Exam :   642-353

Title   :   Cisco Storage Network Design

Ver   :   10.24.07

QUESTION 1:

Certkiller .com has 12 hosts, each capable of a maximum burst I/O rate of 75 MBps. Certkiller .com wants to connect these hosts to the fabric with a 32-port line card. For optimal performance what is the maximum number of hosts that should be connected to any four-port, host-optimized quad?

A. one
B. two
C. three
D. four

Answer: C

QUESTION 2:

What are three value-added features in the Cisco MDS 9000 Series of multiprotocol directors? (Choose three.)

A. FSPF
B. FCC
C. link aggregation
D. buffer-to-buffer credits
E. QoS
F. IPFC

Answer: B,C,E

QUESTION 3:

Which Cisco MDS feature alleviates a head-of-line blocking condition when occasional bursts of traffic exceed the capacity of an end device to receive data?

A. virtual output queues
B. VSAN allowed list
C. VSANs
D. quality of service

Answer: A

QUESTION 4:

A customer is planning to deploy a new storage-area-network infrastructure. The customer has five buildings within corporate headquarters, each with a separate data center. Four of the five data centers serve separate business units, while the

fifth serves as the primary data center for the entire company. The customer would like to deploy the SAN in such a way that each of the five data centers will have its own storage-network infrastructure and connectivity amongst each other. The customer is planning to enable long-distance connectivity from the primary data center for the purposes of replicating data from all of the data centers across the country. Which SAN topology would you recommend that the customer deploy?

A. core-edge
B. collapsed core
C. partial mesh
D. full mesh

Answer: A

QUESTION 5:

What are two reasons that remote backup (remote vaulting) is a core application of FCIP? (Choose two.)

A. FCIP is relatively inexpensive when compared with optical storage networking.
B. Enterprises and storage service providers (SSPs) can provide remote-vaulting services by using existing FCIP WAN infrastructures.
C. FCIP is very reliable because it always uses host-based synchronous replication.
D. FCIP is very reliable because it always uses disk-based asynchronous replication.
E. Applications are often sensitive to high latency, but in a properly designed FCIP backup implementation, the application can be protected from problems with the backup process by using techniques such as snapshots and split mirrors.

Answer: A,E

QUESTION 6:

What technology minimizes the potential for service interruption on SAN extension links?

A. FCIP
B. VRRP
C. VSANs and IVR
D. Port Channeling

Answer: B

QUESTION 7:

A customer recently deployed a core-edge storage network infrastructure that consists of several Cisco MDS directors and fabric switches. The directors are

deployed in the core of the network, and the fabric switches are deployed as edge devices. The edge devices are connected to the core by PortChannels, which consist of four links. The customer is interested in in-band management of the fabric using TCP/IP. Which two configurations are required for enabling in-band management of the fabric using TCP/IP? (Choose two.)

A. VRRP
B. FCIP
C. IPFC
D. synchronization of management users and passwords
E. VSAN IP addresses

Answer: C,E

QUESTION 8:

You are giving a lecture at Certkiller .com. During the lecture you are required to drag the most appropriate application to its corresponding N-tier layer.

Applications, select from these

| Data Mining |
| OLTP Manager |
| Webserver farm with load balancing |

N-tier layer   **Applications, place here**

Storage		Place appliction here
Presentation		Place appliction here
Middleware		Place appliction here

Answer:

N-tier layer   **Applications, place here**

Storage		Data Mining
Presentation		Webserver farm with load balancing
Middleware		OLTP Manager

QUESTION 9:

A customer currently has 10 IBM AIX servers. A production IBM AIX database server has 1 TB of direct-attached storage that is dedicated to database files and log files, of which 800 GB is used. The database files and log files are synchronized from the production database server to the data-mining servers for the purposes of data extraction only. The data-mining servers each have 1 TB of direct-attached storage that is dedicated to the replicated database files and log files. The customer is considering purchasing the Cisco MDS 9216 Fabric Switch and utilizing the read-only zoning feature to enable the data-mining servers to read from the production-server volume on the disk array. How much storage capacity could be reclaimed by using this approach?

A. 800 GB
B. 1 TB
C. 7.2 TB
D. 8 TB
E. 9 TB

Answer: E

QUESTION 10:

What are three reasons to implement VSANs in a Fibre Channel SAN? (Choose three.)

A. to reduce network infrastructure requirements
B. to increase data security
C. to enable port-channeling
D. to enable TCP/IP routing
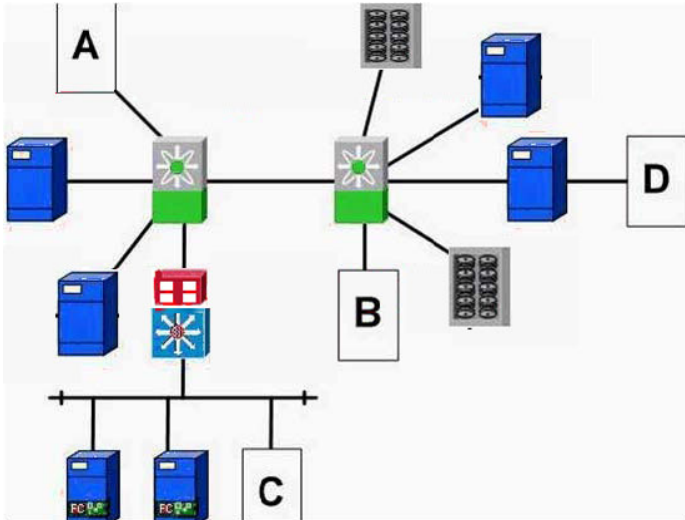E. to share SAN extension capability using EISLs

Answer: A,B,E

QUESTION 11:

What is considered the optimal topology for deployment of Fibre Channel SANs using Cisco MDS family products? (Choose two.)

A. mesh
B. ring
C. core-edge
D. collapsed core
E. core-edge with VSAN

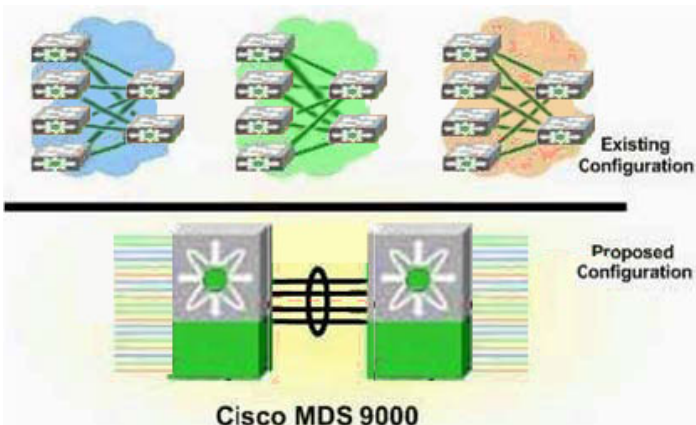Answer: D,E

QUESTION 12:

Exhibit:

Refer to the exhibit. A customer plans to add a tape backup subsystem to its existing storage network. What location is most appropriate for this device?

A. A
B. B
C. C
D. D

Answer: B

QUESTION 13:

Exhibit:

Refer to the exhibit. What topology allows the customer network, made up of several SAN islands, to be integrated into a single SAN topology, and still retain its existing functionality?

A. Core-Edge Topology
B. VSAN with Collapsed-Core Topology
C. VSAN with Core-Edge Topology
D. Single Large SAN Fabric

Answer: B

QUESTION 14:

In the design of an iSCSI implementation in conjunction with a Cisco MDS-based
SAN, which technology provides for diverse connections into multiple SAN switches
and is used to provide automatic failover using a single target IP address?

A. multipathing
B. EtherChannel
C. VRRP
D. OSPF

Answer: C

QUESTION 15:

When designing a SAN, what is considered to be the most significant security
threat?

A. Denial of Service attacks
B. Management Access
C. WWN Spoofing
D. FC_ID Spoofing
E. Host to Storage data paths

Answer: B

QUESTION 16:

Select three common attributes of Gigabit Ethernet compared to Fibre Channel as a
storage transport service. (Choose three.)

A. high bandwidth
B. low bandwidth
C. high latency
D. low latency
E. long distance

Answer: B,C,E

QUESTION 17:

In a core-edge SAN implementation, which statement is true about oversubscription?

A. When using full-rate mode ports, there is no oversubscription in a core-edge implementation.
B. A core-edge design has manageable oversubscription, but at the cost of used ISL ports.
C. Oversubscription in a core-edge design is implemented by using N_Ports.
D. When using a core-edge design, there is only oversubscription when it is implemented in a heterogeneous environment.

Answer: B

QUESTION 18:

Which Cisco MDS 9500 Series feature addresses the customer requirement for five nines (99.999-percent) availability?

A. active and standby FC line cards
B. virtual output queuing (VOQ)
C. an ASM or SSM card that is installed in the switch
D. nondisruptive software upgrades
E. redundant fan cards

Answer: A

QUESTION 19:

A customer is considering designing a new storage-network infrastructure to simplify storage network management. The existing solution uses ten 16-port 1-Gbps Fibre Channel switches. Two of the switches are deployed as core switches, and the remaining eight switches are deployed as edge switches. Each edge switch has an ISL to each of the two core switches. The disk array has four 1-Gbps Fibre Channel interfaces. Two interfaces connect to each of the core switches. Each of the 96 servers has a single 1-Gbps Fibre Channel host bus adapter. Which configuration would provide equivalent or better performance while simplifying infrastructure management?

A. two Cisco MDS 9140 Fabric Switches
B. two Cisco MDS 9216 Fabric Switches, each with one 32-port Fibre Channel line card
C. one Cisco MDS 9506 Multilayer Director with two 16-port Fibre Channel line cards and two 32-port Fibre Channel line cards
D. one Cisco MDS 9506 Multilayer Director with four 32-port Fibre Channel line

cards

Answer: D

QUESTION 20:

Which factor would enable an administrator to determine the maximum amount of
I/O traffic that can be supported by a given server?

A. the operating system
B. the application suite
C. the ability to multiplex I/O streams
D. the number of I/O buses and the bandwidth of each bus

Answer: A,B,D

QUESTION 21:

Which statement best defines storage consolidation?

A. making an enterprise's total disk space highly available to the entire enterprise,
often by placing it in a SAN
B. making an enterprise's disk space, servers, and tape libraries highly available to
the entire enterprise, often by placing them in a SAN
C. making an enterprise's total storage networking less costly by using iSCSI
D. making an enterprise's total disk space highly available by transferring copies of
an enterprise's total storage space to an offsite location
E. making an enterprise's total disk space highly available by connecting all of an
enterprise's storage devices to one (or two) large servers

Answer: B

QUESTION 22:

What effect does VSAN technology have on typical capacity planning for a storage
network?

A. Because of the complete isolation of VSANs, more ports are required in a VSAN
environment than in a non-VSAN environment.
B. When capacity planning where VSANs will be implemented, each VSAN must be
capacity planned independently of all other VSANs.
C. VSANs are over provisioned separately to provide for capacity growth.
D. Unused ports can easily be redeployed for other applications in other VSANs.

Answer: D

QUESTION 23:

A customer has a need to synchronously replicate data from the primary data center to a standby data center that is 30 kilometers away. The customer owns the fiber between the two data centers and uses the link for Gigabit Ethernet connectivity today. The Gigabit Ethernet connection is heavily utilized and generally remains at 90-percent utilization. The customer expects that the replication traffic will require approximately 30 MBps, and is looking for a low-cost solution. Which replication solution would you recommend?

A. FCIP
B. CWDM
C. DWDM
D. iSCSI

Answer: B

QUESTION 24:

Which technology should be used to provide transparent low latency FC transport across a metropolitan area?

A. DWDM
B. FCIP
C. iSCSI
D. iFCP

Answer: A

QUESTION 25:

A fully loaded Cisco MDS 9506 Multilayer Director requires 2190 watts of power. If 110-volt power is provided to the switch, at which power mode would the switch operate?

A. The director would operate in redundant mode only.
B. The director would operate in combined mode only.
C. The director would operate in redundant mode or combined mode.
D. The director cannot operate with 110-volt power.

Answer: B

QUESTION 26:

Which SAN topology should be used for the largest SAN fabrics?

A. arbitrated loop
B. full mesh
C. core-edge
D. cascade
E. collapsed core

Answer: C

QUESTION 27:

What are two MDS features that increase the efficiency of a multiple switch Fibre
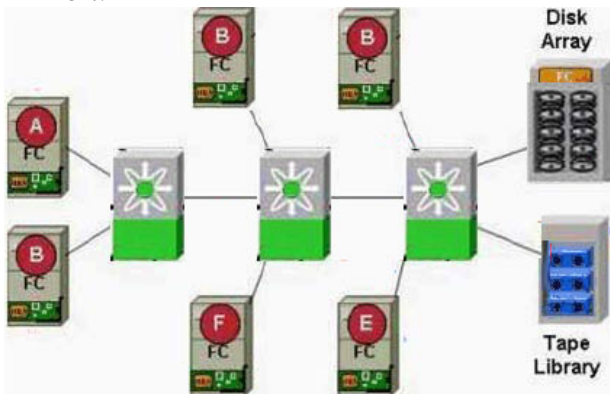Channel fabric? (Choose two.)

A. Port Channel
B. CDP
C. FCP
D. FCC
E. CUP

Answer: A,D

QUESTION 28:

Exhibit:

Refer to the exhibit. A customer has deployed the Cisco MDS topology shown above,
using a single VSAN. The customer notices that performance on Servers B, C, D, E,
and F becomes very poor when Server A starts a large backup operation. Which
MDS feature can be enabled to prohibit the backup operation from causing
performance problems on the remaining servers?
Image: 353A-28.jpg

A. quality of service
B. FSPF traffic engineering
C. virtual output queuing
D. Fibre Channel Congestion Control

Answer: A

QUESTION 29:

Select three characteristics of the Cisco coarse wave division multiplexing (CWDM) solution. (Choose three.)

A. multiplexes up to eight wavelengths across a single fiber pair
B. supports a maximum connection length of 220 kilometers
C. supports both linear and ring topologies
D. requires OADMs (optical add/drop multiplexers) to aggregate multiple wavelengths across the same fiber pair
E. can be optically amplified to extend the distance characteristics

Answer: A,C,D

QUESTION 30:

A customer has two data centers connected by dark fiber and also has a requirement for synchronous data replication between the data centers. If the data centers are 48 km apart, what is the most cost effective solution?

A. CWDM
B. IVR
C. FSPF
D. DWDM
E. Native FC

Answer: A

QUESTION 31:

A customer recently deployed a pair of Cisco MDS 9216i Multilayer Fabric Switches to support an ERP application. The MDS 9216i expansion slot is still unused. The customer examined other infrastructure services and applications to determine if they should leverage the SAN storage capacity, and decided that it would be beneficial to attach eight Microsoft Exchange servers to the SAN. Each Microsoft Exchange server generally drives approximately 50 MBps of disk throughput and has two Fibre Channel host bus adapters. Which line card should be used to support the Microsoft Exchange server SAN connectivity?

A. 16-port Fibre Channel line card
B. 32-port Fibre Channel line card
C. Multiprotocol Services Module line card
D.None;use the IP storage interfaces.

Answer: D

QUESTION 32:

Which SFP and media-type combination would be recommended for a high-speed 10-kilometer link between two Cisco MDS switches?

A. 2-Gbps-SW, LC SFP, 50/125-micron multimode media
B. 2-Gbps-SW, LC SFP, 62.5/125-micron multimode media
C. 2-Gbps-LW, LC SFP, 9/125-micron single-mode media
D. 1-Gbps-SW, LC SFP, 50/125-micron multimode media

Answer: C

QUESTION 33:

What are three causes of host oversubscription? (Choose three.)

A. the operating system
B. the PCI bus limitations
C. the RTO and RPO values
D. whether the HBA has a flat FCIDs assigned
E. the limits on the maximum I/O and bandwidth rate

Answer: A,B,E

QUESTION 34:

A customer is designing a storage network infrastructure to support a database application. Each server will have two 1-Gbps host bus adapters, one connected to each of the two physical fabrics. The disk array has two 2-Gbps Fibre Channel interfaces. Each server will need to drive 20 MBps (encoded) of throughput continuously per host bus adapter, and the multipathing software on each server is not configured for load balancing.What is the maximum number of servers that can be connected to this disk array while satisfying the performance requirement?

A. 8
B. 10
C. 12
D. 14

Answer: B

QUESTION 35:

Which tool requires the Cisco Fabric Manager Server License to operate?

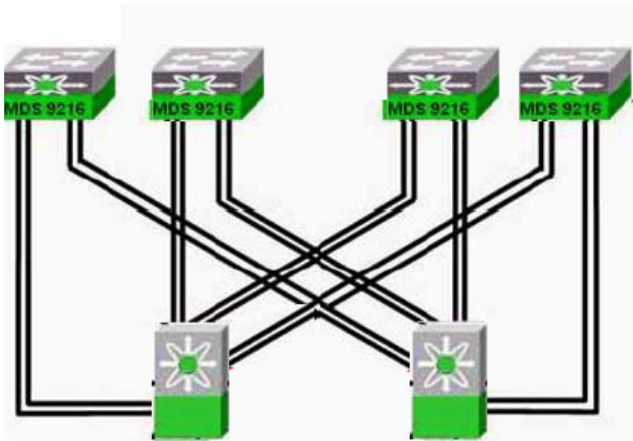A. Cisco Performance Manager
B. Cisco Fabric Manager
C. Cisco Device Manager
D. Cisco Fabric Analyzer

Answer: A

QUESTION 36:

Exhibit:

Refer to the exhibit. Identify the topology that is represented.

A. core-edge
B. multitier
C. collapsed core
D. loop

Answer: A

QUESTION 37:

DRAG DROP
Your boss at Certkiller .com asks you to show her some benefits of Cisco products.
You are required to match the Cisco Value Added feature to the potential issue it
would most likely solve.

Cisco Value Added feature, select from these

SPAN	Port-Channel	VSAN
FCC	RBAC	Fabric Manager Server

| Potential Issue	Cisco Value Added feature place here
Inconsistent view of network topology	Place here
SAN islands	Place here
Network congestion	Place here
Distributed management	Place here
Fabric login problems	Place here
Low network bandwidth	Place here

Answer:

Explanation:

Potential Issue	Cisco Value Added feature place here
Inconsistent view of network topology	Fabric Manager Server
SAN islands	VSAN
Network congestion	FCC
Distributed management	RBAC
Fabric login problems	SPAN
Low network bandwidth	Port-Channel

QUESTION 38:

Exhibit:
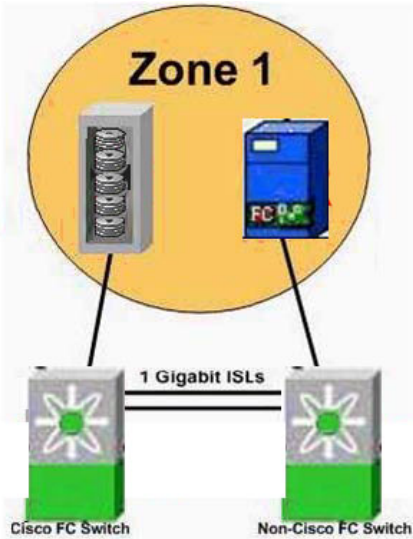
Refer to the exhibit. What port type should be used between the two switches to maximize performance?

A. B
B. E
C. F
D. NL
E. TE

Answer: B

QUESTION 39:

What MDS 9000 feature provides more efficient SAN utilization by creating hardware-based isolated environments within a single physical SAN infrastructure?

A. VSAN
B. SPAN
C. trunking
D. port channel
E. zones

Answer: A

QUESTION 40:

A customer has storage arrays from multiple vendors, and is considering a virtualization solution to simplify storage management. Choose three advantages of using a Cisco MDS-based virtualization solution with an MDS 9500 Series Director instead of host-based or storage-based virtualization solutions. (Choose three.)

A. host and storage heterogeneity

B. LUN masking that is simpler to implement
C. virtualization that is closer to the target
D. virtualization that is embedded in the switch module
E. availability

Answer: A,D,E

QUESTION 41:

What are three key benefits of implementing a SAN using iSCSI? (Choose three.)

A. uses existing IP networking, monitoring, and management infrastructure
B. is more efficient than FC since it requires fewer encapsulations
C. maintains consistent performance over IP networks of varying distances
D. significant capital cost reduction by substituting iSCSI as a transport technology
E. extends existing FC SAN to IP connected hosts

Answer: A,D,E

QUESTION 42:

A customer recently deployed a pair of Cisco MDS 9216i Multilayer Fabric
Switches to support a database application. The MDS 9216i expansion slot is still
unused. The customer examined other infrastructure services and applications to
determine if they should leverage the SAN storage capacity, and decided that it
would be beneficial to attach 20 Microsoft Windows file servers to the SAN. Each
Windows file server generally drives approximately 5MBps of disk throughput.
Which line card should be used to support the Microsoft Exchange server SAN
connectivity?

A. 16-port Fibre Channel line card
B. 32-port Fibre Channel line card
C. Multiprotocol Services Module line card
D.None;use the IP storage interfaces.

Answer: D

QUESTION 43:

In addition to providing secure computer room access, what three MDS 9000
features can help enhance physical security? (Choose three.)

A. the placement of all unused FC ports in a VSAN set to "deny"
B. the placement of every host in its own ZoneSet that includes its storage devices
C. the use of the port security feature to bind pWWNs and sWWNs to specific ports
D. the use of DH-CHAP authentication to ensure fabric level security

E. the use of SSH to block access to all unused ports

Answer: A,C,D

QUESTION 44:

Which two will allow a fully loaded Cisco MDS 9509 Multilayer Director to meet the 2190-W requirement? (Choose two.)

A. two 110-V power supplies in redundant mode
B. two 220-V power supplies in redundant mode
C. two 110-V power supplies that are placed into combined power mode
D. two 110-V power supplies that are placed into active/standby power mode
E. two 110-V power supplies that are placed into primary/backup power mode

Answer: B,C

QUESTION 45:

What are three advantages of a collapsed-core architecture? (Choose three.)

A. This design provides the most efficient use of ports because no ports are consumed for ISLs.
B. The absence of ISLs significantly decreases reliability and manageability.
C. The absence of any oversubscription increases switch throughput.
D. Since there are fewer available paths over which traffic may travel, FSPF values are higher.
E. Ports can be scaled easily by adding hot-swappable blades without disrupting traffic.
F. The highest performance is achieved by director-class switches, because the high-speed backplane provides low fixed latency between any two ports.

Answer: A,E,F

QUESTION 46:

Exhibit:
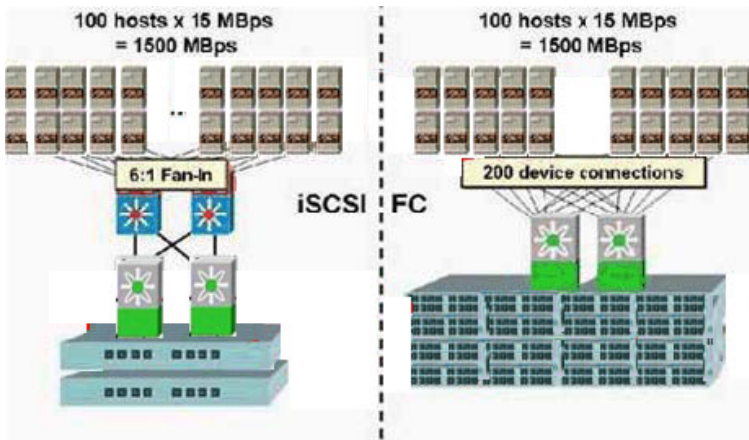
Refer to the exhibit. In this scenario, the total bandwidth requirement is 1500 MBps, but there are 100 hosts that each need 15MBps of bandwidth. Which two statements are correct about the topologies shown in the exhibit? (Choose two.)

A. The iSCSI fan-in ratio is 6.25:1.
B. The Fibre Channel implementation will require 100 HBA ports.
C. iSCSI is the most cost-effective solution with high fan-in ratios.
D. Fibre Channel is the most cost-effective solution with high fan-in ratios.
E. The Fibre Channel implementation would require two 32-port switching modules in the Cisco MDS switches per fabric.

Answer: A,C

QUESTION 47:

Which design approach provides the greatest protection against failures when designing for high availability?

A. Segment the SAN architecture by the use of VSANs.
B. Use zoning to isolate applications in a consolidated SAN architecture.
C. Use appropriate MDS QoS mechanisms to guarantee that each application receives the necessary bandwidth.
D. Implement redundant fabrics across redundant physical infrastructures.

Answer: D

QUESTION 48:

What are three array characteristics that are crucial when planning a SAN design? (Choose three.)

A. fan-in ratio
B. connection speed
C. embedded cache controller
D. RAID level support

E. active/passive controller

Answer: B,C,E

QUESTION 49:

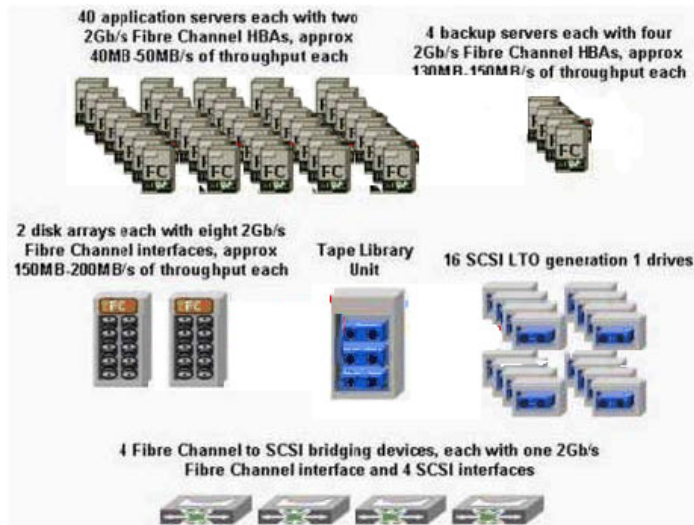What are three host characteristics that are crucial when planning a SAN design?
(Choose three.)

A. host operating system
B. data replication
C. application I/O throughput
D. type of file system
E. CUP and memory resources
F. multipathing

Answer: A,C,F

QUESTION 50:

Exhibit:

Refer to the exhibit. A customer is designing a storage network infrastructure that uses the Cisco MDS 9509 Multilayer Director. The network will consist of 40 application servers, four backup servers, two disk arrays, and one tape library. The application servers each have two Fibre Channel host bus adapters and generate 40 to 50 MBps of throughput. The backup servers each have four host bus adapters and generate 130 to 150 MBps of throughput. The disk arrays each have eight 2-Gbps Fibre Channel interfaces that handle 150 to 200 MBps of traffic. The backup servers will be performing incremental backups of snapshot copies of production volumes from multiple application servers concurrently throughout the day. The backup servers will also be performing full backups of snapshot copies of production volumes from the application servers concurrently throughout the week.

The customer is redeploying 16 first-generation Linear Tape-Open (LTO) SCSI drives that were previously direct-attached to application and backup servers. The drives will be deployed using Fibre Channel-to-SCSI bridging devices, and each device will have one 2-Gbps Fibre Channel interface and four drives attached. These drives will go into the new library.
Which MDS 9509 configuration would best meet the connectivity needs of this customer?

A. one 16-port Fibre Channel line card and four 32-port Fibre Channel line cards
B. two 16-port Fibre Channel line cards and three 32-port Fibre Channel line cards
C. three 16-port Fibre Channel line cards and three 32-port Fibre Channel line cards
D. four 16-port Fibre Channel line cards and two 32-port Fibre Channel line cards
E. five 16-port Fibre Channel line cards and one 32-port Fibre Channel line card

Answer: C

QUESTION 51:

Which Fibre Channel SAN topology maximizes performance and expandability?

A. multi-point
B. point-to-point
C. arbitrated loop
D. switched fabric
E. star

Answer: D

QUESTION 52:

A customer would like to add Cisco MDS switches to an existing Brocade environment with minimal disruption. The Brocade switches are using PID-0 mode. Which two features will enable the creation of a Cisco-Brocade heterogeneous fabric without restricting the feature set of either switch? (Choose two.)

A. interop mode 1
B. interop mode 2
C. interop mode 3
D. IVR
E. PortChannels
F. CWDM

Answer: A,B

QUESTION 53:

What are three key benefits of Cisco's collapsed-core switch configuration? (Choose three.)

A. ease of management
B. increased port channel utilization
C. reduction in equipment and installation cost
D. higher effective port count
E. reduction in total disk space requirements

Answer: A,C,D

QUESTION 54:

A customer SAN design requires the use of existing non-Cisco storage switches in a core edge topology. What must be considered when attaching an MDS 9000 switch as the core device in this network?

A. Trunking is not supported between the core and edge switches.
B. Zoning cannot be used since the domain IDs are in different ranges.
C. FSPF cannot be used between the core and edge switches.
D. If VSANs are implemented in the core, IVR cannot be used.

Answer: A

QUESTION 55:

What provides storage virtualization from IBM?

A. Advanced Services Module (ASM)
B. Caching Services Module (CSM)
C. Storage Services Module (SSM)
D. Cisco MDS 9000 32-port 1/2-Gbps FC Module
E. IP Multiprotocol Services Module

Answer: B

QUESTION 56:

What are two benefits of the Cisco MDS Series Switches that increase the overall resiliency of SAN extension? (Choose two.)

A. VSANs and IVR can eliminate the potential disruption of a WAN failure.
B. VSANs and IVR can increase resiliency by combining control traffic and data traffic over the WAN.

C. Parallel tunnels and PortChannels eliminate failure of every VSAN or IVR in the local fabric.
D. PortChannels and VSANs can be used with FCIP to provide end-to-end redundancy and load balancing.
E. Recovery at the PortChannel level, instead of at the FSPF routing level, provides nondisruptive recovery.

Answer: D,E

QUESTION 57:

Exhibit:
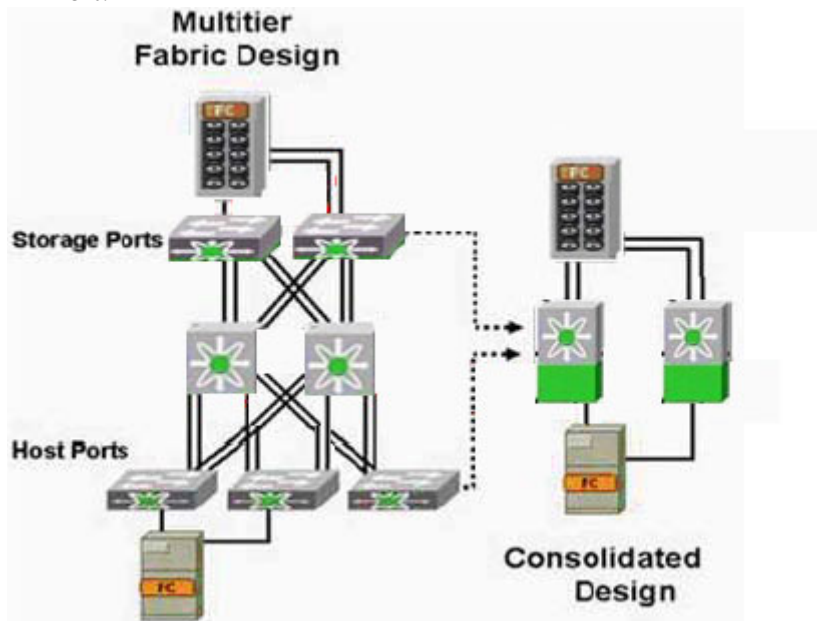
Refer to the exhibit. Which three outcomes would a customer realize by performing the migration from a multitier fabric design to a consolidated design? (Choose three.)

A. lower effective port cost
B. high availability because of the multifaceted redundancy that is built into the Cisco MDS switch
C. lower effective port count
D. higher effective port cost
E. higher effective port count
F. lower availability because there are fewer fabric switches for failover

Answer: A,B,E

QUESTION 58:

What are two characteristics of iSCSI? (Choose two.)

A. iSCSI initiators cannot be members of more than one VSAN.
B. The port VSAN of an iSCSI interface cannot be modified.
C. iSCSI cannot benefit from existing IP QoS.
D. By default, dynamically mapped iSCSI initiators are members of VSAN 1.
E. The IPS module creates one or more FC virtual N_Ports for each iSCSI host.
F. By default, all statically mapped iSCSI initiators are members of VSAN 4094.

Answer: D,E

QUESTION 59:

What feature of the MDS 9000 family would be most valuable in establishing a
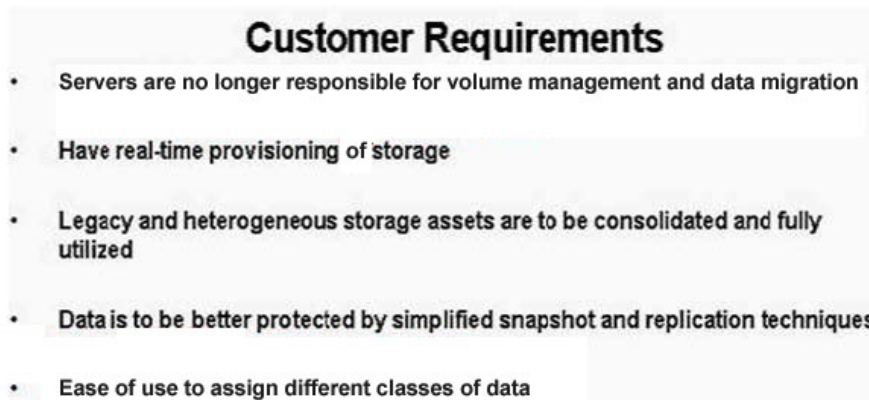baseline of the traffic load on an existing network prior to making changes?

A. SPAN
B. RSPAN
C. FC-SP
D. Performance Manager
E. AAA

Answer: D

QUESTION 60:

Exhibit:

Customer Requirements

- Servers are no longer responsible for volume management and data migration

- Have real-time provisioning of storage

- Legacy and heterogeneous storage assets are to be consolidated and fully utilized

- Data is to be better protected by simplified snapshot and replication techniques

- Ease of use to assign different classes of data

Refer to the exhibit. What should be recommended to meet these customer
requirements?
Image: 353A-60.jpg

A. VSANs
B. wide-area file services (WAFS)
C. storage virtualization
D. Zones
E. Zones and Zone Sets

Answer: D

QUESTION 61:

What provides storage virtualization from IBM?

A. Advanced Services Module (ASM)
B. Caching Services Module (CSM)
C. Storage Services Module (SSM)
D. Cisco MDS 9000 32-port 1/2-Gbps FC Module
E. IP Multiprotocol Services Module

Answer: B

QUESTION 62:

A large credit card processing firm is adding a second data center to support
business continuance. What is the recommended solution for extending the SAN to
the second data center if both data centers are active?

A. asynchronous replication using FCIP
B. dual homed servers, and IP connectivity using multiple paths
C. iSCSI installation and a bridge the Ethernet network to the Fibre Channel fabric
D. synchronous replication using DWDM

Answer: D

QUESTION 63:

A customer wants to consolidate the storage in an existing SAN where Cisco MDS
Series Switches are deployed. How can the customer accomplish this goal and still
be able to retain full access to the data?

A. dual supervisor modules
B. virtual output queuing (VOQ)
C. stateful failover
D. universal interoperability mode 4
E. per-VSAN FSPF routing

Answer: E

QUESTION 64:

A customer has the following application and peak-bandwidth requirements:Four
database servers: 50 MBps eachFour exchange servers: 30 MBps each20 midrange
development servers: 20 MBps eachWhich dual-fabric designs would best meet the
needs of this price-sensitive customer while allowing for future SAN extension

capability?

A. two Cisco MDS 9216i Multilayer Fabric Switches, each with an IPS-8 module
B. two Cisco MDS 9216A Multilayer Fabric Switches, each with an SSM module
C. two Cisco MDS 9216i Multilayer Fabric Switches, each with a 16-port FC module
D. two Cisco MDS 9216A Multilayer Fabric Switches, each with a 32-port FC module

Answer: A

QUESTION 65:

At which point can security on a Fibre Channel SAN be implemented? (Choose three.)

A. storage array
B. server
C. Fibre Channel switch
D. GigE NIC
E. SFP connector

Answer: A,B,C

QUESTION 66:

A customer is designing a SAN for each of two data centers. The two data centers are connected by dark fiber, which is owned by the customer. Cisco ONS platforms terminate the fiber and provide service aggregation. The customer requirements include that the SAN in each data center meet or exceed five nines of availability and be interconnected using 16 separate lambdas. The customer has four storage devices in each data center, and each storage device has four Fibre Channel interfaces. Each data center has 32 servers, and each server has two host bus adapters. The majority of the servers require only 20 to 30MBps of throughput on average, but four of the servers require 150 MBps of throughput on average. What will provide the most cost-effective design to satisfy these requirements?

A. two Cisco MDS 9216 Fabric Switches in each data center, each MDS 9216 with an additional 16-port Fibre Channel line card
B. two Cisco MDS 9216 Fabric Switches in each data center, each MDS 9216 with an additional 32-port Fibre Channel line card
C. two Cisco MDS 9506 Multilayer Directors with one in each data center, each MDS 9506 with two 16-port Fibre Channel line cards and two 32-port Fibre Channel line cards
D. two Cisco MDS 9509 Multilayer Directors with one in each data center, each MDS 9509 with two 16-port Fibre Channel line cards and three 32-port Fibre Channel line cards

Answer: C

QUESTION 67:

DRAG DROP
You work as network consultant. Your customer Certkiller .com requires your services. Specifically you are required to drag Certkiller 's business consideration next to the MDS feature that will solve that issue.
Note: You might not have to use all available options.

Certkiller business consideration, select from these

| Intelligent Storage Services | High Availability Infrastructure | Multiprotocol |
| Enterprise-Class Management | San Consolidation | Storage consolidation |

MDS feature	**Certkiller business consideration, place here**
FM, DM, PM, Traffic Analyzer, PAA	Place here
VSANs, Port Channels, Security, Traffic Engineering, QoS, FCC	Place here
Virtualization, Replication, Volume Mgmt	Place here
Traffic engineering (Per-VSAN PSFP, FCC and QoS), FICON Virtualization	Place here

Answer:

Explanation:

Certkiller business consideration, select from these

| High Availability Infrastructure | Multiprotocol |

| **MDS feature** | **Certkiller business consideration, place here** |
FM, DM, PM, Traffic Analyzer, PAA	Enterprise-Class Management
VSANs, Port Channels, Security, Traffic Engineering, QoS, FCC	San Consolidation
Virtualization, Replication, Volume Mgmt	Assignment Storage Services
Traffic engineering (Per-VSAN PSFP, FCC and QoS), FICON Virtualization	Storage consolidation

QUESTION 68:

What would be a good initial SAN-migration project for a small or medium-sized business that possesses ample WAN bandwidth, but that has an immediate need to reduce spending and to maximize resources?

A. Reduce the WAN bandwidth.
B. Implement FCIP to consolidate all remote SANs.
C. Implement backup consolidation.
D. Centralize the data center and implement an iSCSI solution.

Answer: C

QUESTION 69:

Exhibit:
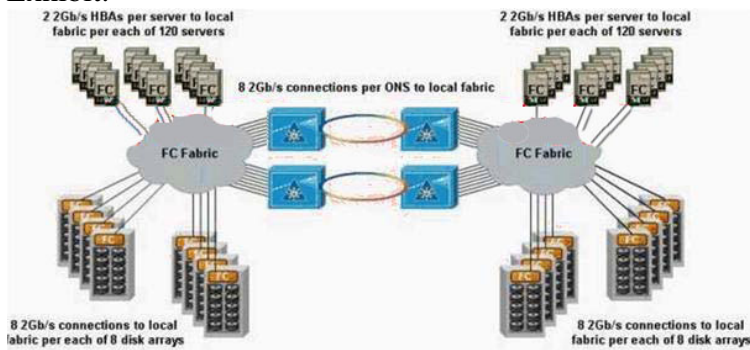
Refer to the exhibit. A customer is designing a SAN for each of two data centers. The two data centers are connected by dark fiber, which is owned by the customer. Cisco ONS platforms terminate the fiber and provide service aggregation. The customer requirements include that the SAN in each data center meet or exceed five nines of availability and be interconnected using 16 separate lambdas. Links between data centers must be able to tolerate failure of any component. The customer has eight storage devices in each data center, and each storage device has eight Fibre Channel interfaces. Each data center has 120 servers, and each server has two host bus adapters. The servers generally require only 10 to 20MBps of throughput. The customer also requires that the solution be efficient on its use of ports, and provide room to grow by at least 10 percent to accommodate server growth over the next year. What is the most cost-effective design to satisfy these requirements?

A. two Cisco MDS 9509 Multilayer Directors in each data center, each MDS 9509 with two 16-port Fibre Channel line cards and five 32-port Fibre Channel line cards
B. two Cisco MDS 9509 Multilayer Directors in each data center, each MDS 9509 with seven 16-port Fibre Channel line cards
C. two Cisco MDS 9509 Multilayer Directors in each data center, each MDS 9509 with one 16-port Fibre Channel line card and six 32-port Fibre Channel line cards
D. two Cisco MDS 9509 Multilayer Directors in each data center, each MDS 9509

with seven 32-port Fibre Channel line cards

Answer: A

QUESTION 70:

A customer has 80% of the total storage space directly connected to servers. The storage space needs are growing at 50% per year. Given these facts, which solution is recommended?

A. increase in server capacity
B. server consolidation
C. storage consolidation
D. storage expansion
E. SAN consolidation

Answer: C

QUESTION 71:

In addition to providing secure computer room access, what three MDS 9000 features can help enhance physical security? (Choose three.)

A. the placement of all unused FC ports in a VSAN set to "deny"
B. the placement of every host in its own ZoneSet that includes its storage devices
C. the use of the port security feature to bind pWWNs and sWWNs to specific ports
D. the use of DH-CHAP authentication to ensure fabric level security
E. the use of SSH to block access to all unused ports

Answer: A,C,D

QUESTION 72:

DRAG DROP
Your Certkiller .com trainee Sandra asks you to match the applications with its most appropriate corresponding N-tier layer. You must comply.

Applications, select from these

Data mining	OLTP Manager	Webserver farm with load balancing

N-tier layer

Storage

Presenation

Middleware

Applications, place here

Place here

Place here

Place here

Answer:

Explanation:

N-tier layer

Storage

Presenation

Middleware

Applications, place here

Data mining

Webserver farm with load balancing

OLTP Manager

QUESTION 73:

A customer has two data centers connected by dark fiber and also has a requirement for synchronous data replication between the data centers. If the data centers are 48 km apart, what is the most cost effective solution?

A. CWDM
B. IVR
C. FSPF
D. DWDM
E. Native FC

Answer: A

QUESTION 74:

Which SFP and media-type combination would be recommended for a high-speed 10-kilometer link between two Cisco MDS switches?

A. 2-Gbps-SW, LC SFP, 50/125-micron multimode media
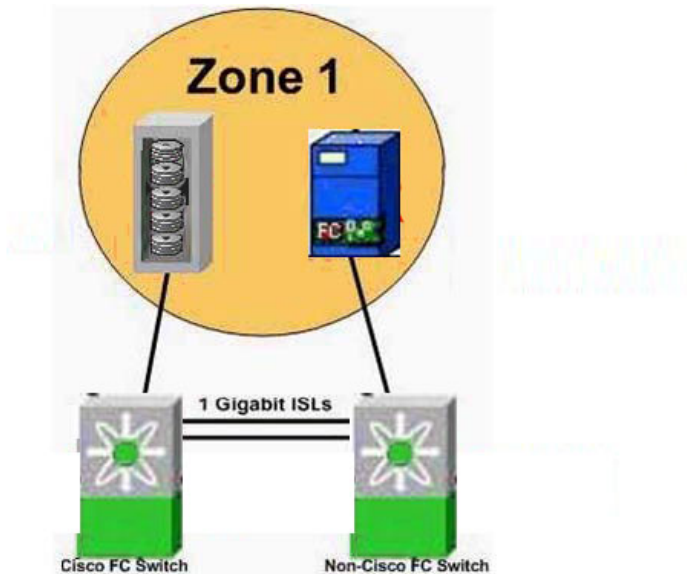B. 2-Gbps-SW, LC SFP, 62.5/125-micron multimode media

C. 2-Gbps-LW, LC SFP, 9/125-micron single-mode media
D. 1-Gbps-SW, LC SFP, 50/125-micron multimode media

Answer: C

QUESTION 75:

Exhibit:

Refer to the exhibit. What port type should be used between the two switches to maximize performance?

A. B
B. E
C. F
D. NL
E. TE

Answer: B

QUESTION 76:

An administrator is concerned about security and wants to have host bus adapters authenticate against an authoritative server upon fabric login. The administrator configures the fabric and hosts accordingly but needs to configure an authoritative server. Which two authentication servers can the MDS be configured to use?(Choose two.)

A. Microsoft Active Directory
B. LDAP
C. RADIUS
D. TACACS+

E. NIS

Answer: C,D

QUESTION 77:

What MDS 9000 feature provides more efficient SAN utilization by creating hardware-based isolated environments within a single physical SAN infrastructure?

A. VSAN
B. SPAN
C. trunking
D. port channel
E. zones

Answer: A

QUESTION 78:

Which statement is true about LUN zoning in a heterogeneous environment?

A. Hardware-enforced LUN zoning helps to ensure that LUNs are accessible by all hosts.
B. Use LUN zoning instead of LUN masking to centralize management in mixed storage environments.
C. LUN zoning requires no special configuration on storage arrays.
D. LUN masking should be used in all situations.

Answer: B

QUESTION 79:

What are two reasons that remote backup (remote vaulting) is a core application of FCIP? (Choose two.)

A. FCIP is relatively inexpensive when compared with optical storage networking.
B. Enterprises and storage service providers (SSPs) can provide remote-vaulting services by using existing FCIP WAN infrastructures.
C. FCIP is very reliable because it always uses host-based synchronous replication.
D. FCIP is very reliable because it always uses disk-based asynchronous replication.
E. Applications are often sensitive to high latency, but in a properly designed FCIP backup implementation, the application can be protected from problems with the backup process by using techniques such as snapshots and split mirrors.

Answer: A,E

QUESTION 80:

Which SAN topology should be used for the largest SAN fabrics?

A. arbitrated loop
B. full mesh
C. core-edge
D. cascade
E. collapsed core

Answer: C

QUESTION 81:

Which Cisco MDS feature alleviates a head-of-line blocking condition when occasional bursts of traffic exceed the capacity of an end device to receive data?

A. virtual output queues
B. VSAN allowed list
C. VSANs
D. quality of service

Answer: A

QUESTION 82:

What are three key benefits of Cisco's collapsed-core switch configuration? (Choose three.)

A. ease of management
B. increased port channel utilization
C. reduction in equipment and installation cost
D. higher effective port count
E. reduction in total disk space requirements

Answer: A,C,D

QUESTION 83:

What are three host characteristics that are crucial when planning a SAN design? (Choose three.)

A. host operating system
B. data replication
C. application I/O throughput
D. type of file system

E. CUP and memory resources
F. multipathing

Answer: A,C,F

QUESTION 84:

A customer is designing a storage network infrastructure to support a database application. Each server will have two 1-Gbps host bus adapters, one connected to each of the two physical fabrics. The disk array has two 2-Gbps Fibre Channel interfaces. Each server will need to drive 20 MBps (encoded) of throughput continuously per host bus adapter, and the multipathing software on each server is not configured for load balancing.What is the maximum number of servers that can be connected to this disk array while satisfying the performance requirement?

A. 8
B. 10
C. 12
D. 14

Answer: B

QUESTION 85:

In the design of an iSCSI implementation in conjunction with a Cisco MDS-based SAN, which technology provides for diverse connections into multiple SAN switches and is used to provide automatic failover using a single target IP address?

A. multipathing
B. EtherChannel
C. VRRP
D. OSPF

Answer: C

QUESTION 86:

What effect does VSAN technology have on typical capacity planning for a storage network?

A. Because of the complete isolation of VSANs, more ports are required in a VSAN environment than in a non-VSAN environment.
B. When capacity planning where VSANs will be implemented, each VSAN must be capacity planned independently of all other VSANs.
C. VSANs are over provisioned separately to provide for capacity growth.
D. Unused ports can easily be redeployed for other applications in other VSANs.

Answer: D

QUESTION 87:

A customer has 80% of the total storage space directly connected to servers. The storage space needs are growing at 50% per year. Given these facts, which solution is recommended?
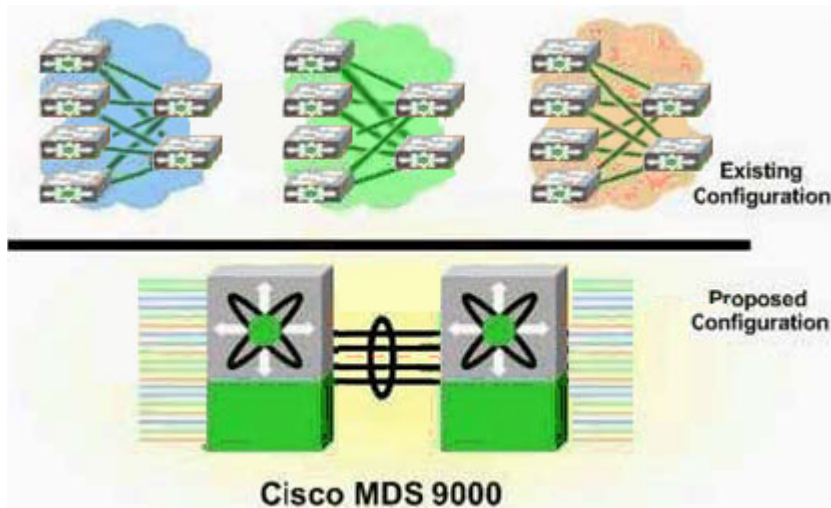
A. increase in server capacity
B. server consolidation
C. storage consolidation
D. storage expansion
E. SAN consolidation

Answer: C

QUESTION 88:

Exhibit:

Refer to the exhibit. What topology allows the customer network, made up of several SAN islands, to be integrated into a single SAN topology, and still retain its existing functionality?
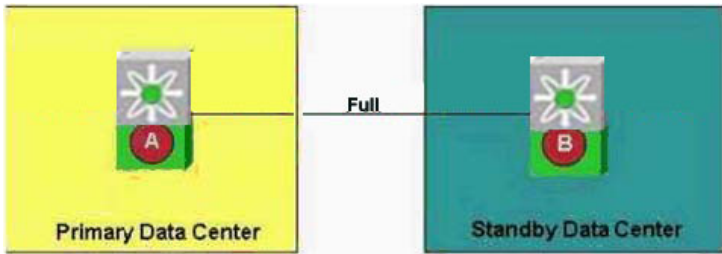
A. Core-Edge Topology
B. VSAN with Collapsed-Core Topology
C. VSAN with Core-Edge Topology
D. Single Large SAN Fabric

Answer: B

QUESTION 89:

Exhibit:

Refer to the exhibit. A customer has deployed two Cisco MDS 9509 Multilayer Directors. One MDS 9509 is deployed in each of two separate data centers. The primary data center is always active, and the secondary data center is considered a standby site. The data centers are connected together by an unreliable Gigabit Ethernet connection that is shared by many departments. A replication application is using Fibre Channel over IP (FCIP) as its transport mechanism over the Gigabit Ethernet circuit. The administrator is concerned about network stability in the production fabric and the impact of a Gigabit Ethernet circuit outage on the production fabric. The administrator is deploying Inter-VSAN Routing to isolate the production fabric from the standby data center fabric, and only has one license. Where should the administrator install and configure Inter-VSAN Routing?

A. Switch A
B. Switch B
C. The administrator should not install and configure Inter-VSAN Routing.
D. Switch A and Switch B

Answer: A

QUESTION 90:

A customer has a need to synchronously replicate data from the primary data center to a standby data center that is 30 kilometers away. The customer owns the fiber between the two data centers and uses the link for Gigabit Ethernet connectivity today. The Gigabit Ethernet connection is heavily utilized and generally remains at 90-percent utilization. The customer expects that the replication traffic will require approximately 30 MBps, and is looking for a low-cost solution. Which replication solution would you recommend?

A. FCIP
B. CWDM
C. DWDM
D. iSCSI

Answer: B

QUESTION 91:

Which statement best defines storage consolidation?

A. making an enterprise's total disk space highly available to the entire enterprise, often by placing it in a SAN
B. making an enterprise's disk space, servers, and tape libraries highly available to the entire enterprise, often by placing them in a SAN
C. making an enterprise's total storage networking less costly by using iSCSI
D. making an enterprise's total disk space highly available by transferring copies of an enterprise's total storage space to an offsite location
E. making an enterprise's total disk space highly available by connecting all of an enterprise's storage devices to one (or two) large servers

Answer: B

QUESTION 92:

A customer SAN design requires the use of existing non-Cisco storage switches in a core edge topology. What must be considered when attaching an MDS 9000 switch as the core device in this network?

A. Trunking is not supported between the core and edge switches.
B. Zoning cannot be used since the domain IDs are in different ranges.
C. FSPF cannot be used between the core and edge switches.
D. If VSANs are implemented in the core, IVR cannot be used.

Answer: A

QUESTION 93:

Select three common attributes of Gigabit Ethernet compared to Fibre Channel as a storage transport service. (Choose three.)

A. high bandwidth
B. low bandwidth
C. high latency
D. low latency
E. long distance

Answer: B,C,E

QUESTION 94:

What are three value-added features in the Cisco MDS 9000 Series of multiprotocol directors? (Choose three.)

A. FSPF
B. FCC

C. link aggregation
D. buffer-to-buffer credits
E. QoS
F. IPFC

Answer: B,C,E

QUESTION 95:

Which design approach provides the greatest protection against failures when
designing for high availability?

A. Segment the SAN architecture by the use of VSANs.
B. Use zoning to isolate applications in a consolidated SAN architecture.
C. Use appropriate MDS QoS mechanisms to guarantee that each application
receives the necessary bandwidth.
D. Implement redundant fabrics across redundant physical infrastructures.

Answer: D

QUESTION 96:

Which two will allow a fully loaded Cisco MDS 9509 Multilayer Director to meet the
2190-W requirement? (Choose two.)

A. two 110-V power supplies in redundant mode
B. two 220-V power supplies in redundant mode
C. two 110-V power supplies that are placed into combined power mode
D. two 110-V power supplies that are placed into active/standby power mode
E. two 110-V power supplies that are placed into primary/backup power mode

Answer: B,C

QUESTION 97:

What would be a good initial SAN-migration project for a small or medium-sized
business that possesses ample WAN bandwidth, but that has an immediate need to
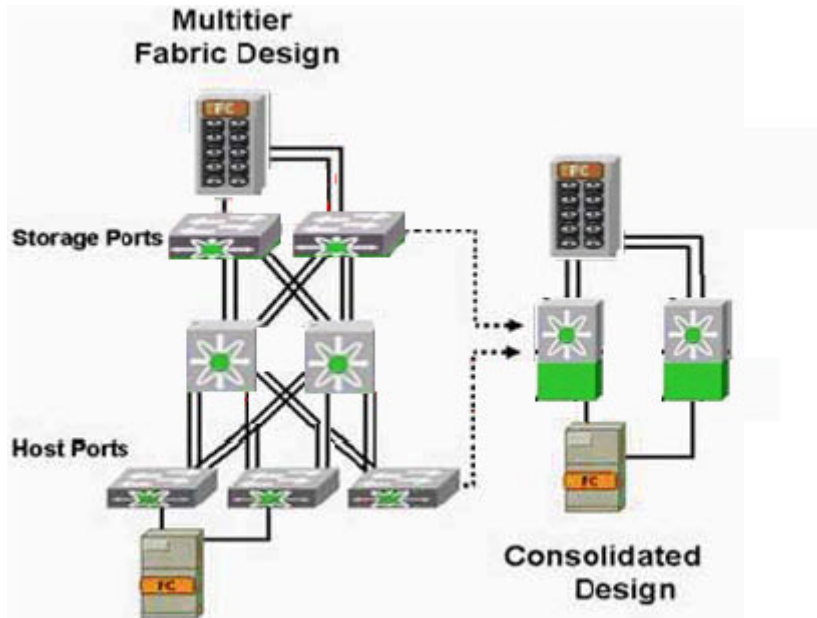reduce spending and to maximize resources?

A. Reduce the WAN bandwidth.
B. Implement FCIP to consolidate all remote SANs.
C. Implement backup consolidation.
D. Centralize the data center and implement an iSCSI solution.

Answer: C

QUESTION 98:

Exhibit:

Refer to the exhibit. Which three outcomes would a customer realize by performing the migration from a multitier fabric design to a consolidated design? (Choose three.)

A. lower effective port cost
B. high availability because of the multifaceted redundancy that is built into the Cisco MDS switch
C. lower effective port count
D. higher effective port cost
E. higher effective port count
F. lower availability because there are fewer fabric switches for failover

Answer: A,B,E

QUESTION 99:

What are two MDS features that increase the efficiency of a multiple switch Fibre Channel fabric? (Choose two.)

A. Port Channel
B. CDP
C. FCP
D. FCC
E. CUP

Answer: A,D

QUESTION 100:

What provides storage virtualization from IBM?

A. Advanced Services Module (ASM)
B. Caching Services Module (CSM)
C. Storage Services Module (SSM)
D. Cisco MDS 9000 32-port 1/2-Gbps FC Module
E. IP Multiprotocol Services Module

Answer: B

QUESTION 101:

A customer is concerned about the security of the SAN. The customer wants to prevent unauthorized hosts and switches from connecting to the SAN fabric. Which technology should be enabled on the Cisco MDS 9000 Series SAN to accommodate this requirement?

A. DHCAP
B. role-based authorization
C. zones
D. SSH

Answer: A

QUESTION 102:

Which four secure management protocols are used to enable intelligent SAN security? (Choose four.)

A. SSH
B. Secure TFTP
C. SNMP
D. FTP
E. DNS
F. RADIUS-based AAA

Answer: A,B,C,D

QUESTION 103:

When designing a SAN, what is considered to be the most significant security threat?

A. Denial of Service attacks

B. Management Access
C. WWN Spoofing
D. FC_ID Spoofing
E. Host to Storage data paths

Answer: B

QUESTION 104:

Which tool requires the Cisco Fabric Manager Server License to operate?

A. Cisco Performance Manager
B. Cisco Fabric Manager
C. Cisco Device Manager
D. Cisco Fabric Analyzer

Answer: A

QUESTION 105:

What are two characteristics of iSCSI? (Choose two.)

A. iSCSI initiators cannot be members of more than one VSAN.
B. The port VSAN of an iSCSI interface cannot be modified.
C. iSCSI cannot benefit from existing IP QoS.
D. By default, dynamically mapped iSCSI initiators are members of VSAN 1.
E. The IPS module creates one or more FC virtual N_Ports for each iSCSI host.
F. By default, all statically mapped iSCSI initiators are members of VSAN 4094.

Answer: D,E

QUESTION 106:

In a core-edge SAN implementation, which statement is true about oversubscription?

A. When using full-rate mode ports, there is no oversubscription in a core-edge implementation.
B. A core-edge design has manageable oversubscription, but at the cost of used ISL ports.
C. Oversubscription in a core-edge design is implemented by using N_Ports.
D. When using a core-edge design, there is only oversubscription when it is implemented in a heterogeneous environment.

Answer: B

QUESTION 107:

Which technology should be used to provide transparent low latency FC transport across a metropolitan area?

A. DWDM
B. FCIP
C. iSCSI
D. iFCP

Answer: A

QUESTION 108:

Which Fibre Channel SAN topology maximizes performance and expandability?

A. multi-point
B. point-to-point
C. arbitrated loop
D. switched fabric
E. star

Answer: D

QUESTION 109:

What are three causes of host oversubscription? (Choose three.)

A. the operating system
B. the PCI bus limitations
C. the RTO and RPO values
D. whether the HBA has a flat FCIDs assigned
E. the limits on the maximum I/O and bandwidth rate

Answer: A,B,E

QUESTION 110:

What are three array characteristics that are crucial when planning a SAN design?
(Choose three.)

A. fan-in ratio
B. connection speed
C. embedded cache controller
D. RAID level support
E. active/passive controller

Answer: B,C,E

QUESTION 111:

What are two benefits of the Cisco MDS Series Switches that increase the overall resiliency of SAN extension? (Choose two.)

A. VSANs and IVR can eliminate the potential disruption of a WAN failure.
B. VSANs and IVR can increase resiliency by combining control traffic and data traffic over the WAN.
C. Parallel tunnels and PortChannels eliminate failure of every VSAN or IVR in the local fabric.
D. PortChannels and VSANs can be used with FCIP to provide end-to-end redundancy and load balancing.
E. Recovery at the PortChannel level, instead of at the FSPF routing level, provides nondisruptive recovery.

Answer: D,E

QUESTION 112:

A customer is planning to deploy a new storage-area-network infrastructure. The customer has five buildings within corporate headquarters, each with a separate data center. Four of the five data centers serve separate business units, while the fifth serves as the primary data center for the entire company. The customer would like to deploy the SAN in such a way that each of the five data centers will have its own storage-network infrastructure and connectivity amongst each other. The customer is planning to enable long-distance connectivity from the primary data center for the purposes of replicating data from all of the data centers across the country. Which SAN topology would you recommend that the customer deploy?

A. core-edge
B. collapsed core
C. partial mesh
D. full mesh

Answer: A

QUESTION 113:

Which statement is true about when the Cisco MDS switch is operating in native mode?

A. Native mode is the only mode available on the MDS switch, and thus the switch is able to operate with all other storage switches because all storage switches are

certified by SNIA.
B. If the products of other storage-switch vendors strictly adhere to published
standards, they will be able to interoperate with MDS in native mode.
C. Most commonly deployed switches in the marketplace today can interoperate
with the switches of other vendors while functioning in their default or native mode.
D. Non-MDS switches are able to interpret the Cisco EISL header and thus can
interpret VSAN information.

Answer: B

QUESTION 114:

What are three key benefits of implementing a SAN using iSCSI? (Choose three.)

A. uses existing IP networking, monitoring, and management infrastructure
B. is more efficient than FC since it requires fewer encapsulations
C. maintains consistent performance over IP networks of varying distances
D. significant capital cost reduction by substituting iSCSI as a transport technology
E. extends existing FC SAN to IP connected hosts

Answer: A,D,E

QUESTION 115:

At which point can security on a Fibre Channel SAN be implemented? (Choose
three.)

A. storage array
B. server
C. Fibre Channel switch
D. GigE NIC
E. SFP connector

Answer: A,B,C

QUESTION 116:

A customer recently deployed a core-edge storage network infrastructure that
consists of several Cisco MDS directors and fabric switches. The directors are
deployed in the core of the network, and the fabric switches are deployed as edge
devices. The edge devices are connected to the core by PortChannels, which consist
of four links. The customer is interested in in-band management of the fabric using
TCP/IP. Which two configurations are required for enabling in-band management
of the fabric using TCP/IP? (Choose two.)

A. VRRP

B. FCIP
C. IPFC
D. synchronization of management users and passwords
E. VSAN IP addresses

Answer: C,E

QUESTION 117:

A customer has deployed two Cisco MDS 9509 Multilayer Directors. One MDS 9509 is deployed in each of two separate data centers. The primary data center is always active, and the secondary data center is considered a standby site. The data centers are connected together by a single Gigabit Ethernet connection that is shared by many departmental networks within the company. The network connection is unreliable and is frequently out of service. The storage administrator needs to synchronously replicate data from an array in the production data center to an array in the standby data center, but is concerned about the network instability impacting the production data center. Which feature would you recommend to the administrator to minimize disruption?

A. PortChannel
B. Fibre Channel over IP
C. Inter-VSAN Routing
D. Fibre Channel Congestion Control
E. Fibre Channel timeout values

Answer: A

QUESTION 118:

Select three characteristics of the Cisco coarse wave division multiplexing (CWDM) solution. (Choose three.)

A. multiplexes up to eight wavelengths across a single fiber pair
B. supports a maximum connection length of 220 kilometers
C. supports both linear and ring topologies
D. requires OADMs (optical add/drop multiplexers) to aggregate multiple wavelengths across the same fiber pair
E. can be optically amplified to extend the distance characteristics

Answer: A,C,D

QUESTION 119:

What are three reasons to implement VSANs in a Fibre Channel SAN? (Choose three.)

A. to reduce network infrastructure requirements
B. to increase data security
C. to enable port-channeling
D. to enable TCP/IP routing
E. to share SAN extension capability using EISLs

Answer: A,B,E

QUESTION 120:

What is considered the optimal topology for deployment of Fibre Channel SANs using Cisco MDS family products? (Choose two.)

A. mesh
B. ring
C. core-edge
D. collapsed core
E. core-edge with VSAN

Answer: D,E

QUESTION 121:

A large credit card processing firm is adding a second data center to support business continuance. What is the recommended solution for extending the SAN to the second data center if both data centers are active?

A. asynchronous replication using FCIP
B. dual homed servers, and IP connectivity using multiple paths
C. iSCSI installation and a bridge the Ethernet network to the Fibre Channel fabric
D. synchronous replication using DWDM

Answer: D

QUESTION 122:

A customer has storage arrays from multiple vendors, and is considering a virtualization solution to simplify storage management. Choose three advantages of using a Cisco MDS-based virtualization solution with an MDS 9500 Series Director instead of host-based or storage-based virtualization solutions. (Choose three.)

A. host and storage heterogeneity
B. LUN masking that is simpler to implement
C. virtualization that is closer to the target
D. virtualization that is embedded in the switch module

E. availability

Answer: A,D,E

QUESTION 123:

A customer is considering designing a new storage-network infrastructure to simplify storage network management. The existing solution uses ten 16-port 1-Gbps Fibre Channel switches. Two of the switches are deployed as core switches, and the remaining eight switches are deployed as edge switches. Each edge switch has an ISL to each of the two core switches. The disk array has four 1-Gbps Fibre Channel interfaces. Two interfaces connect to each of the core switches. Each of the 96 servers has a single 1-Gbps Fibre Channel host bus adapter. Which configuration would provide equivalent or better performance while simplifying infrastructure management?

A. two Cisco MDS 9140 Fabric Switches
B. two Cisco MDS 9216 Fabric Switches, each with one 32-port Fibre Channel line card
C. one Cisco MDS 9506 Multilayer Director with two 16-port Fibre Channel line cards and two 32-port Fibre Channel line cards
D. one Cisco MDS 9506 Multilayer Director with four 32-port Fibre Channel line cards

Answer: D

QUESTION 124:

Which three applications would be best suited for a SAN rather than a NAS environment? (Choose three.)

A. web content services
B. order entry and inventory tracking
C. enterprise resource planning (ERP)
D. office productivity suites (for example, Microsoft Office)
E. credit card transactions
F. engineering collaboration (for example, CAD and CAM)

Answer: B,C,E

QUESTION 125:

A fully loaded Cisco MDS 9506 Multilayer Director requires 2190 watts of power. If 110-volt power is provided to the switch, at which power mode would the switch operate?

A. The director would operate in redundant mode only.
B. The director would operate in combined mode only.
C. The director would operate in redundant mode or combined mode.
D. The director cannot operate with 110-volt power.

Answer: B

QUESTION 126:

What feature of the MDS 9000 family would be most valuable in establishing a baseline of the traffic load on an existing network prior to making changes?

A. SPAN
B. RSPAN
C. FC-SP
D. Performance Manager
E. AAA

Answer: D

QUESTION 127:

What are three advantages of a collapsed-core architecture? (Choose three.)

A. This design provides the most efficient use of ports because no ports are consumed for ISLs.
B. The absence of ISLs significantly decreases reliability and manageability.
C. The absence of any oversubscription increases switch throughput.
D. Since there are fewer available paths over which traffic may travel, FSPF values are higher.
E. Ports can be scaled easily by adding hot-swappable blades without disrupting traffic.
F. The highest performance is achieved by director-class switches, because the high-speed backplane provides low fixed latency between any two ports.

Answer: A,E,F

QUESTION 128:

A customer wants to consolidate the storage in an existing SAN where Cisco MDS Series Switches are deployed. How can the customer accomplish this goal and still be able to retain full access to the data?

A. dual supervisor modules
B. virtual output queuing (VOQ)
C. stateful failover

D. universal interoperability mode 4
E. per-VSAN FSPF routing

Answer: E

QUESTION 129:

A customer is designing a SAN for each of two data centers. The two data centers are connected by dark fiber, which is owned by the customer. Cisco ONS platforms terminate the fiber and provide service aggregation. The customer requirements include that the SAN in each data center meet or exceed five nines of availability and be interconnected using 16 separate lambdas. The customer has four storage devices in each data center, and each storage device has four Fibre Channel interfaces. Each data center has 32 servers, and each server has two host bus adapters. The majority of the servers require only 20 to 30MBps of throughput on average, but four of the servers require 150 MBps of throughput on average. What will provide the most cost-effective design to satisfy these requirements?

A. two Cisco MDS 9216 Fabric Switches in each data center, each MDS 9216 with an additional 16-port Fibre Channel line card
B. two Cisco MDS 9216 Fabric Switches in each data center, each MDS 9216 with an additional 32-port Fibre Channel line card
C. two Cisco MDS 9506 Multilayer Directors with one in each data center, each MDS 9506 with two 16-port Fibre Channel line cards and two 32-port Fibre Channel line cards
D. two Cisco MDS 9509 Multilayer Directors with one in each data center, each MDS 9509 with two 16-port Fibre Channel line cards and three 32-port Fibre Channel line cards

Answer: C

QUESTION 130:

What technology minimizes the potential for service interruption on SAN extension links?

A. FCIP
B. VRRP
C. VSANs and IVR
D. Port Channeling

Answer: B

QUESTION 131:

A customer has 12 hosts, each capable of a maximum burst I/O rate of 75 MBps.

The customer wants to connect these hosts to the fabric with a 32-port line card. For optimal performance what is the maximum number of hosts that should be connected to any four-port, host-optimized quad?

A. one
B. two
C. three
D. four

Answer: C

QUESTION 132:

A customer has the following application and peak-bandwidth requirements:Four database servers: 50 MBps eachFour exchange servers: 30 MBps each20 midrange development servers: 20 MBps eachWhich dual-fabric designs would best meet the needs of this price-sensitive customer while allowing for future SAN extension capability?

A. two Cisco MDS 9216i Multilayer Fabric Switches, each with an IPS-8 module
B. two Cisco MDS 9216A Multilayer Fabric Switches, each with an SSM module
C. two Cisco MDS 9216i Multilayer Fabric Switches, each with a 16-port FC module
D. two Cisco MDS 9216A Multilayer Fabric Switches, each with a 32-port FC module

Answer: A

QUESTION 133:

Which two design criteria require VLANs in a proposed solution? (Choose two)

A. security between departments
B. segmenting collision domains
C. segmenting broadcast domains
D. video steaming on the LAN
E. limited budget of the corporation
F. use of multivendor equipment

Answer: A, C

QUESTION 134:

Which statement describes IPv6 address route summarization?

A. IPv6 address have to converted to IPv4 address to be summarized
B. Classless Inter Domain Routing (CIDR) for IPv6 automatically performs route

summarization
C. IPv6 addresses cannot use route summarization
D. IPv6 address have built in route summarization based on Top Level Aggregators, Next
Level Aggregators and Site Level Aggregators.
E. The routers in the IPv6 network use proprietary protocols to optimize summarization
based on the size of their routing tables.

Answer: D

QUESTION 135:

A converged voice and data network is designed to carry voice calls on-net as close a
possible to the destination to reduce long distance charges. What are two reasons
that a VoIP call could go off earlier than designed? (Choose two)

A. The local voice gateway detects lack of bandwidth.
B. The destination routing is not configured on both local and remote gateways.
C. The local call manager server is too busy to process the call.
D. The telephone user dials access code.

Answer: A, D

QUESTION 136:

A manufacturing company has decided to add a website to enhance sales. The web
servers in the E-Commerce module must be accessible without compromising
network security. Which two design recommendations can be made to meet their
requirements? (Choose two)

A. Use intrusion detection on the E-Commerce server farm
B. Limit the number of incoming connections to the module
C. Place E-Commerce servers and application servers on isolated LANs (DMZs)
D. Move the E-Commerce servers to the WAN module to provide tight security.
E. Use private and public key encryption

Answer: A, C

QUESTION 137:

A global corporation has 2,000,000+ host and 10,000+ routers in their internal
network. They also have connectivity to the Internet and do high volumes of traffic
with their business partners and the public at large. They have decided to start
using IPv6. Which statement best describes a flexible IPv6 strategy for this
corporation?

A. IPv6 hosts and IPv6 routers

B. dual stack hosts and dual stack routers
C. dual stack hosts and IPv4 routers
D. IPv4 hosts and IPv6 routers

Answer: B

QUESTION 138:

A network that is running Voice over Frame Relay (VoFR) is experiencing delay and delay variation due to sterilization of packets of varying size. This condition is causing voice quality problems. Which solution can be added to the network at the sending end to reduce these problems?

A. dejetter buffers
B. hardware digital signal processors
C. link fragmentation and interleaving
D. coding algorithm

Answer: C

QUESTION 139:

An established network is experience DoS attacks against a specific server in E-Commerce module. The operating system on the server has been upgraded and patched and all unnccded services have been tuned off, but the attacks are continuing. What action should be recommended to reduce these attacks?

A. Block all UDP traffic to the affected server by using ACLs at the firewall.
B. Add more servers running the same application as the affected server.
C. Block all TCP traffic to the affected server by using ACLs at the firewall.
D. Limit the correction rate to the affected server at the firewall.

Answer: D

QUESTION 140:

Very large organizations hasreceived its IPv6 address range from their Internet Service Provider and intend to only use IPv6 address internally. They will access the Internet through port address translation (PAT). What is required for their Domain Name Servers, DNS?

A. They no longer need DNS servers
B. Their DNS servers need to support both IPv4 and IPv6 addresses
C. Their DNS servers need to support only IPv6 addresses
D. Their DNS servers need to support only IPv4 addresses
E. They need additional DNS servers in their network just for IPv6 addresses

F. There are no changes required to their DNS servers

Answer: B

QUESTION 141:

RST Corporation is planning to upgrade its current network. The chief technology officer (CTO) has supplied a topology diagram and an IP addressing scheme of the current network during an interview. The company has been growing at about twenty percent per year and it has been difficult to maintain customer support at a satisfactory level. The RST board has met and directed the CTO to look into network improvements.
Which two items are most relevant in documenting RST's business requirements?

A. improved customer support
B. existing network topologies
C. IP addresses assigned by the ISP
D. projected growth
E. frequency of board meetings

Answer: A, D

QUESTION 142:

In Cisco VoIP implementation what is used on a router to associate physical voice ports with phone numbers?

A. automatically route selections
B. translation patterns
C. IP telephony
D. dial neers

Answer: D

QUESTION 143:

What is the default encapsulation for synchronous serial interfaces on Cisco routers?

A. ATM
B. HDLC
C. PPTP
D. Frame Relay
E. GRE

Answer: B

QUESTION 144:

How does Roles Based Access Control (RBAC) enhance manageability in an environment with VSANs?

A. limit operator errors by isolating user management domains within a large physical infrastructure
B. specifies port membership to a specific VSAN
C. configures security options for host ports that are assigned to a VSAN
D. configures VSAN membership for specific trunk ports

Answer: C

QUESTION 145:

What is the impact of IPv6 on the BGP protocol?

A. There is a new version of BGP for IPv6
B. Host converts BGP to IS-IS for IPv6
C. Host converts BGP to IS-IS for IPv6
D. There is no change for BGP between Ipv4 and IPv6
E. BGP cannot be used with IPv6

Answer: A

QUESTION 146:

An enterprise needs to connect networks at high data rates. The networks are located in different buildings with a clear line-of-sight.
Which technology is a solution for this need?

A. broadband fixed wireless
B. cellular wireless
C. wireless LAN
D. Mobile IP
E. ISDN

Answer: A

QUESTION 147:

What is the benefit of using FCC in a Cisco storage network?

A. allows interoperability with other vendor features in a SAN fabric
B. provides congestion control in a storage array efficiently managing buffers

C. allows traffic to be switched between VSANs at a higher rate of speed
D. can be used to manage congestion in a multi-hop environment

Answer: B

QUESTION 148:

What is the impact of IPv6 on the OSPF protocol?

A. Host converts OSPF to IS-IS for IPv6
B. Host converts OSPF to IS-IS for IPv6
C. There is no change for OSPF between Ipv4 and IPv6
D. OSPF can not be used with IPv6
E. There is a new version of OSPF for IPv6

Answer: E

QUESTION 149:

Which two statements are characteristics of data link layer broadcasts? (Choose two)

A. Broadcasts are not forwarded by routers.
B. Broadcasts do not occur at Layer 3.
C. Broadcasts are restricted to port with active, end-user devices.
D. Broadcasts can be controlled with the use of VLANs.

Answer: A, D

QUESTION 150:

A government agency data center that is used for tax processing is located in an earthquake fault zone. A backup data center, located 300 km away, is linked to the main center over an OC-3 connection. Which of the following provides the best solution to extend the SAN for business continuance and for support of their IP applications?

A. synchronous replication using FCIP
B. iSCSI
C. FCIP and asynchronous replication
D. Dark fiber connectivity and use of synchronous replication over FC

Answer: C
Not A: 300 km is to far for synchronous FCIP

QUESTION 151:

What three subsystem characteristics should be considered when designing a
storage backup solution? (Choose three)

A. sustained tape write speed
B. robotics-equipped tape array
C. tape connectivity (i.e. SCSI bridge)
D. tape library capacity
E. tape subsystem mirrored cache size

Answer: A, B, E

QUESTION 152:

Which command assigns an IP address to the management interface on a Catalyst
5000 switch?

A. interface tty
B. ip address sc0
C. set interface sc0
D. set ip manage address

Answer: C

QUESTION 153:

What are three benefits of storing consolidation?

A. reduced management cost through common management applications administered by
fewer people
B. reduce bandwidth demands on the network
C. increase accessibility of corporate data
D. discontinued use of fibre channel
E. greater use of existing disk space

Answer: A, B, E
Not D: fiber channel is apart of consolidation

QUESTION 154:

Refer to exhibit. Certkiller .com plans to add a tape backup system to its existing
storage network. What location is most appropriate for this device?

A. A
B. A

C. C
D. D

Answer: C

QUESTION 155:

Which type of cable connects two access-layer switches using a 10/100 Ethernet port
on each?

A. Cat-5 UTP crossover cable
B. RJ-45 to DB-9 terminal cable
C. RJ-45 to RJ-45 rollover cable
D. RJ-45 to RJ-45 straight-through cable

Answer: A

QUESTION 156:

What MDS 9000 feature provides more efficient SAN utilization by creating
hardware-based isolation environments within a single physical SAN
infrastructure?

A. VSAN
B. SPAN
C. Trunking
D. Port channel
E. Zones

Answer: A

QUESTION 157:

While performing a backup, the tape drive has stopped spinning because of lack of
data. What are two potential problems when this occurs? (Choose two)

A. A host has stopped transmitting
B. FC frames are being fragmented
C. The FC switch port cannot be negotiate the proper speed
D. Network congestion exists
E. SPAN was enabled the tape port

Answer: B, C

QUESTION 158:

Which statement about Ethernet is true?

A. CSMA/CD technology is not used on switch ports.
B. Cabling for Fast Ethernet is limited to UTP and fiber optic.
C. Full-duplex operation increases Ethernet transmission speed.
D. Cabling distance should not exceed 328 meters between active devices.

Answer: B

QUESTION 159:

Which statement is correct with regards to VSANs?

A. Multiple VSANs can be defined in each Zone
B. VSANs limit broadcast traffic
C. Standard zones cross VSAN boundaries
D. An F port can have membership in multiple VSANs

Answer: B

QUESTION 160:

Certkiller .com has two data centers connected by dark fiber and also has a
requirement for asynchronous data replication between the two data centers. If the
data centers are 48 km apart, what is the most cost effective solution?

A. CWDM
B. IVR
C. SFPF
D. DWDM
E. Native TC

Answer: A

QUESTION 161:

Which transmission method is most efficient when a host needs to send data to a
specific group of clients?

A. unicast
B. webcast
C. multicast
D. broadcast

Answer: C

QUESTION 162:

Which statement is correct regarding the MDS 9000 Series of products?

A. data encryption
B. IP routing
C. Fibre Channel switching
D. iSCSI routing

Answer: A

QUESTION 163:

Certkiller .com has two data centers connected by dark fiber and also has a requirement for asynchronous data replication between the two data centers. If the data centers are 8 km apart, what is the most cost effective solution?

A. CWDM
B. DWDM
C. Native FC
D. VSAN

Answer: A

QUESTION 164:

How do IGMPv1 clients leave a multicast group?

A. without sending any notification
B. after sending an IGMP Leave message
C. by sending a unicast message to the router
D. by stopping the periodic heartbreak messages to the router

Answer: A

QUESTION 165:

Which two methods or tools are used to verify a network design produced by network modeling tools, decision tables, and strategic analysis tools? (Choose two)

A. simulation and test tools
B. network management tools
C. a pilot or prototype network
D. redesign documentation

Answer: A, C

QUESTION 166:

In order of for the two sites shown on the diagram to transfer a large amount of data in an efficient manager (utilizing available bandwidth), which three routing protocols could you deploy in the routers? (Choose three)

A. OSPF
B. EIGRP
C. RIPv2
D. RIPv1
E. IGRP
F. BGP

Answer: A, B, E

QUESTION 167:

Which are default settings for IGMP on a catalyst 5000 switch?

A. IGMP snooping enabled and PIM enabled
B. IGMP snooping enabled and CGMP enabled
C. IGMP enabled and IGMP snooping disabled
D. IGMP snooping enabled and CGMP disabled
E. IGMP snooping disabled and CGMP disabled

Answer: E

QUESTION 168:

What are three host characteristics that are crucial when planning a SAN design? (Choose three)

A. host operating system
B. data replication
C. application I/O throughout
D. type of file system
E. CUP and memory resources
F. multipathing

Answer: BDE

QUESTION 169:

To reduce the bandwidth required for each voice call over a converged network, which codes Cisco recommended for WAN links?

A. G711
B. G723
C. G728
D. G729

Answer: D

QUESTION 170:

Which multicast technology specifies a unique forwarding path between each
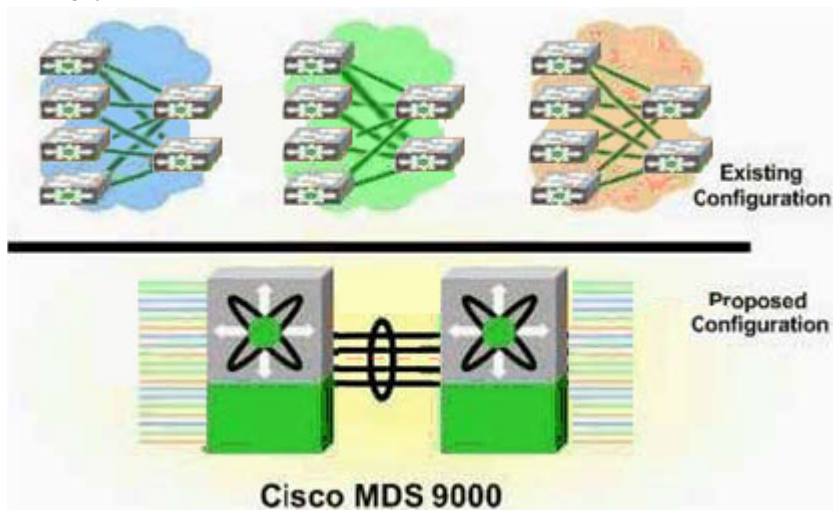member of a multicast group?

A. CGMP
B. VLANs
C. IGMP snooping
D. distribution trees

Answer: D

QUESTION 171:

Exhibit

Cisco MDS 9000

What topology allows the customer network, made up of several SAN islands, to be
integrated into a single SAN topology, and still retain its existing functionality?

A. Core-Edge Topology
B. VSAN with Collapsed-Core Topology
C. VSAN with Core-Edge Topology
D. Single Large SAN Fabric

Answer: C

QUESTION 172:

When designing a SAN, what is considered to be the most significant security threat?

A. Denial of Service attacks
B. Management Access
C. WWN Spoofing
D. FC_ID Spoofing
E. Host to storage data paths

Answer: D

QUESTION 173:

Which statement about Root Path Cost is true?

A. It is the Path Cost of a particular Root Port.
B. It is the cost sent from the Root Bridge to all non-Root bridges.
C. This value is the cumulative cost of all the links leading to the Root Bridge.
D. This value is the cumulative cost of all links sent from the Designated Port of the Root Bridge.

Answer: C

QUESTION 174:

A small state college is planning to improve the performance of their campus network. Which information provided by the college is least relevant to new design?

A. location of wiring closets
B. number of users
C. applications used
D. speed of the network

Answer: A

QUESTION 175:

Which two characteristics are affected by choice of codec when designing networks to carry IP telephony? (Choose two)

A. voice quality
B. silence packet handling
C. voice packet header size
D. bandwidth required for voice calls

Answer: A, D

QUESTION 176:

What are two methods to maintain a consistent VLAN database in a VTP domain? (Choose two)

A. do not configure any switches as a VTP server
B. ensure that all switches not authorized to make changes are in client mode
C. always configure switches using VTP server mode when adding them to the existing network
D. allow only one VTP server in each domain so that adding and deleting VLANs can be centralized to one location

Answer: B, D

QUESTION 177:

You are proposing a multi layer switching solution with multiple paths to a global organization. The proposal is to replace their current non-redundant network of routers. Which three benefits of multi layer switching would you emphasize when you present your proposed design to the organization's board of directors?

A. smaller broadcast domains
B. increased network availability
C. increased security due to VLAN functionality
D. increased network performance
E. fast convergence due to OSPF protocol use
F. increased throughput due to multiple paths

Answer: B, D, F

QUESTION 178:

You have designed and implemented a SAFE network, but users still complain of isolated DoS attacks directed at specific hosts in the e-commerce module. You have limited the connection rate at the Internet firewall, but the problem persists. What more can you do to reduce the effects of these attacks?

A. Ensure all relevant OS patches have been applied.
B. Block all UDP traffic to these servers at the Internet firewall
C. Block all TCP traffic to these servers at the Internet firewall
D. Move the affected servers to the DZM

Answer: A

QUESTION 179:

Which two VTP modes can create and delete VLANs on their own switches?
(Choose two)

A. Client
B. Server
C. Transparent
D. Pass-through

Answer: B, C

QUESTION 180:

When designing an IP address scheme for inter-area connectivity, why is it
important to segment each area into contiguous blocks of addresses?

A. control route cost
B. route aggregation
C. reduce address assignments
D. accommodate future move to IPv6

Answer: B
QUSETION NO: 49
You've designed a converged network to carry voice calls on-net as close as possible
to the destination to avoid long distance charges. Which two are reasons that a VoIP
call could go off-net earlier than designed? (Choose two)

A. remote voice gateway sending busy-back signal
B. destination routing not configured on local and remote gateways
C. call manager server is too busy to process the call
D. the telephone user dials an access code

Answer: A, D

QUESTION 181:

Which two statements are true about the difference between an "On" trunking
mode and a "Nonegotiate" trunking mode? (Choose two)

A. A port configured with trunking mode nonegotiate will not send out DTP or DISL
packets.
B. A port configured with trunking mode "On" will only form a trunk properly with a
port configured with trunking mode on.
C. A port configured with trunking mode "On" will form a trunk properly with a port

configured with any trunking modes except off.
D. A port configured with trunking modes nonegotiate will only form a trunk properly
with a port configured with trunking mode nonegotiate.

Answer: A, C

QUESTION 182:

You are documenting the existing network of Certkiller .com with a large installed
Cisco network. You have prepared this list of the routers in use on the network.
435 Cisco model 2600 routers
129 Cisco model 3600 routers
10 Cisco model 7500 routers
Which two additional items of information would be most valuable to complete your
documentation of these routers? (Choose two)

A. error statistics
B. power requirements
C. interface options
D. software revisions
E. management protocols

Answer: CD

QUESTION 183:

Which two methods or tools are used to verify a network design produced by
network modeling tools, decision tables, and strategic analysis tools? (Choose two)

A. simulation and test tools
B. network management tools
C. a pilot or prototype network
D. redesign documentation

Answer: A, C

QUESTION 184:

Which two statements about the ISL protocol are true? (Choose two)

A. It can be used between Cisco and non-Cisco switch devices.
B. It calculates a new CRC field on top of the existing CRC field.
C. It adds 4 bytes of protocol-specific information to the original Ethernet frame.
D. It adds 30 bytes of protocol-specific information to the original Ethernet frame.

Answer: B, D

QUESTION 185:

When collecting information about Certkiller .com's existing network, which two
information sources will provide the most accurate data? (Choose two).

A. existing network topology diagram
B. customer interview
C. traffic analysis
D. configurations obtained from network equipment
E. customer-supplied server list

Answer: C, D

QUESTION 186:

Which three terms describe the primary functions of the distribution layer of the
campus network design hierarchy? (Choose three)

A. end-user connectivity
B. connects access devices to the core backbone
C. provides WAN connections
D. enforces security policies
E. provides QoS services
F. high speed transport

Answer: B, D, E

QUESTION 187:

What are two benefits provided in VTP Version 2 but NOT in VTP Version 1?
(Choose two)

A. supports Token Ring VLANs
B. allows VLAN consistency checks
C. saves VLAN configuration memory
D. reduces the amount of configuration necessary
E. allows active redundant links when used with spanning tree

Answer: A, B

QUESTION 188:

A prototype network is used to test a proposed network redesign solution. Although
the test seemed to be successful, network performance is unacceptable when
implemented in the live network. What was wrong with the prototype network test?

A. The prototype should have been built on the live network.
B. The prototype failed to test for the proper characteristics.
C. The prototype network didn't match the live network exactly.
D. Different configuration parameters existed in the prototype network.

Answer: B

QUESTION 189:

The diagram shows a standard layer 2 campus network design. Which numbered box represents the Core Layer?

A. #1
B. #2
C. #3
D. #4
E. #5

Answer: C

QUESTION 190:

You must configure an Ethernet trunk to operate in ISL mode between two Cisco switches. Which two are required at each end of the link for the trunk to operate correctly? (Choose two)

A. An identical VTP mode
B. an identical speed/duplex
C. an identical trunk negotiation parameter
D. an identical trunk encapsulation parameter

Answer: B, D

QUESTION 191:

What are two reasons to use a prototype network instead of a pilot network when testing a network redesign? (Choose two)

A. cheaper to implement
B. doesn't impact a live network
C. more modeling tools available
D. more accurate test results
E. more flexible test environment

Answer: B, E

QUESTION 192:

The diagram shows a standard layer 2 campus network design. Which numbered box represents the Distribution Layer?

A. #1
B. #2
C. #3
D. #4

Answer: B

QUESTION 193:

Which two statements are true about a trunk link? (Choose two)

A. IEEE 802.10 can be used for Ethernet trunk links.
B. A trunk link can be associated with a native VLAN.
C. A trunk link is a more efficient use of physical interfaces and cabling.
D. A trunk link bonds multiple physical interfaces to work as one logical interface.

Answer: B, C

QUESTION 194:

Which two technologies reduce the amount of traffic generated by VoIP calls?
(Choose two)

A. grade of service (GoS)
B. quality of service (QoS)
C. voice activation detection (VAD)
D. compressed real-time transport protocol (cRTP)
E. automatic route selection

Answer: C, D

QUESTION 195:

Which multicast technology specifies a unique forwarding path between each member of a multicast group?

A. CGMP
B. VLANs
C. IGMP snooping
D. distribution trees

Answer: D

QUESTION 196:

Which feature allows the previously blocked redundant path of a switch to begin forwarding once a link failure on the forwarding link is detected?

A. PortFast
B. UplinkFast
C. BackboneFast
D. SwitchlinkFast
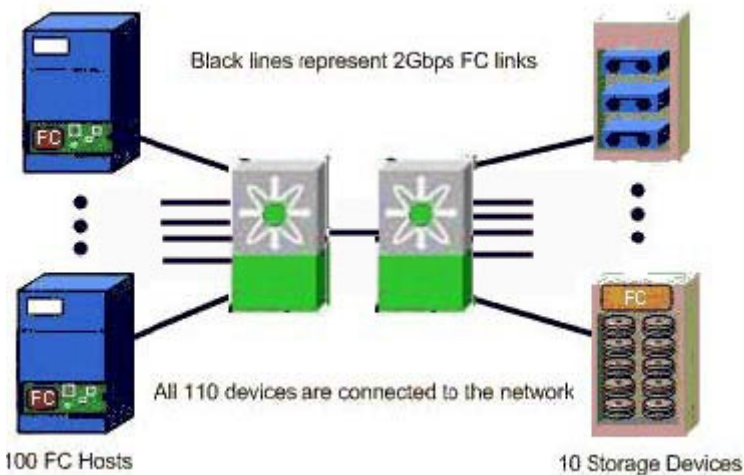
Answer: B

QUESTION 197:

Your customer wants to run voice traffic over the existing frame relay network, but isn't prepared to deploy IP telephones at this point. What networking hardware would you use to accommodate this request?

A. call manager
B. voice gatekeeper
C. voice gateway
D. Multi Control Unit (MCU)
E. Frame Relay Access Device (FRAD)

Answer: C

QUESTION 198:

What are three Cisco value-added features that could be used to enhance the throughput of this FC network? (Choose three)

A. Port-Channel
B. VSAN
C. VOQ
D. FCC
E. RBAQ

Answer: B, C, E

QUESTION 199:

Which four are user-configurable modes of EtherChannel with PAgP? (Choose four)

A. On
B. Off
C. Auto
D. Enable
E. Disable
F. Desirable

Answer: A, B, C, F

QUESTION 200:

Which two Cisco router services perform network traffic analysis to assist in documenting Certkiller .com's existing network? (Choose two)

A. Netflow
B. CDP
C. MRTG
D. NetMon
E. SNMP MIB compiler

Answer: A, B

QUESTION 201:

Exhibit
*** MISSING***
Refer to the exhibit. What protocol should be used to connect the storage networks at the two sites?

A. FCIP
B. FC
C. iSCSI

D. TCP/IP

Answer: C

QUESTION 202:

Which two functions does enabling UplinkFast on a switch perform? (Choose two)

A. decreases the MaxAge timer to expire aged BPDUs
B. increases the Port Cost of all local switch ports by 3,000
C. increases the bridge priority to ensure that it does not become the Root Bridge
D. decreases the bridge table timer so old entries can be flushed at a faster rate

Answer: B, C

QUESTION 203:

Which network analysis tool can produce a graph of traffic utilization on router interfaces?

A. NBAR
B. MRTG
C. NetFlow
D. Cisco NetProfiler

Answer: B

QUESTION 204:

Which technology should be used to provide transparent low latency FC transport across a metropolitan area?

A. DWDM
B. FCIP
C. iSCSI
D. iFCP

Answer: B

QUESTION 205:

Which three statements about the spanning-tree forward delay value are true?
(Choose three)

A. Default values for the network are obtained from the Root Bridge.
B. All switch ports must use the values learned from the Root Bridge.

C. The delay can be abbreviated on a switch's slot port by setting the port fast feature.
D. The value signifies the amount of time the port spends transitioning from listening to learning mode.
E. The value signifies the amount of time the port spends transitioning from blocking to listening mode.

Answer: A, B, D

QUESTION 206:

What is typically required to optimize performance on an MDS gigabit port?

A. enable credit-based TCP flow control
B. manually configure IP MTU size
C. manually configure TCP window size
D. enable fast-start congestion avoidance feature

Answer: C

QUESTION 207:

What is Cisco's recommended best practice when designing a SAN fabric made up of both Fibre Channel and FICON attached devices?

A. Turn off Zoning for FICON ports
B. Use hard Zoning to secure FICON ports
C. Use soft Zoning to secure FICON hosts
D. Place all FICON hosts in a single VSAN

Answer: A

QUESTION 208:

Which command shows the current Root Bridge for VLAN 1 in a Catalyst 5000?

A. show span 1
B. show spantree
C. show bridge vlan 1.
D. show spantree root bridge

Answer: B

QUESTION 209:

What IETF standard target-discovery mechanism is used in iSCSI?

A. Service Location Protocol
B. Internet Storage Name Service
C. SendTargets
D. FC Name Service

Answer: A

QUESTION 210:

What feature of the MDS 9000 Family would be most valuable in establishing a baseline of the traffic load on an existing network prior to making changes?

A. SPAN
B. RSPAN
C. FC-SP
D. Performance Manager
E. AAA

Answer: C

QUESTION 211:

How does a non-Root switch choose its Root Port?

A. It chooses the port with the lowest cumulative Root Path Cost to the Root Bridge.
B. It chooses the port with the highest cumulative Root Path Cost to the Root Bridge.
C. The port receives an inferior BPDU from a neighboring switch on a shared LAN segment.
D. The port receives a BPDU announcing a higher Root Path Cost from a neighboring switch on a shared LAN segment.

Answer: A

QUESTION 212:

What does LUN mapping do?

A. assigns FCIDs to storage arrays
B. configures host membership in a VSAN
C. selectively allows one of multiple LUNs to be viewed by the host
D. ensures that hosts cannot access LUNs that belong to other hosts

Answer: D

QUESTION 213:

You manage a large Metropolitan Area Network spread out over 25 locations around the city.
Your CEO has decided to start producing a monthly webcast for all company employees to show the latest product and company news. You fear the effects on the performance of the network when all 10,000 employees connect to this audio/video steam. You determine that it is time to enable multicast on your network. Which two layer 2 features are available on Cisco switches to optimize the use of multicast on your network? (Choose two)

A. CGMP
B. IGMP Snooping
C. Express Forwarding
D. RGMP
E. SNMP

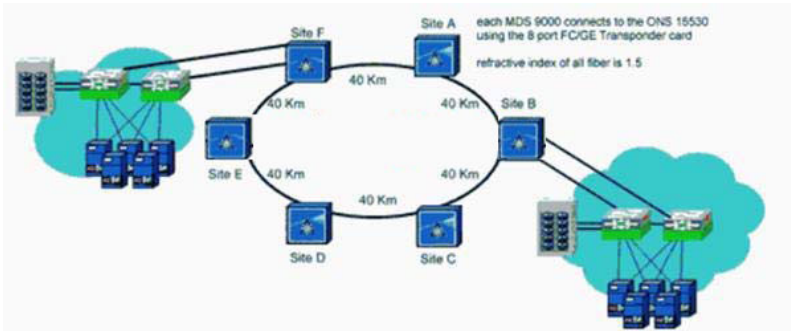Answer: A, B

QUESTION 214:
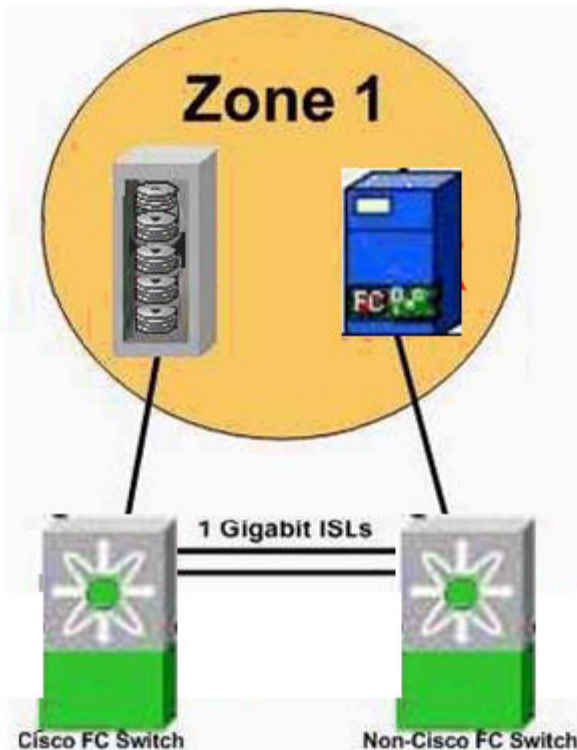
Refer to the exhibit
What port type should be used between switches to maximize performance?

A. B
B. E
C. F
D. NL

E. TE

Answer: C

QUESTION 215:

In the diagram, two fabrics have been merged using the OSN 15530 Multiservice Aggregation Platform with optical splitter protection. If buffer to buffer credit spoofing is not employed, which credit setting on the MDS 9000 switches will maximize ISL throughput under all operating conditions?

A. 12
B. 16
C. 40
D. 90
E. 180

Answer: D

QUESTION 216:

What are three functions of an array controller? (Choose three)

A. Local and remote data replication
B. Fault prevention
C. Target binding
D. Virtual volume support
E. FCC

Answer: A, B, D

QUESTION 217:

Which design topology will typically provide the lowest hop-count and least number of switches?

A. core-edge

B. collapsed core
C. cascade
D. ring
E. partial mesh

Answer: B

QUESTION 218:

Which three Cisco value-added features eliminate Head-of-Line Blocking and are used to manage congestion within a switch? (Choose three)

A. VoQ
B. FCC
C. FSPF
D. Port-Channel
E. Inter-Switch Link

Answer: A, B, D

QUESTION 219:

What are two MDS features that increase the efficiency of a multiple switch Fibre Channel fabric? (Choose two)

A. Port Channel
B. CDP
C. FCP
D. FCC
E. CUP

Answer: A, D

QUESTION 220:

What are two characteristics of a mesh SAN topology? (Choose two)

A. Compensates for lower-density switches.
B. Increases overall port count of fabric while minimizing use of ISLs.
C. Limited scalability.
D. Fewer switches to manage.
E. Quicker convergence after a failure.

Answer: A, C

QUESTION 221:

What are two benefits of implementing host-based replication? (Choose two)

A. Offers the greatest performance.
B. Reduces host CPU requirements.
C. Supports replication on both DAS and SAN.
D. Users existing network connectivity.
E. Host operating system independent.

Answer: C, D

QUESTION 222:

Which three functions are provided by Fibre Channel Host Bus Adapters (HBAs)?
(Choose three)

A. Interfaces between the host computer bus and the Fibre Channel network.
B. Extends the distance between a server and its storage.
C. Provides fibre channel link speeds up to 1 Gbps.
D. Reduces the load of the host CPU by managing block-level storage I/O transactions.
E. Automatically mirrors data onto two different disk sub-systems simultaneously.

Answer: A, B, D

QUESTION 223:

What is a limitation of core-edge SAN designs?

A. Unpredictable failure recovery.
B. Inconsistent or unpredictable hop counts.
C. Inherent oversubscription introduced by the hierarchical design.
D. Difficult to scale and manage.

Answer: C

QUESTION 224:

What is the principle cost advantage of a collapsed core SAN design compared to a
core-edge design if each connects the same number of host and storage ports?

A. Fewer hops for a given exchange.
B. Fewer FSPF disruptions.
C. Fewer ISL connections.
D. Fewer Domains in the Domain List.
E. Fewer Director class switches.

Answer: C

QUESTION 225:

What are three benefits to the implementation of a collapsed core SAN design?
(Choose three)

A. Fewer switches to manage.
B. Oversubscription can be managed by adding additional ISL ports.
C. Typically provides more available paths.
D. More flexible in terms of end device deployment.
E. Port density is greater than in a core-edge topology.

Answer: A, C, D

QUESTION 226:

What technology minimizes the potential for service interruption on SAN extension
links?

A. FCIP
B. VRRP
C. VSANs and IVR
D. Port Channeling

Answer: D

QUESTION 227:

Exhibit

S2=Connected Storage Array Port (2 Gbps)
H2=Connected Host HBA (2 Gbps)
S1=Connected Storage Array Port (1 Gbps)
H1=Connected Host HBA (1 Gbps)
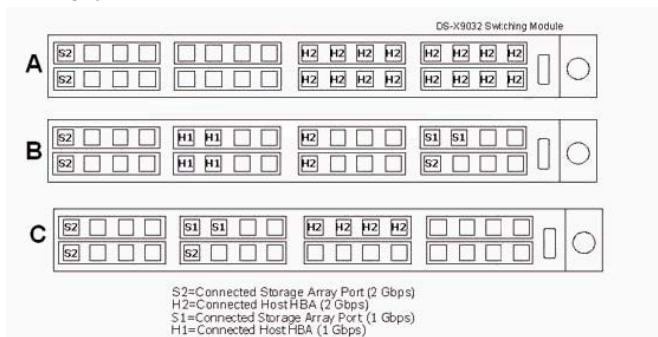
Refer to the exhibit.
What is the effective I/O bandwidth oversubscription ratio from host-to-disk of the
following scenarios?

A. A=1:1, B=3:2:1, and C=8:1
B. A=3:2:1, B=8:1, and C=1:1

C. A=8:1, B=3:2:1, and C=1:1
D. A=1:1, B=8:1, and C=3:2:1
E. A=8:1, B=1:1, and C=3:2:1

Answer: A

QUESTION 228:

Certkiller .com has two buildings connected by a single pair of single-mode fiber. The customer requires eight 2Gbps fibre channel connections between the buildings.
What is the most cost effective solution?

A. Install 14 strands of single-mode fiber between the buildings.
B. Install a Cisco CWDM OADM in each building.
C. Install a Cisco ONS15454 and use DWDM in each building.
D. Implement eight VSANs and use the existing fiber.
E. Install a wireless bridge between the buildings.

Answer:

Explanation: Pending. Send your suggestion to feedback@ Certkiller .com

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QUESTION 229:

Which Fibre Channel SAN topology maximizes performance and expandability?

A. multi-point
B. point-to-point
C. arbitrated loop
D. switched fabric
E. star

Answer: D

QUESTION 230:

Certkiller .com is concerned about the security of his SAN. He wants to prevent unauthorized hosts and switches from connecting to the SAN fabric.
What technology should be enabled on the MDS 9000 SAN to accommodate this customer requirement?

A. DHCHAP
B. auto-learn
C. role-based authorization
D. zones
E. SSH

Answer: A

QUESTION 231:

What are three key benefits of implementing a SAN using iSCSI? (Choose three)

A. Uses existing IP networking, monitoring, and management infrastructure.
B. Is more efficient than FC since it requires fewer encapsulations.
C. Maintains consistent performance over IP networks of varying distances.
D. Significant capital cost reduction by substituting iSCSI as a transport technology.
E. Extends existing FC SAN to IP connected hosts.

Answer: A, D, E

QUESTION 232:

What two MDS 9000 features can be used where additional bandwidth is required between switches in an existing SAN? (Choose two)

A. ISL
B. FSPF
C. VSAN
D. Port Channel
E. Extended Fabric

Answer: A, D

QUESTION 233:

What is required for implementing high availability in a host? (Choose two)

A. dual port array controller
B. multiple HBA ports
C. multi-path drivers
D. FSPF drivers
E. port channeling

Answer: B, C

QUESTION 234:

What is the definition of fan-in ratio as it applies to SANs?

A. The ratio of host ports that need to access a single storage port.
B. The ratio of storage ports to a single host port.

C. The amount of aggregate port bandwidth in the path from storage port to host port.
D. The amount of aggregate bandwidth of ISLs in the path from host port to storage port.

Answer:

QUESTION 235:

Which of the following solutions would be used to meet a business requirement for
nearly instantaneous recovery from a disaster?

A. Business continuance
B. Host based replication
C. High speed tape backup
D. Disaster recovery
E. SAN consolidation

Answer: A

QUESTION 236:

Which cost effective solution will provide for workgroup application continuance
using asynchronous replication as well as NAS replication for a small environment?

A. DWDM
B. FC
C. FCIP
D. Iscsi

Answer: D

QUESTION 237:

Which embedded Cisco MDS tool provides a view of protocol errors?

A. RSPAN
B. Traffic Analyzer
C. SPAN
D. Fabric Analyzer
E. Port Analyzer Adapter

Answer:

QUESTION 238:

Given the following options, what is the correct solution for Certkiller .com with the
requirement to mirror between two data centers that are nearly 200 km apart?

A. CWDM
B. DWDM
C. Native Fiber Channel
D. iSCSI

Answer: B

QUESTION 239:

In a SCSI Command Descriptor Block (CDB), what is the function of the Logical
Block Address field?

A. Differentiates multiple CDBs when they are associated with a single command.
B. Identifies the first logical disk block that is referenced by the command.
C. Specifies the length of blocks in the requests.
D. Identifies the logical unit number associated with the data block.

Answer: B

QUESTION 240:

Which of the following best describes the function that is implemented by iSCSI
HBAs?

A. Offloads TCP error handling to hardware.
B. Offloads TCP flow control to hardware.
C. Offloads TCP error handling and flow control to hardware.
D. Offloads TCP flow control and iSCSI protocol processing to hardware.
E. Offloads TCP error handling and iSCSI protocol processing to hardware.

Answer: D

QUESTION 241:

Which design approach provides the greatest protection against failures when
designing for high availability?

A. Segment the SAN architecture by the use of VSANs.
B. Use zoning to isolate applications in a consolidated SAN architecture.
C. Use appropriate MDS QoS mechanisms to guarantee that each application receives the
necessary bandwidth.
D. Implement redundant fabrics across redundant physical infrastructures.

Answer: D

QUESTION 242:

What effects does VSAN technology have on typical capacity planning for a storage network?

A. Because of the complete isolation of VSANs, more ports are required in a VSAN environment than in a non-VSAN environment.
B. When capacity planning where VSANs will be implemented, each VSAN must be capacity planned independently of all other VSANs.
C. VSANs are over provisioned separately to provide for capacity growth.
D. Unused ports can easily be redeployed for other applications in other VSANs.

Answer: D

QUESTION 243:

What is the SPAN feature typically used for?

A. To extend a VSAN to another vendors switch.
B. To troubleshoot a network in a non-disruptive manner.
C. To concatenate ports between two switches into a SPAN of larger bandwidth.
D. To monitor traffic to the switch processor.
E. To concatenate multiple zones between FC switches.

Answer: B

QUESTION 244:

Which three Fibre Channels witch features are unique to Cisco's MDS 9000 Series switches? (Choose three)

A. LUN Zoning
B. Read-Only Zones
C. Internet-Switch Link
D. Fibre Channel Congestion Control
E. Remote Domain Loopback
F. FSPF

Answer: A, B, D

QUESTION 245:

What three technologies provide advanced traffic engineering capabilities in an MDS 9000 environment? (Choose three)

A. Port Channel

B. Inter-VSAN Routing
C. EISL Trunking
D. QoS
E. Zoning

Answer: B, C, D

QUESTION 246:

What are three key benefits of Cisco's collapsed-core switch configuration? (Choose three)

A. Ease of management.
B. Increased port channel utilization.
C. Reduction in equipment and installation cost.
D. Higher effective port count.
E. Reduction in total disk space requirements.

Answer: A, C, D

QUESTION 247:

By centralizing and consolidating backup functions in a SAN environment, what is the expected achievable subsystem capacity utilization?

A. 15-45%
B. 45-60%
C. 50-70%
D. 70-90%
E. 90-100%

Answer: D

QUESTION 248:

DRAG DROP
Match the following SAN architectures to the characteristics that best describe each.

Core-Edge	Collapsed Core
Mesh	Fan-Out

Minimal growth (2-4 switches), used to increase storage subsystem host access	Place here
Fixed hop count, scalable, predictable failure recovery	Place here
Very slow reconvergence, very low effective port count	Place here
Minimizes ISL count, manageable oversubscription, most flexible in terms of end device deployment	Place here

Answer:

Explanation:
Fan-Out
Core-Edge
Mesh
Collapsed Core

QUESTION 249:

Which topology requires the greatest increase in the number of ISL ports in order
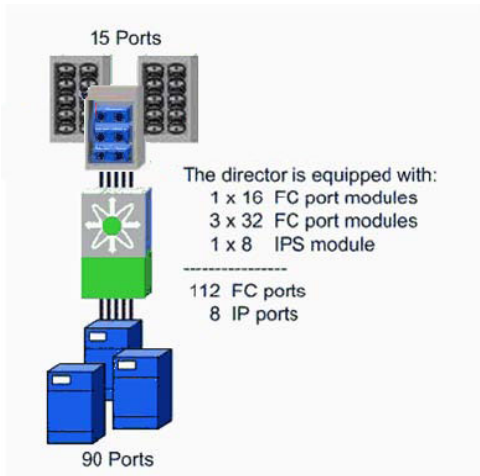to maintain a fixed hop count when a SAN is scaled?

A. core-edge
B. collapse core
C. partial mesh
D. ring

Answer: A

QUESTION 250:

Exhibit

15 Ports

The director is equipped with:
1 x 16 FC port modules
3 x 32 FC port modules
1 x 8   IPS module
----
112 FC ports
  8 IP ports

90 Ports

Refer to the exhibit. Given the fact that all connections are 2 Gbps with storage devices connected to 16-port modules and host connections terminating at 32-port modules, what is the impact of the oversubscription in this design?

A. No oversubscription exists in this design.
B. The 6:1 oversubscription of hosts will overrun the disk subsystems.
C. The 3:2:1 oversubscription of the 32-port host module will cause hosts to be overrun when retrieving data from the disk subsystems.
D. The design renders the host to disk subsystem oversubscription irrelevant.

Answer: D

QUESTION 251:

What are three constraints on a core-edge SAN design when the edge devices are not Cisco MDS switches? (Choose three)

A. FC traceroute cannot be used.
B. FSPF must be disabled.
C. FCC is not effective.
D. Number of VSANs is limited when using interop modes.
E. Trunking is not supported between the core and edge devices.

Answer: A, C, E

QUESTION 252:

You have determined that expansion of Certkiller .com's SAN requires 32 ports for Storage Array connections, 4 ISL connections to the existing SAN, and 44 ports for HBA connection. Select the bill of materials that provides a well-designed SAN solution to meet these requirements at the lowest cost.

A. 2 X MDS 9216

2 X 32 Port Standard FC Switching Module
B. 2 X MDS 9506
2 X 16 Port Standard FC Switching Module
2 X 32 Port Standard FC Switching Module
C. 2 X MDS 9120
2 X 9506
2 X 16 Port Standard FC Switching Module
D. 2 X MDS 9506
4 X 16 Port Standard FC Switching Module
2 X 32 Port Standard FC Switching Module

Answer: A

QUESTION 253:

A large credit card processing firm is adding a second data center to support
business continuance.
What is the recommended solution for extending the SAN to the second data center
if both data centers are active?

A. Asynchronous replication using FCIP.
B. Dual homed servers, and IP connectivity using multiple paths.
C. iSCSI installation and a bridge the Ethernet network to the Fibre Channel fabric.
D. Synchronous replication using DWDM.

Answer: D

QUESTION 254:

What requirement suggest the use of NAS versus a SAN solution?

A. Primarily record level access
B. Primarily block level access
C. Primarily transaction level access
D. Primarily file level access

Answer: D

QUESTION 255:

Which statement best defines storage consolidation?

A. Making an enterprise's total disks space highly available to the entire enterprise, often
by placing it in a SAN.
B. Making an enterprise's disk space, servers, and tape libraries highly available to the
entire enterprise, often by placing them in a SAN.

C. Making an enterprise's total storage networking less costly by using iSCSI.
D. Making an enterprise's total disk space highly available by transferring copies of an enterprise's total storage space to an offsite location.
E. Making an enterprise's total disk space highly available by connecting all of an enterprise's storage devices to one (or two) large servers.

Answer: B

QUESTION 256:

Which feature of the MDS 9000 Series prevents head of line blocking in a SAN environment?

A. FCC
B. QOS
C. VSAN
D. VOQ

Answer: D

QUESTION 257:

DRAG DROP
Match the Cisco Value Address feature to the potential issue it would most likely solve.

FCC	SAN islands	Place here
Fabric Manager Server	Distributed management	Place here
RBAC	Fabric login problems	Place here
YSAN	Network congestion	Place here
Port-Channel	Low network bandwidth	Place here
SPAN	Inconsistent view of network topology	Place here

Answer:

Explanation:
YSAN
RBAC
SPAN
FCC
Port-Channel
Fabric Manager Server

QUESTION 258:

Which are three factors that determines the ROI for a SAN? (Choose three)

A. Storage subsystem requirements
B. Administration costs
C. Application downtime
D. Training
E. Disaster recovery

Answer: A, B, C

QUESTION 259:

DRAG DROP
Connect the Fibre Channel Port type on the left with its corresponding Fibre
Channel Port type on the right. You will not use all options.

NL-PORT		F-Port	Place here
E-Port		FL-Port	Place here
N-Port		E-Port	Place here
FL-Port			

Answer:

Explanation:

	F-Port	N-Port
	FL-Port	NL-PORT
FL-Port	E-Port	E-Port

QUESTION 260:

At which point can security on a Fibre Channel SAN be implemented? (Choose
three)

A. storage array
B. server
C. Fibre Channel switch
D. GigE NIC
E. SFP connector

Answer: A, B, C

QUESTION 261:

What technology should a SAN design incorporate to minimize convergence time in the event of a link failure?

A. traffic engineering
B. FCC
C. FSPF
D. port channels

Answer: D

QUESTION 262:

What low cost solution should be used to connect low throughput IP-based servers to an existing Fibre Channel network?

A. Use FCIP to connect the server to the network at lower speeds.
B. Use the existing IP network with iSCSI.
C. Use FCP to automatically adjust transmission rates.
D. Use FCIP to allow host connections over an IP network.

Answer: B

QUESTION 263:

DRAG DROP
Match the following features with the characteristics that best define that feature.

FSPF		Quality of Service
Fiber Channel Congestion Control		Port Channel
VSANs		

Divides the physical infrastructure, isolating fabrics	Place here
Provides load balancing between equal-cost paths between domains	Place here
Treated as one ISL link	Place here
Selective host throttling by slowing rate of buffer credits (R_RDY)	Place here
Prioritizes traffic over congested links	Place here

Answer:

Explanation:

Divides the physical infrastructure, isolating fabrics	VSANs
Provides load balancing between equal-cost paths between domains	FSPF
Treated as one ISL link	Port Channel
Selective host throttling by slowing rate of buffer credits (R_RDY)	Fiber Channel Congestion Control
Prioritizes traffic over congested links	Quality of Service

QUESTION 264:

Certkiller .com SAN design requires the use of existing non-Cisco storage switches in a core edge topology. What must be considered when attaching an MDS 9000 switch as the core device in this network?

A. Trunking is supported between the core and edge switches.
B. Zoning cannot be used since the domain IDs are in different ranges.
C. FSPF cannot be used between the core and edge switches.
D. If VSANs are implemented in the core, IVR cannot be used.

Answer: A

QUESTION 265:

In the design if an iSCSI implementation in conjunction with a Cisco MDS-based SAN, which technology provides for diverse connections into multiple SAN switches and is used to provide automatic failover using a single target IP address?

A. multipathing
B. EtherChannel
C. VRRP
D. OSPF

Answer: C

QUESTION 266:

In addition to providing secure computer room access, what three MDS 9000 features can help enhance physical security? (Choose three)

A. The placement of all unused FC ports in a VSAN set to "deny".
B. The placement of every host in its own ZoneSet that includes its storage devices.
C. The use of the port security feature to bind pWWNs and sWWNs to specific ports.
D. The use of DH-CHAP authentication to ensure fabric level security.
E. The use of SSH to block access to all unused ports.

Answer: A, C, D

QUESTION 267:

What is considered the optimal topology for deployment of Fibre Channel SANs
using Cisco MDS family products? (Choose two)

A. mesh
B. ring
C. core-edge
D. collapsed core
E. core-edge with VSAN

Answer: D, E

QUESTION 268:

What are three array characteristics that are crucial when planning a SAN design?
(Choose three)

A. fan-in ratio
B. connection speed
C. embedded cache controller
D. RAID level support
E. active/passive controller

Answer: B, C, E

QUESTION 269:

With a synchronous remote mirror replication facility, write completion will be
delayed by which of the following?

A. one round trip time
B. two round trip times
C. four round trip times
D. one round trip time per data block
E. one round trip time plus one round trip time per data block
F. two round trip times plus one round trip time per data block

Answer: B

QUESTION 270:

What are three reasons to implement VSANs in a Fibre Channel SAN? (Choose

three)

A. To reduce network infrastucture requirements
B. To increase data security
C. To enable port-channeling
D. To enable TCP/IP routing
E. To share SAN extension capability using EISLs

Answer: A, B, E

QUESTION 271:

What is the best mechanism to use to isolate backup traffic from other mission critical traffic?

A. VSANs
B. Zones
C. Trunking
D. Port channels

Answer: A

QUESTION 272:

What Fibre Channel port type links switches for fabric expansion?

A. N-Port
B. F-Port
C. E-Port
D. NL-Port

Answer: C

QUESTION 273:

Certkiller .com has 80% of the total storage space directly connected to servers. The storage space needs are growing at 50% per year. Given these facts, which solution is recommended?

A. Increase in server capacity
B. Server consolidation
C. Storage expansion
D. SAN consolidation

Answer: C

QUESTION 274:

What protocol provides backup and restore services in the NAS architecture?

A. DAFS
B. SRDF
C. HORC
D. CIFS
E. NDMP

Answer: E