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# Brocade Certified Fabric Designer Gen 5 Practice Questions with Answers Explained For Exam 143-280

## Section 1

1) What are three organizational limitations when designing a new SAN infrastructure? (Choose three.)

A) personnel availability
B) connecting to legacy hardware
C) policy limitations
D) functionality separation
E) software limitation

*Organizational limitations are constraints imposed by organization policies or manpower availability.*

2) What are three parts of the network design phase? (Choose three.)

A) change management
B) data collection
C) data analysis
D) prototype for testing
E) transition to new design

*Data collection and analysis and prototyping are all part of the network design phase of the network lifecycle. Change management does not apply until after the new network is deployed and so comes later. Transitioning is part of the implementation phase.*

3) Which three tools would be used to capture traffic, utilization, and performance information from an existing fabric? (Choose three.)

A) Brocade SAN Health
B) Monitoring and Alerting Policy Suite (MAPS)
C) Flow Vision
D) Brocade Network Advisor
E) ClearLink Diagnostics

*SAN Health, Flow Vision, and Brocade Network Advisor are all capable of capturing and displaying performance statistics in various forms for the user. MAPS is a monitoring tool, and while it can be configured to alert on certain performance related parameters, it does not provide any direct performance information on its own. ClearLink diagnostics is a physical layer port diagnostic tool and does not include any performance metrics.*

4) You are required to design a fabric that is resilient.

What are two factors that would cause problems with the design? (Choose two.)

A) faulty media
B) high number of storage ports
C) mixed use of OM fiber types
D) use of switches instead of Directors

*Resiliency is the ability of a network to return to normal when there has been a failure of some kind. It should not be confused with redundancy, which is the elimination of single points of failure through the use of additional equipment, multiple paths between switches, dual HBAs, etc. Whereas redundancy seeks to avoid network disruptions entirely, resiliency deals with the time it takes to get the network operational again when a failure does occur.*

## Section 2

5) You are designing a fabric that will be monitored using MAPS.

Which two events should be monitored that would impact performance? (Choose two.)

A) stuck VC condition
B) I/O packet loss
C) I/O performance impact
D) I/O frame loss

*The I/O performance impact and I/O frame loss monitoring categories are part of the Fabric Performance Impact monitoring introduced in Fabric OS v7.3.0 as a replacement for Bottleneck Monitor.*

6) You need to design a fabric to mirror data between sites that are 50 km apart. You want to create a 10 Gbps FCIP tunnel between the two sites using 1 GbE ports.

Which Brocade switch would you use?

A) Brocade 7800 switch
B) Brocade 7840 switch
C) Brocade 6520 switch
D) Brocade DCX 8510-8 switch

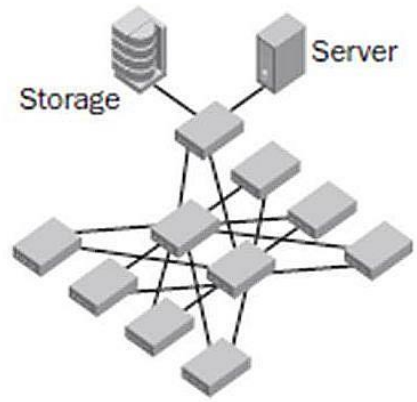
*Of the hardware listed the Brocade 7840 Extension switch is the only one with enough 1 GbE ports to create a 10 Gbps tunnel. The Brocade 6520 is not an extension product and does not support FCIP. The DCX 8510-8 does not do FCIP on its own and would require a slot card.*

7) You have three fabrics within your company and want to create a backbone fabric to allow inter-fabric device sharing.

How many switches and IFLs must be configured to provide dual redundant connections between each edge fabric and the backbone, while eliminating single points of failure within the backbone?

A) one backbone switch with three IFLs
B) one backbone switch with six IFLs
C) two backbone switches with three IFLs
D) two backbone switches with six IFLs

Two FCR switches are required in the backbone in order to eliminate the switch as a single point of failure. After that a minimum of two IFLs per edge fabric are required, with each IFL being connected to a separate FCR switch in the backbone fabric.




8) Referring to the exhibit, what are two attributes of the fabric design? (Choose two.)

A) It does not scale well.
B) Traffic is localized.
C) This is a highly redundant topology.
D) It provides simplified manageability.

*Traffic is localized between the storage and server shown on the diagram by virtue of being connected to the same switch. The topology is also considered redundant as the diagram shows that the edge switches each have connections to both of the core switches.*

9) You have a dual core topology with AG modules connecting to the core.

How should you connect the AG modules to provide equal connectivity to each core? (Choose two.)

A) Connect the AG modules to each core switch; create port groups for each core.
B) Connect each AG module to an FC switch that is ISL connected to each core.
C) Connect each AG module to each core switch; allow the AG module to route traffic to the appropriate core switch.
D) Connect each AG module to one core switch and use FCR to connect the cores together.

*FCR is not used when building a core-edge design, only when routing between separate fabrics is required.*

10) You are planning a technology refresh of an existing fabric in your data center.

Which information is required? (Choose two.)

A) physical real estate availability
B) number of Ethernet switches deployed
C) OM level of fiber cable used
D) number of drives in the storage arrays

*Part of designing a fabric upgrade includes determining the amount of rack space available for switches and making sure that the existing cabling will be able to accommodate the new speeds. The number of Ethernet switches and the number of drives in the storage arrays will not have an impact on how you design your SAN fabrics.*

## Section 3

11) A customer is designing dual redundant fabrics with Brocade DCX backbones. One of the requirements is that all traffic should be monitored and logged for historical performance analysis.

Which Brocade tool will meet the customer needs in this design?

A) ClearLink Diagnostics
B) Brocade Network Advisor
C) Top Talkers
D) NET Health

*Brocade Network Advisor is the only tool here that can continually monitor your SAN and collect historical data. ClearLink Diagnostics is a physical level port diagnostic cool. Top Talkers does not log historical performance metrics, it shows which ports on the switch are using the most bandwidth. NET Health is a tool used to gather information about your Ethernet hardware.*

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12) A customer SAN is experiencing congestion and you believe that a port is transmitting frames faster than the device can accept the data.

Which two tools would you use to identify the problem? (Choose two.)

A) Top Talkers
B) MAPS
C) End-to-End Monitoring
D) Bottleneck Detection

*MAPS Fabric Performance Impact Monitor or Bottleneck Detection are designed to report high-latency devices. Top Talkers and End-to-End Monitors are used for collecting performance related information from the fabric.*

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13) A requirement for the new SAN is to configure automatic notification of switch events.

Which two tools would be used to accomplish these criteria? (Choose two.)

A) Call Home
B) MAPS violations notification
C) Historical Performance Reports
D) Dashboard Timeline

*Call Home is part of the Brocade Network Advisor software and can be configured to email an administrator when certain events occur. MAPS is a switch/fabric monitoring utility that is part of Fabric OS and can be configured to email the administrator or send SNMP traps to a log server.*

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## Section 4

14) You are designing a new Brocade Gen 5 fabric and need to connect 15 remote sites that are over 20 km away from each other.

Which device would meet this requirement?

A) Brocade 8470 switch
B) Brocade 6520 switch
C) Brocade 7500 switch
D) Brocade 7840 switch

The Brocade 7840 is the only Gen 5 switch listed that supports FCIP. The Brocade 7500 supports FCIP but is not a Gen 5 switch.

15) A customer needs their SAN fabric to support 2, 4, 8, 10, and 16 Gbps speeds.

Which two Brocade products would satisfy the requirement? (Choose two.)

A) FC16-32
B) FC16-48
C) FC16-64
D) FX8-24

*The FC16-32 and FC16-48 both support the speeds required. The QSFPs used by the FC16-64 do not support 2 or 10 Gbps speeds and the FC8-24 is a 8 Gbps blade which does not support 10 or 16 Gbps speeds.*

16) A customer has eight fixed form factor switches in an edge-core topology with 224 total ports, including 56 ISL ports. The new design requires reducing latency and minimizing the number of physical switches to manage.

Which two configurations satisfy the requirements? (Choose two.)

A) Brocade DCX 8510-4 with four FC16-48 port blades
B) two Brocade 6520s with four ISL between switches
C) Brocade DCX 8510-8 with four FC16-48 port blades
D) Brocade 6510 edge switches connected to a Brocade DCX 8510-4 core switch

*Any time you want to reduce overall switch count it is best to use high density director switches like the DCX 8510 family. ISL connections can be replaced with UltraScale ICL connections between the chassis which frees up additional device ports.*

18) You have a Brocade 6520 switch with Virtual Fabrics and Fibre Channel Routing enabled. A base switch is configured.

How many additional logical switches are configurable in this Brocade 6520?

A) 2
B) 5
C) 7
D) 11

*The Brocade 6520 supports a total of four logical switches. The base switch and default switch each count as logical switches, leaving the possibility of creating two additional logical switches.*

## Section 5

19) You have a customer that has two Brocade DCX 8510-8s in two data centers that are 80 km apart. They will be connecting through a 10 Gbps DWDM device. The device is handling the buffering for the long distance. In each data center, the 8510-8 and the DWDM devices are in the same room. The customer wants to use the full 10 Gbps bandwidth.

What would meet the requirement?

A) Use ELWL SFP on the 8510-8 ports that connect to the DWDM.
B) Use the 10 Gbps FCIP/Fibre Channel license.
C) Use the Extended Fabric license.
D) Configure LS mode on the 8510-8 ports that connect to DWDM.

*The 10 Gbps FCIP/Fibre Channel license is required in order to put a switch port into 10 Gbps mode. A 10 Gbps SFP will also be required.*

20) Your company wants to connect a Brocade Gen 5 fabric to three remote offices 70 km away. They would like to use their existing IP network and keep the networks separate.

Which device would you use accomplish this task?

A) Brocade 8740
B) Brocade 7800
C) Brocade 6510
D) Brocade 6520

*Of the switches listed the Brocade 7800 is the only one that supports FCIP.*

## Section 6

21) A customer designed a Brocade Gen 5 fabric and noticed traffic-based congestion on the ISLs.

Which solution applies?

A) Increase buffer credits.
B) Add ISLs.
C) Enable trunking.
D) Implement Traffic Isolation Zones.

*If congestion is seen on an ISL, the solution is to add additional bandwidth in the form of additional ISLs.*

22) A customer designed a Brocade Gen 5 Virtual Fabric with several logical switches connected to two sites.

Which solution prevents the logical switches from being impacted by latency on the base fabric?

A) Implement an ISL between logical switches.
B) Disable XISL usage on the base switch.
C) Enable XISL usage on the default switch.
D) Implement trunking on the base fabric.

*Using a direct ISL between logical switches provides a dedicated path that only the logical switch can use opposed to the logical switches all sharing traffic through an XISL on the base fabric. Trunking on the base fabric would alleviate congestion problems but not issues caused by high latency.*

23) You have a Brocade Gen 5 fabric with 5,000 ports. Your customer DBAs are complaining about slow response on their database. You suspect that there are some misbehaving devices in the fabric. They want you to tune and optimize performance.

Which design change would you make to identify the problem? (Choose two.)

A) Add port fencing to your design.
B) Add Traffic Isolation Zones to your design.
C) Add Bottleneck Detection to your design.
D) Add additional ISLs to your design.

*A misbehaving device can have large performance impacts on the rest of your fabric. If you suspect a device is causing fabric-wide issues it is sometimes best to monitor for those problems and fence the port if necessary. Fencing the port prevents access to/from the device, but can also save headaches on the rest of the fabric. Bottleneck Detection can be used to isolate areas of congestion and device latency.*

24) You need a solution for your fabric design that will limit interruptions when a link is lost and improve performance for edge devices.

Which Brocade feature will accomplish this goal?

A) DLS
B) F_Port Trunking
C) Traffic Isolation Zones
D) QoS zones

*F_Port trunking can be used between AGs and switches as well as between switches and HBAs that support trunking. When a connection is trunked the loss of a single link will not have a significant impact on connection or performance. Additionally, having multiple links increases the bandwidth available.*

## Section 7

25) You are asked by your customer to offer migration and design options for a SAN technology upgrade, using the dual fabric migration technique.

What are two considerations when using this method? (Choose two.)

A) The host and the respective storage should not be moved together.
B) New fabrics are built alongside the old fabrics.
C) There are no compatibility concerns between old and new switches.
D) The hosts cannot exist on both old and new fabrics at the same time.

*A dual fabric migration is used when down time cannot be scheduled for an upgrade. The updated fabric is built parallel to the existing fabric and host and device ports are transitioned over one at a time. In a redundant environment there should be no outages, as each connection is moved there is a redundant path available to carry the traffic.*

26) A customer uses dual fabrics with Brocade DCX 8510 backbones and FX8-24 FCIP blades 24x7. Both fabrics need to be upgraded to Fabric OS v7.3. They want to avoid the risk of losing FCIP traffic.

What should be done to satisfy this requirement?

A) Stop FCIP traffic in fabric A; upgrade fabric A; re-start FCIP traffic in fabric A; repeat steps for fabric B after fabric A proves to work correctly.
B) Stop FCIP traffic in fabrics A and B; upgrade fabrics A and B; re-start FCIP traffic in fabrics A and B.
C) Upgrade fabrics A and B; re-start FCIP traffic in fabrics A and B.
D) Execute a failover of FCIP traffic from fabric A to fabric B; perform the upgrade and repeat for fabric B.

The only correct solution is to perform the upgrades on a single fabric at a time. While one fabric is being upgraded the other fabric will handle the traffic load.

27) You want to use the unused ports of your fabric. Before deploying them, you want to test the link distance and link saturation to validate the recommended configuration.

Which tool would be used for this task?

A) Flow Monitor
B) ClearLink Diagnostics
C) Bottleneck Monitoring
D) Top Talkers Port Mode Monitoring

*ClearLink Diagnostics is a physical layer port diagnostic utility. It runs a series of tests, including internal and external loopback, link saturation, and also estimates cable distance.*

## Section 8

28) Which policy is used to restrict the device ports that connect to switch ports?

A) SCC
B) DCC
C) ACL
D) FCS

*The Device Connection Control (DCC) policy is used to restrict device access to switch ports.*

29) Which policy is used to restrict which FC switches join the fabric?

A) DCC
B) FSC
C) SCC
D) IP Filter

*The Switch Connection Control (SCC) policy can be used in a fabric to limit switch connections. Only switches listed in the policy are allowed to form ISLs and join the fabric.*

30) Which predefined Fabric OS role is configured to allow most local switch commands, excluding: security, user management, and zoning commands?

A) Admin
B) Basic Switch Admin
C) Switch Admin
D) User

*The Switch Admin role best fits the question. The Admin account has access to all switch commands, and the User and Basic Switch Admin accounts only have access to a limited subset of show and zoning commands.*