Exam : 642-871

Title : Designing Cisco Network Services Architecture

Ver : 09-27-07

QUESTION 1:

How would you define a fault tolerant device?

A. A backup path exists for every link between the client and the server.
B. Key components can be hot-swapped.
C. A backup device exists for every device between the client and the server.
D. Devices in the network can be hot-swapped without interrupting the network operation.
E. The device provides redundant backup within the device for each of its key components.

Answer: E

Explanation:
Device fault tolerance and redundancy: This is often the first level of availability in the network. Fault-tolerant devices provide a high level of reliability. Cisco offers options for redundant supervisor engines and dual power supplies, which provide the first backstop against a network failure.
Reference: Arch student guide p.1-13.

QUESTION 2:

Which of the following characteristics do you need to take into account when analyzing an application? (Choose three.)

A. Bandwidth, loss tolerance, and delay characteristics
B. Server speed
C. Number of servers and users
D. Application type
E. User's operating system
F. Server operating system
G. All of the above.

Answer: A, C, D
Official Cisco ARCH course material, pg. 2-12

QUESTION 3:

Which of the following metrics are used to measure performance in the Enterprise Edge module of the Enterprise Composite Network model? (Select three.)

A. grade of service
B. response time
C. throughput
D. transmit jitter
E. utilization

Answer: B, C, E

Explanation:
Performance might be the least understood term in networking. Typically, performance is defined as throughput and packets per second (pps). These are easy numbers to gauge and report, but these values relate to a single switch or router and make no sense when measuring an entire network.
The point is that there is no one metric for determining performance. Instead, gauge network performance by these three metrics:
1) Responsiveness.
2) Throughput.
3) Utilization.
Reference: Arch student guide p. 1-10.

QUESTION 4:

Which of the following is considered part of a Fault Tolerant Device? (Choose three)

A. Redundant power supplies
B. Redundant links
C. Redundant cooling fans
D. Service contracts
E. High MTBF

Answer: A, C, E

Explanation:
The Cisco official course notes "Designing Cisco Network Service Architectures (ARCH) v1.2" give the following answers on page 5-8:
- catalyst supervisors
- power supplies
- fans
- hot swappable modules

To quote from the text "To achieve high availability the fault tolerance of each device is optimised. This is achieved by providing redundant backup within the device for each of its components".
E: MTBF (mean time between failures) is a measure of how reliable a hardware product or component is. For most components, the measure is typically in thousands or even tens of thousands of hours between failures. For example, a hard disk drive may have a mean time between failures of 300,000 hours. A desired MTBF can be used as a quantifiable objective when designing a new product. The MTBF figure can be developed as the result of intensive testing, based on actual product experience, or predicted by analyzing known factors. The manufacturer may provide it as an index of a product's or component's reliability and, in some cases, to give customers an idea of how much service to plan for.
Most sources define this term to mean average time between failures.
Not B: The question asks about items that are parts of the Fault Tolerant Device. The redundant links are outside the device and are not part of the device.

QUESTION 5:

Which of the following is the last step that needs to be done in the Enterprise Campus Design Methodology?

A. Design the physical network.
B. Determining the correct amount of users.
C. Select the different routing protocols to be used.
D. Design the edge distribution module.
E. Characterize applications.
F. Determine the data and application requirements.
G. Select an IP addressing strategy and numbering scheme.

Answer: D
Reference: Cisco Systems Inc. course material, pages 2-10 and 2-11

QUESTION 6:

Which location would be the best locale for the device for the Management Module and Server Farm?

A. In the Administration building.
B. In the Information-processing building.
C. In the Accounting Department in the Administration building
D. In the Engineering building.
E. In all buildings.

Answer: B

QUESTION 7:

Which of the following is the first step that needs to be done in the Enterprise Design Methodology?

A. Select a service provider.
B. Determine the data and application requirements.
C. Select an IP addressing strategy and numbering scheme.
D. Characterize applications.
E. Select a Layer 1 technology.
F. Select a Layer 2 technology.

Answer: B

QUESTION 8:

When working in the Enterprise Composite Network Model environment, which components form part of the Enterprise Edge functional area? (Choose four.)

A. WAN module
B. Server farm
C. E-Commerce module
D. Access server
E. Internet connectivity
F. Management module
G. VPN/Remote access
H. All of the above.

Answer: A, C, E, G

QUESTION 9:

Which step in new network design, follows after the application and data requirements have been determined?

A. Design the physical network.
B. Design the logical network.
C. Select the IP addressing strategy and numbering.
D. Setting priorities with regard to IP addressing

E. Select the routing protocols.

Answer: B

Explanation:
1) Determine application and data requirements for each campus location on the enterprise network
2) Design the logical network.
Reference: Arch student guide p.2-10.

QUESTION 10:

When you design the campus network which of the following modules of the Enterprise Network will you include? (Choose all that apply.)

A. The Campus Core module
B. The Server Farm module
C. The Building Distribution module
D. The Edge Distribution module
E. The Management Module
F. The Divide and conquer module
G. All of the above

Answer: A, B, D

QUESTION 11:

You are a network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know which of the seven step enterprise campus design methodology precedes "design the logical network."
What will your reply be?

A. Design the physical topology
B. Select appropriate system devices and assign IP addresses
C. Assign IP addresses
D. Select routing protocols
E. Create security policy
F. Determine enterprise data requirements

Answer: F

QUESTION 12:

Your Certkiller trainee is busy with an Enterprise Composite Network design.
Which factors would he consider when analyzing network traffic for this design?
(Select three.)

A. user types
B. traffic types
C. file server types
D. sampling method
E. media types
F. traffic load measurement

Answer: B, D, F
Cisco ARCH course material, pg. 2-13

QUESTION 13:

You are the network administrator at Certkiller .Your newly appointed Certkiller trainee wants to know which components are part of the Internet connectivity module for a network.
What will your reply be? (Choose three.)

A. DNS servers
B. security servers
C. SMTP servers
D. management servers
E. corporate servers

Answer: A, B, C

Explanation:
Internet Connectivity: Provides internal users with connectivity to Internet services. Internet users can access the information on publicly-available servers. Additionally, this module accepts Virtual Private Network(VPN) traffic from remote users and remote sites and forwards it to the Remote Access and VPN module. The major components of the Internet Connectivity module are:
4) E-mail servers.
5) DNS servers.
6) Public web servers.
7) Security servers.
8) Edge routers.
Reference: Arch student guide p.1-40

QUESTION 14:

What is the first step in the Enterprise Campus Design Methodology?

A. The design of the logical network.
B. The design of the physical network.
C. The selection of the routing protocols.
D. The determination of data and application requirements.
E. The selection of an IP addressing strategy and numbering scheme.

Answer: D
Reference: Arch student guide p.2-10

QUESTION 15:

Your Certkiller .com trainee Doug asks you to characterize Layer 3 switching.
What should you tell him? (Select three).

A. support flat networks
B. supports complex routing in hierarchical networks
C. supports simple implementation
D. supports equal cost routing
E. supports load balancing

Answer: B, D, E

Explanation: B - Cisco considers router configuration as a complex task.
D - Routing protocols support equal cost routing for IP and IPX.
E - Load Balancing is traffic based.
http://www.cisco.com/en/US/products/hw/switches/ps5304/products_configuration_guide_chapter09186a008007
Switching, and Forwarding
Layer 3 Switching
* CPU Redundancy for the Catalyst 8540 CSR and Catalyst 8540 MSR
* IP, IPX, and IP multicast routing and forwarding between Ethernet ports
* AppleTalk 1 and 2 routing
* Constrained Multicast Flooding (CMF)
* Up to 128 IP multicast groups
* QoS-based forwarding based on IP-precedence-based forwarding
*
Load balancing among equal cost paths based on source and destination IP and IPX addresses

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QUESTION 16:

Dr Bill your supervisor at Certkiller .com asks you to tell him about the enterprise

composite network model. What should you tell him?

A. The enterprise composite network model is made up of three functional areas including the enterprise campus, campus backbone, and enterprise edge.
B. The enterprise composite network model allows easy network topology changes.
C. The enterprise composite network model is composed of a singular access, distribution, and core layer.
D. The enterprise composite network model defines a deterministic network with defined boundaries between modules.

Answer: D

Explanation:
Enterprise Composite Network Model defines a deterministic network with clearly defined boundaries between modules. The model has clear demarcation points to aid the designer in knowing exactly where traffic is.
Reference: Arch student guide p.1-31

QUESTION 17:

Which architectural design consideration of the Network Composite Model involved administration of network equipment on addition to client server component administration?

A. QoS
B. Connectivity
C. Accessibility
D. Network and system management
E. Topology definition and management

Answer: D

Explanation: The Network Management Module can support both in-band and out-of-band (OOB) networks for administration and or management of network equipment and client server components.
In-band Network management uses bandwidth on the production network.
Out-of-Band (OOB) management uses a separate logical network or in some cases a different logical and additional physical network.

QUESTION 18:

A modular design using the Enterprise Composite Model consists of which three functional areas? (Choose three)

A. Enterprise Campus
B. Enterprise Edge
C. Campus Backbone
D. Service Provider Edge
E. Network Management

Answer: A, B, D

Explanation:
The Enterprise Composite Network Model introduces additional modularity into the network structure. The entire network is divided into functional areas that contain the hierarchical model access, distribution, and core layers.
The Enterprise Composite Network Model contains three major functional areas:
1) Enterprise Campus.
2) Enterprise Edge.
3) Service Provider Edge.
Reference: Arch student guide p.1-30

QUESTION 19:

What is a criteria of the enterprise composite network model?

A. Includes all modules needed to meet any network design.
B. Defined flexible boundaries between modules for scalability requirements.
C. Clearly defines module boundaries and demarcation points to identify where traffic is.
D. Requires specific core, distribution, and access layer requirements to match the model.

Answer: C
Cisco ARCH course material, pg. 1-31

QUESTION 20:

Which three best practices should be implemented at the campus backbone submodule to support the server farm module? (Choose three)

A. Implement highly redundant switching and links with no single points or paths of failure.
B. Implement server load balancing.
C. Implement the Hot Standby Router Protocol (HSRP) for failover protection.
D. Dual home all servers.
E. Implement intrusion detection with automatic notification of intrusion attempts in place.
F. Deploy caching systems.

Answer: A, C, E

Explanation: According to Cisco Design standards, the Campus Back Bone must have High Availability. Cisco design best practices guidelines require redundancy for mission critical devices.
Cisco ARCH course material, pg. 2-69

QUESTION 21:

Which three objectives would be met by designing Layer 3 switching in the Campus Backbone of a medium size installation? (Choose three)

A. Scale to a large size.
B. Increase router peering.
C. Provide a flexible topology with no spanning tree loops.
D. Control broadcasts in the backbone.
E. Reduce complexity.

Answer: A, C, D
Explanation
The most flexible and scalable campus backbone consists of Layer 3 switches. The backbone switches are connected by routed Gigabit Ethernet or Gigabit EherChannel links. Layer 3 switched backbones offer these advantages:
1) Reduced router peering (not B)
2) Flexible topology with no spanning-tree loops (C)
3) Multicast and broadcast control in the backbone (D)
4) Scalability to arbitrarily large size (A)
Reference: Arch student guide p.2-35, 2-36

QUESTION 22:

Which three objectives meet the requirements for the Server Farm module? (Choose three)

A. Provide remote dial-up access.
B. Provide up to 10 Gbps of outbound capacity.
C. Provide scalability with switched and server load balancing.
D. Provide availability with overall network design.
E. Provide high switch port density.

Answer: B,C,D

Explanation:
1) Performance: Up to 10 Gbps outbound bandwidth capacity is required from the server

farm for most enterprises.
2) Scalability: Scalability is a critical requirement in every server farm. Server load balancing is most often deployed. As the number of servers requiring higher-bandwidth connections increases, port densities can exceed the capacity of a single switch or server farm block. Applying a modular block design to server farm deployment permits flexible growth.
3) Availability: Availability is generally ensured through the overall network design. Networks are designed to minimize the occurrence of service problems and the time to recover from problems, for example with backup recovery policies.
Reference: Arch student guide p.2-65

QUESTION 23:

A good Enterprise Campus network must have the ability to cope with user number, data and application increases. What does one call this ability to expand to support increasing capabilities?

A. Functionality
B. Performance
C. Scalability
D. Administration
E. Expandability

Answer: C
The ability of a campus network to expand so as to accommodate more users and resources is referred to as scalability.

QUESTION 24:

You are a network administrator at Certkiller .com. The Certkiller .com German division has a regional office in Berlin, and a branch of in Weimar.
Redundancy requirements from the Weimar branch office to the Berlin regional depend on which two characteristics? (Select two.)

A. routing requirements
B. critical importance of the site and number of users
C. impact if the site is an aggregation point
D. impact if the site is offline or unavailable.

Answer: B, D

QUESTION 25:

Certkiller wants you to design and implement a new Campus Backbone module that has multicast and broadcast control, flexible topology, and no spanning tree loops. Cost effectiveness is a secondary consideration.
Which equipment type would you recommend?

A. High-end routers
B. Mid-level Layer 2 switches
C. High-level Layer 2 switches
D. Layer 3 switches

Answer: D

Explanation:
The most flexible and scalable campus backbone consists of Layer 3 switches, as shown in the figure. The backbone switches are connected by routed Gigabit Ethernet or Gigabit EherChannel links. Layer 3 switched backbones offer these advantages:
5) Reduced router peering
6) Flexible topology with no spanning-tree loops
7) Multicast and broadcast control in the backbone
8) Scalability to arbitrarily large size
Reference: Arch student guide p.2-35

QUESTION 26:

What will increase network availability?

A. A decrease in MTTR and an increase in MTBF.
B. An increase in MTTR and a decrease in MTBF
C. A decrease in both MTTR and MTBG.
D. A increase in both MTTR and MTBF.

Answer: A

Explanation:
Availability is a measurable quantity. The factors affecting availability are mean time to repair (MTTR), the time it takes to recover from a failure, and mean time between failure (MTBF) the time that passes between network outages or device failures.
Decreasing MTTR and increasing MTBF increase availability. Dividing MTBF by the sum of MTBF and MTTR results in a percentage indicating availability.
Rerference: Arch student guide p.5-7

QUESTION 27:

Which action indicates the optimal level of functional process recovery in a high availability architecture?

A. Failure of a networking component is automatically detected.
B. The end-users are unaware that a failure has occurred.
C. The ailing component fails-over to an alternate component.
D. Automated alert mechanisms generate a dispatch for service.
E. Monitoring tools generate alert messages when a less than optimal condition occurs.

Answer: B

QUESTION 28:

Which of the following technologies will you implement at the Server Farm Distribution Layer when you receive an instruction by Certkiller to design and implement a new Server Farm module with high availability and performance?
(Choose three.)

A. Mid-range switches
B. Redundant switching and links with no single paths or points of failure
C. Caching systems where appropriate
D. Server load balancing
E. Redundant firewalls
F. All of the above.

Answer: B, C, D

QUESTION 29:

You are contracted as a network administrator for a well established company, Certkiller .com. Certkiller wants you to design and implement a new Campus Backbone module. It should have multicast and broadcast control, flexible topology, with no spanning tree loops. Cost effectiveness is a secondary consideration as money would be no option. What type of equipment would you recommend for use in this module?

A. Mid-level Layer 2 switches
B. High-level Layer 2 switches
C. High-end routers
D. High-end hubs
E. Layer 3 switches

Answer: E

Explanation:
The most flexible and scalable campus backbone consists of Layer 3 switches, as shown in the figure. The backbone switches are connected by routed Gigabit Ethernet or Gigabit EherChannel links. Layer 3 switched backbones offer these advantages:
9) Reduced router peering
10) Flexible topology with no spanning-tree loops
11) Multicast and broadcast control in the backbone
12) Scalability to arbitrarily large size
Reference: Arch student guide p.2-35

QUESTION 30:

Which of the following strategies can one employ to provide scalability in the server farm module?

A. Up to 10 Gbps of bandwidth at the access level.
B. Modular block design at the distribution level.
C. Redundant servers at the access level.
D. Modular block design at the access level.
E. High port densities at the access level.

Answer: D

QUESTION 31:

You are contracted as a network administrator for a small newly established company, Certkiller .com. Their network consists of three buildings that are spaced several hundred feet apart. Each connected via single-mode fiber using fast Ethernet. Access is through 10 Mbps hubs with 100 Mbps Ethernet uplinks over multi-mode fiber to a switch within each building.
The CEO of Certkiller wants you to design a new network that will take scalability, performance, manageability, security and availability into account, while still keeping costs low as the company is still relatively new.

What recommendation regarding network modules would you include in your network design?

A. A three-level campus infrastructure model with a low-speed core using Layer 2 switches, a distribution level using mid-level, Layer 2 switches, and using low-level Layer 2 switches at the access level.
B. A two-level campus infrastructure model with combined high-speed core and distribution layer using high-speed Layer 3 switches and low-level Layer 2 switches at the access layer.
C. A three-level campus infrastructure model with a intermediate-speed core using Layer 3 switches, a distribution level using mid-level, Layer 2 switches and using low-level Layer 2 switches at the access level.
D. A two-level campus infrastructure model with combined high-speed core and distribution layer using mid-level Layer 3 switches and mid-level Layer 2 switches at the access layer.

Answer: B

QUESTION 32:

Sandra works as a network administrator at Certkiller .com. She is currently utilizing CiscoWorks LAN Management Solution (LMS) as part of the enterprise network management strategy.
Which tools of LMS provides topology, VLAN management, and user tracking for Cisco Catalyst switches?

A. Device Fault Manager
B. Campus Manager
C. nGenious Real Time Monitor
D. Resource Manager Essentials
E. CiscoView

Answer: B

Explanation:
Campus Manager: Campus Manager provides the administrator with tools to configure, manage, and understand the physical and logical aspects of a Catalyst-based local-area network. Campus Manager offers these applications:
1) Topology Services.
2) User Tracking.
3) Path Analysis.

4) VLAN Port Assignment.
5) Discrepancy Reports.
Reference: Arch student guide p.4-21

QUESTION 33:

You work as a network consultant at Certkiller .com. One of Certkiller 's customers wants to implement a new company-wide intranet application. You are carefully going through the steps of determining the requirements of the customers for this application, when you determine that the company will need to track and monitor performance data. In which step in determining the requirements of the customer for the new application does this fit?

A. identify QoS requirements
B. identify business constraints
C. identify security requirements
D. identify network management requirements

Answer: D

QUESTION 34:

Your newly appointed Certkiller trainee wants to know which of the following is a primary tool providing perimeter security to a network.
What would your reply be?

A. LAPD
B. Kerberos
C. VPN
D. L2TP
E. Content filter

Answer: C

Explanation:
Perimeter security: This element provides the means to control access to critical network applications, data, and services so that only legitimate users and information can pass through the network. Routers and switches with Access Control Lists, stateful firewall implementations, and dedicated firewall appliances provide perimeter security control. Complementary tools, including virus scanners and content filters, also help control network perimeters.

Firewall and Pixes use VPNs.
Reference: Arch student guide p.6-21.

QUESTION 35:

An administrator is securing the building access module of the network and does not want users on the same subnet to be able to communicate without passing through a Layer 3 device first.
Which should the administrator do?

A. Build PACLs to filter and direct traffic.
B. Build RACLs to filter and direct traffic.
C. Place each user on an isolated private VLAN port.
D. Place each user on a company private VLAN port.
E. Place each user on a promiscuous private VLAN port.

Answer: D

QUESTION 36:

Your newly appointed Certkiller trainee wants to know which high availability design will depend more on networks than devices.
What would your reply be?

A. Clustering
B. Token Ring
C. Parallel processing
D. Fault tolerance
E. Redundant topology
F. Tripe modular redundancy

Answer: E

QUESTION 37:

Which aspects are significant when planning a network design for high availability? (Choose two.)

A. Company size
B. Performance requirements
C. Hardware costs
D. Cost of downtime

Answer: C, D

QUESTION 38:

Why is it beneficial to design high availability networks based on a redundant network topology? (Choose two.)

A. The cost of the network is reduced.
B. Internet connection is obsolete.
C. The traffic load can be shared between primary and secondary paths.
D. Network availability is precarious.
E. Redundant topologies are easier to manage and troubleshoot.
F. The probability of problems with the physical environment interrupting service is reduced.

Answer: C, F

QUESTION 39:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what the basic approaches for high-availability design are.
What would your reply be? (Choose two.)

A. Redundant Topologies
B. Public bandwidth sharing
C. Fault management.
D. Extremely high MTTR
E. Fault Tolerant Devices
F. Extremely low MTBF

Answer: A, E

Explanation:
Key availability issues to address include:
1)Device fault tolerance and redundancy: This is often the first level of availability in the network. Fault-tolerant devices provide a high level of reliablility. Cisco offers options for redundant supervisor engines and dual power supplies, which provide the first backstop against a network failure.

2) link redundancy
3) Protocol resiliency.
4) Network capacity design.
Reference: Arch student guide p.1-13.

QUESTION 40:

With which of the following high availability architecture must good software version control as well as device configuration control be included?

A. Network design
B. Operational best practices
C. Fault tolerance
D. Device-level hardware reliability
E. Fault management and diagnosis

Answer: B

QUESTION 41:

With which networking technology can you, the network administrator at Certkiller , be assured that you will be able to provide guaranteed availability of resources to the users for mission-critical, interactive, and time-sensitive Internet business applications?

A. Resiliency
B. Redundancy
C. QoS
D. Fault tolerance
E. Loss tolerance
F. Load balancing

Answer: C

Explanation:
QoS technologies make certain that the WAN is used efficiently by mission-critical applications that are most important to the business, that bandwidth and minimum delays required by time-sensitive multimedia and voice applications are available, and that other applications using the link get fair service without interfering with

mission-critical traffic.
Reference: Arch student guide p.7-6.

QUESTION 42:

You are a network administrator at Certkiller . You have designed a high availability network based on a redundant network topology. Your newly appointed Certkiller trainee wants to know what the main disadvantage of this design is.
What will your reply be?

A. Many routing protocols do not support redundant topologies.
B. Network delay can vary between the primary and secondary paths.
C. The secondary path cannot automatically take over for the primary path.
D. The traffic load cannot be shared between primary and secondary paths.
E. Redundant topologies are more costly and can be more difficult to manage.

Answer: E

Explanation:
Redundant topologies cost not cheap, because they need additional hardware and links. They are also difficult to manage since the networks consist of more hardware and the additional protocols and features are realized.

QUESTION 43:

You work as a network consultant. Your client, Certkiller .com, plans to promote an e-commerce website heavily, and expect to achieve a high volume of transactions. Downtime must be kept to an absolute minimum.
What should you include in your proposed availability model?

A. The effects of parallel link options on the network topology
B. An illustration of scalability and performance of the system.
C. The effects of various redundant design options and their costs
D. a plan for the proactive management of redundant components

Answer: C

QUESTION 44:

What is high availability?

A. Redundant infrastructure
B. Clustering of computer systems

C. Reduced MTBF
D. Continuous operation of computing systems

Answer: D

Explanation: High availability is continuous operation of computing systems.
Note:
To achieve high network availability, these network components are required:
1) Reliable, fault-tolerant network devices.
2) Device and link redundancy.
3) Load balancing
4) Resilient network technologies.
5) Network design.
Reference: Arch student guide p.5-9

QUESTION 45:

You are creating a high availability architecture for a client with a limited budget.
Which network equipment has lowest priority for redundancy?

A. Core switches
B. Access routers
C. Access servers
D. Distribution switches
E. Server access switches
F. End-user access switches

Answer: F

QUESTION 46:

What is a key trade-off when achieving high availability?

A. Cost
B. Hardware
C. Reliability
D. Processing power

Answer: A

Explanation:
Redundancy and other network features which the high availability needs cost not cheap.

QUESTION 47:

If a switch fabric is currently maintaining a percentage availability of .9995 and the route processor has a percentage availability of .9997, what is the current system availability?

A. .9992
B. .9996
C. .9997
D. 1.999

Answer: A

Explanation:
To calculate the availability of the complex system or device, multiply the availability of all of its parts. For example:
1) Switch fabric availability = .99997
2) Route processor availability = .99996
3) System availability = .99997* .99996 = 0.99992
As system complexity increases, availability decreases. If a failure of any one part causes a failure in the system as a whole, it is called serial availability.
Reference: Arch student guide p.5-7

QUESTION 48:

What are the two most significant disadvantages of designing a high availability network solely based on fault tolerant devices? (Choose two)

A. Redundant subsystem within devices add to costs.
B. Redundant subsystem cannot be managed remotely.
C. Redundant subsystem increase the cost of network configuration.
D. Redundant subsystem may become obsolete without ever being used.
E. Redundant subsystem that are maintained in hot standby mode cannot contribute additional performance.

Answer: A, E

QUESTION 49:

Which of the following symptoms are experienced when one fails to check the LAN/WAN utilization before implementing a VoIP design?

A. An improper codec selection.
B. The data link being oversubscribed.
C. An echo due to excessive delays.
D. A negative progression in the probability of call blocking

Answer: B

QUESTION 50:

Which of the following would you implement at remote locations for failover purposes when working in a centralized call-processing model?

A. SNAP
B. SRST
C. CHAP
D. HSRP
E. PSTN

Answer: B

Explanation:
Survivable Remote Site Telephony (SRST) that provides basic call processing at remote sites in the event of an IP WAN failure.
Reference: Arch student guide p.11-39

QUESTION 51:

You are a network administrator at Certkiller . You want to implement QoS tools to protect voice-from-voice. What tools should you use?

A. prioritization tools
B. link efficiency tools
C. traffic shaping tools
D. call admission tools
E. All of the above

Answer: D

Explanation:
Call admission control ensures that voice quality of service (QoS) is maintained across constricted WAN links, and automatically diverts calls to alternative PSTN routers when

WAN bandwidth is not available.
Reference: Arch student guide p.11-7

QUESTION 52:

You are the network administrator at Certkiller .Your newly appointed Certkiller trainee wants to know what IP telephony deployment model uses an H.225 Gatekeeper-Controlled trunk for call admission control within existing H.323 environments.
What will your reply be?

A. single site with centralized call processing
B. single site with distributed call processing
C. multisite with centralized call processing
D. multisite with distributed call processing

Answer: D

QUESTION 53:

Which two benefits does VoFR provide? (Choose two)

A. Bandwidth efficiency
B. Cell-switching
C. Congestion notification
D. Heterogeneous network

Answer: A, C

Explanation:
These features are offered with Voice over Frame Relay:
1) Enables real-time, delay-sensitive voice traffic to be carried over slow Frame Relay links
2) Allows replacement of dedicated 64-kbps time-division multiplexing (TDM) telephony circuits with more economical Frame Relay PVCs or SVCs
3) Uses voice compression technology that conforms to International Telecommunication Union Telecommunication Standardization Sector (ITU-T) specifications
4) Allows intelligent setup of proprietary-switched Voice over Frame Relay connections between two Voice over Frame Relay endpoints
5) Supports standards-based FRF.11 and FRF.12 functionality
Reference: Arch student guide p.11.62

QUESTION 54:

What are two design guidelines for VoIP networks? (Choose two)

A. Delay should be no more than 10 ms.
B. Loss should be no more than 1 percent.
C. Jitter should be less then 40 ms.
D. Managed bandwidth is strongly recommended for voice control traffic.
E. One-way latency should be no more than 50 ms.

Answer: B, D
Not C: C is close. But actually 40 ms should be 30 ms

QUESTION 55:

Certkiller is using a multi-site centralized call processor model.
Which feature ensures that the remote site IP phones will still have limited functionality given a WAN outage?

A. Call Admission Control
B. TAPI
C. MGCP
D. SRST
E. SCCP

Answer: D

Explanation:
Survivable Remote Site Telephony (SRST) that provides basic call processing at remote sites in the event of an IP WAN failure.
Reference: Arch student guide p.11-39

QUESTION 56:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what the recommended maximum number of users that an individual wireless access point should support is.
What would your reply be?

A. Between 1 and 10
B. Between 10 and 30
C. Between 32 and 48
D. Between 56 and 128

Answer: B

Explanation:
For a given data rate, the WLAN designer can alter the power level or choose a different antenna to change the coverage area and/or coverage shape.
Access points have an aggregate throughput of about 6 Mbps. With this in mind, the maximum suggested number of active clients is between 10 and 30. The precise number of active clients depends on the data rates supported. That is, active clients with higher data rates necessitate fewer active clients for each access point.
Reference: Arch student guide p.10-8.

QUESTION 57:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know which of the following protocols will provide WLAN redundancy and low downtime.
What would your reply be?

A. EAP
B. BRI
C. SNMP
D. HSRP
E. WEP

Answer: F

Explanation:
Page 10-22 of the official course notes "Designing Cisco Network Service Architectures (ARCH) v1.2" says:
WLAN high-availability considerations
- access point hot standby redundancy, configure two access points to use the same channel in a single coverage area, only one Access point is active.
Hot standby is not the same as HSRP. Hot standby mode designates an access point as a backup for another access point. The standby access point is placed near the access point it monitors and is configured exactly the same as the monitored access point (except for its role in the radio network and IP address). The standby access point associates with the monitored access point as a client and queries the monitored access point regularly through both the Ethernet interface and the radio interface. If the

monitored access point fails to respond, the standby access point comes online, signals the primary access point radio to become quiescent, and takes the monitored access point's place in the network.
Reference: Arch student guide p.10-30.

QUESTION 58:

How would you go about delimiting the area coverage of wireless access points in an effort to provide added security?

A. Lowering Mbps data rates.
B. Increasing Mbps data rates.
C. Configure group access at set intervals.
D. Group access point frequency channels.
E. Enable multicasting.

Answer: B

Explanation:
If an 11-Mbps service has been specified and provisioned with access points to support this level of service, allowing clients to associate at lower rates will create a coverage area greater than planned, increasing the security exposure and potentially interfering with other WLANs
Reference: Arch student guide p.10-22.

QUESTION 59:

Which of the following will enhance throughput in a wireless LAN? (Choose two.)

A. Use static WEP.
B. Filter multicast traffic.
C. Increase size of roaming domains.
D. Use dynamic WAP
E. Minimize broadcast.
F. Enable IPSec.

Answer: B, E

Explanation:
Broadcast and multicast are sent at the slowest data rate (to

ensure that all clients can see them), which reduces the throughput of the WLAN because traffic must wait until frames are processed at the slower rate.
Reference: Arch student guide p.10.22

QUESTION 60:

Your newly appointed Certkiller trainee wants to know which IEEE wireless standard will allow backward compatibility with 802.11b.
What would your reply be?

A. 802.1q
B. 802.11g
C. 802.11a
D. 802.1g
E. 802.11p

Answer: B

Explanation:
The 802.11g standard operates in the same unlicensed portion of the 2.4-GHz spectrum as 802.11b. Both the IEEE 802.11g and 802.11a standards provide a 54-Mbps data rate. IEEE 802.11g provides the benefit of backward compatibility with IEEE 802.11b equipment, preserving users investment in their existing WLAN infrastructure.
Reference: Arch student guide p.10-10

QUESTION 61:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what the maximum number of wireless IP phones that can register with an Access point is.
What would your reply be?

A. 3
B. 7
C. 8
D. 15
E. 33
F. 35
G. 40
H. 57

Answer: B

QUESTION 62:

You are a network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know what the maximum data rate of 802.11b is.
What will your reply be?

A. 2.4 Mbps data
B. 54 Mbps data
C. 1.44 Mbps data
D. 11 Mbps data
E. 2.4 Mbps data

Answer: D

Explanation:
The 802.11b Standard
Long established, the 802.11b standard is used today by the majority of installed wireless LANs.
General Features:
Has a maximum transmission rate per channel of 11Mbps (actual throughput is about 6 to 7Mbps).
Operates in the 2.4GHz radio band.
Supports three channels at distances up to 350 feet.

QUESTION 63:

With regard to wireless enterprise networks, which of the following is true?

A. routing protocols is the most important consideration
B. power of the transmitter is the most important consideration
C. RF interference is the most important consideration
D. STP domains is the most important consideration
E. geological environment is the most important consideration

Answer: C

Explanation:
It is very important, since the performance of the network depends of it.
You can use RF design to minimize the RF radiation in coverage areas or directions not required. For example, if WLAN coverage is required only in the buildings, then you can minimize the amount of RF coverage outside the building through access-point

placement and direction antennas.
The performance of the WLAN and its equipment depends upon its RF environment.
Reference: Arch student guide p.10-23.

QUESTION 64:

Your Certkiller .com trainee Sandra is curios about Cisco wireless LAN.
What should you tell Sandra? (Select two.)

A. Only IP can be transmitted over a wireless LAN
B. All stations in a wireless cell share the bandwidth
C. Wireless LANs use CSMA/CD access method
D. Only one station can send at one time
E. Wireless LANs use a token sharing access method.

Answer: B, D

Explanation:
A WLAN consists of an access point communicating over radio frequency to wireless clietnts. The data rate, power level, and antenna choice affect the size of the coverage area of a single wireless cell, which in turn affects how many access points are required in a specific implementation. This topic describes the wireless communication architecture.
Only one station in a wireless cell, including the access point, can send data at any one time (D).
The bandwidth is shared among all stations (B). If a station wishes to send, it listens and waits for an available slot. WLANs use carrier sense multiple access collision avoidance (CSMA/CA).
Reference: Arch student guide p.10-6.

QUESTION 65:

You are the network administrator at Certkiller . Certkiller has an IEEE 802.11b wireless environment. What is the maximum recommended number of calls using G.711 per access point?

A. 7
B. 15
C. 30
D. 50
E. 100

Answer: A

Explanation:
The maximum recommended number of phones per access point is seven. This limitation is due to the number of packets that can be forwarded per second over an 802.11 link and minimizing transmission delays, rather than a bandwidth limitation of the link.
Reference: ARCH student guide p.10-35

QUESTION 66:

What can be done to ensure connections to workstations that are placed on the edge of a wireless access point's coverage area?

A. Lower data rates
B. Increase data rates
C. Group access point frequency channels together for increased range
D. Enable multicasting

Answer: A

Explanation:
Data rates affect cell size. Lower data rates (such as 1 Mbps) can extend farther from the access point than can higher data rates (such as 11 Mbps). Therefore, the data rate (and power level) affects cell coverage and consequently the number of access points required.
Reference: Arch student guide p.10-21

QUESTION 67:

You are a network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know what the frequency of 802.11b is.
What will your reply be?

A. 5 GHz
B. 2.4 GHz
C. 1.4 GHz
D. 11 MHz

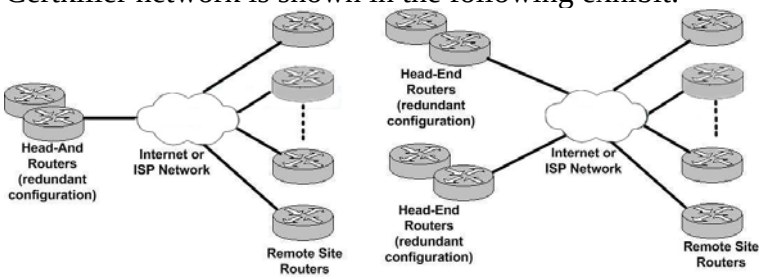
Answer: B

Explanation: Both 802.11b and 802.11g use frequency 2.4GHz. 802.11b is rated at 11Mbps while 802.11g is rated at 54 Mpbs. 802.11g is backwards capable with 802.11b.
Incorrect:

A. 5 GHz - 802.11A

QUESTION 68:

You are the network administrator at Certkiller . The Certkiller network is shown in the following exhibit:



What is the Certkiller VPN topology as shown in the illustration?

A. Full-mesh VPN
B. Hub-and-spoke VPN
C. Hierarchical VPN
D. Token Ring
E. Private WAN

Answer: B

QUESTION 69:

Which of the following types of VNP technology is needed when multicast, broadcast and non-IP packets needs to be tunneled?

A. IPSec
B. GRE
C. Triple-DES
D. IKE
E. None of the above.

Answer: B

Explanation:
In site-to-site VPNs, the principal tunneling is generic routing encapsulation (GRE). If only IP-unicast packets are being tunneled, simple encapsulation provided by IPSec is suffiecient. GRE is used when multicast, broadcast, and no-IP packets need to be tunneld.
Reference: Arch student guide p.9-7

QUESTION 70:

Which of the following will cause Egress Blocking?

A. Packet flooding.
B. Re-transmission of packets blocking all traffic.
C. Large data packets blocking voice packets.
D. Large voice packets blocking data packets.
E. Excessive data fragmentation.

Answer: C

QUESTION 71:

Certkiller Ltd. is a medium-sized company with 12 stationary offices and one head office, where every office is several hundred miles away from the next. You are the network administrator and the CEO of Certkiller wants you to design a VNP. Considering the scenario, what type of VNP would you design?

A. Enterprise remote access VPN
B. Wireless VPN
C. Remote access VPN
D. Site to site VPN
E. Wide area wireless VNP

Answer: D

Explanation:
Since the company is not big the solution may be cost effective. The offices are very far so the internet connection may be used. The best solution here would be site-to-site VPN.
Site-to-Site VPNs are an alternative WAN infrastructure used to connect branch offices, home offices, or business partners sites to all or portions of an enterprise's network. VPNs do not inherently change private WAN requirements, such as support for multiple protocols, high reliablility, and extensive scalability, but instead meet these requirements more cost-effectively and with greater flexibility.
Site-to-site VPNs utilize the most pervasive transport technologies available today, such as the public Internet or service provider IP networks, by employing tunneling and

encryption for data privacy and QoS for transport reliability.

QUESTION 72:

You are a network administrator at Certkiller . You have designed a high availability network based on a redundant network topology. Your newly appointed Certkiller trainee wants to know what the advantages of this design are.
What will your reply be? (Choose two.)

A. It reduces the cost of the network.
B. It can guarantee Quality of Service.
C. Redundant topologies are easier to configure.
D. It allows the secondary path to automatically take over for the primary path.
E. It reduces the impact of individual network device failure.

Answer: D, E

Explanation:
Loss of IP connectivity can be caused by local-link failure, full-loss connectivity by the service provider, or device failure. For a typical remote site, an alternate path (dedicated or dial-on-demand) to the head-end site can protect against local-link failure or loss of service provider connectivity. Protection against a local-device failure at a remote site I is not usually provided unless the importance of connectivity for the remote site warrants the cost. For a typical head-end site, you can achieve redundancy by implementing multiple provider connections and by deploying multiple head-end routers.
Reference: Arch student guide p.9-34

QUESTION 73:

You work as a network administrator at the small real estate company Certkiller .com located in Toronto area. Certkiller .com has two locations 100 miles apart. Each site has 10 computers attached to a LAN with high speed Internet access. There is a need to securely transmit large amounts of customer data from one office location to the other.
Which topology would provide a low-cost, secure solution?

A. Individual remote access VPN
B. Leased point-to-point connections
C. ISDN dial-up access

D. Site-to-site IPSec-based VPN

Answer: D

QUESTION 74:

Which IP NAT implementation allows IPSec peers to establish a connection through a NAT device?

A. PAT
B. PAT-T
C. Dynamic NAT
D. IPSec ESP NAT

Answer: B

Explanation:
NAT Traversal (NAT-T) lets IPSec peers establish a connection through a NAT device. It does this by encapsulating IPSec traffic in UDP datagrams, using port 4500, thereby providing NAT devices with port information. NAT-T autodetects any NAT devices, and only encapsulates IPSec traffic when necessary.
Reference: Arch student guide p.9-64

QUESTION 75:

What are two benefits of choosing a site-to-site VPN instead of a private WAN? (Choose two)

A. Usually less expensive.
B. Guaranteed bandwidth.
C. Globally available.
D. Increased reliability.

Answer: A, C

Explanation:
Site-to-site VPNs are primarily deployed to connect office locations of an enterprise. They provide an alternative to the WAN infrastructure, while offering significant cost benefits. They enable new infrastructure applications such as extrantet, and extend and enhance network connectivity.
Enterprise WAN requirements for traditional private WAN services, such as multiprotocol support, high -availability, scalability, and security, are also requirements for VPNs. VPNs can often meet these requirements more cost-effectively and with greater flexibility than private WAN services using leased lines or virtual circuit

technologies such as Frame Relay and ATM.
Reference: Arch student guide p.9-27,9-28.

QUESTION 76:

Which typical enterprise campus requirement ensures that the network supports the required applications and that data flows within the required time frames?

A. Availability
B. Performance
C. Functionality
D. Manageability
E. Scalability

Answer: C

QUESTION 77:

Which of the following characteristics determines the choice of Layer 1 technology for WAN, remote, or Internet access at the Enterprise Edge? (Choose all that apply.)

A. Scalability.
B. Transportability
C. Loss
D. Layer 2 technology
E. Layer 1 media
F. All of the above.

Answer: C, E

QUESTION 78:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know which of the following application characteristics are significant and must be taken into account in the Enterprise Edge design process.
What would your reply be? (Choose three.)

A. Database magnitude
B. Delay sensitivity
C. Data content
D. Bandwidth usage

E. Loss tolerance
F. All of the above.

Answer: B, D, E

QUESTION 79:

You are contracted as a network administrator for a small newly established company, Certkiller .com. The network consists of three buildings that 150 hundred feet apart that are connected via fast Ethernet single-mode fiber. 10Mbps hubs with 100Mbps Ethernet uplinks over multi-mode fibers to a switch in each building provide access to the network. Category 5 wiring connects over 200 users to the hubs.
The CEO of Certkiller wants you to design a new network that will take scalability, performance, manageability, security and availability into account, while still keeping costs low as the company is still relatively new.
What recommendation regarding wiring infrastructure would you include in your network design?

A. Install Category 5e copper to the desktop from the wiring closets.
B. Replace the copper wiring with fiber optic cables will save costs over a longer period.
C. Maintain the current wiring structure.
D. Install multi-mode fiber to the desktop from the wiring closets.
E. Replace the multi-mode fiber within the buildings with single-mode fiber.

Answer: C

QUESTION 80:

Which of the following would you select to keep VLAN design complexity to a minimum? (Choose one option.)

A. Use campus wide VLANs.
B. Use building distribution level VLANs.
C. Use VLANs in the campus backbone.
D. Use per-switch VLANs at the access layer.
E. Use VLANs in the core.

F. All of the above.

Answer: D

QUESTION 81:

Under which of the following circumstances would you consider using OSPF to be a viable choice for use as a routing protocol. (Choose four.)

A. Authentication is required.
B. NBMA connections exist.
C. The network is non-hierarchical.
D. Only internal routes should be considered.
E. Load balancing between multiple routes is required.
F. Fast convergence is necessary.
G. External routes are not an issue.

Answer: A, B, E, F

Explanation:
OSPF offers these features:
1) With OSPF, there is no limitation on the hop count. The intelligent use of VLSM is very useful in IP address allocation.
2) OSPF uses IP multicast to send link-state updates. This ensures less processing on routers that are not listening to OSPF packets. Updates are only sent when routing changes occur rather than periodically. This ensures a better use of bandwidth.
3) OSPF offers fast convergence because routing changes are propagated instantaneously and not periodically (a characteristic of distance vector routing protocols).
4) OSPF allows for effective load balancing
5) OSPF allows for routing authentication by using different methods of password authentication
6) OSPF allows for the transfer and tagging of external routes injected into an autonomous system. This keeps track of external routes injected by exterior protocols such as Border Gateway Protocol (BGP).
Reference: Arch student guide p.2-49

QUESTION 82:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know which of the objectives mentioned below meet the requirements for the Server Farm module.
What would your reply be? (Choose all that apply.)

A. Provide availability with overall network design.
B. Provide medium switch port density.
C. Provide remote dial-up access.
D. Provide up to 100 Gbps of outbound capacity.
E. Provide scalability with switches and server load balancing.
F. All of the above.

Answer: A, E

QUESTION 83:

In which networks would it be the norm to use Static Routing? (Choose two.)

A. Dial-on-demand networks
B. Smaller expanding networks
C. Stub networks
D. Token ring networks.
E. Multi-homed networks
F. Not so stubby network

Answer: A, C

Explanation:
Static routing is primarily use for:
1) Routing to and from stub networks. A stub network only carries traffic for local hosts, and typically has only one entry/ xit point. Even if it has paths to more than one other network, it does not carry traffic for other networks.
2) Smaller network that are noet expected to grow significantly.
3) Supporting special features such as dial-on-demand routing (DDR) and on-demand routing
4) Specifying routes toward dialing peers in dial-in environments.
Reference: Arch student guide p.2-46.

QUESTION 84:

When selecting a router for an Edge solution, which is the first step that you, the Certkiller technician, would use Cisco Product Advisor for?

A. To determine the environment in which the router will be used.
B. To select the number of WAN ports required.
C. To determine types of protocols to be supported.
D. To select the appropriate switches.
E. To select the number of LAN ports required.

Answer: A

QUESTION 85:

Which of the following are characteristic in defining a Campus Backbone submodule? (Choose all that apply.)

A. Partial mesh generally used to avoid redundant links.
B. Usually, no policy enforcement.
C. Provides high speed, low overhead of low latency switching.
D. Full mesh to allow redundancy.
E. Implements policy-based filtering.
F. Transports aggregate traffic from the other submodules and functional areas.
G. All of the above.

Answer: B, C, F

QUESTION 86:

What are the design options that will allow network segmentation? (Choose two.)

A. VLANs
B. Token Ring
C. Ethernet Trunking
D. Separate, flat networks
E. Rapid Spanning Tree (RST)

Answer: A, D

QUESTION 87:

Which of the following application characteristics are important to the Enterprise Edge design process? (Choose three.)

A. data content
B. bandwidth usage
C. database size
D. delay sensitivity
E. loss tolerance

Answer: B, D, E

QUESTION 88:

Which two routing protocols are more appropriate in an NBMA environment? (Choose two)

A. IGRP
B. RIPv2
C. EIGRP
D. OSPF

Answer: C, D

Explanation:
D: Intitialy OSPF was designed for networks that consisted of point-to-point links, but later it was successfully adapted for operation in LAN and NBMA environments.
C: EIGRP is suitable for nonbroadcast multi-access (NBMA) environments where there are split horizon issues, such as with Frame Relay or ATM multipoint interfaces.
Not B,A: Use of RIP and RIPv2 in NBMA networks is not appropriate because of large bandwidth requirements.

QUESTION 89:

Cisco has various management tools aimed at various markets. Which of the following Cisco network management tools is targeted toward small to medium-size business?

A. Netsys
B. CiscoWorks Lite
C. CiscoWorks Standard
D. CiscoWorks Premium
E. CiscoWorks for Windows

Answer: E

QUESTION 90:

Certkiller has 1500 managed devices and 15,000 end users on a campus network.
LAN Management Solution (LMS) is being deployed as the network management application.
What is the recommended number of network management server(s)?

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

Answer: A

QUESTION 91:

Which statement about CiscoWorks 2000 Inventory Manager is true?

A. It uses SNMP v1.
B. It scans devices for hardware information.
C. It scans and records the operational status of devices.
D. When the configuration of a device changes, the inventory is automatically updated.

Answer: B

Explanation:
Inventory Manager: Inventory Manager provides current inventory of all Cisco devices (routers, switches, firewalls) in the network, including support for Cisco CallManager, VPN concentrator, and WAN switches. Hardware and software summary information, includes detailed reports for groups of devices, memory, flash, software version, interface, and stack modules.
Reference: Arch student guide p.4-19

QUESTION 92:

According to good network design practices, what should be done to segment a physical network? (Choose three)

A. Use Layer 3 switching to reduce the scope of broadcast domains.
B. Use Layer 3 switching to reduce the scope of failure domains.
C. Use a Layer 2, switched domain to reduce the size of a collision domain.
D. Use Layer 2 switched domains to increase the size of a policy domain.
E. Use access control list to define policy domains.
F. Use access control lists to define failure domains.

Answer: A, C, E

QUESTION 93:

Which factors in a business environment will increase the need for remote access? (Choose all that apply.)

A. The ability to provide a more flexible work environment.
B. The need for authentication.
C. The rising costs of office space.
D. The need for a means of charging back leasing costs.
E. All of the above.

Answer: A, C

Explanation:

A. Having remote users will decrease the need for additional office space.
C. Allowing users to work from home provide a more flexible work environment.
Incorrect.
B. The need for authentication would not suggest a need for remote access.
D. Irrelevant

QUESTION 94:

What are the features that influence Redundancy requirements of a WAN from a branch office to a regional office? (Choose all that apply.)

A. Impact if the site is an aggregation point.
B. Impact of the site is non-existent or unavailable.
C. Routing and switching requirements
D. Critical importance of the site and the number of users.

E. All of the above.

Answer: B, D

Explanation:
The correct answers should be:
- criticality of the site
- number of users
According to Cisco.
Not A: The official Cisco course notes "Designing Cisco Network Service Architectures (ARCH) v1.2" states on page 3-16 "Branch offices normally do not act as aggregation points. Redundancy depends on the criticality of the site and the number of users".

QUESTION 95:

Your newly appointed Certkiller trainee wants to know which ATM service class will not allow delay or loss and is the most appropriate for traffic.
What would your reply be?

A. Real Time Variable Bit Rate (rt-VBR)
B. Constant Bit Rate (CBR)
C. Virtual Time Variable Bit Rate (vt-VBR)
D. Available Bit Rate (ABR)
E. Unspecified Bit Rate (UBR)
F. Non-Real Time Bit Rate (nrt-VBR)

Answer: B

Explanation:
Constant bit rate (CBR): This traffic category has a bandwidth guarantee. Use it for traffic least tolerant of delay or loss.
Reference: Arch student guide p.3-35.

QUESTION 96:

Which one of the following application requirements would make DSL an inappropriate choice for a Layer 1 technology?

A. low cost
B. high bandwidth
C. high link quality

D. always on
E. all of the above

Answer: C

Explanation:
Enterprises are increasingly turning to DSL to expand the use of telecommuting, reduce costs, and provide Internet-based services. DSL offers always-on access, allowing users to work at remote offices as if they were on site.
Reference: Arch student guide p.3-66

QUESTION 97:

When designing a network for an online bookstore, the availability of which two Enterprise Edge modules would be the most critical issue? (Select two)

A. WAN module
B. Internet Connectivity module
C. Remote Access and VNP module
D. E-commerce module

Answer: B, D

Explanation:
For book store the most critical are E-Commerce and Internet Connectivity module.
E-Commerce: Enables enterprises to deploy e-commerce applications and take advantage of the Internet. All e-commerce transactions pass through a series of intelligent services to provide performance, scalability, and availability within the overall e-commerce network design.
Internet connectivity: Provides internal users with connectivity to Internet services. Internet users can access the information on publicly available servers. Additionally, this module accepts Virtual Private Network (VPN) traffic from remote users and remote sites and forwards it to the Remote Access and VPN module.
Reference: Arch student guide p.3-5

QUESTION 98:

You are a network administrator at Certkiller . Certkiller has an ATM network. Your newly appointed Certkiller trainee wants to know which method is used to prevent large data volumes from delaying voice packets on the Certkiller network. What will your reply be?

A. CCS
B. FRF.11
C. increased MTU
D. separate VCs for data and voice

Answer: D

Explanation:
All other answers are wrong. With separate Vc you could easily assign different QOS parameters

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QUESTION 99:

You are a network administrator at Certkiller . Certkiller has a regional office in London and branch offices in Newcastle, Oxford, and Liverpool. You need to provide redundancy from Oxford office to the office in London.
What two choices can you make? (Choose two.)

A. multiple Frame Relay PVCs
B. dual Wan links to the regional office
C. dual Wan links to another branch office
D. single links - one to the regional office and one to another office

Answer: B, D

Explanation:
If the branch office requires redundant links, the design will use either dual WAN links to two different regions or connect to another branch that connects to a regional site. The link between two branch offices is generally the minimum amount of bandwidth to support each branch. In that case, oversize the link between the branch and regional site to support a fraction of the bandwidth (usually half) of the other branch site. A third method is to implement a dial-on-demand circuit through either ISDN or the PSTN.
Reference: Arch student guide p.3-22.

QUESTION 100:

Which two statements are true about MLP interleaving? (Choose two)

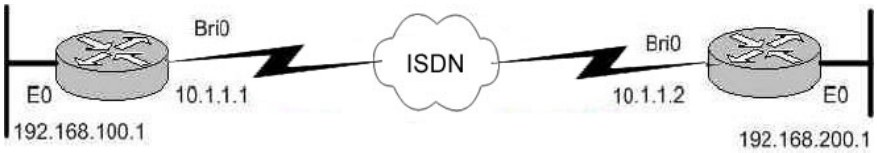
A. It fragments and encapsulates all packets in a fragmentation header.
B. Packets smaller than the fragmentation size are interleaved between the fragments of the larger packets.
C. Packets larger than the fragmentation size are always fragmented, and cannot be interleaved, even if the traffic is voice traffic.
D. It fragments and encapsulates packets that are no longer than a configured size, but

does not encapsulate smaller packets inside a fragmentation header.

Answer: B, D

Explanation:
Previous implementations of Cisco IOS Multilink PPP (MLP) include support for Link Fragmentation Interleaving (LFI). This feature allows the delivery of delay-sensitive packets, such as the packets of a Voice call, to be expedited by omitting the PPP Multilink Protocol header and sending the packets as raw PPP packets in between the fragments of larger data packets. This feature works well on bundles consisting of a single link. However, when the bundle contains multiple links there is no way to keep the interleaved packets in sequence with respect to each other.
Interleaving on MLP allows large packets to be multilink encapsulated and fragmented into a small enough size to satisfy the delay requirements of real-time traffic; small real-time packets are not multilink encapsulated and are transmitted between fragments of the large packets.
Note: The following URL from Cisco's website explains this feature:
http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122cgcr/fqos_c/fqcprt6/qcflfi.htm#wp100090
"(Optional) Configures a maximum fragment delay. If, for example, you want a voice stream to have a maximum bound on delay of 20 milliseconds (ms) and you specify 20 ms using this command, MLP will choose a fragment size based on the configured value."
Packets are fragmentedwhen they exceed the configured maximum delay.

QUESTION 101:



A network administrator is designing the routing schema to be used for the WAN connections between the corporate headquarters and the branch offices. Each of the branch offices has its own network server providing most of the local services needed. The branch offices need only periodic connectivity to the corporate headquarters, so ISDN BRI in a DDR configuration was chosen for WAN connectivity.
Which two routing protocols are most appropriate for this network? (Choose two)

A. RIPv2
B. IGRP
C. EIGRP
D. OSPD
E. IS-IS

Answer: A, B
Because both these routing protocol have a feature call snapshot routing.
The following routing protocols are supported for snapshot routing :
1- RTMP.
2- RTP.
3- RIPv2.
4- IGRP.
5- Novel IPX - RIP and SAP

QUESTION 102:

You are the network administrator at Certkiller . Certkiller has been issued a portion of a Class C address from their ISP. There are 320 users that will need access to the Internet. The CEO now wants you to design a network that requires private internal addressing for the users within the company and also requires a website for external users. Which types of Network Address Translation would you propose? (Choose two.)

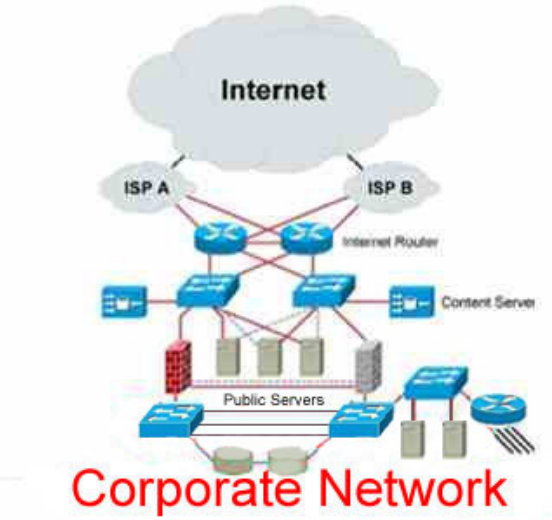
A. Static
B. Overlapping
C. Persistent
D. Dynamic

Answer: A, D

Explanation:
Static NAT would be good for the Web server. Dynamic NAT should be used for the 320 users of the company.
Static NAT: Maps an unregistered IP address to a registered IP address on a one-to-one basis. Static NAT is particularly useful when a device needs to be accessible from outside the network.
Dynamic NAT: Maps an unregistered IP address to a registered IP address from a group of registered IP addresses.

QUESTION 103:

Certkiller has obtained a block of public Internet addresses to provide addresses for their publicly accessed services. Part of the Certkiller .com corporate network is illustrated in the network topology exhibit.



Which one of the following statements is the best design for the Internet connectivity solution?

A. To facilitate Internet connection load sharing, static routing should be used on the Internet routers, with static routes on each Internet router pointing to the networks hosted by the ISP connected to the router.
B. To enable the proper redundancy capabilities of multi-homing, a BGP connection should be made to ISP A, and floating static routes should be installed to direct traffic to ISP B.
C. To enable the proper redundancy capabilities of multi-homing, a BGP connection should be made both ISP A and ISP B.
D. To facilitate Internet connection load sharing, the Internet routers should be configured to run HSRP.

Answer: C

QUESTION 104:

Certkiller .com, an insurance company, has a single link to the Internet through a local ISP. The ISP provides web hosting for Certkiller .com. E-mail is the main application for 175 users at Certkiller .com's single office. The remaining 750 employees at Certkiller .com are involved in the manufacturing process and do not have network access. Fifteen host devices, available in kiosks to all employees, are used for internal human resource applications.
You are now required to recommend a suitable routing mechanism for the Certkiller .com enterprise edge.

A. RIP V2
B. BGP
C. Default route
D. IBGP

E. EBGP

Answer: C

Explanation:
When Implementing a single-homed system, the routing decision is to use default routes pointing to the network that connects the site to the ISP. The default route is then advertised throughout the corporate site, so that any packets with an unknown destination are forwarded to the ISP.
Reference: Arch student guide p.3-57.

QUESTION 105:

Certkiller uses a single ISP connection. Certkiller is finishing development of a web site that will be used for catalog information and sales to external customers. The web site is expected to have a large amount of traffic. Certkiller has 2,800 internal network users, of which 300 require simultaneous external Internet connectivity. What should be designed into the network to improve accessibility to Certkiller 's web site?

A. Mirrored server farm
B. Multi-homed ISPs
C. Redundant distribution routers
D. Firewall

Answer: B

Explanation:
ISP multi-homing solutions improve availability and load balancing for WANs that use the Internet. Multiple connections, known as multi-homing, reduce the chance of a potentially catastrophic shutdown if one of the connections should fail.
Multi-homing really makes a difference if one connection to an ISP fails. As soon as the router assigned to connect to that ISP determines that the connection is down, it will reroute all data through one of the other routers.
Reference: Arch student guide p.3-89

QUESTION 106:

In an Internet e-commerce, browser-based application, which method can have the greatest impact on optimizing WAN bandwidth usage?

A. Multiplexing
B. Compression
C. Content networking

D. Secure sockets layer (SSL)

Answer: C

Explanation:
Content networking with its WCCP mechanism provides cashing of web pages and pictures which user already loaded so if he want to load the webpage again it loads from the local cash, not from the Internet.
This optimizes WAN bandwidth usage.

QUESTION 107:

The SAFE medium network design suggest which of the following modules?

A. Campus infrastructure and Internet connectivity.
B. Campus infrastructure, Internet connectivity, and network management.
C. Corporate Internet, campus, and WAN.
D. Frame/ATM and ISP edge.

Answer: C
Reference: Arch student guide p.6-82

QUESTION 108:

A network vulnerability scanner is part of which critical element of network and system security?

A. Host security
B. Perimeter security
C. Security monitoring
D. Policy management

Answer: C

Explanation:
Intrusion protection: To ensure that a network remains secure, it is important to regularly test and monitor the state of security preparation. Network vulnerability scanners can proactively identify areas of weakness, and intrusion detection systems can monitor and respond to security events as the occur. Using security monitoring solutions, organizations can obtain unprecedented visibility into both the network data stream and the security posture of the network.
Reference: Arch student guide p.6-22

QUESTION 109:

To securely transport EIGRP traffic, a network administrator will build VPNs between sites.
What is the best method to accomplish the transport of EIGRP traffic?

A. IPSec in tunnel mode.
B. IPSec in transport mode.
C. GRE with IPSec in transport mode.
D. GRE with IPSec in tunnel mode.

Answer: C
Reference: Arch student guide p.9-40, 9-41.

QUESTION 110:

Which of the following IOS queuing features are recommended at present to use as queuing method when sending voice traffic?

A. WFQ
B. IO RTP Priority
C. CQ
D. PQ
E. Codec
F. LLQ
G. ARQ

Answer: F

Explanation:
In choosing from among the many available prioritization sc hemes, the major factors to consider include the type of traffic involved and the type of media on the WAN. For multiservice traffic over an IP WAN, Cisco recommends low-latency queuing (LLQ) for low-speed links. LLQ allows up to 64 traffic classes with the ability to specify, for example, strict priority queuing behavior for voice and interactive video. A minimum bandwidth for Systems Network Architecture (SNA) data and market data feeds, and weighted fair queuing for other traffic types.
Reference: Arch student guide p.11-77.

QUESTION 111:

Which of the following are IOS queuing techniques?
(Choose all that apply.)

A. LLQ
B. CAR
C. CQ
D. PQ
E. WFQ
F. NBAR

Answer: A, C, D, E

Explanation:
Not B,F: CAR is a term of traffic shaping. NBAR is not a queuing technique.
Reference: Arch student guide p.7-22.

QUESTION 112:

Which of the following statements best describes the characteristics of a network that is well designed for QoS?

A. Packets are classified at each router within the network. The classification is based on as many details as possible, typically using extended IP ACLs to match the packets.
B. Packets are classified based on their position from the hub and the closeness to the router. All the packets are manually classified based on their positioning and flow of the router.
C. Packets are classified based on socket address, at the router closets to the source of the traffic.
The packets are characterized automatically based on flow at the routers in the middle of the network.
D. Packets are classified and marked, close to the edge of the network.
The packets are treated differently based on this marking at the routers in the middle of the network.
E. Packets are classified based on variable parameters, but close to the edge of the network.
The packets are automatically characterized based on flow at the routers in the middle of the network.

Answer: D

Explanation:
Network design practice emphasizes that you should classify or mark traffic as close to the edge of the network as possible. Traffic class is a criterion for queue selection in the various queuing schemes used at interfaces within the campus switches and WAN devices. When you connect an IP phone using a single cable, the phone becomes the edge of the managed network. As the edge device, the IP phone can and should classify and mark traffic flows so that network QoS mechanisms can correctly handle the packets.
Reference: Arch student guide p.11-76

QUESTION 113:

Which of the following would you use in the CPE to make sure that voice packets are limited to the Committed Information Rate (CIR) and do not expand beyond the CIR of Frame Relay links?

A. Prioritization
B. Traffic shaping
C. Traffic policing
D. Segmentation
E. Classification
F. Fragmentation

Answer: B

QUESTION 114:

You are a network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know why CBWFQ is not recommended for voice traffic.
What will your reply be?

A. CBWFQ does not support FIFO
B. CBWFQ allows queue starvation
C. CBWFQ guarantees delay but does not guarantee bandwidth
D. CBWFQ guarantees bandwidth but does not guarantee delay
E. None of the above

Answer: D

QUESTION 115:

Within the IP header, which fields of the ToS byte provide Layer 3 classification? (Choose two.)

A. CoS
B. TTL
C. SNAP
D. DSCP
E. IP Precedence

Answer: D, E

QUESTION 116:

Which of the following represent the advantages of implementing QoS in Enterprise Networks? (Choose two.)

A. It decreases propagation delay
B. It provides predictable response times.
C. It supports dedicated bandwidth per application.
D. It prevents the need to increase bandwidth when adding applications.

Answer: B, C

QUESTION 117:

With regard to classification and marketing, which of the following statement is true?

A. When classifying packets at Layer 3, only Layer 3 IP Precedence markings can be used.
B. Marking features allows a router to mark any field that the classification features can examine
C. Classification features can examine different fields inside a frame or packet, unless the packet has already been marked, in which case only the marked field can be examined
D. Although classification can examine different fields inside a frame or packet, it is useful to mark the packet, so that switches and routers that later receive the packet can apply features based on the market field.

Answer: D

Explanation:

Packet classification features provide the capability to partition network traffic into multiple priority levels or classes of service. For example, by using the three precedence bits in the type of service (ToS) field of the IP packet header (two of the values are reserved for other purposes), you can categorize packets into a limited set of up to six traffic classes. After you classify packets, you can utilize other QoS features to assign the appropriate traffic handling policies, including congestion management, bandwidth allocation, and delay bounds for each traffic class.
Reference: ARCH student guide p.7-18.

QUESTION 118:

Certkiller, the CEO of Toronto division of Certkiller .com, want to know what the characteristics of RSVP are.
What should you tell Mrs. Bill?

A. RSVP itself provides bandwidth and delay guarantees
B. For RSVP to be end-to-end, all devices must support RSVP
C. RSVP reservations are maintained by a centralized reservations server.
D. An RSVP compatible QoS mechanism must be used to implement guarantees according to RSVP reservations.

Answer: B, D

Explanation:
Resource Reservation Protocol. Protocol that supports the reservation of resources across an IP network. Applications running on IP end systems can use RSVP to indicate to other nodes the nature (bandwidth, jitter, maximum burst, and so on) of the packet streams they want to receive. Also known as Resource Reservation Setup Protocol.
Resource Reservation Protocol (RSVP) is an IETF-draft networking protocol dedicated to being the facilitator and carrier of standardized QOS information and parameters. RSVP carries generic (industry-defined) QOS parameters from end nodes (inclusive) to each QOS-aware network device included in the path between RSVP session members. That is, RSVP is a means by which end nodes and network devices can communicate and negotiate QOS parameters and network usage admission.
Reference: Arch student guide p. B-23.

QUESTION 119:

Which two of the following factors are typically used to determine QoS requirements for real-time applications such as IP Telephony?

A. latency
B. jitter
C. echo delay

D. two-way latency
E. propagation delay

Answer: A, B

Explanation:
Voice, as a class of IP network traffic, has strict requirements concerning delay and delay variation (also known as jitter). Compared to most data, it is relatively tolerant of loss. To meet the requirements for voice traffic, the Cisco AVVID IP telephony solution uses a wide range of IP QoS features such as classification, queuing, congestion detection, traffic shaping, and compression.
Reference: Arch student guide p.11-76.

QUESTION 120:

Which speed links is recommended for link efficiency tools to be used?

A. Links below 10 Mbps
B. Links above 2.0 Mbps
C. Links equal to 1.5 Mbps
D. Links at or below 768 Kbps

Answer: D

Explanation:
Link efficiency interleaving is used on links at or below 768 Kbps.
Reference: Arch student guide p.7-29

QUESTION 121:

The ITU G.114 recommendation specifies which end-to-end delay as the threshold for high-quality voice.

A. 125 ms
B. 150 ms
C. 200 ms
D. 250 ms

Answer: B

Explanation:
When addressing the QoS needs of voice traffic, keep in mind.
1) One-way latency should be no more than 150-200 ms.
2) Jitter should be no more than 30 ms.

3) Loss should be no more than one percent.
Reference: Arch student guide p.7-45

QUESTION 122:

What can be done when voice frames are delayed by large numbers of data packets at an interface?

A. Implement random early detection.
B. Implement prioritized queue service.
C. Implement aggressive fragmentation.
D. Implement token-bucket prioritization.

Answer: B

Explanation:
Allow applications to reserve bandwidth to meet their requirements. For example, a Voice over IP (VoIP) applications can reserve 32 kbps end-to-end using this kind of service. Cisco IOS QoS uses weighted fair queueing (WFQ) with RSVP to provide this kind of service. Guaranteed rate service is implemented using a queue-service discipline.
Reference: Arch student guide p.7-12

QUESTION 123:

Which IOS QoS enhancement was created to address scalability and bandwidth guarantee issues?

A. DiffServ
B. IntServ
C. RSVP
D. WFQ

Answer: C
DiffServ and IntServ are not IOS enhancements, but models of QoS implementations. WFQ is a basic queueing mechanism.

QUESTION 124:

Which type of classification mechanism does the Cisco IP phone use?

A. ISL
B. Q.931
C. G.729a

D. 802.1p/Q
E. Spanning Tree

Answer: D

Explanation:
Streaming video applications, such as IPTV video on demand (VoD) programs, are relatively high bandwidth applications with a high tolerance for loss, delay, and delay variation. As such, significant QoS tools are not required to meet the needs of these applications. However, in most enterprise environments, these types of applications are considered more important than regular background applications (such as e-mail and web browsing) and should be given preferential treatment. A Layer 2 classification of CoS 1 in 8021.Q/802.1p environments should be used for these applications.
Reference: Arch student guide p.7-48

QUESTION 125:

What problem does WFQ introduce when used in networks that have delay sensitive traffic like voice and video?

A. WFQ weights by giving preference to TCP-based flows whereas voice and video is UDP/RTP-based.
B. WFW weights by giving preference to UDP-based flows whereas voice and video is TCP/RTP-based.
C. WFQ becomes too fair in the presence of many flows so that an individual flow might not get enough bandwidth.
D. WFQ provides configuration settings that only permit data traffic, which is the root cause of WFQ's inability to provide good service to voice and video traffic.

Answer: C

Explanation:
WFQ is to fair.
WFQ classifies traffic into different flows based on such characteristics as source and destination address, protocol, and port and socket of the session. WFQ is a default queueing discipline on links at and below 2.048 Mbps.

QUESTION 126:

What is one of the reasons that custom QoS ACLs are recommended over automatic QoS when configuring ports on a Catalyst 6500 for use with IP phones?

A. 79xx IP phones do not automatically mark voice packets with non-zero DSCP values.
B. 79xx IP phones do not mark protocol packets such as DHCP, DNS or TFP with

non-zero DSCP values.
C. 79xx IP phones do not mark voice packets with optimal DSCP values.
D. 79xx IP phones use a custom protocol to communicate CDP information to the switch.

Answer: C

QUESTION 127:

When working in a Cisco environment, which of the following models would be utilized when you connect to a PBX system that uses non-standard signaling?

A. Translate model
B. Cross over model
C. Interprete model
D. Transport model
E. Trans-cross model

Answer: A

QUESTION 128:

Both incoming and outgoing calls for a voice system are governed by rules. Which set of rules governs the handling of voice system calls?

A. Voice plan
B. Route plan
C. Route pattern
D. Dial pattern
E. Call handler
F. Dial plan

Answer: F

QUESTION 129:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know in which of the following Frame Relay PVC configurations that are able to carry both voice and data, is the potential voice load better understood and partially isolated from the data load.
What would your reply be?

A. Simplex PVCs
B. Separate PVCs
C. Half Duplex PVCs
D. Duplex PVCs
E. Combined PVCs

Answer: B

QUESTION 130:

Your newly appointed Certkiller trainee wants to know which codec you would recommend for higher quality voice over a data network. What would your reply be?

A. G.711
B. G.714
C. G.723
D. G.726
E. Q.728
F. G.729

Answer: A

QUESTION 131:

What is the default setting that the Cisco IP phone employs to set the CoS/ToS value for voice packets?

A. 1
B. 3
C. 5
D. 7
E. None of the above.

Answer: C

Explanation:
Ports that are in the data VLAN have a default class of service (CoS) of zero. Ports that are a member of the voice VLAN have a default CoS of 5
Reference: Arch student guide p.11-49

QUESTION 132:

Bandwidth used by active calls can be delimited by which of the following types of Call Admission in the Control Manager?

A. Departments
B. Regions
C. Partitions
D. Locations
E. Device Pools
F. All of the above

Answer: D

QUESTION 133:

In a voice system, what set of rules governs the handling of incoming and outgoing calls?

A. A dial plan
B. The route table
C. The dial pattern
D. A call handler
E. A route pattern

Answer: E

QUESTION 134:

With regard to voice calls, which tool is used to reduce IP header size?

A. cRTP
B. RTCP
C. transcoder
D. coded (compression / decompression)
E. A and D

Answer: A

Explanation:
Header Compression - Compresses a header at various layers of the Open System

Interconnection (OSI) reference model. Examples include Transmission Control
Protocol (TCP) header compression, compressed RTP (cRTP), and compressed Internet Protocol/User Datagram Protocol (IP/UDP).

QUESTION 135:

What type of protocol is SIP?

A. Peer-client
B. Server-peer
C. Peer-to-peer
D. Client-server

Answer: D
SIP stands for Session Initiation Protocol. SIP was published as a proposed standard by the Internet Engineering Task Force (IETF) in 1999. It is a signaling protocol for multimedia session control. This includes signaling for voice, data, and video sessions between just two parties or for multiparty conferencing sessions. SIP end-points negotiate the media parameters using Session Description Protocol (SDP). SDP allows the SIP terminal or application to negotiate media type (audio, video or data), transport protocol (RTP), and media encoding method. Unlike the switched circuit network of today, IP networks developed using SIP will easily support the concepts of presence, availability, and mobility since it is part of the SIP standard.
The IETF defines standard behavior for key SIP Server elements such as registration, redirect and proxy servers. SIP registration servers allow users to register with the SIP network using a SIP address that is similar to a URL or Web site location. Once a user registers, the local SIP proxy server routes messages on behalf of the user to the proper destination address. The SIP redirect server is a special server that returns a new or changed address for the destination party that may have temporarily changed locations (from work to home for example). Each of these servers have a particular behavior defined in the IETF standard and maintain session state information in a standard manner, leading to interoperability.
SIP's main advantages over H.323 are its extensibility and flexibility for adding new features. H.323 is a more complex architecture and uses binary encoding of message parameters. The simplicity of SIP makes it easier to develop and debug applications leading to lower product costs for equipment providers.
The SIP client-server and header format design is based on proven Internet standards such as Hyper Text Transfer Protocol (used on commercial web servers) and Simple Mail Transfer Protocol (used for internet e-mail services). The Client-Server design means that each SIP request will result in a well-defined set of SIP responses. This modular design makes it easy to extend SIP to support new operations by simply adding a new request (or SIP Method) and its corresponding response message. Because SIP is text based, it is easy to parse the various SIP commands.

QUESTION 136:

When enabling traffic shaping on a Frame Relay interface supporting voice and data, which three parameters should be configured to protect voice traffic? (Choose three)

A. Bt
B. Bc
C. Be
D. CIR
E. LMI
F. DLCI

Answer: B, C, D

QUESTION 137:

Your boss at Certkiller .com is curios as to which type of applications benefit from IP Multicast.
What should you tell her? (Select three).

A. low bandwidth streaming applications with many simultaneous users
B. high bandwidth web serving applications
C. video-on-demand served from the Internet
D. scheduled classes delivered using IP-TV over multiple LAN/WAN connections
E. live radio broadcasts delivered over multiple LAN/WAN connections
F. high bandwidth, high volume transactional applications

Answer: A, D, E

QUESTION 138:

You are a technician at Certkiller .com. Your newly appointed Certkiller trainee Jack wants to know which of the following are considerations to using IP Multicast delivery.
What would your reply be? (Select two.)

A. No congestion avoidance.
B. Not for bandwidth intensive applications.
C. No guaranteed delivery mechanism.
D. Source sends multiple data streams out each interface.
E. Ordered delivery of packets.

Answer: A, C
Explanation; Multicast disadvantage are Best-effort delivery, No vongestion avoidance, Duplicates and Out-of order delivery.

QUESTION 139:

What are potential issues when using PIM-SM for multicast networks? (Choose two)

A. Not effective for dense distribution of receivers.
B. Easy to troubleshoot.
C. Unicast routing protocol dependent.
D. Requires an RP for the initial distribution.
E. RPs can become bottlenecks unless carefully placed.

Answer: D, E

Explanation:
Potential issues with PIM-SM include:
1) PIM-SM requires an RP during the initial setup of the distribution tree (it can switch to the shortest-path tree once RP is established and determined as optimal). RPs can become bottlenecks if not selected with great care.
2) PIM-SM's complex behavior is difficult to understand and therefore difficult to debug.
Reference: Arch student guide p.8-29

QUESTION 140:

You are a technician at Certkiller .com. Your newly appointed Certkiller trainee wants to know which of the following are considerations to using IP Multicast delivery. What would your reply be? (Choose all that apply.)

A. No congestion avoidance.
B. Low end routers in use.
C. No guaranteed delivery mechanism.
D. Source sends multiple data streams out each interface.
E. Ordered delivery of packets.
F. Not for bandwidth intensive applications.

Answer: C, E

QUESTION 141:

You are the network administrator at Certkiller .Your newly appointed Certkiller trainee wants to know what the source address of IP multicast traffic is.
What will your reply be?

A. the assigned IP address of the source host
B. a reserved link address in the 224.0.0.0/24 LCP block
C. a GLOP address with an embedded AS number assigned to the source organization
D. a source-specific (SSM) address in the 232/8 block

Answer: A

QUESTION 142:

What are the characteristics of an IP Multicast source distribution tree? (Choose three)

A. Sub-optimal paths from source to all receivers.
B. Minimal memory utilization on multicast routers.
C. Router maintenance of complete path information for each source.
D. Optimal path from source to each receiver.
E. Reduced latency when compared to shared distribution trees.
F. Single root RP forwarding of all source traffic.

Answer: C, D, E

Explanation:
IP Multicast Source Distribution Trees
1) uses more memory (Router maintenance of complete path information for each source)
2) Supports optimal paths from source to all receivers
3) Minimizes delay
Reference: Arch student guide p.8-20

QUESTION 143:

What are two potential issues when using PIM-SM for multicast networks? (Choose two)

A. Not effective for dense distribution of receivers.
B. Easy to troubleshoot.
C. Unicast routing protocol dependent.
D. Requires an RP for the initial distribution.
E. RPs can become bottlenecks unless carefully placed.

Answer: D, E

Explanation:
Potential issues with PIM-SM include:
1) PIM-SM requires an RP during the initial setup of the distribution tree (it can switch to the shortest-path tree once RP is established and determined as optimal). RPs can become bottlenecks if not selected with great care.
2) PIM-SM's complex behavior is difficult to understand and therefore difficult to debug.
Reference: Arch student guide p.8-29

QUESTION 144:

Which of the following components would you most probably encounter in the VPN/Remote Access module? (Choose three.)

A. ISDN
B. IDS
C. Firewall
D. PSTN
E. Access server
F. All of the above.

Answer: B, C, E

QUESTION 145:

Which VNP management characteristic would you use when you want to make sure that the network in operation has the least disruption of service when topology changes are made?

A. Auto setup
B. Remote management
C. Dynamic reconfiguration
D. Automatic reconfiguration.
E. Path MTU discovery

Answer: C

Explanation:
Dynamic reconfiguration: All configuration changes should take effect without requiring a reboot of the device.
Disruption of service with a fully loaded VPN device can

potentially impact thousands of individual users.
Reference: Arch student guide p.9-17

QUESTION 146:

Your newly appointed Certkiller trainee wants to know which protocol at Layer 3 can be used to provide data integrity, privacy, and security on an IP based VPN.
What would your reply be?

A. GRE
B. PKI
C. IPSec
D. L2TP
E. Kerberos
F. MD5

Answer: C

Explanation:
IPSec is a set of standards that specify various options for providing VPN data privacy. Packet authentication protects the information flow from being tampered with or even repeated, thereby minimizing disruption to the communication.
An IPSec networking architecture has been specifically designed to address these issues. The framework set forth by the IPSec working group, Internet Engineering Task Force (IETF), pofides data integrity checks for tamper detection, source address verification, and data privacy for the packet data nad data path.
Reference: Arch student guide p.9-9.

QUESTION 147:

You are contracted as a network administrator the company, Certkiller Ltd. Recently you received complaints by users that they are experiencing performance problems on the company's site-to-site VPN network. Upon investigating the complaints you find that the VPN connection uses IPSec and GRE and traverses several Ethernet segments. The VPN packets are being fragmented as they traverse the links.
What can be done to address this problem successfully?

(Choose two.)

A. Employ path MTU discovery.
B. Set the MTU value to 1400 bytes.
C. Reset the MTU value to lower than 1400 bytes.
D. Set the MTU higher than 1500 bytes.
E. Turn off pre-fragmentation for IPSec.
F. None of the above.

Answer: A, B

QUESTION 148:

You are the network administrator at Certkiller . Which Cisco Works VPN/Security Management Solution will you use to gain access to devices and the displays that will show their real-time status as well as their operational and configuration functions through a web browser?

A. Resource Manager (RME)
B. VPN Monitor
C. Cisco View
D. Omni-vision
E. IDS Host Sensor

Answer: B

Explanation:
The CiscoWorks VPN/Security Management Solution includes VPN Monitor.
VPN Monitor: Collects, stores, and reports on IPsec-based site-to-site and remote-access VPNs. VPN Monitor supports the Cisco VPN concentrators and routers.
Reference: Arch student guide p.9-19.

QUESTION 149:

Which network management tool helps network administrators develop and maintain new and existing traffic filters on Cisco devices?

A. CiscoView
B. ACL Manager
C. Cisco Netsys
D. Resource Manager

Answer: B

Explanation:
ACL Manager manages the access lists of Cisco devices. ACLM provides tools to set up and manage IP and IPX filtering and device access control. These tools include: access list editors, policy template managers, network and service class managers for scalability, access list navigation tools for troubleshooting, optimization of access lists, and automated distribution of access list updates.
Reference: Arch student guide p.4-25

QUESTION 150:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what the device weight limit per CallManager in a Cisco IP phone configuration would be.
What would your reply be?

A. 800
B. 5000
C. 6500
D. 2500

Answer: B

Explanation:
The clustering option relate to the grouping of devices, usually phones and gateways. With the limits imposed on a single CallManager (device weights of 5,000 per CallManager, not IP phones) and good design practices, the minimum configuration consists of two CallManagers, which will support up to 2,500 IP phones. Cisco recommends four CallManagers to support 5,000 IP phones and up to six CallManagers to support up to 10,000 IP phones.
Reference: Arch student guide p.11-28

QUESTION 151:

Which of the following signaling techniques is used amongst CallManager clusters for intercluster calls?

A. SS7

B. H.323
C. MGCP
D. BRI2

Answer: B

QUESTION 152:

You are a technician at Certkiller . Your newly appointed Certkiller trainee wants to know what the maximum number of CallManager servers you can have in a cluster is.
What would your reply be?

A. 3
B. 7
C. 8
D. 56

Answer: C

QUESTION 153:

With Call Manager v3.1, what is the maximum number of servers in a Cluster?

A. 3
B. 6
C. 7
D. 8

Answer: D

Explanation:
The primary advantage of the distributed call processing model is that, by using local call processing, it provides the same level of features and capabilities whether the IP WAN is available or not. Each site can have from one to eight Cisco CallManager servers in a cluster based on the number of users.
Reference: Arch student guide p.11-43

QUESTION 154:

Which three are used in configuration Call Manager dial plans? (Choose three)

A. route list

B. route group
C. gateway list
D. route keeper
E. route pattern
F. first digit pattern

Answer: A, B, E

QUESTION 155:

Which of the following are functions form part of Web Cache Communication Protocol (WCCP)? (Choose four.)

A. Fault tolerance
B. Network address translation
C. Load balancing
D. Scalability
E. Remote management
F. Service assurance
G. Redundancy allowance

Answer: A, C, D, F

Explanation:
Cisco routers and switches incorporate Web Cache Communication Protocol (WCCP) software to enable content routing capabilities. Additionally, Cisco offers content routers specifically designed to support large-scale mirrored web sites.
Content routing routes user requests to the replicated-content site (typically a mirror site) that can serve them most quickly and efficiently. The content routing software redirects a user request to the closest (best) replicated-content site, based on network delay, using a software process called boomerang. The content routing software load balances up to 500 sites for each domain it is configured to support.
Reference: Arch student guide p.12-6

QUESTION 156:

Mentioned below are several tools. Which of them is a web-browser based tool designed to provide administrative access for content networking?

A. Cisco CallManager
B. Hypertext Administration Design (HAD)
C. Access Point
D. Content Distribution Manager (CDM)
E. Self-Organizing Distributed Architecture (SODA)
F. Web Cache Communication Protocol (WCCP)

Answer: D

Explanation:
The Cisco Content Distribution Manager (CDM) is a web-browser-based tool that provides the administrative function for content networking. With the CDM, you can configure and monitor Content Engines, import and preview media, and generate media URLs for access from web sites. You also set maximum bandwidth usage over the WAN from the CDM to the remote Content Engines, as well as maximum LAN bandwidth usage from the Content Engines to end-user desktops.
Reference: Arch student guide p.12-9

QUESTION 157:

You are a technician at Certkiller . You were instructed to place Content Engines on the Certkiller network. Where would you place it when you are dealing with transparent caching?

A. Close to the servers.
B. Behind the main server.
C. At the Internet edge.
D. In front of web server farms.
E. Close to the end users.

Answer: E

QUESTION 158:

As a network consultant at Certkiller .com you are required to speed up services for external users and minimize load on network servers on a LAN.
Which of the following should you implement?

A. VPN networking

B. CSPM
C. content networking
D. fault tolerance

Answer: C

QUESTION 159:

You are the network administrator at Certkiller .Your newly appointed Certkiller trainee wants to know what enterprise caching mode eliminates the need for Layer 4 switches or WCCP enabled routers to intercept user requests.
What will your reply be?

A. transparent
B. proxy
C. reverse proxy
D. direct

Answer: B

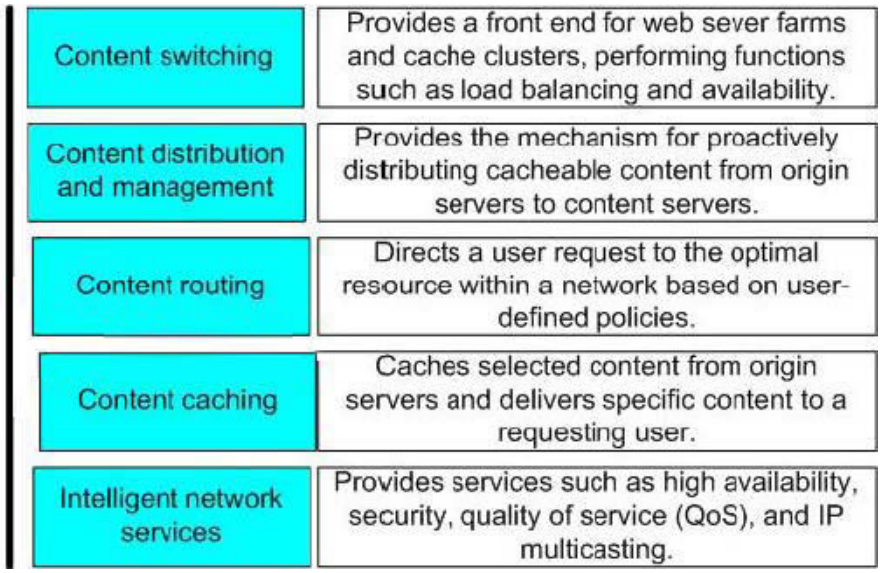
Explanation:
In proxy mode, end-user web browsers need to be explicitly configured to the IP address or host name of the Content Engine, and there is no need for additional hardware such as Layer 4 switches or Web Cache Communication Protocol (WCCP)-enabled routers to intercept user requests, as in transparent caching. Enterprises are normally interested in deploying transparent network caching, but some enterprises may have a legacy requirement for a proxy (nontransparent) cache.
Reference: Arch student guide p.12-12

QUESTION 160:

DRAG DROP

There are five main components utilized in content networking.
Drag each component to its intended use.

Answer:



QUESTION 161:

Which content networking device allows bandwidth configuration settings so that streaming content will not interfere with other network traffic?

A. IP/TV Control Server
B. Content Distribution Manager
C. Content Engine
D. IP/TV Broadcast Server

Answer: B

Explanation:

The CDM enables you to configure bandwidth and distribution settings such that the streaming content will no interfere with other network traffic. It is also the central control point where the CEs that will carry the broadcast media are identified. The CDM is typically located in the server farm
Reference: Arch student guide p.12-42

QUESTION 162:

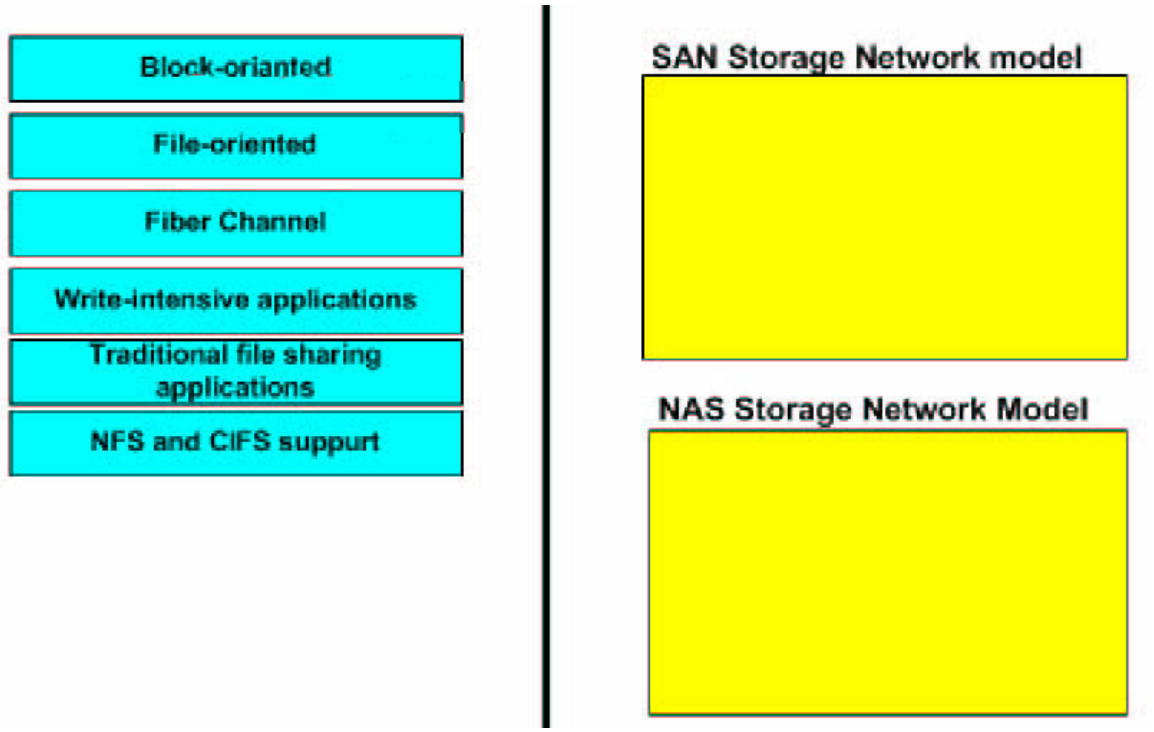
Which of the following protocols is able to provide block access to remote storage over WAN links?

A. SCSI-FP
B. SIP
C. iSCSI
D. FCIP
E. eSCSI
F. CIFS

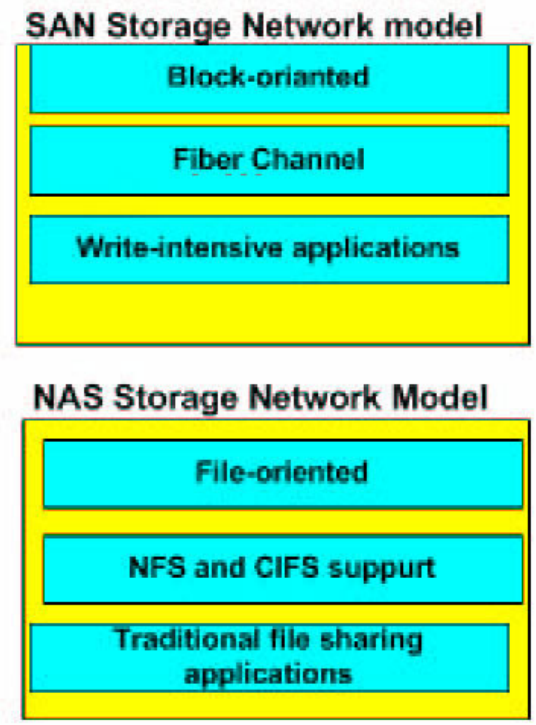
Answer: C

QUESTION 163:

DRAG DROP
Below is a list of characteristics and applications that can belong to either the SAN or the NAS storage network model. Can you sort the list by dragging the appropriate option to the correct box on the right?
Drag each option to the appropriate box.



Answer:



QUESTION 164:

You are a technician at Certkiller .com. Your newly

appointed Certkiller trainee wants to know which device will act as a bridge between a Fiber Channel SAN and an IP network.
What would your reply be?

A. Storage Router
B. Switching hub
C. FC-HBA attached host
D. FC Switch
E. NAS GE Switch

Answer: A

Explanation:
The Cisco storage router delivers redundant iSCSI paths to a pair of Fibre Channel switches. iSCSI takes advantage of the connection-oriented TCP protocol for reliable service. Ethernet was already part of the IT network. This meant trained personnel were on board, and simplified the storage networking installation shown in the figure.
Cost was an important factor in choosing iSCSI. Because the research facility already had TCP/IP and Gigabit Ethernet networks installed, the iSCSI solution fit their budget and met their storage networking needs.
Reference: Arch student guide p.13-33

QUESTION 165:

You are the network administrator at Certkiller . Your newly appointed Certkiller trainee wants to know which protocol encapsulates Fiber Channel frames so that they can be transported transparently over an IP network.
What will your reply be?

A. iSCSO
B. FCIP
C. SCSI-FP
D. eSCSI
E. CIFS

Answer: B

Explanation:
An important technology for linking Fibre Channel SANs is FCIP. FCIP and iSCSI are complementary solutions for enabling company-wide access to storage. FCIP transparently interconnects Fibre Channel SAN islands over IP networks through FCIP

tunnels, while iSCSI allows IP-connected hosts to access iSCSI or FC-connected storage.
Reference: Arch student guide p.13-15

QUESTION 166:

You are a network technician at Certkiller .com. The database for Certkiller .com requires continuous uptime (24x7) and processes many write-intensive applications from many different sources. The current Certkiller .com LAN network operates at approximately 50% utilization, with peaks that exceed 70%.
Which storage networking model would you include your network upgrade design?

A. Metro Optical
B. NAS
C. SAN
D. universal IP

Answer: C

QUESTION 167:

Which IP storage network solution is best suited for high-volume, write-intensive, transaction-driven applications?

A. Storage area networking
B. Network-attached storage
C. Local storage
D. Metro optical storage

Answer: A

Explanation:
SAN provides block-oriented access to native disk storage. It is based on a shared or switched infrastructure, often Fibre Channel. You can extend SAN to an ip infrastructure. New protocols and products are emerging that allow the integration of SANs with the IP network. Historically, SANs have been well suited to high-volume, write-intensive transaction-driven applications.
Reference: Arch student guide p.13-7.

QUESTION 168:

In which scenario would a SAN storage solution be a better choice than an iSCSI-based NAS solution?

A. Traditional file-sharing applications.
B. Fast growing data storage needs.
C. Applications that cannot tolerate block level, storage access latency.
D. Highly reads-intensive applications.
E. Web serving applications with many active pages.

Answer: C

QUESTION 169:

What are disadvantages to storage directly attached to the application servers?
(Choose three)

A. Reliability
B. Scalability
C. Redundancy
D. Manageability
E. Available bandwidth
F. Access speed

Answer: A, B, D

Explanation:
B:
System administrators are faced with the challenging task to managing storage and making it scalable to accommodate future needs.
With storage directly attached to the server, scalability is difficult. The storage expansion capability is limited to the capacity of the server (for example, as measured by the number of I/O controllers and devices per controller configured is the server). The nature of the small computer system (SCSI) bus commonly used to connect commodity disks to a commodity server makes it difficult to allocate more disk storage without interrupting and rebooting the server, and thus affecting applications.
C: No redundancy is provided
Reference: Arch student guide p.13-6.
Incorrect answers:
A: Reliability would be good.
E: bandwidth would be excellent.
F: access speed would be excellent.

QUESTION 170:

Which protocol enables the location of a fully synchronized hot backup Fiber Channel storage solution at a remote site over existing optical WAN links?

A. iSCSI
B. SCSI-FCP
C. FCIP
D. HSRP

Answer: C

Explanation:
You can use FCIP to connect two geographically dispersed Fibre Channel storage arrays for the purpose of synchronous data storage. If the local storage array becomes unavailable, an application could utilize the FCIP link to access the data on the "hot backup" storage system at the remote site. It is also possible to implement remote tape backups to further protect customers' valuable information in the event of disaster at the primary site.
Reference: Arch student guide p.13-16

QUESTION 171:

Why is G.729a commonly used instead of G.729?

A. It receives a higher MOS score.
B. It uses less complex algorithms.
C. It uses more complex algorithms.
D. It samples speech pattern more often.

Answer: B

QUESTION 172:

What are two benefits of a high availability network? (Choose two)

A. Improves user satisfaction.
B. Minimized lost opportunity costs.
C. Increases network manageability.
D. Reduces hardware and software costs.
E. Reduces information technology (IT) costs.

Answer: A, B

QUESTION 173:

What is the frequency and maximum data rate of 802.11b?

A. 5 GHz frequency and 2.4 Mbps data.
B. 5 GHz frequency and 54 Mbps data.
C. 2.4 GHz frequency and 1.44 Mbps data.
D. 2.4 GHz frequency and 11 Mbps data.
E. 1.44 GHz frequency and 2.4 Mbps data.

Answer: D

QUESTION 174:

You would choose IS-IS for a routing protocol to meet the following two requirements. (Choose two)

A. Expansion of the backbone area is a concern.
B. Dial-up connections are required.
C. The network has NBMA connections.
D. The network is very large.

Answer: A, D

QUESTION 175:

Which three LAN routing protocols would be appropriate for a small retail organization with a multi-vendor LAN infrastructure? (Choose three)

A. IGRP
B. RIP
C. RIPv2
D. OSPF
E. EIRGP
F. BGP

Answer: B, C, D

QUESTION 176:

When designing a converged network, which measures can be taken at the building access layer to help eliminate latency and ensure end-to-end quality of service can

be maintained? (Choose three)

A. Rate limit traffic.
B. Configure spanning-tree for fast link convergence.
C. Isolate voice traffic on separate VLANs.
D. Use low latency queuing at the source.
E. Classify and mark traffic close to the source.

Answer: B, C, E

QUESTION 177:

With which of the following does the Cisco Product Advisor help customers? (Choose three)

A. design options
B. hardware devices
C. software options
D. hardware options
E. protocol components

Answer: B, C, D

QUESTION 178:

Which statement about fully redundant topologies is true?

A. Public bandwidth can be utilized on an as-needed basis.
B. Key components can be replaced within the device without turning power off.
C. Devices can be replaced in the network without interrupting the network operation.
D. Each device provides redundant backup within the device for each of its key components.
E. A backup exists for every link and for every device between the client and the server.

Answer: E

QUESTION 179:

What is the frequency and maximum data rate of 802.11a?

A. 5 GHz frequency and 54 Mbps data.
B. 5 GHz frequency and 10 Mbps data.
C. 2.4 GHz frequency and 10 Mbps data.

D. 2.4 GHz frequency and 64 Mbps data.
E. 12 GHz frequency and 12 Mbps data.

Answer: A

QUESTION 180:

Which two QoS functions are used to prioritize voice over data? (Choose two)

A. voice activity detection
B. queue servicing
C. classification
D. fragmentation

Answer: B, C

QUESTION 181:

Which three routing protocols can minimize the number of routes advertised in the network? (Choose three)

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

Answer: B, C, D

QUESTION 182:

Which of the following modules of the Enterprise Campus is NOT considered important to the scalability of the campus network?

A. building distribution
B. building access
C. campus backbone
D. network management
E. server farm

Answer: C

QUESTION 183:

Which three things can be restricted by the Class of Service in a traditional PBX?
(Choose three)

A. dial plans
B. dialled numbers
C. voice mail prompts
D. phone features
E. ring tones

Answer: A, B, D

QUESTION 184:

What does ATM do that Frame Relay does not?

A. packet looping
B. priority queuing
C. packet forwarding
D. circuit emulation

Answer: B

Explanation:
Not D: The following Cisco URL describes the four-port circuit emulation cards
available for the 2600 router.
http://www.cisco.com/en/US/products/hw/routers/ps259/products_data_sheet09186a00802045f5.html
Since the 2600 does not support ATM, but it does support Frame Relay, it is safe to say
that circuit emulation can be supported over Frame Relay.
Note: This topic does not appear in the ARCH v1.2 course notes. We believe it relates to
an older version of the course.

QUESTION 185:

What happens when packets traversing the network exceed the MTU of an
IPSec/VPN interface?

A. They trigger a link failure.
B. They are all discarded and re-transmitted.
C. They are unable to be sent.
D. They come fragmented.

Answer: D

QUESTION 186:

Which type of disaster recovery application protects from user error or data corruption, as well as hardware failure?

A. disk mirroring
B. replication
C. backup and off-site storage
D. disk duplexing
E. RAID 5 stripe sets

Answer: C

QUESTION 187:

What are two characteristics of shaping, but not policing? (Choose two)

A. It forces TCP resends.
B. It is typically performed on enterprise egress.
C. It is rate limiting with no buffering mechanism.
D. It can adapt to Frame Relay BECN and FECN.

Answer: B, D

QUESTION 188:

Certkiller .com is a global insurance company with headquarters in Mexico City. The campus there is made of a number of buildings located in the same vicinity. In 2003, a new building, Building Certkiller 12A was added. The additional building houses approximately 1000 employees. Rather than deploy a private branch exchange (PBX) in the new building, Certkiller .com has decided to implement an IP telephony solution. External calls will be carried across a MAN link to another building, where a gateway connects into the worldwide PBX network of Certkiller .com. Voice mail and unified messaging components are required and all IP phones and workstations should be on separate VLANs and IP subnets. Which IP technology deployment best suits their need?

A. single-site
B. multisite with centralized call processing
C. multisite with distributed call processing

D. clustering over the WAN

Answer: A

QUESTION 189:

In the Enterprise Composite Network model, which Enterprise Campus Infrastructure Module submodule provides aggregation of wiring closets, and performing routing, quality of service, and access control?

A. Building Access
B. Building Distribution
C. Campus Backbone
D. Edge Distribution

Answer: B

QUESTION 190:

Certkiller .com is a small company with 25 agents stationed around Spain. It is necessary for these agents to transmit customer data securely from their homes and from their customer sites.
Which topology would provide a low-cost, secure solution?

A. Individual Remote Access IPSec-based VPN
B. Leased Line T1 Connection
C. Dial-up ISDN Access
D. Site-to-Site IPSec-based VPN

Answer: A

QUESTION 191:

In which two instances would static routing be preferred over the use of dynamic routing protocols? (Choose two.)

A. in small networks that are planning to grow
B. in networks using on demand routing that are not expected to grow significantly
C. in networks where a total knowledge of the network is not known
D. in a network that has a few very large sites and a single connection to the Internet
E. when routing to and from stub networks

Answer: B,E

QUESTION 192:

Which two types of attacks are addressed at the Building Access sub-module of the Enterprise Campus infrastructure? (Choose two.)

A. viruses
B. packet sniffers
C. IP spoofing
D. password attacks
E. unauthorized access

Answer: A,B

QUESTION 193:

Which three components are part of the Intelligent Network Services provided by the Cisco AVVID framework? (Choose three.)

A. QoS
B. work force optimization
C. security
D. e-business infrastructure
E. IP telephony
F. IP multicasting

Answer: A,C,F

QUESTION 194:

What two choices can you make when redundancy is required from a branch office to a regional office? (Choose two.)

A. multiple Frame Relay PVCs
B. single links - one to the regional office and one to another branch office
C. dual Wan links to the regional office
D. dual Wan links to another branch office

Answer: B,C

QUESTION 195:

The Acme Anvil Corporation has two manufacturing sites and six sales offices. Each sales office requires 25 public IP addresses, and each manufacturing facility requires 210 public IP addresses. If the company plans for 20 percent growth for each facility, how many Class C addresses will it require?

A. five
B. four
C. six
D. eight
E. seven
F. three

Answer: F

QUESTION 196:

Which QoS requirement applies to streaming video traffic?

A. 150bps of overhead bandwidth
B. serialization delay of 10 ms
C. one-way latency of 150 ms to 200 ms
D. jitter of 30 ms or less
E. packet loss of 2 percent or less

Answer: E

QUESTION 197:

What type of Call Admission control in CallManager allows for limits to the bandwidth consumed by active calls?

A. locations
B. regions
C. partitions
D. device Pools

Answer: A

QUESTION 198:

Which routing protocol best fits these requirements? - Supported by multiple router vendors - Requires minimum router CPU and memory resources - Uses a simple routing metric - Supports manual or automatic route summarization

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

Answer: C

QUESTION 199:

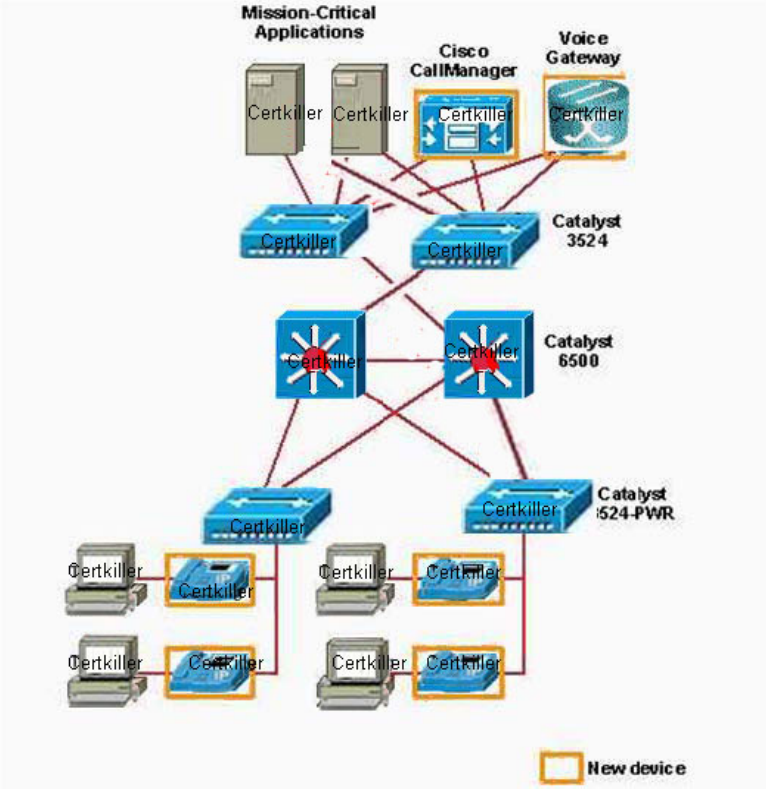
One of the business requirements of New Garden Health, Inc. is a secure connection to its business partners. Which four components should be included in the topology diagram of the VPN module? (Choose four.)

A. public servers
B. VPN network management servers
C. firewall
D. perimeter router
E. IDS/IPS
F. VPN concentrator

Answer: C,D,E,F

QUESTION 200:

Exhibit:



Refer to the exhibit. CCC Machine has decided to deploy a Voice over IP solution in its main campus headquarters. The design calls for the insertion of a Cisco CallManager, Cisco IP phones, and a voice gateway. Due to the new application requirements, what three changes should be made to the access layer of the CCC network design? (Choose three.)

A. Configure the 3524-PWR access switches to ensure Voice over IP packets are given preferential treatment by enabling voice traffic to use separate queues.
B. Since end-user workstations cannot run CDP, disable it on the IP phones to improve performance and increase security.
C. The trust boundary should be extended from the 3524-PWR access switches to include the IP phones.
D. A new voice-only VLAN should be established and extended from the IP phones throughout the campus.
E. Ingress rate-limiting should be configured on 3524-PWR access switches to ensure Voice over IP bandwidth guarantees.

Answer: A,C,D

QUESTION 201:

A network designer will be incorporating IP telephony into a large company with over 4,000 phones. What two recommendations does Cisco make about the server(s) used to store configuration files, device loads (operating code), and ring types for

downloading? (Choose two.)

A. Create a dedicated TFTP server.
B. Create one FTP server per dedicated database publisher.
C. Incorporate multiple load-balanced FTP servers to replace any TFTP servers.
D. Create multiple load-balanced TFTP servers.
E. Create a backup TFTP server in case the main FTP server fails.
F. Incorporate a dedicated FTP server to replace any TFTP servers.

Answer: A,D

QUESTION 202:

Morris Prosthetics is having problems with serialization delay on its WAN links. The links currently carry less than 768 Kbps. Which Layer 2 mechanism can help solve the problem?

A. Integrated Services module
B. Compressed Real-Time Transfer Protocol
C. link fragmentation and interleaving
D. differentiated service code points

Answer: C

QUESTION 203:

Lafeyette Productions is looking for a new ISP that has improved availability, load balancing, and catastrophe protection. Which type of ISP connectivity solution would be best?

A. autonomous-route injection
B. single run
C. stub domain EBGP
D. multi-homed
E. direct BGP peering

Answer: D

QUESTION 204:

What are three features of the Cisco Product Advisor tool? (Choose three.)

A. It includes a wireless product search category.

B. It covers select switches from the Catalyst 2800 Series through the Catalyst 8500 Series.
C. It covers only select routers from the 800 Series through the 7400 Series.
D. It can be used in a novice, question-and-answer mode.
E. You can begin searching categories that include routing, switching, and IP telephony.
F. It narrows down Cisco networking products based on product cost and network requirements.

Answer: A,C,D

QUESTION 205:

Acme Nutrition manufactures a wide variety of vitamin supplements. It has a single manufacturing facility with 3 regional warehouses and 16 district sales offices. Currently the manufacturing facility requires 210IP addresses; warehouse requires 51 ip address; each district sales office requires 11 addresses ; and the IP WAN requires 38 IP addresses. If Acme Nutrition plans for 20 percent growth in facilities, how many Class C subnets will the district sales offices require?

A. 19 (3 from the warehouse range and 16 from a separate Class C address)
B. 18 (2 from the Warehouse range and 14 from a separate Class C address)
C. 16 (3 from the warehouse range and 13 from a separate Class C address)
D. 20 (4 from the warehouse range,15 from a separate Class C block and 1 from the IP WAN block)
E. 19 (3 from the warehouse block, 15 from a separate Class C block and 1 from the IP WAN block)
F. 16 (all from a separate Class C address)

Answer: E

QUESTION 206:

Captain Marion's Videography delivers Internet digital video using 9 MPEG video encoders and a statistical multiplexer. Channels are packed into a 6-MHz channel bandwidth.The MPEG multiplexer monitors and allocates the appropriate bandwidth. The multiplexer measures available bandwidth and feeds back signaling to the MPEG encoders. Coding rates are then increased or decreased. Packet generation from each input source is controlled such that no packets are dropped and no extra null packets can be generated.These bandwidth and traffic requirements work best with which mode of video delivery?

A. open looped
B. quality equalization

C. VoD delivery
D. fixed broadcast

Answer: D

QUESTION 207:

The Schuyler and Livingston Iron Works has been working on getting its network security under control. It has set up VPN with IPSec links to its suppliers. It has installed network vulnerability scanners to proactively identify areas of weakness, and it monitors and responds to security events as they occur. It also employs extensive access control lists, stateful firewall implementations, and dedicated firewall appliances. The company has been growing very fast lately and wants to make sure it is up to date on security measures. Which two areas of security would you advise the company to strengthen? (Choose two.)

A. security management
B. perimeter security
C. identity
D. intrusion protection
E. secure connectivity
F. intrusion detection

Answer: C, D

Explanation: The right answer shoul be identity and intrusion protection (C,D) because security management is covered by the vulnerability scanner and monitor.

QUESTION 208:

Which Cisco voice application includes Cisco IP IVR, Cisco IP Integrated Contact Distribution (ICD), and Cisco IP Queue Manager?

A. Cisco Conference Connection
B. Cisco Integration Manager
C. Cisco Works
D. Cisco Emergency Responder
E. Cisco VoIP Integration Application
F. Cisco Customer Response Solution

Answer: F

QUESTION 209:

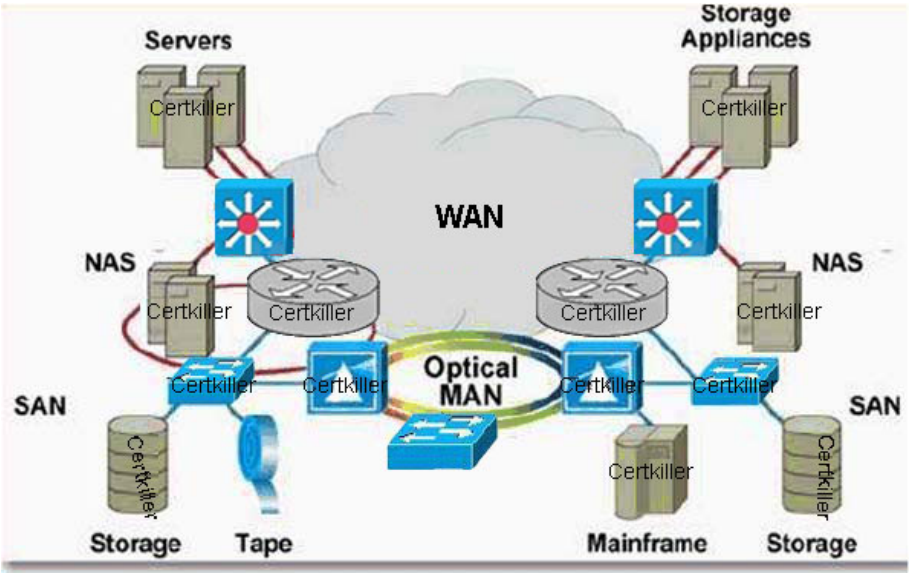
Which benefit of the Cisco AVVID framework improves productivity by enabling comprehensive tools?

A. intelligence
B. interoperability
C. innovation
D. integration

Answer: D

QUESTION 210:

Exhibit:



Refer to the exhibit. What is the most performance enhancing, cost effective, and growth oriented media for the connections for the NAS portion of this storage network design?

A. Gigabit Ethernet
B. FCIP
C. Fiber Channel
D. EtherChannel

Answer: D

QUESTION 211:

Which four QoS design requirements are the closest to Cisco recommendations for VoIP traffic? (Choose four).

A. serialization delay of 100 ms to 150 ms
B. less than 30 ms of jitter
C. one-way latency of 150 ms to 200 ms
D. 150 bps (+ Layer 2 overhead) of guaranteed bandwidth for voice control traffic per call
E. less than 1 percent of packet loss
F. fixed 64 kbps of guaranteed priority bandwidth per call

Answer: B,C,D,E

QUESTION 212:

Which two of the following Cisco router platforms support Multicast Distributed Fast Switching? (Choose two.)

A. 12000 series
B. 7200 series with NSE-1
C. 3600 series
D. 7500 series
E. ISR 1800/2800/3800 series
F. 10000 series

Answer: A,D

QUESTION 213:

When designing the WAN module within the enterprise edge, which document is used to specify the connectivity and performance agreements with the service provider?

A. RFC
B. SOW
C. RFP
D. SLC/SLA

Answer: D

QUESTION 214:

Which two statements are correct in regards to the Content Distribution Manager? (Choose two.)

A. It allows configurable bandwidth and distribution settings so content will not interfere with other network traffic.
B. It is utilized in content networking for e-commerce.
C. It is used to cache selected content from origin servers and delivers specific content to requesting users.
D. It is used to load balance and direct traffic to the appropriate CE.
E. It enables organizations to deliver live broadcasts to desktops and meeting rooms.
F. It is utilized in content networking for streaming media.

Answer: A,F

QUESTION 215:

Users at Certkiller .com began experiencing high network delays when Internet connectivity was enabled for all users. After investigating the traffic flow, you determine that peer-to-peer traffic from a music download site is consuming a large amount of bandwidth. Which QoS mechanism can you implement to improve the network response time?

A. Use class-based marking to mark the peer-to-peer traffic to DSCP 0
B. Use class-based policing to limit the peer-to-peer traffic rate.
C. Use class-based WRED to randomly drop the peer-to-peer traffic during network congestions.
D. Use CBWFQ to queue the peer-to-peer traffic into the default traffic class.
E. Use class-based shaping to delay any excessive peer-to-peer traffic.

Answer: B

QUESTION 216:

When designing an IP addressing scheme, how much reserve capacity does Cisco recommend to plan for in the IP address space?

A. 10-30 percent
B. 25-50 percent
C. 15-35 percent
D. 20-40 percent

Answer: D

QUESTION 217:

Which conference bridge supports multiple low-bit-rate stream types?

A. hardware
B. Q.711
C. VoIP q.933
D. software
E. G.729
F. Skinny

Answer: A

QUESTION 218:

What are three benefits to tuning BGP parameters? (Choose three.)

A. When there are two alternate paths to the same target network and they have the same relative performance, you can direct traffic to the least expensive path.
B. It helps reduce the amount of traffic an ISP has to pay for on its own network.
C. Cold-potato routing keeps traffic on the network of an ISP as short a time as possible, delivering the traffic to the ingress point as close to the target as possible.
D. Hot-potato routing directs traffic to the closest ingress point of the network. Traffic remains on the router for a shorter period of time. This is true even when an even more optimal path exists.
E. In order to avoid routing loops, all BGP routers in the same AS must ultimately make the best routing decision for their own directly connected network.
F. Policy routing is often used to balance traffic across multiple links.

Answer: A,B,F

QUESTION 219:

Which routing protocol supports a flexible area structure using routing levels one and two?

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

Answer: F

QUESTION 220:

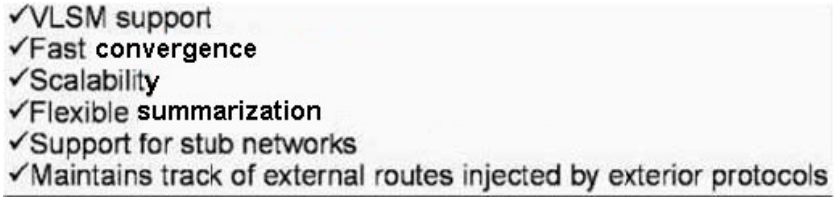
A security analysis at Certkiller .com recommends installing an IDS appliance and a firewall appliance. These appliances should connect directly into a Layer 3 switch. A load balancer and SSL termination have also been recommended.Potomac's management have expressed concern over the cost. You suggest using integrated blades. What is one advantage and one disadvantage of your design proposal? (Choose two.)

A. This configuration can inhibit failover in high-availability scenarios without a high degree of management.
B. Using integrated blades would only require two devices.
C. Increased usage of standalone devices is cost-effective.
D. Since integrated blades are rarely used in high-availability failover scenarios, this creates a support issue.
E. The data center would need several devices to achieve its goal.
F. Putting all security devices in a single chassis provides a single point of failure.

Answer: B,F

QUESTION 221:

Exhibit:



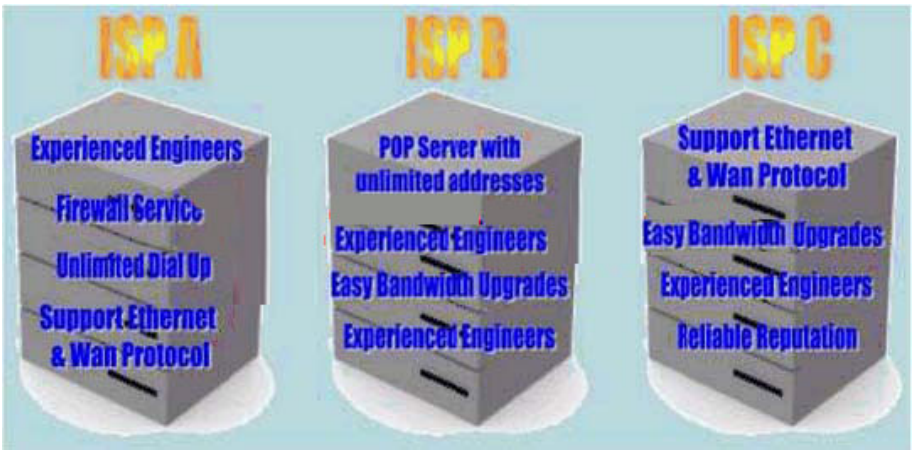
Refer to the exhibit. Which routing protocol would do the best job of meeting these requirements?

A. EIGRP
B. RIPv2
C. IGRP
D. OSPF
E. RIP

Answer: D

QUESTION 222:

Exhibit:



Refer to the exhibit. An IT department has configured their Edge as follows:A PIX firewall:- Using appliance form- Using OSPF- Six interfaces- One interface connecting to the outside via the Internet router- Three inside interfaces connecting to the internal network- A DMZ interface connecting to the e-mail and web servers On their outbound router (where they once had a high incidence of packet drop), they now have: - 10 Mbps Metro Ethernet link- 10/100BASE-FX (for growth) In picking an ISP they are looking for: - Growth capacity- RedundancyGiven this scenario, which ISP is the best fit?

A. ISP A
B. ISP B
C. ISP C
D. ISP A or ISP C
E. ISP B or ISP C
F. ISP A or ISP B

Answer: C

QUESTION 223:

What are the two primary kinds of communication within a Cisco CallManager cluster? (Choose two.)

A. mechanism for distributing the database
B. intercluster CDP
C. propagation and replication of run-time data
D. intercluster routing
E. registration, admission, and status (RAS) messages
F. keepalives between the Call Managers within the cluster

Answer: A,C

QUESTION 224:

The network administrator would like to generate synthetic traffic using the Service Assurance Agent contained in Cisco IOS. Which CiscoWorks network management application will be used to report the latency and availability for configured traffic operations on an end-to-end and hop-by-hop (router-to-router) basis?

A. nGenius Real-Time Monitor
B. Device Fault Manager
C. CiscoView
D. Internetwork Performance Monitor

Answer: D

QUESTION 225:

What are three primary activities in the cycle of building an enterprise security strategy? (Choose three.)

A. activity audit
B. ACL documentation
C. administration
D. technology implementation
E. policy establishment
F. feature evaluation

Answer: A,D,E

QUESTION 226:

Acme Costume Company is connecting its manufacturing facilties to its stores with a small point-to-multipoint Frame Relay IP WAN. Little growth is expected in the network infrastructure.Up to this point the company has been using a dial-on-demand network. Dropping WAN costs, however, have led them to consider using a high-speed WAN solution to improve access. Which two routing protocols could you deploy to support the new larger network while keeping costs down? (Choose two.)

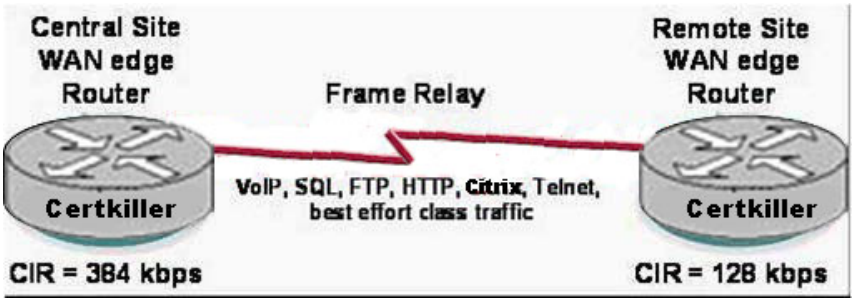
A. EIGRP
B. OSPF
C. RIP
D. IGRP
E. RIPv2

F. IS-IS

Answer: A,B

QUESTION 227:

Exhibit:



Refer to the exhibit. A central site WAN edge router is connected to the remote site WAN edge router over a Frame Relay PVC. The central site has a CIR of 384 kbps and the remote site has a CIR of 128 kbps. Traffic flowing across this Frame Relay WAN link includes VoIP, SQL, FTP, HTTP, Citrix, Telnet, and other best-effort class traffic. Which three QoS mechanisms should be implemented on the WAN edge router Frame Relay WAN link in the outbound direction? (Choose three.)

A. class-based markings
B. LLQ
C. class-based traffic policing
D. Frame Relay traffic shaping
E. Class-Based RTP header compression on the voice traffic class
F. class-based WRED on the voice traffic class

Answer: B,D,E

QUESTION 228:

Which three features are network design requirements that indicate a need for a highly available network? (Choose three.)

A. improved customer loyalty
B. minimum network equipment costs
C. network intrusion detection
D. support of mission-critical applications
E. reduced productivity losses
F. increased use of streaming media

Answer: A,D,E

QUESTION 229:

Certkiller .com. amultinational company, has Internet gateways in multiple countries and an internal IP WAN. They are designing an IP addressing scheme.Which are the three most important issues that need to be considered? (Choose three.)

A. Is hierarchy needed within the IP addressing plan?
B. How many locations are in the network and what is their size?
C. How will VLANs be deployed for the customer?
D. Which locations will provide redundant links to the Internet?
E. What types of IP addresses are required, private, public, or both?

Answer: A,B,E

QUESTION 230:

Certkiller .com specializes in home theater products. Their campus network has four buildings in close proximity and another building about four miles away. The network accommodates close to 500 marketing, sales, finance, and engineering employees.The IT staff wants to test the the current FDDI backbone to see if it inhibits network performance. In addition, they need to ensure that a new database order entry application will not negatively impact the network. Which testing method will best meet Burgouyne's needs?

A. Set up a prototype on the live system during off-hours.
B. Set up a prototype network on the live system using NetPredictor.
C. Use NetPredictor to test the capacity and to collect packet traces to predict future performance.
D. Set up a pilot network to simulate their network, and add users to show the difference.
E. Set up a pilot network to simulate their network, and collect packet traces.
F. Set up a prototype network in a lab.

Answer: C

QUESTION 231:

Certkiller .com is a parts distributor doing business worldwide. The IT staff is considering a network upgrade. The main network load is a CRM application used around the clock. Equipment funding is very liberal, but the IT staff has limited assistance time. The staff insists on full network design proof and verification.What is the best way to prototype this design?

A. Integrate the test with the production network during business hours.
B. Set up a test network that will operate during off-peak hours.
C. Use a test network in a lab.
D. Integrate testing with the production network during off-hours.
E. Implement live during off-peak hours (although because of the around the clock nature of the business, you will not be able to test very well).

Answer: C

QUESTION 232:

Which three components comprise the AVVID framework? (Choose three.)

A. intelligent network services
B. common network infrastructure
C. interoperability
D. network solutions
E. abstracted integration
F. advanced artificial intelligence

Answer: A,B,D

QUESTION 233:

Exhibit:

Refer to the exhibit. At Certkiller .com, you have just interviewed the IT manager who has this list of technical issues about the company's Campus LAN. Which three device technologies will best solve these problems? (Choose three.)

A. ATM switches
B. switch blades
C. routers
D. VPN concentrators
E. LAN switches
F. IPX firewalls

Answer: A,C,E

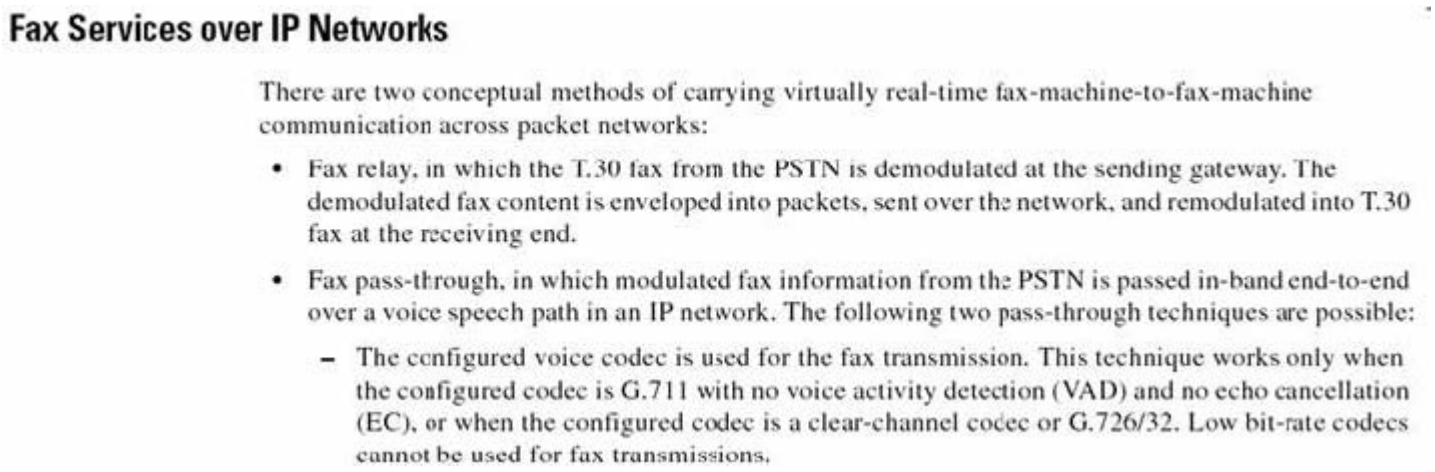
QUESTION 234:

Which two of the following codecs are recommended in a VoIP network design when support for fax/modem traffic is required? (Choose two.)

A. G.729 with VAD and no EC
B. G.711
C. G.726r32
D. GSM 6.10
E. GSM.711 with no VAD and no EC
F. G.729

Answer: B,C

Explanation: Cisco's website contains an article about configuring fax support http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122newft/122t/122t11/faxapp/ which states that the only possible options are:
G.711 with no VAD and no EC
G.726 at 32K (G.726r32)



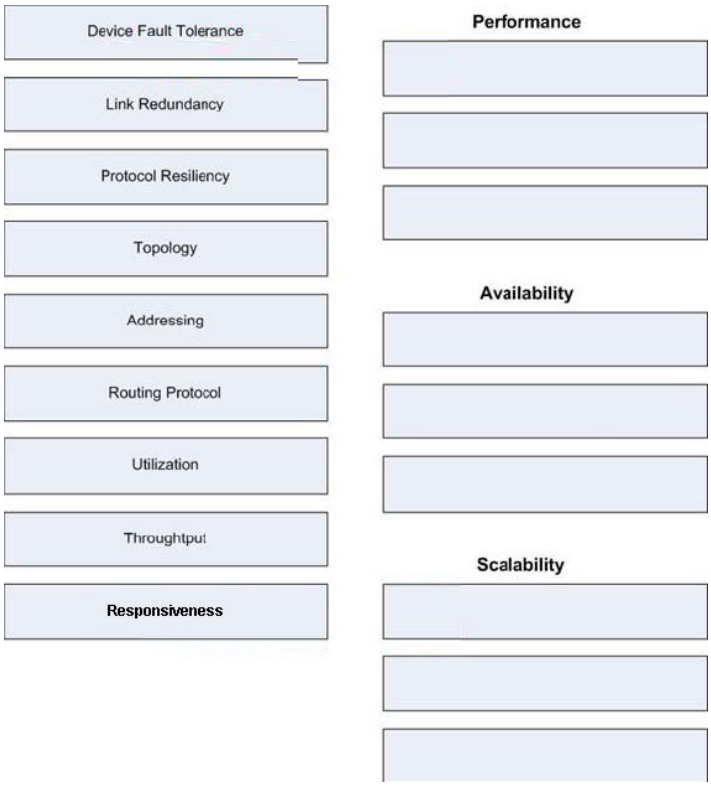
Fax Services over IP Networks

There are two conceptual methods of carrying virtually real-time fax-machine-to-fax-machine communication across packet networks:

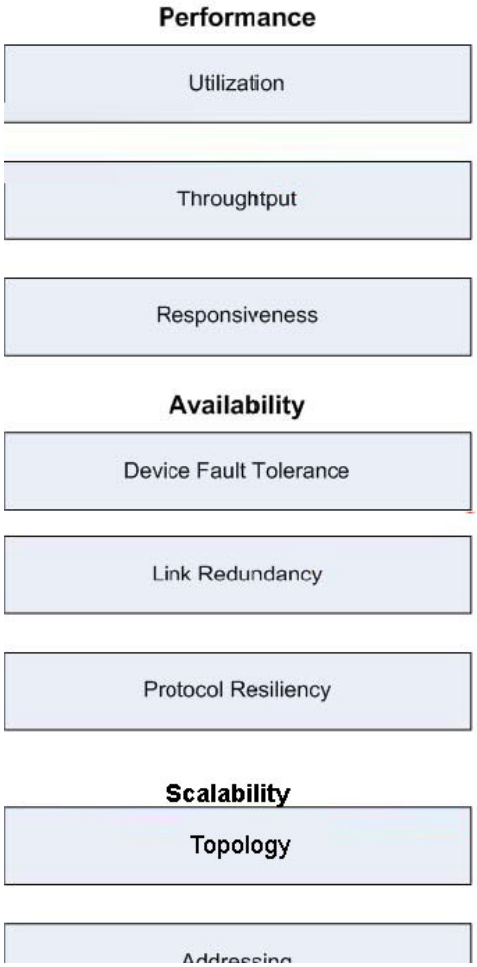
- Fax relay, in which the T.30 fax from the PSTN is demodulated at the sending gateway. The demodulated fax content is enveloped into packets, sent over the network, and remodulated into T.30 fax at the receiving end.
- Fax pass-through, in which modulated fax information from the PSTN is passed in-band end-to-end over a voice speech path in an IP network. The following two pass-through techniques are possible:
  - The configured voice codec is used for the fax transmission. This technique works only when the configured codec is G.711 with no voice activity detection (VAD) and no echo cancellation (EC), or when the configured codec is a clear-channel codec or G.726/32. Low bit-rate codecs cannot be used for fax transmissions.

QUESTION 235:

DRAG DROP
Place the network attribute on the left to the network Deployment Concern Category it belongs on the right.

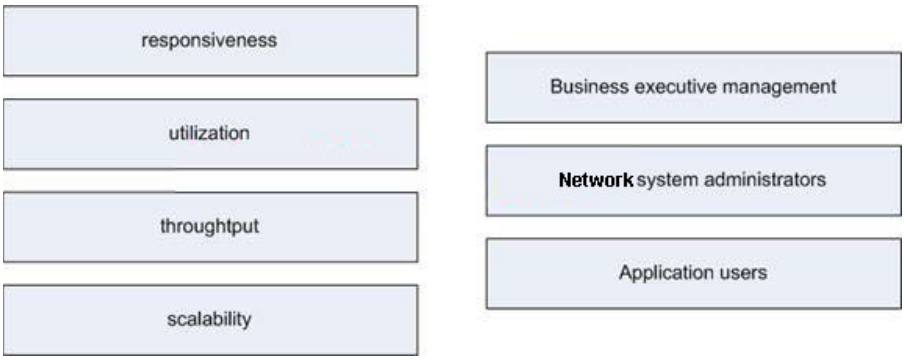

Device Fault Tolerance
Link Redundancy
Protocol Resiliency
Topology
Addressing
Routing Protocol
Utilization
Throughtput
Responsiveness
Performance
Availability
Scalability

Answer:

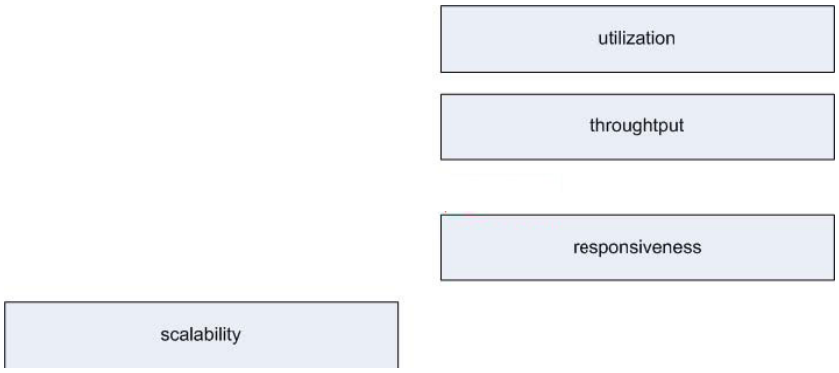


QUESTION 236:

DRAG DROP
Match the performance metric with the group of people usually most concerned with that measure.

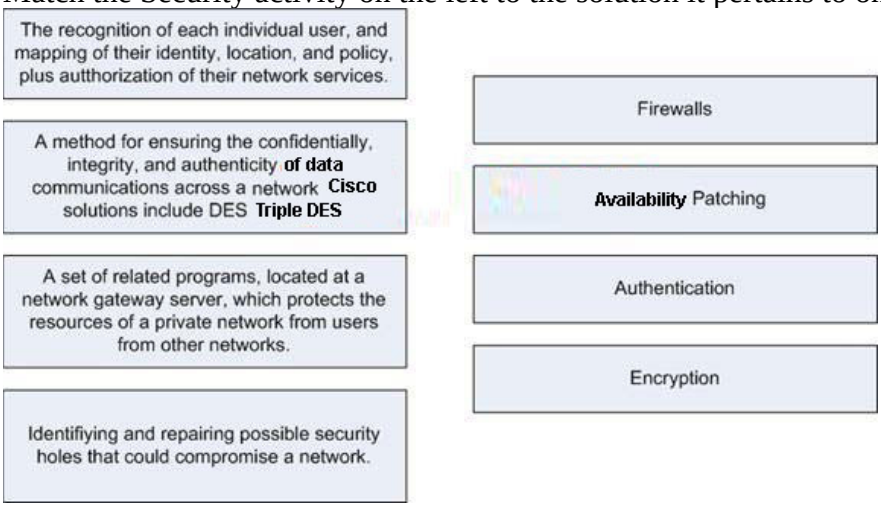


Answer:

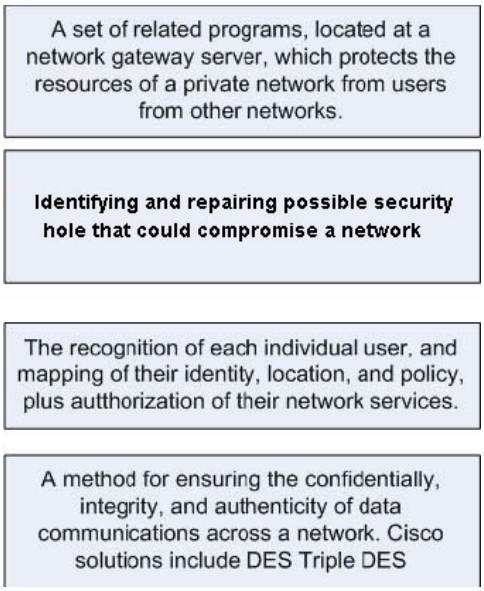


QUESTION 237:

DRAG DROP
Match the Security activity on the left to the solution it pertains to on the right

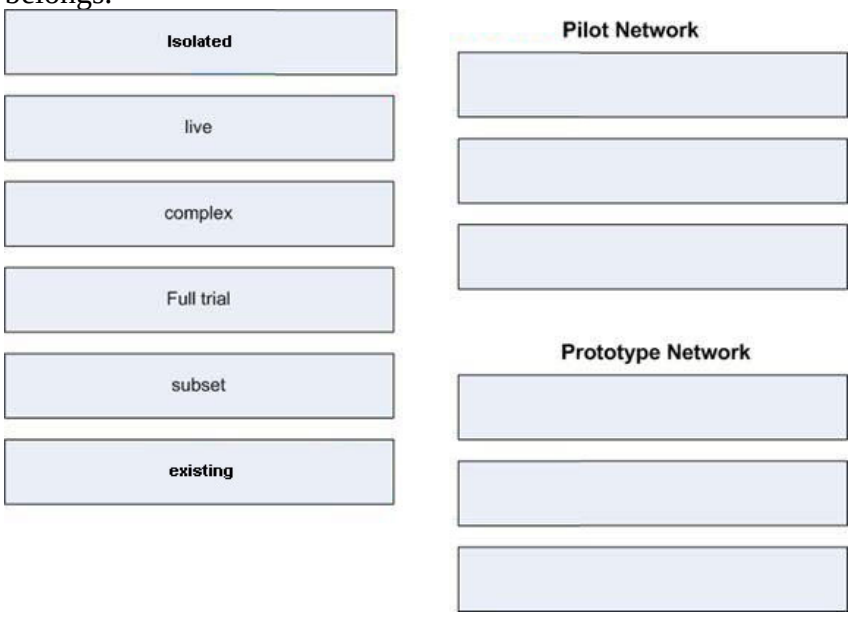


Answer:

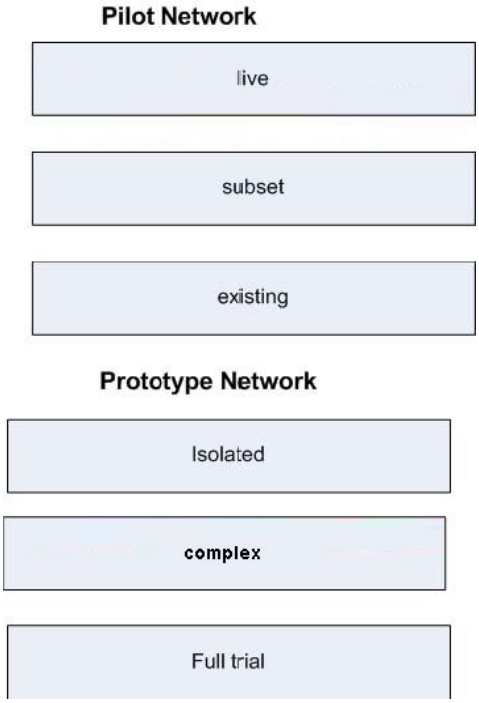


QUESTION 238:

DRAG DROP
Match the world on the left to the category for proving a design implementation it belongs.

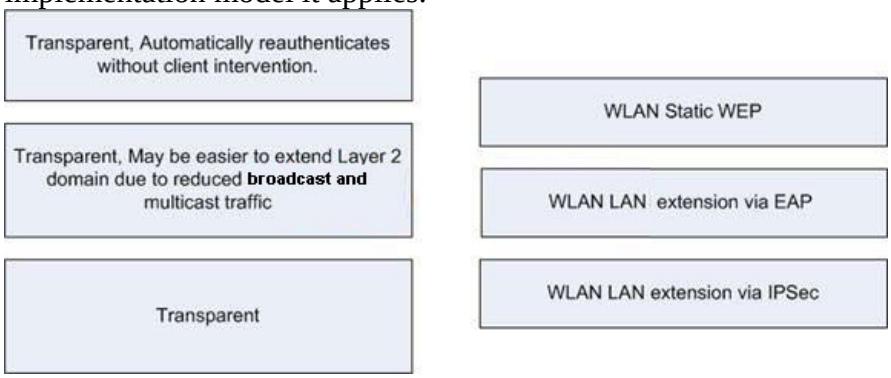


Answer:

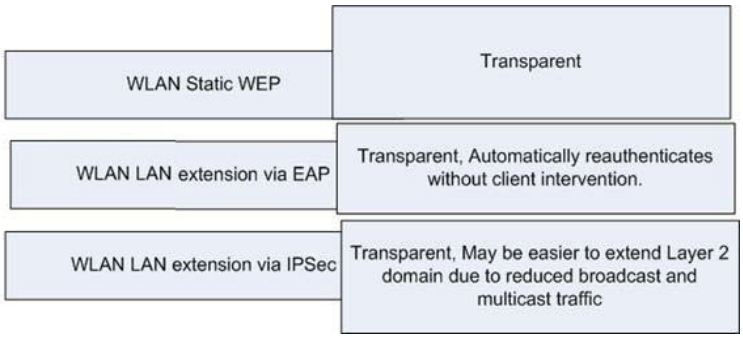


QUESTION 239:

DRAG DROP
Match the Layer 2 roaming characteristic to the wireless LAN security implementation model it applies.



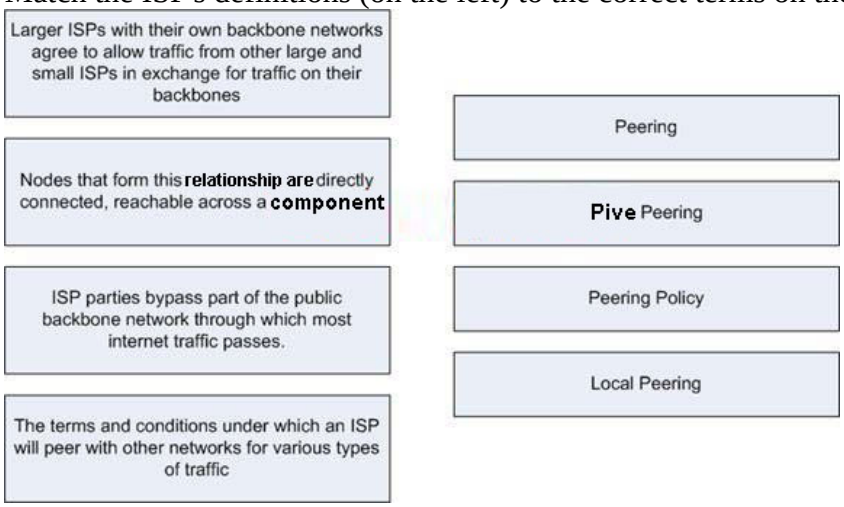
Answer:



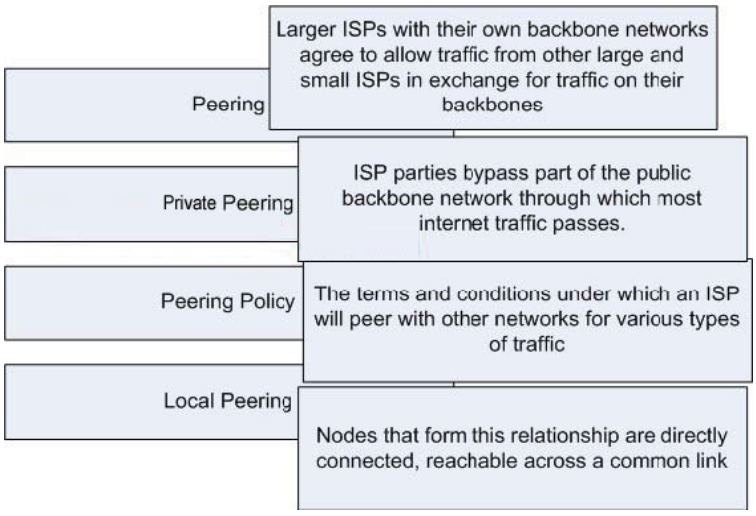
Explanation:
Source CCDP Self Study (Designing Cisco Network Architectures ARCH), page 420
table 10-2 Security Implementation Model Comparison Layer 2 Roaming explains exactly for "WLAN LAN Extension via EAP", "WLAN LAN Extension via IPSec", and "WLAN Static WEP".

QUESTION 240:

DRAG DROP
Match the ISP's definitions (on the left) to the correct terms on the right.



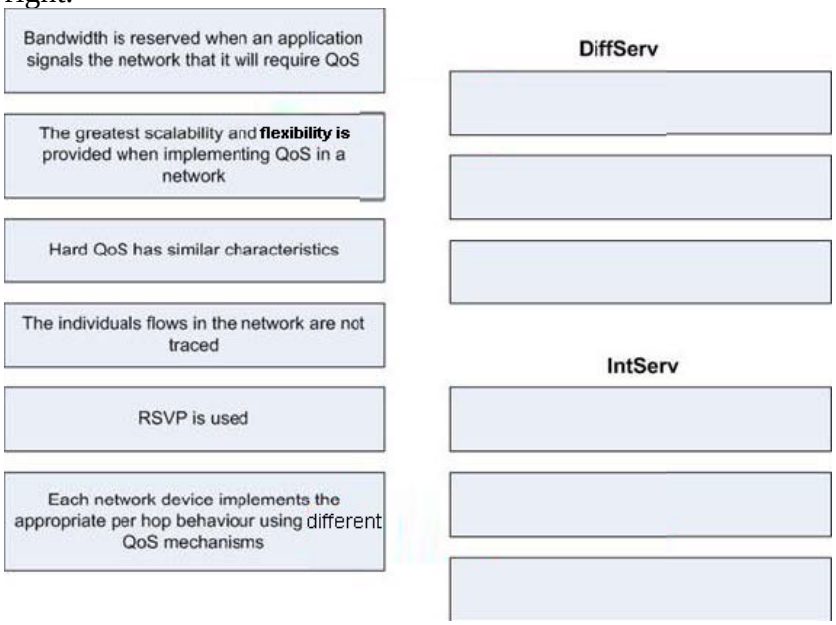
Answer:



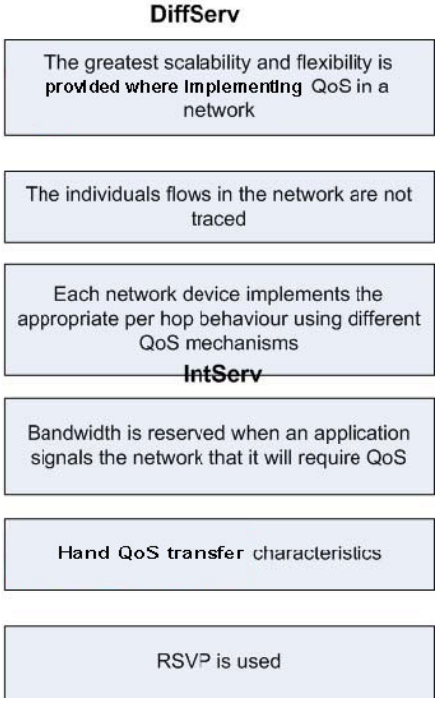
Explanation:
Source: http://searchnetworking.techtarget.com/sDefinition/0,,sid7_gci212768,00.html "peering"
and http://www.riverstonenet.com/support/mpls/ldp_peering.htm "LDP peering"

QUESTION 241:

DRAG DROP
Match the attribute on the left to the services codepoint model it describes on the right.



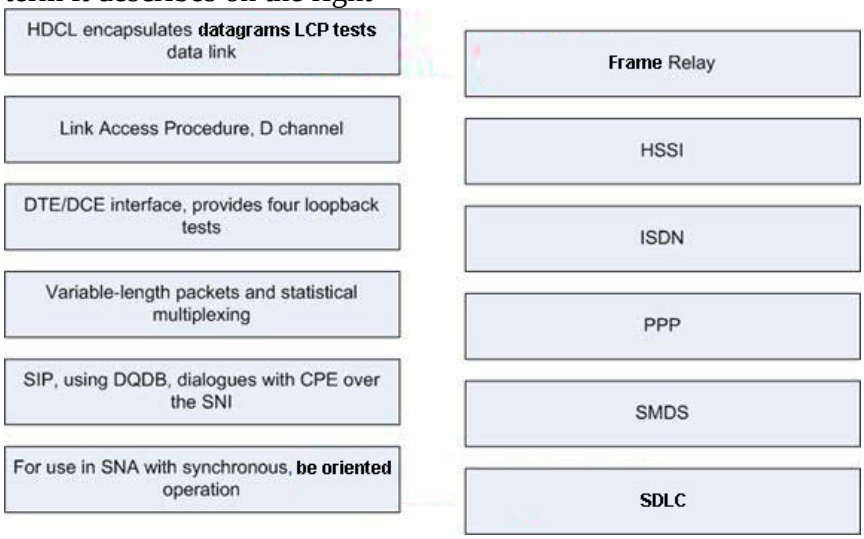
Answer:



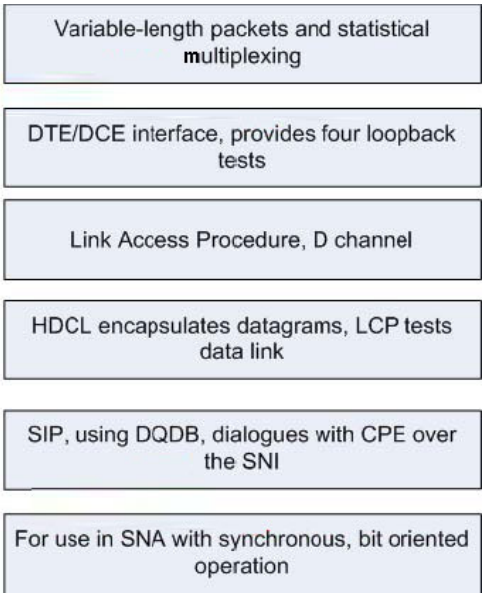
QUESTION 242:

DRAG DROP

Match the most appropriate definition on the left to the Layer 2 WAN technology term it describes on the right



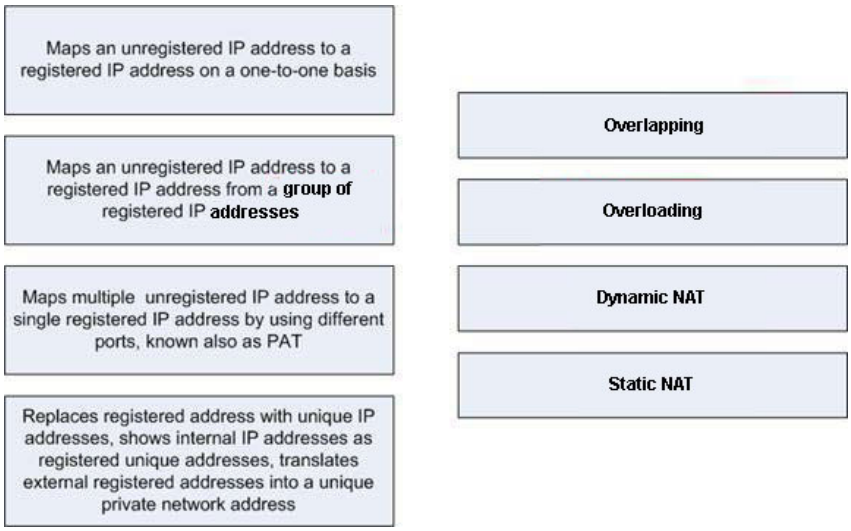
Answer:



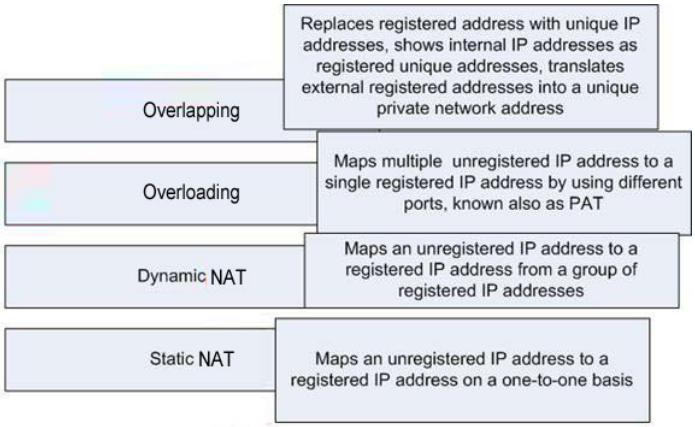
QUESTION 243:

DRAG DROP
Match the definition on the left to the form of NAT it describes on the right.

Answer:



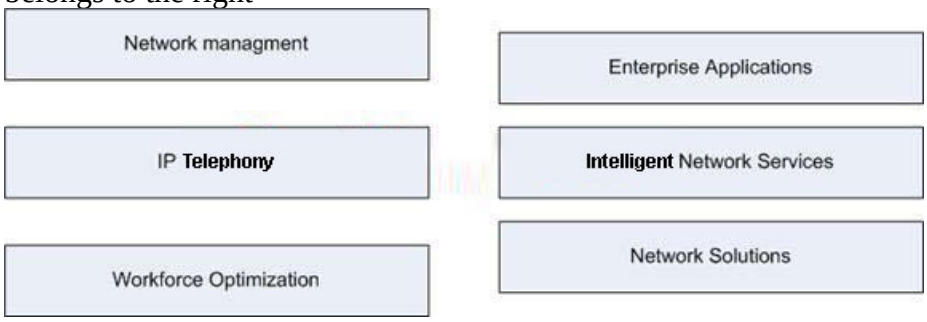
Explanation:



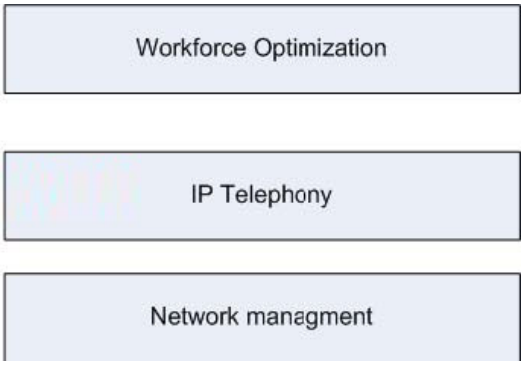
NAT provides additional security, effectively hiding the entire internal network from the world behind that address. NAT takes these forms:
Static NAT: Maps an unregistered IP address to a registered IP address on a one-to-one basis. Static NAT is particularly useful when a device needs to be accessible from outside the network.
Dynamic NAT: Maps an unregistered IP address to a registered IP address from a group of registered IP addresses.
Overloading: A form of dynamic NAT that maps multiple unregistered IP addresses to a single registered IP address by using different ports. Known also as PAT, single-address NAT, or port-level multiplexed NAT.
Overlapping: When the IP addresses used on your internal network are registered IP addresses in use on another network, the router must maintain a lookup table so that it can intercept and replace these registered addresses with unique IP addresses. The NAT router must translate the internal addresses into registered unique addresses. It must also translate the external registered addresses to addresses that are unique to the private network through static NAT or with dynamic NAT with DNS.
Reference: Designing Cisco Network Service Architectures (ARCH) v1.1, Page 3-77

QUESTION 244:

DRAG DROP
Match the AVVID element on the left to the Cisco AVVID framework component it belongs to the right



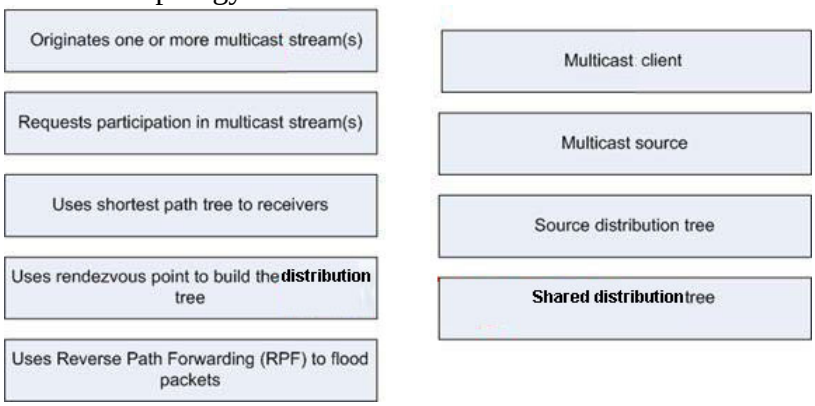
Answer:



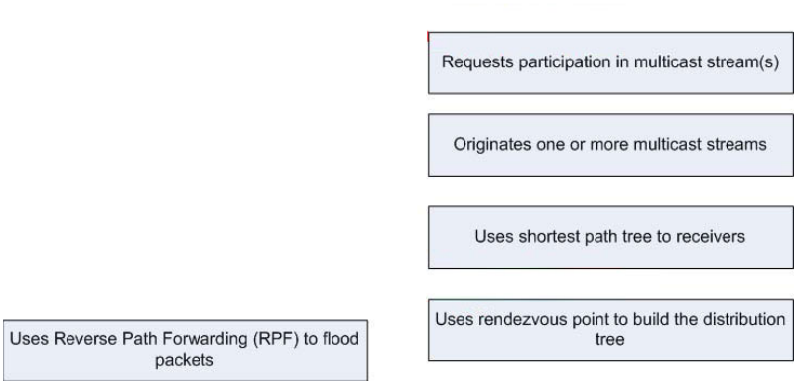
Explanation:
Network Management is Intelligent Network Services and IP Telephony is Network Solutions.

QUESTION 245:

DRAG DROP
Match the appropriate description, function, or activity to the corresponding multicast topology element.

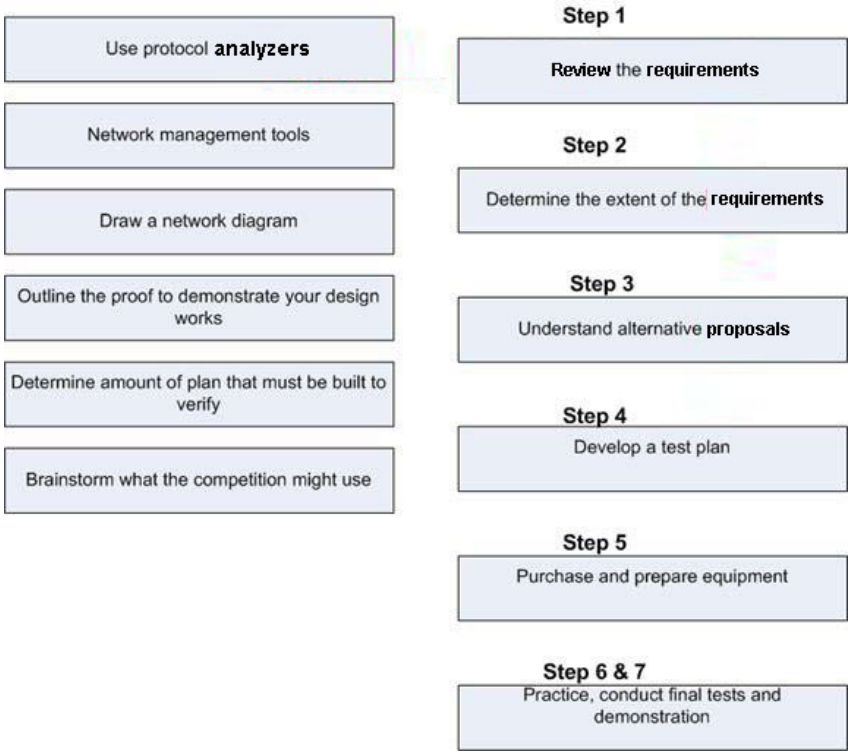


Answer:

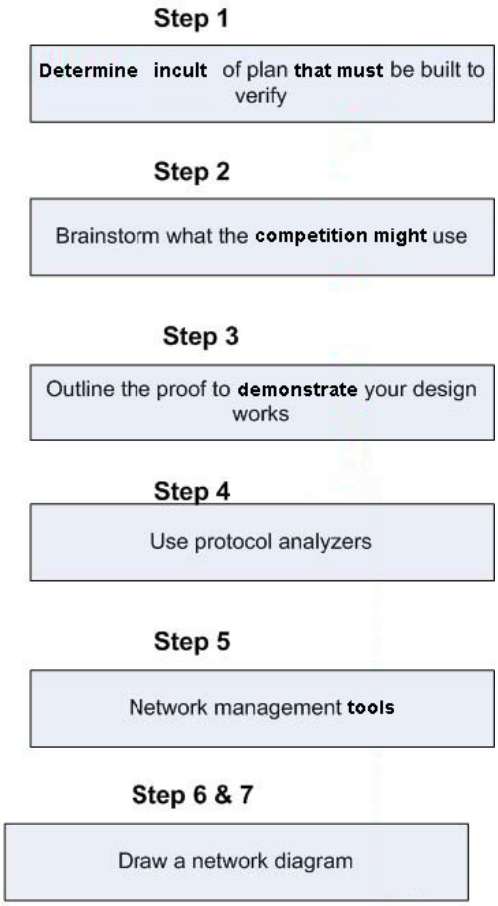


QUESTION 246:

DRAG DROP
Match the test element on the left to the correct prototype test creation step.



Answer:



Explanation:
Step 1. Review customers requirements
Outline the Proof required to demonstrate that your design works
Step 2. Determine content of Prototpe
Determine how much of the design must be built
Step 3. Understand the competition
Research information on your competitors products
Step 4. Develop a test plan
Draw a network diagram
Step 5. Purchase and prepare your equipment
Athough both Network Management tools and Protocol Analysers are both mentioned, ONLY PROTOCOL ANALYSERS are mentioned in Step 7. So by Default Network Management tools must be the answer here
Step6 Practice and Step7 Conduct tests and Demonstarate
By Default (and mentioned in the bookd for step 7) Protocol Analyzers

Case Study #1 Certkiller .com, Scenario

Certkiller .com is a distributor of hardwoods, wood shop machinery, and accessories. Certkiller .com have retail stores located in Madrid, Barcelona, and Valencia. The corporate headquarters and distribution warehouse are located in the same facility

in Barcelona. The warehouse inventory system is on a single database application, which is accessed from the remote stores via dial-up connections. A server containing the back office applications (general ledger, payroll, etc.) is located on the same LAN segment as the database server. Remote dial-up traffic has reached a level that requires 9 hours of connection daily over 28.8kbps modems, resulting in some large communications charges.
Local access to services at the Barcelona headquarters is via a 100mbps multi-vendor switches Ethernet LAN. Certkiller .com is currently using RIPv2 as their internal routing protocol. There are 15 hosts at Barcelona and 5 each at the Madrid and Valencia remote stores. The new sites will add 5 hosts each and headquarters is expected to add 12 devices to manage the new locations.
There are plans to acquire two new locations per year for the next five years.
Currently there are no Internet connections, however, a web server will be added in the next sixth months to allow sales over the Internet. Certkiller .com uses a Class C address that they would like to keep. Additionally Certkiller .com wants to minimize the amount of router traffic across the WAN links.
The Information Technology manager wants a new, reliable, scalable WAN design that will reduce costs, improve response time for the remote networks, and can be implemented in incremental steps.

Case Study #1 Certkiller .com (4 questions)

QUESTION 247:

Which three Enterprise Composite Network modules are sub-modules should be included in your design? Select three.

A. Server Farm
B. Internet Connectivity
C. Campus Core
D. Edge Distribution
E. Management
F. WAN

Answer: A, B, F

QUESTION 248:

Which IP addressing approach will meet Certkiller .com requirements?

A. Certkiller .com needs an address space larger than a single Class C IP address.
B. Certkiller .com can use the current Class C address with EIGPR as the internal routing protocol.
C. Certkiller .com can use the current Class C address with IGPR as the internal routing

protocol.
D. Certkiller .com can use the current Class C address with the current routing protocol.

Answer: B

QUESTION 249:

Which Layer 2 technology would you recommend to Certkiller .com in your WAN design?

A. PPP
B. Frame Relay
C. ADSL
D. ATM

Answer: B

Explanation:
Frame Relay meets all clients needs.
Frame Relay is a switched data-link layer protocol that handles multiple virtual circuits using HDLC-delivered encapsulation between connected devices. Frame Relay is more bandwidth efficient than X.25, the protocol for which it is generally considered a replacement. Frame Relay provides cost-effective, high-speed, low-latency virtual circuits between sites. Frame Relay provides cost-effective, high-speed, low-latency virtual circuits between sites. Frame Relay runs over DS0, T1/E1, and serial links.
Reference: Arch student guide p.3-30

QUESTION 250:

Your boss at Certkiller .com asks you when the site-to-site access model is appropriate.
What should you tell him?

A. for multiple ISDN connections
B. for modem concentrated dial-up connections
C. for a group of users in the same vicinity sharing a connection
D. for use by mobile users

Answer: A

Case Study #2 FOO, Scenario

FOO is a manufacturer and importer of fasteners, including nuts and bolts. The main campus is composed of three buildings that are less than 200 meters apart. All campus wiring is Category 5e copper. Network access and distribution devices are

currently 100 Mbps hubs, and the core is a 100 Mbps Layer-2 switch.
Development of the network has taken place over the past eight years in a series of steps that involved minimal planning, with the exception of the WAN links, which have been recently redesigned. The current network is characterized by slow response and frequent outages.
The engineering department uses a database server located in the engineering building. This server processes heavy local traffic, that keeps the local network at 70% of bandwidth. Accounting uses commercial packages for general ledger, account payable, and account receivable ;packages are located on a server in the administration building. This server processes heavy local traffic and light traffic from other buildings. All other servers are located in the information-processing center.
All employees use e-mail located on one server in the information-processing center.
There is a web server that is available for public use and an internal web server that is available to employees for company news items and for human resource applications, such as an internal jobs-available database. The external web server is in a new Corporate Internet module.
The internal network traffic is expected to grow at 10% per year for the next five years. The IT manager of FOO has asked you tot design an up-to-date, high-performance, scalable, secure, manageable, and reliable campus network to meet the strategic goals of FOO. Finances are limited, so the design needs to meet the requirements but with minimum cost.

Case Study #2 FOO (3 questions)

QUESTION 251:

Which three modules of the Enterprise Network model will you include in your design? Select three.

A. The Campus Core module.
B. The Edge Distribution module
C. The Management module
D. The Corporate Internet module
E. The Server Farm module
F. The Building Distribution module

Answer: A, C, E

QUESTION 252:

Which recommendations would you make based on the provided parameters? Select two.

A. Use existing copper wiring to the desktop.
B. Use existing copper wiring between the buildings.
C. Use existing single mode fiber to the desktop.
D. Use existing multi-mode fiber to the desktop.
E. Use existing single mode fiber between the buildings.
F. Use existing multi-mode fiber between the buildings.

Answer: A, F

QUESTION 253:

Where would you locate the devices for the Management Module and Server Farm?

A. In the Administration building
B. In the Engineering building
C. In the Information-processing building
D. in all buildings

Answer: C

Case Study #3 BAR, Scenario

BAR, an Internet auction house for baseball memorabilia, has increased sales 100% over the past two years. The design of their current network has all of their servers located on an single LAN segment designated as the DMZ on their firewall. The SQL server that processes customer orders also hosts the web server that presents the website and customer bidding forms. The web server provides the ability for customers to browse a large collection of photographs as well as a catalog of memorabilia offered directly from BAR. An e-mail server is located on the same segment as the SQL Server.

As the business traffic to the website has increased, the single server often gets inundated with traffic. The e-mail server is experiencing an increase in traffic as well, because all correspondence with customers is via e-mail. Both the servers and the network where the servers are located have experienced repeated outages because of hardware problems.

Certkiller, the owner of BAR, has decided to purchase a rival auction site and consolidate the two businesses into one location. The rival auction house has a separate web server and two larger SQL servers that process their customer orders. Once the companies are consolidated, the server applications will be consolidated as well. There will be three SQL servers dedicated to processing customer orders and bidding forms. Two additional servers will be dedicated to web and e-mail services. Jack has a concern that the network will not be able to efficiently process all of the additional traffic to the new servers.

BAR sales organization has a requirement that the systems be up and accessible to customers twenty-four hours a day, seven days a week. The sales department claims that BAR is losing valuable sales because of unreliable server and network

hardware.
Certkiller requested a proposal from Cisco for a redesign of the BAR network to address her concerns and to provide the accessibility that the sales department requires. The Cisco Sales Team has proposed a network redesign that includes a Server Farm module.

Case Study #3 BAR (4 questions)

QUESTION 254:

Which two features of the Server Farm module will directly address the problems that the sales department claims have caused lost sales? Select two.

A. firewalls
B. dual-homed servers
C. caching systems
D. mid-range switches
E. redundant switching and links

Answer: B, E
B. Dual-homed servers - Addresses hardware failure
E. Redundant switching and links - Provides more than one path between server and switches.
Incorrect:
B. Firewall - Nothing to do with availability of servers.
C. Caching Systems - Content Switching not mentioned as an option.
D. Mid-Range Switch - Does not address the availability of servers.

QUESTION 255:

Which two properties of the Server Farm module directly address the concern expressed by Certkiller, the owner of BAR? Select two.

A. performance
B. security
C. availability
D. scalability
E. manageability

Answer: C, D
C. Availability - The systems need to be up and accessible to customers 24 hours a day. Up time, MTBF and MTTR are important factors when dealing with critical business functions and services.
D. Scalability - The Server Farm Module scalability addresses increasing traffic, and not

current traffic which would be performance. Jack has a concern that the network will not be able to efficiently process all the additional traffic to the new servers.
Incorrect Answers:

A. Performance of Server Farm not an issue - servers have experienced outages.
B. Security is not mentioned - Although one should investigate current security policies.
E. No mention of manageability.

QUESTION 256:

Because BAR plans on consolidating its server applications, which feature can be included in the network redesign proposal to improve scalability?

A. mid-range switches
B. firewalls
C. server load balancing
D. dual-homed servers
E. redundant switching and links

Answer: A
Mid-range switches, such as a 4500, provides layer 2/3/4 functions and support QoS. This is a proposal from Cisco and not some other vendor. Provide the Cisco solution!

QUESTION 257:

Which Server Farm feature could be added to the BAR network to reduce the time that customers wait for catalog pages and pictures to display when customers access them from the web?

A. redundant switching and links
B. mid-range switches
C. dual-homed servers
D. firewalls
E. caching systems,

Answer: E

Explanation:
When using cashing systems, the pages and pictures on them which user already loaded in the past are cashed and in the future if he wants to access this page it is loaded from the local cash, not from the website. It is much faster and it safes the Internet connection costs.

Case Study #4 Certkiller School, Scenario

Exhibit #1:

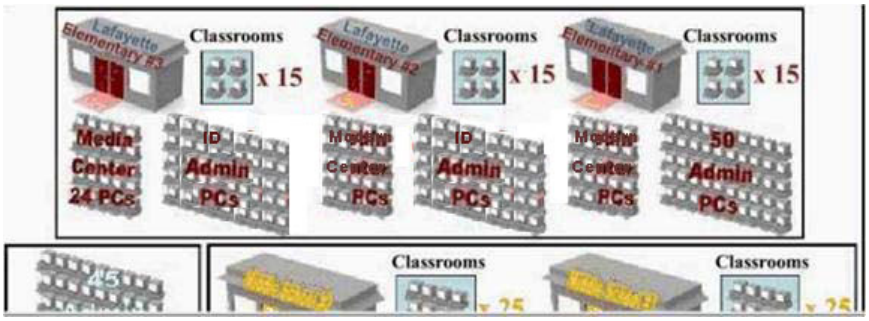
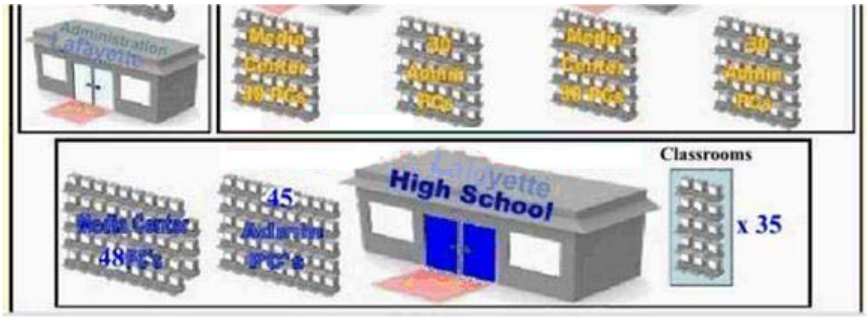


Exhibit #2:



Refer to the exhibits. Certkiller school needs an IP addressing scheme that is manageable and scalable. Its ISP will provide only one registered Class C address. A 20 percent overall growth in IP addresses is predicted .
The Certkiller school buildings are as follows.
One adminislralion building:
-45 PCs and server
-Webserver
-Internet connection
Three elementary schools:
-15 classrooms with 4 PCs per room
-Media center with 24 PCs
-50 administrative PCs
Two middle schools:
-25 classrooms with 12 PCs in each class
-Media center with 30 PCs
-30 administrative PCs
One high school:
-35 classrooms with 18 PCs in each class
-Media center with 48 PCs
-45 administrative PCs '

Case Study #4 Certkiller (4 Questions)

QUESTION 258:

How would you deploy the IP addressing scheme in the elementary schools?

A. a set of public IP addresses with one Class B address for each elementary school
B. a set of private IP addresses with one Class C address for each elementary school
C. a set of private IP addresses with two Class C addresses subnetted between the elementary schools
D. a set of public IP addresses with two Class C addresses subnetted between the elementary schools

Answer: B

QUESTION 259:

How would you deploy the IP addressing scheme in the Admin building?

A. private IP addresses with a public Class C address range and public addresses for the web server
B. a set of private IP addresses with one Class C address subnetted for the administration building and public addresses for the web servers
C. a set of private IP addresses with one Class C address for the administration building and public addresses for the web servers.
D. a set of private IP addresses with one Class C address for the administration building and private addresses for the web servers

Answer: C

QUESTION 260:

How would you deploy the IP addressing scheme in the middle schools?

A. a set of private IP addresses with four Class C address ranges for each middle school
B. a set of private IP addresses with two Class C address ranges for each middle school
C. a set of private IP addresses with two Class C addresses subnetted for each middle school
D. a set of private IP addresses with four Class C addresses subnetted between the two middle schools

Answer: B

QUESTION 261:

How would you deploy the IP addressing scheme in the high school?

A. a set of private IP addresses with three Class C address ranges for the high school
B. a set of private IP addresses with four Class C address ranges for the high school
C. a set of private IP addresses with three Class C addresses subnetted for the high school
D. a set of private IP addresses with four Class C addresses subnetted for the high school

Answer: B

Case Study #5 Certkiller Mexico, Scenario

Certkiller Mexico is planning to offer a multimedia Internet video-relationship solution. It will provide streaming video services, VolP services, and an interactive video dating service. The business plan calls for three separate divisions:
1) Streaming video
2)VoIP
3) Interactive video
Each division will have its own network resources.

Case Study #5 Certkiller Mexico(3 Questions)

QUESTION 262:

What two network design constraints must Certkiller Mexico consider in order to accommodate voice over IP traffic?(Choose two.)

A. Voice traffic is variable delay insensitive provided a large enough elasticity buffer exists in the voice endpoints .
B. Voice traffic requires the round-trip latency be no more than 300 ms.
C. Voice traffic is insensitive to dropping of voice packets since modern codecs use prediction algorithms capable of rebuilding missing sounds and words.
D. Since voice calls configured for modern codecs use such a small amount of bandwidth (12kbps) per call, it is generally not a requirement to guarantee bandwidth for voice traffic.
E. Link fragmentation and interleaving techniques should be applied on all WAN interfaces with bandwidth less than 768kbps.

Answer: A, E

QUESTION 263:

What two network design constraints must Certkiller Mexico consider in order to accommodate interactive video traffic?(Choose two.)

A. Interactive video traffic is variable delay insensitive provided a large enough elasticity buffer exists in the video endpoints.
B. Interactive video traffic requires the round-trip latency be no more than 300 ms.
C. Interactive video traffic is insensitive to dropping of video packets since TCP guarantees retransmission of any lost video packets.
D. Videoconferencing sessions cannot be established through WAN edge routers configured for NAT.
E. The minimum amount of guaranteed bandwidth required is the size of the video conference plus 20 percent.

Answer: B, E

QUESTION 264:

What two network design constraints must Certkiller Mexico consider in order to accommodate streaming video traffic? (Choose two.)

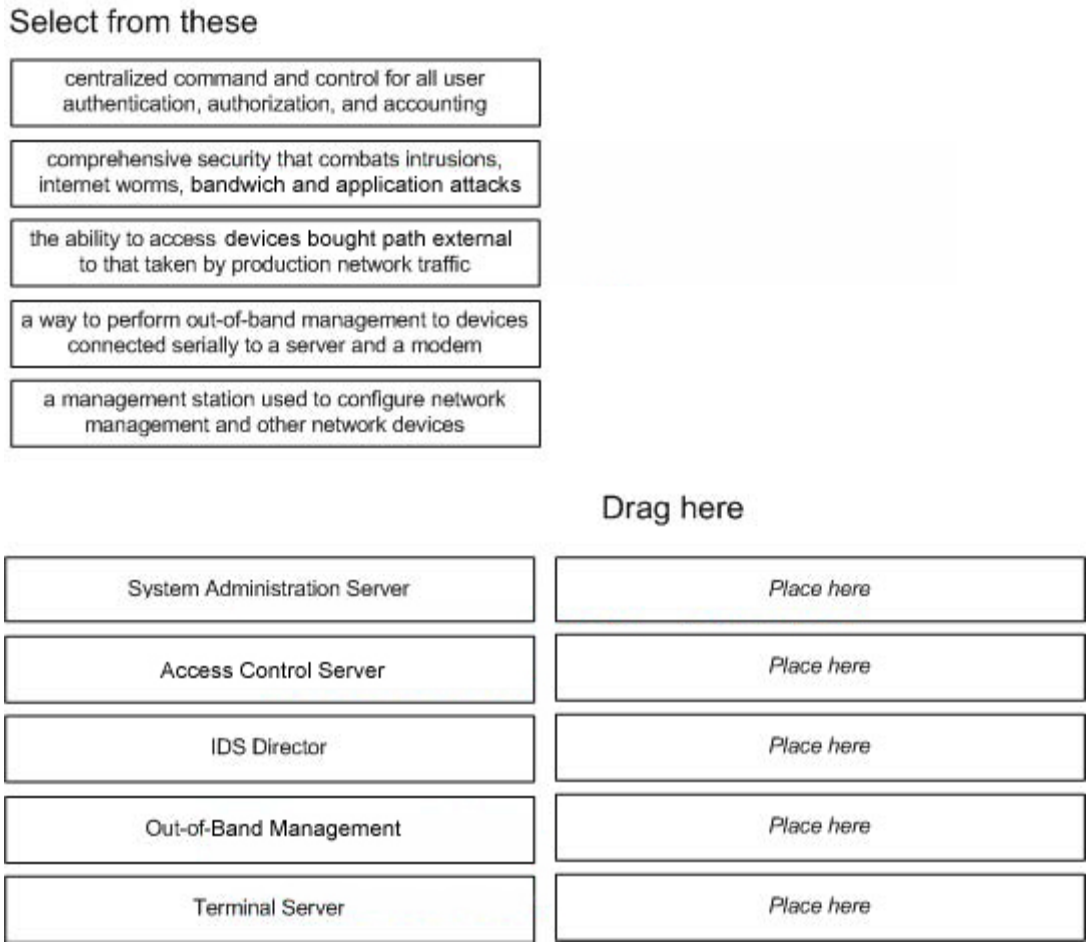
A. Streaming video traffic is less sensitive to variability of delay than interactive video.
B. Streaming video traffic requires the round-trip latency be no more than 300 ms.
C. Streaming video traffic has a higher tolerance for packet loss than interactive video or voice traffic.
D. The minimum amount of required bandwidth is the size of the streaming video (CIF. QCIF, etc.) times the color depth.
E. Streaming video sessions cannot be established through WAN edge routers configured for NAT.

Answer: A, C

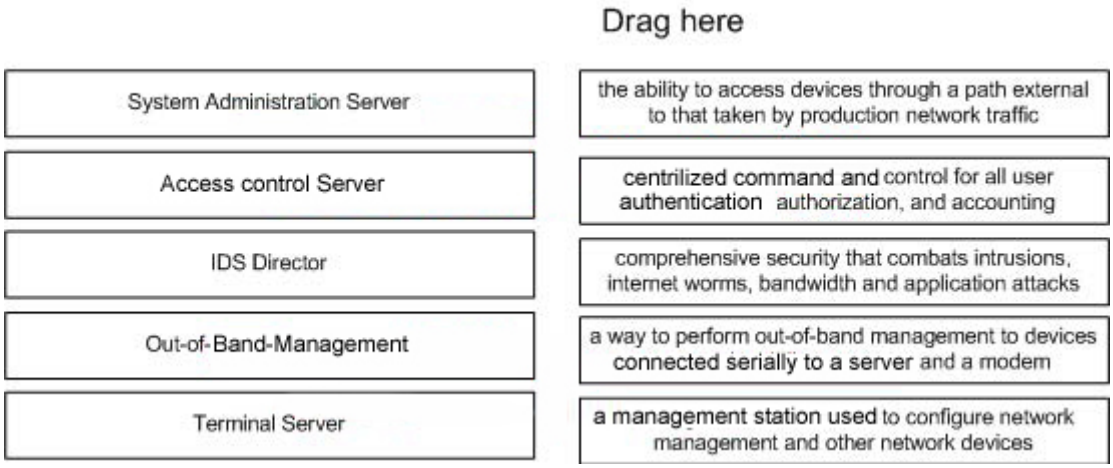
Mixed (4 Questions)

QUESTION 265:

DRAG DROP
Drag the requirement for Network Management on the left to the service or tool that will meet that need on the right.


Select from these
centralized command and control for all user authentication, authorization, and accounting
comprehensive security that combats intrusions, internet worms, bandwich and application attacks
the ability to access devices bought path external to that taken by production network traffic
a way to perform out-of-band management to devices connected serially to a server and a modem
a management station used to configure network management and other network devices
Drag here
System Administration Server
Access Control Server
IDS Director
Out-of-Band Management
Terminal Server
Place here
Place here
Place here
Place here
Place here

Answer:


Drag here
System Administration Server
Access control Server
IDS Director
Out-of-Band-Management
Terminal Server
the ability to access devices through a path external to that taken by production network traffic
centrilized command and control for all user authentication authorization, and accounting
comprehensive security that combats intrusions, internet worms, bandwidth and application attacks
a way to perform out-of-band management to devices connected serially to a server and a modem
a management station used to configure network management and other network devices

QUESTION 266:

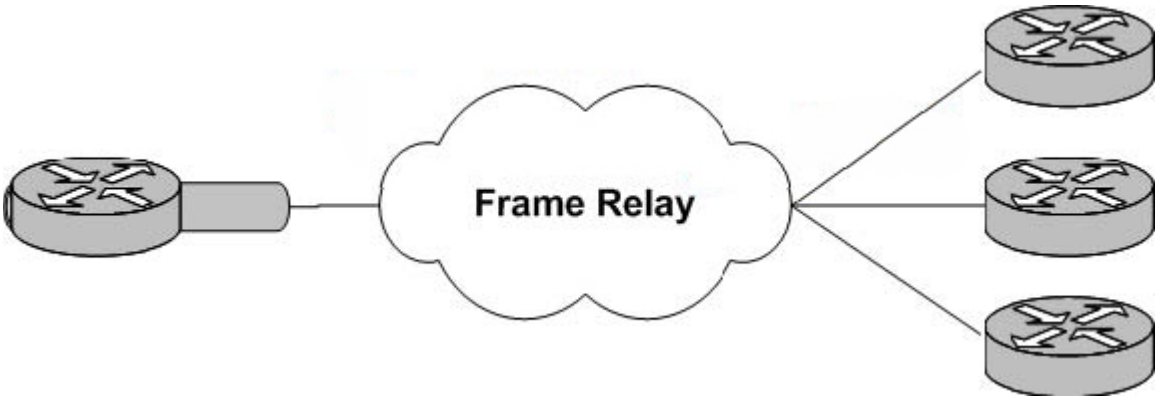
Which three metrics are used to gauge network performance? (Choose three.)

A. responsiveness
B. throughput
C. scalability
D. utilization
E. topology
F. availability

Answer: A,B,D

QUESTION 267:

Examine the graphic and consider following requirements:
-- All sites must be able to communicate with all other sites
-- EIGRP will be used over the links
-- IP unicast and multicast traffic must be forwarded
Which protocol combination would be most appropriate for the point-to-multipoint VPN configuration shown in the graphic?
Exhibit:

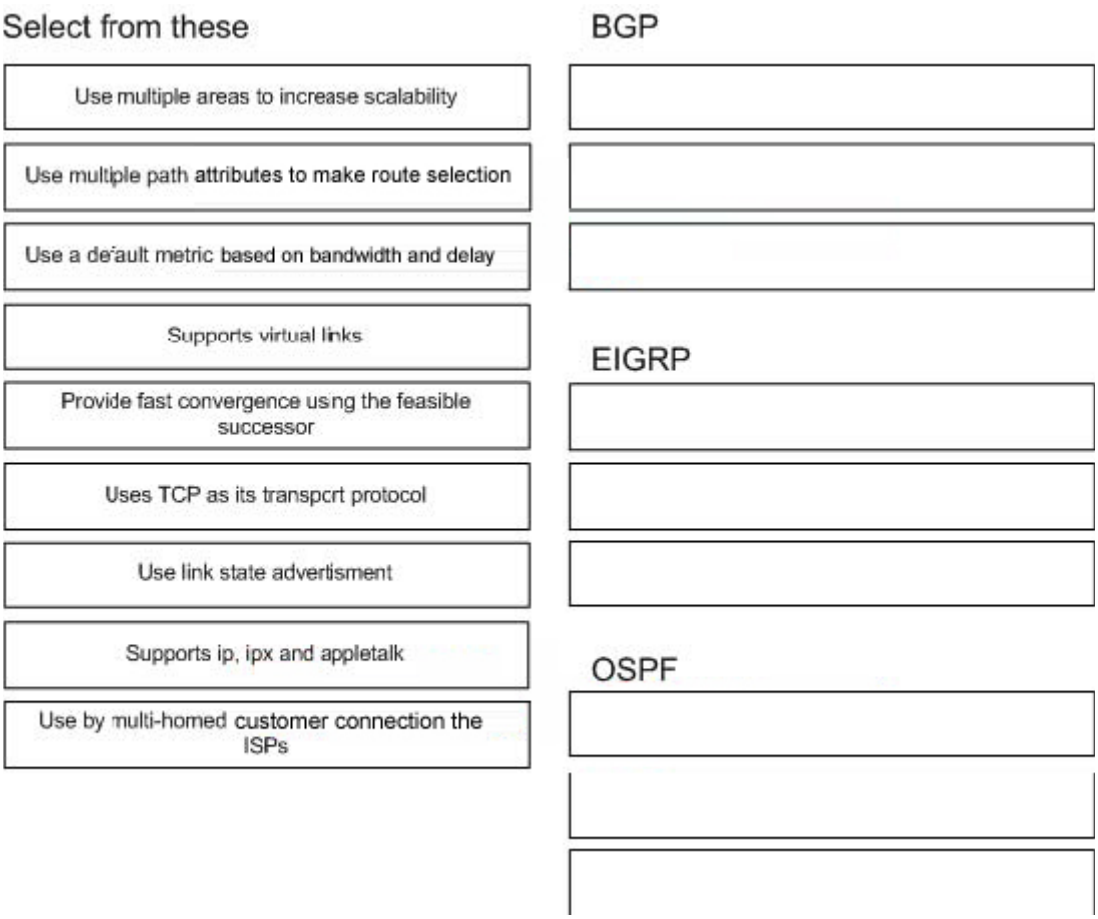


A. GRE with IPSEC in tunnel mode
B. GRE with IPSEC in transport mode
C. GRE with PPTP
D. GRE with L2TP
E. L2TP with IPSEC

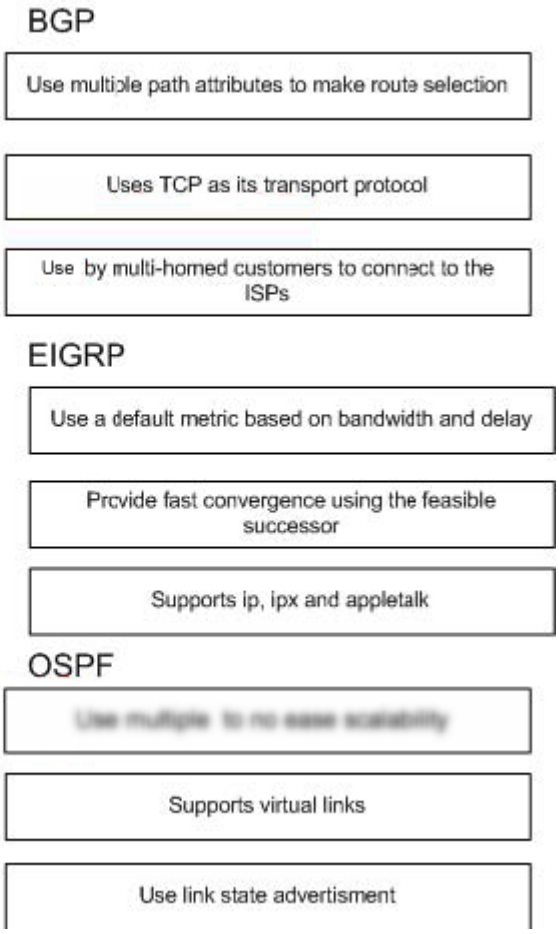
Answer: B

QUESTION 268:

DRAG DROP
Drag the routing protocol characteristics on the left to match the routing protocol on the right.



Answer:


BGP
Use multiple path attributes to make route selection
Uses TCP as its transport protocol
Use by multi-homed customers to connect to the ISPs
EIGRP
Use a default metric based on bandwidth and delay
Provide fast convergence using the feasible successor
Supports ip, ipx and appletalk
OSPF
Supports virtual links
Use link state advertisment