

350_401 20th_Jan_2021_digitaltut_Has_Assili

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I'm doing this work of the new Digitaltut questions to assist my friends around the world who are preparing Cisco 350-401 **it 's free.**

I ask each user of this dumps to **pray for the soul of my father and my sister** that they are in paradia

Exam A

QUESTION 1

When a wired client connects to an edge switch in an SDA fabric, which component decides whether the client has access to the network?

- A. control-plane node
- B. Identity Service Engine
- C. RADIUS server
- D. edge node

Correct Answer: B

Section: (none)

Explanation

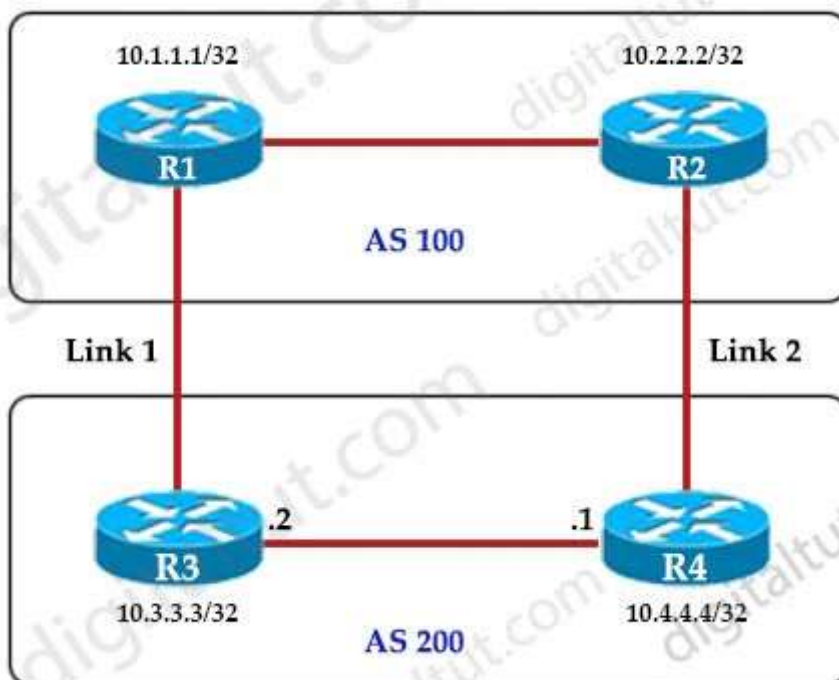
Explanation/Reference:

Answer:

QUESTION 2

Refer to the exhibit.

An engineer must ensure that all traffic leaving AS 200 will choose Link 2 as the exit point. Assuming that all BGP neighbor relationships have been formed and that the attributes have not been changed on any of the routers, which configuration accomplish task?



- A. R4(config-router)#bgp default local-preference 200
- B. R3(config-router)#neighbor 10.1.1.1 weight 200
- C. R3(config-router)#bgp default local-preference 200
- D. R4(config-router)#neighbor 10.2.2.2 weight 200

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

Local preference is an indication to the AS about which path has preference to exit the AS in order to reach

a certain network. A path with a higher local preference is preferred. The default value for local preference is 100.

Unlike the weight attribute, which is only relevant to the local router, local preference is an attribute that routers exchange in the same AS. The local preference is set with the "bgp default local-preference value" command.

In this case, both R3 & R4 have exit links but R4 has higher local-preference so R4 will be chosen as the preferred exit point from AS 200.

(Reference:

http://www.cisco.com/en/US/tech/tk365/technologies_tech_note09186a00800c95bb.shtml#localpref)

Answer:

QUESTION 3

Which protocol infers that a YANG data model is being used?

- A. SNMP
- B. REST
- C. RESTCONF
- D. NX-API

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

YANG (Yet Another Next Generation) is a data modeling language for the definition of data sent over network management protocols such as the NETCONF and RESTCONF.

Answer:

QUESTION 4

Which configuration restricts the amount of SSH that a router accepts 100 kbps?

Option A Option B

```
class-map match-all CoPP_SSH class-map match-all CoPP_SSH
match access-group name CoPP_SSH match access-group name CoPP_SSH
```

!!

```
policy-map CoPP_SSH policy-map CoPP_SSH
```

```
class CoPP_SSH class CoPP_SSH
```

```
police cir 100000 police cir CoPP_SSH
```

```
exceed-action drop exceed-action drop
```

!!

!!

!!

```
interface GigabitEthernet0/1 interface GigabitEthernet0/1
```

```
ip address 209.165.200.225 255.255.255.0 ip address 209.165.200.225 255.255.255.0 ip access-group
```

```
CoPP_SSH out ip access-group CoPP_SSH out
```

```
duplex auto duplex auto
```

```
speed auto speed auto
```

```
media-type rj45 media-type rj45
```

```
service-policy input CoPP_SSH service-policy input CoPP_SSH
```

!!

```
ip access-list extended CoPP_SSH ip access-list extended CoPP_SSH
```

```
permit tcp any any eq 22 deny tcp any any eq 22
```

!!

Option C Option D

```
class-map match-all CoPP_SSH class-map match-all CoPP_SSH
```

```
match access-group name CoPP_SSH match access-group name CoPP_SSH
```

!!

```
policy-map CoPP_SSH policy-map CoPP_SSH
```

```
class CoPP_SSH class CoPP_SSH
```

```
police cir 100000 police cir 100000
```

```

exceed-action drop exceed-action drop
!!
!!
!!
control-plane control-plane transit
service-policy input CoPP_SSH service-policy input CoPP_SSH
!!
ip access-list extended CoPP_SSH ip access-list extended CoPP_SSH
permit tcp any any eq 22 permit tcp any any eq 22
!!

```

```

A. class-map match-all CoPP_SSH
   match access-group name CoPP_SSH
   !
   policy-map CoPP_SSH
   class CoPP_SSH
   police cir 100000
   exceed-action drop
   !
   !
   !
   interface GigabitEthernet0/1
   ip address 209.165.200.225 255.255.255.0
   ip access-group CoPP_SSH out
   duplex auto
   speed auto
   media-type rj45
   service-policy input CoPP_SSH
   !
   ip access-list extended CoPP_SSH
   permit tcp any any eq 22
   !

```

```

B. class-map match-all CoPP_SSH
   match access-group name CoPP_SSH
   !
   policy-map CoPP_SSH
   class CoPP_SSH
   police cir CoPP_SSH
   exceed-action drop
   !
   !
   !
   interface GigabitEthernet0/1
   ip address 209.165.200.225 255.255.255.0
   ip access-group CoPP_SSH out
   duplex auto
   speed auto
   media-type rj45
   service-policy input CoPP_SSH
   !
   ip access-list extended CoPP_SSH
   deny tcp any any eq 22

```

```

C. class-map match-all CoPP_SSH
   match access-group name CoPP_SSH
   !
   policy-map CoPP_SSH
   class CoPP_SSH
   police cir 100000
   exceed-action drop
   !
   !
   !
   control-plane
   service-policy input CoPP_SSH

```

```

!
ip access-list extended CoPP_SSH
permit tcp any any eq 22
D. class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
policy-map CoPP_SSH
class CoPP_SSH
police cir 100000
exceed-action drop
!
!
!
control-plane transit
service-policy input CoPP_SSH
!
ip access-list extended CoPP_SSH
permit tcp any any eq 22
!

```

Correct Answer: C

Section: (none)

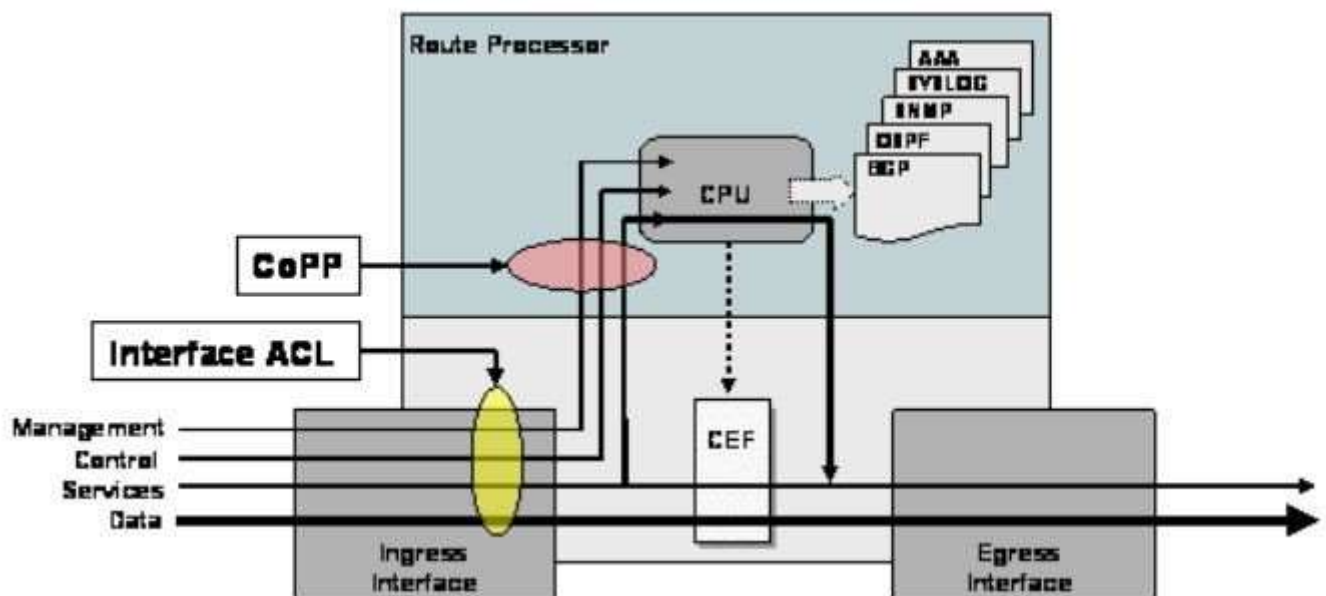
Explanation

Explanation/Reference:

Explanation

CoPP protects the route processor on network devices by treating route processor resources as a separate entity with its own ingress interface (and in some implementations, egress also). CoPP is used to police traffic that is destined to the route processor of the router such as:

- + Routing protocols like OSPF, EIGRP, or BGP.
- + Gateway redundancy protocols like HSRP, VRRP, or GLBP.
- + Network management protocols like telnet, SSH, SNMP, or RADIUS.



Therefore we must apply the CoPP to deal with SSH because it is in the management plane. CoPP must be put under "control-plane" command. But we cannot name the control-plane (like "transit").

Answer:

QUESTION 5

What NTP stratum level is a server that is connected directly to an authoritative time source?

- A. Stratum 0
- B. Stratum 1
- C. Stratum 14
- D. Stratum 15

Correct Answer: B

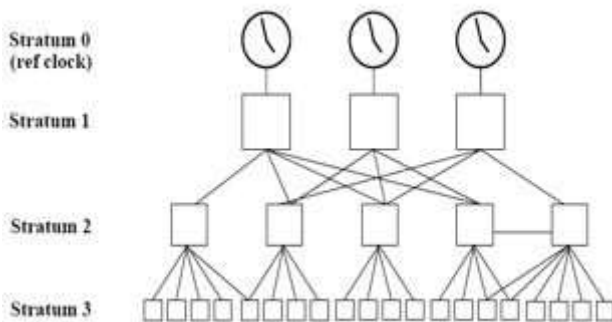
Section: (none)

Explanation

Explanation/Reference:

Explanation

The stratum levels define the distance from the reference clock. A reference clock is a stratum 0 device that is assumed to be accurate and has little or no delay associated with it. Stratum 0 servers cannot be used on the network but they are directly connected to computers which then operate as stratum-1 servers. A stratum 1 time server acts as a primary network time standard.



A stratum 2 server is connected to the stratum 1 server; then a stratum 3 server is connected to the stratum 2 server and so on. A stratum 2 server gets its time via NTP packet requests from a stratum 1 server. A stratum 3 server gets its time via NTP packet requests from a stratum-2 server... A stratum server may also peer with other stratum servers at the same level to provide more stable and robust time for all devices in the peer group (for example a stratum 2 server can peer with other stratum 2 servers).

NTP uses the concept of a stratum to describe how many NTP hops away a machine is from an authoritative time source. A stratum 1 time server typically has an authoritative time source (such as a radio or atomic clock, or a Global Positioning System (GPS) time source) directly attached, a stratum 2 time server receives its time via NTP from a stratum 1 time server, and so on.

Reference: <https://www.cisco.com/c/en/us/td/docs/routers/asr920/configuration/guide/bsm/16-6-1/b-asm-xe-16-6-1-asr920/bsm-time-calendar-set.html>

Answer:

QUESTION 6

How does QoS traffic shaping alleviate network congestion?

- A. It drops packets when traffic exceeds a certain bitrate.
- B. It buffers and queue packets above the committed rate.
- C. It fragments large packets and queues them for delivery.
- D. It drops packets randomly from lower priority queues.

Correct Answer: B

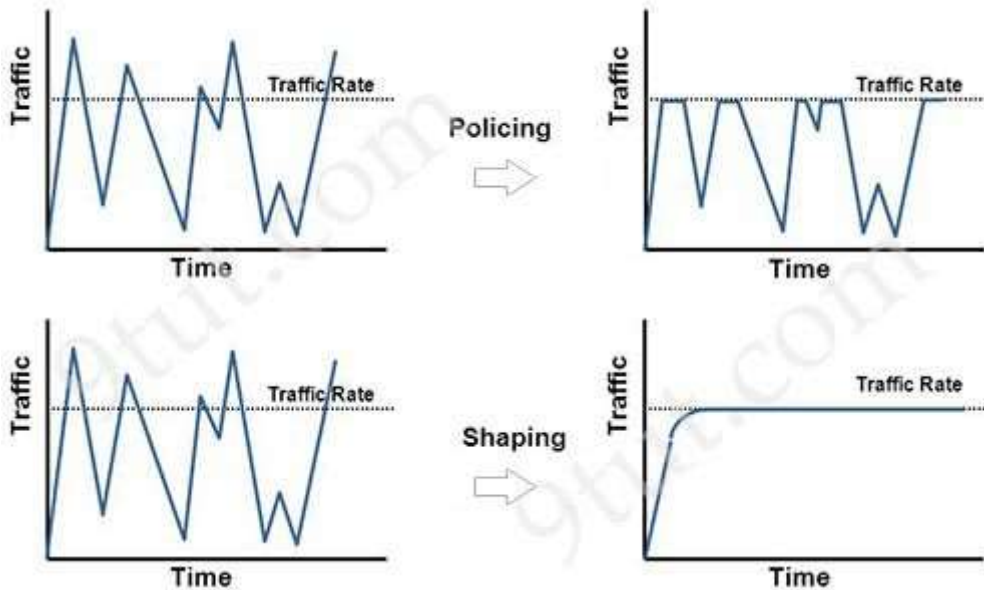
Section: (none)

Explanation

Explanation/Reference:

Explanation

Traffic shaping retains excess packets in a queue and then schedules the excess for later transmission over increments of time. The result of traffic shaping is a smoothed packet output rate.



Answer:

QUESTION 7

An engineer is describing QoS to a client. Which two facts apply to traffic policing? (Choose two)

- A. Policing adapts to network congestion by queuing excess traffic
- B. Policing should be performed as close to the destination as possible
- C. Policing drops traffic that exceeds the defined rate
- D. Policing typically delays the traffic, rather than drops it
- E. Policing should be performed as close to the source as possible

Correct Answer: CE

Section: (none)

Explanation

Explanation/Reference:

Explanation

Traffic policing propagates bursts. When the traffic rate reaches the configured maximum rate (or committed information rate), excess traffic is dropped (or remarked). The result is an output rate that appears as a saw-tooth with crests and troughs.

Unlike traffic shaping, traffic policing does not cause delay.

Classification (which includes traffic policing, traffic shaping and queuing techniques) should take place at the network edge. It is recommended that classification occur as close to the source of the traffic as possible.

Also according to this Cisco link, "policing traffic as close to the source as possible".

Answer:

QUESTION 8

What mechanism does PIM use to forward multicast traffic?

- A. PIM sparse mode uses a pull model to deliver multicast traffic
- B. PIM dense mode uses a pull model to deliver multicast traffic
- C. PIM sparse mode uses receivers to register with the RP
- D. PIM sparse mode uses a flood and prune model to deliver multicast traffic

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

PIM dense mode (PIM-DM) uses a push model to flood multicast traffic to every corner of the network. This push model is a brute-force method of delivering data to the receivers. This method would be efficient in certain deployments in which there are active receivers on every subnet in the network. PIM-DM initially floods multicast traffic throughout the network. Routers that have no downstream neighbors prune the unwanted traffic. This process repeats every 3 minutes.

PIM Sparse Mode (PIM-SM) uses a pull model to deliver multicast traffic. Only network segments with active receivers that have explicitly requested the data receive the traffic. PIM-SM distributes information about active sources by forwarding data packets on the shared tree. Because PIM-SM uses shared trees (at least initially), it requires the use of an RP. The RP must be administratively configured in the network. Answer C seems to be correct but it is not, PIM sparse mode uses sources (not receivers) to register with the RP.

Sources register with the RP, and then data is forwarded down the shared tree to the receivers.

Reference: Selecting MPLS VPN Services Book, page 193

Answer:

QUESTION 9

Which two namespaces does the LISP network architecture and protocol use? (Choose two)

- A. TLOC
- B. RLOC
- C. DNS
- D. VTEP
- E. EID

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

Explanation

Locator ID Separation Protocol (LISP) is a network architecture and protocol that implements the use of two namespaces instead of a single IP address:

+ Endpoint identifiers (EIDs)--assigned to end hosts.

+ Routing locators (RLOCs)--assigned to devices (primarily routers) that make up the global routing system.

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xs-3s/irl-xe-3s-book/irl-overview.html

Answer:

QUESTION 10

Which First Hop Redundancy Protocol should be used to meet a design requirements for more efficient default bandwidth usage across multiple devices?

- A. GLBP
- B. LCAP
- C. HSRP
- D. VRRP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

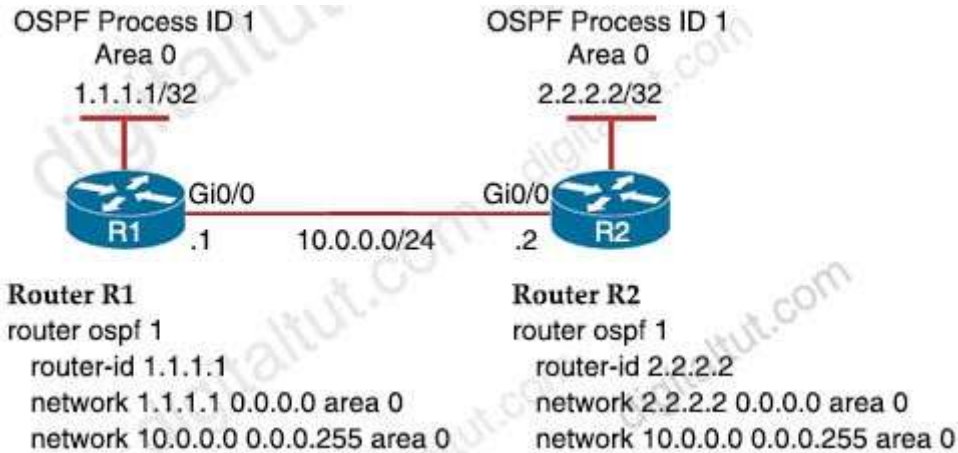
The main disadvantage of HSRP and VRRP is that only one gateway is elected to be the active gateway and used to forward traffic whilst the rest are unused until the active one fails. Gateway Load Balancing

Protocol (GLBP) is a Cisco proprietary protocol and performs the similar function to HSRP and VRRP but it supports load balancing among members in a GLBP group.

Answer:

QUESTION 11

Refer to the exhibit.



A network engineer is configuring OSPF between router R1 and router R2. The engineer must ensure that a DR/BDR election does not occur on the Gigabit Ethernet interfaces in area 0. Which configuration set accomplishes this goal?

- A. R1(config-if)#interface Gi0/0
R1(config-if)#ip ospf network point-to-point
R2(config-if)#interface Gi0/0
R2(config-if)#ip ospf network point-to-point
- B. R1(config-if)#interface Gi0/0
R1(config-if)#ip ospf network broadcast
R2(config-if)#interface Gi0/0
R2(config-if)#ip ospf network broadcast
- C. R1(config-if)#interface Gi0/0
R1(config-if)#ip ospf database-filter all out
R2(config-if)#interface Gi0/0
R2(config-if)#ip ospf database-filter all out
- D. R1(config-if)#interface Gi0/0
R1(config-if)#ip ospf priority 1
R2(config-if)#interface Gi0/0
R2(config-if)#ip ospf priority 1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

Broadcast and Non-Broadcast networks elect DR/BDR while Point-to-point/multipoint do not elect DR/BDR. Therefore we have to set the two Gi0/0 interfaces to point-to-point or point-to-multipoint network to ensure that a DR/BDR election does not occur.

Answer:

QUESTION 12

What are two reasons why broadcast radiation is caused in the virtual machine environment? (Choose two)

- A. vSwitch must interrupt the server CPU to process the broadcast packet
- B. The Layer 2 domain can be large in virtual machine environments
- C. Virtual machines communicate primarily through broadcast mode
- D. Communication between vSwitch and network switch is broadcast based
- E. Communication between vSwitch and network switch is multicast based

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

Explanation

Broadcast radiation refers to the processing that is required every time a broadcast is received on a host. Although IP is very efficient from a broadcast perspective when compared to traditional protocols such as Novell Internetwork Packet Exchange (IPX) Service Advertising Protocol (SAP), virtual machines and the vswitch implementation require special consideration. Because the vswitch is software based, as broadcasts are received the vswitch must interrupt the server CPU to change contexts to enable the vswitch to process the packet. After the vswitch has determined that the packet is a broadcast, it copies the packet to all the VMNICs, which then pass the broadcast packet up the stack to process. This processing overhead can have a tangible effect on overall server performance if a single domain is hosting a large number of virtual machines.

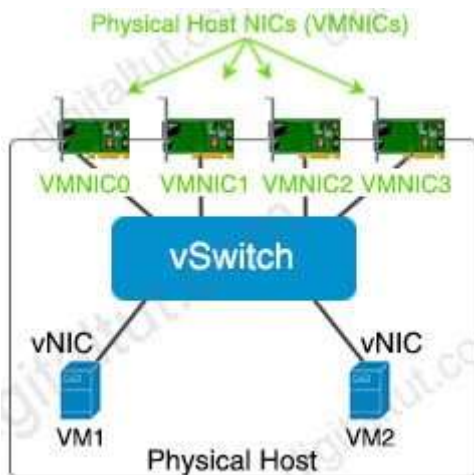
Note: This overhead effect is not a limitation of the vswitch implementation. It is a result of the software-based nature of the vswitch embedded in the ESX hypervisor.

Reference: https://www.cisco.com/c/en/us/solutions/collateral/data-center-virtualization/net_implementation_white_paper0900aecd806a9c05.html

Note about the structure of virtualization in a hypervisor:

Hypervisors provide virtual switch (vSwitch) that Virtual Machines (VMs) use to communicate with other VMs on the same host. The vSwitch may also be connected to the host's physical NIC to allow VMs to get layer 2 access to the outside world.

Each VM is provided with a virtual NIC (vNIC) that is connected to the virtual switch. Multiple vNICs can connect to a single vSwitch, allowing VMs on a physical host to communicate with one another at layer 2 without having to go out to a physical switch.



Although vSwitch does not run Spanning-tree protocol but vSwitch implements other loop prevention mechanisms. For example, a frame that enters from one VMNIC is not going to go out of the physical host from a different VMNIC card.

Answer:

QUESTION 13

A company plans to implement intent-based networking in its campus infrastructure. Which design facilities a migrate from a traditional campus design to a programmer fabric designer?

- A. Layer 2 access
- B. three-tier
- C. two-tier
- D. routed access

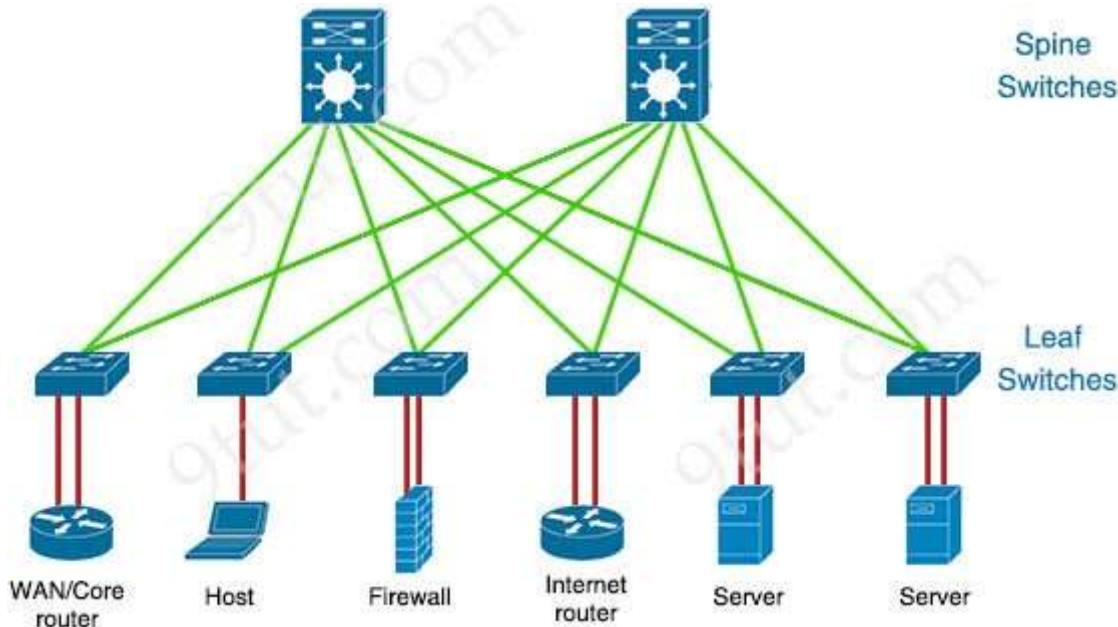
Correct Answer: C
Section: (none)

Explanation

Explanation/Reference:

Explanation

Intent-based Networking (IBN) transforms a hardware-centric, manual network into a controller-led network that captures business intent and translates it into policies that can be automated and applied consistently across the network. The goal is for the network to continuously monitor and adjust network performance to help assure desired business outcomes. IBN builds on software-defined networking (SDN). SDN usually uses spine-leaf architecture, which is typically deployed as two layers: spines (such as an aggregation layer), and leaves (such as an access layer).



Answer:

QUESTION 14

When a wireless client roams between two different wireless controllers, a network connectivity outage is experienced for a period of time. Which configuration issue would cause this problem?

- A. Not all of the controllers in the mobility group are using the same mobility group name
- B. Not all of the controllers within the mobility group are using the same virtual interface IP address
- C. All of the controllers within the mobility group are using the same virtual interface IP address
- D. All of the controllers in the mobility group are using the same mobility group name

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

A prerequisite for configuring Mobility Groups is "All controllers must be configured with the same virtual interface IP address". If all the controllers within a mobility group are not using the same virtual interface, inter-controller roaming may appear to work, but the handoff does not complete, and the client loses connectivity for a period of time. -> Answer B is correct.

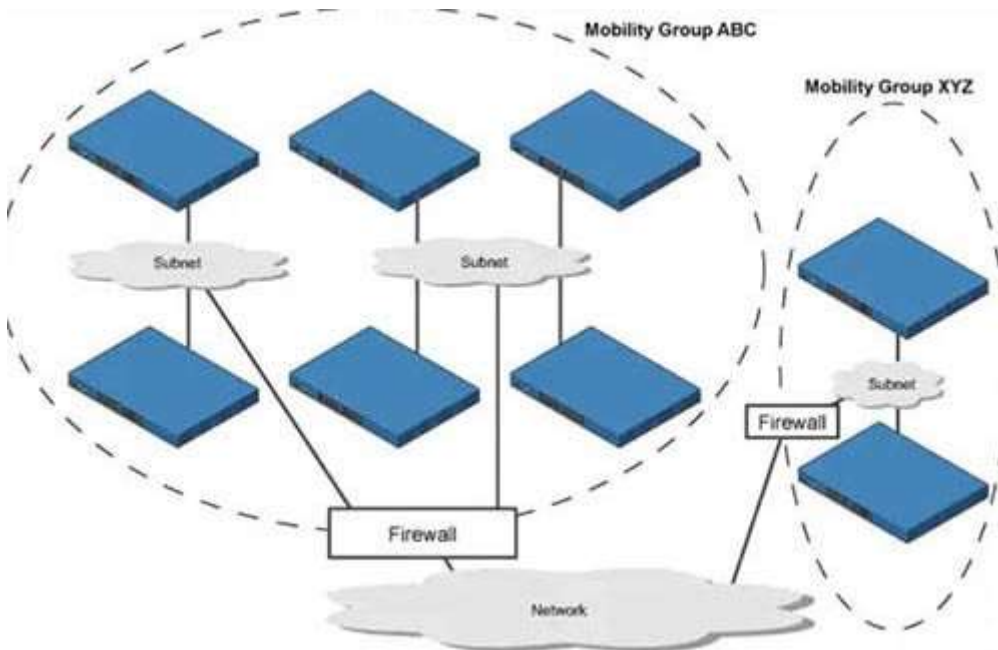
Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/config-guide/b_cg85/mobility_groups.html

Answer A is not correct because when the client moves to a different mobility group (with different mobility group name), that client would be connected (provided that the new connected controller had information about this client in its mobility list already) or drop (if the new connected controller has not had information about this client in its mobility list). For more information please read the note below.

Note:

A mobility group is a set of controllers, identified by the same mobility group name, that defines the realm of seamless roaming for wireless clients. By creating a mobility group, you can enable multiple controllers in a

network to dynamically share information and forward data traffic when inter-controller or inter-subnet roaming occurs. Controllers in the same mobility group can share the context and state of client devices as well as their list of access points so that they do not consider each other's access points as rogue devices.



Let's take an example:

The controllers in the ABC mobility group share access point and client information with each other. The controllers in the ABC mobility group do not share the access point or client information with the XYZ controllers, which are in a different mobility group. Therefore if a client from ABC mobility group moves to XYZ mobility group, and the new connected controller does not have information about this client in its mobility list, that client will be dropped.

Note: Clients may roam between access points in different mobility groups if the controllers are included in each other's mobility lists.

QUESTION 15

Which algorithms are used to secure REST API from brute attacks and minimize the impact?

- A. SHA-512 and SHA-384
- B. MD5 algorithm-128 and SHA-384
- C. SHA-1, SHA-256, and SHA-512
- D. PBKDF2, BCrypt, and SCrypt

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

One of the best practices to secure REST APIs is using password hash. Passwords must always be hashed to protect the system (or minimize the damage) even if it is compromised in some hacking attempts. There are many such hashing algorithms which can prove really effective for password security e.g. PBKDF2, bcrypt and scrypt algorithms.

Other ways to secure REST APIs are: Always use HTTPS, Never expose information on URLs (Usernames, passwords, session tokens, and API keys should not appear in the URL), Adding Timestamp in Request, Using OAuth, Input Parameter Validation.

Reference: <https://restfulapi.net/security-essentials/>

We should not use MD5 or any SHA (SHA-1, SHA-256, SHA-512...) algorithm to hash password as they are not totally secure.

Note: A brute-force attack is an attempt to discover a password by systematically trying every possible combination of letters, numbers, and symbols until you discover the one correct combination that works.

Answer:

QUESTION 16

What is the role of the RP in PIM sparse mode?

- A. The RP responds to the PIM join messages with the source of requested multicast group
 - B. The RP maintains default aging timeouts for all multicast streams requested by the receivers
 - C. The RP acts as a control-plane node and does not receive or forward multicast packets
 - D. The RP is the multicast that is the root of the PIM-SM shared multicast distribution tree
- Answer: D

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

The concept of joining the rendezvous point (RP) is called the RPT (Root Path Tree) or shared distribution tree.

The RP is the root of our tree which decides where to forward multicast traffic to. Each multicast group might have different sources and receivers so we might have different RPTs in our network.

QUESTION 17

A network administrator is preparing a Python script to configure a Cisco IOS XE-based device on the network. The administrator is worried that colleagues will make changes to the device while the script is running. Which operation of the client manager in prevent colleague making changes to the device while the script is running?

- A. `m.lock(config='running')`
- B. `m.lock(target='running')`
- C. `m.freeze(target='running')`
- D. `m.freeze(config='running')`

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

The example below shows the usage of lock command:

```
def demo(host, user, names):
```

```
    with manager.connect(host=host, port=22, username=user) as m:
```

```
        with m.locked(target='running'):
```

```
            for n in names:
```

```
                E. edit_config(target='running', config=template % n)
```

```
            the command "m.locked(target='running')" causes a lock to be acquired on the running datastore.
```

Answer:

QUESTION 18

What are two device roles in Cisco SD-Access fabric? (Choose two)

- A. core switch
- B. vBond controller
- C. edge node
- D. access switch
- E. border node

Correct Answer: CE

Section: (none)

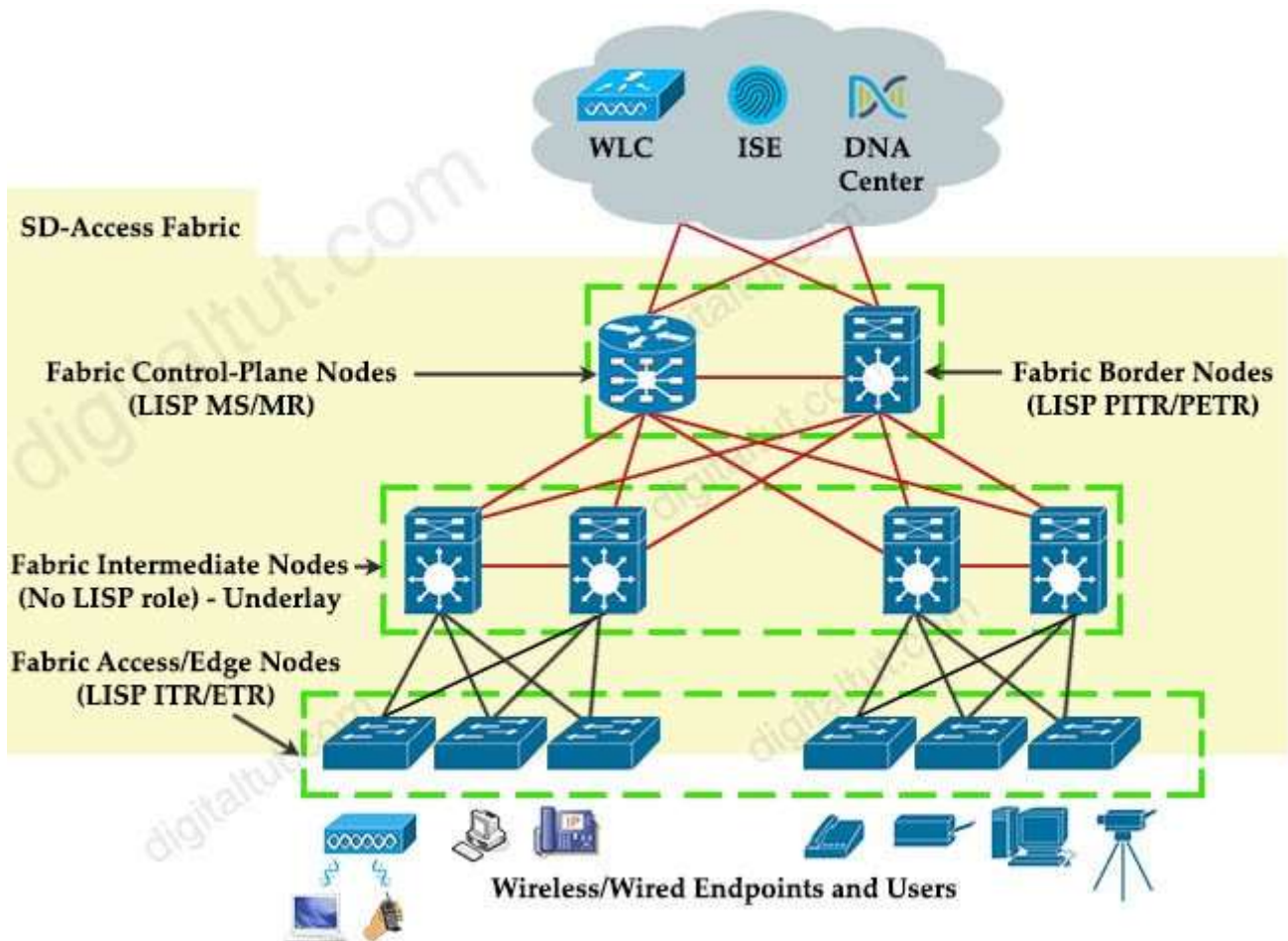
Explanation

Explanation/Reference:

Explanation

There are five basic device roles in the fabric overlay:

- + Control plane node: This node contains the settings, protocols, and mapping tables to provide the endpoint-to- location (EID-to-RLOC) mapping system for the fabric overlay.
- + Fabric border node: This fabric device (for example, core layer device) connects external Layer 3 networks to the SDA fabric.
- + Fabric edge node: This fabric device (for example, access or distribution layer device) connects wired endpoints to the SDA fabric.
- + Fabric WLAN controller (WLC): This fabric device connects APs and wireless endpoints to the SDA fabric.
- + Intermediate nodes: These are intermediate routers or extended switches that do not provide any sort of SD- Access fabric role other than underlay services.



Reference: CCNP and CCIE Enterprise Core ENCOR 350-401 Official Cert Guide

Answer:

QUESTION 19

Drag and drop the LISP components from the left onto the function they perform on the right. Not all options are used.

LISP map resolver	accepts LISP encapsulated map requests
LISP proxy ETR	learns of EID prefix mapping entries from an ETR
LISP route reflector	receives traffic from LISP sites and sends it to non-LISP sites
LISP ITR	receives packets from site-facing interfaces
LISP map server	

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

- + accepts LISP encapsulated map requests: LISP map resolver
- + learns of EID prefix mapping entries from an ETR: LISP map server
- + receives traffic from LISP sites and sends it to non-LISP sites: LISP proxy ETR + receives packets from site-facing interfaces: LISP ITR

Explanation

ITR is the function that maps the destination EID to a destination RLOC and then encapsulates the original packet with an additional header that has the source IP address of the ITR RLOC and the destination IP address of the RLOC of an Egress Tunnel Router (ETR). After the encapsulation, the original packet become a LISP packet.

ETR is the function that receives LISP encapsulated packets, decapsulates them and forwards to its local EIDs. This function also requires EID-to-RLOC mappings so we need to point out an "map-server" IP address and the key (password) for authentication.

A LISP proxy ETR (PETR) implements ETR functions on behalf of non-LISP sites. A PETR is typically used when a LISP site needs to send traffic to non-LISP sites but the LISP site is connected through a service provider that does not accept nonroutable EIDs as packet sources. PETRs act just like ETRs but for EIDs that send traffic to destinations at non-LISP sites.

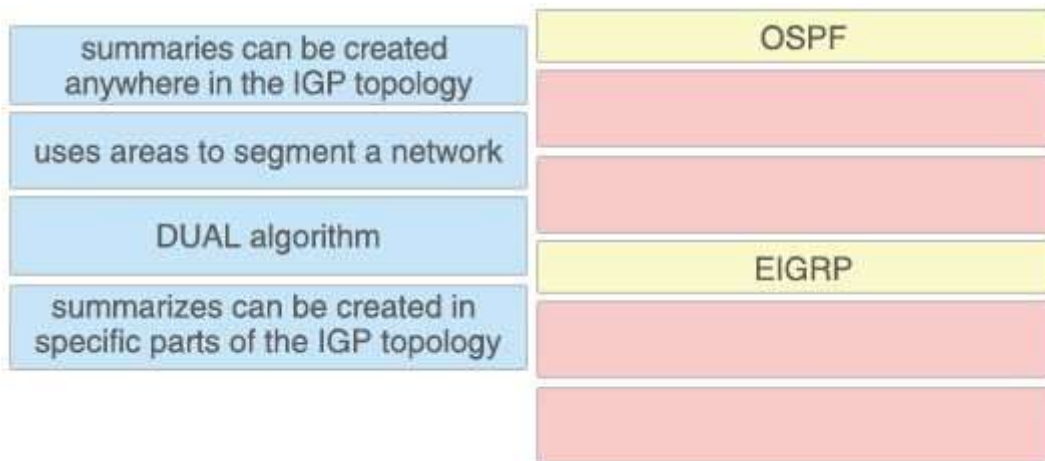
Map Server (MS) processes the registration of authentication keys and EID-to-RLOC mappings. ETRs sends periodic Map-Register messages to all its configured Map Servers.

Map Resolver (MR): a LISP component which accepts LISP Encapsulated Map Requests, typically from an ITR, quickly determines whether or not the destination IP address is part of the EID namespace

Answer:

QUESTION 20

Drag and Drop the descriptions from the left onto the routing protocol they describe on the right.



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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

OSPF:

- + uses areas to segment a network
- + summarizes can be created in specific parts of the IGP topology

EIGRP:

- + summaries can be created anywhere in the IGP topology
- + DUAL algorithm

Explanation

Unlike OSPF where we can summarize only on ABR or ASBR, in EIGRP we can summarize anywhere.

Manual summarization can be applied anywhere in EIGRP domain, on every router, on every interface via the ip summary-address eigrp as-number address mask [administrative-distance] command (for example: ip summary-address eigrp 1 192.168.16.0 255.255.248.0). Summary route will exist in routing table as long as at least one more specific route will exist. If the last specific route will disappear, summary route also will fade out. The metric used by EIGRP manual summary route is the minimum metric of the specific routes.

Answer:

QUESTION 21

Which component handles the orchestration plane of the Cisco SD-WAN?

- A. vBond
- B. vSmart
- C. vManage
- D. vEdge

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

- + Orchestration plane (vBond) assists in securely onboarding the SD-WAN WAN Edge routers into the SD-

WAN overlay. The vBond controller, or orchestrator, authenticates and authorizes the SD-WAN components onto the network. The vBond orchestrator takes an added responsibility to distribute the list of vSmart and vManage controller information to the WAN Edge routers. vBond is the only device in SD-WAN that requires a public IP address as it is the first point of contact and authentication for all SD-WAN components to join the SD-WAN fabric. All other components need to know the vBond IP or DNS information.

Answer:

QUESTION 22

Which two entities are Type 1 hypervisors? (Choose two)

- A. Oracle VM VirtualBox
- B. Microsoft Hyper-V
- C. VMware server
- D. VMware ESX
- E. Microsoft Virtual PC

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

Explanation

A bare-metal hypervisor (Type 1) is a layer of software we install directly on top of a physical server and its underlying hardware. There is no software or any operating system in between, hence the name bare-metal hypervisor. A Type 1 hypervisor is proven in providing excellent performance and stability since it does not run inside Windows or any other operating system. These are the most common type 1 hypervisors:

- + VMware vSphere with ESX/ESXi
- + KVM (Kernel-Based Virtual Machine)
- + Microsoft Hyper-V
- + Oracle VM
- + Citrix Hypervisor (formerly known as Xen Server)

Answer:

QUESTION 23

Which access point mode allows a supported AP to function like a WLAN client would, associating and identifying client connectivity issues?

- A. client mode
- B. SE-connect mode
- C. sensor mode
- D. sniffer mode

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

As these wireless networks grow especially in remote facilities where IT professionals may not always be on site, it becomes even more important to be able to quickly identify and resolve potential connectivity issues ideally before the users complain or notice connectivity degradation.

To address these issues we have created Cisco's Wireless Service Assurance and a new AP mode called "sensor" mode. Cisco's Wireless Service Assurance platform has three components, namely, Wireless Performance Analytics, Real-time Client Troubleshooting, and Proactive Health Assessment. Using a supported AP or dedicated sensor the device can actually function much like a WLAN client would associating and identifying client connectivity issues within the network in real time without requiring an IT or technician to be on site.

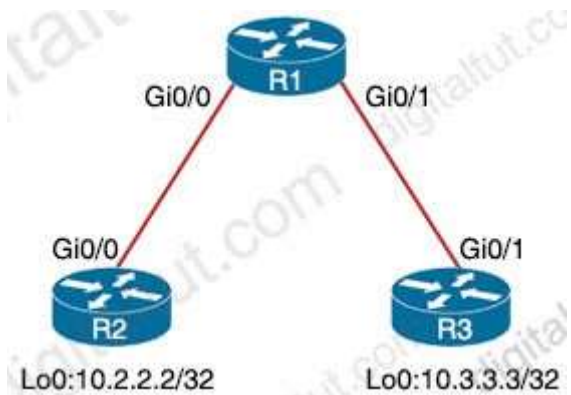
Reference: [https://content.cisco.com/chapter.sjs?](https://content.cisco.com/chapter.sjs?uri=/searchable/chapter/content/dam/en/us/td/docs/wireless/controller/technotes/8-5/)

[uri=/searchable/chapter/content/dam/en/us/td/docs/wireless/controller/technotes/8-5/](https://content.cisco.com/chapter.sjs?uri=/searchable/chapter/content/dam/en/us/td/docs/wireless/controller/technotes/8-5/)

Answer:

QUESTION 24

Refer to the exhibit.



An engineer must deny Telnet traffic from the loopback interface of router R3 to the loopback interface of router R2 during the weekend hours. All other traffic between the loopback interfaces of routers R3 and R2 must be allowed at all times. Which command accomplish this task?

- A. R3(config)#time-range WEEKEND
R3(config-time-range)#periodic Saturday Sunday 00:00 to 23:59
R3(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND R3(config)
#access-list 150 permit ip any any time-range WEEKEND
R3(config)#interface Gi0/1
R3(config-if)#ip access-group 150 out
- B. R1(config)#time-range WEEKEND
R1(config-time-range)#periodic Friday Sunday 00:00 to 00:00
R1(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND R1(config)
#access-list 150 permit ip any any
R1(config)#interface Gi0/1
R1(config-if)#ip access-group 150 in
- C. R1(config)#time-range WEEKEND
R1(config-time-range)#periodic weekend 00:00 to 23:59
R1(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND R1(config)
#access-list 150 permit ip any any
R1(config)#interface Gi0/1
R1(config-if)#ip access-group 150 in
- D. R3(config)#time-range WEEKEND
R3(config-time-range)#periodic weekend 00:00 to 23:59
R3(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND R3(config)
#access-list 150 permit ip any any time-range WEEKEND
R3(config)#interface Gi0/1
R3(config-if)#ip access-group 150 out

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

We cannot filter traffic that is originated from the local router (R3 in this case) so we can only configure the ACL on R1 or R2. "Weekend hours" means from Saturday morning through Sunday night so we have to configure: "periodic weekend 00:00 to 23:59".

Note: The time is specified in 24-hour time (hh:mm), where the hours range from 0 to 23 and the minutes range from 0 to 59.

Answer:

QUESTION 25

Which tool is used in Cisco DNA Center to build generic configurations that are able to be applied on device with similar network settings?

- A. Command Runner
- B. Template Editor
- C. Application Policies
- D. Authentication Template

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

Cisco DNA Center provides an interactive editor called Template Editor to author CLI templates. Template Editor is a centralized CLI management tool to help design a set of device configurations that you need to build devices in a branch. When you have a site, office, or branch that uses a similar set of devices and configurations, you can use Template Editor to build generic configurations and apply the configurations to one or more devices in the branch.

Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3/user_guide/b_cisco_dna_center_ug_1_3/b_cisco_dna_center_ug_1_3_chapter_0111.html

Answer:

QUESTION 26

A client device roams between access points located on different floors in an atrium. The access points joined to the same controller and configuration in local mode. The access points are in different IP addresses, but the client VLAN in the group same. What type of roam occurs?

- A. inter-controller
- B. inter-subnet
- C. intra-VLAN
- D. intra-controller

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

Mobility, or roaming, is a wireless LAN client's ability to maintain its association seamlessly from one access point to another securely and with as little latency as possible. Three popular types of client roaming are: Intra-Controller Roaming: Each controller supports same-controller client roaming across access points managed by the same controller. This roaming is transparent to the client as the session is sustained, and the client continues using the same DHCP-assigned or client-assigned IP address.

Inter-Controller Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group and on the same subnet. This roaming is also transparent to the client because the session is sustained and a tunnel between controllers allows the client to continue using the same DHCP- or client-assigned IP address as long as the session remains active.

Inter-Subnet Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group on different subnets. This roaming is transparent to the client because the session is sustained and a tunnel between the controllers allows the client to continue using the same DHCP- assigned or client-assigned IP address as long as the session remains active.

Reference: https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_01100.html

Answer:

QUESTION 27

What does the LAP send when multiple WLCs respond to the CISCO_CAPWAP-CONTROLLER.localdomain hostname during the CAPWAP discovery and join process?

- A. broadcast discover request
- B. join request to all the WLCs
- C. unicast discovery request to each WLC
- D. Unicast discovery request to the first WLC that resolves the domain name

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

The AP will attempt to resolve the DNS name CISCO-CAPWAP-CONTROLLER.localdomain. When the AP is able to resolve this name to one or more IP addresses, the AP sends a unicast CAPWAP Discovery Message to the resolved IP address(es). Each WLC that receives the CAPWAP Discovery Request Message replies with a unicast CAPWAP Discovery Response to the AP.

Reference: <https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/107606-dns-wlc-config.html>

Answer:

QUESTION 28

Refer to the exhibit.

```
vlan 222
remote-span
!
vlan 223
remote-span
!
monitor session 1 source interface FastEthernet0/1 tx
monitor session 1 source interface FastEthernet0/2 rx
monitor session 1 source interface port-channel 5
monitor session 1 destination remote vlan 222
!
```

What is the result when a technician adds the monitor session 1 destination remote vlan 223 command?

- A. The RSPAN VLAN is replaced by VLAN 223
- B. RSPAN traffic is sent to VLANs 222 and 223
- C. An error is flagged for configuring two destinations
- D. RSPAN traffic is split between VLANs 222 and 223

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 29

In an SD-Access solution what is the role of a fabric edge node?

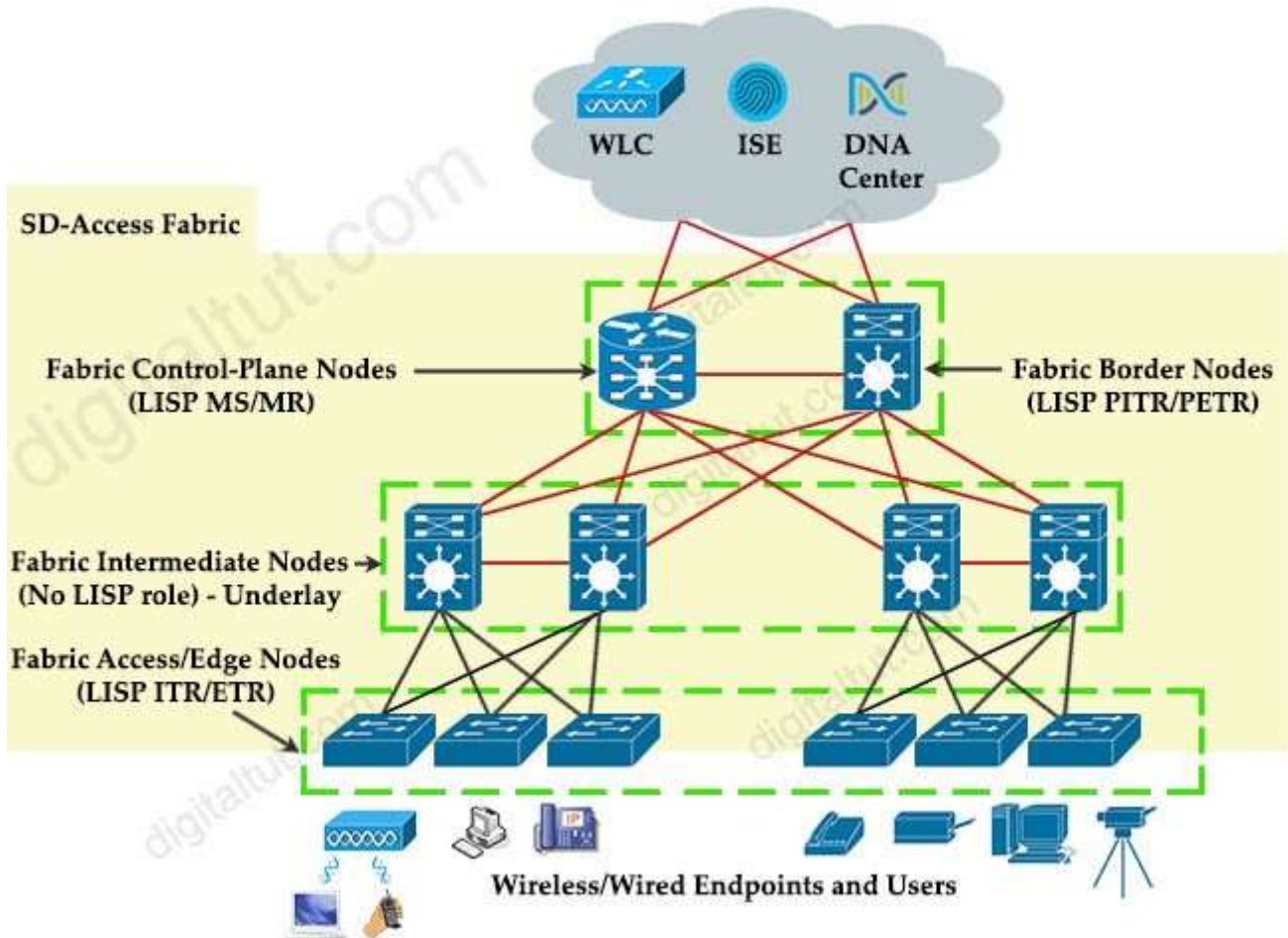
- A. to connect external Layer 3- network to the SD-Access fabric
- B. to connect wired endpoint to the SD-Access fabric
- C. to advertise fabric IP address space to external network
- D. to connect the fusion router to the SD-Access fabric

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

Explanation

+ Fabric edge node: This fabric device (for example, access or distribution layer device) connects wired endpoints to the SDA fabric.



Answer:

QUESTION 30

Refer to the exhibit.

```
access-list 1 permit 172.16.1.0 0.0.0.255  
ip nat inside source list 1 interface gigabitethernet0/0 overload
```

The inside and outside interfaces in the NAT configuration of this device have been correctly identified. What is the effect of this configuration?

- A. dynamic NAT
- B. static NAT
- C. PAT
- D. NAT64

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

Explanation

The command "ip nat inside source list 1 interface gigabitethernet0/0 overload" translates all source addresses that pass access list 1, which means 172.16.1.0/24 subnet, into an address assigned to gigabitethernet0/0 interface. Overload keyword allows to map multiple IP addresses to a single registered IP address (many-to- one) by using different ports so it is called Port Address Translation (PAT).

Answer:

QUESTION 31

Which component of the Cisco Cyber Threat Defense solution provides user and flow context analysis?

- A. Cisco Firepower and FireSIGHT
- B. Cisco Stealthwatch system
- C. Advanced Malware Protection
- D. Cisco Web Security Appliance

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

The goal of the Cyber Threat Defense solution is to introduce a design and architecture that can help facilitate the discovery, containment, and remediation of threats once they have penetrated into the network interior.

Cisco Cyber Threat Defense version 2.0 makes use of several solutions to accomplish its objectives:

* NetFlow and the Lancope StealthWatch System

Broad visibility

User and flow context analysis

Network behavior and anomaly detection

Incident response and network forensics

* Cisco FirePOWER and FireSIGHT

Real-time threat management

Deeper contextual visibility for threats bypassing the perimeters

URL control

* Advanced Malware Protection (AMP)

Endpoint control with AMP for Endpoints

Malware control with AMP for networks and content

* Content Security Appliances and Services

Cisco Web Security Appliance (WSA) and Cloud Web Security (CWS)

Dynamic threat control for web traffic

Outbound URL analysis and data transfer controls

Detection of suspicious web activity

Cisco Email Security Appliance (ESA)

Dynamic threat control for email traffic

Detection of suspicious email activity

* Cisco Identity Services Engine (ISE)

User and device identity integration with Lancope StealthWatch

Remediation policy actions using pxGrid

Reference: https://www.cisco.com/c/dam/en/us/td/docs/security/network_security/ctd/ctd2-0/design_guides/ctd_2-0_cvd_guide_jul15.pdf

Answer:

QUESTION 32

An engineer must protect their company against ransom ware attacks. Which solution allows the engineer to block the execution stage and prevent file encryption?

- A. Use Cisco AMP deployment with the Malicious Activity Protection engine enabled
- B. Use Cisco AMP deployment with the Exploit Prevention engine enabled
- C. Use Cisco Firepower and block traffic to TOR networks
- D. Use Cisco Firepower with Intrusion Policy and snort rules blocking SMB exploitation

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

Explanation

Ransomware are malicious software that locks up critical resources of the users. Ransomware uses well-established public/private key cryptography which leaves the only way of recovering the files being the payment of the ransom, or restoring files from backups.

Cisco Advanced Malware Protection (AMP) for Endpoints Malicious Activity Protection (MAP) engine defends your endpoints by monitoring the system and identifying processes that exhibit malicious activities when they execute and stops them from running. Because the MAP engine detects threats by observing the behavior of the process at run time, it can generically determine if a system is under attack by a new variant of ransomware or malware that may have eluded other security products and detection technology, such as legacy signature-based malware detection. The first release of the MAP engine targets identification, blocking, and quarantine of ransomware attacks on the endpoint.

Reference: <https://www.cisco.com/c/dam/en/us/products/collateral/security/amp-for-endpoints/white-paper-c11-740980.pdf>

QUESTION 33

Refer to the exhibit.

WLANs > Edit 'LiveDemo'

Select AAA servers below to override use of default servers on this WLAN

Radius Servers

Radius Server Overwrite interface Enabled

Interface Priority WLAN

	Authentication Servers	Accounting Servers
	<input checked="" type="checkbox"/> Enabled	<input checked="" type="checkbox"/> Enabled
Server 1	None	None
Server 2	None	None
Server 3	None	None
Server 4	None	None
Server 5	None	None
Server 6	None	None

Assuming the WLC's interfaces are not in the same subnet as the RADIUS server, which interface would the WLC use as the source for all RADIUS-related traffic?

- A. the interface specified on the WLAN configuration
- B. any interface configured on the WLC
- C. the controller management interface
- D. the controller virtual interface

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

Answer:

QUESTION 34

Which benefit is offered by a cloud infrastructure deployment but is lacking in an on-premises deployment?

- A. efficient scalability
- B. virtualization
- C. storage capacity
- D. supported systems

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 35

Wireless users report frequent disconnections from the wireless network. While troubleshooting a network engineer finds that after the user a disconnect, the connection reestablishes automatically without any input required. The engineer also notices these message logs.

AP `AP2' is down Reason: Radio channel set. 6:54:04 PM

AP `AP4' is down Reason: Radio channel set. 6:44:49 PM

AP `AP7' is down Reason: Radio channel set. 6:34:32 PM

Which action reduces the user impact?

- A. increase the dynamic channel assignment interval
- B. increase BandSelect
- C. increase the AP heartbeat timeout
- D. enable coverage hole detection

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

These message logs inform that the radio channel has been reset (and the AP must be down briefly). With dynamic channel assignment (DCA), the radios can frequently switch from one channel to another but it also makes disruption. The default DCA interval is 10 minutes, which is matched with the time of the message logs.

By increasing the DCA interval, we can reduce the number of times our users are disconnected for changing radio channels.

Answer:

QUESTION 36

Which DHCP option helps lightweight APs find the IP address of a wireless LAN controller?

- A. Option 43
- B. Option 60
- C. Option 67
- D. Option 150

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 37

A network administrator applies the following configuration to an IOS device.

```
aaa new-model
aaa authentication login default local group tacacs+
```

What is the process of password checks when a login attempt is made to the device?

- A. A TACACS+ server is checked first. If that check fail, a database is checked
- B. A TACACS+ server is checked first. If that check fail, a RADIUS server is checked. If that check fail, a local database is checked
- C. A local database is checked first. If that fails, a TACACS+server is checked, if that check fails, a RADIUS server is checked
- D. A local database is checked first. If that check fails, a TACACS+server is checked

Correct Answer: D

Section: (none)

Explanation**Explanation/Reference:**

Explanation

The "aaa authentication login default local group tacacs+" command is broken down as follows:

- + The `aaa authentication' part is simply saying we want to configure authentication settings.
 - + The `login' is stating that we want to prompt for a username/password when a connection is made to the device.
 - + The `default' means we want to apply for all login connections (such as tty, vty, console and aux). If we use this keyword, we don't need to configure anything else under tty, vty and aux lines. If we don't use this keyword then we have to specify which line(s) we want to apply the authentication feature.
 - + The `local group tacacs+' means all users are authenticated using router's local database (the first method).
- If the credentials are not found on the local database, then the TACACS+ server is used (the second method).

QUESTION 38

What is the role of the vsmart controller in a Cisco SD-WAN environment?

- A. IT performs authentication and authorization
- B. It manages the control plane.
- C. It is the centralized network management system.
- D. It manages the data plane.

Correct Answer: B

Section: (none)

Explanation**Explanation/Reference:**

Explanation

- + Control plane (vSmart) builds and maintains the network topology and make decisions on the traffic flows. The vSmart controller disseminates control plane information between WAN Edge devices, implements control plane policies and distributes data plane policies to network devices for enforcement.

Answer:

QUESTION 39

Why is an AP joining a different WLC than the one specified through option 43?

- A. The WLC is running a different software version

- B. The AP is joining a primed WLC
- C. The AP multicast traffic unable to reach the WLC through Layer 3
- D. The APs broadcast traffic is unable to reach the WLC through Layer 2

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 40

Which devices does Cisco DNA Center configure when deploying an IP-based access control policy?

- A. All devices integrating with ISE
- B. selected individual devices
- C. all devices in selected sites
- D. all wired devices

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

When you click Deploy, Cisco DNA Center requests the Cisco Identity Services Engine (Cisco ISE) to send notifications about the policy changes to the network devices.

Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3-1-0/user_guide/b_cisco_dna_center_ug_1_3_1_0/b_cisco_dna_center_ug_1_3_1_0_chapter_01011.html

0/user_guide/b_cisco_dna_center_ug_1_3_1_0/b_cisco_dna_center_ug_1_3_1_0_chapter_01011.html

Answer:

QUESTION 41

Which method of account authentication does OAuth 2.0 within REST APIs?

- A. username/role combination
- B. access tokens
- C. cookie authentication
- D. basic signature workflow

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

The most common implementations of OAuth (OAuth 2.0) use one or both of these tokens:

+ access token: sent like an API key, it allows the application to access a user's data; optionally, access tokens can expire.

+ refresh token: optionally part of an OAuth flow, refresh tokens retrieve a new access token if they have expired. OAuth2 combines Authentication and Authorization to allow more sophisticated scope and validity control.

Answer:

QUESTION 42

What does the Cisco DNA Center use to enable the delivery of applications through a network and to yield analytics for innovation?

- A. process adapters

- B. Command Runner
- C. intent-based APIs
- D. domain adapters

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

The Cisco DNA Center open platform for intent-based networking provides 360-degree extensibility across multiple components, including:

+ Intent-based APIs leverage the controller to enable business and IT applications to deliver intent to the network and to reap network analytics and insights for IT and business innovation. These enable APIs that allow Cisco DNA Center to receive input from a variety of sources, both internal to IT and from line-of-business applications, related to application policy, provisioning, software image management, and assurance.

...

Reference: <https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/dna-center/nb-06-dna-cent-plat-sol-over-cte-en.html>

Answer:

QUESTION 43

Which action is a function of VTEP in VXLAN?

- A. tunneling traffic from IPv6 to IPv4 VXLANs
- B. allowing encrypted communication on the local VXLAN Ethernet segment
- C. encapsulating and de-encapsulating VXLAN Ethernet frames
- D. tunneling traffic from IPv4 to IPv6 VXLANs

Correct Answer: C

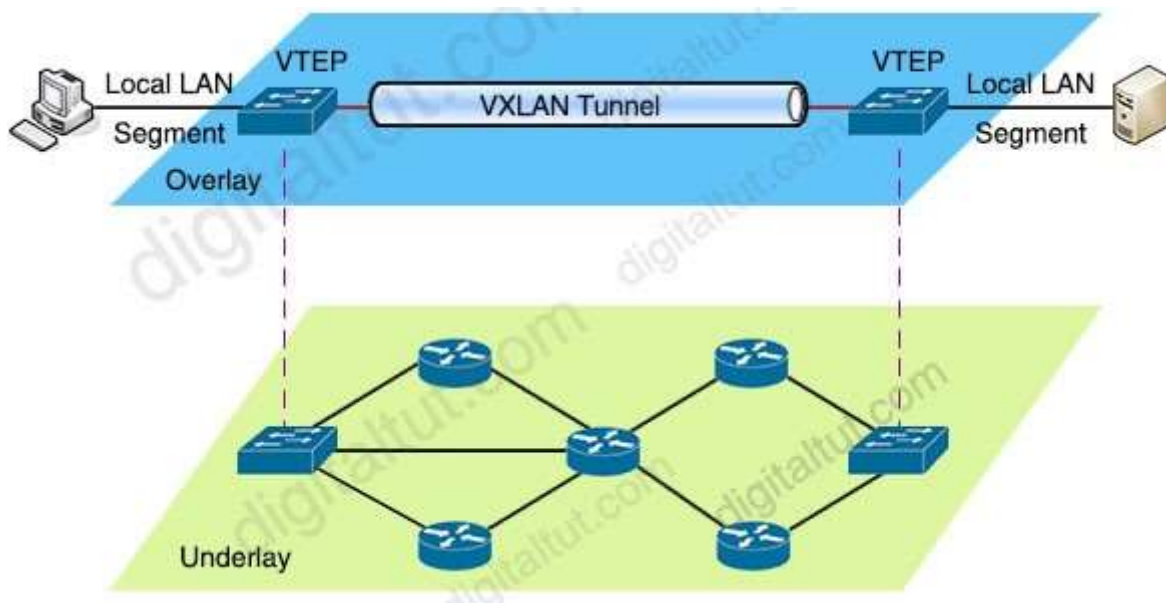
Section: (none)

Explanation

Explanation/Reference:

Explanation

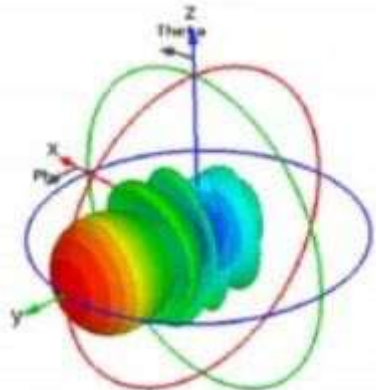
VTEPs connect between Overlay and Underlay network and they are responsible for encapsulating frame into VXLAN packets to send across IP network (Underlay) then decapsulating when the packets leaves the VXLAN tunnel.



Answer:

QUESTION 44

Which type of antenna does the radiation pattern represent?



Antenna 3D Radiation Pattern

- A. Yagi
- B. multidirectional
- C. directional patch
- D. omnidirectional

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

A Yagi antenna is formed by driving a simple antenna, typically a dipole or dipole-like antenna, and shaping the beam using a well-chosen series of non-driven elements whose length and spacing are tightly controlled.



Reference: https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/prod_white_paper0900aecd806a1a3e.html

===== New Questions (added on 1st-July-2020) =====

Answer:

QUESTION 45

Drag and drop the REST API authentication method from the left to the description on the right.

HTTP basic authentication	public API resource
token-based authentication	username and password in an encoded string
secure vault	API-dependent secret
OAuth	authorization through identity provider

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

- + public API resource: secure vault
- + username and password in an encoded string: HTTP basic authentication
- + API-dependent secret: OAuth
- + authorization through identity provider: token-based authentication

Explanation

When Secure Vault is not in use, all information stored in its container is encrypted. When a user wants to use the files and notes stored within the app, they have to first decrypt the database. This happens by filling in a previously determined Security Lock which could be a PIN or a password of the user's choosing.

When a user leaves the app, it automatically encrypts everything again. This way all data stored in Secure Vault is decrypted only while a user is actively using the app. In all other instances, it remains locked to any attacker, malware or spyware trying to access the data.

How token-based authentication works: Users log in to a system and once authenticated are provided with a token to access other services without having to enter their username and password multiple times. In short, token-based authentication adds a second layer of security to application, network, or service access.

OAuth is an open standard for authorization used by many APIs and modern applications. The simplest example of OAuth is when you go to log onto a website and it offers one or more opportunities to log on using another website's/service's logon. You then click on the button linked to the other website, the other website authenticates you, and the website you were originally connecting to logs you on itself afterward using permission gained from the second website.

Answer:

QUESTION 46

Which characteristic distinguishes Ansible from Chef?

- A. Ansible lacks redundancy support for the master server. Chef runs two masters in an active/active mode
- B. Ansible uses Ruby to manage configurations. Chef uses YAML to manage configurations
- C. Ansible pushes the configuration to the client. Chef client pulls the configuration from the server
- D. The Ansible server can run on Linux, Unix or Windows. The Chef server must run on Linux or Unix

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Ansible works by connecting to your nodes and pushing out small programs, called "Ansible modules" to them.

These programs are written to be resource models of the desired state of the system. Ansible then executes these modules (over SSH by default), and removes them when finished.

Chef is a much older, mature solution to configuration management. Unlike Ansible, it does require an installation of an agent on each server, named chef-client. Also, unlike Ansible, it has a Chef server that each client pulls configuration from.

QUESTION 47

Drag and drop the QoS mechanisms from the left to the correct descriptions on the right.

DSCP	bandwidth management technique which delays datagrams
policy map	mechanism to create a scheduler for packets prior to forwarding
shaping	portion of the IP header used to classify packets
service policy	mechanism to apply a QoS policy to an interface
policing	tool to enforce rate-limiting on ingress/egress
CoS	portion of the 802.1Q header used to classify packets

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

- + bandwidth management technique which delays datagrams: shaping
- + mechanism to create a scheduler for packets prior to forwarding: policy map
- + portion of the IP header used to classify packets: DSCP
- + mechanism to apply a QoS policy to an interface: service policy
- + tool to enforce rate-limiting on ingress/egress: policing
- + portion of the 802.1Q header used to classify packets: CoS

Explanation

To attach a policy map to an input interface, a virtual circuit (VC), an output interface, or a VC that will be used as the service policy for the interface or VC, use the service-policy command in the appropriate configuration mode.

Class of Service (CoS) is a 3 bit field within an Ethernet frame header when we use 802.1q which supports virtual LANs on an Ethernet network. This field specifies a priority value which is between 0 and 63 inclusive which can be used in the Quality of Service (QoS) to differentiate traffic.

The Differentiated Services Code Point (DSCP) is a 6-bit field in the IP header for the classification of packets. Differentiated Services is a technique which is used to classify and manage network traffic and it helps to provide QoS for modern Internet networks. It can provide services to all kinds of networks.

Traffic policing is also known as rate limiting as it propagates bursts. When the traffic rate reaches the configured maximum rate (or committed information rate), excess traffic is dropped (or remarked). The result is an output rate that appears as a saw-tooth with crests and troughs.

Traffic shaping retains excess packets in a queue and then schedules the excess for later transmission over increments of time -> It causes delay.

Answer:

QUESTION 48

In a Cisco SD-WAN solution, how is the health of a data plane tunnel monitored?

- A. with IP SLA
- B. ARP probing
- C. using BFD
- D. with OMP

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

The BFD (Bidirectional Forwarding Detection) is a protocol that detects link failures as part of the Cisco SD-WAN (Viptela) high availability solution, is enabled by default on all vEdge routers, and you cannot disable it.

Answer:

QUESTION 49

What function does VXLAN perform in an SD-Access deployment?

- A. policy plane forwarding
- B. control plane forwarding
- C. data plane forwarding
- D. systems management and orchestration

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 50

A server running Linux is providing support for virtual machines along with DNS and DHCP services for a small business. Which technology does this represent?

- A. container
- B. Type 1 hypervisor
- C. hardware pass-through
- D. Type 2 hypervisor

Correct Answer: D

Section: (none)

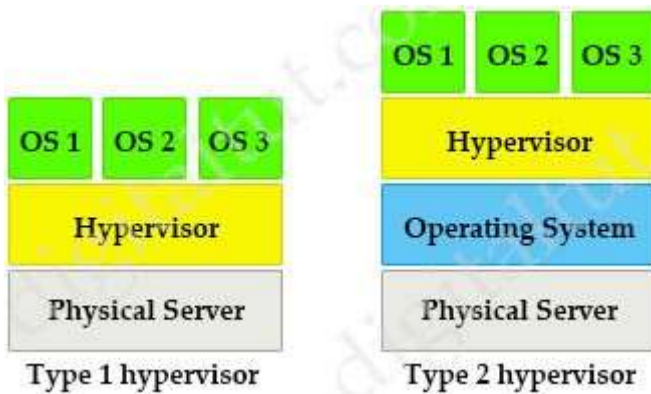
Explanation

Explanation/Reference:

Explanation

In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management

console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).



Answer:

QUESTION 51

What is the primary effect of the spanning-tree portfast command?

- A. It enables BPDU messages
- B. It minimizes spanning-tree convergence time
- C. It immediately puts the port into the forwarding state when the switch is reloaded
- D. It immediately enables the port in the listening state

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

The purpose of Port Fast is to minimize the time interfaces must wait for spanning-tree to converge, it is effective only when used on interfaces connected to end stations.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3560/software/release/12-2_55_se/configuration/guide/3560_scg/swstpopt.html

===== New Questions (added on 5th-July-2020) =====

Answer:

QUESTION 52

What is calculated using the numerical values of the transmitter power level, cable loss and antenna gain?

- A. SNR
- B. RSSI
- C. dBi
- D. EIRP

Correct Answer: D

Section: (none)

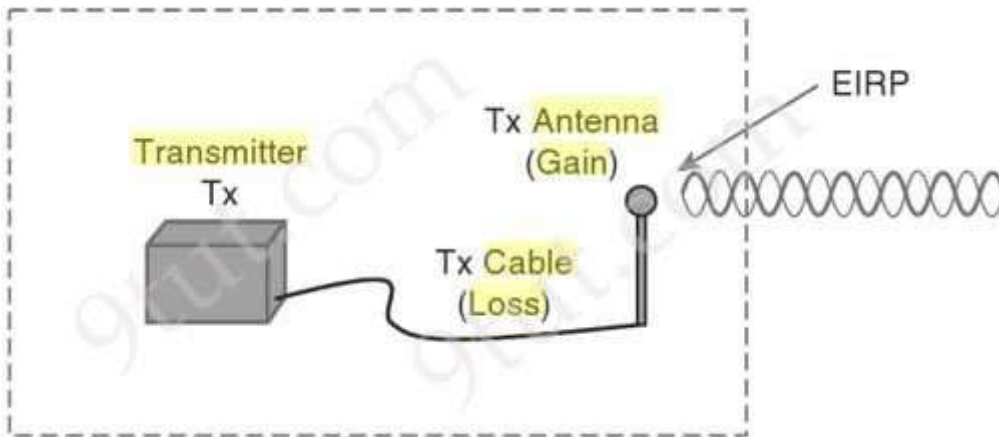
Explanation

Explanation/Reference:

Explanation

Once you know the complete combination of transmitter power level, the length of cable, and the antenna gain, you can figure out the actual power level that will be radiated from the antenna. This is known as the effective isotropic radiated power (EIRP), measured in dBm.

EIRP is a very important parameter because it is regulated by governmental agencies in most countries. In those cases, a system cannot radiate signals higher than a maximum allowable EIRP. To find the EIRP of a system, simply add the transmitter power level to the antenna gain and subtract the cable loss.



$EIRP = Tx\ Power - Tx\ Cable + Tx\ Antenna$

Suppose a transmitter is configured for a power level of 10 dBm (10 mW). A cable with 5-dB loss connects the transmitter to an antenna with an 8-dBi gain. The resulting EIRP of the system is 10 dBm - 5 dB + 8 dBi, or 13 dBm.

You might notice that the EIRP is made up of decibel-milliwatt (dBm), dB relative to an isotropic antenna (dBi), and decibel (dB) values. Even though the units appear to be different, you can safely combine them because they are all in the dB "domain".

Reference: CCNA Wireless 640-722 Official Cert Guide

Answer:

QUESTION 53

Which two security features are available when implementing NTP? (Choose two)

- A. encrypted authentication mechanism
- B. dock offset authentication
- C. broadcast association mode
- D. access list based restriction scheme
- E. symmetric server passwords

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

Explanation

The time kept on a machine is a critical resource and it is strongly recommend that you use the security features of NTP to avoid the accidental or malicious setting of incorrect time. The two security features available are an access list-based restriction scheme and an encrypted authentication mechanism.

Reference: <https://www.cisco.com/c/en/us/support/docs/availability/high-availability/19643-ntp.html>

Answer:

QUESTION 54

Refer to the exhibit.



An engineer reconfigures the port-channel between SW1 and SW2 from an access port to a trunk and immediately notices this error in SW1's log.

%PM-SP-4-ERR_DISABLE: bpduguard error detected on Gi0/0, putting Gi0/0 in err-disable state.

Which command set resolves this error?

- A. Sw1(config)# interface G0/0
Sw1(config-if)# no spanning-tree bpduguard enable
Sw1(config-if)# shut
Sw1(config-if)# no shut
- B. Sw1(config)# interface G0/0
Sw1(config-if)# spanning-tree bpduguard enable
Sw1(config-if)# shut
Sw1(config-if)# no shut
- C. Sw1(config)# interface G0/1
Sw1(config-if)# spanning-tree bpduguard enable
Sw1(config-if)# shut
Sw1(config-if)# no shut
- D. Sw1(config)# interface G0/0
Sw1(config-if)# no spanning-tree bpduguard enable
Sw1(config-if)# shut
Sw1(config-if)# no shut

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
 Answer:

QUESTION 55



Company policy restricts VLAN 10 to be allowed only on SW1 and SW2. All other VLANs can be on all three switches. An administrator has noticed that VLAN 10 has propagated to SW3. Which configuration corrects the issue?

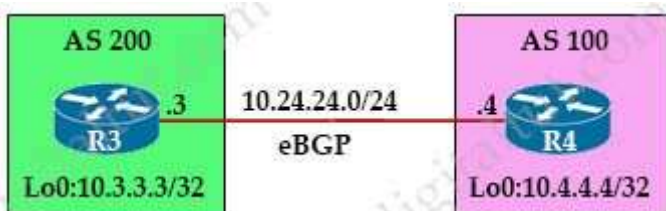
- A. SW2(config)#interface gi1/2
SW2(config)#switchport trunk allowed vlan 10
- B. SW1(config)#interface gi1/1
SW1(config)#switchport trunk allowed vlan 1-9,11-4094
- C. SW2(config)#interface gi1/1
SW2(config)#switchport trunk allowed vlan 10
- D. SW2(config)#interface gi1/2
SW2(config)#switchport trunk allowed vlan 1-9,11-4094

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
 ===== New Questions (added on 14th-July-2020) =====

Answer:

QUESTION 56
 Refer to the exhibit.



An engineer must establish eBGP peering between router R3 and router R4. Both routers should use their loopback interfaces as the BGP router ID. Which configuration set accomplishes this task?

- A. R3(config)#router bgp 200
R3(config-router)#neighbor 10.24.24.4 remote-as 100
R3(config-router)#bgp router-id 10.3.3.3
R4(config)#router bgp 100
R4(config-router)#neighbor 10.24.24.3 remote-as 200
R4(config-router)#bgp router-id 10.4.4.4
- B. R3(config)#router bgp 200
R3(config-router)#neighbor 10.4.4.4 remote-as 100
R3(config-router)#neighbor 10.4.4.4 update-source loopback0
R4(config)#router bgp 100
R4(config-router)#neighbor 10.3.3.3 remote-as 200
R4(config-router)#neighbor 10.3.3.3 update-source loopback0
- C. R3(config)#router bgp 200
R3(config-router)#neighbor 10.24.24.4 remote-as 100
R3(config-router)#neighbor 10.24.24.4 update-source loopback0
R4(config)#router bgp 100
R4(config-router)#neighbor 10.24.24.3 remote-as 200
R4(config-router)#neighbor 10.24.24.3 update-source loopback0

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 57

Refer to the exhibit.



```
R1(config)# ip nat inside source static 10.70.5.1 10.45.1.7
```

A network architect has partially configured static NAT. which commands should be asked to complete the configuration?

- A. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat outside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat inside
- B. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat outside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat inside
- C. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat inside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat outside
- D. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat inside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat outside

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Answer:

QUESTION 58

What is the result of applying this access control list?

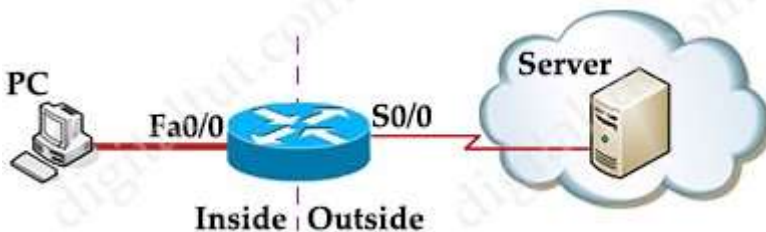
```
ip access-list extended STATEFUL
10 permit tcp any any established
20 deny ip any any
```

- A. TCP traffic with the DF bit set is allowed
- B. TCP traffic with the SYN bit set is allowed
- C. TCP traffic with the ACK bit set is allowed
- D. TCP traffic with the URG bit set is allowed

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation

The established keyword is only applicable to TCP access list entries to match TCP segments that have the ACK and/or RST control bit set (regardless of the source and destination ports), which assumes that a TCP connection has already been established in one direction only. Let's see an example below:



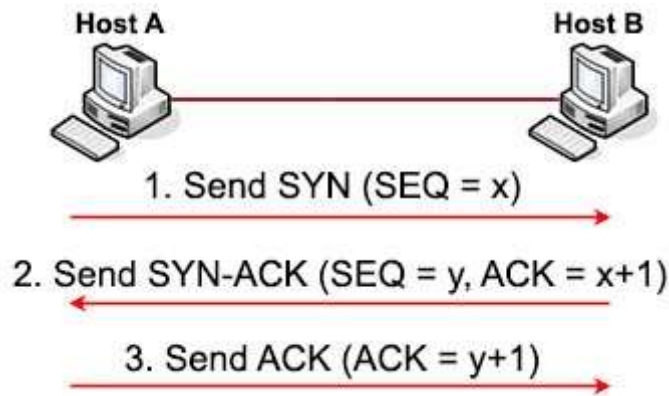
Suppose you only want to allow the hosts inside your company to telnet to an outside server but not vice versa, you can simply use an "established" access-list like this:

```
access-list 100 permit tcp any any established
access-list 101 permit tcp any any eq telnet
```

```
!
interface S0/0
ip access-group 100 in
ip access-group 101 out
```

Note:

Suppose host A wants to start communicating with host B using TCP. Before they can send real data, a three-way handshake must be established first. Let's see how this process takes place:



1. First host A will send a SYN message (a TCP segment with SYN flag set to 1, SYN is short for SYNchronize) to indicate it wants to setup a connection with host B. This message includes a sequence (SEQ) number for tracking purpose. This sequence number can be any 32-bit number (range from 0 to 232) so we use "x" to represent it.

2. After receiving SYN message from host A, host B replies with SYN-ACK message (some books may call it "SYN/ACK" or "SYN, ACK" message. ACK is short for ACKnowledge). This message includes a SYN sequence number and an ACK number:

+ SYN sequence number (let's called it "y") is a random number and does not have any relationship with Host A's SYN SEQ number.

+ ACK number is the next number of Host A's SYN sequence number it received, so we represent it with "x+1".

It means "I received your part. Now send me the next part (x + 1)".

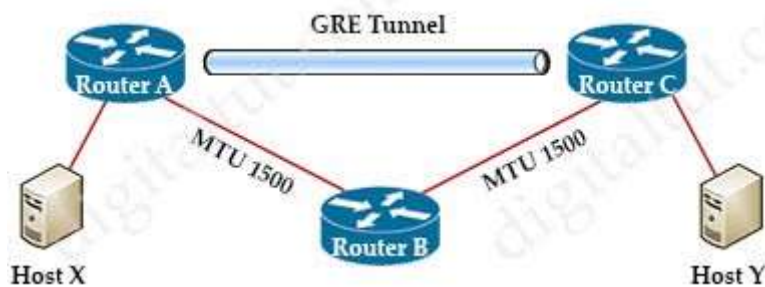
The SYN-ACK message indicates host B accepts to talk to host A (via ACK part). And ask if host A still wants to talk to it as well (via SYN part).

3. After Host A received the SYN-ACK message from host B, it sends an ACK message with ACK number "y+1" to host B. This confirms host A still wants to talk to host B.

Answer:

QUESTION 59

Refer to exhibit.



MTU has been configured on the underlying physical topology, and no MTU command has been configured on the tunnel interfaces. What happens when a 1500-byte IPv4 packet traverses the GRE tunnel from host X to host Y, assuming the DF bit is cleared?

- A. The packet arrives on router C without fragmentation.
- B. The packet is discarded on router A
- C. The packet is discarded on router B
- D. The packet arrives on router C fragmented.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

If the DF bit is set to clear (not set), routers can fragment packets regardless of the original DF bit setting.

Whenever we create tunnel interfaces, the GRE IP MTU is automatically configured 24 bytes less than the outbound physical interface MTU. Ethernet interfaces have an MTU value of 1500 bytes so tunnel interfaces by default will have 1476 bytes MTU, which is 24 bytes less the physical interface. The process of sending a 1500- byte IPv4 packet (with DF bit set to clear) is shown below:

1. The sender sends a 1500-byte packet (20 byte IPv4 header + 1480 bytes of TCP payload).
2. Since the MTU of the GRE tunnel is 1476, the 1500-byte packet is broken into two IPv4 fragments of 1476 and 44 bytes, each in anticipation of the additional 24 bytes of GRE header.
3. The 24 bytes of GRE header is added to each IPv4 fragment. Now the fragments are 1500 (1476 + 24) and 68 (44 + 24) bytes each.
4. The GRE + IPv4 packets that contain the two IPv4 fragments are forwarded to the GRE tunnel peer router.
5. The GRE tunnel peer router removes the GRE headers from the two packets.
6. This router forwards the two packets to the destination host.
7. The destination host reassembles the IPv4 fragments back into the original IPv4 datagram.

Reference: <https://www.cisco.com/c/en/us/support/docs/ip/generic-routing-encapsulation-gre/25885-pmtud-ipfrag.html> (Scenario 5)

Answer:

QUESTION 60

What is used to measure the total output energy of a Wi-Fi device?

- A. dBi
- B. EIRP
- C. mW
- D. dBm

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

Output power is measured in mW (milliwatts). A milliwatt is equal to one thousandth (10⁻³) of a watt.

===== New Questions (added on 17th-July-2020) =====

Answer:

QUESTION 61

Drag and drop the characteristics from the left onto the correct infrastructure deployment types on the right.

significant initial investment but lower reoccurring costs	On Premises
pay-as-you-go model	
physical location of data can be definded in contract with provider	Cloud
very scalable and fast delivery of changes in scale	
company has control over the physical security of equipment	

- A.
- B.

- C.
- D.

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

On Premises:

- + significant initial investment but lower reoccurring costs
- + company has control over the physical security of equipment

Cloud:

- + pay-as-you-go model
- + very scalable and fast delivery of changes in scale
- + physical location of data can be definded in contract with provider



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- + First 20 questions
- +

Answer:

QUESTION 62

Which two LISP infrastructure elements are needed to support LISP to non-LISP internetworking? (Choose two)

- A. PETR
- B. PITR
- C. MR
- D. MS
- E. ALT

Correct Answer: AC

Section: (none)

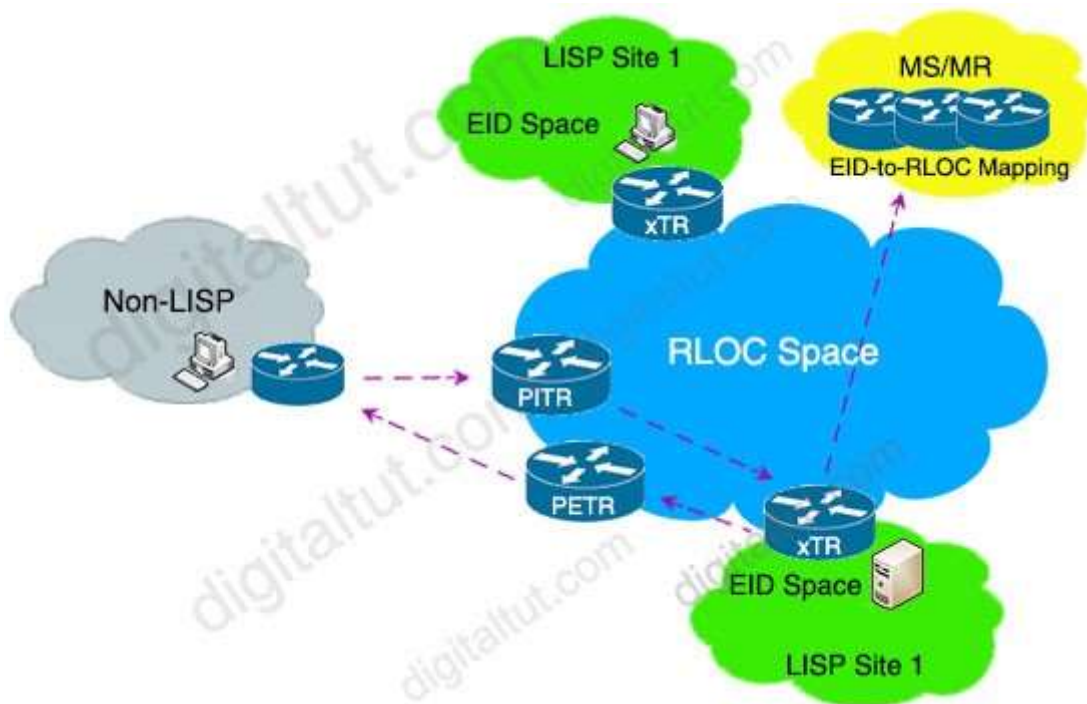
Explanation

Explanation/Reference:

Explanation

In this question we suppose that we only need to send packets from LISP site to non-LISP site successfully. We don't care about the way back (if we care about the way back then all PETR, PITR, MS & MR are needed).

Proxy Egress Tunnel Router (PETR): A LISP device that de-encapsulates packets from LISP sites to deliver them to non-LISP sites.



When the xTR in LISP Site 1 want to sends traffic to Non-LISP site, the ITR (not PETR) needs a Map Resolver (MR) to send Map Request to. When the ITR (the xTR in LISP Site 1 in the figure above) receives negative MAP-Reply packet from MR, it caches that prefix and map it to the PETR.

Good reference: <https://netmindblog.com/2019/12/04/lisp-locator-id-separation-protocol-part-ii-pxtr/>

Answer:

QUESTION 63

Which statement about dynamic GRE between a headend router and a remote router is true?

- A. The headend router learns the IP address of the remote end router statically
- B. A GRE tunnel without an IP address has a status of administratively down
- C. GRE tunnels can be established when the remote router has a dynamic IP address
- D. The remote router initiates the tunnel connection

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 64

Which two statements about AAA authentication are true? (Choose two)

- A. RADIUS authentication queries the router's local username database
- B. TACACS+ authentication uses an RSA server to authenticate users
- C. Local user names are case-insensitive
- D. Local authentication is maintained on the router
- E. KRB5 authentication disables user access when an incorrect password is entered

Correct Answer: DE

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 65

Which action is performed by Link Management Protocol in a Cisco stackwise virtual domain?

- A. It discovers the stackwise domain and brings up SVL interfaces
- B. It rejects any unidirectional link traffic forwarding
- C. It determines if the hardware is compatible to form the stackwise virtual domain
- D. It determines which switch becomes active or standby

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

The Link Management Protocol (LMP) performs the following functions:

- + Verifies link integrity by establishing bidirectional traffic forwarding, and rejects any unidirectional links + Exchanges periodic hellos to monitor and maintain the health of the links
- + Negotiates the version of StackWise Virtual header between the switches StackWise Virtual link role resolution Reference: <https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9000/nb-06-cat-9k-stack-wp-cte-en.html>

Answer:

QUESTION 66

Which two actions provide controlled Layer 2 network connectivity between virtual machines running on the same hypervisor? (Choose two)

- A. Use a single trunk link to an external Layer2 switch
- B. Use a virtual switch provided by the hypervisor
- C. Use VXLAN fabric after installing VXLAN tunnelling drivers on the virtual machines
- D. Use a single routed link to an external router on stick
- E. Use a virtual switch running as a separate virtual machine

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 67

How does SSO work with HSRP to minimize network disruptions?

- A. It enables HSRP to elect another switch in the group as the active HSRP switch
- B. It ensures fast failover in the case of link failure
- C. It enables data forwarding along known routes following a switchover, while the routing protocol reconverges
- D. It enables HSRP to failover to the standby RP on the same device

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

SSO HSRP alters the behavior of HSRP when a device with redundant Route Processors (RPs) is configured for stateful switchover (SSO) redundancy mode. When an RP is active and the other RP is standby, SSO enables the standby RP to take over if the active RP fails.

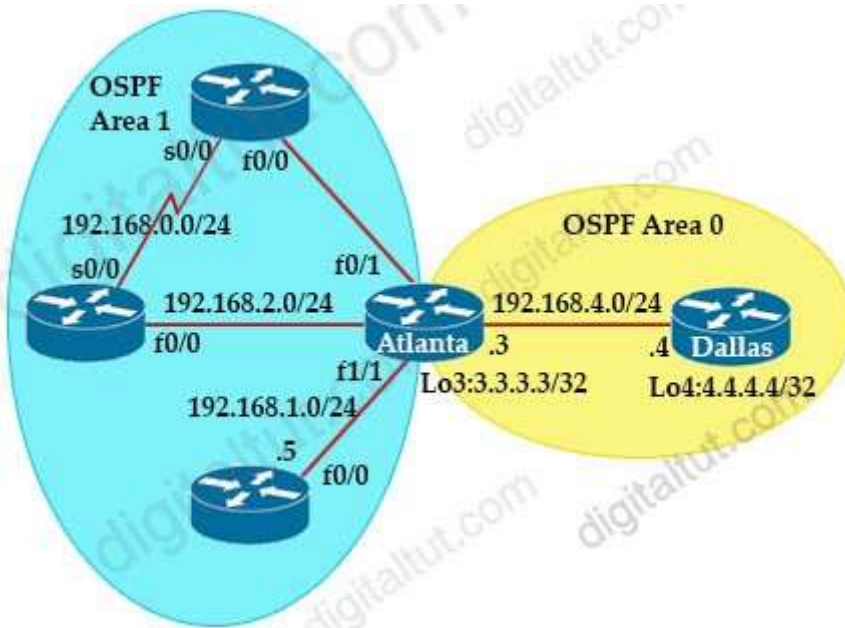
The SSO HSRP feature enables the Cisco IOS HSRP subsystem software to detect that a standby RP is installed and the system is configured in SSO redundancy mode. Further, if the active RP fails, no change occurs to the HSRP group itself and traffic continues to be forwarded through the current active gateway device.

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp_fhrp/configuration/15-s/fhp-15-s-book/fhp-hsrp-ss0.html

Answer:

QUESTION 68

Refer to the exhibit.



Dallas#show ip route ospf

```

3.0.0.0/32 i subnetted, 1 subnets
O   3.3.3.3 [110/40001] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.0.0/24 [110/145535] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.1.0/24 [110/80000] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.2.0/24 [110/80000] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.3.0/24 [110/44000] via 192.168.4.3, 00:33:32, FastEthernet0/0
  
```

Which command when applied to the Atlanta router reduces type 3 LSA flooding into the backbone area and summarizes the inter- area routes on the Dallas router?

- A. Atlanta(config-route)#area 0 range 192.168.0.0 255.255.252.0
- B. Atlanta(config-route)#area 1 range 192.168.0.0 255.255.252.0
- C. Atlanta(config-route)#area 0 range 192.168.0.0 255.255.248.0
- D. Atlanta(config-route)#area 1 range 192.168.0.0 255.255.248.0

Correct Answer: B

Section: (none)

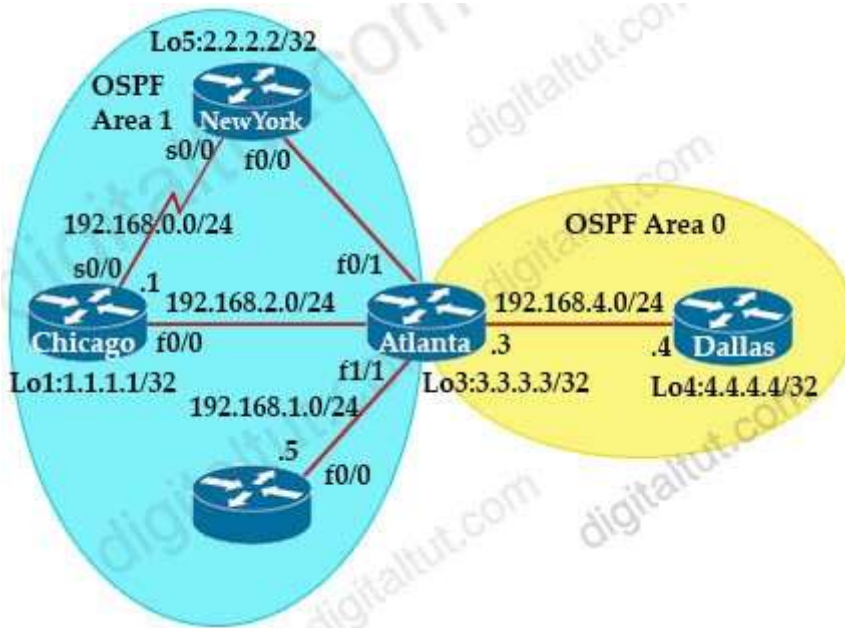
Explanation

Explanation/Reference:

Answer:

QUESTION 69

Refer the exhibit.



```
Chicago#show ip ospf nei
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
3.3.3.3	1	FULL/BDR	00:00:35	192.168.2.3	FastEthernet0/0
2.2.2.2	0	FULL/ -	00:00:35	192.168.0.2	Serial10/0

```
Chicago#show ip ospf int bri
```

Interface	PID	Area	IP Address/Mask	Cost	State	Nbrs	F/C
Fa0/0	1	1	192.168.2.1/24	40444	DR	1/1	
Se0/0	1	1	192.168.0.1/24	65535	P2P	1/1	

Which router is the designated router on the segment 192.168.0.0/24?

- A. Router Chicago because it has a lower router ID
- B. Router NewYork because it has a higher router ID
- C. This segment has no designated router because it is a nonbroadcast network type.
- D. This segment has no designated router because it is a p2p network type.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 70

An engineer must configure interface GigabitEthernet0/0 for VRRP group 10. When the router has the highest priority in the group, it must assume the master role. Which command set must be added to the initial configuration to accomplish this task?

Initial Configuration

```
interface GigabitEthernet0/0
description to IDF
ip address 172.16.13.2 255.255.255.0
```

- A. vrrp 10 ip 172.16.13.254
vrrp 10 preempt

- B. standby 10 ip 172.16.13.254
standby 10 priority 120
- C. vrrp group 10 ip 172.16.13.254 255.255.255.0
vrrp group 10 priority 120
- D. standby 10 ip 172.16.13.254 255.255.255.0
standby 10 preempt

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

In fact, VRRP has the preemption enabled by default so we don't need the "vrrp 10 preempt" command. The default priority is 100 so we don't need to configure it either. But notice that the correct command to configure the virtual IP address for the group is "vrrp 10 ip {ip-address}" (not "vrrp group 10 ip ...") and this command does not include a subnet mask.

Answer:

QUESTION 71

Drag and drop the characteristics from the left onto the infrastructure types on the right.

slow upgrade lifecycle	On-Premises Infrastructure
low capital expenditure	
provider maintains the infrastructure	
high capital expenditure	
enterprise owns the hardware	Cloud-Hosted Infrastructure
fast upgrade lifecycle	

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

On-Premises Infrastructure:

- + slow upgrade lifecycle
- + high capital expenditure
- + enterprise owns the hardware

Cloud-Hosted Infrastructure:

- + low capital expenditure

- + provider maintains the infrastructure
- + fast upgrade lifecycle

Answer:

QUESTION 72

Drag and drop the threat defense solutions from the left onto their descriptions on the right.

StealWatch	provides IPS/IDS capabilities
ESA	provides malware protection on endpoints
AMP4E	protects against email threat vector
Umbrella	performs security analytics by collecting network flows
FTD	provides DNS protection

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

- + StealWatch: performs security analytics by collecting network flows
- + ESA: protects against email threat vector
- + AMP4E: provides malware protection on endpoints
- + Umbrella: provides DNS protection
- + FTD: provides IPS/IDS capabilities

Explanation

- + StealWatch: performs security analytics by collecting network flows via NetFlow + ESA: email security solution which protects against email threats like ransomware, business email compromise, phishing, whaling, and many other email-driven attacks
- + AMP for Endpoints (AMP4E): provides malware protection on endpoints
- + Umbrella: provides DNS protection by blocking malicious destinations using DNS + Firepower Threat Defense (FTD): provides a comprehensive suite of security features such as firewall capabilities, monitoring, alerts, Intrusion Detection System (IDS) and Intrusion Prevention System (IPS).

Answer:

QUESTION 73

Refer to the exhibit. An engineer configures CoPP and enters the show command to verify the implementation. What is the result of the configuration?

```

Router2#show policy-map control-plane

Control Plane
Service-policy input:CISCO
Class-map:CISCO (match-all)
 20 packets, 11280 bytes
 5 minute offered rate 0 bps, drop rate 0 bps
Match:access-group 120
police:
 8000 bps, 1500 limit, 1500 extended limit
 conformed 15 packets, 6210 bytes; action:transmit
 exceeded 5 packets, 5070 bytes; action:drop
 violated 0 packets, 0 bytes; action:drop
 conformed 0 bps, exceed 0 bps, violate 0 bps
Class-map:class-default (match-any)
105325 packets, 11415151 bytes
 5 minute offered rate 0 bps, drop rate 0 bps
Match:any

```

- A. All traffic will be policed based on access-list 120
- B. If traffic exceeds the specified rate, it will be transmitted and remarked
- C. Class-default traffic will be dropped
- D. ICMP will be denied based on this configuration

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 74

You are configuring a controller that runs Cisco IOS XE by using the CLI. Which three configuration options are used for 802.11w Protected Management Frames? (Choose three)

- A. mandatory
- B. association-comeback
- C. SA teardown protection
- D. saquery-retry-time
- E. enable
- F. comeback-time

Correct Answer: ABD

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 75

Which technology is used to provide Layer 2 and Layer 3 logical networks in the Cisco SD-Access architecture?

- A. underlay network
- B. overlay network
- C. VPN routing/forwarding

D. easy virtual network

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

An overlay network creates a logical topology used to virtually connect devices that are built over an arbitrary physical underlay topology.

An overlay network is created on top of the underlay network through virtualization (virtual networks). The data plane traffic and control plane signaling are contained within each virtualized network, maintaining isolation among the networks and an independence from the underlay network.

SD-Access allows for the extension of Layer 2 and Layer 3 connectivity across the overlay through the services provided by through LISP.

Reference: <https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html>

Answer:

QUESTION 76

An engineer uses the Design workflow to create a new network infrastructure in Cisco DNA Center. How is the physical network device hierarchy structured?

- A. by location
- B. by role
- C. by organization
- D. by hostname naming convention

Correct Answer: A

Section: (none)

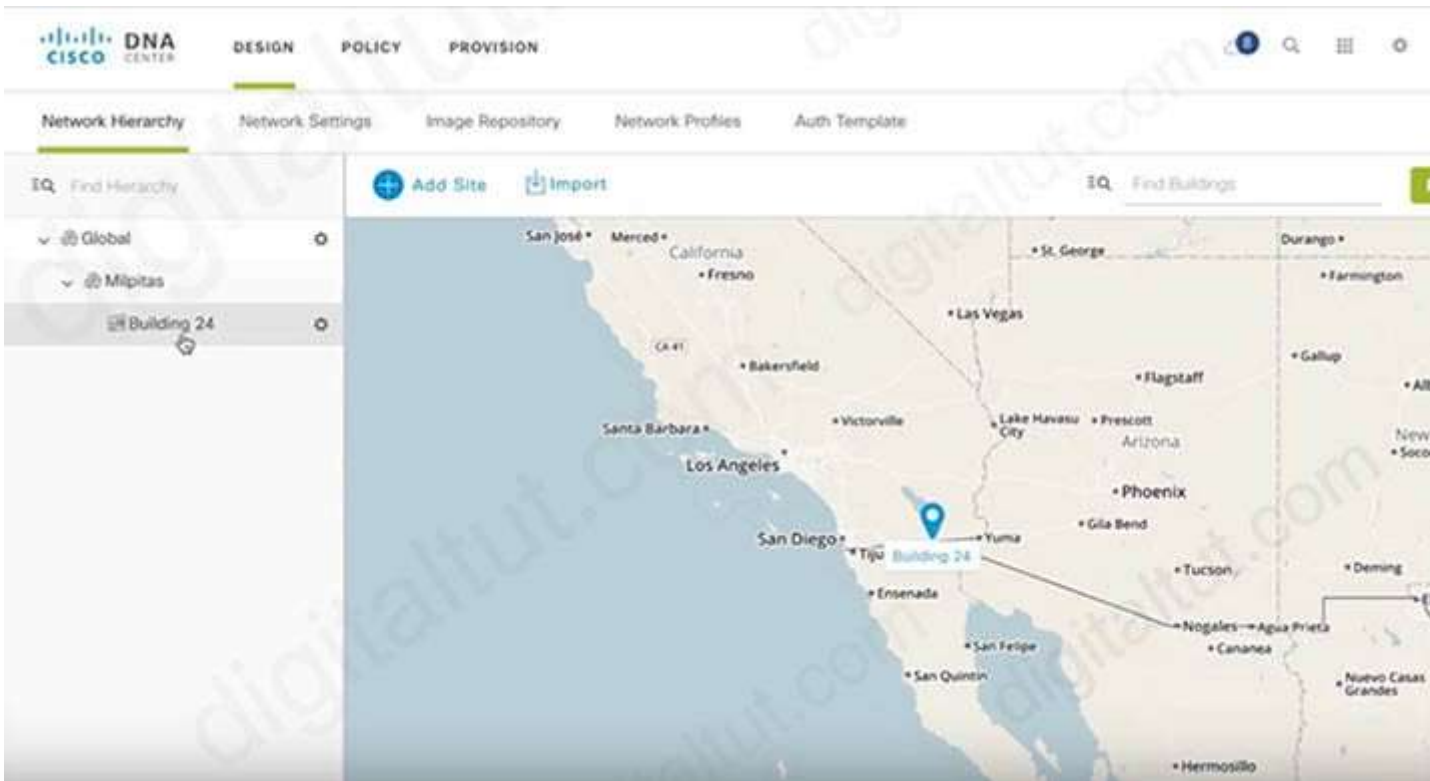
Explanation

Explanation/Reference:

Explanation

You can create a network hierarchy that represents your network's geographical locations. Your network hierarchy can contain sites, which in turn contain buildings and areas. You can create site and building IDs to easily identify where to apply design settings or configurations later.

Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-2-5/user_guide/b_dnac_ug_1_2_5/b_dnac_ug_1_2_4_chapter_0110.html



Answer:

QUESTION 77

Refer to the exhibit.

```
(WLC) >show interface summary
```

```
Interface Name          Vlan Id
-----
deadnet                 999
users1                  14
users2                  15
users3                  16
```

```
(WLC) >show wlan 1
```

```
WLAN Identifier . . . . . 1
Network Name (SSID) . . . . . wlan1
AAA Policy Override . . . . . Enabled
Interface . . . . . deadnet
FlexConnect Local Switching . . . . . Enabled
FlexConnect Central Association . . . . . Disabled
flexconnect Central Dhcp Flag . . . . . Disabled
flexconnect nat-pat Flag . . . . . Disabled
flexconnect DNS Override Flag . . . . . Disabled
flexconnect PPPoE pass-through . . . . . Disabled
flexconnect local-switching IP-source-guar . . . . . Disabled
FlexConnect Vlan based Central Switching . . . . . Enabled
FlexConnect Local Authentication . . . . . Disabled
FlexConnect Learn IP Address . . . . . Enabled
```

```
(WLC) >show ap config general FlexAP1
```

```
AP Mode . . . . . FlexConnect
FlexConnect Vlan mode : . . . . . Enabled
Native ID : . . . . . 1
WLAN 1 : . . . . . 10 (AP-Specific)
FlexConnect VLAN ACL Mappings
Vlan : . . . . . 10
Ingress ACL : . . . . . None
Egress ACL : . . . . . None
VLAN with least priority : . . . . . 13
FlexConnect Group . . . . . flexgroup1
Group VLAN ACL Mappings
Vlan : . . . . . 11
Ingress ACL : . . . . . None
Egress ACL : . . . . . None
Vlan : . . . . . 12
```

A wireless client is connecting to FlexAP1 which is currently working standalone mode. The AAA authentication process is returning the following AVPs:

```
Tunnel-Private-Group-Id(81): 15
Tunnel-Medium-Type(65): IEEE-802(6)
Tunnel-Type(64): VLAN(13)
```

Which three behaviors will the client experience? (Choose three)

- A. While the AP is in standalone mode, the client will be placed in VLAN 15.
- B. While the AP is in standalone mode, the client will be placed in VLAN 10.
- C. When the AP transitions to connected mode, the client will be de-authenticated.
- D. While the AP is in standalone mode, the client will be placed in VLAN 13.
- E. When the AP is in connected mode, the client will be placed in VLAN 13.
- F. When the AP transitions to connected mode, the client will remain associated.

- G. When the AP is in connected mode, the client will be placed in VLAN 15.
- H. When the AP is in connected mode, the client will be placed in VLAN 10.

Correct Answer: BCG

Section: (none)

Explanation

Explanation/Reference:

Explanation

+ From the output of WLC "show interface summary", we learned that the WLC has four VLANs: 999, 14, 15 and 16.

+ From the "show ap config general FlexAP1" output, we learned that FlexConnect AP has four VLANs: 10, 11, 12 and 13. Also the WLAN of FlexConnect AP is mapped to VLAN 10 (from the line "WLAN 1: 10 (AP-Specific)).

From the reference at: https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-1/Enterprise-Mobility-8-1-Design-Guide/Enterprise_Mobility_8-1_Deployment_Guide/ch7_HREA.html

FlexConnect VLAN Central Switching Summary

Traffic flow on WLANs configured for Local Switching when FlexConnect APs are in connected mode are as follows:

+ If the VLAN is returned as one of the AAA attributes and that VLAN is not present in the FlexConnect AP database, traffic will switch centrally and the client is assigned this VLAN/Interface returned from the AAA server provided that the VLAN exists on the WLC. (-> as VLAN 15 exists on the WLC so the client in connected mode would be assigned this VLAN -> Answer G is correct)

+ If the VLAN is returned as one of the AAA attributes and that VLAN is not present in the FlexConnect AP database, traffic will switch centrally. If that VLAN is also not present on the WLC, the client will be assigned a VLAN/Interface mapped to a WLAN on the WLC.

+ If the VLAN is returned as one of the AAA attributes and that VLAN is present in the FlexConnect AP database, traffic will switch locally.

+ If the VLAN is not returned from the AAA server, the client is assigned a WLAN mapped VLAN on that FlexConnect AP and traffic is switched locally.

Traffic flow on WLANs configured for Local Switching when FlexConnect APs are in standalone mode are as follows:

+ If the VLAN returned by the AAA server is not present in the FlexConnect AP database, the client will be put on a default VLAN (that is, a WLAN mapped VLAN on a FlexConnect AP) (-> Therefore answer B is correct). When the AP connects back, this client is de-authenticated (-> Therefore answer C is correct) and will switch traffic centrally.

Answer:

QUESTION 78

Which three methods does Cisco DNA Center use to discover devices? (Choose three)

- A. CDP
- B. LLDP
- C. SNMP
- D. ping
- E. NETCONF
- F. a specified range of IP addresses

Correct Answer: ABF

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 79

What would be the preferred way to implement a loopless switch network where there are 1500 defined VLANs and it is necessary to load the shared traffic through two main aggregation points based on the VLAN identifier?

- A. 802.1D

- B. 802.1s
- C. 802.1W
- D. 802.1AE

Correct Answer: B

Section: (none)

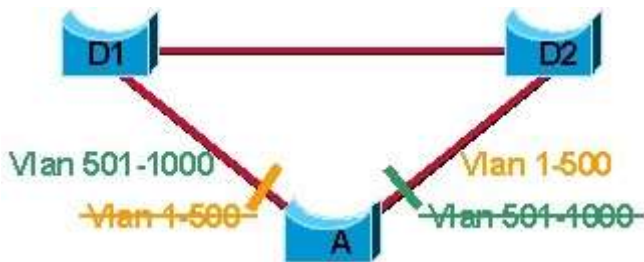
Explanation

Explanation/Reference:

Explanation

Where to Use MST

This diagram shows a common design that features access Switch A with 1000 VLANs redundantly connected to two distribution Switches, D1 and D2. In this setup, users connect to Switch A, and the network administrator typically seeks to achieve load balancing on the access switch Uplinks based on even or odd VLANs, or any other scheme deemed appropriate.



Reference: <https://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/24248-147.html>

Answer:

QUESTION 80

Drag and drop the characteristics from the left onto the routing protocols they describe on the right.

Link State Protocol	OSPF
selects routes using the DUAL algorithm	
maintains alternative loop-free backup path if available	
supports only equal multipath load balancing	EIGRP
Advanced Distance Vector Protocol	
quickly computes new path upon link failure	

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

OSPF

- + Link State Protocol
- + supports only equal multipath load balancing
- + quickly computes new path upon link failure

EIGRP

- + selects routes using the DUAL algorithm
- + maintains alternative loop-free backup path if available
- + Advanced Distance Vector Protocol

Explanation

EIGRP maintains alternative loop-free backup via the feasible successors. To qualify as a feasible successor, a router must have an Advertised Distance (AD) less than the Feasible distance (FD) of the current successor route.

Advertised distance (AD): the cost from the neighbor to the destination.

Feasible distance (FD): The sum of the AD plus the cost between the local router and the next-hop router

Answer:

QUESTION 81

How does the RIB differ from the FIB?

- A. The RIB includes many routes to the same destination prefix. The FIB contains only the best route.
- B. The FIB maintains network topologies and routing tables. The RIB is a list of routes to particular network destinations.
- C. The RIB is used to create network topologies and routing tables. The FIB is a list of routes to particular network destinations.
- D. The FIB includes many routes a single destination. The RIB is the best route to a single destination.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 82

What is the purpose of an RP in PIM?

- A. secure the communication channel between the multicast sender and receiver.
- B. ensure the shortest path from the multicast source to the receiver.
- C. receive IGMP joins from multicast receivers.
- D. send join messages toward a multicast source SPT

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 83

Refer to the exhibit.



```

hostname R1
router ospf 1
network 0.0.0.0 255.255.255.255 area 0
auto-cost reference-bandwidth 1000
!
hostname R2
router ospf 2
network 20.0.0.0 0.0.0.255 area 0

```

Which command must be applied to R2 for an OSPF neighborship to form?

- A. network 20.1.1.2 0.0.255.255 area 0
- B. network 20.1.1.2 255.255.255.255 area 0
- C. network 20.1.1.2 0.0.0.0 area 0
- D. network 20.1.1.2 255.255.0.0. area 0

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

The "network 20.0.0.0 0.0.0.255 area 0" command on R2 did not cover the IP address of Fa1/1 interface of R2 so OSPF did not run on this interface. Therefore we have to use the command "network 20.1.1.2 0.0.255.255 area 0" to turn on OSPF on this interface.

Note: The command "network 20.1.1.2 0.0.255.255 area 0" can be used too so this answer is also correct but answer C is the best answer here.

The "network 0.0.0.0 255.255.255.255 area 0" command on R1 will run OSPF on all active interfaces of R1.

Answer:

QUESTION 84

Which antenna type should be used for a site-to-site wireless connection?

- A. Omnidirectional
- B. Yagi
- C. dipole
- D. patch

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 85

Refer to the exhibit. An engineer is using XML in an application to send information to a RESTCONF-enabled device. After sending the request, the engineer gets this response message and a HTTP response

code of 400. What do these responses tell the engineer?

```
<errors xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
  <error>
    <error-message>End-of-file reached in XML
stream</error-message>
    <error-path>/ietf-interfaces:interfaces/interface=Giga
bitEthernet2</error-path>
    <error-tag>malformed-message</error-tag>
    <error-type>application</error-type>
  </error>
</errors>
```

- A. POST was used instead of PUT to update
- B. The Accept header sent was application/xml
- C. The Content-Type header sent was application/xml.
- D. JSON body was used

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

Accept and Content-type are both headers sent from a client (a browser) to a service.

Accept header is a way for a client to specify the media type of the response content it is expecting and

Content-type is a way to specify the media type of request being sent from the client to the server.

The response was sent in XML so we can say the Accept header sent was application/xml.

Answer:

QUESTION 86

Refer to the exhibit. Which two commands ensure that DSW1 becomes root bridge for VLAN 10 and 20?
(Choose two)

DSW1#show spanning-tree

MST1

```
Spanning tree enabled protocol mstp
Root ID    Priority    32769
           Address    0018.7363.4300
           Cost      2
           Port      13 (FastEthernet1/0/11)
           Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID  Priority 32769 (priority 32768 sys-id- ext 1)
           Address 001b.0d8e.e080
           Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
```

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa1/0/7	Desg FWD	2	2	128.1	P2p Bound (PVST)
Fa1/0/10	Desg FWD	2	2	128.12	P2p Bound (PVST)
Fa1/0/11	Root FWD	2	2	128.13	P2p
Fa1/0/12	Altn BLK	2	2	128.14	P2p

DSW1#show spanning-tree mst

```
#### MST1    vlans mapped: 10,20
Bridge       address 001b.0d0e.e000 priority 32769 (32768 sysid 1)
Root        address 0018.7363.4300 priority 32769 (32768 sysid 1)
           port Fa1/0/11 cost 2 (rem hops 19)
```

----- output omitted -----

- A. spanning-tree mstp 1 priority 0
- B. spanning-tree mst 1 root primary
- C. spanning-tree mst vlan 10,20 priority root
- D. spanning-tree mst 1 priority 4096
- E. spanning-tree mst 1 priority 1
- F. spanning-tree mstp vlan 10,20 root primary

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

Explanation

From the second command output (show spanning-tree mst) we learn that MST1 includes VLANs 10 & 20. Therefore if we want DSW1 to become root bridge for these VLANs we need to set the MST 1 region to root -> The command "spanning-tree mst 1 root primary" can do the trick. In fact, this command runs a macro and sets the priority lower than the current root. Also we can see the current root bridge for these VLANs has the priority of 32769 (default value + sysid) so we can set the priority of DSW1 to a specific lower value. But notice that the priority must be a multiple of 4096. Therefore D is a correct answer.

Answer:

QUESTION 87

Which feature of EIGRP is not supported in OSPF?

- A. load balancing of unequal-cost paths

- B. load balance over four equal-costs paths
- C. uses interface bandwidth to determine best path
- D. per-packet load balancing over multiple paths

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 88

Which two characteristics define the Intent API provided by Cisco DNA Center? (Choose two)

- A. northbound API
- B. southbound API
- C. device-oriented
- D. business outcome oriented
- E. procedural

Correct Answer: AD

Section: (none)

Explanation

Explanation/Reference:

Explanation

The Intent API is a Northbound REST API that exposes specific capabilities of the Cisco DNA Center platform.

The Intent API provides policy-based abstraction of business intent, allowing focus on an outcome rather than struggling with individual mechanisms steps.

Reference: <https://developer.cisco.com/docs/dna-center/#!/cisco-dna-center-platform-overview/intent-api-northbound>

Answer:

QUESTION 89

What is the difference between CEF and process switching?

- A. CEF processes packets that are too complex for process switching to manage.
- B. CEF is more CPU-intensive than process switching.
- C. CEF uses the FIB and the adjacency table to make forwarding decisions, whereas process switching punts each packet.
- D. Process switching is faster than CEF.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

"Punt" is often used to describe the action of moving a packet from the fast path (CEF) to the route processor for handling.

Cisco Express Forwarding (CEF) provides the ability to switch packets through a device in a very quick and efficient way while also keeping the load on the router's processor low. CEF is made up of two different main components: the Forwarding Information Base (FIB) and the Adjacency Table.

Process switching is the slowest switching methods (compared to fast switching and Cisco Express Forwarding) because it must find a destination in the routing table. Process switching must also construct a new Layer 2 frame header for every packet. With process switching, when a packet comes in, the scheduler calls a process that examines the routing table, determines which interface the packet should be switched to and then switches the packet. The problem is, this happens for the every packet.

Reference: <http://www.cisco.com/web/about/security/intelligence/acl-logging.html>

Answer:

QUESTION 90

During deployment, a network engineer notices that voice traffic is not being tagged correctly as it traverses the network. Which COS to DSCP map must be modified to ensure that voice traffic is treated properly?

- A. COS of 5 to DSCP 46
- B. COS of 7 to DSCP 48
- C. COS of 6 to DSCP 46
- D. COS of 3 to DSCP of 26

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

CoS value 5 is commonly used for VOIP and CoS value 5 should be mapped to DSCP 46. DSCP 46 is defined as being for EF (Expedited Forwarding) traffic flows and is the value usually assigned to all interactive voice and video traffic. This is to keep the uniformity from end-to-end that DSCP EF (mostly for VOICE RTP) is mapped to COS 5.

Note:

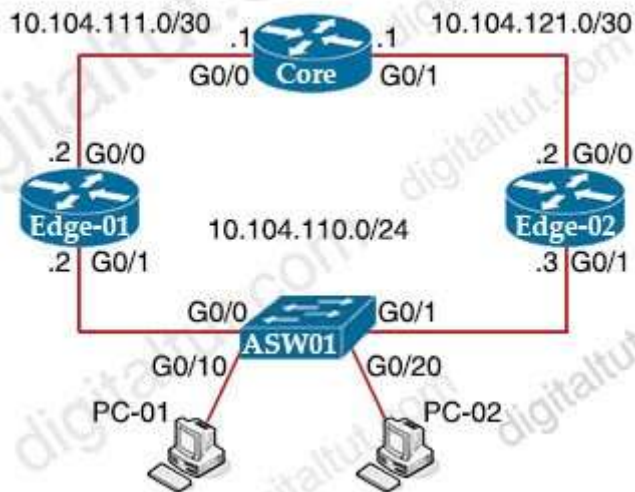
+ CoS is a L2 marking contained within an 802.1q tag,. The values for CoS are 0-7 + DSCP is a L3 marking and has values 0-63

+ The default DSCP-to-CoS mapping for CoS 5 is DSCP 40

Answer:

QUESTION 91

Refer to the exhibit. Edge-01 is currently operational as the HSRP primary with priority 110. Which command on Edge-02 causes it to take over the forwarding role when Edge-01 is down?



- A. standby 10 priority
- B. standby 10 timers
- C. standby 10 track
- D. standby 10 preempt

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

The "preempt" command enables the HSRP router with the highest priority to immediately become the active router.

Answer:

QUESTION 92

What is a Type 1 hypervisor?

- A. runs directly on a physical server and depends on a previously installed operating system
- B. runs directly on a physical server and includes its own operating system
- C. runs on a virtual server and depends on an already installed operating system
- D. run on a virtual server and includes its own operating system

Correct Answer: B

Section: (none)

Explanation

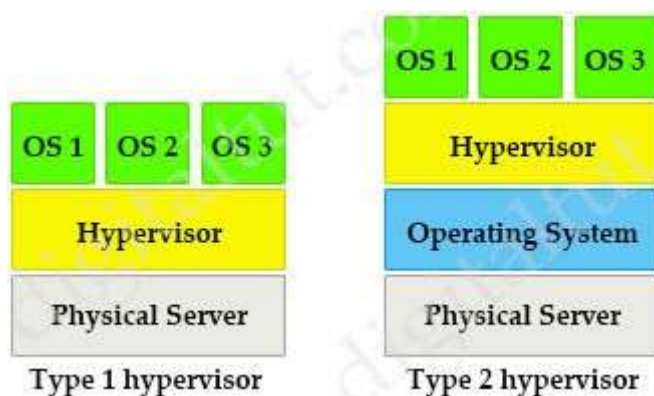
Explanation/Reference:

Explanation

There are two types of hypervisors: type 1 and type 2 hypervisor.

In type 1 hypervisor (or native hypervisor), the hypervisor is installed directly on the physical server. Then instances of an operating system (OS) are installed on the hypervisor. Type 1 hypervisor has direct access to the hardware resources. Therefore they are more efficient than hosted architectures. Some examples of type 1 hypervisor are VMware vSphere/ESXi, Oracle VM Server, KVM and Microsoft Hyper-V.

In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).



Answer:

QUESTION 93

An engineer reviews a router's logs and discovers the following entry. What is the event's logging severity level?

Router# *Feb 03 11:13:44 334: %LINK-3-UPDOWN: Interface GigabitEthernet0/1, changed state to up

- A. error
- B. notification
- C. informational
- D. warning

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

Syslog levels are listed below:

Level	Keyword	Description
0	emergencies	System is unusable
1	alerts	Immediate action is needed
2	critical	Critical conditions exist
3	errors	Error conditions exist
4	warnings	Warning conditions exist
5	notification	Normal, but significant, conditions exist
6	informational	Informational messages
7	debugging	Debugging messages

Number "3" in "%LINK-3-UPDOWN" is the severity level of this message so in this case it is "errors".

Answer:

QUESTION 94

Refer to the exhibit. An engineer attempts to configure a router on a stick to route packets between Clients, Servers, and Printers; however, initial tests show that this configuration is not working. Which command set resolves this issue?

```
interface Vlan10
ip vrf forwarding Clients
ip address 192.168.1.1 255.255.255.0
!
interface Vlan20
ip vrf forwarding Servers
ip address 172.16.1.1 255.255.255.0
!
interface Vlan30
ip vrf forwarding Printers
ip address 10.1.1.1 255.255.255.0
<output omitted>
router eigrp 1
network 10.0.0.0
network 172.16.0.0
network 192.168.1.0
```

Option A Option B

```
router eigrp 1 router eigrp 1
network 10.0.0.0 255.0.0.0 network 10.0.0.0 255.255.255.0
network 172.16.0.0 255.255.0.0 network 172.16.0.0 255.255.255.0
network 192.168.1.0 255.255.0.0 network 192.168.1.0 255.255.255.0
```

Option C Option D

```
interface Vlan10 interface Vlan10
no ip vrf forwarding Clients no ip vrf forwarding Clients
! ip address 192.168.1.2 255.255.255.0
interface Vlan20 !
no ip vrf forwarding Servers interface Vlan20
! no ip vrf forwarding Servers
interface Vlan30 ip address 172.16.1.2 255.255.255.0
no ip vrf forwarding Printers !
interface Vlan30
no ip vrf forwarding Printers
ip address 10.1.1.2 255.255.255.0
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

We must reconfigure the IP address after assigning or removing an interface to a VRF. Otherwise that interface does not have an IP address.

Answer:

QUESTION 95

How is a data modeling language used?

- A. To enable data to be easily structured, grouped validated, and replicated
- B. To represent finite and well-defined network elements that cannot be changed
- C. To model the flows of unstructured data within the infrastructure
- D. To provide human readability to scripting languages

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

Customer needs are fast evolving. Typically, a network center is a heterogenous mix of various devices at multiple layers of the network. Bulk and automatic configurations need to be accomplished. CLI scraping is not flexible and optimal. Re-writing scripts many times, even for small configuration changes is cumbersome. Bulk configuration changes through CLIs are error-prone and may cause system issues. The solution lies in using data models—a programmatic and standards-based way of writing configurations to any network device, replacing the process of manual configuration. Data models are written in a standard, industry-defined language. Although configurations using CLIs are easier (more human-friendly), automating the configuration using data models results in scalability.

Reference:

https://www.cisco.com/c/en/us/td/docs/optical/ncs1000/60x/b_Datamodels_cg_ncs1000/b_Datamodels_cg_ncs1000_chapter_00.pdf

Answer:

QUESTION 96

Refer to the exhibit.

```
aaa new-model
aaa authentication login authorizationlist tacacs+
tacacs-server host 192.168.0.202
tacacs-server key ciscotestkey
line vty 0 4
login authentication authorizationlist
```

What is the effect of the configuration?

- A. The device will allow users at 192.168.0.202 to connect to vty lines 0 through 4 using the password ciscotestkey
- B. The device will allow only users at 192 168.0.202 to connect to vty lines 0 through 4
- C. When users attempt to connect to vty lines 0 through 4, the device will authenticate them against TACACS+ if local authentication fails
- D. The device will authenticate all users connecting to vty lines 0 through 4 against TACACS+

Correct Answer: D

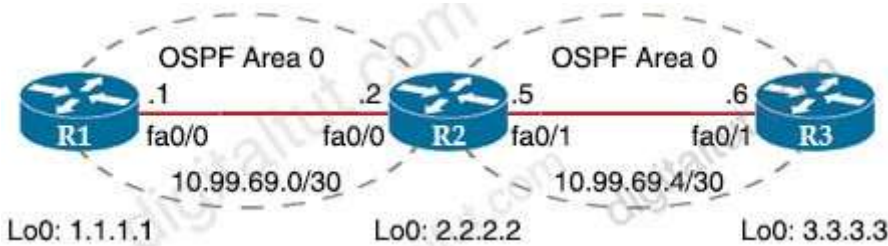
Section: (none)

Explanation

Explanation/Reference:

QUESTION 97

Refer to the exhibit. R1 is able to ping the R3 fa0/1 interface. Why do the extended pings fail?



```
R1#ping
Protocol [ip]:
Target IP address: 3.3.3.3
Repeat count [5]: 3
Datagram size [100]: 1500
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface: 1.1.1.1
Type of service [0]:
Set DF bit in IP header? [no]: yes
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]: Record
Number of hops [9]:
Loose, Strict, Record, Timestamp, Verbose[RV]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 3, 1500-byte ICMP Echos to 3.3.3.3, timeout is 2 seconds:
Packet sent with a source address of 1.1.1.1
Packet sent with the DF bit set
Packet has IP options: Total option bytes= 39, padded length=40
Record route: <*>
(0.0.0.0)
(0.0.0.0)
```

```
Unreachable from 10.99.69.2, maximum MTU 1492, Received packet has options
Total option bytes= 39, padded length=40
Record route: <*>
(0.0.0.0)
(0.0.0.0)
<output omitted>
```

- A. R2 and R3 do not have an OSPF adjacency
- B. R3 is missing a return route to 10.99.69.0/30
- C. The maximum packet size accepted by the command is 1476 bytes
- D. The DF bit has been set

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

Explanation

If the DF bit is set, routers cannot fragment packets. From the output below, we learn that the maximum MTU of R2 is 1492 bytes while we sent ping with 1500 bytes. Therefore these ICMP packets were dropped. Note: Record option displays the address(es) of the hops (up to nine) the packet goes through.

Answer:

QUESTION 98

Refer to the exhibit. A network engineer configures a GRE tunnel and enters the show interface tunnel command. What does the output confirm about the configuration?

```
Tunnel100 is up, line protocol is up
Hardware is Tunnel
Internet address is 192.168.200.1/24
MTU 17912 bytes, BW 100 Kbit/sec, DLY 50000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive set (10 sec), retries 3
Tunnel source 209.165.202.129 (GigabitEthernet0/1)
Tunnel Subblocks:
  src-track:
    Tunnel100 source tracking subblock associated with GigabitEthernet0/1
    Set of tunnels with source GigabitEthernet0/1, 1 members (includes iterators),
    on interface <OK>
Tunnel protocol/transport GRE/IP
Key disabled, sequencing disabled
Checksumming of packets disabled
Tunnel TTL 255, Fast tunneling enabled
Tunnel transport MTU 1476 bytes
```

- A. The keepalive value is modified from the default value.
- B. Interface tracking is configured.
- C. The tunnel mode is set to the default.
- D. The physical interface MTU is 1476 bytes.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

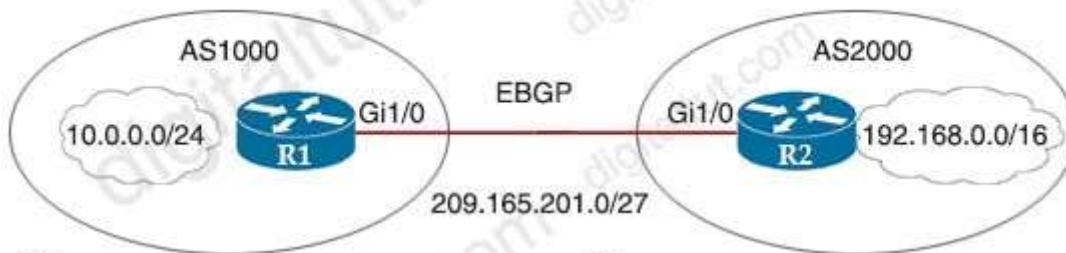
Explanation

From the "Tunnel protocol/transport GRE/IP" line, we can deduce this tunnel is using the default IPv4 Layer-3 tunnel mode. We can return to this default mode with the "tunnel mode gre ip" command.

Answer:

QUESTION 99

Refer to the exhibit. Which two commands are needed to allow for full reachability between AS 1000 and AS 2000? (Choose two)



R1
 router bgp 1000
 address-family ipv4 unicast
 neighbor 209.165.201.2 remote-as 2000
 network 10.0.0.0 mask 255.255.255.0
 description Peer Router B

R2
 router bgp 2000
 address-family ipv4 unicast
 neighbor 209.165.201.1 remote-as 1000
 network 10.0.0.0 mask 255.255.255.0
 description Peer Router A

- A. R2#no network 10.0.0.0 255.255.255.0
- B. R1#network 19.168.0.0 mask 255.255.0.0
- C. R1#no network 10.0.0.0 255.255.255.0
- D. R2#network 209.165.201.0 mask 255.255.192.0
- E. R2#network 192.168.0.0 mask 255.255.0.0

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:
 Answer:

QUESTION 100
 Refer to the exhibit.

```
SW1#show monitor session all
Session 1
-----
Type           : Remote Destination Session
Source RSPAN VLAN : 50

Session 2
-----
Type           : Local Session
Source Ports   :
  Both        : Fa0/14
Destination Ports : Fa0/15
Encapsulation  : Native
Ingress       : Disabled
```

An engineer configures monitoring on SW1 and enters the show command to verify operation. What does the output confirm?

- A. SPAN session 1 monitors activity on VLAN 50 of a remote switch
- B. SPAN session 2 only monitors egress traffic exiting port FastEthernet 0/14.
- C. SPAN session 2 monitors all traffic entering and exiting port FastEthernet 0/15.
- D. RSPAN session 1 is incompletely configured for monitoring

Correct Answer: D
Section: (none)

Explanation

Explanation/Reference:

Explanation

SW1 has been configured with the following commands:

```
SW1(config)#monitor session 1 source remote vlan 50
```

```
SW1(config)#monitor session 2 source interface fa0/14
```

```
SW1(config)#monitor session 2 destination interface fa0/15
```

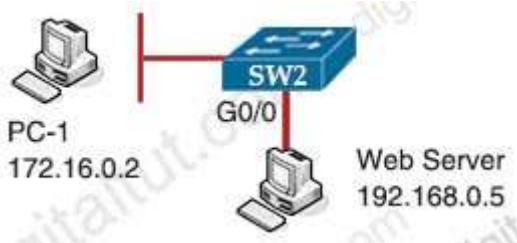
The session 1 on SW1 was configured for Remote SPAN (RSPAN) while session 2 was configured for local SPAN. For RSPAN we need to configure the destination port to complete the configuration.

Note: In fact we cannot create such a session like session 1 because if we only configure "Source RSPAN VLAN 50" (with the command "monitor session 1 source remote vlan 50") then we will receive a "Type: Remote Source Session" (not "Remote Destination Session").

Answer:

QUESTION 101

Refer to the exhibit. PC-1 must access the web server on port 8080. To allow this traffic, which statement must be added to an access control list that is applied on SW2 port G0/0 in the inbound direction?



- A. permit host 172.16.0.2 host 192.168.0.5 eq 8080
- B. permit host 192.168.0.5 host 172.16.0.2 eq 8080
- C. permit host 192.168.0.5 eq 8080 host 172.16.0.2
- D. permit host 192.168.0.5 it 8080 host 172.16.0.2

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

The inbound direction of G0/0 of SW2 only filter traffic from Web Server to PC-1 so the source IP address and port is of the Web Server.

Answer:

QUESTION 102

Refer to the exhibit.

```
R1
key chain cisco123
key 1
key-string Cisco123!
```

```
Ethernet0/0 - Group 10
State is Active
8 state changes, last state change 00:03:33
Virtual IP address is 192.168.0.1
Active virtual MAC address is 0000.0c07.ac0a
```

```
R2
key chain cisco123
key 1
key-string Cisco123!
```

```
Ethernet0/0 - Group 10
State is Active
17 state changes, last state change 00:03:33
Virtual IP address is 192.168.0.1
Active virtual MAC address is 0000.0c07.ac0a
```

An engineer is installing a new pair of routers in a redundant configuration. Which protocol ensures that

traffic is not disrupted in the event of a hardware failure?

- A. HSRPv2
- B. VRRP
- C. GLBP
- D. HSRPv1

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

The "virtual MAC address" is 0000.0c07.acXX (XX is the hexadecimal group number) so it is using HSRPv1.

Note: HSRP Version 2 uses a new MAC address which ranges from 0000.0C9F.F000 to 0000.0C9F.FFFF.

Answer:

QUESTION 103

Refer to the exhibit.

```
aaa new-model
aaa authentication login default local-case enable
aaa authentication login ADMIN local-case
username CCNP secret Str0ngP@ssw0rd!
line 0 4
login authentication ADMIN
```

How can you change this configuration so that when user CCNP logs in, the show run command is executed and the session is terminated?

- A. Add the autocommand keyword to the aaa authentication command
- B. Assign privilege level 15 to the CCNP username
- C. Add the access-class keyword to the aaa authentication command
- D. Assign privilege level 14 to the CCNP username
- E. Add the access-class keyword to the username command
- F. Add the autocommand keyword to the username command

Correct Answer: F

Section: (none)

Explanation

Explanation/Reference:

Explanation

The "autocommand" causes the specified command to be issued automatically after the user logs in. When the command is complete, the session is terminated. Because the command can be any length and can contain embedded spaces, commands using the autocommand keyword must be the last option on the line. In this specific question, we have to enter this line "username CCNP autocommand show running-config".

Answer:

QUESTION 104

Refer to the exhibit. What does the error message relay to the administrator who is trying to configure a Cisco IOS device?

```
<?xml version="1.0" encoding="utf-8"?>
<data xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"/>
```

- A. A NETCONF request was made for a data model that does not exist.

- B. The device received a valid NETCONF request and serviced it without error.
- C. A NETCONF message with valid content based on the YANG data models was made, but the request failed.
- D. The NETCONF running datastore is currently locked.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

Missing Data Model RPC Error Reply Message

If a request is made for a data model that doesn't exist on the Catalyst 3850 or a request is made for a leaf that is not implemented in a data model, the Server (Catalyst 3850) responds with an empty data response. This is expected behavior.

Reference: <https://www.cisco.com/c/en/us/support/docs/storage-networking/management/200933-YANG-NETCONF-Configuration-Validation.html>

Answer:

QUESTION 105

In an SD-WAN deployment, which action in the vSmart controller responsible for?

- A. handle, maintain, and gather configuration and status for nodes within the SD-WAN fabric
- B. onboard vEdge nodes into the SD-WAN fabric
- C. gather telemetry data from vEdge routers
- D. distribute policies that govern data forwarding performed within the SD-WAN fabric

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Control plane (vSmart) builds and maintains the network topology and make decisions on the traffic flows. The vSmart controller disseminates control plane information between WAN Edge devices, implements control plane policies and distributes data plane policies to network devices for enforcement.

QUESTION 106

What does Call Admission Control require the client to send in order to reserve the bandwidth?

- A. SIP flow information
- B. Wi-Fi multimedia
- C. traffic specification
- D. VoIP media session awareness

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

===== New Questions (added on 10th-Oct-2020)
=====

Answer:

QUESTION 107

Refer to the exhibit.

R1

interface GigabitEthernet0/0

ip address 192.168.250.2 255.255.255.0

```
standby 20 ip 192.168.250.1
standby 20 priority 120
```

```
R2
interface GigabitEthernet0/0
ip address 192.168.250.3 255.255.255.0
standby 20 ip 192.168.250.1
standby 20 priority 110
```

What are two effects of this configuration? (Choose two)

- A. R1 becomes the active router
- B. R1 becomes the standby router
- C. If R2 goes down, R1 becomes active but reverts to standby when R2 comes back online
- D. If R1 goes down, R2 becomes active but reverts to standby when R1 comes back online
- E. If R1 goes down, R2 becomes active and remains the active device when R1 comes back online

Correct Answer: AE

Section: (none)

Explanation

Explanation/Reference:

QUESTION 108

Using the EIRP formula, what parameter is subtracted to determine the EIRP value?

- A. antenna cable loss
- B. antenna gain
- C. transmitter power
- D. signal-to-noise ratio

Correct Answer: A

Section: (none)

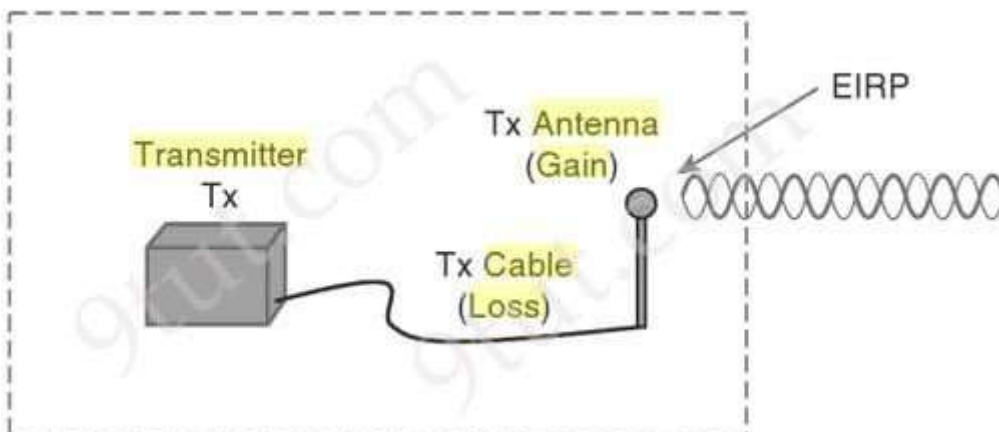
Explanation

Explanation/Reference:

Explanation

Once you know the complete combination of transmitter power level, the length of cable, and the antenna gain, you can figure out the actual power level that will be radiated from the antenna. This is known as the effective isotropic radiated power (EIRP), measured in dBm.

EIRP is a very important parameter because it is regulated by governmental agencies in most countries. In those cases, a system cannot radiate signals higher than a maximum allowable EIRP. To find the EIRP of a system, simply add the transmitter power level to the antenna gain and subtract the cable loss.



EIRP = Tx Power Tx Cable + Tx Antenna

Suppose a transmitter is configured for a power level of 10 dBm (10 mW). A cable with 5-dB loss connects the transmitter to an antenna with an 8-dBi gain. The resulting EIRP of the system is 10 dBm 5 dB + 8 dBi, or 13 dBm.

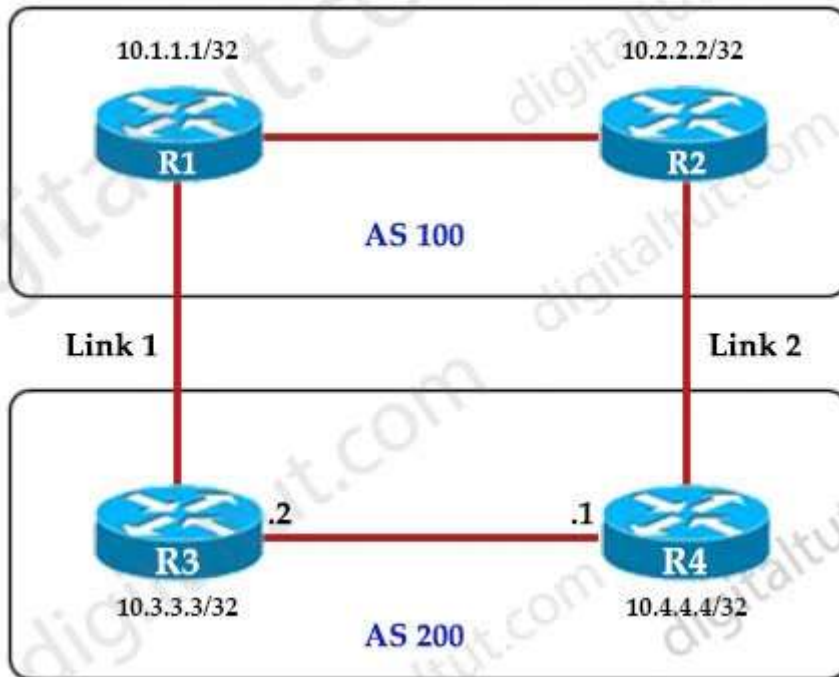
You might notice that the EIRP is made up of decibel-milliwatt (dBm), dB relative to an isotropic antenna (dBi), and decibel (dB) values. Even though the units appear to be different, you can safely combine them because they are all in the dB "domain".

Reference: CCNA Wireless 640-722 Official Cert Guide

Answer:

QUESTION 109

Refer to the exhibit.



An engineer must ensure that all traffic entering AS 200 will choose Link 2 as an entry point. Assuming that all BGP neighbor relationships have been formed and that the attributes have not been changed on any of the routers, which configuration accomplish task?

Option A Option B

```
R3(config)#route-map PREPEND permit 10 R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 200 200 200 R3(config-route-map)#set as-path prepend 100
100 100
```

R3(config)# router bgp 200 R3(config)# router bgp 200

```
R3(config-router)#neighbor 10.1.1.1 route-map PREPEND out R3(config-router)#neighbor 10.2.2.2 route-
map PREPEND in
```

Option C Option D

```
R3(config)#route-map PREPEND permit 10 R3(config)#route-map PREPEND permit 10
R3(config-route-map)#set as-path prepend 100 100 100 R3(config-route-map)#set as-path prepend 200
200 200
```

R3(config)# router bgp 200 R3(config)# router bgp 200

```
R3(config-router)#neighbor 10.1.1.1 route-map PREPEND in R3(config-router)#neighbor 10.2.2.2 route-
map PREPEND out
```

- A. Option A
- B. Option B
- C. Option C

D. Option D

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

R3 advertises BGP updates to R1 with multiple AS 100 so R3 believes the path to reach AS 200 via R3 is farther than R2 so R3 will choose R2 to forward traffic to AS 200.

Answer:

QUESTION 110

Drag and drop the DHCP messages that are exchanged between a client and an AP into the order they are exchanged on the right.

DHCP Request	Step 1
DHCP Offer	Step 2
DHCP Discover	Step 3
DHCP ACK	Step 4

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

- + Step 1: DHCP Discover
- + Step 2: DHCP Offer
- + Step 3: DHCP Request
- + Step 4: DHCP ACK

Explanation

There are four messages sent between the DHCP Client and DHCP Server: DHCPDISCOVER, DHCP OFFER, DHCPREQUEST and DHCPACKNOWLEDGEMENT. This process is often abbreviated as DORA (for Discover, Offer, Request, Acknowledgement).

Answer:

QUESTION 111

Refer to the exhibit.

```
interface FastEthernet0/1
ip address 209.165.200.225 255.255.255.224
ip nat outside
!
interface FastEthernet0/2
ip address 10.10.10.1 255.255.255.0
```

```
ip nat inside
!  
access-list 10 permit 10.10.10.0 0.0.0.255  
!
```

Which command allows hosts that are connected to FastEthernet0/2 to access the Internet?

- A. ip nat inside source list 10 interface FastEthernet0/1 overload
- B. ip nat outside source static 209.165.200.225 10.10.10.0 overload
- C. ip nat inside source list 10 interface FastEthernet0/2 overload
- D. ip nat outside source list 10 interface FastEthernet0/2 overload

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

The command "ip nat inside source list 10 interface FastEthernet0/1 overload" configures NAT to overload on the address that is assigned to the Fa0/1 interface.

===== New Questions (added on 12th-Oct-2020)

=====

Answer:

QUESTION 112

In a Cisco SD-Access fabric, which control plane protocol is used for mapping and resolving endpoints?

- A. LISP
- B. DHCP
- C. SXP
- D. VXLAN

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 113

Refer to the exhibit. What does the snippet of code achieve?

```
with manager.connect(host=192.168.0.1, port=22,  
                    username='admin', password='password1', hostkey_verify=True,  
                    device_params={'name':'nexus'}) as m:
```

- A. It creates an SSH connection using the SSH key that is stored and the password is ignored
- B. It creates a temporary connection to a Cisco Nexus device and retrieves a token to be used for API calls
- C. It opens an ncclient connection to a Cisco Nexus device and maintains it for the duration of the context
- D. It opens a tunnel and encapsulates the login information, if the host key is correct

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

ncclient is a Python library that facilitates client-side scripting and application development around the NETCONF protocol.

The above Python snippet uses the ncclient to connect and establish a NETCONF session to a Nexus device (which is also a NETCONF server).

===== New Questions (added on 6th-Nov-2020)

=====

QUESTION 114

What are two reasons a company would choose a cloud deployment over an on-prem deployment?
(Choose two)

- A. Cloud deployments require long implementation times due to capital expenditure processes. OnPrem deployments can be accomplished quickly using operational expenditure processes
- B. Cloud costs adjust up or down depending on the amount of resources consumed. On- Prem costs for hardware, power, and space are ongoing regardless of usage
- C. In a cloud environment, the company controls technical issues. On-prem environments rely on the service provider to resolve technical issue
- D. Cloud resources scale automatically to an increase in demand. On-prem requires additional capital expenditure
- E. In a cloud environment, the company is in full control of access to their data. On-prem risks access to data due to service provider outages

Correct Answer: BD

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 115

Which outbound access list, applied to the WAN interface of a router, permits all traffic except for http traffic sourced from the workstation with IP address 10.10.10.1?

- A. ip access-list extended 200
deny tcp host 10.10.10.1 eq 80 any
permit ip any any
- B. ip access-list extended 10
deny tcp host 10.10.10.1 any eq 80
permit ip any any
- C. ip access-list extended NO_HTTP
deny tcp host 10.10.10.1 any eq 80
- D. ip access-list extended 100
deny tcp host 10.10.10.1 any eq 80
permit ip any any

Correct Answer: D

Section: (none)

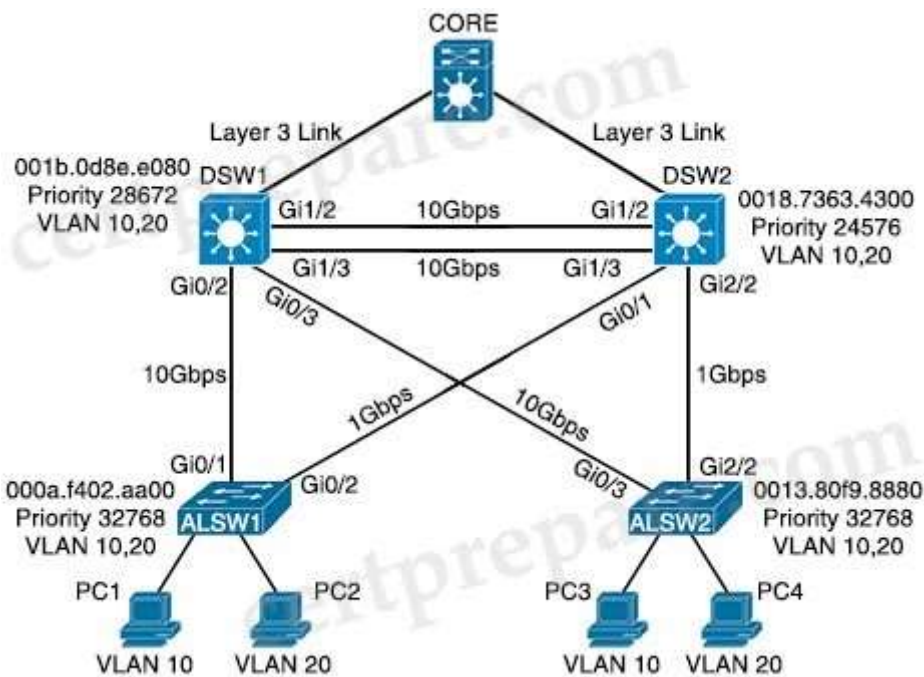
Explanation

Explanation/Reference:

Answer:

QUESTION 116

Refer to the exhibit. Assuming all links are functional, which path does PC1 take to reach DSW1?



- A. PC1 goes from ALSW1 to DSW1
- B. PC1 goes from ALSW1 to DSW2 to ALSW2 to DSW1
- C. PC1 goes from ALSW1 to DSW2 to Core to DSW1
- D. PC1 goes from ALSW1 to DSW2 to DSW1

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

In the topology above, we see DSW2 has lowest priority 24576 so it is the root bridge for VLAN 10 so surely all traffic for this VLAN must go through it. All of DSW2 ports must be in forwarding state. And:

+ The direct link between DSW1 and ALSW1 is blocked by STP.

+ The direct link between DSW1 and ALSW2 is also blocked by STP.

Therefore PC1 must go via this path: PC1 -> ALSW1 -> DSW2 -> DSW1.

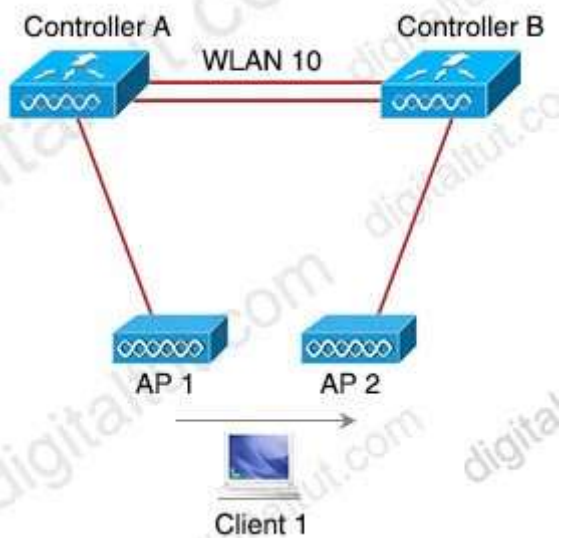
===== New Questions (added on 11th-Nov-2020)

=====

Answer:

QUESTION 117

Refer to the exhibit.



Both controllers are in the same mobility group. Which result occurs when Client 1 roams between APs that are registered to different controllers in the same WLAN?

- A. Client 1 contact controller B by using an EoIP tunnel
- B. CAPWAP tunnel is created between controller A and controller B
- C. Client 1 users an EoIP tunnel to contact controller A
- D. The client database entry moves from controller A to controller B

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

This is called Inter Controller-L2 Roaming. Inter-Controller (normally layer 2) roaming occurs when a client roam between two APs registered to two different controllers, where each controller has an interface in the client subnet. In this instance, controllers exchange mobility control messages (over UDP port 16666) and the client database entry is moved from the original controller to the new controller.

Answer:

QUESTION 118

Drag and drop the LIPS components on the left to the correct description on the right.

map server	IPv4 or IPv6 address of an endpoint within a LISP site
ETR	network infrastructure component that learns of EID-prefix mapping entries from an ETR
EID	de-encapsulates LISP packets coming from outside of the LISP site to destinations inside of the site

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

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

+ IPv4 or IPv6 address of an endpoint within a LISP site: EID

+ network infrastructure component that learns of EID-prefix mapping entries from an ETR: map server + de-encapsulates LISP packets coming from outside of the LISP site to destinations inside of the site: ETR



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Answer:

QUESTION 119

Which deployment option of Cisco NGFW provides scalability?

- A. tap
- B. clustering
- C. inline tap
- D. high availability

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

Clustering lets you group multiple Firepower Threat Defense (FTD) units together as a single logical device.

Clustering is only supported for the FTD device on the Firepower 9300 and the Firepower 4100 series. A

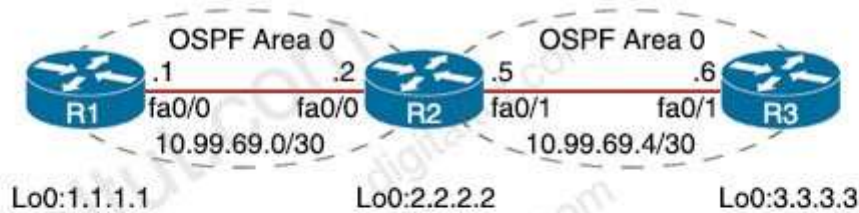
cluster provides all the convenience of a single device (management, integration into a network) while

achieving the increased throughput and redundancy of multiple devices.

Answer:

QUESTION 120

Refer to the exhibit.



```
R1#traceroute
Protocol [ip]:
Target IP address: 3.3.3.3
Source address: 1.1.1.1
Numeric display [n]:
Timeout in seconds [3]:
Probe count [3]:
Minimum Time to Live [1]:
Maximum Time to Live [30]:
Port Number [33434]:
Loose, Strict, Record, Timestamp, Verbose[none]: Record
Number of hops [9]:
Loose, Strict, Record, Timestamp, Verbose [RV]:
Type escape sequence to abort.
```

Continued --->

```
Tracing the route to 3.3.3.3
 1 10.99.69.2 36 msec
Received packet has options
Total option bytes = 40, padded length=40
Record route:
(10.99.69.1) <*>
(0.0.0.0)
(0.0.0.0)
End of list
---output omitted---

 2 10.99.69.6 !A
Received packet has options
Total option bytes = 40, padded length=40
Record route:
(10.99.69.1)
(10.99.69.5) <*>
(0.0.0.0)
(0.0.0.0)
End of list
!A
---output omitted---
```

The traceroute fails from R1 to R3. What is the cause of the failure?

- A. An ACL applied inbound on fa0/1 of R3 is dropping the traffic
- B. An ACL applied inbound on loopback0 of R2 is dropping the traffic
- C. The loopback on R3 is in a shutdown state
- D. Redistribution of connected routes into OSPF is not configured

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

We see in the traceroute result the packet could reach 10.99.69.5 (on R2) but it could not go any further so we can deduce an ACL on R3 was blocking it.

Note: Record option displays the address(es) of the hops (up to nine) the packet goes through.

Answer:

QUESTION 121

Refer to the exhibit.

```

flow record v4_r1
 match ipv4 tos
 match ipv4 protocol
 match ipv4 source address
 match ipv4 destination address
 match transport source-port
 match transport destination-port
 collect counter bytes long
 collect counter packets long
!
flow monitor FLOW-MONITOR-1
 record v_r1
 exit
!
sampler SAMPLER-1
 mode random 1 out-of 2
 exit
!
ip cef
!
interface GigabitEthernet0/0/0
 ip address 172.16.6.2 255.255.255.0

```

Option A
Option B

```

sampler SAMPLER-1
 mode random 1-out-of 2
 flow FLOW-MONITOR-1

```

```

interface GigabitEthernet0/0/0
 ip flow monitor SAMPLER-1 input

```

Option C Option D

```

interface GigabitEthernet0/0/0
 ip flow monitor FLOW-MONITOR-1 sampler SAMPLER-1 input

```

Which command set must be added to the configuration to analyze 50 packets out of every 100?

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Answer:

QUESTION 122

An engineer must configure a ACL that permits packets which include an ACK in the TCP header. Which entry must be included in the ACL?

- A. access-list 110 permit tcp any any eq 21 tcp-ack
- B. access-list 10 permit ip any any eq 21 tcp-ack
- C. access-list 10 permit tcp any any eq 21 established
- D. access-list 110 permit tcp any any eq 21 established

Correct Answer: D

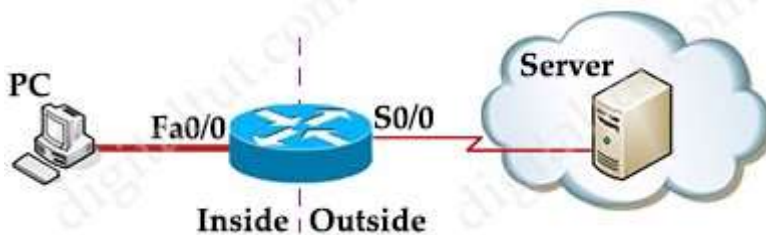
Section: (none)

Explanation

Explanation/Reference:

Explanation

The established keyword is only applicable to TCP access list entries to match TCP segments that have the ACK and/or RST control bit set (regardless of the source and destination ports), which assumes that a TCP connection has already been established in one direction only. Let's see an example below:



Suppose you only want to allow the hosts inside your company to telnet to an outside server but not vice versa, you can simply use an "established" access-list like this:

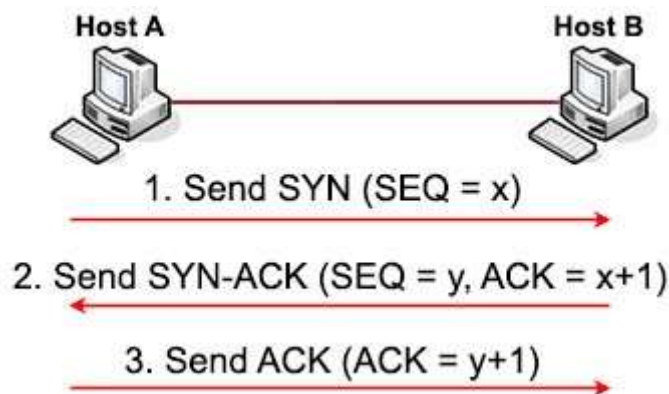
```
access-list 100 permit tcp any any established
access-list 101 permit tcp any any eq telnet
```

```
!
interface S0/0
ip access-group 100 in
ip access-group 101 out
```

Note:

Suppose host A wants to start communicating with host B using TCP. Before they can send real data, a three-way handshake must be established first.

Let's see how this process takes place:



1. First host A will send a SYN message (a TCP segment with SYN flag set to 1, SYN is short for SYNchronize) to indicate it wants to setup a connection with host B. This message includes a sequence (SEQ) number for tracking purpose. This sequence number can be any 32-bit number (range from 0 to 232) so we use "x" to represent it.

2. After receiving SYN message from host A, host B replies with SYN-ACK message (some books may call it "SYN/ACK" or "SYN, ACK" message).

ACK is short for ACKnowledge). This message includes a SYN sequence number and an ACK number:
 + SYN sequence number (let's called it "y") is a random number and does not have any relationship with Host A's SYN SEQ number.

+ ACK number is the next number of Host A's SYN sequence number it received, so we represent it with "x + 1". It means "I received your part. Now send me the next part (x + 1)".

The SYN-ACK message indicates host B accepts to talk to host A (via ACK part). And ask if host A still wants to talk to it as well (via SYN part).

3. After Host A received the SYN-ACK message from host B, it sends an ACK message with ACK number "y+1" to host B. This confirms host A still wants to talk to host B.

Answer:

QUESTION 123

Which two sources cause interference for Wi-Fi networks? (Choose two)

- A. mirrored wall
- B. fish tank
- C. 900MHz baby monitor
- D. DECT 6.0 cordless
- E. incandescent lights

Correct Answer: AB

Section: (none)

Explanation

Explanation/Reference:

Explanation

Windows can actually block your WiFi signal. How? Because the signals will be reflected by the glass. Some new windows have transparent films that can block certain wave types, and this can make it harder for your WiFi signal to pass through.

Tinted glass is another problem for the same reasons. They sometimes contain metallic films that can completely block out your signal.

Mirrors, like windows, can reflect your signal. They're also a source of electromagnetic interference because of their metal backings.

Reference: <https://dis-dot-dat.net/what-materials-can-block-a-wifi-signal/>

An incandescent light bulb, incandescent lamp or incandescent light globe is an electric light with a wire filament heated until it glows. WiFi operates in the gigahertz microwave band. The FCC has strict regulations on RFI (radio frequency interference) from all sorts of things, including light bulbs -> Incandescent lights do not interfere Wi-Fi networks.

Note:

+ Many baby monitors operate at 900MHz and won't interfere with Wi-Fi, which uses the 2.4GHz band.

+ DECT cordless phone 6.0 is designed to eliminate wifi interference by operating on a different frequency. There is essentially no such thing as DECT wifi interference.

Answer:

QUESTION 124

What are two considerations when using SSO as a network redundancy feature? (Choose two)

- A. must be combined with NSF to support uninterrupted Layer 2 operations
- B. must be combined with NSF to support uninterrupted Layer 3 operations
- C. both supervisors must be configured separately
- D. the multicast state is preserved during switchover
- E. requires synchronization between supervisors in order to guarantee continuous connectivity

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

Explanation

Cisco IOS Nonstop Forwarding(NSF) always runs with stateful switchover (SSO) and provides redundancy for Layer 3 traffic.

Reference:

https://www.cisco.com/en/US/docs/switches/lan/catalyst3850/software/release/3se/consolidated_guide/b_consolidated_3850_3se_cg_chapter_01101110.pdf

QUESTION 125

What is the responsibility of a secondary WLC?

- A. It shares the traffic load of the LAPs with the primary controller.
- B. It avoids congestion on the primary controller by sharing the registration load on the LAPs.
- C. It registers the LAPs if the primary controller fails.
- D. It enables Layer 2 and Layer 3 roaming between itself and the primary controller.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

When the primary controller (WLC-1) goes down, the APs automatically get registered with the secondary controller (WLC-2). The APs register back to the primary controller when the primary controller comes back on line.

Reference: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/69639-wlc-failover.html>

Answer:

QUESTION 126

What is the purpose of the LISP routing and addressing architecture?

- A. It creates head-end replication used to deliver broadcast and multicast frames to the entire network.
- B. It allows LISP to be applied as a network visualization overlay through encapsulation.
- C. It allows multiple instances of a routing table to co-exist within the same router.
- D. It creates two entries for each network node, one for its identity and another for its location on the network.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

Locator ID Separation Protocol (LISP) solves this issue by separating the location and identity of a device through the Routing locator (RLOC) and Endpoint identifier (EID):

+ Endpoint identifiers (EIDs) assigned to end hosts.

+ Routing locators (RLOCs) assigned to devices (primarily routers) that make up the global routing system.

Answer:

QUESTION 127

How does the EIGRP metric differ from the OSPF metric?

- A. The EIGRP metric is calculated based on bandwidth only. The OSPF metric is calculated on delay only.
- B. The EIGRP metric is calculated based on delay only. The OSPF metric is calculated on bandwidth and delay.
- C. The EIGRP metric is calculated based on hop count and bandwidth. The OSPF metric is calculated on bandwidth and delay.
- D. The EIGRP metric is calculated based on bandwidth and delay. The OSPF metric is calculated on bandwidth only.

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

By default, EIGRP metric is calculated:

metric = bandwidth + delay

While OSPF is calculated by:

OSPF metric = Reference bandwidth / Interface bandwidth in bps

(Or Cisco uses 100Mbps (108) bandwidth as reference bandwidth. With this bandwidth, our equation would be:

Cost = 108/interface bandwidth in bps)

Answer:

QUESTION 128

What is one fact about Cisco SD-Access wireless network deployments?

- A. The access point is part of the fabric underlay
- B. The WLC is part of the fabric underlay
- C. The access point is part the fabric overlay
- D. The wireless client is part of the fabric overlay

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

Access Points

+ AP is directly connected to FE (or to an extended node switch)

+ AP is part of Fabric overlay

Reference: <https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2018/pdf/BRKEWN-2020.pdf>

Answer:

QUESTION 129

What are two differences between the RIB and the FIB? (Choose two)

- A. The FIB is derived from the data plane, and the RIB is derived from the FIB.
- B. The RIB is a database of routing prefixes, and the FIB is the information used to choose the egress interface for each packet.
- C. FIB is a database of routing prefixes, and the RIB is the information used to choose the egress interface for each packet.
- D. The FIB is derived from the control plane, and the RIB is derived from the FIB.
- E. The RIB is derived from the control plane, and the FIB is derived from the RIB.

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

Explanation

The Forwarding Information Base (FIB) contains destination reachability information as well as next hop information. This information is then used by the router to make forwarding decisions. The FIB allows for very efficient and easy lookups. Below is an example of the FIB table:

```

R2#show ip cef
Prefix                Next Hop              Interface
0.0.0.0/0             192.168.201.1        FastEthernet0/0
0.0.0.0/32            receive
192.168.201.0/27      attached              FastEthernet0/0
192.168.201.0/32      receive
192.168.201.1/32      192.168.201.1        FastEthernet0/0
192.168.201.2/32      receive
192.168.201.31/32     receive
224.0.0.0/4           drop
224.0.0.0/24          receive
255.255.255.255/32    receive

```

The FIB maintains next-hop address information based on the information in the IP routing table (RIB).

Note: In order to view the Routing information base (RIB) table, use the "show ip route" command. To view the Forwarding Information Base (FIB), use the "show ip cef" command. RIB is in Control plane while FIB is in Data plane.

Answer:

QUESTION 130

What is the function of the fabric control plane node in a Cisco SD-Access deployment?

- A. It is responsible for policy application and network segmentation in the fabric.
- B. It performs traffic encapsulation and security profiles enforcement in the fabric.
- C. It holds a comprehensive database that tracks endpoints and networks in the fabric.
- D. It provides integration with legacy nonfabric-enabled environments.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

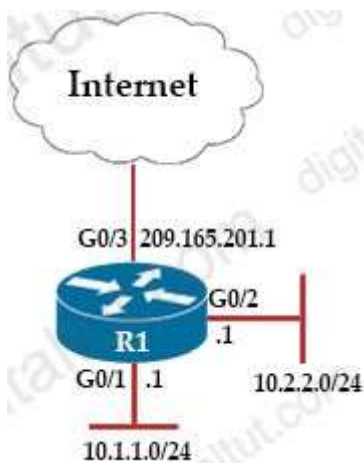
Fabric control plane node (C): One or more network elements that implement the LISP Map-Server (MS) and Map-Resolver (MR) functionality. The control plane node's host tracking database keep track of all endpoints in a fabric site and associates the endpoints to fabric nodes in what is known as an EID-to-RLOC binding in LISP.

Reference: <https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-macro-segmentation-deploy-guide.html>

Answer:

QUESTION 131

Refer to the exhibit.



An engineer must allow all users in the 10.2.2.0/24 subnet to access the Internet. To conserve address space, the public interface address of 209.165.201.1 must be used for all external communication. Which command set accomplishes these requirements?

- A. `access-list 10 permit 10.2.2.0 0.0.0.255`
`interface G0/3`
`ip nat outside`
`interface G0/2`
`ip nat inside`
`ip nat inside source list 10 interface G0/2 overload`
- B. `access-list 10 permit 10.2.2.0 0.0.0.255`
`interface G0/3`
`ip nat outside`
`interface G0/2`
`ip nat inside`
`ip nat inside source list 10 209.165.201.1`
- C. `access-list 10 permit 10.2.2.0 0.0.0.255`
`interface G0/3`
`ip nat outside`
`interface G0/2`
`ip nat inside`
`ip nat inside source list 10 interface G0/3`
- D. `access-list 10 permit 10.2.2.0 0.0.0.255`
`interface G0/3`
`ip nat outside`
`interface G0/2`
`ip nat inside`
`ip nat inside source list 10 interface G0/3 overload`

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

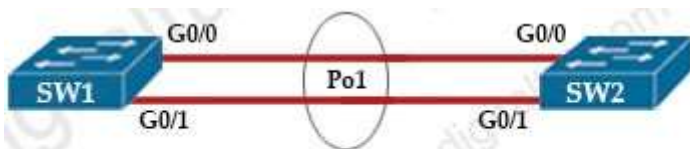
Explanation

The command "ip nat inside source list 10 interface G0/3 overload" configures NAT to overload (PAT) on the address that is assigned to the G0/3 interface.

Answer:

QUESTION 132

Refer to the exhibit.



```
SW1# show etherchannel summary
```

```
! output omitted
```

Group	Port-channel	Protocol	Ports
1	Po1 (SD)	-	

```
SW2#
```

```
08:33:23: %PM-4-ERR_DISABLE: channel-misconfig error detection on Gi0/0, putting Gi0/0 in err-disable state
```

```
08:33:23: %PM-4-ERR_DISABLE: channel-misconfig error detection on Gi0/1, putting Gi0/1 in err-disable state
```

After an engineer configures an EtherChannel between switch SW1 and switch SW2, this error message is logged on switch SW2. Based on the output from SW1 and the log message received on Switch SW2, what action should the engineer take to resolve this issue?

- A. Configure the same protocol on the EtherChannel on switch SW1 and SW2.
- B. Connect the configuration error on interface Gi0/1 on switch SW1.
- C. Define the correct port members on the EtherChannel on switch SW1.
- D. Correct the configuration error on interface Gi0/0 switch SW1.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

In this case, we are using your EtherChannel without a negotiation protocol. As a result, if the opposite switch is not also configured for EtherChannel operation on the respective ports, there is a danger of a switching loop. The EtherChannel Misconfiguration Guard tries to prevent that loop from occurring by disabling all the ports bundled in the EtherChannel.

Answer:

QUESTION 133

Which element enables communication between guest VMs within a virtualized environment?

- A. vSwitch
- B. virtual router
- C. hypervisor
- D. pNIC

Correct Answer: A

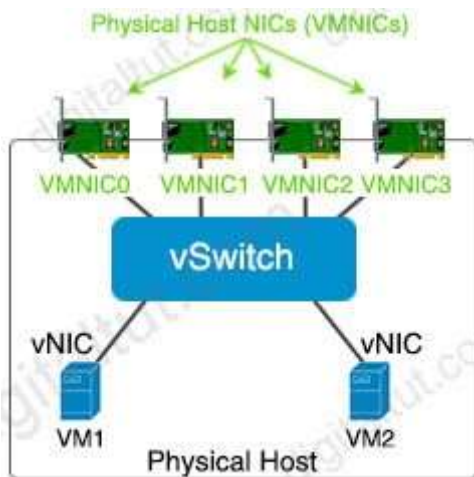
Section: (none)

Explanation

Explanation/Reference:

Explanation

Each VM is provided with a virtual NIC (vNIC) that is connected to the virtual switch. Multiple vNICs can connect to a single vSwitch, allowing VMs on a physical host to communicate with one another at layer 2 without having to go out to a physical switch.



Answer:

QUESTION 134

Refer to the exhibit.

```

vlan 222
remote-span
!
vlan 223
remote-span
!
monitor session 1 source interface FastEthernet0/1 tx
monitor session 1 source interface FastEthernet0/2 rx
monitor session 1 source interface port-channel 5
monitor session 1 destination remote vlan 222

```

These commands have been added to the configuration of a switch. Which command flags an error if it is added to this configuration?

- A. monitor session 1 source interface FastEthernet0/1 rx
- B. monitor session 1 source interface port-channel 6
- C. monitor session 1 source vlan 10
- D. monitor session 1 source interface port-channel 7, port-channel 8

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

RSPAN consists of at least one RSPAN source session, an RSPAN VLAN, and at least one RSPAN destination session. You separately configure RSPAN source sessions and RSPAN destination sessions on different network devices. To configure an RSPAN source session on a device, you associate a set of source ports or source VLANs with an RSPAN VLAN.

Traffic monitoring in a SPAN session has these restrictions:

+ Sources can be ports or VLANs, but you cannot mix source ports and source VLANs in the same session.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750x_3560x/software/release/12-2_55_se/configuration/guide/3750xscg/swspan.html

Therefore in this question, we cannot configure a source VLAN because we configured source ports for RSPAN session 1 already.

Answer:

QUESTION 135

Which entity is responsible for maintaining Layer 2 isolation between segments in a VXLAN environment?

- A. switch fabric
- B. host switch
- C. VTEP
- D. VNID

Correct Answer: D

Section: (none)

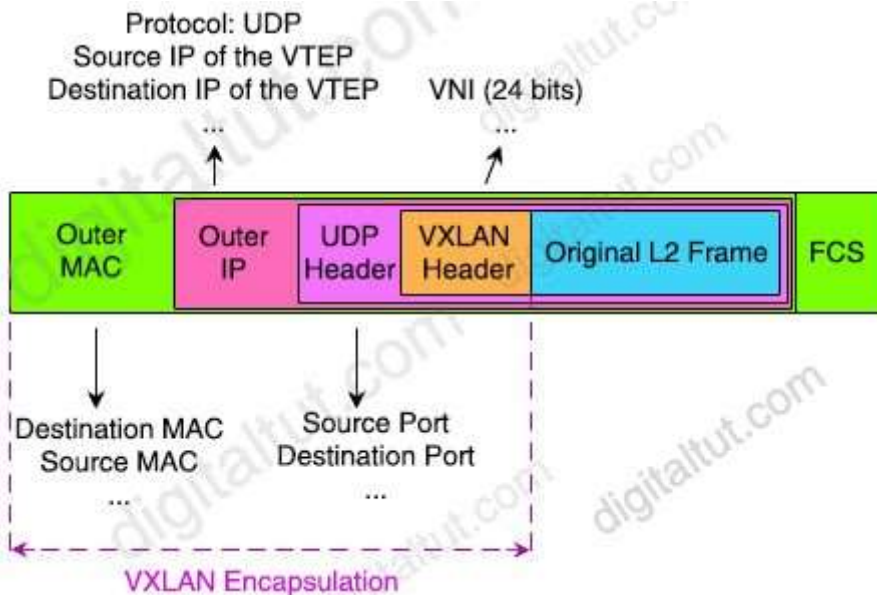
Explanation

Explanation/Reference:

Explanation

VXLAN uses an 8-byte VXLAN header that consists of a 24-bit VNID and a few reserved bits. The VXLAN header together with the original Ethernet frame goes in the UDP payload. The 24-bit VNID is used to identify Layer 2 segments and to maintain Layer 2 isolation between the segments.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/7-x/vxlan/configuration/guide/b_Cisco_Nexus_9000_Series_NX-OS_VXLAN_Configuration_Guide_7x/b_Cisco_Nexus_9000_Series_NX-OS_VXLAN_Configuration_Guide_7x_chapter_010.html Let's see the structure of a VXLAN packet to understand how (note: VNI = VNID)



The key fields for the VXLAN packet in each of the protocol headers are:

+ Outer MAC header (14 bytes with 4 bytes optional) Contains the MAC address of the source VTEP and the MAC address of the next-hop router.

Each router along the packet's path rewrites this header so that the source address is the router's MAC address and the destination address is the next-hop router's MAC address.

+ Outer IP header (20 bytes)- Contains the IP addresses of the source and destination VTEPs.

+ (Outer) UDP header (8 bytes)- Contains source and destination UDP ports:

Source UDP port: The VXLAN protocol repurposes this standard field in a UDP packet header. Instead of using this field for the source UDP port, the protocol uses it as a numeric identifier for the particular flow between VTEPs. The VXLAN standard does not define how this number is derived, but the source VTEP usually calculates it from a hash of some combination of fields from the inner Layer 2 packet and the Layer 3 or Layer 4 headers of the original frame.

Destination UDP port: The VXLAN UDP port. The Internet Assigned Numbers Authority (IANA) allocates port 4789 to VXLAN.

+ VXLAN header (8 bytes)- Contains the 24-bit VNI (or VNID)

+ Original Ethernet/L2 Frame Contains the original Layer 2 Ethernet frame.

Answer:

QUESTION 136

Which method does Cisco DNA Center use to allow management of non-Cisco devices through southbound protocols?

- A. It creates device packs through the use of an SDK
- B. It obtains MIBs from each vendor that details the APIs available.
- C. It uses an API call to interrogate the devices and register the returned data.
- D. It imports available APIs for the non-Cisco device in a CSV format.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

Cisco DNA Center allows customers to manage their non-Cisco devices through the use of a Software Development Kit (SDK) that can be used to create Device Packages for third-party devices.

Reference: <https://developer.cisco.com/docs/dna-center/#!/cisco-dna-center-platform-overview/multivendor-support-southbound>

Answer:

QUESTION 137

Refer to the exhibit.

<pre>R1 key chain cisco123 key 1 key-string Cisco123!</pre>	<pre>R2 key chain cisco123 key 1 key-string cisco123!</pre>
<pre>Ethernet0/0 - Group 10 State is Active 8 state changes, last state change 00:03:33 Virtual IP address is 192.168.0.1 Active virtual MAC address is 0000.0c07.ac0a Local virtual MAC address is 0000.0c07.ac0a (v1 default) Hello time 5 sec, hold time 15 sec Next hello sent in 2.704 secs Authentication MD5, key-chain "cisco123" Preemption enabled Active router is local Standby router is unknown Priority 255 (configured 255) Group name is "workstation-group" (cfgd)</pre>	<pre>Ethernet0/0 - Group 10 State is Active 17 state changes, last state change 00:03:33 Virtual IP address is 192.168.0.1 Active virtual MAC address is 0000.0c07.ac0a Local virtual MAC address is 0000.0c07.ac0a (v1 default) Hello time 10 sec, hold time 30 sec Next hello sent in 6.704 secs Authentication MD5, key-chain "cisco123" Preemption disabled Active router is local Standby router is unknown Priority 200 (configured 200) Group name is "workstation-group" (cfgd)</pre>

An engineer is installing a new pair of routers in a redundant configuration. When checking on the standby status of each router the engineer notices that the routers are not functioning as expected. Which action will resolve the configuration error?

- A. configure matching hold and delay timers
- B. configure matching key-strings
- C. configure matching priority values
- D. configure unique virtual IP addresses

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

From the output exhibit, we notice that the key-string of R1 is "Cisco123!" (letter "C" is in capital) while that

of R2 is "cisco123!". This causes a mismatch in the authentication so we have to fix their key-strings.

Note:

key-string [encryption-type] text-string: Configures the text string for the key. The text-string argument is alphanumeric, case-sensitive, and supports special characters.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/6-x/security/configuration/guide/b_Cisco_Nexus_9000_Series_NX-OS_Security_Configuration_Guide/b_Cisco_Nexus_9000_Series_NX-OS_Security_Configuration_Guide_chapter_01111.pdf

Answer:

QUESTION 138

Refer to the exhibit.

```
line vty 0 4
session-timeout 30
exec-timeout 120 0
session-limit 30
login local
line vty 5 15
session-timeout 30
exec-timeout 30 0
session-limit 30
login local
```

Only administrators from the subnet 10.10.10.0/24 are permitted to have access to the router. A secure protocol must be used for the remote access and management of the router instead of clear-text protocols. Which configuration achieves this goal?

Option A Option B

```
access-list 23 permit 10.10.10.0 0.0.0.255 access-list 23 permit 10.10.10.0 0.0.0.255 line vty 0 4 line vty 0
15
access-class 23 in access-class 23 in
transport input ssh transport input ssh
```

Option C Option D

```
access-list 23 permit 10.10.10.0 0.0.0.255 access-list 23 permit 10.10.10.0 255.0.0.0 line vty 0 15 line vty 0
15
access-class 23 out access-class 23 in
transport input all transport input ssh
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 139

What is used to validate the authenticity of the client and is sent in HTTP requests as a JSON object?

- A. SSH
- B. HTTPS
- C. JVT
- D. TLS

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Answer:

QUESTION 140
Refer to the exhibit.

```
monitor session 1 source vlan 10 -12 rx  
monitor session 1 destination interface gigabitethernet0/1
```

An engineer must configure a SPAN session. What is the effect of the configuration?

- A. Traffic sent on VLANs 10, 11, and 12 is copied and sent to interface g0/1.
- B. Traffic sent on VLANs 10 and 12 only is copied and sent to interface g0/1.
- C. Traffic received on VLANs 10 and 12 only is copied and sent to interface g0/1.
- D. Traffic received on VLANs 10, 11, and 12 is copied and sent to interface g0/1.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Answer:

QUESTION 141

In a Cisco SD-Access wireless architecture, which device manages endpoint ID to Edge Node bindings?

- A. fabric control plane node
- B. fabric wireless controller
- C. fabric border node
- D. fabric edge node

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

Explanation

SD-Access Wireless Architecture Control Plane Node A Closer Look

Fabric Control-Plane Node is based on a LISP Map Server / Resolver

Runs the LISP Endpoint ID Database to provide overlay reachability information

+ A simple Host Database, that tracks Endpoint ID to Edge Node bindings (RLOCs)

+ Host Database supports multiple types of Endpoint ID (EID), such as IPv4 /32, IPv6 /128* or MAC/48 +

Receives prefix registrations from Edge Nodes for wired clients, and from Fabric mode WLCs for wireless

clients + Resolves lookup requests from FE to locate Endpoints

+ Updates Fabric Edge nodes, Border nodes with wireless client mobility and RLOC information Reference:

<https://www.ciscolive.com/c/dam/r/ciscolive/latam/docs/2018/pdf/BRKEWN-2020.pdf>

===== New Questions (added on 24th-Dec-2020) =====

Answer:

QUESTION 142

Which control plane protocol is used between Cisco SD-WAN routers and vSmart controllers?

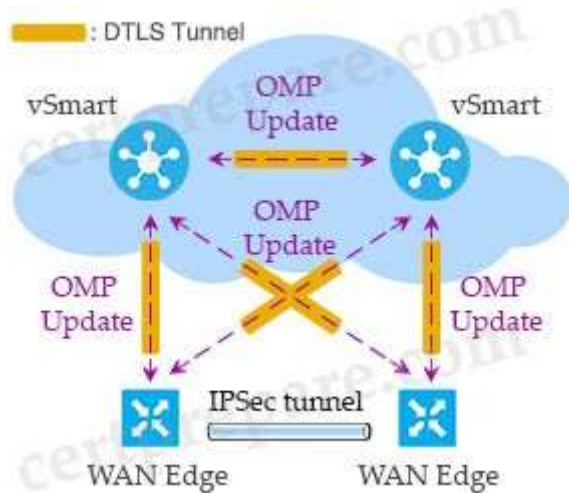
- A. BGP
- B. OMP
- C. TCP
- D. UDP

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

Explanation

Cisco SD-WAN uses Overlay Management Protocol (OMP) which manages the overlay network. OMP runs between the vSmart controllers and WAN Edge routers (and among vSmarts themselves) where control plane information, such as the routing, policy, and management information, is exchanged over a secure connection.



Answer:

QUESTION 143

In a Cisco Catalyst switch equipped with two supervisor modules an administrator must temporarily remove the active supervisor from the chassis to perform hardware maintenance on it. Which mechanism ensure that the active supervisor removal is not disruptive to the network operation?

- A. NSF/NSR
- B. SSO
- C. HSRP
- D. VRRP

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

Explanation

Stateful Switchover (SSO) provides protection for network edge devices with dual Route Processors (RPs) that represent a single point of failure in the network design, and where an outage might result in loss of service for customers.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/12-2SY/configuration/guide/sy_swcg/stateful_switchover.html

Answer:

QUESTION 144

Which router is elected the IGMP Querier when more than one router is in the same LAN segment?

- A. The router with the shortest uptime
- B. The router with the lowest IP address
- C. The router with the highest IP address

D. The router with the longest uptime

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

Query messages are used to elect the IGMP querier as follows:

1. When IGMPv2 devices start, they each multicast a general query message to the all-systems group address of 224.0.0.1 with their interface address in the source IP address field of the message.
2. When an IGMPv2 device receives a general query message, the device compares the source IP address in the message with its own interface address.

The device with the lowest IP address on the subnet is elected the IGMP querier.

3. All devices (excluding the querier) start the query timer, which is reset whenever a general query message is received from the IGMP querier. If the query timer expires, it is assumed that the IGMP querier has gone down, and the election process is performed again to elect a new IGMP querier.

Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst3750x_3560x/software/release/15-2_2_e/multicast/configuration_guide/b_mc_1522e_3750x_3560x_cg/b_ipmc_3750x_3560x_chapter_01000.html

Answer:

QUESTION 145

Refer to the exhibit.

```
ip sla 10
icmp-echo 192.168.10.20
timeout 500
frequency 3
ip sla schedule 10 life forever start-time now
track 10 ip sla 10 reachability
```

The IP SLA is configured in a router. An engineer must configure an EEM applet to shut down the interface and bring it back up when there is a problem with the IP SLA. Which configuration should the engineer use?

- A. event manager applet EEM_IP_SLA
event track 10 state down
- B. event manager applet EEM_IP_SLA
event track 10 state unreachable
- C. event manager applet EEM_IP_SLA
event sla 10 state unreachable
- D. event manager applet EEM_IP_SLA
event sla 10 state down

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

The "ip sla 10" will ping the IP 192.168.10.20 every 3 seconds to make sure the connection is still up. We can configure an EEM applet if there is any problem with this IP SLA via the command "event track 10 state down".

Reference: <https://www.theroutingtable.com/ip-sla-and-cisco-eem/>

Answer:

QUESTION 146

A network engineer is configuring Flexible NetFlow and enters these commands:

```
Sampler Netflow1
mode random one-out-of 100
```

interface fastethernet 1/0
flow-sampler netflow1

Which are two results of implementing this feature instead of traditional NetFlow? (Choose two)

- A. Only the flows of top 100 talkers are exported
- B. CPU and memory utilization are reduced
- C. The data export flow is more secure
- D. The accuracy of the data to be analyzed is improved
- E. The number of packets to be analyzed are reduced

Correct Answer: BE

Section: (none)

Explanation

Explanation/Reference:

Explanation

The "mode random one-out of 100" specifies that sampling uses the random mode and only take one sample out of every 100 packets.

===== New Questions (added on 11th-Jan-2021) =====

Answer:

QUESTION 147

What is a benefit of using a Type 2 hypervisor instead of a Type 1 hypervisor?

- A. ability to operate on hardware that is running other OSs
- B. improved security because the underlying OS is eliminated
- C. improved density and scalability
- D. better application performance

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

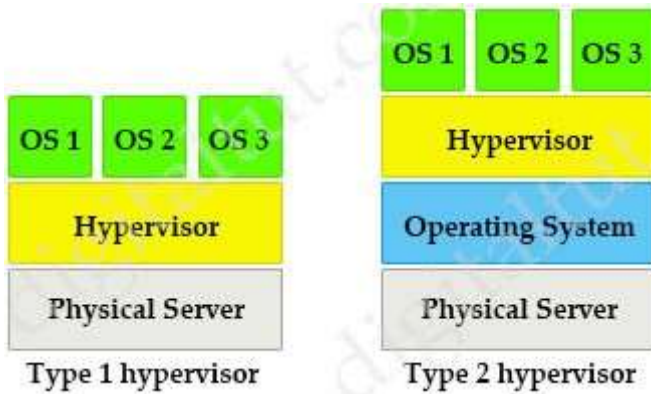
There are two types of hypervisors: type 1 and type 2 hypervisor.

In type 1 hypervisor (or native hypervisor), the hypervisor is installed directly on the physical server. Then instances of an operating system (OS) are installed on the hypervisor. Type 1 hypervisor has direct access to the hardware resources. Therefore they are more efficient than hosted architectures.

Some examples of type 1 hypervisor are VMware vSphere/ESXi, Oracle VM Server, KVM and Microsoft Hyper-V.

In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).

Type 1 is more efficient and well performing, it is also more secure than type 2 because the flaws and vulnerabilities that are endemic to Operating Systems are often absent from Type 1, bare metal hypervisors. Type 1 has better performance, scalability and stability but supported by limited hardware.



===== New Questions (added on 17th-Jan-2021) =====

Answer:

QUESTION 148

In a wireless Cisco SD-Access deployment, which roaming method is used when a user moves from one access point to another on a different access switch using a single WLC?

- A. Layer 3
- B. inter-xTR
- C. auto anchor
- D. fast roam

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 149

Which DHCP option provides the CAPWAP APs with the address of the wireless controller(s)?

- A. 43
- B. 66
- C. 69
- D. 150

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 150

An engineer must configure HSRP group 300 on a Cisco IOS router. When the router is functional, it must be the active HSRP router. The peer router has been configured using the default priority value. Which three commands are required? (Choose three)

- A. standby 300 timers 1 110
- B. standby 300 priority 90
- C. standby 300 priority 110
- D. standby version 2
- E. standby version 1
- F. standby 300 preempt

Correct Answer: CDF
Section: (none)
Explanation

Explanation/Reference:
Answer:

QUESTION 151

In a traditional 3 tier topology, an engineer must explicitly configure a switch as the root bridge and exclude it from any further election process for the spanning-tree domain. Which action accomplishes this task?

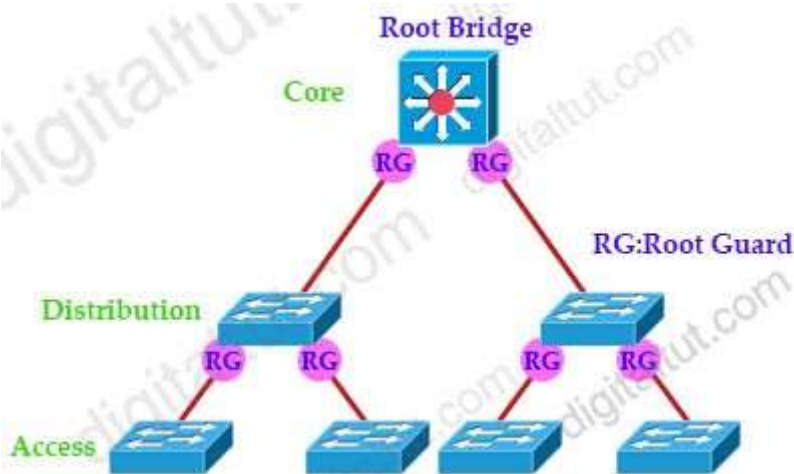
- A. Configure the spanning-tree priority to 32768
- B. Configure root guard and portfast on all access switch ports
- C. Configure BPDU guard in all switch-to-switch connections
- D. Configure the spanning-tree priority equal to 0

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation

Root guard does not allow the port to become a STP root port, so the port is always STP-designated. If a better BPDU arrives on this port, root guard does not take the BPDU into account and elect a new STP root. Instead, root guard puts the port into the root-inconsistent STP state which is equal to a listening state. No traffic is forwarded across this port.

Below is an example of where to configure Root Guard on the ports. Notice that Root Guard is always configure on designated ports.



To configure Root Guard use this command:

Switch(config-if)# spanning-tree guard root

Reference: <http://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/10588-74.html>

Answer:

QUESTION 152

Refer to the exhibit.



Cisco DNA Center has obtained the username of the client and the multiple devices that the client is using on the network. How is Cisco DNA Center getting these context details?

- A. Those details are provided to Cisco DNA Center by the Identity Services Engine
- B. The administrator had to assign the username to the IP address manually in the user database tool on Cisco DNA Center
- C. User entered those details in the Assurance app available on iOS and Android devices
- D. Cisco DNA Center pulled those details directly from the edge node where the user connected

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Features of the Cisco DNA Assurance solution includes Device 360 and client 360, which provides a detailed view of the performance of any device or client over time and from any application context. Provides very granular troubleshooting in seconds.

QUESTION 153

Which QoS queuing method transmits packets out of the interface in the order the packets arrive?

- A. custom
- B. weighted- fair
- C. FIFO
- D. priority

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

First-in, first-out (FIFO): FIFO entails no concept of priority or classes of traffic. With FIFO, transmission of packets out the interface occurs in the order the packets arrive, which means no QoS.

Answer:

QUESTION 154

Refer to the exhibit.

```

Router1#
Router1#show run int tunnel 0
Building configuration...

Current configuration : 93 bytes
!
interface Tunnel0
 ip address 172.16.1.1 255.255.255.0
 tunnel destination 192.168.10.2
end

```

```

Router1#show ip int brief

```

Interface	IP-Address	OK?	Method	Status	Protocol
GigabitEthernet0/0	192.1681.1	YES	manual	up	up
GigabitEthernet0/1	unassigned	YES	unset	administratively down	down
GigabitEthernet0/2	unassigned	YES	unset	administratively down	down
GigabitEthernet0/3	unassigned	YES	unset	administratively down	down
Loopback0	192.168.10.1	YES	manual	up	up
Tunnel0	172.16.1.1	YES	manual	up	down

Which command must be applied to Router1 to bring the GRE tunnel to an up/up state?

- A. Router1(config-if)#tunnel source Loopback0
- B. Router1(config-if)#tunnel source GigabitEthernet0/1
- C. Router1(config-if)#tunnel mode gre multipoint
- D. Router1(config)#interface tunnel0

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

In order to make a Point-to-Point GRE Tunnel interface in up/up state, two requirements must be met:
 + A valid tunnel source (which is in up/up state and has an IP address configured on it) and tunnel destination must be configured + A valid tunnel destination is one which is routable. However, it does not have to be reachable.

-> In this question we are missing an up/up source so we can choose Loopback 0 interface.

Answer:

QUESTION 155

Refer to the exhibit.

```
Router#sh run | b vty
```

```

line vty 0 4
 session-timeout 30
 exec-timeout 20 0
 session-limit 30
 login local
 line vty 5 15
 session-timeout 30
 exec-timeout 20 0
 session-limit 30
 login local

```

Security policy requires all idle-exec sessions to be terminated in 600 seconds. Which configuration achieves this goal?

- A. line vty 0 15
exec-timeout 10 0
- B. line vty 0 15
exec-timeout
- C. line vty 0 15
absolute-timeout 600
- D. line vty 0 4
exec-timeout 600

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

The "exec-timeout" command is used to configure the inactive session timeout on the console port or the virtual terminal. The syntax of this command is:

```
exec-timeout minutes [seconds]
```

Therefore we need to use the "exec-timeout 10 0" command to set the user inactivity timer to 600 seconds (10 minutes).

Answer:

QUESTION 156

A wireless consultant is designing a high-density wireless network for a lecture hall for 1000 students. Which antenna type is recommended for this environment?

- A. sector antenna
- B. dipole antenna
- C. parabolic dish
- D. omnidirectional antenna

Correct Answer: D

Section: (none)

Explanation

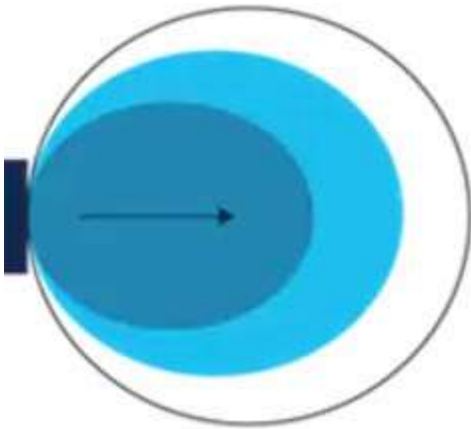
Explanation/Reference:

Explanation

Directional antennas

Directional antennas come in many different styles and shapes. An antenna does not offer any added power to the signal; it simply redirects the energy it receives from the transmitter. By redirecting this energy, it has the effect of providing more energy in one direction and less energy in all other directions.

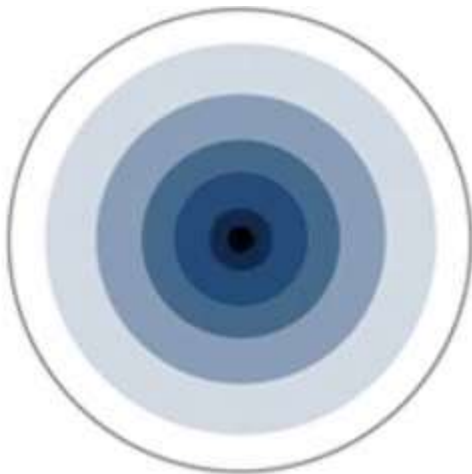
As the gain of a directional antenna increases, the angle of radiation usually decreases, providing a greater coverage distance but with a reduced coverage angle. Directional antennas include patch antennas and parabolic dishes. Parabolic dishes have a very narrow RF energy path, and the installer must be accurate in aiming these types of antennas at each other.



Directional patch antenna

Reference: https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/product_data_sheet09186a008008883b.html Omnidirectional antennas

An omnidirectional antenna is designed to provide a 360-degree radiation pattern. This type of antenna is used when coverage in all directions from the antenna is required. The standard 2.14-dBi "rubber duck" is one style of omnidirectional antenna.



Omnidirectional antenna

-> Therefore Omnidirectional antenna is best suited for a high-density wireless network in a lecture hall.

Answer:

QUESTION 157

Refer to the exhibit. How can you configure a second export destination for IP address 192.168.10.1?

```
configure terminal
ip flow-export destination 192.168.10.1 9991
ip flow-export version 9
```

- A. Specify a different TCP port
- B. Specify a different UDP port
- C. Specify a VRF
- D. Configure a version 5 flow-export to the same destination
- E. Specify a different flow ID

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

To configure multiple NetFlow export destinations to a router, use the following commands in global configuration mode:

Step 1: Router(config)# ip flow-export destination ip-address udp-port

Step 2: Router(config)# ip flow-export destination ip-address udp-port

The following example enables the exporting of information in NetFlow cache entries:

```
ip flow-export destination 10.42.42.1 9991
```

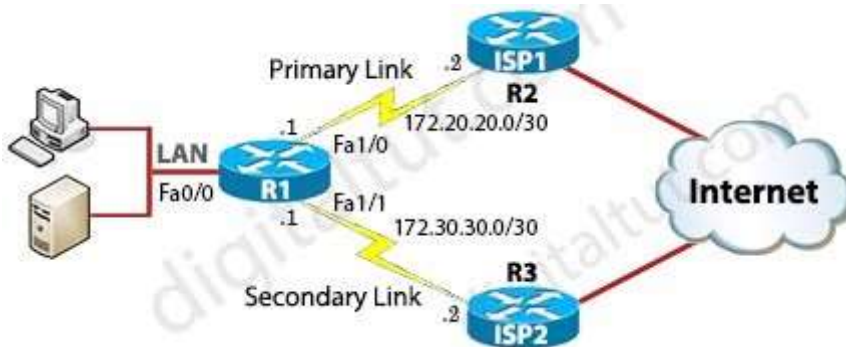
```
ip flow-export destination 10.0.101.254 1999
```

Reference: https://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/12s_mdnf.html

Answer:

QUESTION 158

Refer to exhibit. What are two reasons for IP SLA tracking failure? (Choose two)



```
R1(config)#ip sla 1
R1(config-ip-sla)#icmp-echo 172.20.20.2 source-interface FastEthernet0/0
R1(config-ip-sla-echo)#timeout 5000
R1(config-ip-sla-echo)#frequency 10
R1(config-ip-sla-echo)#threshold 500
R1(config)#ip sla schedule 1 start-time now life forever
R1(config)#track 10 ip sla 1 reachability
R1(config)#ip route 0.0.0.0 0.0.0.0 172.20.20.2 track 10
R1(config)#no ip route 0.0.0.0 0.0.0.0 172.20.20.2
R1(config)#ip route 0.0.0.0 0.0.0.0 172.30.30.2 5
```

- A. The source-interface is configured incorrectly
- B. The destination must be 172.30.30.2 for icmp-echo
- C. A route back to the R1 LAN network is missing in R2
- D. The default route has wrong next hop IP address
- E. The threshold value is wrong

Correct Answer: CE

Section: (none)

Explanation

Explanation/Reference:

Explanation

There is no problem with the Fa0/0 as the source interface as we want to check the ping from the LAN interface -> A is not correct.

Answer B is not correct as we must track the destination of the primary link, not backup link.

In this question, R1 pings R2 via its LAN Fa0/0 interface so maybe R1 (which is an ISP) will not know how to reply back as an ISP usually does not configure a route to a customer's LAN -> C is correct.

There is no problem with the default route -> D is not correct.

For answer E, we need to understand about how timeout and threshold are defined:

Timeout (in milliseconds) sets the amount of time an IP SLAs operation waits for a response from its request packet. In other words, the timeout specifies how long the router should wait for a response to its ping before it is considered failed. Threshold (in milliseconds too) sets the upper threshold value for calculating network monitoring statistics created by an IP SLAs operation. Threshold is used to activate a response to IP SLA violation, e.g.

send SNMP trap or start secondary SLA operation. In other words, the threshold value is only used to indicate over threshold events, which do not affect reachability but may be used to evaluate the proper settings for the timeout command.

For reachability tracking, if the return code is OK or OverThreshold, reachability is up; if not OK, reachability is down.

Therefore in this question, we are using "Reachability" tracking (via the command "track 10 ip sla 1 reachability") so threshold value is not important and can be ignored -> Answer E is correct. In fact, answer E is not wrong but it is the best option left.

This tutorial can help you revise IP SLA tracking topic: <http://www.firewall.cx/cisco-technical-knowledgebase/cisco-routers/813-cisco-router-ipsla-basic.html> and <http://www.ciscozine.com/using-ip-sla-to-change-routing/>

Note: Maybe some of us will wonder why there are these two commands:

```
R1(config)#ip route 0.0.0.0 0.0.0.0 172.20.20.2 track 10
```

```
R1(config)#no ip route 0.0.0.0 0.0.0.0 172.20.20.2
```

In fact the two commands:

```
ip route 0.0.0.0 0.0.0.0 172.20.20.2 track 10
```

```
ip route 0.0.0.0 0.0.0.0 172.20.20.2
```

are different. These two static routes can co-exist in the routing table. Therefore if the tracking goes down, the first command will be removed but the second one still exists and the backup path is not preferred. So we have to remove the second one.

Answer:

QUESTION 159

Which protocol is responsible for data plane forwarding in a Cisco SD-Access deployment?

- A. VXLAN
- B. IS-IS
- C. OSPF
- D. LISP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 160

Refer to the exhibit.

```

DSW2#sh spanning-tree vlan 10

VLAN0010
  Spanning tree enabled protocol ieee
  Root ID          Priority 10
                  Address 0018.7363.4300
                  Cost    2
                  Port    9 (FastEthernet1/0/7)
                  Hello Time 2 sec Max Age 20 sec
                  Forward Delay 15 sec

  Bridge ID Priority 4106 (priority 4096 sys-id-ext 10)
          Address 001b.0d8e.e080
          Hello Time 2 sec Max Age 20 sec
          Forward Delay 15 sec
          Aging Time 300 sec

Interface Role Sts Cost Prio.Nbr Type
-----
Fa1/0/7   Root FWD 2    128.9   P2p
Fa1/0/10  Desg FWD 4    128.12  P2p
Fa1/0/11  Desg FWD 2    128.13  P2p
Fa1/0/12  Desg FWD 2    128.14  P2p

```

DSW2#

```

*Mar 3 09:33:23.234: #SPANTREE-2-BLOCK_BPDUGUARD: Received BPDU on port Fa1/0/7 with BPDU Guard enabled. Disabling port.
*Mar 3 09:33:23.234: %PM-4-ERR_DISABLE: bpduguard error detected on Fa1/0/7, putting Fa1/0/7 in err-disable state
*Mar 3 09:33:23.678: %SPANTREE-2-BLOCK_BPDUGUARD: Received BPDU on port Fa1/0/7 with BPDU Guard enabled. Disabling port.
*Mar 3 09:33:23.679: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0/7, changed state to down
*Mar 3 09:33:23.701: %LINK-3-UPDOWN: Interface FastEthernet1/0/7, changed state to down

```

An engineer entered the no spanning-tree bpduguard enable on interface fa1/0/7 command. Which statement describes the effect of this command?

- A. Fa1/0/7 remains in err-disabled state until the shutdown/no shutdown command is entered in the interface configuration mode
- B. Interface Fa1/0/7 remains in err-disabled state until the errdisable recovery cause bpduguard command is entered in the interface configuration mode
- C. Fa1/0/7 remains in err-disabled state until the errdisable recovery bpduguard command is entered in the interface configuration mode
- D. Interface Fa1/0/7 remains in err-disabled state until the spanning-tree portfast bpduguard disable command is entered in the interface configuration mode
- E. Interface Fa1/0/7 returns to an up and operational state

Correct Answer: A

Section: (none)

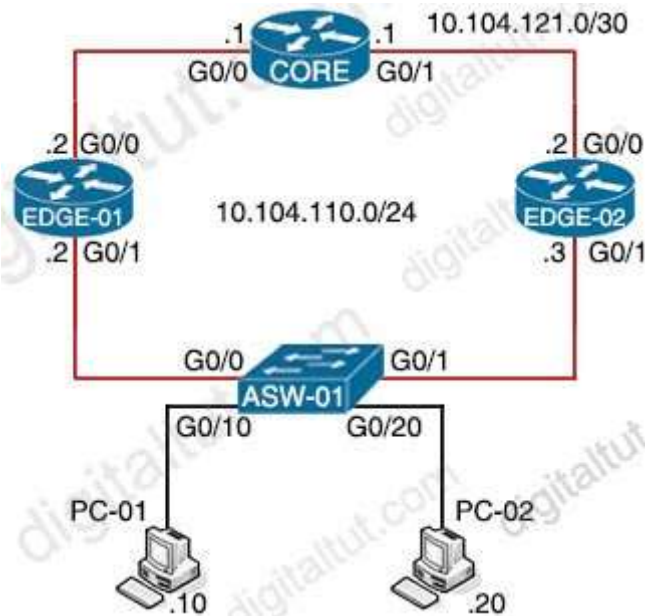
Explanation

Explanation/Reference:

Answer:

QUESTION 161

Refer to the exhibit.



On which interfaces should VRRP commands be applied to provide first hop redundancy to PC-01 and PC-02?

- A. G0/0 on Edge-01 and G0/0 on Edge-02
- B. G0/1 on Edge-01 and G0/1 on Edge-02
- C. G0/0 and G0/1 on Core
- D. G0/0 and G0/1 on ASW-01

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 162

Refer to the exhibit.

```
interface Vlan10
ip vrf forwarding Customer1
ip address 192.168.1.1 255.255.255.0
!
interface Vlan20
ip vrf forwarding Customer2
ip address 172.16.1.1 255.255.255.0
!
interface Vlan30
ip vrf forwarding Customer3
ip address 10.1.1.1 255.255.255.0
```

Which configuration allows Customer2 hosts to access the FTP server of Customer1 that has the IP address of 192.168.1.200?

- A. ip route vrf Customer1 172.16.1.0 255.255.255.0 172.16.1.1 global
ip route vrf Customer2 192.168.1.200 255.255.255.255 192.168.1.1 global
ip route 192.168.1.0 255.255.255.0 Vlan10
ip route 172.16.1.0 255.255.255.0 Vlan20
- B. ip route vrf Customer1 172.16.1.0 255.255.255.0 172.16.1.1 Customer2
ip route vrf Customer2 192.168.1.200 255.255.255.255 192.168.1.1 Customer1
- C. ip route vrf Customer1 172.16.1.0 255.255.255.0 172.16.1.1 Customer1
ip route vrf Customer2 192.168.1.200 255.255.255.255 192.168.1.1 Customer2

```
D. ip route vrf Customer1 172.16.1.1 255.255.255.255 172.16.1.1 global
ip route vrf Customer2 192.168.1.200 255.255.255.0 192.168.1.1 global
ip route 192.168.1.0 255.255.255.0 Vlan10
ip route 172.16.1.0 255.255.255.0 Vlan20
```

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

Static routes directly between VRFs are not supported so we cannot configure a direct static route between two VRFs.

The command "ip route vrf Customer1 172.16.1.0 255.255.255.0 172.16.1.1 global" means in VRF Customer1, in order to reach destination 172.16.1.0/24 then we use the next hop IP address 172.16.1.1 in the global routing table. And the command "ip route 192.168.1.0 255.255.255.0 Vlan10" tells the router "to reach 192.168.1.0/24, send to Vlan 10".

Answer:

QUESTION 163

Refer to the exhibit.

```
aaa new-model
aaa authentication login local tacacs+
tacacs-server host 10.1.1.1
tacacs-server key CISCO
```

```
line con 0
 login authentication local
line aux 0
line vty 0 4
!
username tommy password 0 Cisco
end
```

TACACS+ Server Passwords

```
username tommy password 0 Tommy
```

Which password allows access to line con 0 for a username of "tommy" under normal operation?

- A. Cisco
- B. local
- C. 0 Cisco
- D. Tommy

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

In this question, there are two different passwords for user "tommy":

+ In the TACACS+ server, the password is "Tommy"

+ In the local database of the router, the password is "Cisco".

From the line "login authentication local" we know that the router uses the local database for authentication so the password should be "Cisco".

Note: "... password 0 ..." here means unencrypted password.

Answer:

QUESTION 164

Which tunneling technique is used when designing a Cisco SD-Access fabric data plane?

- A. VXLAN
- B. VRF Lite
- C. VRF
- D. LISP

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

The tunneling technology used for the fabric data plane is based on Virtual Extensible LAN (VXLAN). VXLAN encapsulation is UDP based, meaning that it can be forwarded by any IP-based network (legacy or third party) and creates the overlay network for the SD-Access fabric. Although LISP is the control plane for the SD-Access fabric, it does not use LISP data encapsulation for the data plane; instead, it uses VXLAN encapsulation because it is capable of encapsulating the original Ethernet header to perform MAC-in-IP encapsulation, while LISP does not. Using VXLAN allows the SD-Access fabric to support Layer 2 and Layer 3 virtual topologies (overlays) and the ability to operate over any IP-based network with built-in network segmentation (VRF instance/VN) and built-in group-based policy.

Reference: CCNP and CCIE Enterprise Core ENCOR 350-401 Official Cert Guide

Answer:

QUESTION 165

An engineer has deployed a single Cisco 5520 WLC with a management IP address of 172.16.50.5/24. The engineer must register 50 new Cisco AIR- CAP2802I-E-K9 access points to the WLC using DHCP option 43.

The access points are connected to a switch in VLAN 100 that uses the 172.16.100.0/24 subnet. The engineer has configured the DHCP scope on the switch as follows:

```
Network 172.16.100.0 255.255.255.0
Default Router 172.16.100.1
Option 43 Ascii 172.16.50.5
```

The access points are failing to join the wireless LAN controller. Which action resolves the issue?

- A. configure option 43 Hex F104.AC10.3205
- B. configure option 43 Hex F104.CA10.3205
- C. configure dns-server 172.16.50.5
- D. configure dns-server 172.16.100.1

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

Explanation

172.16.50.5 in hex is

We will have the answer from this paragraph:

"TLV values for the Option 43 suboption: Type + Length + Value. Type is always the suboption code 0xf1. Length is the number of controller management IP addresses times 4 in hex. Value is the IP address of the controller listed sequentially in hex. For example, suppose there are two controllers with management interface IP addresses, 192.168.10.5 and 192.168.10.20. The type is 0xf1. The length is $2 * 4 = 8 = 0x08$. The IP addresses translates to c0a80a05 (192.168.10.5) and c0a80a14 (192.168.10.20). When the string is assembled, it yields f108c0a80a05c0a80a14. The Cisco IOS command that is added to the DHCP scope is

option 43 hex f108c0a80a05c0a80a14."

Reference: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/97066-dhcp-option-43-00.html> Therefore in this question the option 43 in hex should be "F104.AC10.3205 (the management IP address of 172.16.50.5 in hex is AC.10.32.05).

Answer:

QUESTION 166

Why would a log file contain a * next to the date?

- A. The network device is not configured to use NTP time stamps for logging.
- B. The network device was unable to reach the NTP server when the log messages were recorded.
- C. The network device is not configured to use NTP
- D. The network device was receiving NTP time when the log messages were recorded

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

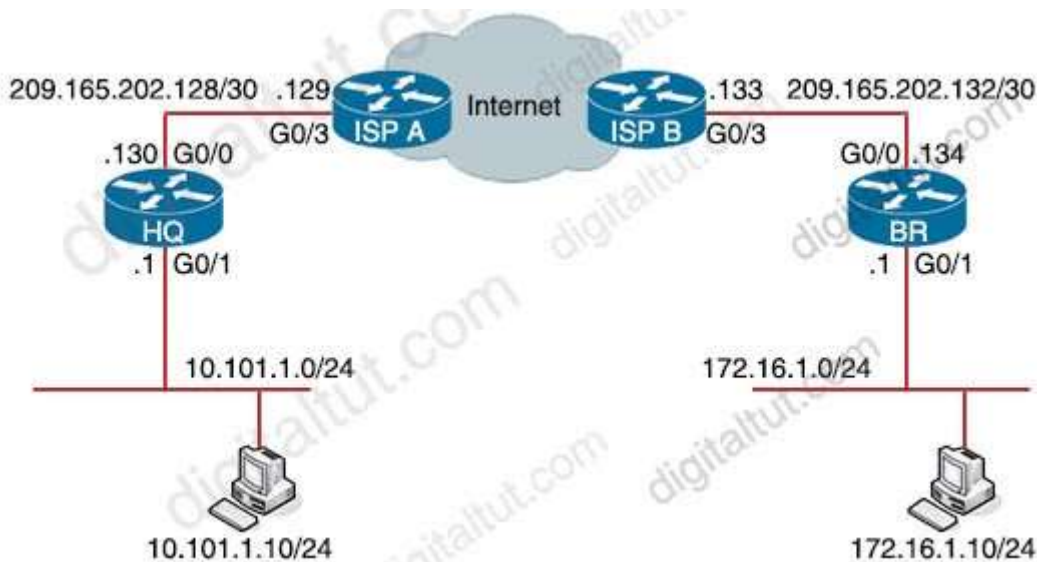
If the system clock has not been set, the date and time are preceded by an asterisk (*) to indicate that the date and time are probably not correct.

Reference: https://www.cisco.com/E-Learning/bulk/public/tac/cim/cib/using_cisco_ios_software/cmdrefs/service_timestamps.htm Although there is no obvious correct answer in this question but the best answer should be "the device was unable to reach the NTP server" (and date time are probably not correct).

Answer:

QUESTION 167

Refer to the exhibit.



> Frame 24: 138 bytes on wire (1104 bits), 138 bytes captured (1104 bits) on interface 0 > Ethernet II, Src: 50:00:00:01:00:01 (50:00:00:01:00:01), Dst: 50:00:00:02:00:01 (50:00:00:02:00:01) > Internet Protocol Version 4, Src: 209.165.202.130, Dst: 209.165.202.134
> Generic Routing Encapsulation (IP)
> Internet Protocol Version 4, Src: 10.111.111.1, Dst: 10.111.111.2
> Internet Control Message Protocol

A GRE tunnel has been created between HQ and BR routers. What is the tunnel IP on the HQ router?

- A. 209.165.202.130
- B. 10.111.111.2

- C. 10.111.111.1
- D. 209.165.202.134

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Explanation

In the above output, the IP address of "209.165.202.130" is the tunnel source IP while the IP 10.111.1.1 is the tunnel IP address.

An example of configuring GRE tunnel is shown below:

R1 (GRE config only)

R2 (GRE config only)

interface s0/0/0

interface s0/0/0

ip address 63.1.27.2 255.255.255.0

ip address 85.5.24.10 255.255.255.0

interface tunnel0

interface tunnel1

ip address 10.0.0.1 255.255.255.0

ip address 10.0.0.2 255.255.255.0

tunnel mode gre ip //this command can be ignored

tunnel source 85.5.24.10

tunnel source s0/0

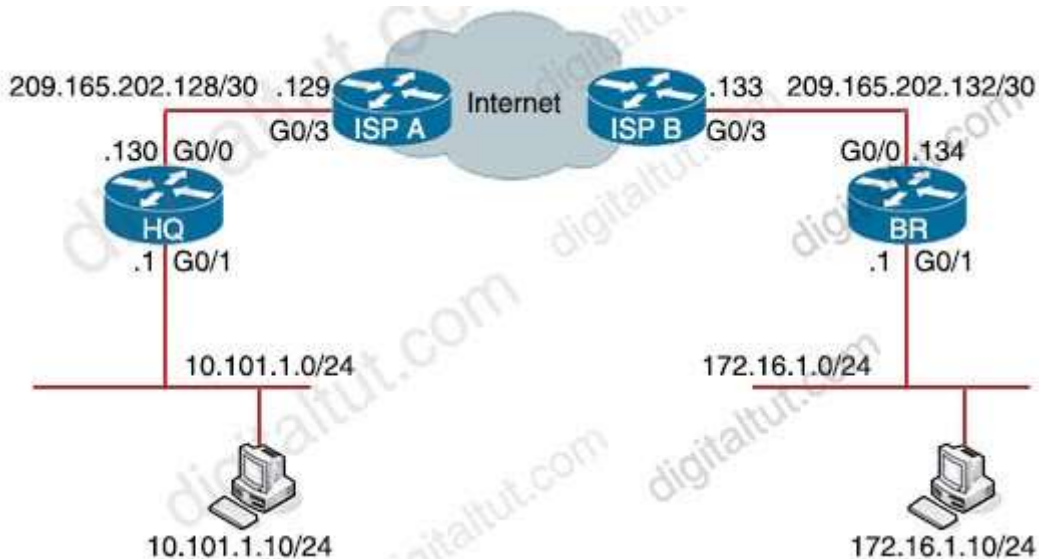
tunnel destination 63.1.27.2

tunnel destination 85.5.24.10

Answer:

QUESTION 168

Refer to the exhibit.



Option A Option B

interface Tunnel1 interface Tunnel1

ip address 209.165.202.130 255.255.255.252 ip address 10.111.111.1 255.255.255.0 tunnel source

GigabitEthernet0/0 tunnel source GigabitEthernet0/0

tunnel destination 209.165.202.129 tunnel destination 209.165.202.133

Option C Option D

interface Tunnel1 interface Tunnel1

ip address 10.111.111.1 255.255.255.0 ip address 10.111.111.1 255.255.255.0

tunnel source GigabitEthernet0/0 tunnel source GigabitEthernet0/0

tunnel destination 209.165.202.134 tunnel destination 209.165.202.129

Which configuration must be applied to the HQ router to set up a GRE tunnel between the HQ and BR routers?

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

Answer:

QUESTION 169

A customer has deployed an environment with shared storage to allow for the migration of virtual machines between servers with dedicated operating systems that provide the virtualization platform. What is this operating system described as?

- A. hosted virtualization
- B. type 1 hypervisor
- C. container oriented
- D. decoupled

Correct Answer: A

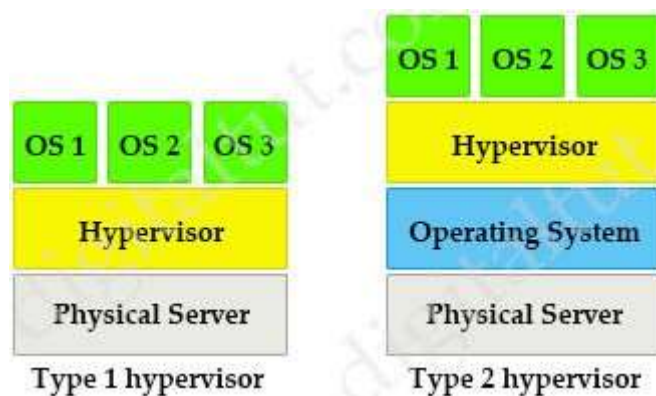
Section: (none)

Explanation

Explanation/Reference:

Explanation

Hosted virtualization is type 2 hypervisor. In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).



Answer:

QUESTION 170

Refer to the exhibit.

Make is Gocar
Model is Zoom

- Features are
- + Power Windows
 - + Manual Drive

+ Auto AC

What is the JSON syntax that is formed from the data?

- A. Make:Gocar, Model: Zoom, Features: ["Power Windows", "Manual Dnve", "Auto AC"]}
- B. ("Make":["Gocar", "Model": "Zoom"], Features: ["Power Windows", "Manual Drive", "Auto AC"]}
- C. {"Make": Gocar, "Model": Zoom, "Features": Power Windows, Manual Drive, Auto AC}
- D. "Make": "Gocar", "Model": "Zoom", "Features": ["Power Windows", "Manual Drive", "Auto AC"]

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Explanation

JSON syntax structure:

+ uses curly braces {} to hold objects and square brackets [] to hold arrays

+ JSON data is written as key/value pairs

+ A key/value pair consists of a key (must be a string in double quotation marks ""), followed by a colon :, followed by a value. For example:

```
"name": "John"
```

+ Each key must be unique

+ Values must be of type string, number, object, array, boolean or null

+ Multiple key/value within an object are separated by commas ,

JSON can use arrays. Arrays are used to store multiple values in a single variable. For example:

```
{  
  "name": "John",  
  "age": 30,  
  "cars": [ "Ford", "BMW", "Fiat"]  
}
```

In the above example, "cars" is an array which contains three values "Ford", "BMW" and "Fiat".

Note: Although our correct answer above does not have curly braces to hold objects but it is still the best choice here

QUESTION 171

Refer to the exhibit.

An engineer is designing a guest portal on Cisco ISE using the default configuration. During the testing phase, the engineer receives a warning when displaying the guest portal. Which issue is occurring?

- A. The server that is providing the portal has an expired certificate
- B. The server that is providing the portal has a self-signed certificate
- C. The connection is using an unsupported protocol
- D. The connection is using an unsupported browser

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

Explanation

If you're a website owner and your website displays this error message, then there could be two reasons why the browser says the cert authority is invalid:

+ You're using a self-signed SSL certificate, OR

+ The certificate authority (CA) that issued your SSL certificate isn't trusted by your web browser.

Answer:

QUESTION 172

Refer to the exhibit. Which level message does the WLC send to the syslog server?

The image shows a configuration interface for a network device. On the left is a navigation menu under 'Management' with options: Summary, SNMP, HTTP-HTTPS, Telnet-SSH, Serial Port, Local Management Users, User Sessions, Logs (with sub-options Config and Message logs), Mgmt Via Wireless, and Tech Support. The main area is titled 'Syslog Server' and shows a server IP of 192.168.100.2 with a 'Remove' link. Below this are settings for Syslog Level (Errors), Syslog Facility (Local Use 0), IPsec (unchecked), and IPsec Profile Name (none). A section titled 'Msg Log Configuration' includes Buffered Log Level (Errors), Console Log Level (Disable), File Info (checked), Trace Info (checked), and Traceback Logging Level (Errors).

- A. syslog level errors and less severity messages
- B. syslog level errors messages
- C. all syslog levels messages
- D. syslog level errors and greater severity messages

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

Answer: