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Topic Break Down

Topic	No. of Questions
Topic 1, New Update	631
Topic 2, Network Fundamentals	98
Topic 3, Network Access	96
Topic 4, IP Connectivity	107
Topic 5, IP Services	64
Topic 6, Security Fundamentals	68
Topic 7, Automation and Programmability	49
Total	1113

QUESTION NO: 1 - (DRAG DROP)

DRAG DROP

Drag and drop the AAA terms from the left onto the descriptions on the right.

Select and Place:

accounting	tracks activity
authentication	updates session attributes
authorization	verifies access rights
CoA	verifies identity

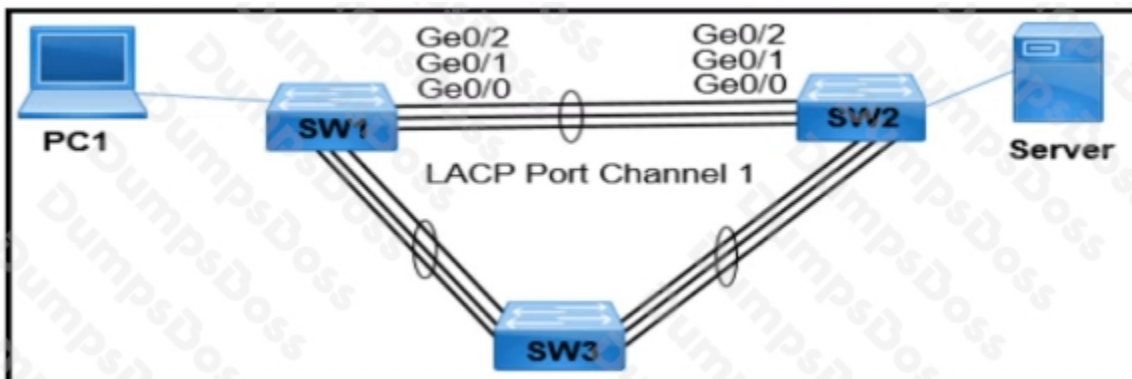
ANSWER:

	accounting
	CoA
	authorization
	authentication

Explanation:

QUESTION NO: 2

Refer to the exhibit.



PC1 regularly sends 1800 Mbps of traffic to the server. A network engineer needs to configure the EtherChannel to disable Port Channel 1 between SW1 and SW2 when the Ge0/0 and Ge0/1 ports on SW2 go down. Which configuration must the engineer apply to the switch?

A)

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# lacp port-priority 32000
```

B)

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# lacp max-bundle 2
```

C)

```
SW2# configure terminal
SW2(config)# lacp system-priority 32000
```

D)

```
SW2# configure terminal
SW2(config)# interface port-channel 1
SW2(config-if)# port-channel min-links 2
```

A. Option A

B. Option B

C. Option C

D. Option D

ANSWER: D

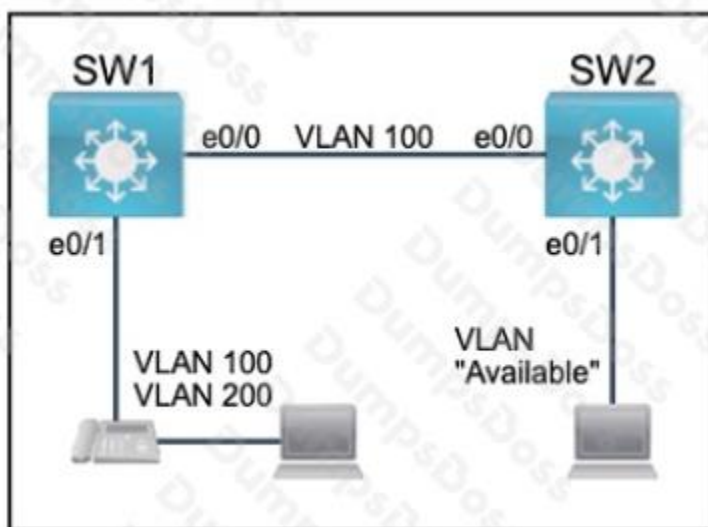
QUESTION NO: 3 - (SIMULATION)**Guidelines**

This is a lab item in which tasks will be performed on virtual devices.

- Refer to the **Tasks** tab to view the tasks for this lab item.
- Refer to the **Topology** tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- **Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.

All physical cabling between the two switches is installed. Configure the network connectivity between the switches using the designated VLANs and interfaces.

1. Configure VLAN 100 named Compute and VLAN 200 named Telephony where required for each task.
2. Configure Ethernet0/1 on SW2 to use the existing VLAN named Available.
3. Configure the connection between the switches using access ports.
4. Configure Ethernet0/1 on SW1 using data and voice VLANs.
5. Configure Ethernet0/1 on SW2 so that the Cisco proprietary neighbor discovery protocol is turned off for the designated interface only.



ANSWER: Seethebelow.

Explanation:

Answer as below configuration:

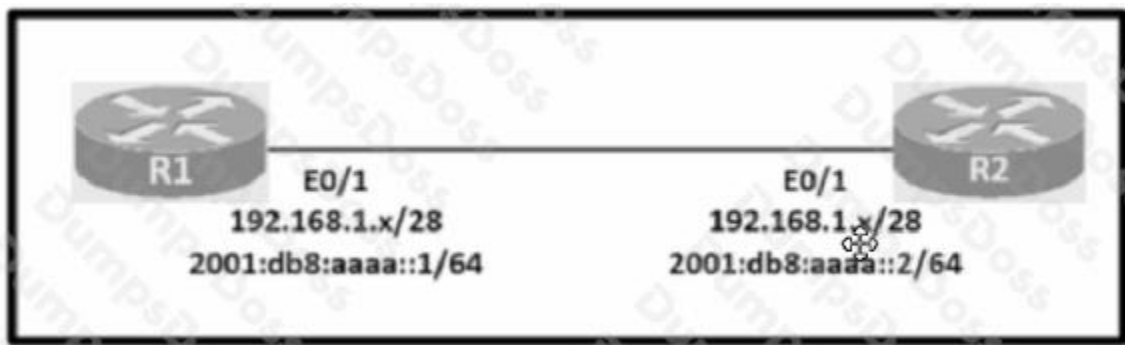
```
on sw1
enable
conf t
vlan 100
name Compute
vlan 200
name Telephony
int e0/1
switchport voice vlan 200
switchport access vlan 100
int e0/0
switchport mode access
do wr

on sw2
Vlan 99
Name Available
Int e0/1
Switchport access vlan 99
do wr
```

QUESTION NO: 4 - (SIMULATION)

Configure IPv4 and IPv6 connectivity between two routers. For IPv4, use a /28 network from the 192.168.1.0/24 private range. For IPv6, use the first /64 subnet from the 2001:0db8:aaaa::/48 subnet.

1. Using Ethernet0/1 on routers R1 and R2, configure the next usable/28 from the 192.168.1.0/24 range. The network 192.168.1.0/28 is unavailable.
2. For the IPv4 /28 subnet, router R1 must be configured with the first usable host address.
3. For the IPv4 /28 subnet, router R2 must be configured with the last usable host address.
4. For the IPv6 /64 subnet, configure the routers with the IP addressing provided from the topology.
5. A ping must work between the routers on the IPv4 and IPv6 address ranges.



Guidelines Topology Tasks

Guidelines

This is a lab item in which tasks will be performed on virtual devices.

- Refer to the **Tasks** tab to view the tasks for this lab item.
- Refer to the **Topology** tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.
- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- **Save your configurations** to NVRAM before moving to the next item.
- Click **Next** at the bottom of the screen to submit this lab and move to the next question.
- When **Next** is clicked, the lab closes and cannot be reopened.

R1 R2

ANSWER: Seethebelow.

Explanation:

Answer as below configuration:

on R1

config terminal

ipv6 unicast-routing

inter eth0/1

ip addre 192.168.1.1 255.255.255.240

ipv6 addre 2001:db8:aaaa::1/64

not shut

end

copy running start

on R2

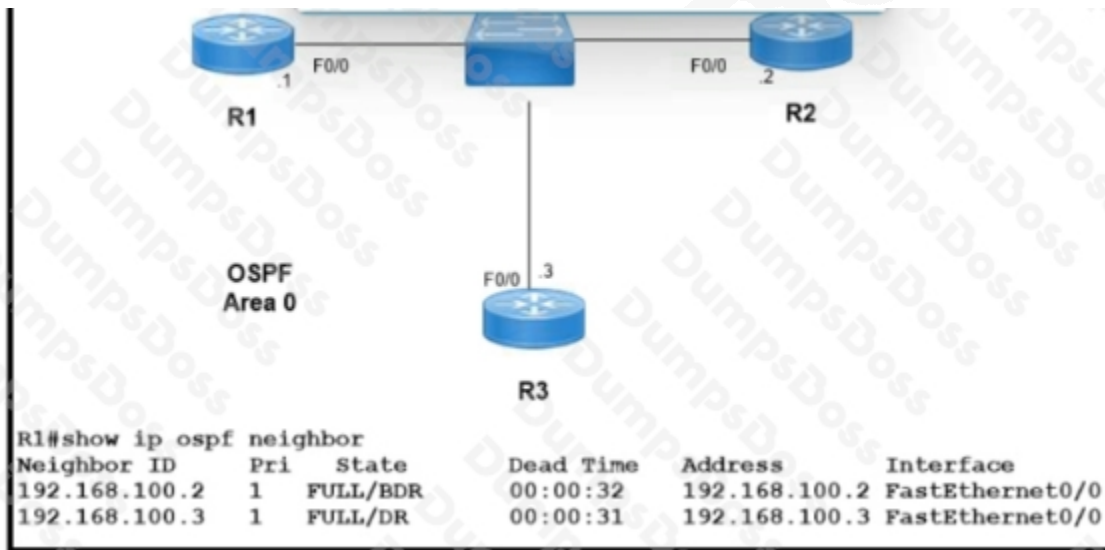
config terminal

ipv6 unicast-routing

```
inter eth0/1
ip address 192.168.1.14 255.255.255.240
ipv6 address 2001:db8:aaaa::2/64
not shut
end
copy running start
-----
for test from R1
ping ipv6 2001:db8:aaaa::1
for test from R2
ping ipv6 2001:db8:aaaa::2
```

QUESTION NO: 5

Refer to the exhibit.



Which two configurations must the engineer apply on this network so that R1 becomes the DR? (Choose two.)

A)

```
R1(config)#router ospf 1
R1(config-router)#router-id 192.168.100.1
```

B)

```
R1(config)#interface fastethernet 0/0
R1(config-if)#ip ospf priority 200
```


C)

```
R3(config)#interface fastethernet 0/0  
R3(config-if)#ip ospf priority 0
```

D)

```
R1(config)#interface fastethernet 0/0  
R1(config-if)#ip ospf priority 0
```

E)

```
R3(config)#interface fastethernet 0/0  
R3(config-if)#ip ospf priority 200
```

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

ANSWER: B C

QUESTION NO: 6

What are two advantages of implementing a controller-based architecture instead of a traditional network architecture? (Choose two.)

- A. It allows for seamless connectivity to virtual machines.
- B. It supports complex and high-scale IP addressing schemes.
- C. It enables configuration task automation.
- D. It provides increased scalability and management options.
- E. It increases security against denial-of-service attacks.

ANSWER: C D

QUESTION NO: 7

What are two benefits of FHRPs? (Choose two.)

- A. They enable automatic failover of the default gateway.
- B. They allow multiple devices to serve as a single virtual gateway for clients in the network.

- C. They are able to bundle multiple ports to increase bandwidth.
- D. They prevent loops in the Layer 2 network.
- E. They allow encrypted traffic.

ANSWER: A B

QUESTION NO: 8

Which QoS queuing method discards or marks packets that exceed the desired bit rate of traffic flow?

- A. shaping
- B. policing
- C. CBWFQ
- D. LLQ

ANSWER: B

QUESTION NO: 9

In which way does a spine-and-leaf architecture allow for scalability in a network when additional access ports are required?

- A. A spine switch and a leaf switch can be added with redundant connections between them.
- B. A spine switch can be added with at least 40 GB uplinks.
- C. A leaf switch can be added with connections to every spine switch.
- D. A leaf switch can be added with a single connection to a core spine switch.

ANSWER: C

Explanation:

Spine-leaf architecture is typically deployed as two layers: spines (such as an aggregation layer), and leaves (such as an access layer). Spine-leaf topologies provide high-bandwidth, low-latency, nonblocking server-to-server connectivity.

Leaf (aggregation) switches are what provide devices access to the fabric (the network of spine and leaf switches) and are typically deployed at the top of the rack. Generally, devices connect to the leaf switches. Devices can include servers, Layer 4-7 services (firewalls and load balancers), and WAN or Internet routers. Leaf switches do not connect to other leaf switches. In spine-and-leaf architecture, every leaf should connect to every spine in a full mesh.

Spine (aggregation) switches are used to connect to all leaf switches and are typically deployed at the end or middle of the row. Spine switches do not connect to other spine switches.

Reference: <https://www.cisco.com/c/en/us/products/collateral/switches/nexus-9000-series-switches/guide-c07-733228.html>

QUESTION NO: 10 - (DRAG DROP)

Drag and drop the characteristic from the left onto the IPv6 address type on the right.

confined to a single link	Global Unicast Address
required on all IPv6 devices	
is publicly routable in the same way as IPv4 addresses	Link-Local Address
provides for one-to-one communication	

ANSWER:

confined to a single link	Global Unicast Address
required on all IPv6 devices	
is publicly routable in the same way as IPv4 addresses	Link-Local Address
provides for one-to-one communication	

Explanation:

Global Unicast Address

is publicly routable in the same way as IPv4 addresses

provides for one-to-one communication

Link-Local Address

confined to a single link

required on all IPv6 devices

QUESTION NO: 11

What Is the path for traffic sent from one user workstation to another workstation on a separate switch In a three-tier architecture model?

- A. access - core - distribution - access
- B. access - distribution - distribution - access
- C. access - core - access
- D. access - distribution - core - distribution - access

ANSWER: D

QUESTION NO: 12

Which two pieces of information can you determine from the output of the show ntp status command? (Choose two.)

- A. whether the NTP peer is statically configured
- B. the IP address of the peer to which the clock is synchronized
- C. the configured NTP servers
- D. whether the clock is synchronized

E. the NTP version number of the peer

ANSWER: B D

Explanation:

Below is the output of the “show ntp status” command. From this output we learn that R1 has a stratum of 10 and it is getting clock from 10.1.2.1.

```
R1#show ntp status
Clock is synchronized, stratum 10, reference is 10.1.2.1
nominal freq is 250.0000 Hz, actual freq is 249.9987 Hz, precision is 2**18
reference time is D5E492E9.98ACB4CF (13:00:25.596 CST Wed Sep 18 2013)
clock offset is 15.4356 msec, root delay is 52.17 msec
root dispersion is 67.61 msec, peer dispersion is 28.12 msec
```

QUESTION NO: 13

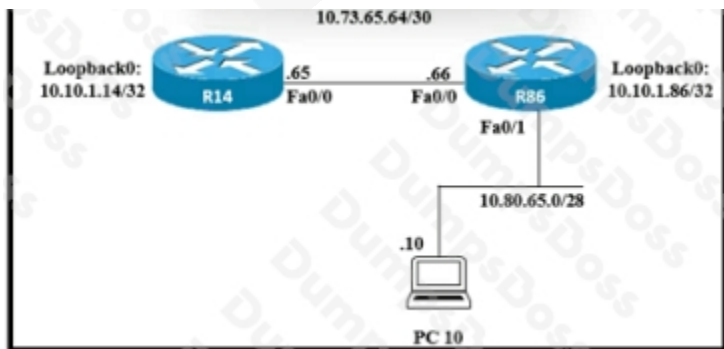
Which JSON data type is an unordered set of attribute- value pairs?

- A. array
- B. string
- C. object
- D. Boolean

ANSWER: C

QUESTION NO: 14

Refer to the exhibit.



Router R14 is in the process of being configured. Which configuration must be used to establish a host route to PC 10?

- A. ip route 10.80.65.10 255.255.255.254 10.80.65.1
- B. ip route 10.8065.10 255.255.255.255 10.73.65.66
- C. ip route 1073.65.65 255.0.0.0 10.80.65.10
- D. ip route 10.73.65.66 0.0.0.255 10.80.65.10

ANSWER: B

QUESTION NO: 15

Refer to the exhibit.

```
{  
  "Routers": ["R1", "R2", "R3"],  
  "Switches": ["SW1", "SW2", "SW3"]  
}
```

What is represented by "R1" and "SW1" within the JSON output?

- A. key
- B. array
- C. value
- D. object

ANSWER: C

QUESTION NO: 16

A frame that enters a switch fails the Frame Check Sequence. Which two interface counters are incremented? (Choose two.)

- A. input errors
- B. frame
- C. giants
- D. CRC
- E. runts

ANSWER: A D

Explanation:

Whenever the physical transmission has problems, the receiving device might receive a frame whose bits have changed values. These frames do not pass the error detection logic as implemented in the FCS field in the Ethernet trailer. The receiving device discards the frame and counts it as some kind of input error. Cisco switches list this error as a CRC error. Cyclic redundancy check (CRC) is a term related to how the FCS math detects an error.

The “input errors” includes runts, giants, no buffer, CRC, frame, overrun, and ignored counts.

The output below show the interface counters with the “show interface s0/0/0” command:

```
Router#show interface s0/0/0
Serial0/0/0 is up, line protocol is up
Hardware is M4T
Description: Link to R2
Internet address is 10.1.1.1/30
MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
--output omitted--
5 minute output rate 0 bits/sec, 0 packets/sec
268 packets input, 24889 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
251 packets output, 23498 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions      DCD=up DSR=up DTR=up RTS=up CTS=up
```

QUESTION NO: 17

Refer to the exhibit.

```
SiteA#show interface TenGigabitEthernet0/1/0
TenGigabitEthernet0/1/0 is up, line protocol is up
Hardware is BUILT-IN-EPA-8x10G, address is 780c.f02a.db91 (bia 780a.f02b.db91)
Description: Connection to SiteB
Internet address is 10.10.10.1/30
MTU 8146 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
    reliability 166/255, txload 1/255, rxload 1/255
Full Duplex, 10000Mbps, link type is force-up, media type is SFP-LR
5 minute input rate 264797000 bits/sec, 26672 packets/sec
5 minute output rate 122464000 bits/sec, 15724 packets/sec

SiteB#show interface TenGigabitEthernet0/1/0
TenGigabitEthernet0/1/0 is up, line protocol is up
Hardware is BUILT-IN-EPA-8x10G, address is 780c.f02c.db26 (bia 780c.f02c.db26)
Description: Connection to SiteA
Internet address is 10.10.10.2/30
MTU 8146 bytes, BW 10000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Full Duplex, 10000Mbps, link type is force-up, media type is SFP-LR
5 minute input rate 122464000 bits/sec, 15724 packets/sec
5 minute output rate 264797000 bits/sec, 26672 packets/sec
```

Shortly after SiteA was connected to SiteB over a new single-mode fiber path users at SiteA report intermittent connectivity issues with applications hosted at SiteB. What is the cause of the intermittent connectivity issue?

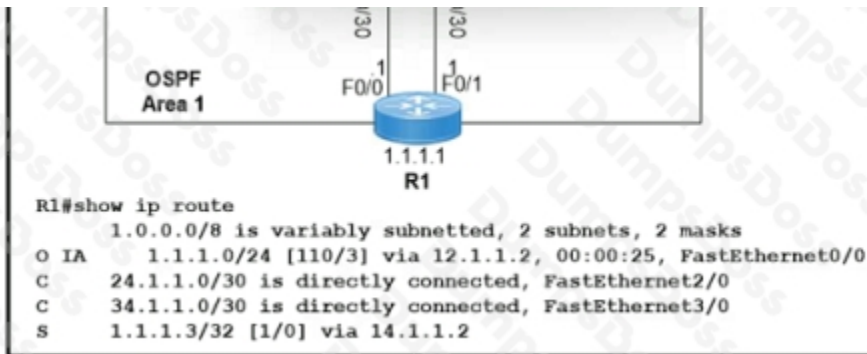
A. Interface errors are incrementing

- B. An incorrect SFP media type was used at SiteA
- C. High usage is causing high latency
- D. The sites were connected with the wrong cable type

ANSWER: A

QUESTION NO: 18

Refer to the exhibit.



Which two values does router R1 use to determine the best path to reach destinations in network 1,0.0.0/8? (Choose two.)

- A. longest prefix match
- B. highest administrative distance
- C. highest metric
- D. lowest metric
- E. lowest cost to reach the next hop

ANSWER: A D

QUESTION NO: 19

Which of the following dynamic routing protocols are Distance Vector routing protocols?

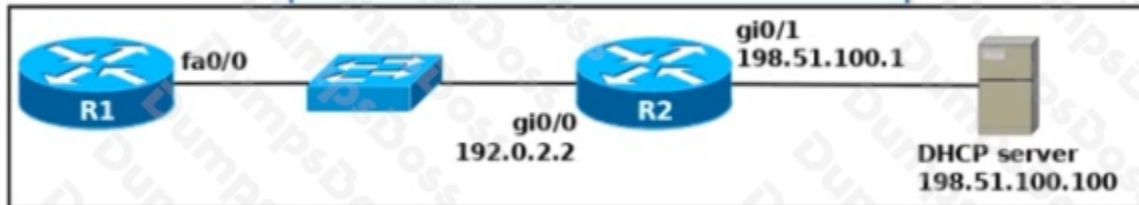
- A. IS-IS
- B. EIGRP
- C. OSPF
- D. BGP

E. RIP

ANSWER: B E

QUESTION NO: 20

Refer to the exhibit.



An engineer deploys a topology in which R1 obtains its IP configuration from DHCP. If

the switch and DHCP server configurations are complete and correct. Which two sets of commands must be configured on R1 and R2 to complete the task? (Choose two)

A. R1(config)# interface fa0/0
R1(config-if)# ip helper-address 198.51.100.100

B. R2(config)# interface gi0/0
R2(config-if)# ip helper-address 198.51.100.100

C. R1(config)# interface fa0/0
R1(config-if)# ip address dhcp
R1(config-if)# no shutdown

D. R2(config)# interface gi0/0
R2(config-if)# ip address dhcp

E. R1(config)# interface fa0/0
R1(config-if)# ip helper-address 192.0.2.2

ANSWER: B C