5.2.13 Practice Questions

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Score: 100%

Passing Score: 80%

Question 1. ✓ Correct

A workstation is connected to a switch on the Gi0/2 interface using a straight-through cable. The Ethernet interface in the workstation has been manually configured to use a 100 Mbps link speed and full duplexing.

Which of the following are true in this scenario? (Select three.)

- → ☑ If the link speed is 1000 Mbps or faster, full-duplex is used.
- → ☑ The switch attempts to sense the link speed. If it can't, the slowest link speed supported on the interface is selected.
- ☐ If the link speed is 10 Mbps or 100 Mbps, full-duplex is used.
- ☐ If the link speed is 100 Mbps or slower, autonegotiation is disabled.
- ☐ The switch interface will display as administratively down.
- → ☑ If the link speed is 10 Mbps or 100 Mbps, half-duplex is used.
- ☐ If the link speed is 1000 Mbps or faster, half-duplex is used.

Explanation

By default, the link speed and duplex configuration for Ethernet interfaces in Cisco devices are set using IEEE 802.3u autonegotiation. The interface negotiates with remote devices to determine the correct settings. However, autonegotiation can be disabled on the Cisco device and/or other Ethernet network hosts. When this happens, devices with autonegotiation enabled try to negotiate link speed and duplexing, but get no response. When autonegotiation fails, Cisco devices that have autonegotiation enabled default to the following:

- The interface will attempt to sense the link speed. If it can't, the slowest link speed supported on the interface is used, which is usually 10 Mbps.
- If the link speed selected is 10 Mbps or 100 Mbps, half-duplex is used. If it is 1000 Mbps or faster, full-duplex is used.

In this situation, link speed and duplex mismatches are likely to occur between network devices on the same link. When this happens, the link will probably be established, and the interface will be in an up/up state, but it will perform very poorly.

References

5.2.3 Switch Configuration Facts

resources\text\t_swi_cfg_ccna7\q_swi_cfg_01_ccna7.question.xml

Question 2. ✓ Correct

You are the only network administrator for your company. You are planning for an upcoming vacation, and you need to ensure that you can administer your switches remotely while you are gone. What must you configure to allow remote administration? (Select two.)

- [ ] The management VLAN name must match the local workgroup name.
- [ ] Use VNC on port 5900 to remotely access the switch.
- [x] → The switch must be configured with a valid IP address and default gateway.
- [ ] CDP must be enabled on the switch so that other devices on the network can locate it.
- [x] → Use Telnet, Secure Shell, or Web protocols to remotely access the switch.

Explanation

For the switch to communicate with remote workstations, the switch must have a valid IP address and default gateway. You can connect to a Cisco device directly with a console cable or remotely using applications like Telnet or Secure Shell.

References

5.2.3 Switch Configuration Facts

resources\text\t_swi_cfg_ccna7\q_swi_cfg_02_ccna7.question.xml

Question 3. ✓ Correct

During the initial setup of a new switch, which of the following configuration tasks should be performed? (Select three.)

- → ☑ Set the default gateway for remote management.
- → ☑ Set an IP address for remote management.
- ☐ Configure trunking.
- ☐ Configure the Spanning Tree Protocol.
- → ☑ Set passwords for the console, virtual terminal (TTY) ,and enable mode.
- ☐ Attach a rollover console cable and set VTP mode to server.
- ☐ Set duplex to full for remote access ports.

Explanation

After you plug in a switch, you should always configure the following:

- Passwords (console, virtual terminal, or VTY, and enable mode)
- IP addresses
- Default gateway

Other configurations are optional depending on the purpose of the device.

References

5.2.3 Switch Configuration Facts

resources\text\t_swi_cfg_ccna7\q_swi_cfg_03_ccna7.question.xml

Question 4. ✓ Correct

The FastEthernet 0/0 interface on a switch is currently disabled. You need to enable it so a workstation can be connected to it.

Drag each command on the left to the associated configuration step on the right to accomplish this task. Not all of the commands will be used.

Enter global configuration mode.

✓ **config terminal**

Enter interface configuration mode.

✓ **interface fa0/0**

Enable the interface.

✓ **no shutdown**

Verify the interface is up.

✓ **show interface status**

Explanation

To complete the requirements of this scenario, you need to use the following commands:

- Enter global configuration mode: **config terminal**
- Enter interface configuration mode: **interface fa0/0**
- Enable the interface: **no shutdown**
- Verify the interface status: **show interface status**

References

5.2.4 Switch Configuration Mode Facts

resources\text\t_swi_mode_ccna7\q_swi_mode_01_ccna7.question.xml

Question 5. ✓ Correct

The following graphic illustrates some of the configuration modes of the switch.

What is one difference between the VLAN interface configuration and config-vlan?

- VLAN interface configuration mode is used to perform all VLAN configuration tasks.
- Config-vlan mode is used to configure all management functions and is a logical management interface.
- → VLAN interface configuration mode is used to configure the switch IP address.
- Config-vlan mode is used to configure all physical interfaces.

Explanation

The VLAN interface configuration mode is used to configure the switch IP address and other management functions. It is a logical management interface configuration mode instead of a physical interface configuration mode, as is used for the FastEthernet and GigabitEthernet ports.

Do not confuse the config-vlan mode with the VLAN interface configuration mode.

References

5.2.4 Switch Configuration Mode Facts

resources\text\t_swi_mode_ccna7\q_swi_mode_02_ccna7.question.xml

Question 6. ✓ Correct

You have a workstation connected to a small branch network using a single switch. The network does not have any routers and is not connected to the internet. What are the minimum configuration parameters required on the workstation to be able to communicate with all hosts on the network?

- IP address and default gateway
- IP address
- → IP address and subnet mask
- IP address, subnet mask, and default gateway

Explanation

On a single subnet, you only need to configure an IP address and a subnet mask. The default gateway identifies the router address used to reach remote networks. You would only use the default gateway if the network was connected to another subnet or the internet.

References

5.2.8 Switch IP Configuration Facts

resources\text\t_swi_ipad_ccna7\q_swi_ipad_01_ccna7.question.xml

Question 7. ✓ Correct

You have a small network connected to the internet as shown. You need to configure the default gateway address on Wrk1 so that it can communicate with hosts on the internet.

Which address would you use for the default gateway address?

- ○ The IP address assigned to Fa0/1 on Router2.
- ○ The IP address assigned to SwitchA.
- → ◉ The IP address assigned to Fa0/0 on Router1.
- ○ The IP address assigned to Fa0/1 on Router1.
- ○ The IP address assigned to Fa0/0 on Router2.

Explanation

When assigning the default gateway address, use the address of the router interface connected to the same network that is used to reach remote networks. In this scenario, the workstation must be configured with the IP address assigned to the Fa0/0 interface on Router1. This default gateway configuration allows the workstation to communicate with hosts on the other internal subnet as well as with hosts on the network.

The IP address assigned to the switch is only used for remote management of the switch. Packets sent to remote networks are not processed by the switch, but the frames are simply forwarded to the correct destination device. The Fa0/1 interface on Router1 is not on the same network as Wrk1, so it cannot be used as its default gateway address. The Fa0/0 interface on Router2 would be the default gateway address for hosts connected to SwitchB.

References

5.2.8 Switch IP Configuration Facts

resources\text\t_swi_ipad_ccna7\q_swi_ipad_02_ccna7.question.xml

Question 8. ✓ Correct

You have a small network with a single subnet connected to the internet as shown in the Exhibit. The router has been assigned the two addresses shown.

You need to manually configure the workstation to connect to the network. The workstation should use RouterA as the default gateway, and DNS1 as the DNS server address.

From the drop-down lists, select the appropriate parameters to configure the workstation's TCP/IP settings.

IP Address

192.168.12.46 ✓

Subnet Mask

255.255.255.240 ✓

Default Gateway

192.168.12.34 ✓

DNS Server

198.162.1.22

Explanation

Use the following values:

- Use 192.168.12.46 for the IP address. With a 28-bit mask, the router is on subnet 192.168.12.32, and valid addresses are 192.168.12.33 to 192.168.12.46. You cannot use 192.168.12.32 because that is the subnet address. You cannot use 192.168.12.47 because that is the broadcast address.
- A 28-bit mask is 255.255.255.240 in binary.
- For the default gateway address, use the address assigned to the router interface that is on the same subnet as the workstation (in this example, 192.168.12.34).
- For the DNS server address, use the IP address assigned to the DNS server (198.162.1.22).

References

5.2.8 Switch IP Configuration Facts

resources\text\t_swi_ipad_ccna7\q_swi_ipad_03_ccna7.question.xml

Question 9. ✓ Correct

Which command(s) would you use to configure a default-gateway on a Catalyst 2950XL switch?

→ ◉ **Switch(config)#ip default-gateway 192.168.10.1**

○ **Switch(config)#interface fa0/1**
Switch(config-if)ip default-gateway 192.168.10.1 255.255.255.0

○ **Switch(config)#ip default-gateway 192.168.10.1 255.255.255.0**

○ **Switch(config)#interface fa0/1**
Switch(config-if)#ip default-gateway 192.168.10.1

Explanation

The **default-gateway** command requires that you be in global configuration mode. Only the IP address is defined, not the subnet mask.

References

5.2.8 Switch IP Configuration Facts

resources\text\t_swi_ipad_ccna7\q_swi_ipad_04_ccna7.question.xml

Question 10. ✓ Correct

You must configure an IP address on a Catalyst 2950XL switch using the default management switch port. From global configuration mode, which commands would you enter to configure the correct management port?

- **int fa0/1**
  ip address 192.168.10.2 255.255.255.0
- **int vlan 2**
  ip address 192.168.10.2 255.255.255.0
- **int fa0/3**
  ip address 192.168.10.2 255.255.255.0
- → **int vlan 1**
  ip address 192.168.10.2 255.255.255.0

Explanation

The default management switch port on a Catalyst 2950XL switch is VLAN1. The IP address must be assigned to VLAN1.

The management IP address cannot be assigned to an interface. The IP address identifies the entire switch, not a specific switch port.

References

5.2.8 Switch IP Configuration Facts

resources\text\t_swi_ipad_ccna7\q_swi_ipad_05_ccna7.question.xml