

## Exam Report: 4.4.10 Practice Questions

Date: 9/25/2019 11:53:05 am  
Time Spent: 11:13

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## Overall Performance

Your Score: 75%

Passing Score: 80%

View results by: ☐ Objective Analysis ☒ Individual Responses

## Individual Responses

### ▼ Question 1: Correct

You've connected a cable certifier to an RJ45 wall jack and the output shown below is displayed on the device. What does this output indicate? (Select two.)

1	-----	1
2	-----	2
3	-----	3
4	4	
5	-----	5
6	6	
7	-----	7
8	-----	8

- ☐ Pins 4 and 6 are straight-through.
- ☐ Pin 6 is shorted.
- ☐ Pins 4 and 6 are crossed-over.
- ➔ ☒ Pin 6 is open.
- ➔ ☒ Pin 4 is open.
- ☐ The cable is functioning correctly.
- ☐ Pin 4 is shorted.

## Explanation

In this example, any connections displayed with no characters between the pin numbers are open connections. This problem is usually caused by:

- Poor connections between the wire and the RJ45 jack.
- Individual wires broken within the UTP cable.

Output with x characters between pins indicates that they are shorted. Correctly functioning connections are displayed using - characters in the output of the cable certifier. Cross-over

connections are displayed with lines between the crossed-over pins.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm MCS2]

### ▼ Question 2: Correct

Users are complaining that sometimes network communications are slow. You use a protocol analyzer and find that packets are being corrupted as they pass through a switch. You also notice that this only seems to happen when the elevator is running.

What should you do?

- ☐ Add a dedicated A/C unit to the switch closet.
- ☐ Install a dedicated power circuit for the switch.
- ☐ Add a UPS system to the switch.

➡ ☒ Install shielded cables near the elevator.

## Explanation

Interference is a signal that corrupts or destroys regular networking signals. Interference affects the availability of a network because normal communications are not possible. Sources of interference include elevators, generators, motors, and fluorescent lights.

Use a UPS or a dedicated power circuit to ensure that devices have constant power. Use a dedicated A/C unit to keep a server room or closet cool.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm SP08\_6-5 2]

### ▼ Question 3: Correct

You have a network connected using a physical bus topology. One of the cables that connects a workstation to the bus breaks.

Which of the following best describes what effect this will have on network communications?

- ☐ All devices except the device connected with the drop cable will be able to communicate.
- ☐ All devices will be able to communicate.
- ➡ ☒ No devices will be able to communicate.
- ☐ Devices on one side of the break will be able to communicate with each other; devices on the other side will not be able to communicate.
- ☐ Devices on one side of the break will be able to communicate with each other; devices on the other side of the break will be able to communicate with each other.

## Explanation

A break in the network bus means that the end of the network bus is no longer terminated. For this reason, a break in the bus typically means that no devices can communicate. Identifying the location of the break is difficult on a true bus network.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP09\_2-3 #5]

### ▼ Question 4: Correct

You have a network connected using a physical star topology. One of the drop cables connecting a workstation has been removed.

Which of the following best describes what affect this will have on network communications?

- ☐ Devices on one side of the missing cable will be able to communicate with each other; devices on the other side of the missing cable will not be able to communicate.
- ☐ No devices will be able to communicate.
- ➡ ☒ All devices will be able to communicate, except the device connected with the drop cable .
- ☐ Devices on one side of the missing cable will be able to communicate with each other; devices on the other side of the missing cable will be able to communicate with each other.
- ☐ All devices will be able to communicate.

### Explanation

A break in a cable in a star means that the device connected to the central device (hub or switch) through that cable can no longer communicate on the network. All other hosts will be able to communicate with all other devices.

### References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP09\_2-3 #6|[/]

#### ▼ Question 5: Incorrect

You have a network connected using a full physical mesh topology. The link between device A and device B is broken.

Which of the following best describes what affect this will have on network communications?

- ☐ No devices will be able to communicate with any other device.
- ➡ ☐ Device A will be able to communicate with all other devices.
- ☒ ~~Device A will be able to communicate with any device except for device B.~~
- ☐ Device A will not be able to communicate with any other device.

### Explanation

With a mesh topology, a break in a single link has no effect on communications. Data can be routed to the destination device by taking a different (sometimes longer) path through the mesh topology.

### References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP09\_2-3 #7]

#### ▼ Question 6: Correct

During a network infrastructure upgrade, you have replaced two 10 Mbps hubs with switches and upgraded from Category 3 UTP cable to Category 5e. During the process, you accidentally cut the Cat 5e patch cable that stretches from the network printer to the upgraded switch.

What is the impact on the network?

- ☐ All network nodes on the same subnet as the printer will be unavailable.
- ☐ All network nodes, including the printer, will be available.

- ➡ ☒ All network nodes except the printer will be available.
- ☐ All network nodes authenticated by the same server as the printer will be unavailable.
- ☐ All network nodes connected to the switch will be unavailable.

## Explanation

UTP cable and switches are associated with a star network topology. In a star topology, each device is attached to the network using its own patch cable. If the cable were to fail for any reason, only the device connected by that cable would be unavailable.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP05\_4-7 #34]

### ▼ Question 7: Correct

You have just connected four new computer systems to an Ethernet switch using spare patch cables. After the installation, only three systems are able to access the network. You verify all client network settings and replace the network card in the failed system. The client is still unable to access the network.

Which of the following might you suspect is the real cause of the problem?

- ☐ Incorrect LAN protocol
- ☐ Incorrect routing table
- ➡ ☒ Failed patch cable
- ☐ Faulty IP stack
- ☐ Failed switch

## Explanation

Bent and damaged patch cables will prevent client systems from accessing the network. In this scenario, a faulty patch cable is the most likely cause of the connection failure. The easiest way to test this is to simply swap out the cable and try a known working UTP patch cable.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP05\_4-8 #59]

### ▼ Question 8: Incorrect

You are moving a client to a new location within an Ethernet network. Previous to the move, the client system did not have difficulty accessing the network.

During the relocation, you attach patch cables from the client system to the wall jack and from the patch panel to the switch. Once connected, you do not get a link light on the network card or the switch. You swap out the cable running between the patch panel and the switch with a known working one, but you still cannot connect.

Which of the following might you suspect is the problem?

- ➡ ☐ Failed patch cable between the client system and the wall jack
- ☒ Failed network card
- ☐ Failed switch
- ☐ Faulty termination

- ☐ Incorrect duplex settings
- ☐ Server software configuration error

## Explanation

Because the client system previously worked in a different location, the issue is not likely related to the client system. The NIC and switch LEDs' failure to light indicate that there isn't an end-to-end connection between the client and the switch. This means that either the patch cable between the wall jack and the client is faulty or the cable between the patch panel and the switch is faulty. The cable connecting the switch and the patch panel was verified, leaving the cable run between the wall jack and the client system.

It is unlikely that the issue is a failed network card, as the system was functioning in a different location, eliminating the possibility of hardware and software on the client system being the problem. The failure is limited to a connection issue between a single client and a switch. If the switch failed, all clients connected to that switch would not be able to connect. Incorrect duplex settings would not prevent NIC and switch LEDs from lighting.

## References

LabSim for Network Pro, Section 4.4.  
[netpro18v5\_all\_questions\_en.exm NP05\_4-8 #68]

### ▼ Question 9: Incorrect

Upon conducting a visual inspection of the server room, you see that a switch displays LED collision lights that are continually lit. You check the LED on the corresponding workstation and see that it is flashing rapidly even though it is not sending or receiving network traffic at that time.

What is the cause of the network collisions?

- ➡ ☐ Faulty network card
- ☐ Faulty switch
- ☐ Adapter controller card failure
- ☐ PCI slot failure
- ☒ ~~Incorrect duplex settings~~

## Explanation

Sometimes when a NIC fails, it doesn't just stop working, but begins to flood the network with transmissions. This is called jabbering. A single network card can slow down an entire network by continually transmitting onto the network. A jabbering network card can be identified by a slower than normal network, by high occurrences of collisions displayed on the hub or switch, and by LEDs on a network card indicating a high level of transmissions even though a user is not using the network.

## References

LabSim for Network Pro, Section 4.4.  
[netpro18v5\_all\_questions\_en.exm NP05\_4-8 #78]

### ▼ Question 10: Correct

A user from the sales department calls to report that he is experiencing problems connecting to the sales file server. All users in the sales department connect to the sales server through a single Ethernet switch. No other users have reported problems connecting to the sales server.

Which of the following troubleshooting actions are you most likely to perform first?

- ☐ Reinstall the network card drivers on the sales server.

- ☐ Replace the network card in the sales server.
- ☐ Replace the Ethernet switch in the sales department.

➡ ☒ Replace the network card in the user's computer.

## Explanation

In this scenario, you are most likely to replace the network card in the user's computer.

As there is only one user experiencing a problem, you are unlikely to replace the network card in the server or replace the Ethernet switch. For the same reason, you are also unlikely to replace the network card drivers on the server. If more than one user were experiencing the problem, any of the options could be a valid troubleshooting step.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP05\_4-8 #95]

### ▼ Question 11: Correct

You are creating an Ethernet network for your company. The shipping department is located in a different building that is located 150 meters from the main wiring closet. You connect a single Cat 6a cable to connect the wiring closet to the shipping building.

Which of the following should you include in your plan?

- ☐ Spanning tree
- ➡ ☒ Repeater
- ☐ Half-duplex
- ☐ Shielded twisted pair

## Explanation

A repeater regenerates the signal and removes the unwanted effects caused by attenuation. Attenuation is the loss of signal strength from one end of a cable to the other. In this example, the distance from the wiring closet to the other building exceeds the 100-meter maximum for Ethernet, so a repeater is necessary to regenerate the signal.

Use shielded twisted pair to protect against electromagnetic interference (EMI). Shielded cables have a metal foil that encloses all of the wires. Some cables might also include a drain wire, which is a bare wire in the middle of the wire bundle that helps to reduce EMI. More expensive cable might also use a metal foil around each pair of wires.

The spanning tree protocol runs on switches to prevent switching loops by making only a single path between switches active at a single time. When using half-duplex communications, devices perform collision detection because the transmission medium is shared.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP09\_4-7 #MCS4|/]

### ▼ Question 12: Correct

Angela is the network administrator for a rapidly growing company with a 100BaseT network. Users have recently complained about slow file transfers. While checking network traffic, Angela discovers a high number of collisions.

Which connectivity device would best reduce the number of collisions and allow future growth?

- ➡ ☒ Switch
- ☐ Gateway

- ☐ Hub
- ☐ Router
- ☐ Bridge

## Explanation

A switch would be the best choice in this situation. A bridge will segment traffic and reduce collisions, but it would be harder to maintain and harder to add new bridges as the network grows. A router would allow growth and reduce collisions. Switches can provide those benefits at a lower cost per port and offer more administration options.

## References

LabSim for Network Pro, Section 4.4.

[netpro18v5\_all\_questions\_en.exm NP05\_1-6 #7]