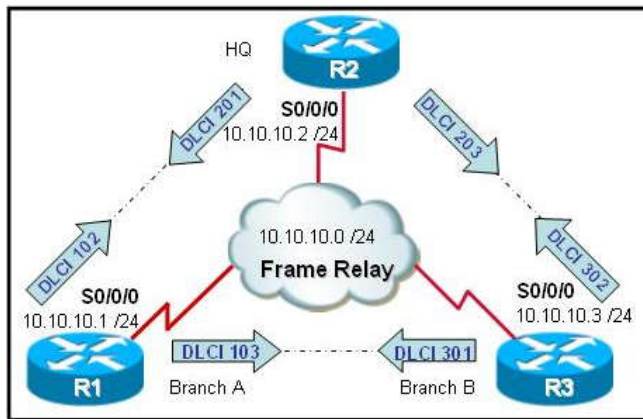**1** A technician has been asked to troubleshoot an existing switched network but is unable to locate documentation for the VLAN configuration. Which troubleshooting tool allows the technician to map and discover VLAN and port assignments?

● cable analyzer

● <mark>network analyzer</mark>

● protocol analyzer

● knowledge base

2

Refer to the exhibit. Users at Branch B are reporting trouble accessing a corporate website running on a server that is located at HQ. HQ and Branch A users can access the website. R3 is able to ping 10.10.10.1 successfully but not 10.10.10.2. The users at Branch B can access servers at Branch A. Which two statements are true aboutthe troubleshooting efforts? (Choose two.)

☐ The web server should be tested for an application layer problem.

☐ <mark>Frame Relay at R3 and R2 should be tested to narrow the scope of the problem.</mark>

☐ The fact that users at Branch A are working normally proves that there is no problem at R2.

☐ <mark>An ACL entry error could cause the failure at Layer 4 in either R3 or R2.</mark>

☐ The successful ping from R3 to R1 proves that the WAN is functioning normally. Therefore, the problem has to be in the upper layers.

3 Excessive broadcasts are generally a symptom of a problem at which layer?

● physical

● <mark>data link</mark>

● network

● transport

4
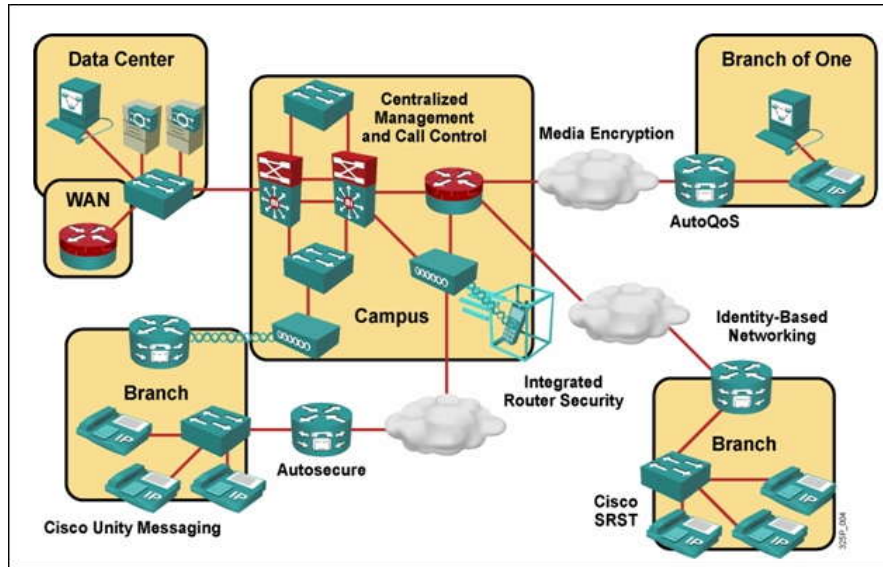
Refer to the exhibit. Which two steps should be taken during the process of creating network documentation? (Choose two.)

☐ Record the information about the devices discovered in the Campus network only.

☐ Record the information about the devices discovered in the entire network, including the remote locations.

☐ Transfer any information about the devices from the network configuration table that corresponds to a component of the topology diagram.

☐ Transfer only the Layer 2 and Layer 3 information about the devices from the network configuration table that corresponds to a component of the topology diagram.

☐ Transfer the recorded information about the devices from the network configuration table gathered during peak network utilization that corresponds to a component of the topology diagram.

5 When gathering symptoms for troubleshooting a network problem, which step could result in getting an external administrator involved in the process?

● narrowing the scope

● gathering symptoms from suspect devices

● analyzing existing symptoms

● determining ownership

6 Clients across the company are reporting poor performance across all corporate applications running in the data center. Internet access and applications running across the corporate WAN are performing normally. The network administrator observes a continual broadcast of random meaningless traffic (jabber) on the application server LAN in the data center on a protocol analyzer. How should the administrator start troubleshooting?

● The jabber in the data center indicates a local physical layer problem. Use the protocol analyzer to determine the source of the jabber, and then check for a recent NIC driver update or bad cabling.

● Because all clients are experiencing application problems, the administrator should use a top-down approach with the application servers in the data center.

● The scope of the problem indicates a likely routing or spanning-tree problem. Begin by checking routing tables, and follow up using appropriate STP **show** commands to find a loop if routing is working normally.

● Poll the staff to determine if any recent changes have been made. Back out all the changes one by one until the error condition is fixed.

7 What is one example of a physical layer problem?

● incorrect encapsulation

- ● incorrect STP configuration
- ● incorrect ARP mapping
- ● incorrect clock rate

8 Which three guidelines should be used to construct questions designed to gather information from users? (Choose three.)

- ☐ Determine the sequence of events that occurred before the problem happened.
- ☐ Determine if the user is at fault.
- ☐ Attempt to gain the trust of the user by using technical terms whenever possible.
- ☐ Start with trivial questions designed to build a rapport with the user.
- ☐ Use each question as a means to either discover or eliminate possible problems.
- ☐ Ask the user to recreate the problem, if possible.

9
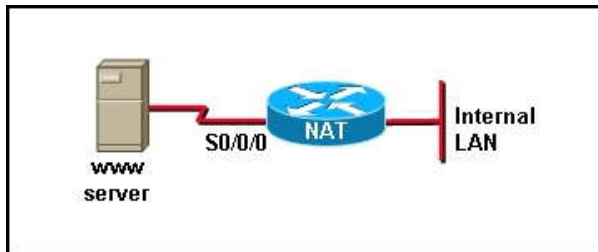
Refer to the exhibit. Users on the Internal LAN are unable to connect to the www server. The network administrator pings the server and verifies that NAT is functioning correctly. Which OSI layer should the administrator begin to troubleshoot next?

- ● physical
- ● data link
- ● network
- ● application

10 Which two components should be taken in consideration when establishing a network baseline? (Choose two.)

- ☐ information about the network design
- ☐ requirements about the service provider setup
- ☐ IP addressing allocation on the network
- ☐ expected performance under normal operating conditions
- ☐ expected performance under extreme operating conditions

11
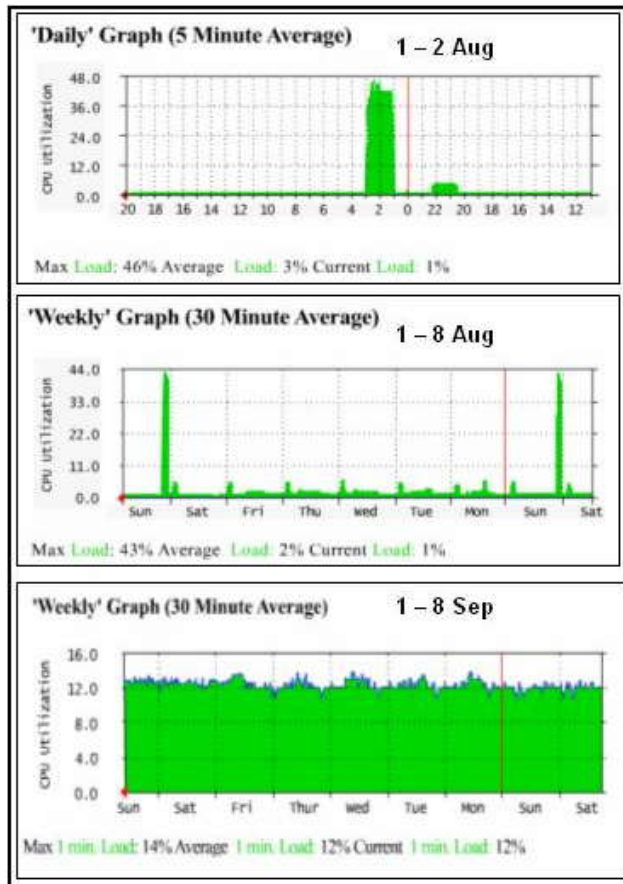
Refer to the exhibit. The graphs are from HR-1, a single application server used by the HR department. Baseline data gathering began on August 1. What useful information can be determined from the graphs?

●   The CPU resources on HR-1 are not well balanced. The processing cycle needs to be adjusted.

●   There are two distinct weekend processing cycles that start on Saturday evening and end on Sunday morning.

●   The baseline graphs show that HR-1 has a clear processing problem, although the exact nature of the problem is not yet known.

●   The processing load on HR-1 is repeatable and therefore predictable.

●   Something has caused a clear impact to the CPU loads on HR-1. There is insufficient information to determine if a problem exists.

12 Which troubleshooting approach is suggested for dealing with a complex problem that is suspected of being caused by faulty network cabling?

●   bottom up

●   top down

●   divide and conquer

●   middle out

13   Which two statements are true concerning logical networking models? (Choose two.)

☐   TCP/IP splits the lowest layer of the OSI model into two separate layers.

☐   The top layer of the TCP/IP model combines the functions of the top three OSI layers.

☐ Troubleshooting with the TCP/IP model requires different techniques than with the OSI model.

☐ The network access layer is responsible for exchanging packets between devices on a TCP/IP network.

☐ The Internet layer provides communication between applications, such as FTP, HTTP, and SMTP on separate hosts.

☐ The TCP/IP network access layer corresponds to the OSI physical and data link layers.

14 A network administrator is configuring an ACL to apply only to users on the 192.168.1.128 /26 network. Which network and wildcard mask combination would match only addresses on the desired network?

● 192.168.1.0 0.0.0.63

● 192.168.1.0 0.0.0.192

● 192.168.1.128 0.0.0.63

● 192.168.1.128 0.0.0.192

● 192.168.1.128 0.0.0.255

15 Which two elements are typically found on a logical network diagram? (Choose two.)

☐ interface identifiers

☐ connector types

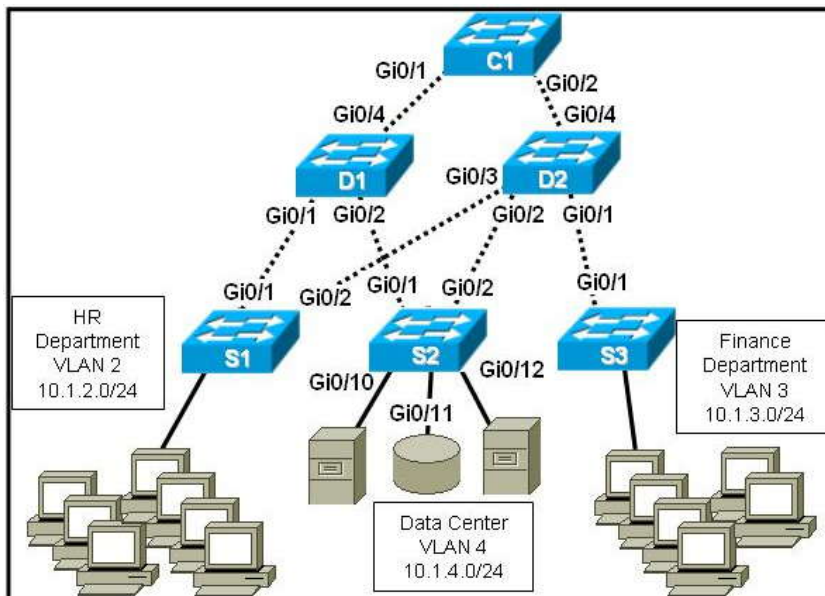☐ operating system versions

☐ cable types

☐ virtual circuits

16
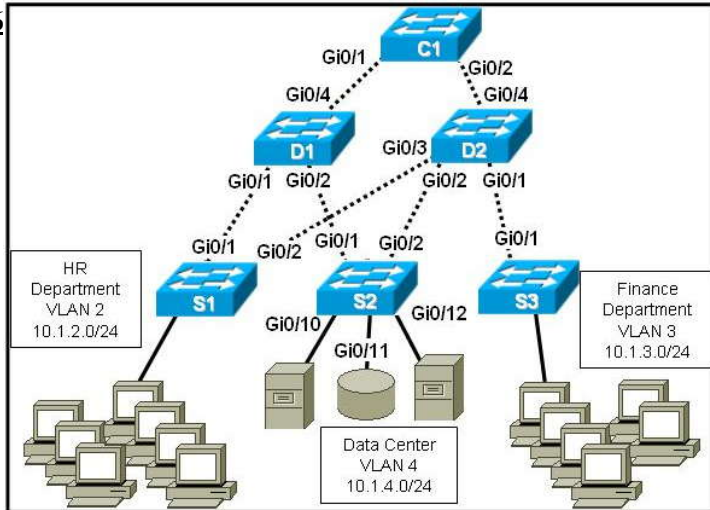
Refer to the exhibit. One of the HR server applications is no longer responding to any client requests. Each transaction is dependent upon several servers in the data center. There are no problems with any of the company-wide applications running on the servers in the data center. The staff has no experience with this failure and limited in-house knowledge of the various applications. Which beginning troubleshooting steps would constitute a top-down methodology?

● Check all the server cable connections.
Check for green connection lights on each NIC.
Ping the local address of each server, followed by the addresses of the dependent servers and sample clients.

● Use the application control console on each server to ensure that the application is running.
Check the event logs on the application servers for application specific error messages.
Check for client connections in the session consoles for servers with session management tools.

● Test IP connectivity between clients and servers.
Proceed to higher layers if IP connectivity is good.
Check for network problems if connectivity is bad.

● Reinstall the affected applications on the servers.
If the application is still not responding, reinstall the client on one of the user PCs.
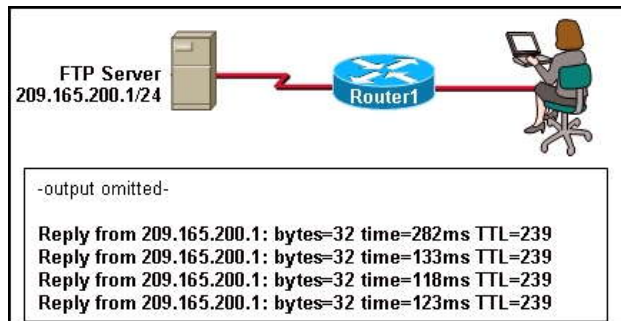
17

Refer to the exhibit. One of the HR server applications is no longer responding to any client requests. Each transaction is dependent upon several servers in the data center. The troubleshooter begins by carefully documenting all known symptoms at the client machines and the server consoles. The cause of the problem is not immediately apparent, so the troubleshooter begins the isolation phase of the troubleshooting process. Which methodology is the troubleshooter following?

● top down

● bottom up

● divide and conquer

● narrowing the scope; the methodology is not yet determined

18 A technician has been asked to make several changes to the configuration and topology of a network and then determine the outcome of the changes. What tool can be used to determine the overall effect caused by the changes?

● baselining tool

● knowledge base

● protocol analyzer

● cable tester

19


```
-output omitted-

Reply from 209.165.200.1: bytes=32 time=282ms TTL=239
Reply from 209.165.200.1: bytes=32 time=133ms TTL=239
Reply from 209.165.200.1: bytes=32 time=118ms TTL=239
Reply from 209.165.200.1: bytes=32 time=123ms TTL=239
```

Refer to the exhibit. Based on the output shown from the command prompt of the administrator, which OSI layers are functioning properly?

● Layers 1 and 2

● Layers 1 through 3

● Layers 1 through 4

● Layers 1 through 7

20

```
Router1# show interface s0/0
Serial 0 is up, line protocol is up
  Hardware is MCI Serial
  Internet address is 131.108.156.98, subnet mask is 255.255.255.252
  MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec, rely 255/255, load 1/255
  Encapsulation PPP, loopback not set
  Keepalive set (10 sec)
  LCP Open
  Open: IPCP, CDPCP
```

Refer to the exhibit. Which three pieces of information can be determined by analyzing the output shown? (Choose three.)

☐ A carrier detect signal is present.

☐ Keepalives are being received successfully.

☐ Default encapsulation is used on this serial link.

☐ Packets passing this interface cannot exceed 1 KB in size.

☐ The reliability of this link is very low.

☐ The LCP negotiation phase is complete.

21 A high collision count is often a sign of problems at which layer?

● physical

● data link

● network

● transport