CCNA4 v 4.0 Exam chapter 8 Network Troubleshooting

1. Which two pieces of information are typically found on a logical network diagram? (Choose two.)

cable types
connector types
interface identifiers
DLCI for virtual circuits
operating system versions

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

physical
data link
network
transport

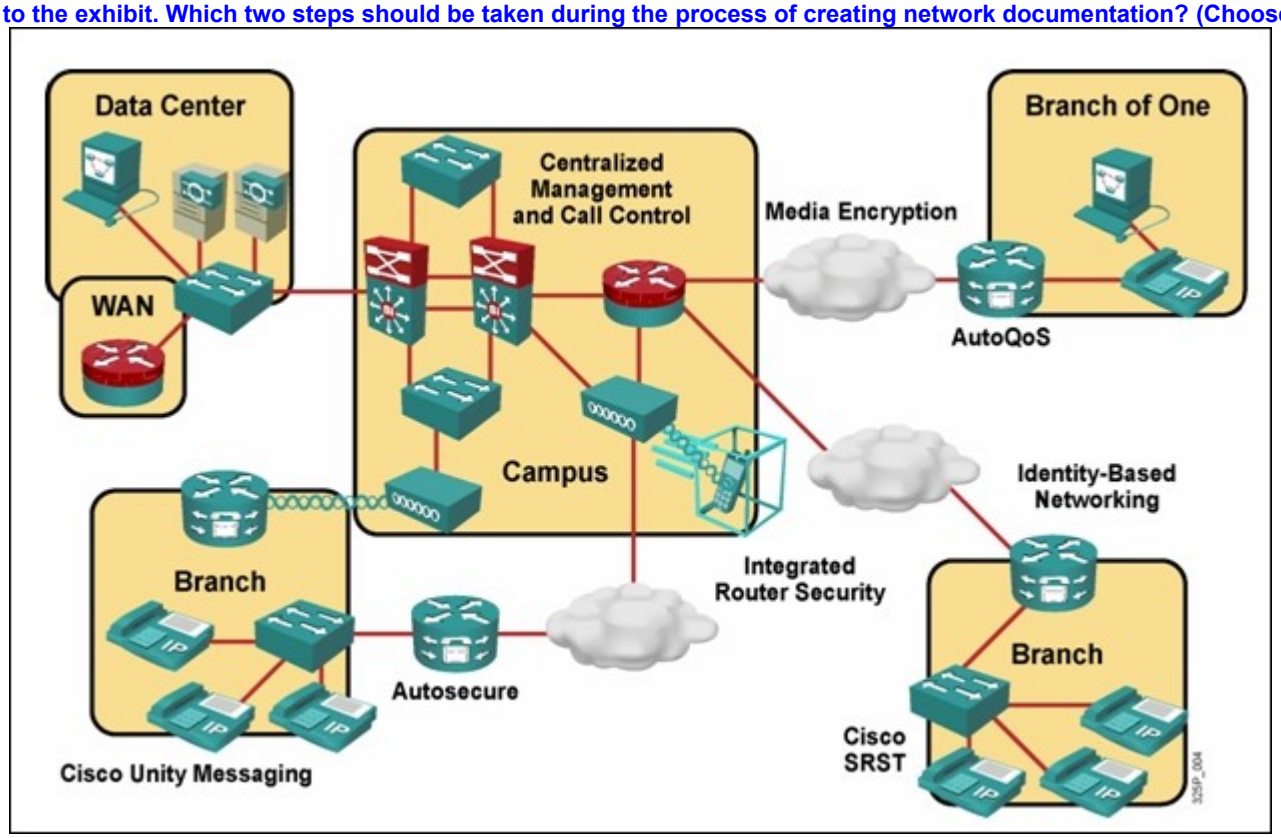
3. What is one example of a physical layer problem?

incorrect encapsulation
incorrect STP configuration
incorrect ARP mapping
incorrect clock rate

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

information about the network design
IP addressing allocation on the network
requirements about the service provider setup
requirements for access control lists to regulate traffic
expected performance under normal operating conditions

5. 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.

6. 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.

7. 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.

8. 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

9. 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

10. 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?

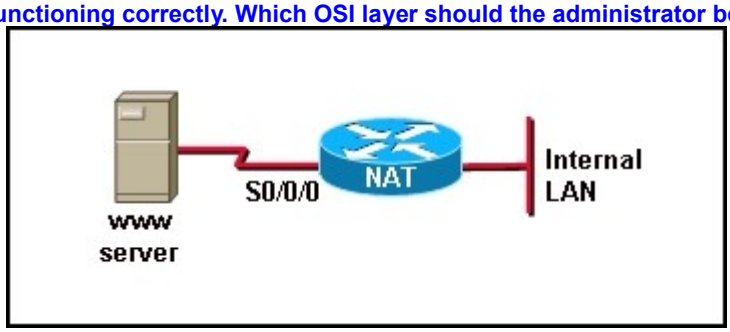
cable analyzer

network analyzer

protocol analyzer

knowledge base

11. 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

12. 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

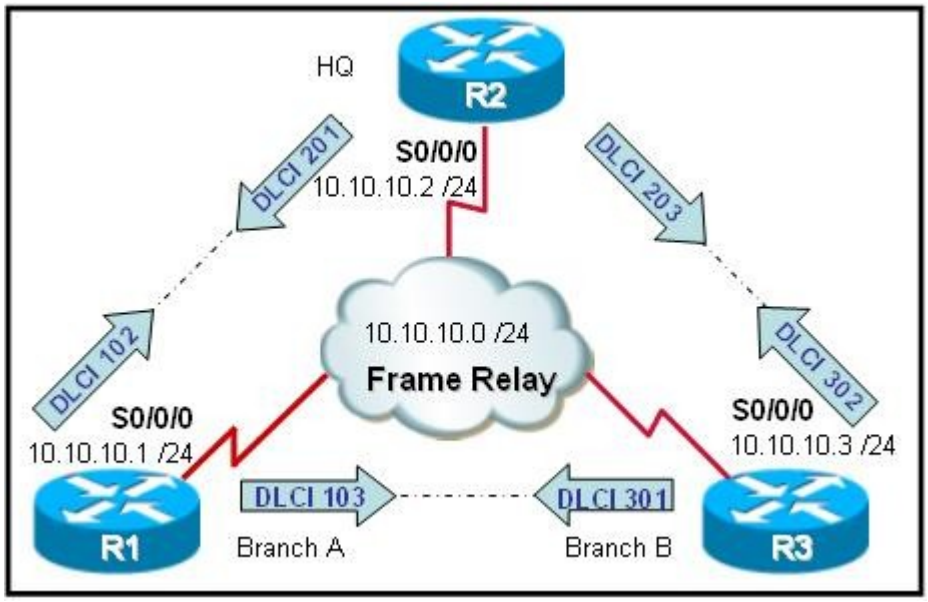
determining ownership

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

```
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
```

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.

14. 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.
Frame Relay at R3 and R2 should be tested to narrow the scope of the problem.
The fact that users at Branch A are working normally proves that there is no problem at R2.
An ACL entry error could cause the failure at Layer 4 in either R3 or R2.
The successful ping from R3 to R1 proves that the WAN is functioning normally. Therefore, the problem has to be in the upper layers.

15. Users are complaining of very long wait times to access resources on the network. The show interface command reveals collision counts far above the network baseline. At which OSI layer should the administrator begin troubleshooting?
application
transport
network
data link
physical

16. Encapsulation errors from mismatched WAN protocols on a serial link between two routers indicate a problem at which OSI layer?
physical
data link
network
transport

17. What combination of IP address and wildcard mask should be used to specify only the last 8 addresses in the subnet 192.168.3.32/28?
192.168.3.32 0.0.0.7
192.168.3.32 0.0.0.15
192.168.3.40 0.0.0.7
192.168.3.40 0.0.0.15

18. A network administrator has received complaints that users on a local LAN can retrieve e-mail from a remote e-mail server but are unable to open web pages on the same server. Services at which two layers of the OSI model should be investigated during the troubleshooting process? (Choose two.)
physical layer
data link layer
network layer
transport layer
application layer

19. Information about which OSI layers of connected Cisco devices can be verified with the show cdp neighbors command?
All layers
Layer 1, Layer 2, and Layer 3
Layer 1, Layer 2, Layer 3, and Layer 4
Layer 6 and Layer 7

20. Which three approaches should be used when attempting to gather data from users for troubleshooting? (Choose three.)

Determine fault.

Get to know the user to build trust.

Obtain information by asking simple pertinent questions.

Impress the user with use of technical language and skills.

Determine if the problem is related to time or a specific event.

Determine if the user can re-create the problem or events leading to the problem.