

Capstone 7A Essential Questions

Answer the following questions. 3 points each

1. How would you troubleshoot/resolve DNS problems?
2. What command would you use to troubleshoot a DNS problem, why?
3. What command would you use to see if the gateway is up, why?
4. Your PC, DNS and your company router are functioning properly. What command would you use to troubleshoot where the breakdown in communications is, why?
5. What command would you use to verify your PC's IP Address, netmask and gateway address?
6. Name some steps and commands which you would use to troubleshoot Internet related problems:
7. How would you troubleshoot DHCP server related issues?
8. What are the commands to get a new DHCP IP address on a PC?
9. A user is unable to telnet/ssh into the router. Explain the methodology of troubleshooting:
10. What are the big differences between routers, switches and Hubs?
11. What are the two types of copper LAN cables and console cable?
12. What type of cable do you use to connect two switches together, why?
13. What type of cable do you use to connect a laptop to a router, why?
14. What are the differences between a crossover cable and a straight-through cable?
15. What does the ping command do?
16. What is the difference between a public and a private IP address?
17. Why would you need a default gateway configured on your PC?
18. What command on a switch would you use to display the SVI address?
19. What command on a switch would you use to display the trunking information?
20. What command on a router would you use to display the route table?

21. What command on a router would you use to display the IP address of each interface?
22. What utility would you use to connect to a router from a laptop?
23. What is data encapsulation?
24. Briefly describe NAT:
25. What is the major difference between RIP and RIPv2?
26. What is the importance of the OSI Physical Layer?
27. What are MAC addresses?
28. What is the difference between a default and a custom netmask?
29. Explain the difference between a Client/Server architecture and a Peer-to-Peer architecture:
30. What is the difference between CSMA/CD and CSMA/CA?

Answer the following essential questions (5 points each):

1. Explain the purpose of IPv4 / IPv6 Dual Stack
2. Explain the purpose of 6to4 Tunneling