65 Computer Networking Interview Questions to Ask Candidates

Questions

1. Can you explain the difference between a switch and a router?
2. How would you troubleshoot a 'network unreachable' error?
3. What is the purpose of subnetting, and when would you use it?
4. Explain the concept of a VLAN and its benefits.
5. What is the difference between TCP and UDP?
6. How does a firewall work, and what are the different types?
7. What is NAT, and why is it used in networking?
8. Explain the concept of Quality of Service (QoS) in networking.
9. What is the purpose of DHCP, and how does it work?
10. What is the difference between a hub, a switch, and a router?
11. Can you explain the OSI model and its layers?
12. How does DNS resolution work?
13. What is the difference between a public and private IP address?
14. Explain the concept of network segmentation and its benefits.
15. What is ARP and how does it function in a network?
16. How would you secure a wireless network?
17. What is the purpose of a default gateway?
18. Explain the difference between a static and dynamic IP address.
19. What is a subnet mask and how is it used?
20. How does a VPN work and what are its main uses?
21. What is the difference between unicast, multicast, and broadcast traffic?
22. Explain the purpose of ICMP and give an example of its use.
23. What is the difference between a domain and a workgroup in networking?
24. How would you troubleshoot a slow network connection?
25. What is network congestion and how can it be mitigated?
26. Explain the concept of network protocols and give a few examples.
27. What is the purpose of a proxy server?
28. How does load balancing work in a network environment?
29. What is the difference between half-duplex and full-duplex communication?
30. Explain the concept of network topology and describe a few common types.
31. Can you explain the concept of network congestion and how it can be mitigated?
32. How would you design a network to ensure high availability?
33. Explain the differences between IPv4 and IPv6, and discuss the challenges of transitioning between them.
34. How does BGP (Border Gateway Protocol) work, and why is it important for internet routing?
35. Describe the process of network segmentation and its benefits for security and performance.
36. How would you approach troubleshooting a slow network connection?
37. Explain the concept of SDN (Software-Defined Networking) and its potential benefits.
38. How does network load balancing work, and what are some common algorithms used?
39. Describe the concept of network virtualization and its applications in modern data centers.
40. How do you ensure network security in a cloud-based environment?
41. What is the purpose of the Hypertext Transfer Protocol (HTTP) and how does it function in web communication?
42. Can you explain the role of the Simple Mail Transfer Protocol (SMTP) in email delivery?
43. What are the key differences between the Internet Control Message Protocol (ICMP) and User Datagram Protocol (UDP)?
44. How does the Transport Layer Security (TLS) protocol enhance communication security over the internet?
45. What is the function of the File Transfer Protocol (FTP) and how is it different from SFTP?
46. Can you explain what the Voice over Internet Protocol (VoIP) is and how it works?
47. What is the role of the Post Office Protocol (POP) in email retrieval?
48. How does the Dynamic Host Configuration Protocol (DHCP) differ from the Bootstrap Protocol (BOOTP)?
49. What is the purpose of the Network File System (NFS) in a networking environment?
50. Can you explain how the Secure Hypertext Transfer Protocol (HTTPS) differs from HTTP?
51. Can you describe the differences between client-server and peer-to-peer network architectures?
52. What are the key characteristics of a mesh network topology, and where is it typically used?
53. How does a star network topology function, and what are its advantages and disadvantages?
54. Can you explain the concept and benefits of a hybrid network topology?
55. What is the role of a network architecture diagram, and why is it important?
56. How does a ring network topology work, and in what situations is it most effective?
57. What are the primary considerations when designing a network for a large enterprise?
58. How do cloud-based network architectures differ from traditional on-premises network architectures?
59. Can you describe a time when you had to troubleshoot a complex network issue? What steps did you take to resolve it?
60. How would you handle a situation where multiple critical network devices fail simultaneously?
61. Imagine you need to redesign a company's network to improve performance and scalability. What factors would you consider, and what steps would you take?
62. How would you approach securing a network that handles sensitive data?
63. Describe a scenario where you had to optimize network performance. What measures did you take?