System Administrator Interview Questions (CCNA and Related Skills)

This document contains a structured list of 60+ important questions that a System Administrator candidate with CCNA knowledge should prepare for. It includes networking, Windows/Linux administration, cloud, and security topics with both direct and scenario-based questions.

Networking Questions

1. Explain the difference between TCP and UDP.
2. How does OSPF work? Advantages over RIP?
3. Describe subnetting a /24 network into 4 subnets.
4. What is a VLAN and why is it used?
5. How do you configure a trunk port on a Cisco switch?
6. Differences between IPv4 and IPv6?
7. Explain NAT vs PAT with examples.
8. What is STP and why is it important?
9. Difference between EIGRP and OSPF.
10. Ping vs tracert usage.
11. What is an ACL and how is it configured?
12. Explain the OSI layers with examples.
13. How to troubleshoot a network outage?
14. Difference between a router and a switch.
15. What is a broadcast storm?
16. Scenario: Users in VLAN 10 cannot access the internet. Steps to troubleshoot?
17. Scenario: Router interface goes down after configuration. Steps?
18. Scenario: High CPU usage on a switch. Possible causes?
19. Scenario: Inter-VLAN communication fails.
20. Scenario: Users cannot reach a remote server.

Windows Administration Questions

1. How to reset a user password in Active Directory?
2. What is a Group Policy Object (GPO) and its purpose?
3. Troubleshoot DNS resolution issues.
4. Difference between domain, tree, and forest.
5. How to configure DHCP scope?
6. How to manage Windows Firewall?
7. Describe Windows backup strategies.
8. How to check event logs for errors?
9. Difference between standard and administrative accounts.
10. PowerShell command to list all users.
11. Scenario: Users cannot log in due to authentication failures.
12. Scenario: Server is running out of disk space.
13. Scenario: Deploy software updates to all servers.
14. Scenario: Printer sharing not working.
15. Scenario: Remote Desktop connection issues.

Linux Administration Questions

1. How to add a new user and assign permissions?
2. How to check open ports on a Linux server?
3. Difference between soft and hard links.
4. How to monitor system processes?
5. Commands to manage services (systemctl/service).
6. Difference between apt and yum.
7. How to configure crontab jobs?
8. How to check disk usage?
9. Difference between /var/log/syslog and /var/log/messages.
10. How to secure SSH access?
11. Scenario: Service fails to start on boot. Troubleshooting steps?
12. Scenario: Disk space full on /var. How to clean up?
13. Scenario: Configure static IP.
14. Scenario: Troubleshoot network connectivity.
15. Scenario: Investigate unauthorized login attempts.

Cloud Administration Questions

1. Difference between public and private subnets.
2. Explain IAM roles and policies.
3. How to take a snapshot of a VM.
4. Difference between IaaS, PaaS, and SaaS.
5. How to configure security groups?
6. Monitoring tools in cloud platforms.
7. Differences between block and object storage.
8. Steps to migrate an on-premise server to the cloud.
9. How to implement role-based access control?
10. Backup strategies for cloud VMs.
11. Scenario: VM cannot connect to the internet.
12. Scenario: Implement role-based access to a storage bucket.
13. Scenario: Troubleshoot high latency in a cloud network.

Security Questions

1. Difference between stateful and stateless firewall.
2. What is MFA and why is it important?
3. VPN types and use cases.
4. Steps to secure Windows/Linux servers.
5. How to respond to malware alerts.
6. Common cybersecurity best practices.
7. Configure firewall to allow HTTP and block FTP.
8. Scenario: Unauthorized access detected in logs.
9. Scenario: Ransomware detected on a workstation.

Troubleshooting Questions

1. Identify the problem-solving steps in troubleshooting.
2. Scenario: User cannot access shared folder. Steps?
3. Scenario: Network latency reported. How to diagnose?
4. Scenario: Service repeatedly crashing on Windows/Linux.
5. Scenario: Printer or peripheral not working.
6. Scenario: VPN connection issues.
7. Scenario: Slow server performance.

This collection of questions provides a complete set for interview preparation, covering both technical knowledge and scenario-based problem-solving.