101 Linux Admin Interview Questions (and Answers)

Questions

1. What is Linux, in super simple terms, and why do people use it instead of, say, Windows?

2. Imagine the file system is like a tree. Where's the very bottom, the root, of that tree in Linux? What does it contain?

3. If you want to see what's inside a folder, what command do you use?

4. Let's say you need to create a new folder to store your drawings. What command helps you do that?

5. How would you rename a file, like changing 'drawing.txt' to 'cool_drawing.txt'?

6. What command would you use to see the contents of a text file quickly?

7. Explain the difference between absolute and relative paths in the file system. Can you give an example of each?

8. If a program isn't working, how do you find out what processes are running on your Linux system?

9. What's the super important user called 'root' able to do that other users can't?

10. How do you become 'root' temporarily to do something important?

11. What are permissions? Can you name a couple of them?

12. How can you change permissions on a file or folder so only you can read and write it?

13. What is an environment variable and can you name some common ones?

14. What is the command to show the current date and time?

15. Explain what SSH is used for.

16. What's a package manager, and why is it useful?

17. What is a shell? What are the different types of shells that are available?

18. How can you find a specific file if you only know part of its name?

19. What do you know about the bash history?

20. Explain what are symbolic links. What is the difference between hard link and symbolic link?

21. What is the command to compress a folder? What about uncompressing it?

22. What is a daemon in Linux?

23. What are the different log file locations in Linux? Why are log files important?

24. How would you check network connectivity from the command line?

25. What does 'ls' do, and how is it helpful?

26. Explain what a file extension is, like '.txt' or '.pdf'.

27. What's the difference between a user and a group in Linux?

28. If a program isn't working, what's one simple thing you can try first?

29. What does 'sudo' do, and why is it important to be careful with it?

30. Can you describe a situation where you might need to use the command line instead of a graphical interface?

31. What is an IP address, and why do computers need one?

32. What's a 'server' in simple terms, and what are they used for?

33. How do you create a new directory (folder) in Linux using the command line?

34. What is the command to see where you are in the file system?

35. Explain the meaning of the terms 'open source' and how it relates to Linux.

36. What is the purpose of a firewall?

37. Describe what you know about basic file permissions in Linux (read, write, execute).

38. How would you shut down or restart a Linux computer using the command line?

39. What is the purpose of a text editor, and can you name one used in Linux?

40. What is the difference between absolute and relative paths?

41. Explain what a process is in the context of Linux operating system.

42. If you accidentally delete a file, what are some steps you might take to try and recover it?

43. What is the function of the 'ping' command?

44. Why is it important to keep a Linux system updated?

45. What is a virtual machine, and why might someone use one?

46. Describe a common task a Linux administrator might do every day.

47. What are environment variables and why are they useful?

48. What is SSH and why is it used?

49. Explain the concept of a Linux distribution (like Ubuntu, Fedora, etc.).

50. Explain the concept of inode and how it relates to files and directories.

51. How would you monitor CPU utilization on a Linux system and identify the processes consuming the most resources?

52. Describe the steps you would take to troubleshoot a network connectivity issue on a Linux server.

53. What are the different RAID levels, and what are their advantages and disadvantages in terms of performance and data redundancy?

54. Explain the purpose of the /etc/fstab file and how it's used to manage mounted file systems.

55. How do you manage user accounts and groups on a Linux system, including creating, modifying, and deleting them?

56. Describe the process of setting up and configuring a basic firewall using iptables or firewalld.

57. What is the purpose of SSH keys, and how do you configure SSH key-based authentication?

58. Explain how you would schedule a task to run automatically using cron.

59. How do you manage and troubleshoot system logs on a Linux server?

60. Describe the steps involved in backing up and restoring a Linux system.

61. What are the different types of Linux distributions, and what are some key differences between them?

62. Explain how you would configure and manage network interfaces on a Linux system.

63. How do you troubleshoot performance issues related to disk I/O on a Linux server?

64. Describe the process of installing and configuring a web server like Apache or Nginx.

65. What are Linux namespaces and cgroups, and how are they used for containerization?

66. Explain how you would use the `tcpdump` or `Wireshark` to capture and analyze network traffic.

67. How do you manage and troubleshoot DNS resolution issues on a Linux system?

68. Describe the steps involved in securing a Linux server against common security threats.

69. What is the purpose of SELinux or AppArmor, and how do they enhance system security?

70. Explain how you would use `lsof` or `netstat` to identify open files and network connections.

71. How do you manage and troubleshoot memory leaks on a Linux server?

72. Describe the process of setting up and configuring a mail server on Linux.

73. What are the different types of virtualization technologies, and what are their pros and cons?

74. Explain how you would use `strace` to trace system calls made by a process.

75. How do you manage and troubleshoot kernel panics on a Linux system?

76. Describe the steps involved in upgrading a Linux system to a newer version.

77. What is the purpose of the `/proc` filesystem, and how can it be used for system monitoring?

78. How would you troubleshoot a slow-running application on a Linux server, considering both system resources and application-level issues?

79. Describe a situation where you had to optimize a Linux server for high traffic, and what steps did you take?

80. Explain your approach to automating Linux server deployments using configuration management tools like Ansible or Puppet.

81. Walk me through your process of setting up and managing a highly available web server environment on Linux.

82. How do you monitor the security of a Linux server environment, and what tools do you use?

83. Describe a time you had to recover a Linux server from a critical failure. What was your strategy?

84. Explain how you would implement and manage a secure backup and restore strategy for a critical database on Linux.

85. What are your preferred methods for performance tuning a Linux-based database server (e.g., MySQL, PostgreSQL)?

86. How do you manage and troubleshoot network connectivity issues on a Linux server, considering various networking tools and protocols?

87. Describe your experience with containerization technologies like Docker and Kubernetes on Linux.

88. Explain your approach to managing user authentication and authorization in a large Linux environment using tools like LDAP or Active Directory.

89. How would you approach securing a Linux server against common web application vulnerabilities (e.g., SQL injection, XSS)?

90. Describe a complex scripting project you've undertaken to automate a Linux administration task.

91. How do you stay up-to-date with the latest security patches and updates for your Linux servers, and what is your patching strategy?

92. Explain how you would diagnose and resolve a kernel panic on a Linux server.

93. Describe your experience with implementing and managing a virtualized environment using KVM or Xen on Linux.

94. How do you handle log management and analysis in a large Linux environment?

95. Explain your approach to troubleshooting and resolving file system corruption issues on a Linux server.

96. How do you ensure compliance with security policies and regulations in your Linux environment?

97. Describe your experience with managing and troubleshooting DNS servers on Linux.

98. Explain how you would implement and manage a centralized configuration management system for your Linux servers.