

Module 16

Linux server - Operate running systems

Assignment Level Basic to Advance

1. What is PID ?

Ans: PID stands for Process IDentifier. It's a unique number assigned to each running process on a system.

2. What is PPID?

Ans:PPID stands for Parent Process IDentifier. It indicates the PID of the parent process

3. What is the use of " ps " command ?

Ans:The "ps" command is used to view information about active processes

4. What is the use of " ps aux " command ?

Ans:"ps aux" displays detailed information about all running processes.

5. What is the use of " tops " command ?

Ans:The "top" command provides dynamic real-time information about system resource usage.

6. Which command is used to change priority value ?

Ans:"nice" command is used to change the priority value of a process

7. What is the use of "jobs" command ?

Ans:"jobs" command displays the status of jobs running in the background.

8. What is the use of grep command ?

Ans:"grep" command is used for pattern searching in text.

9. What is system?

Ans:A system is a collection of hardware, software, and processes working together to perform a set of functions

10.What is daemons?

Ans:Daemons are background processes that run continuously, usually providing services to other processes or users.

11.I want to check the service status for" sshd", which will help me?

Ans:"systemctl status sshd" checks the service status for sshd.

12.How to stop and start services in terminal?

Ans:To stop and start services in the terminal, you can use "systemctl stop <service>" and "systemctl start <service>", respectively.

13.What is the use of openSSH ?

Ans:OpenSSH is a set of secure network utilities based on the SSH protocol, used for securely accessing remote machines

14.Which command is used to generate key in linux ?

Ans:"ssh-keygen" command is used to generate SSH keys in Linux.

15.Which command is used to copy ssh key?

Ans:"ssh-copy-id" command is used to copy SSH keys to remote servers.

16.How do we prohibit the root user from logging in using ssh?

Ans:To prohibit the root user from logging in using SSH, you can edit the SSH configuration file (/etc/ssh/sshd_config) and set "PermitRootLogin no".

17.How do we prohibit password authentication using ssh?

Ans: To prohibit password authentication using SSH, edit the SSH configuration file and set "PasswordAuthentication no".

18. Where we find general logs ?

Ans: General logs are typically found in /var/log.

19. Where we find secure logs ?

Ans: Secure logs are usually found in /var/log/secure or /var/log/auth.log.

20. Where we find mail log ?

Ans: Mail logs are located in /var/log/mail.log or /var/log/maillog

21. Where we find scheduling logs?

Ans: Scheduling logs can be found in /var/log/cron or /var/log/syslog

22. Where we find booting logs?

Ans: Booting logs are stored in /var/log/boot.log or /var/log/messages.

23. What is the use of "lastb" command ?

Ans: "lastb" command displays a list of the last logged-in users who failed to authenticate.

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29. What is the use of "lastb" command ?

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- **Assignment Level Intermediate**

1. Remote host is "NADIAD", Remote user is "KAMAL,

how to access remote user via ssh? [write down the command]

Ans: To access the remote user "KAMAL" on the host "NADIAD" via SSH, you would use the following command: `ssh KAMAL@NADIAD`

2. What the "w -f" command is used to display a list of currently logged-in users and the processes they are running. What is the use of "w -f" command ?

Ans: The "w -f" command is used to display a list of currently logged-in users and the processes they are running.

3. What are "SSH host keys" ?

Ans: SSH host keys are cryptographic keys used by SSH for authenticating hosts to clients, ensuring secure communication

4. What is the default location for server's public key in client side?

Ans: The default location for the server's public key on the client side is typically stored in the file "`~/.ssh/known_hosts`".

5. I want to fire "`ls -l /etc`" command on remote host "desktop"

[write down the command]

Ans: To fire the "ls -l /etc" command on the remote host "desktop", you would use the following command: `ssh desktop 'ls -l /etc'`.

6. What is the use of this command "journalctl --since today"?

Ans: The command "journalctl --since today" is used to view system logs since the beginning of the current day.

7. What is "chronyd"?

Ans: "chronyd" is a daemon used for system clock synchronization in Linux systems, similar to the more commonly known "ntpd".

8. Full form of NTP

Ans: NTP stands for Network Time Protocol.

9. Port number for NTP is...

Ans: 123

10. I want to check timezone, which command will help me?

Ans: To check the timezone, you can use the command "timedatectl".

11. How to set timezone? Give a command....

Ans: To set the timezone, you can use the command "timedatectl set-timezone <timezone>".

Task :1

1. Display all processes on display

Ans: 'ps -e.'

2. In terminal, Determine the number of logical CPUs

Ans: nproc

3. Start and check any new job

Ans: jobs

4. Start any new job in background

Ans: command &.

5. Start any background job on foreground

Ans: fg command followed by the job ID.

6. Check running process

Ans: "ps aux"

7. Check all running process under user

Ans: "ps -u username."

8. Kill any process via its PID

Ans: "kill PID."

9. Change nice values for any new process

Ans: "nice" command followed by the desired value and the command to execute

10. Change nice value for any running user

Ans: "renice"

11. Check the status of sshd.service

Ans: "systemctl status sshd.service."

12. Stop the service of sshd.service

Ans: "systemctl stop sshd.service."

13. Start the service of sshd.service

Ans: "systemctl start sshd.service."

14. Login in server vm

Ans: "ssh username@hostname."

15. Display the status of "chronyd"

Ans: "systemctl status chronyd."

16. Restart "sshd.service"

Ans: "systemctl restart sshd.service."

TASK: 2

1. Start desktop machine

Ans: done

2. Get remote access of server machine

Ans: "ssh username@hostname."

3. Create new user in server name "user1"

Ans: "sudo adduser user1"

4. From desktop machine, login "user1" of server user

Ans: "ssh user1@server_hostname."

5. Execute single command "hostname", on remote host (server), and as a remote user "user1"

Ans: "ssh user1@server_hostname 'hostname'"

6. Display a list of currently logged into the computer

Ans: "who" or "w"

7. Generate private-public ssh key with password

Ans: "ssh-keygen -t rsa -b 2048."

8. Import this key on remote host side

Ans: To import the generated SSH key on the remote host side, you would append the public key to the ~/.ssh/authorized_keys file on the server. You can use a command like: ssh-copy-id -i ~/.ssh/id_rsa.pub user1@server_hostname. Alternatively, manually copy and paste the public key into the ~/.ssh/authorized_keys file on the server.

Task: 4

1. Open general log

Ans: "sudo tail -f /var/log/messages or sudo cat /var/log/messages"

2. Open secure message logs

Ans: "sudo tail -f /var/log/secure" or "sudo cat /var/log/secure"

3. Open only mail logs

Ans: "sudo tail -f /var/log/maillog" or "sudo cat /var/log/maillog"

4. Check scheduling logs

Ans: "sudo tail -f /var/log/cron" or "sudo cat /var/log/cron"

5. Check booting logs

Ans: "sudo dmesg" or "sudo journalctl -b"

6. See the info about "bad logging"

Ans: "sudo dmesg | grep -i error" or "sudo journalctl -p 3 -xb"

7. Check emperor logs

Ans: "emperor" log

8. Check today's temporary logs

Ans: "sudo journalctl --since=today or sudo cat /var/log/messages | grep \$(date +%b %e)"

9. Set new time zone

Ans: "sudo timedatectl set-timezone <timezone>"