**Module: 5- Linux server - Deploy, configure, and maintain systems Assignment**

38. · Schedule tasks using cron or at.

ANS. Sure! Here's a simple explanation:

1. Using Cron:

cron is for scheduling tasks that repeat regularly (e.g., every day, week, or month).

How to use:

1. Open the cron editor:
2. crontab -e
3. Add a line like this for the task:
4. \* \* \* \* \* /path/to/command
   * The five stars represent:
     + Minute
     + Hour
     + Day of the month
     + Month
     + Day of the week.

2. Using At:

at is for running a task once at a specific time.

How to use:

1. To run a task at a specific time, use:
2. echo "/path/to/command" | at 10:00
   * This runs the command at 10:00 AM today.
3. Check scheduled tasks with:
4. atq
5. Remove a task with:
6. atrm job\_number

39. Use apt or yum (depending on your Linux distribution) to install, update, and remove software packages.

ANS. Here’s a simpler version:

Using yum (Red Hat/CentOS):

* Install a package:
* sudo yum install name # Install package
* Update all packages:
* sudo yum update # Update packages
* Remove a package:
* sudo yum remove name # Remove package

40. Install all httpd package

ANS. To install the httpd package , you can use the following commands depending on your Linux distribution.

For Red Hat/CentOS (using yum):

sudo yum install httpd # Install Apache (httpd) package

41. Open kickstart configuration graphically.

ANS. To open the Kickstart configuration graphically:

1. Install system-config-kickstart:

On CentOS/RHEL:

sudo yum install system-config-kickstart

On Fedora:

sudo dnf install system-config-kickstart

1. Open the tool:

sudo system-config-kickstart

This will open a graphical interface to configure Kickstart settings.

42. Configure new kickstart file

ANS. To configure a new Kickstart file:

1. Install the Tool:

* On CentOS/RHEL:
* sudo yum install system-config-kickstart
* On Fedora:
* sudo dnf install system-config-kickstart

2. Open the Tool:

sudo system-config-kickstart

3. Configure the Kickstart File:

Use the graphical interface to set:

* Partitioning (disk layout)
* Packages (software to install)
* Network (IP settings)
* Timezone and Language

4. Save the Kickstart File:

Once done, save it as ks.cfg.

Now you can use this file to automate system installs.

43. Show full configuration of new kickstart file.

ANS. Here’s a simple example of a full Kickstart file for automatic Linux installation:

Kickstart File Example:

#version=RHEL7

install

url --url=http://mirror.centos.org/centos/7/os/x86\_64/

lang en\_US.UTF-8

keyboard us

network --bootproto=dhcp --device=eth0 --onboot=yes --hostname=localhost

timezone --utc America/New\_York

rootpw --iscrypted $6$rounds=656000$....

firewall --enabled --service=ssh

services --enabled="network,sshd"

part / --size=1 --grow --fstype ext4

%packages

@core

%end

%post

echo "Post install steps"

%end

Key Parts:

* install: Starts installation.
* url: Sets the installation source.
* lang & keyboard: Set language and keyboard.
* network: Configures network.
* timezone: Sets timezone.
* rootpw: Sets the root password.
* firewall: Enables the firewall and SSH.
* services: Starts network and SSH.
* part: Creates disk partition.
* %packages: Installs minimal packages.
* %post: Runs commands after installation.

44. Validate new kickstart file.

ANS. To validate your Kickstart file:

1. Install ksvalidator (if not installed):
   * On CentOS/RHEL:
   * sudo yum install pykickstart
   * On Fedora:
   * sudo dnf install pykickstart
2. Validate the Kickstart file: Run this command:
3. ksvalidator /path/to/ks.cfg
4. Check for errors: If everything is okay, there will be no output. If there are errors, they'll be shown in the terminal.

45. All http on firewall.

ANS. To allow all HTTP traffic (port 80) through the firewall, you can use the following commands depending on your Linux distribution:

1. For firewalld (on CentOS, RHEL, Fedora):

Allow HTTP traffic (port 80) with the following command:

sudo firewall-cmd --zone=public --add-service=http --permanent

sudo firewall-cmd --reload

This will:

* Allow HTTP traffic.
* Make the change permanent.
* Reload the firewall to apply the change.

2. For ufw (on Ubuntu/Debian):

To allow HTTP traffic (port 80) using ufw:

sudo ufw allow http

3. For iptables:

If you're using iptables, you can allow HTTP traffic like this:

sudo iptables -A INPUT -p tcp --dport 80 -j ACCEPT

To make the iptables rule persistent, you'll need to save the configuration depending on your system.

46. Reload firewall.

ANS. To reload the firewall and apply changes, use the following commands based on your firewall tool.

For firewalld (CentOS/RHEL/Fedora):

sudo firewall-cmd --reload

This will reload the firewall and apply any changes you made.

47. Start and restart http.

ANS. To start and restart Apache (HTTP service):

1. For systemd (CentOS/RHEL 7+, Ubuntu 16.04+, Fedora):

* Start Apache:
* sudo systemctl start httpd # CentOS/RHEL/Fedora
* sudo systemctl start apache2 # Ubuntu/Debian
* Restart Apache:
* sudo systemctl restart httpd # CentOS/RHEL/Fedora
* sudo systemctl restart apache2 # Ubuntu/Debian

48. Install new foundation using new kickstart file.

ANS. To install a system using a new Kickstart file:

1. Prepare the Kickstart File:

Make sure your Kickstart file (e.g., ks.cfg) is ready.

2. Place the Kickstart File:

Put the Kickstart file in a place where it can be accessed during installation:

* On a USB/CD.
* On a network server (via HTTP, FTP, or NFS).

3. Start Installation:

* Boot from your installation media (USB or CD).
* At the boot prompt, type the command to use your Kickstart file.

Example (for HTTP server):

linux ks=http://your-server-ip/path/to/ks.cfg

Example (for local file):

linux ks=hd:/path/to/ks.cfg

Press Enter to begin installation.

4. Let the System Install:

The system will automatically follow the Kickstart file to set up everything (like partitions, packages, etc.).