**1. Linux Admin**

* **Description**: Managing Linux systems, including users, file systems, and system services.
* **Command**: useradd (Add a user)
* **Example**:

bash

Copy code

sudo useradd -m john

sudo passwd john

**2. VMware**

* **Description**: Virtualization platform to create and manage virtual machines.
* **Command**: Using VMware CLI for virtual machine operations.
* **Example**:

bash

Copy code

vmware-cmd <vmx\_file\_path> start

**3. Docker**

* **Description**: A containerization platform to build, deploy, and run applications in containers.
* **Command**: docker run (Run a container)
* **Example**:

bash

Copy code

docker run -d -p 8080:80 nginx

**4. CI/CD**

* **Description**: Continuous Integration and Continuous Deployment pipeline for automated builds and deployments.
* **Command**: GitHub Actions or Jenkins CLI.
* **Example (Jenkins)**:

bash

Copy code

java -jar jenkins-cli.jar -s http://localhost:8080/ build my\_pipeline

**5. Bachelor of Technology (I.T)**

* **Description**: Degree program focusing on information technology concepts.
* **Example**: Coursework includes networking, programming, and database management.

**6. Spring Tool Suite**

* **Description**: IDE for developing Spring-based Java applications.
* **Command**: Using Maven in STS.
* **Example**:

bash

Copy code

mvn spring-boot:run

**7. VS Code**

* **Description**: Lightweight code editor with support for debugging and extensions.
* **Example**: Configure Python development:

json

Copy code

{

"python.pythonPath": "path/to/python"

}

**8. HPCSA (High Performance Computing System Administration)**

* **Description**: Diploma focusing on managing high-performance computing systems.

**9. xCAT**

* **Description**: Extreme Cloud Administration Toolkit for managing HPC clusters.
* **Command**: nodeset (Set node boot state)
* **Example**:

bash

Copy code

nodeset compute01 osimage=centos7-x86\_64-install

**10. Nagios**

* **Description**: Monitoring tool for servers, applications, and networks.
* **Command**: Check service status.
* **Example**:

bash

Copy code

nagios -v /usr/local/nagios/etc/nagios.cfg

**11. Bash Scripting**

* **Description**: Writing scripts to automate tasks in Linux.
* **Example**:

bash

Copy code

#!/bin/bash

echo "Hello, World!"

**12. Proxmox**

* **Description**: Open-source virtualization platform.
* **Command**: Manage VMs with Proxmox CLI.
* **Example**:

bash

Copy code

qm start 101

**13. N/W Security**

* **Description**: Network security concepts like firewalls, intrusion detection, etc.
* **Command**: Configure firewall with ufw.
* **Example**:

bash

Copy code

sudo ufw allow 22

sudo ufw enable

**14. DevOps**

* **Description**: Practices for integrating development and operations for faster delivery.
* **Example**: Automating deployments using Ansible.

yaml

Copy code

- hosts: all

tasks:

- name: Install Nginx

apt:

name: nginx

state: present

**15. Kubernetes**

* **Description**: Container orchestration platform.
* **Command**: kubectl (Manage Kubernetes clusters)
* **Example**:

bash

Copy code

kubectl get pods

**16. PostgreSQL**

* **Description**: Open-source relational database.
* **Command**: Query database.
* **Example**:

sql

Copy code

SELECT \* FROM users;

**17. Cloud**

* **Description**: Computing services delivered over the internet (e.g., AWS).
* **Example**: Launch an EC2 instance using AWS CLI.

bash

Copy code

aws ec2 run-instances --image-id ami-12345 --count 1 --instance-type t2.micro

**18. AWS**

* **Description**: Amazon Web Services cloud platform.
* **Command**: AWS CLI example.
* **Example**:

bash

Copy code

aws s3 cp file.txt s3://my-bucket/

**19. GitHub**

* **Description**: Source code hosting and version control.
* **Command**: Push code to repository.
* **Example**:

bash

Copy code

git push origin main

**20. Grafana**

* **Description**: Visualization tool for monitoring data.
* **Command**: Set up a data source using Grafana CLI.
* **Example**:

bash

Copy code

grafana-cli plugins install grafana-piechart-panel

**21. Prometheus**

* **Description**: Monitoring system for metrics collection.
* **Command**: Start Prometheus server.
* **Example**:

bash

Copy code

./prometheus --config.file=prometheus.yml

**22. LVM**

* **Description**: Logical Volume Manager for managing disk partitions.
* **Command**: Create logical volume.
* **Example**:

bash

Copy code

lvcreate -L 10G -n myvol myvg

**23. RAID**

* **Description**: Redundant Array of Independent Disks for data redundancy.
* **Command**: Create RAID array.
* **Example**:

bash

Copy code

mdadm --create /dev/md0 --level=1 --raid-devices=2 /dev/sda /dev/sdb

**24. Lustre**

* **Description**: File system for large-scale storage.
* **Command**: Mount Lustre filesystem.
* **Example**:

bash

Copy code

mount -t lustre /dev/lustre /mnt/lustre

**25. Slurm**

* **Description**: Scheduler for HPC clusters.
* **Command**: Submit a job.
* **Example**:

bash

Copy code

sbatch job\_script.sh

Each command demonstrates practical usage based on the described concept. Let me know if you'd like a deeper dive into any of these!

4o