Linux commands for server management

Basic System Information

- **uname -a**: Displays system information (kernel version, architecture, etc.).
- **hostname**: Shows the hostname of the server.
- **uptime**: Shows how long the system has been running.
- **top**: Displays real-time system processes and resource usage.
- **free -h**: Displays memory usage in human-readable format.
- **df -h**: Shows disk space usage in a human-readable format.
- **du -sh /path/to/directory**: Displays the disk usage of a specific directory.
- **lsb_release -a**: Shows detailed information about the distribution.

File and Directory Operations

- **ls**: Lists files and directories.
- **cd <directory>**: Changes the directory.
- **pwd**: Prints the current working directory.
- **cp <source> <destination>**: Copies files or directories.
- **mv <source> <destination>**: Moves or renames files or directories.
- **rm <file>**: Removes files.
- **rm -r <directory>**: Recursively removes directories.
- **mkdir <directory>**: Creates a new directory.
- **rmdir <directory>**: Removes an empty directory.

Process Management

- **ps aux**: Lists all running processes.
- **kill <PID>**: Kills a process by its Process ID (PID).
- **killall <process_name>**: Kills all processes by the given name.
- **top**: Displays running processes in real-time.
- **htop**: A more advanced, interactive process viewer (requires installation).

User and Group Management

- **whoami**: Displays the current logged-in username.
- **id <username>**: Displays user and group information for the given username.
- **useradd <username>**: Creates a new user.
- **usermod -aG <group> <username>**: Adds a user to a specific group.
- **passwd <username>**: Changes a user's password.
- **groupadd <groupname>**: Creates a new group.
- **groupdel <groupname>**: Deletes a group.

Disk and File System Management

- **fdisk -l**: Lists all available disk partitions.
- **mount**: Mounts a file system or disk.
- **umount <mount_point>**: Unmounts a file system or disk.
- **lsblk**: Lists information about all block devices.
- **fsck <device>**: Checks the file system for errors on a given device.

Network Commands

- **ifconfig** or **ip a**: Displays network interface configuration.
- **ping <hostname or IP>**: Sends ICMP echo requests to test connectivity.
- **netstat -tuln**: Displays active listening ports and their status.
- **ss -tuln**: Another command to show active listening ports.
- **curl <URL>**: Fetches data from a URL.
- **wget <URL>**: Downloads files from a URL.
- **traceroute <hostname>**: Shows the route packets take to a destination.

Log Files and Monitoring

- **tail -f /var/log/syslog**: Displays real-time system logs.
- **journalctl -xe**: Views detailed logs on systems using systemd.
- **dmesg**: Displays the kernel ring buffer, which often contains boot and hardware-related logs.
- **last**: Shows the last logins of users.
- **who**: Shows who is logged in to the server.

Package Management (depending on your distro)

- **apt update**: Updates package lists for Debian/Ubuntu-based systems.
- **apt upgrade**: Upgrades installed packages for Debian/Ubuntu-based systems.
- **apt install <package_name>**: Installs a package on Debian/Ubuntu-based systems.
- **yum update**: Updates packages for RedHat/CentOS-based systems.
- **yum install <package_name>**: Installs a package on RedHat/CentOS-based systems.
- **dnf install <package_name>**: Installs a package on Fedora-based systems.

Service Management (with systemd)

- **systemctl status <service>**: Displays the status of a service.
- **systemctl start <service>**: Starts a service.
- **systemctl stop <service>**: Stops a service.
- **systemctl restart <service>**: Restarts a service.
- **systemctl enable <service>**: Enables a service to start on boot.
- **systemctl disable <service>**: Disables a service from starting on boot.

Backup and Archive

- **tar -cvf <archive_name.tar> <directory>**: Creates a tarball archive.
- **tar -xvf <archive_name.tar>**: Extracts a tarball archive.
- **rsync -av <source> <destination>**: Synchronizes files and directories between two locations.

File Permissions and Ownership

- **chmod <permissions> <file>**: Changes the permissions of a file.
- **chown <user>:<group> <file>**: Changes the ownership of a file.
- **chgrp <group> <file>**: Changes the group ownership of a file.

System Shutdown and Reboot

- **shutdown now**: Shuts down the server immediately.
- **reboot**: Reboots the server.
- **poweroff**: Powers off the server.