Detailed Linux Commands Reference

This document provides a comprehensive overview of Linux commands executed during system exploration and administration practice. It covers user management, directory navigation, file manipulation, process monitoring, package management, system service control, and file compression. Each command is accompanied by an explanation to help beginners understand its purpose and usage.

Command	Explanation
whoami	Displays the current logged-in username.
pwd	Prints the current working directory path.
ls	Lists all files and directories in the current location.
cat /etc/os-release	Displays operating system information such as version and distribution.
sudo -i	Switches to the root user with administrative privileges.
cd /	Changes the current directory to the root (/) directory.
cd /bin	Navigates to the /bin directory where essential binaries are stored.
cd /etc	Changes directory to /etc, which contains system configuration files.
ls -l	Lists files in long format, showing permissions, owner, size, and modification date.
mkdir devopsdir	Creates a new directory named 'devopsdir'.
touch testfile.txt	Creates an empty file named 'testfile.txt'.
cp file1 file2	Copies 'file1' to 'file2' or into a directory.
mv file1 dir/	Moves or renames files and directories.
rm file.txt	Removes or deletes a file named 'file.txt'.
rm -rf dir/	Recursively removes directories and their contents without confirmation.
hostname	Displays or sets the system hostname.
cat /etc/hostname	Displays the current hostname of the system.
free -m	Displays memory usage in megabytes.
df -h	Shows disk space usage in human-readable format.
uptime	Shows how long the system has been running along with load averages.
grep -i firewall anaconda-ks.cfg	Searches case-insensitively for the term 'firewall' in the file.
awk -F':' '{print $1}' /etc/passwd	Prints the first field (username) from /etc/passwd using ':' as the delimiter.
sed -i 's/old/new/g' file	Replaces all occurrences of 'old' with 'new' inside the file.
head -n 10 file	Displays the first 10 lines of a file.
tail -n 10 file	Displays the last 10 lines of a file.
tail -f /var/log/messages	Continuously monitors and displays new lines added to the log file.
find /etc -name host*	Searches for files or directories under /etc starting with 'host'.
locate host	Quickly finds files and directories containing the term 'host' using an indexed databa
useradd ansible	Creates a new user account named 'ansible'.
passwd ansible	Sets or changes the password for the user 'ansible'.

groupadd devops	Creates a new group named 'devops'.
usermod -aG devops ansible	Adds the user 'ansible' to the 'devops' group.
chown user:group file	Changes file ownership to the specified user and group.
chmod 770 /opt/webdata	Grants full permissions to owner and group, none to others.
yum install httpd -y	Installs the Apache web server using YUM package manager (CentOS).
systemctl start httpd	Starts the Apache web server service.
systemctl status httpd	Checks the running status of the Apache web server.
systemctl enable httpd	Enables the Apache service to start automatically on boot.
apt install apache2 -y	Installs the Apache2 web server on Debian/Ubuntu systems.
apt update	Updates the local package index to fetch latest package metadata.
apt upgrade	Upgrades all installed packages to their latest versions.
rpm -qa	Lists all installed RPM packages on the system.
rpm -ivh package.rpm	Installs an RPM package with verbose and hash progress output.
rpm -e package	Uninstalls a specified RPM package from the system.
tar -czvf file.tar.gz dir	Creates a compressed tarball (gzip format) of a directory.
tar -xzvf file.tar.gz	Extracts files from a gzip-compressed tar archive.
zip -r archive.zip folder	Compresses all files in a folder into a ZIP archive recursively.
unzip archive.zip	Extracts files from a ZIP archive.
ps -ef	Displays all running processes in full format.
kill PID	Terminates a process by its Process ID (PID).
top	Displays real-time system resource usage including CPU and memory.
history	Displays a list of previously executed commands in the shell.