Linux Administration Command Reference

School of Computer Science and Engineering

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Command	Syntax	Example
ls	ls [options] [directory]	• ls (basic listing) • ls -l (long format) • ls -a (show hidden) • ls -lh (human readable)
cd	cd [directory]	• cd /var/log • cd ~ • cd .. (parent directory)
pwd	pwd	pwd
touch	touch [options] filename	• touch file.txt • touch -t 202401010000 oldfile
rm	rm [options] file	• rm file.txt • rm -r directory/ • rm -f protectedfile
mkdir	mkdir [options] directory	• mkdir newdir • mkdir -p path/to/nested
rmdir	rmdir [options] directory	• rmdir emptydir • rmdir -p path/to/nested
cp	cp [options] source dest	• cp file.txt backup/ • cp -r dir/ newdir/ • cp -i file.txt ~

Command	Syntax	Example
mv	mv [options] source dest	• mv oldname newname • mv file.txt ~/documents/ • mv -i file.txt dest/
chmod	chmod [options] mode file	• chmod 755 script.sh • chmod u+x executable • chmod -R 644 dir/
chown	chown [options] user:group file	• chown root:root file • chown -R user:group dir/ • sudo chown www-data logfile
cat	cat [options] file	• cat file.txt • cat file1 file2 > combined • cat -n numbered.txt
grep	grep [options] pattern file	• grep "error" logfile • grep -r "pattern" dir/ • grep -i "CaseInsensitive"
ps	ps [options]	• ps aux • ps -ef • ps -u username
pkill	pkill [options] pattern	• pkill chrome • pkill -9 hungprocess • pkill -u username
kill	kill [options] PID	• kill 1234 • kill -9 5678 • kill -l (list signals)
top	top [options]	top

Command	Syntax	Example
free	free [options]	• free -h • free -m
man	man [section] command	• man ls • man 5 passwd
mount	mount [options] device dir	• sudo mount /dev/sdb1 /mnt • mount -t ext4 /dev/sdc1 /media
umount	umount [options] dir/device	• sudo umount /mnt • umount -l /media (lazy)
udisksctl	udisksctl action [options]	• udisksctl mount -b /dev/sdb1 • udisksctl power-off -b /dev/sdb1
gzip	gzip [options] file	• gzip file.txt • gzip -9 bigfile (max compression) • gzip -k keeporiginal
gunzip	gunzip [options] file.gz	• gunzip file.gz • gunzip -c archive.gz > output
tar	tar [options] archive files	• tar -cvf archive.tar dir/ • tar -xvf archive.tar • tar -czvf archive.tar.gz dir/
sudo	sudo command	• sudo apt update • sudo -i (root shell)

Command	Syntax	Example
apt	apt [command] [options]	• sudo apt update • sudo apt install package • sudo apt remove package
df	df [options]	• df -h • df -T (show filesystem types)
echo	echo [options] string	• echo "Hello World" • echo $PATH • echo -e "Line1\nLine2"
ln	ln [options] target linkname	• ln -s /path/to/file link • ln file hardlink