Linux Commands Cheat Sheet for DevOps

File & Directory Management

ls -l : list files with permissions, ownership, size, date
cd /path : change directory
pwd : print working directory
mkdir dirname : create directory
rm -rf dirname : remove files/directories
cp -r src dst : copy files/directories
mv old new : move/rename files

File Viewing & Editing

cat file.log : view contents
less file.log : view with pagination
head -n 20 file.log : first 20 lines
tail -f file.log : live log monitoring
vim file.sh / nano file.sh : edit files

User & Group Management

whoami : current user
id username : show UID, GID, groups
adduser devopsuser : create new user
usermod -aG sudo devopsuser : add user to group
groupadd devops : create group
groupdel devops : delete group
passwd username : change password

Process & System Monitoring

top : real-time process monitoring
htop : better version of top (if installed)
ps aux | grep nginx : check if process is running
kill -9 : force kill process
free -h : check memory usage
df -h : check disk usage
du -sh /var/log : check folder size

Networking

ip a / ifconfig : show IP addresses
ping google.com : test connectivity
traceroute google.com : trace route to host
curl -I https://example.com : check HTTP headers
netstat -tulnp / ss -tulnp : check open ports & listening services
scp file user@host:/path : copy file over SSH
rsync -avz src/ user@host:/path : sync directories

Package Management

sudo apt update && sudo apt upgrade : update system (Debian/Ubuntu)
sudo yum install httpd : install package (CentOS/RHEL)
dpkg -l | grep nginx : list installed package

Services & Systemd

systemctl status nginx : check service status
systemctl start nginx : start service
systemctl stop nginx : stop service
systemctl restart nginx : restart service
journalctl -u nginx -f : follow service logs

Logs & Debugging

tail -f /var/log/syslog : follow system log
tail -f /var/log/messages : check system events (RHEL/CentOS)
grep ERROR /var/log/app.log : search for errors
dmesg | less : check kernel/system messages

Compression & Archiving

tar -czvf backup.tar.gz /path : create compressed archive
tar -xzvf backup.tar.gz : extract archive
zip -r backup.zip /path : create zip file
unzip backup.zip : extract zip

Permissions

chmod 755 script.sh : change file permissions
chown user:group file : change ownership
ls -l : verify permissions

SSH & Remote Access

ssh user@hostname : connect to remote server
ssh -i key.pem user@hostname : connect using SSH key
scp -i key.pem file user@host:/path : copy files with key