Devops Shack

DEVOPS CHEAT SHEET

100+ MOST USED COMMANDS & CONCEPTS

BY DEVOPS SHACK

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100+ Most Used Commands & Concepts

Introduction

DevOps is all about unifying development and operations to deliver software faster, reliably, and securely. This cheat sheet covers the **most common DevOps commands and practices** across Linux, Git, Docker, Kubernetes, CI/CD, and more.

Whether you're debugging in production, setting up CI pipelines, or deploying to Kubernetes, these commands are your **everyday toolbox**.

1. Linux Essentials

Linux is the backbone of DevOps. These commands are used for navigation, file management, and system monitoring.

Command	Description
ls -l	List files with details
pwd	Print working directory
cd /path	Change directory
cp src dest	Copy file
mv src dest	Move or rename file
rm -rf dir	Delete file/dir
cat file	Show file content
tail -f log.txt	Stream logs
free -h	Show memory usage

Command	Description
top	Show running processes

2. Git (Version Control)

Git tracks source code and enables collaboration. Use these daily for commits, branches, and syncing with remote.

Command	Description
git init	Initialize repo
git clone <url>	Clone repo
git status	Check repo status
git add .	Stage changes
git commit -m "msg"	Commit changes
git push origin main	Push to remote
git pull origin main	Pull from remote
git branch -b feature	Create branch
git merge feature	Merge branch
git log --oneline	Compact history

3. Docker (Containers)

Docker packages apps into portable containers. These are must-use commands for dev, CI, and prod.

Command	Description
docker --version	Check version
docker pull nginx	Pull image
docker images	List images

Command	Description
docker run -d -p 8080:80 nginx	Run container
docker ps	Show running containers
docker stop <id>	Stop container
docker exec -it <id> bash	Shell into container
docker logs -f <id>	Follow logs
docker build -t myapp .	Build image
docker push user/app:1.0	Push image

4. Kubernetes (Orchestration)

Kubernetes manages containers at scale. These commands are daily bread for DevOps engineers.

Command	Description
kubectl get nodes	List cluster nodes
kubectl get pods	List pods
kubectl describe pod <pod>	Pod details
kubectl logs -f <pod>	Stream pod logs
kubectl exec -it <pod> -- bash	Exec into pod
kubectl apply -f deploy.yaml	Apply manifest
kubectl delete pod <pod>	Delete pod
kubectl get svc	List services
kubectl scale deployment web --replicas=3	Scale app
kubectl rollout undo deployment/web	Rollback

5. CI/CD Pipelines (Jenkins/GitHub Actions)

CI/CD automates builds, tests, and deployments. These commands define and control pipelines.

Command	Description
jenkins-cli.jar -s <url> list-jobs	List Jenkins jobs
jenkins-cli.jar -s <url> build job	Trigger job
.github/workflows/ci.yml	GitHub Actions config
gh workflow run <workflow>	Run workflow manually
git push origin main	Trigger pipeline
docker build .	Build in pipeline
docker push repo/app	Push in pipeline
kubectl apply -f k8s/	Deploy in pipeline
sonar-scanner	Run code quality scan
trivy image app:latest	Container security scan

6. Cloud (AWS/Azure/GCP)

Cloud providers are core to DevOps. These are frequently used commands for provisioning and management.

Command	Description
aws configure	Setup AWS CLI
aws s3 ls	List S3 buckets
aws ec2 describe-instances	Show EC2s
aws eks update-kubeconfig --name cluster	Connect to EKS
az login	Azure login
az group list	Show resource groups

Command	Description
az aks get-credentials --name cluster	Connect to AKS
gcloud auth login	Google login
gcloud compute instances list	List instances
gcloud container clusters get-credentials my-cluster	Connect to GKE

7. Monitoring & Logging

Monitoring helps detect issues early. Use these for resource checks, metrics, and logs.

Command	Description
top	CPU/memory usage
htop	Interactive monitoring
df -h	Disk usage
du -sh *	Directory sizes
kubectl top pods	Pod resource usage
kubectl get events	Cluster events
docker stats	Container resource usage
journalctl -u <service>	Service logs
prometheus.yml	Prometheus config
grafana-cli plugins ls	List Grafana plugins

8. Security Tools

Security must be baked into DevOps. These are must-use tools for secrets and scanning.

Command	Description
snyk test	Scan dependencies
trivy image <image>	Scan Docker image
gitleaks detect	Detect secrets in Git
checkov -d .	Scan IaC files
vault kv put secret/db password=pass	Store secret in Vault
vault kv get secret/db	Retrieve secret
kubectl create secret generic creds	Create K8s secret
kubectl describe secret creds	Inspect secret
openssl genrsa -out key.pem 2048	Generate RSA key
certbot certonly --standalone	Get TLS cert

9. Infrastructure as Code (Terraform/Ansible)

IaC automates infrastructure provisioning. These commands are used daily for reproducible infra.

Command	Description
terraform init	Initialize Terraform
terraform plan	Preview infra changes
terraform apply	Apply changes
terraform destroy	Tear down infra
ansible-playbook play.yml	Run playbook
ansible all -m ping	Test connection
ansible-vault encrypt file.yml	Encrypt secrets
ansible-vault decrypt file.yml	Decrypt secrets

Command	Description
packer build image.json	Build machine image
vagrant up	Start Vagrant VM

10. DevOps Productivity & Utilities

Small but powerful helpers — aliases, YAML tools, and shortcuts that save hours in daily work.

Command	Description
alias k=kubectl	Shorten kubectl
kubectl get pods -o wide	Wide output
yq e '.spec.template' file.yaml	Parse YAML
jq . file.json	Parse JSON
watch kubectl get pods	Watch pods live
grep "ERROR" app.log	Filter logs
find . -name "*.yaml"	Find YAML files
curl -I http://app	Test endpoint
dig example.com	DNS lookup
nc -zv host port	Check TCP connectivity

Quick Reference (One Pager)

Category	Command	Description
Linux	ls -l	List files
	tail -f file	Follow logs
Git	git clone <url>	Clone repo
	git commit -m "msg"	Commit

Category	Command	Description
	git push origin main	Push changes
Docker	docker run -d -p 8080:80 nginx	Run container
	docker ps	Running containers
	docker logs -f <id>	Follow logs
K8s	kubectl get pods	List pods
	kubectl logs -f <pod>	Stream logs
	kubectl apply -f deploy.yaml	Deploy YAML
CI/CD	jenkins-cli build job	Trigger Jenkins job
	gh workflow run	Trigger GitHub Actions
Cloud	aws s3 ls	List buckets
	az aks get-credentials	Connect to AKS
	gcloud compute instances list	GCP instances
Monitoring	kubectl top pod	Pod usage
	docker stats	Container usage
Security	trivy image <img>	Scan image
	gitleaks detect	Find secrets
IaC	terraform apply	Apply infra
	ansible-playbook play.yml	Run playbook

Conclusion

DevOps brings together code, infrastructure, automation, and monitoring into a unified practice. This cheat sheet summarized the **100+ most used commands across Linux, Git, Docker, Kubernetes, CI/CD, Cloud, Monitoring, Security, and IaC**.

The **Quick Reference Table** helps with daily lookups, while the full guide provides context and best practices. With these essentials, you can build, deploy, monitor, and secure applications across any environment.

DevOps is not just about tools — it's about speed, reliability, and confidence. Master these commands, and you'll master the daily workflow of a DevOps engineer.