THE DEVOPS ROADMAP

Learn DevOps from zero, in the right order.

56 free resources in 12 steps: Linux, Git, networking, scripting, Docker, Kubernetes, CI/CD, cloud, infrastructure as code and monitoring. YouTube courses, official docs, free books and practice labs, with Hindi options. Start at step 1, don't skip ahead.

56	56	22	6
resources	free	YouTube	in Hindi

How to use this

1. Do the steps in order. One course per step is enough, you don't need all of them.
2. After each step, build one small thing and put it on GitHub.
3. Type every command yourself. Watching is not practice.
4. Tap any title to open it. The link is also printed under each one.

Links checked on 18 November 2026. Everything here is free to learn from. Certification exams are paid, and cloud free tiers have limits, so set a billing alert before you practice.

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STEP 1 OF 12

Start here: what DevOps actually is

Watch one of these first so you know where you are heading.

01 **DevOps Roadmap** — FREE · ROADMAP
roadmap.sh
The whole map on one page. Come back to it after every step.
roadmap.sh/devops

02 **What is DevOps? REALLY understand it** — FREE · YOUTUBE
TechWorld with Nana
What a DevOps engineer does all day, and how it differs from SRE.
youtube.com/watch?v=0yWAtQ6wYNM

03 **Day 1: Fundamentals of DevOps** — FREE · YOUTUBE
Abhishek Veeramalla
First video of his free 45-day DevOps course.
youtube.com/watch?v=Ou9j73aWgyE

04 **90DaysOfDevOps** — FREE · GITHUB
Michael Cade
A day-by-day plan with notes for every topic in this PDF.
github.com/MichaelCade/90DaysOfDevOps

STEP 2 OF 12

Linux: where every server lives

Almost every server you touch runs Linux. Get comfortable in the terminal before anything else.

01 **Introduction to Linux (LFS101)** — FREE · COURSE
The Linux Foundation
A full free course from the people behind Linux.
training.linuxfoundation.org/training/introduction-to-linux

02 **The Linux Command Line** — FREE · BOOK
William Shotts
Free book. The best way to really learn the shell.
linuxcommand.org/tlcl.php

03 **Linux Operating System: Crash Course for Beginners** — FREE · YOUTUBE
freeCodeCamp
Under three hours, from zero.
youtube.com/watch?v=ROjZy1WbCIA

04 **Linux For DevOps In One Shot** — FREE · YOUTUBE · HINDI
TrainWithShubham
Linux taught for DevOps work, in Hindi.
youtube.com/watch?v=e01GGTKmtpc

05 **Bandit** FREE PRACTICE

OverTheWire

A game you play with Linux commands. Great practice.

overthewire.org/wargames/bandit

STEP 3 OF 12

Git: track every change

Every DevOps tool starts from a Git repo. Learn branches, merges and pull requests.

01 **Pro Git** FREE BOOK

Scott Chacon and Ben Straub

The official free Git book.

git-scm.com/book/en/v2

02 **Learn Git Branching** FREE PRACTICE

learngitbranching.js.org

Visual, interactive Git puzzles in the browser.

learngitbranching.js.org

03 **Complete Git and GitHub Tutorial** FREE YOUTUBE

Kunal Kushwaha

Git and open source contribution in about an hour.

youtube.com/watch?v=apGV9Kg7ics

04 **GitHub Skills** FREE COURSE

GitHub

Short hands-on courses that run inside your own repo.

skills.github.com

05 **Git & GitHub for DevOps** FREE YOUTUBE HINDI

TrainWithShubham

Free workshop, in Hindi.

youtube.com/watch?v=DyqAdz96mok

STEP 4 OF 12

Networking basics: how requests find servers

You need IPs, ports, DNS, HTTP and load balancers. Not a networking degree.

01 **Computer Networking Full Course** — FREE YOUTUBE
Kunal Kushwaha
The OSI model with real-life examples.
youtube.com/watch?v=IPvYjXCsTg8

02 **Networking Fundamentals** — FREE YOUTUBE
Abhishek Veeramalla
Networking explained for DevOps and cloud work.
youtube.com/playlist?list=PLdpzxOOAlwvKv4MFW35XRskZbQbrt6ep-

03 **What is DNS?** — FREE DOCS
Cloudflare Learning Center
How a name like google.com turns into an IP address.
cloudflare.com/learning/dns/what-is-dns

04 **How does the Internet work?** — FREE DOCS
MDN Web Docs
A five-minute read that ties it all together.
developer.mozilla.org/en-US/docs/Learn_web_development/Howto/Web_mechanics/How_does_the_Internet_work

STEP 5 OF 12

Scripting: automate the boring parts

Bash first, then a little Python. Write scripts that do your repeated work.

01 **Bash Scripting Tutorial for Beginners** — FREE YOUTUBE
freeCodeCamp
Variables, loops and conditions in under an hour.
youtube.com/watch?v=tK9Oc6AEnR4

02 **Shell Scripting in One Shot** — FREE YOUTUBE HINDI
TrainWithShubham
Shell scripting with three DevOps projects, in Hindi.
youtube.com/watch?v=9Xl1ZTk3BQw

03 **Automate the Boring Stuff with Python** — FREE BOOK
Al Sweigart
Free online book for practical Python scripts.
automatetheboringstuff.com

04 **ShellCheck** — FREE TOOL
shellcheck.net
Paste a script and it points out the bugs.
shellcheck.net

05 **explainshell** FREE TOOL

explainshell.com

Paste any command and it explains each part.

explainshell.com

STEP 6 OF 12

Docker: package any app

Learn images, containers, volumes, networks and Docker Compose.

01 **Docker Tutorial for Beginners** FREE YOUTUBE

TechWorld with Nana

A full course in about three hours.

youtube.com/watch?v=3c-iBn73dDE

02 **Docker docs: Get started** FREE DOCS

Docker

The official walkthrough.

docs.docker.com/get-started

03 **Docker Curriculum** FREE COURSE

Prakhar Srivastav

A beginner tutorial that ends with deploying an app.

docker-curriculum.com

04 **Play with Docker** FREE PRACTICE

Docker

Run Docker in the browser, nothing to install.

labs.play-with-docker.com

05 **Docker In One Shot** FREE YOUTUBE HINDI

TrainWithShubham

Docker with two live projects, in Hindi.

youtube.com/watch?v=9bSbNNH4Nqw

STEP 7 OF 12

Kubernetes: run containers at scale

Pods, deployments, services, ingress, config and secrets.

01 **Kubernetes Tutorial for Beginners** — FREE · YOUTUBE
TechWorld with Nana
A full beginner course in under four hours.
youtube.com/watch?v=X48VuDVv0do

02 **Kubernetes Basics** — FREE · DOCS
kubernetes.io
The official tutorial: deploy, expose, scale and update an app.
kubernetes.io/docs/tutorials/kubernetes-basics

03 **Introduction to Kubernetes (LFS158)** — FREE · COURSE
The Linux Foundation
Free course from the foundation that runs the Kubernetes exams.
training.linuxfoundation.org/training/introduction-to-kubernetes

04 **Killercoda playgrounds** — FREE · PRACTICE
Killercoda
A free Kubernetes cluster in your browser.
killercoda.com/playgrounds

05 **Kubernetes Explained for DevOps Engineers** — FREE · YOUTUBE · HINDI
TrainWithShubham
A 20-minute intro, in Hindi.
youtube.com/watch?v=FqfoDUhzyDo

STEP 8 OF 12

CI/CD: ship code automatically

Every push builds, tests and deploys by itself. Start with GitHub Actions.

01 **GitHub Actions Tutorial** — FREE · YOUTUBE
TechWorld with Nana
Basic concepts and a CI/CD pipeline with Docker.
youtube.com/watch?v=R8_veQiYBjI

02 **GitHub Actions docs** — FREE · DOCS
GitHub
Write your first workflow file.
docs.github.com/en/actions

03 **GitLab CI/CD tutorial** — FREE · DOCS
GitLab
Create and run your first GitLab pipeline.
docs.gitlab.com/ci/quick_start

04 **Jenkins Zero to Hero** — FREE · YOUTUBE

Abhishek Veeramalla

Many older setups still run Jenkins. This covers it.

youtube.com/playlist?list=PLdpzxOOAlwvJDIAQZtMjUUbiVUDfGaCIX

05 **Jenkins Pipeline: Getting started** — FREE · DOCS

Jenkins

The official first pipeline.

jenkins.io/doc/pipeline/tour/getting-started

STEP 9 OF 12

Cloud: rent servers by the minute

Pick one cloud and go deep before you try the others.

01 **AWS Cloud Practitioner Essentials** — FREE · COURSE

AWS

AWS's own free intro course.

skillbuilder.aws/learn/94T2BEN85A/aws-cloud-practitioner-essentials/8D79F3AVR7

02 **AWS Certified Cloud Practitioner course** — FREE · YOUTUBE

freeCodeCamp

A full course for the CLF-C02 exam. The exam itself is paid.

youtube.com/watch?v=7HKot-brXFE

03 **Azure Fundamentals (AZ-900)** — FREE · COURSE

Microsoft Learn

Microsoft's free path if your company uses Azure.

learn.microsoft.com/en-us/training/courses/az-900t00

04 **Google Skills** — FREE · COURSE

Google Cloud

Hands-on Google Cloud labs, formerly Cloud Skills Boost. Some are free.

skills.google

05 **AWS Free Tier** — FREE · PRACTICE

AWS

Practice on real cloud. Set a billing alert on day one.

aws.amazon.com/free

STEP 10 OF 12

Infrastructure as code: servers from a file

Write your servers as code with Terraform, configure them with Ansible.

01 **Terraform tutorials** — FREE DOCS
HashiCorp
Official step-by-step tutorials for AWS, Azure and Google Cloud.
developer.hashicorp.com/terraform/tutorials

02 **Terraform Course: Automate your AWS cloud infrastructure** — FREE YOUTUBE
freeCodeCamp
Build real AWS infrastructure with Terraform.
youtube.com/watch?v=SLB_c_ayRMo

03 **Terraform In One Shot** — FREE YOUTUBE HINDI
TrainWithShubham
Terraform with three live projects, in Hindi.
youtube.com/watch?v=S9mohJI_R34

04 **What is Ansible** — FREE YOUTUBE
TechWorld with Nana
Ansible and playbooks in 17 minutes.
youtube.com/watch?v=1id6ERvfozo

05 **Ansible: Getting started** — FREE DOCS
Ansible docs
The official first steps.
docs.ansible.com/projects/ansible/latest/getting_started/index.html

STEP 11 OF 12

Monitoring: know when it breaks

Metrics, logs, dashboards and alerts. Prometheus and Grafana are the usual pair.

01 **How Prometheus Monitoring works** — FREE YOUTUBE
TechWorld with Nana
Prometheus architecture in about 20 minutes.
youtube.com/watch?v=h4Sl21AKiDg

02 **Prometheus: Getting started** — FREE DOCS
Prometheus docs
Run Prometheus and scrape your first metrics.
prometheus.io/docs/prometheus/latest/getting_started

03 **Grafana tutorials** — FREE DOCS
Grafana Labs
Build dashboards and alerts on top of your metrics.
grafana.com/tutorials

04 **What is OpenTelemetry?** FREE DOCS

OpenTelemetry

The open standard for traces, metrics and logs.

opentelemetry.io/docs/what-is-opentelemetry

05 **Site Reliability Engineering** FREE BOOK

Google

Google's free book on running systems in production.

sre.google/sre-book/table-of-contents

STEP 12 OF 12

Practice: where you actually get good

Do these alongside the courses, not after.

01 **DevOps Exercises** FREE GITHUB

Arie Bregman

Exercises and questions for every topic here. Good before interviews.

github.com/bregman-arie/devops-exercises

02 **DevOps projects** FREE PRACTICE

roadmap.sh

Project ideas from beginner to advanced.

roadmap.sh/devops/projects

03 **Real-Time Projects for DevOps and Cloud** FREE YOUTUBE

Abhishek Veeramalla

Full projects you can rebuild and put on GitHub.

youtube.com/playlist?list=PLdpzxOOAlwvLm5lWIYctUnwaFRIO2Io_5

Four first projects

1. Write a bash script that backs up a folder every night with cron, and logs when it fails.
2. Put a small web app in Docker, then run it with a database using Docker Compose.
3. Add a GitHub Actions pipeline that tests the app and pushes the image on every commit.
4. Create an AWS server with Terraform, deploy the app to it, and watch it in Grafana.

Four mistakes to skip

- **Starting with Docker or Kubernetes.** Without Linux and networking, every error looks like magic.
- **Collecting courses.** One course per step is enough. Build something after each step.
- **Leaving cloud resources running.** Set a billing alert and delete what you made after practice.
- **Only watching.** Type every command yourself. Keep your projects on GitHub to show in interviews.

Made by chalkesahil. If a link stops working, comment on the reel and it gets fixed.