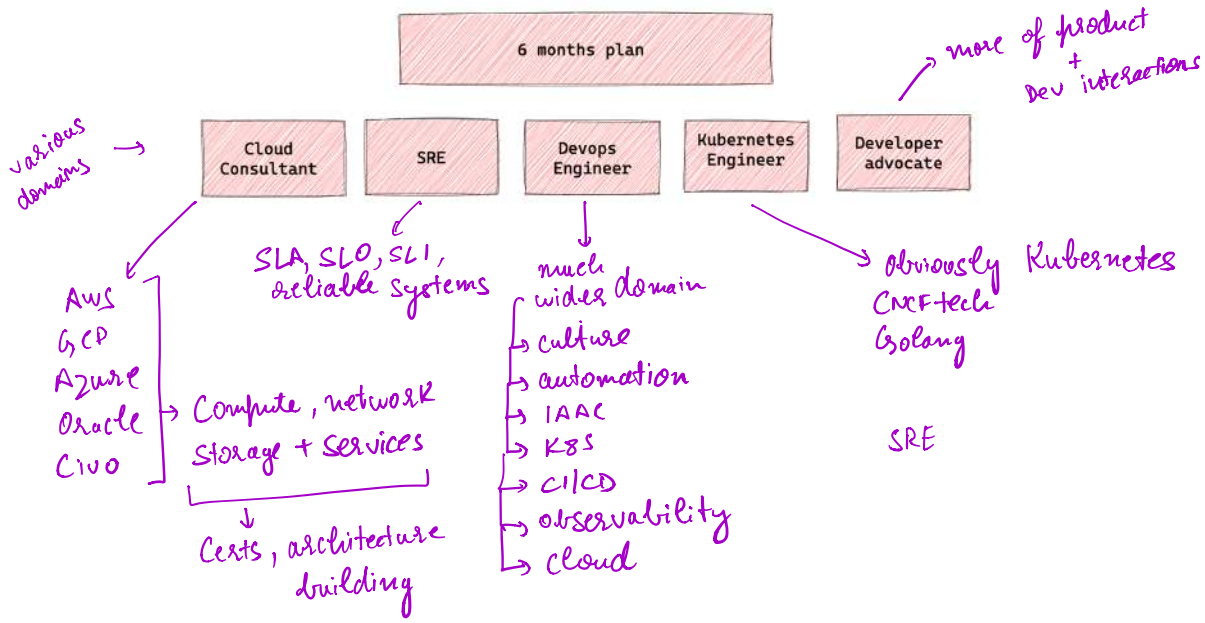
Roadmap 2022

ANYONE CAN LEARN



Prerequisites

1 Linux OS

- Linux distros
- Software installs
- User management
- File management
- working with files/dir
- Text editor
- Systemd
- Process
- Web Server
  - nginx
  - apache HTTP

UBUNTU
CENTOS
FEDORA

Virtual Machine
VM in cloud
Containers
Katakoda

Proxy
- HA Proxy
- traefik

Basic Linux Commands → CLI

ls
mkdir
cd
touch
vi
cat
cp
mv
chmod
kill
env
export
curl
tar
du
ping
netstat
nslookup
ps
tail
systemctl
journalctl
top

→ bash tricks
- small scripts for automation

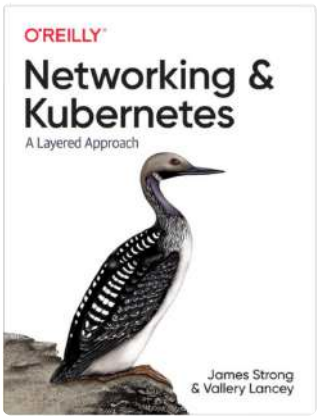
Scripting
- Shell scripting
- Python
- GoLang

Windows
↳ WSL

ssh

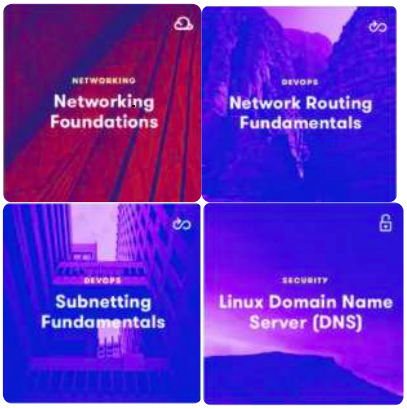
Resources → edx linux course by LF
Devops Prerequisites Course → Youtube

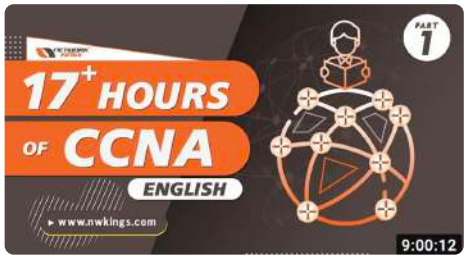
Resources



(2) Basic Networking

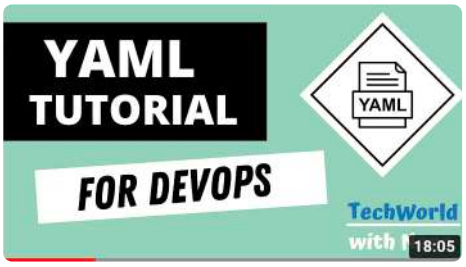
- → How system communicate
- → LAN / WAN
- → What is a switch, router, ISP ?
- → IP address and types
- → OSI model
- → Basic subnetting
- → DNS basics
- → Switching + Routing





Part 1 (Enough)

(3) Introduction to YAML



(4) GIT → Source code
↳ has to live somewhere.

GitHub
GitLab

- → How to work with git
- → setup
- → Create repo
- → Commit and Push code
- → Branching
- → PR
- → Public/Private repo
- → Pull, rebase, fork, clone

Resources
↳

Free codecamp
Youtube

Kunal Kushwaha
Youtube

Free codecamp
Youtube

(5) CLOUD

↳ Any Cloud provider

Terms
→ IAAS
→ SAAS
→ PAAS

What is
- cloud Concepts
- Benefits
- Infra

Network
Storage
Compute
IAM
Billing

→ you have different services

→ You need cloud account
↓
use free credits for learning.

↓

→ Bigdata, Databases
ML, Kubernetes

GCP, AWS, Azure, Oracle

Civo → Cloud Native approach → managed Kubernetes

Resources

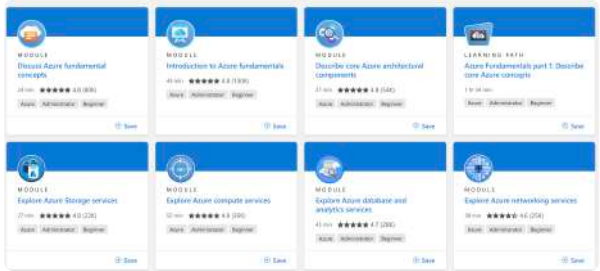
↓

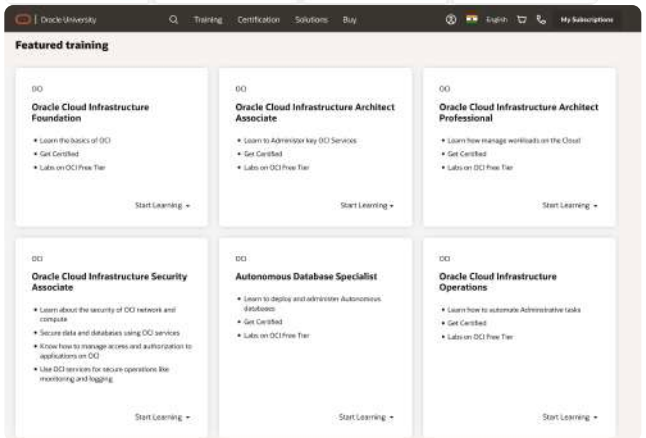
Associate

↓

Devops Professional

Azure ↓





GCP ↑

Oracle

→ You should be able to work with cloud

→ Learn quickly

→ Certs are addon

(6) Virtualization and Containers

→ Servers → virtualization → containers

What is → VM
→ Container — Difference

Container technology → → Docker
→ Podman + Buildah
→ Kaniko

Build via buildah
run via podman

build from dockerfile inside container
K8's cluster

→ Ko → go apps

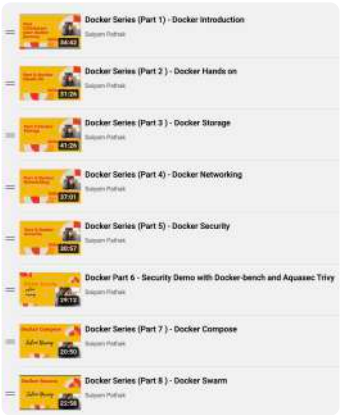
→ kim → CRI, containerd, buildkit

All these are open source projects.

How to
↳ build
Push
Pull
tag
Run

Concepts
↓
OCI
CRI

Resources → Docker playlist (my youtube) ← Start simple
↓
Docker (Many free courses)



Free Code Camp Youtube

Tech world with Nana

Dockercon

Docker deep dive ↑ (my youtube)

Advanced → Docker Security
Dockerfile Best Practices
Container scanning (trivy)

Ivan Blog series

HackersPlexit youtube

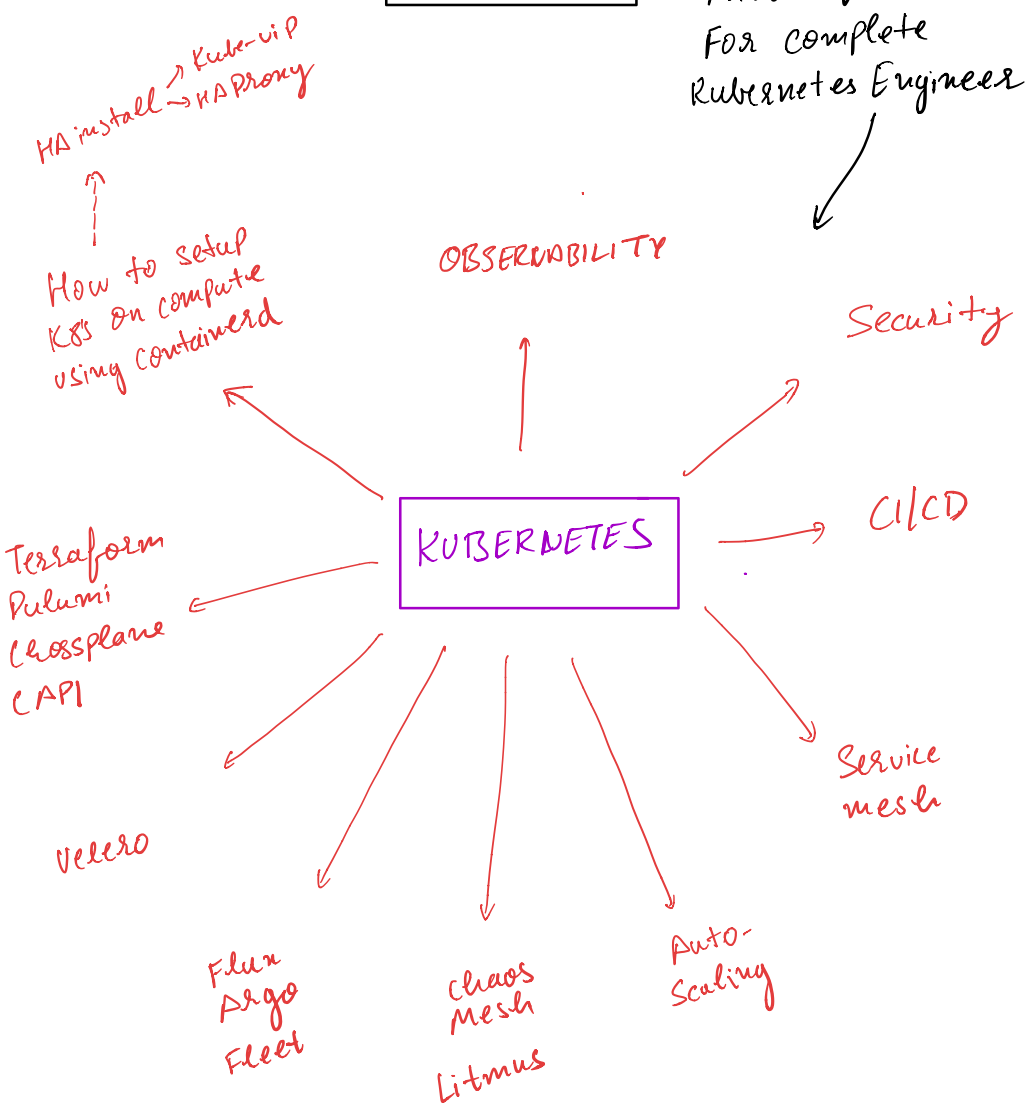
7 KUBERNETES → Container orchestration.

↳ a must learn for all domains

↓ lot of Resources → what is

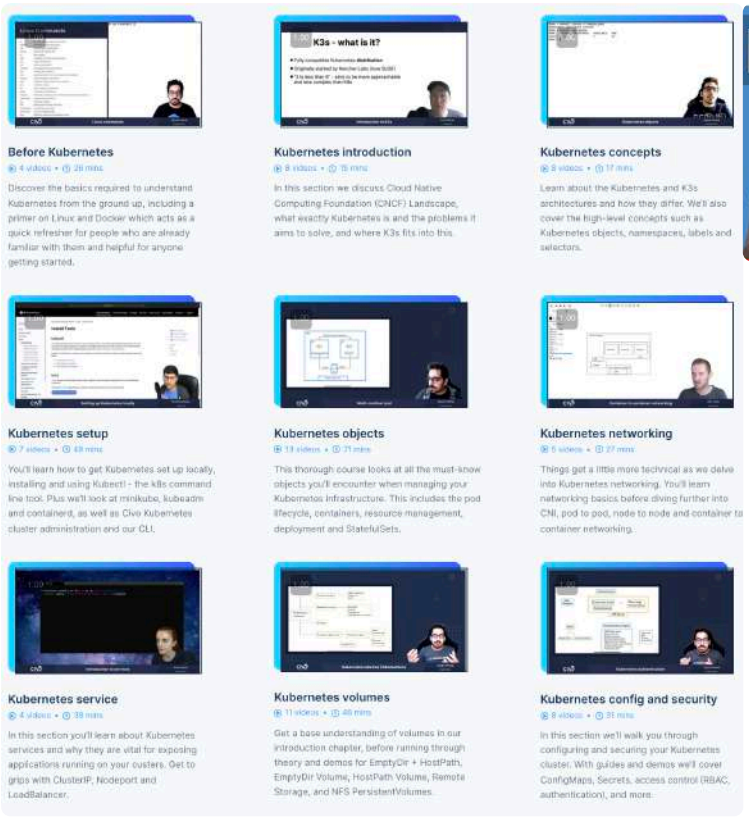
- K8's
- Architecture
- objects
- Secrets
- Configmaps
- PV, PVC
- Networking
- Services

Mind Map For complete Kubernetes Engineer

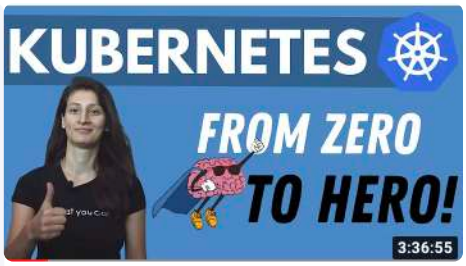


Resources

(1) → Civo Academy



(2)



Techworld with Nana
Youtube.

(4) Kube.academy

(3) → edx, course by LF

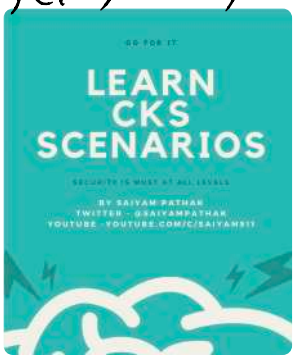
KCNA Kubernetes and cloud native associate certification

Path to certification

KCNA, CKA, CKAD, CKS

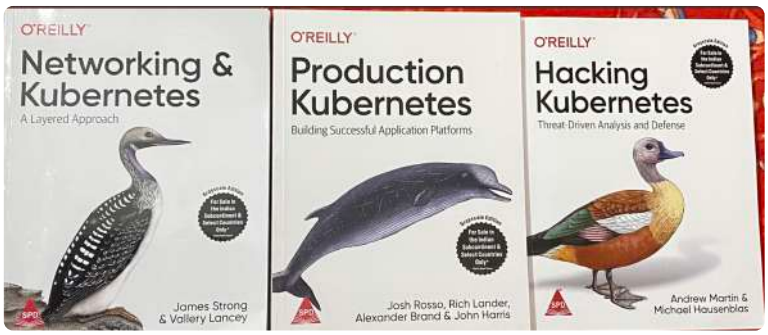
→ Certs magic show
↓
CNCF official

My Youtube (Many Resources)



My CKS Book

More depth Knowledge →



(8) CI/CD →

From Devops view

GitHub Actions
Jenkins

Code Commit → Build → Test → Stage → Deploy → Release

What are the concepts → CI/CD Landscape → CDFoundation

[Kubernetes Native → GitOps → Flux CD, Argo CD, Fleet] → My YouTube

GitOps ↓ Concepts + tooling

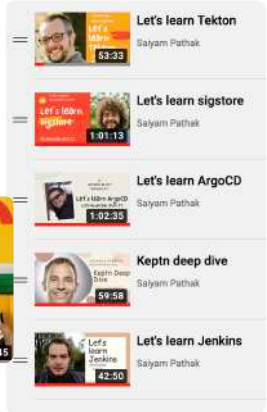
More for Kubernetes Engineer + SRE

CI/CD Week → must watch from experts →

Simplilearn Youtube

Techworld with Nana

My Youtube



⑨ IAC → Infrastructure as Code

↳ IAC concepts

DO - Terraform

KE SRE - Crossplane

KE SRE - Pulumi

INFRA PROVISIONING

→ Code to create infra

→ automate → Creation, updating, deleting infra

→ no manual errors

→ no misconfiguration

→ state of your infra.

Terraform →

Crossplane → my Youtube

→ CNCFMinutes Crossplane

→ Crossplane deep dive

→ Crossplane composition deep dive

Configuration Management → Ansible

⑩ Observability

↳ Monitoring → Nagios / Prometheus → TSDB

→ Thanos for HA → Grafana visualization

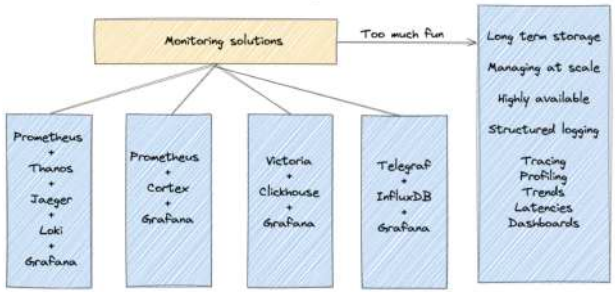
Logging → Loki / Elastic

Tracing → Jaeger

Profiling → Parca

- what is Observability?
- Observability Pillars
- Tools
  ↳ setup, configuration
- OpenTelemetry
- OpenTracing

Resources



(11) Chaos Engineering

↳ chaos mesh

Litmus

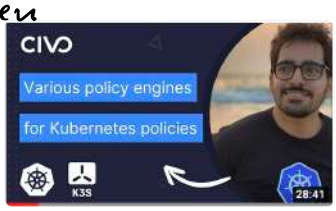
(12) Policy

↳ Kubewarden

↳ OPA

↳ Kyverno

↳ jsPolicy



(13) Service Mesh

Istio

Linkerd

(14) Others → Supply chain security → CNCF Landscape

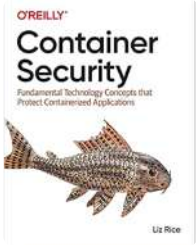
Kubernetes Security → Operators

↳ CKS

↳ what are they

how to write Kubernetes operator

↳ operator sdk



KE
VI

YOU CAN DO IT!!!

SUBCSRIBE TO MY CHANNEL

FOLLOW ON TWITTER

SHARE THIS ROADMAP

GET INTO THE WORLD OF TECH