



# COMMUNITY DAY

PUNE 2022



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**Scan QR code to participate in  
Quiz**





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Mujhe ghar jaana hai

Q1. Who do you see in above image ?



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# Simplifying K8S setup on AWS using KOPS

**Sagar Utekar | December 10, 2022**



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## About Me

- Working as Site Reliability Engineer at VMWare Software India PVT. LTD.
- Open-Source Enthusiast, A firm believer in the power of community education.
- Google Summer Of Code Admin, Mentor, Mentee 2022 @PEcAn Project
- CKS | CKA | CKAD | Terraform Certified
- Mentored 5000+ students & professionals across India for career guidance, Job Search, Open Source, Cloud Native



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Q2. Have you heard about Kubernetes & KOPS ?



**kubernetes**



**kops**



**amazon**  
web services

**YES**

**NO**



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**Bhai aapka knowledge toh  
kamaal ka hai bhai**





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## Agenda

- Overview of Kubernetes & KOPS
- KOPS K8S cluster Architecture
- Activities needed to get production ready k8s in AWS
- Deciding best solution for your use case



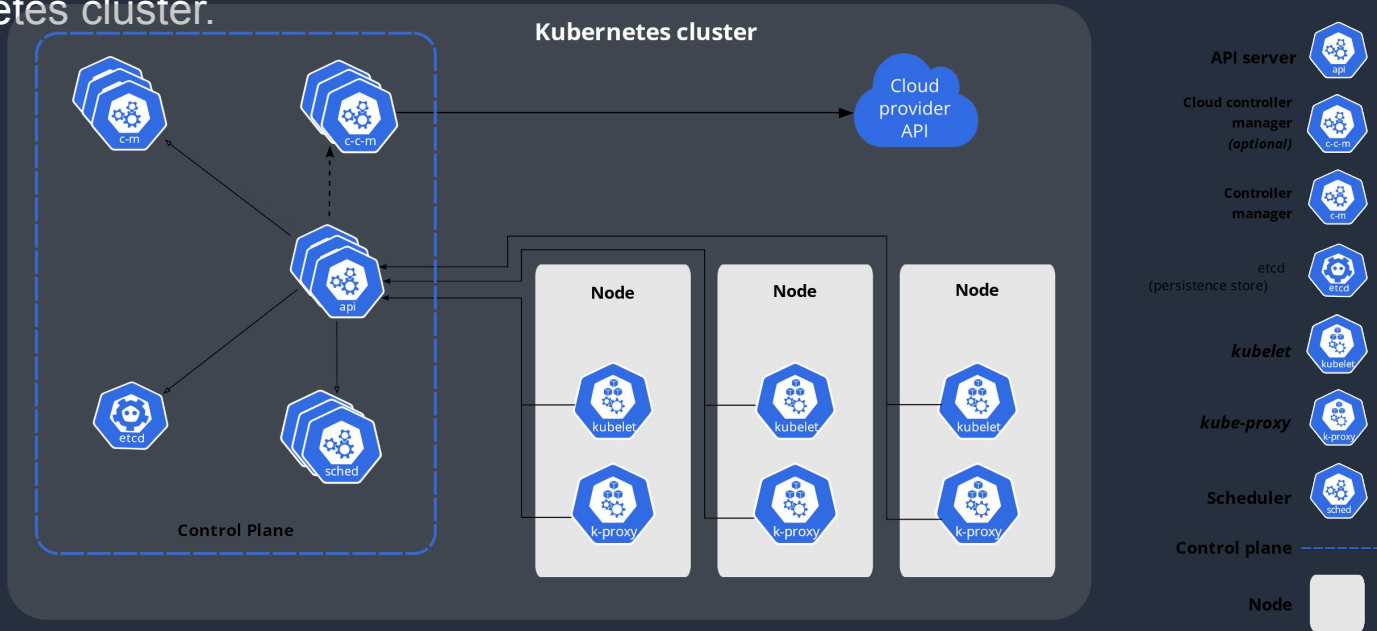
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## Overview of

## Kubernetes

Kubernetes is an open source, container orchestration platform. Applications packaged as Docker images can be easily deployed, scaled, and managed in a Kubernetes cluster.





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## Overview of KOPS

Kops, short for Kubernetes Operations, is a set of tools for installing, operating, and deleting Kubernetes clusters in the cloud. A rolling upgrade of an older version of Kubernetes to a new version can also be performed.

### Features -

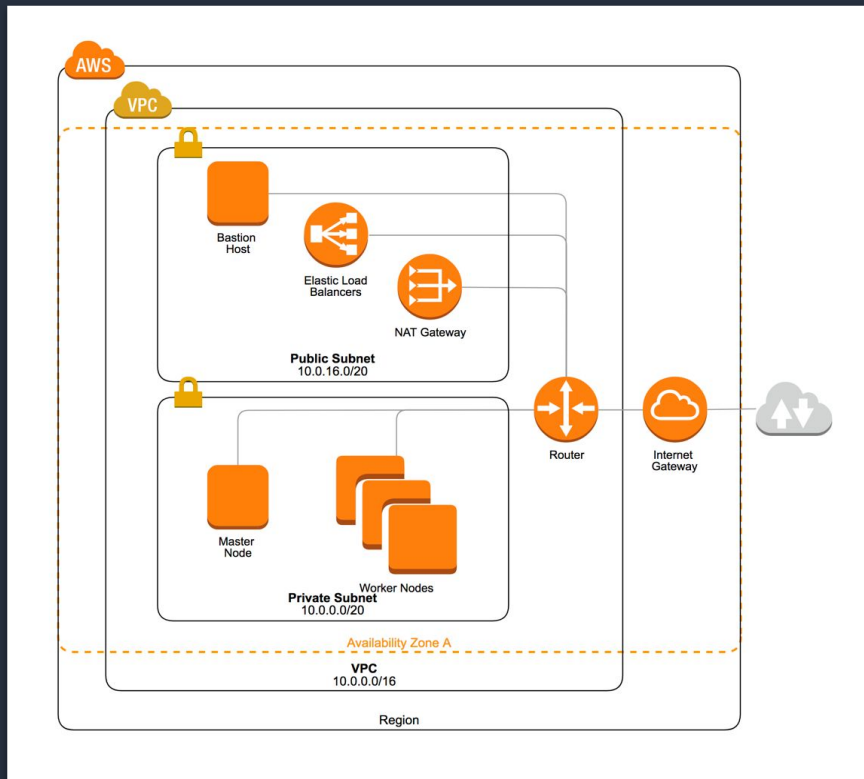
1. Automates the provisioning of HA K8S clusters
2. Built on a state-sync model for dry-runs and automatic idempotency
3. Supports zero-config managed Kubernetes add-ons
4. Templating and dry-run modes for creating Manifests
5. Choose from most popular CNI Networking providers out-of-the-box
6. Multi-architecture ready with ARM64 support



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# KOPS K8S Cluster Architecture





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Q2. Should we start creating cluster in AWS using KOPS ?

**YES**

**NO**



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## Activities needed to get a production ready K8S in AWS

- ❑ Setup k8s Cluster in AWS using KOPS
- ❑ SSH access to clusters
- ❑ Upgrading clusters
- ❑ Addons
  - Monitoring for K8S cluster
  - RBAC Setup
  - Audit Logging
  - Infrastructure and cost alerts
- ❑ Troubleshooting

<https://github.com/Sagar2366/tech-talks.git>



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Decide what's best for your use case





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## What's included for setup

Area	KOPS	EKS
Etcd	Included (Master)	Included
Networking	NA	AWS Support
DNS	Partially (Requires third party domain)	Included
Monitoring	NA	Included
Logging	NA	Included
Storage	NA	Included
Load Balancing	Included	Included



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## Who's responsible when it breaks ?

Area	KOPS	EKS
Control plane	Community Support	EKS
Networking	“”	AWS Support
Cert manager	”””	Community Support
Monitoring	”””	AWS Support
Logging	“”	“”
Storage	“”	“”
Load Balancing	“”	“”



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## Questions & Answers





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# Thank you!

See you at the AWS Community Day Pune 2023





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## Connect with me

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[https://twitter.com/me\\_sagar\\_utekar](https://twitter.com/me_sagar_utekar)

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