Zelar

Meetup

Kubernetes/VMs Multi-Cluster Metrics and Logging With

Prometheus **Grafana loki** **Thanos**

📅 17th Septmber
10:00 AM (IST)

📍 Zelarsoft Private Limited
Duration: 60 minutes

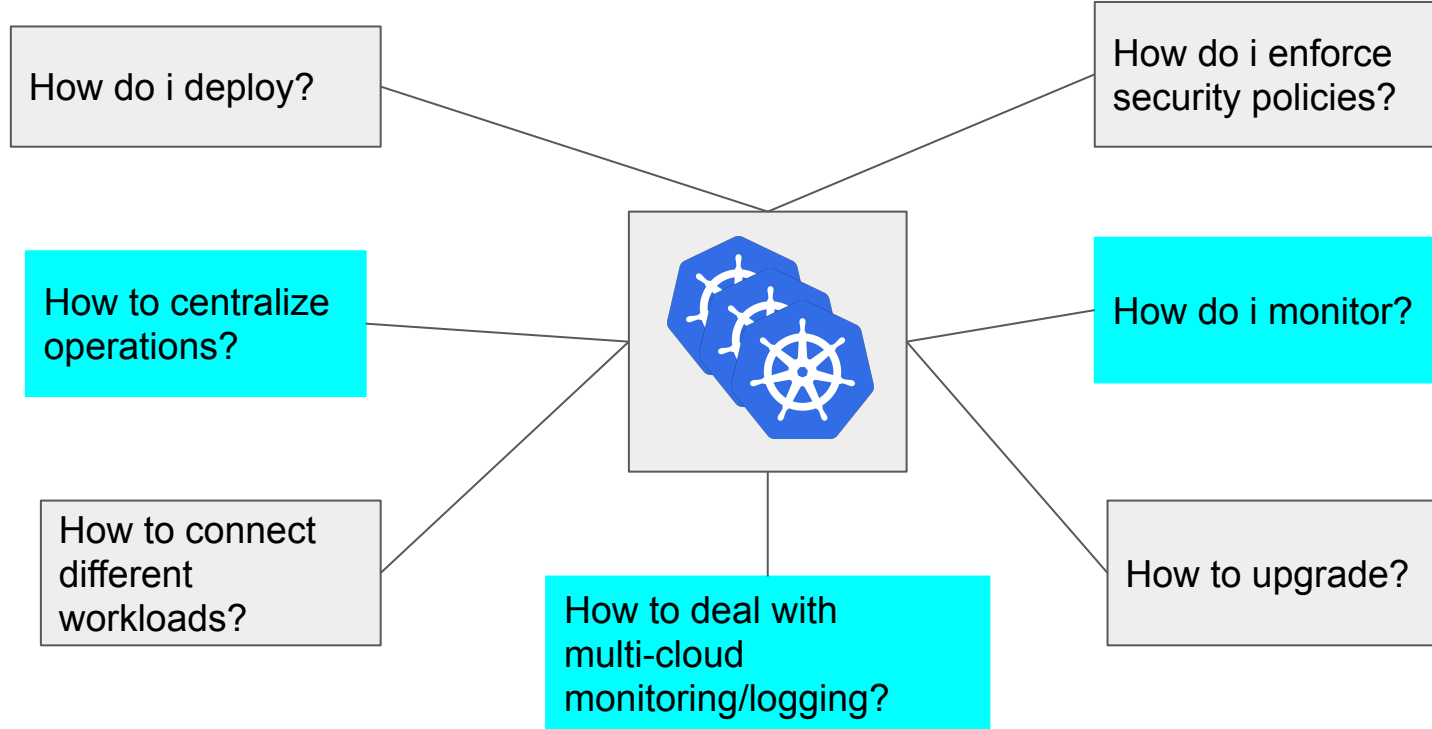## Register Now

Chakradhar Rao

Ujjinaiah J

Agenda

- Why multi-clusters
- Impact of multi-cluster, multi-cloud k8s clusters
- Monitoring and logging challenges
- Existing solutions
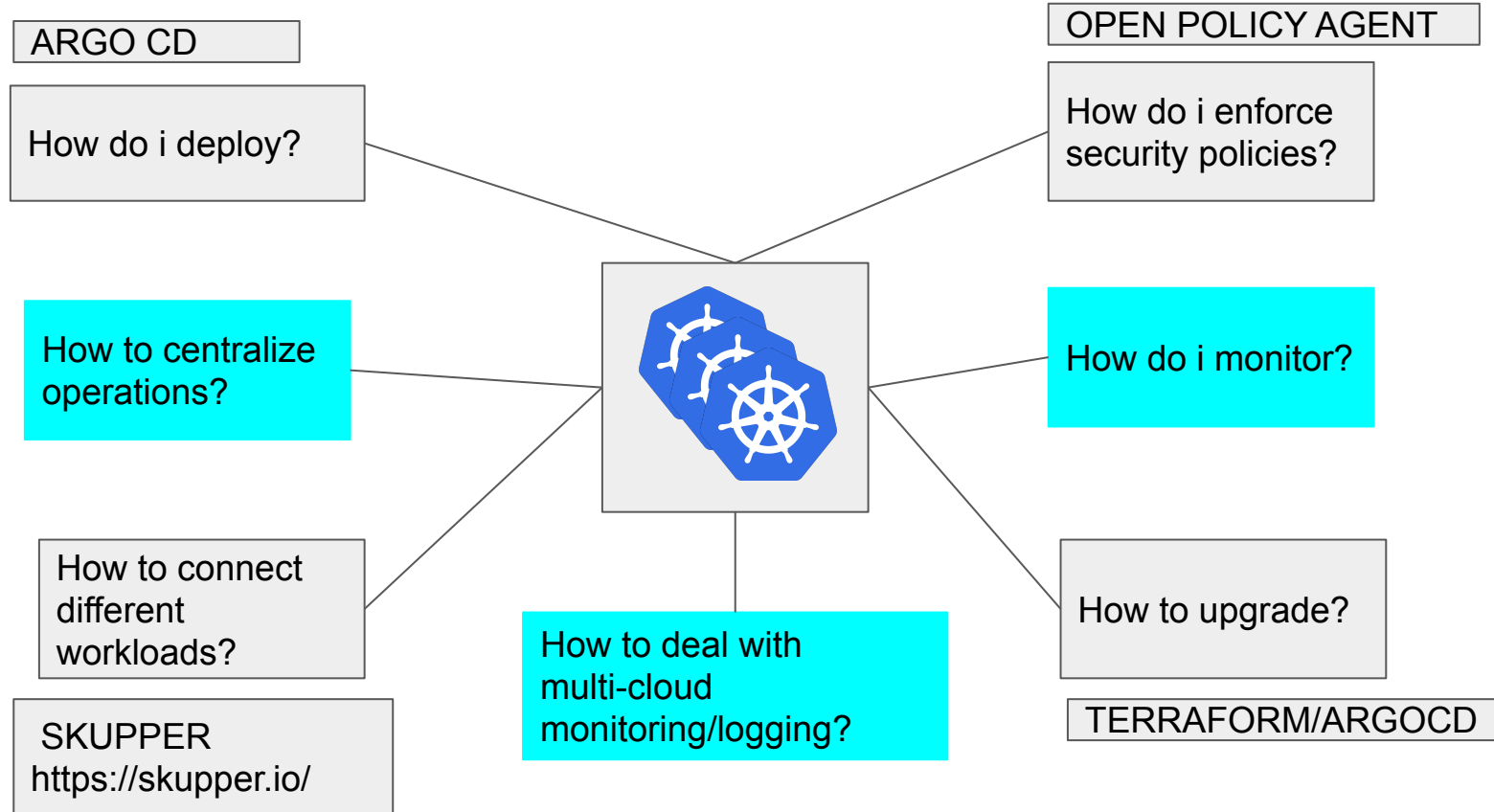- Solution Architecture
- Demo
- Q & A

Why Multi-Clusters?

- More microservices adoption leads to independent teams
- 2-pizza teams → more autonomous
- Small teams take care of development, devops, monitoring
- Small teams ⇒ Many small k8s clusters

Impact of multi-clusters

How do i deploy?

How do i enforce security policies?

How to centralize operations?

How do i monitor?

How to connect different workloads?

How to deal with multi-cloud monitoring/logging?

How to upgrade?

Impact of multi-clusters

ARGO CD

How do i deploy?

OPEN POLICY AGENT

How do i enforce security policies?

How to centralize operations?

How do i monitor?

How to connect different workloads?

SKUPPER
https://skupper.io/

How to deal with multi-cloud monitoring/logging?

How to upgrade?

TERRAFORM/ARGOCD

Multi-Cluster Logging & Monitoring challenges

- Separation of data from cluster is important for seamless operations
- Aggregating monitoring data, reducing noise.
- Correlating **logging/monitoring/tracing** data during troubleshooting is hard , have to switch to multiple systems
- Large log/monitor data needs downsampling/compaction

Existing solutions

- **Elasticsearch** is goto solution for logging but comes with heavy infrastructure and domain expertise requirement
- **Prometheus** is goto solution for monitoring but comes can only work for single cluster
- Popular log shipping agents like **fluentd** cannot scale for heavy volumes
- Community required something purpose built for container workloads

DEMO

SOLUTION ARCHITECTURE