

# Join us for KubeCon + CloudNativeCon Virtual



Event dates: **August 17-20, 2020**

Schedule: **Now available!**

Cost: **\$75**

**Register now!**



# Best Practices for Running and Implementing Kubernetes



**Kendall Miller**

President



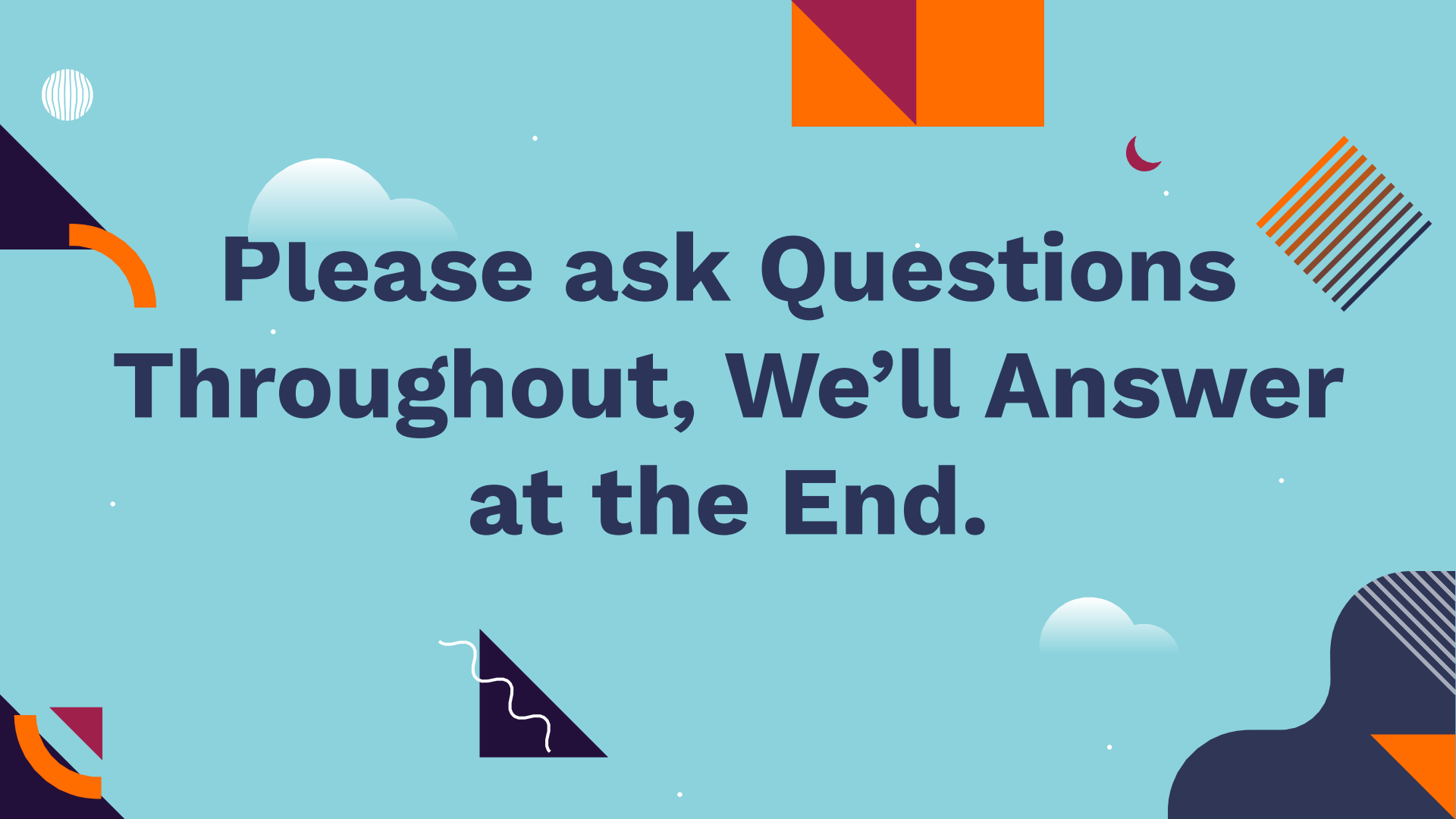
 @blatanterror

**Robert Brennan**

Director - Open Source



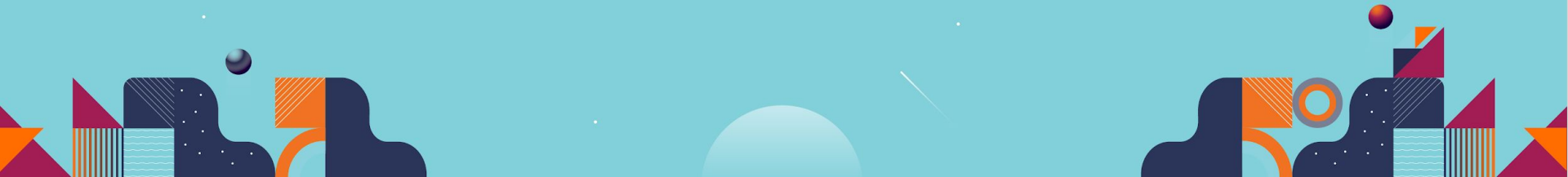
 @fairwindsops

The background is a light blue gradient. It features several decorative elements: a white sphere with vertical lines in the top left; a square with a diagonal split between orange and maroon in the top center; a maroon crescent moon in the top right; a diamond shape with parallel orange and blue lines in the middle right; a white cloud in the middle left; a dark blue triangle with a white wavy line in the bottom center; a white cloud in the bottom right; and a dark blue shape with a white wavy line in the bottom left. The text is centered in a bold, dark blue font.

**Please ask Questions  
Throughout, We'll Answer  
at the End.**

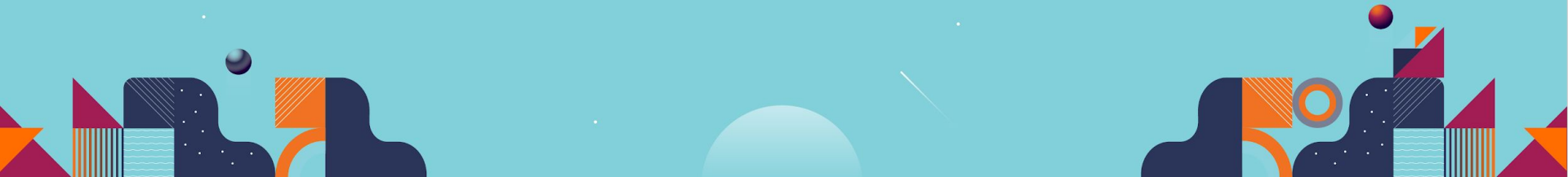
- ❑ Considerations and common pitfalls when implementing Kubernetes
- ❑ Best practices for running Kubernetes in production
- ❑ Security implications when adopting Kubernetes
- ❑ Q&A

# Considerations and common pitfalls when implementing Kubernetes



- ❑ What are the common things that people need help with?
- ❑ Why Kubernetes instead of Serverless, ECS, Heroku, etc?
- ❑ Will Kubernetes help implement a DevOps culture?
  - Tools often amplify and reflect culture
- ❑ These problems are scary to a lot of companies. How can you start addressing them?

# Best practices for running Kubernetes in production



## □ **Reliability**

- How do we reduce human error to avoid downtime?
- What are best practices for auditability?
- How does it play in to disaster recovery?
- Should we run databases in the cluster in Stateful Sets?

## □ **Efficiency**

- Do I need to start thinking about building a CI/CD pipeline?
- How do we pick instance groups/types?
- How do we set resource requests/limits?
- Should we be autoscaling all the things?
- But what about spot instances?

## □ Security

- How do we handle updates/upgrades/patching (ensuring we can keep up to date on Kubernetes and all the add-ons we run)?
- Can we automate TLS certs?
- How do we manage RBAC at scale?
- How do we think about network policies in Kubernetes?
- What are Workload Identities?
- How do we manage secrets in Kubernetes?

- **Monitoring and alerting**
  - Can monitoring be implemented as code?
  - How does monitoring play in to service ownership?
  - Is every alert actionable?

# Any Questions?



**Twitter:** @fairwindsops



**Github:** @FairwindsOps

### Kubernetes Best Practices



**By Fairwinds**

Published 2020



**Authors:**

Sarah Zelechowski  
Robert Brennan  
Ivan Fetch  
Daniel O'Sullivan

## Kubernetes Best Practices Guide

- Ensuring the Security of Your Clusters via Kubernetes Best Practices
- Ensuring the Health of Your Clusters via Kubernetes Best Practices
- Maximizing the Health and Efficiency of Your Kubernetes Clusters
- Optimizing Monitoring and Alerting Capabilities in a Kubernetes Environment

*Learn more at **Fairwinds.com > Resources***

## Fairwinds Insights

- Protect and Optimize Your Mission Critical Kubernetes Applications with our new solution

**Free Trial**

***Fairwinds.com/insights***

# Thanks!

