Fairwinds

Fathom Accelerates Development and Optimizes Infrastructure with Fairwinds

OVERVIEW

Fathom, a digital manufacturing company that provides advanced rapid prototyping and on-demand low volume production services, faced significant challenges with their outdated infrastructure. Their legacy setup, based on basic AWS configurations and Jenkins deployments, required considerable involvement from their infrastructure vendor. Deployments took hours to complete, and often failed, requiring considerable support from internal and external resources.

The team felt like they had something on fire almost every month, putting them in a constant state of stress. Stan, a member of the development team at Fathom, who was familiar with the Fairwinds Ops team from a previous role, recognized the need for modern, scalable infrastructure and turned to Fairwinds for help building and maintaining production-grade Kubernetes infrastructure.

READY TO TRANSFORM INFRASTRUCTURE MANAGEMENT

Fathom, well known as a high-precision, responsive, and comprehensive manufacturing partner, offers a wide range of services, from CNC machining to rapid tooling and injection molding to engineering and design support. Serving diverse industries, including aerospace, automotive, government, industrial, and medical, the company offers expertise that enables faster product-to-market timelines and a commitment to quality and security. To do all this well, they needed infrastructure that was modern, scalable, and efficient. Instead of wasting valuable time troubleshooting their existing solutions, they wanted to move to Kubernetes in a way that enabled them to focus on their operational goals.

EXISTING PROBLEMS

- ⊘ Outdated cloud infrastructure causing frequent issues and time-consuming deployments.

- ⊘ Lack of security and governance in existing infrastructure.

- ⊘ Difficulty in managing costs and optimizing Kubernetes resources.

FAIRWINDS SOLUTIONS

- ⊘ Managed Kubernetes-as-a-Service, a white-glove, people-led approach to Kubernetes management.

- ⊘ Fairwinds Insights for continuous security scanning, policy enforcement, cost monitoring, and right-sizing recommendations.

- ⊘ Access to Kubernetes expertise, production monitoring, and critical response services.

- ⊘ Saved approximately three days of cycle time per month on deployment issues and configuration problems.

THE CHALLENGES

Outdated cloud architecture

Fathom was using basic AWS configurations that did not include auto-scaling groups or enable easy deployments.

Time-consuming and unreliable deployments

Deployments often took hours and frequently failed, requiring rollbacks.

Lack of self-sufficiency

The company relied heavily on a traditional release engineer, hindering their ability to deploy quickly and efficiently.

Frequent issues and firefighting

The team spent a large amount of time just getting things to work, dealing with problems that weren't related to development.

Inefficient resource allocation

The infrastructure wasn't optimized, leading to wasted time and effort on managing hosting infrastructure instead of focusing on business differentiators.

Limited scalability

The existing setup couldn't handle increased demand efficiently, impacting their ability to grow and adapt to changing demands.

These challenges were significantly impacting Fathom's productivity, causing stress, and preventing the team from focusing on their core development work.

SOLUTION: TRANSFORMED INFRASTRUCTURE MANAGEMENT

By implementing Fairwinds' Managed Kubernetes-as-a-Service and Fairwinds Insights, Fathom experienced a dramatic improvement in their deployment processes and infrastructure management. With access to Fairwinds expert site reliability engineers (SREs) and the Insights dashboards, Fathom was able to more easily:

- **Right-size clusters:** Using the right-sizing guidance in Insights, Fathom was able to optimize resource utilization and scale up and down based on demand without incurring unnecessary cloud spend.

- **Gain visibility:** Fairwinds Insights provided a single pane of glass, delivering a comprehensive view of the environment that highlighted vulnerabilities, simplified monitoring and cost optimization, enabled automatic alignment with Kubernetes best practices, and provided in-application guidance to fix issues.

- **Improve security:** Working closely with Fairwinds SREs, the team focused on scanning containers for vulnerabilities (and addressing them) and ensuring secure Kubernetes deployment configurations.

- **Streamline deployments:** By leveraging Kubernetes and Helm, Fathom was able to do quick rollbacks when (or if) necessary and build more flexible development processes.

MEASURABLE RESULTS AND PRODUCTIVITY GAINS

The impact of Fairwinds' solutions on Fathom's operations has been significant over the seven years that the two companies have been working together. The operations team there estimates that by leveraging Fairwinds Managed Kubernetes-as-a-Service and Fairwinds Insights, they have:

- ✓ **Saved approximately three days** of cycle time per month on deployment issues and configuration problems.

- ✓ **Increased project delivery** by one additional project per quarter.

- ✓ **Reduced significant incidents** from monthly occurrences to quarterly at most.

- ✓ **Eliminated the need for frequent discussions** about hosting infrastructure issues with the management team.

UNEXPECTED BENEFITS AND CONTINUOUS OPTIMIZATION

Fathom also found additional value in Fairwinds' proactive approach to optimization. Wilson Yan, Senior Software Engineer at Fathom, noted, "Fairwinds helps support you with data-driven actions that you would never have thought about." The team shared that they particularly appreciate Fairwinds' enthusiasm for optimizing stacks and development processes, ensuring the best performance for their services.

A PARTNERSHIP THAT DELIVERS

Fathom's experience with Fairwinds has been overwhelmingly positive. The partnership has not only met but in many ways exceeded expectations in terms of return on investment.

This partnership highlights the benefits of combining Fairwinds Insights for Kubernetes governance and security and managed Kubernetes-as-a-Service for end-to-end cluster management on production-grade infrastructure. By using these two complementary solutions, companies like Fathom can focus on their core business while trusting that their infrastructure is secure, reliable, and efficient.

"We actually don't think about our stack anymore. We do what we need to do. We write code. It gets deployed. **Everything works**."

**Stan,
Development Team Member
at Fathom**

"You want to work with Fairwinds because you get **a single pane of glass for your clusters and full turnkey service** for your DevOps without having to expend unnecessary effort or think too hard about it."

**Wilson Yan,
Senior Software Engineer
at Fathom**

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