



## Custom Kubernetes Platform Build

K3 Business Technology Group now has a production Kubernetes Platform, designed, built and supported by LiveWyer

### Comprehensive Kubernetes platform for hosting applications

Delivered a new standardised multi-cloud platform whilst maintaining a single development environment.

### Enterprise-grade observability stacks

Developed production-grade observability stacks (logging, monitoring and service mesh).

### Seamless CI/CD integration accelerates service development

A custom-built library that integrates Jenkins CI/CD builds with Kubernetes drives the new service development velocity.

### Trusted at scale

LiveWyer scaled the Platform from 20 up to 130 microservices.

## CHALLENGE

K3 Imagine, a greenfield retail commerce solution focusing on point-of-service systems, and K3 Dataswitch, a greenfield systems integrator and data processing platform, faced significant technical challenges during their early development phases. Their in-house Managed Service Provider (MSP) needed to gain the expertise to build and maintain a container-based platform infrastructure. Recognising the critical need for a specialised partner, K3 turned to LiveWyer for assistance in building a Proof of Concept (PoC) for their platform infrastructure.

*"LiveWyer provided the expertise we needed to build and scale our Kubernetes based infrastructure. Their support helped us navigate early technical challenges and establish a solid foundation."*

Cloud Platform Director - K3

## SOLUTION

LiveWyer's first step was to design and deploy a Kubernetes-based infrastructure on-premise using vSphere. This infrastructure was designed and tailored to support K3 Imagine's greenfield retail commerce solution. LiveWyer introduced a Jenkins-based CI/CD build system to accelerate development, which incorporated best-practice GitOps principles. This system allowed K3 to

streamline the development and deployment of their microservices, ensuring faster iteration and progress.

Following the success of the initial PoC, LiveWyer's role expanded, evolving the PoC into a full-fledged production platform. When we started, Kubernetes cluster management tools like Cluster API, Rancher, and Tanzu were not widely available. To meet the demands of K3 Imagine's growing platform, LiveWyer developed an in-house solution that automated the end-to-end builds of new Kubernetes clusters and nodes in vSphere on-premise. This solution allowed the company to scale rapidly while ensuring operational efficiency.

In addition to platform development, LiveWyer took responsibility for the infrastructure's day-to-day operations. This included managing the platform, overseeing the CI/CD build system, and ensuring high availability and performance through production-grade observability tools. LiveWyer provided comprehensive support for the platform's operational health by deploying logging, monitoring, and service mesh solutions.

130+

MICROSERVICES

30+

DAILY DEPLOYMENTS

0

DOWNTIME

## CHALLENGE

The partnership between LiveWyer and K3 proved essential to the success of both projects. LiveWyer's deep technical expertise in Kubernetes, CI/CD, and infrastructure management enabled K3 to overcome significant technical challenges and accelerate the growth and maturity of their platform.

### Thank you for reading

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