

CUSTOMER CASE STUDY

PubNative



How a mobile advertising technology leader gained competitive advantage through infrastructure, with Kinvolk Lokomotive Kubernetes and Packet bare-metal hosting



SNAPSHOT

YEAR FOUNDED:

2014

INDUSTRY:

Mobile advertising

LOCATION:

Berlin, Germany

CLIENTS SERVED IN:

More than 120 countries

PROJECT HIGHLIGHTS

- » Working with Kinvolk and Packet, PubNative saved 20-30% of its total cloud hosting bill by adopting a multi-cloud Kubernetes solution
- » Time to production deployment: 3 months
- » First year savings: hundreds of thousands of dollars
- » Payback time on investment: 3 months

BACKGROUND

In the booming mobile app economy, advertising offers a crucial revenue stream for developers. To access the advertiser marketplace, these developers rely on sophisticated technology that matches a placement opportunity with bidders who want to place their ads. So-called supply-side platforms (SSPs) process thousands of such requests per second, fan them out to a large pool of potential advertisers, identify the highest bidder, and deliver that ad to the end-user – all within a matter of milliseconds.

Since its founding in 2014, PubNative quickly established a leadership position in the mobile advertising ecosystem, with its pioneering API-driven approach and exclusive focus on mobile



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publishers, the fastest-growing segment of the overall online advertising market.

Bruno Wozniak, Director of Engineering at PubNative, explains the company's business model: "We work with mobile app developers, enabling them to monetize their user base. For free apps, it's really their only opportunity for revenue. Our focus on mobile is a key differentiator that has enabled us to succeed."



Bruno Wozniak, Director of Engineering at PubNative

This success, however, created demands on the company's back-end infrastructure that threatened to limit its ability to continue to grow.

This was about more than simply finding a "cheaper cloud" offering, though. Combining the use of Packet with Kubernetes as a uniform orchestration layer, PubNative was excited about the flexibility to optimally locate workloads and services across

cloud boundaries – whether for computing costs, connectivity options, or the availability of value-added managed services. As Wozniak said: "It felt like we had a chance to have our cake and eat it too."

TURNING INSIGHT INTO REALITY

Like many lean DevOps teams, however, PubNative was kept pretty busy maintaining its existing application. How would they be able to manage a project to move into Packet at the same time as keeping the lights on? The team found some spare time

to try deploying Kubernetes in the Packet bare metal environment and could get it basically running, but hit some challenges with security and networking that made them realize they didn't have the required resources to build a well-architected, reliable solution.

"The payback time was just three months, so financially this was a no-brainer."

Facing the renewal of its long term agreement with its existing cloud provider in just a few months, PubNative had a tight



timeline for completing the migration and knew it would take a highly skilled, agile partner to ensure the project's success.

Wozniak approached a number of potential partners but settled on Kinvolk: “We selected Kinvolk for their demonstrated expertise and general good communication. We liked how they responded to our request for proposal. They weren't the cheapest by any measure, but of all the companies we spoke with, we felt the most confident about their ability to deliver. We also liked that they were local to us, in Berlin.”

“...the combination of Packet's bare metal hosting and Kinvolk's Lokomotive sets us up with a flexible multi-cloud architecture for the future, enabling us to cost-effectively deliver superior solutions to our customers.”

After a couple of on-site sessions, the Kinvolk and PubNative teams collaborated on an optimal design. Some globally centralized backing services and analytical workloads using data on S3 remained in AWS, while bandwidth-intensive services moved to Packet. Connectivity between the clouds was implemented initially as an automated encrypted connection over the public internet and will transition to the “Packet Connect” direct inter-cloud service once that is available.

The Kubernetes layer was built using Kinvolk's Lokomotive tooling for automated deployment, including Flatcar Linux as the underlying immutable container operating system, Contour/Envoy for cluster ingress routing, Calico for container networking, and OpenEBS for elastic storage.

“We are glad we chose to work with Packet and Kinvolk on this project. They delivered what they promised, to a tight schedule.”

Calico's host protection capabilities were also used extensively to provide a robust host-based network security layer. This is essential as, being an exclusively bare metal hosting provider, Packet doesn't offer the equivalent of network/application security groups in other public cloud providers.



A COST-OPTIMIZED FOUNDATION FOR THE FUTURE

With the clock ticking, the project had to be completed quickly – and it was. From the initial kick-off meeting to the first cluster going live with production traffic was a timespan of just three months.



Packet's global locations cover all the key regions where PubNative needs local presence

PubNative has already seen cost savings of 20% and is expecting that to rise to 30% in the coming months once Packet completes implementation of a Kubernetes auto-scaler controller. For PubNative, this represents a saving of hundreds of thousands of dollars every year.

“We are glad we chose to work with Packet and Kinvolk on this project,” stated Wozniak. “They delivered what they promised, to a tight schedule. The payback time was just three months, so financially this was a no-brainer. More importantly, the combination of Packet’s bare metal hosting and Kinvolk’s Lokomotive sets us up with a flexible multi-cloud architecture for the future, enabling us to cost-effectively deliver superior solutions to our customers.”



Are you interested in being part of the PubNative team evolving and scaling its Kubernetes-on-Bare-Metal platform? If so, good news: PubNative is hiring! See their open positions here:

<https://pubnative.net/about/#jobs>

Are you interested in gaining competitive advantage, like PubNative, through Kubernetes and Packet bare metal infrastructure?

Contact Kinvolk today at hello@kinvolk.io to find out how we can help!