

# Ondat provides Civo with Cloud Native Storage

Supporting Civo's lightning-fast managed Kubernetes development and deployment service

## The Customer

**Civo provides one of the world's fastest-to-deploy managed Kubernetes services. Using K3s, Civo customers can launch a Kubernetes cluster in around 90 seconds compared to the 20–30 minutes and substantial effort required with most services.**

Originally founded in Hertfordshire in the UK, Civo now has a globally distributed team with employees in UK, America, India, and Malaysia. The company's target markets include small to medium development teams that need fast Kubernetes access for experimentation and testing, demos, learning and training environments, and continuous integration or delivery (CI/CD). The company also supports individual developers who work for — or represent — larger enterprises, including Oracle, Walmart, Verizon, Microsoft, and NetApp.

“As a self-funded start-up, our biggest challenge has always been managing the entire platform — including the storage component — with a relatively small team. While it's true that we've grown over the last 18 months, we're still a lean operation, so we must rely heavily on product automation and vendor support to make sure we continue to deliver to our customers. Ondat continues to support us and more than pulls their weight in this regard. As such, we now consider the company to be a key technical partner and critical enabler for our future growth and evolution.”

**Andy Jeffries CTO & Co-founder of Civo Ltd**



**Company Size:** 50



**Industry:** Information Technology & Services



**Location:** Hertfordshire, UK

## The Challenge

Civo's original platform was based on OpenStack and initially used software-defined storage from Ceph. However, the development team quickly realized that this combination wasn't delivering as anticipated. Andy Jeffries, CTO & Co-founder explains. “There were just too many maintenance and development issues at the platform and storage level. True, Ceph held many promises in terms of being a scalable solution. But it felt like we were battling constantly to maintain a perfect working state. Some disks would fill up, while other disks would be 60% empty — yet the whole cluster would go into a warning state, with alarm bells ringing everywhere. It wasn't an easy or stress-free way to run a managed service business”

Persevering with OpenStack, Civo moved away from open-source storage and tried NetApp, an all-flash solution. It was a move in the right direction, but the solution still required a lot of management and late-night calls when the storage failed, or, customer instances

## Case Study – Civo Cloud Native Storage

dropped into read-only mode. It was clear that the time had come to find a new operating platform and accompanying storage vendor. One that could support a growing managed services provider with reliable, scalable, and self-healing cloud native data availability.

### The Solution

Civo considered several storage vendors, including OpenEBS, Portworx, Ondat and Rook. Ondat was ultimately selected because it delivered on three essential requirements — performance, data safety, and support.

“When we talk about performance and data safety, we’re talking about the strong replication, high availability, and failover that Ondat brings to the table” confirms Andy. “Ondat also demonstrated that their team understood the unique way cloud and managed service providers consume storage in terms of the vast number of volumes that are created and deleted on a regular basis — and the accompanying elasticity that’s required to make that happen”.

Today, Civo has two super-clusters with more on the way this year. One in London and one in New York. They both run Kubernetes as the base layer and Ondat within that, providing persistent volumes. When a Civo customer launches a K3S cluster, the platform spins up a series of virtual machine disks with storage provided by Ondat.

### The Benefits

Without the capability to persistently store data, clusters can fail and then customer applications can be affected. In the past, Civo was able to work around this issue by having regular I/O compute instances. If a customer needed a database or uploaded file storage, Civo had to manually create an instance and use that as the backend storage. With Ondat, it’s a native part of the deployment and — as such — happens automatically. Ondat also enables Civo to carry out maintenance and rolling upgrades of its Kubernetes clusters, thanks to its replication function and transparency when moving volumes between nodes. “Ours is the kind of offering that tests the limit of IT infrastructure and container-based applications,” muses Andy, “We’re always hitting system limits and bottlenecks — like distributed key value stores. Ondat is always keen to work with us as we push these boundaries. Their team monitors how close we are getting to the limits and, before we hit them, offer advice on how we can extend the capability so that it doesn’t become a bottleneck”.

In addition, Civo’s development team has been impressed with the strong product roadmap that Ondat has in place and its willingness to engage openly with future product developments, noting that Ondat is always open to discuss and understand what features they might need in the future.

Andy comments: “For a specialist managed service provider trying to break our way into a larger market segment, this kind of openness and transparency from a vendor is critical in planning our evolution and delivering new products”.

### More competitive pricing

Civo has also written its own storage driver, which utilizes Ondat. This allows customers to create their own volumes of persistent storage. Andy provides some additional detail: “Using Ondat in this way has allowed us to reduce the price of our Kubernetes clusters — offering customers smaller static disks on the instances and still giving them the ability to add any size of volume they want to them. This means customers now pay for what they use rather than resources they don’t need. To that end, you can buy a 1GB Ondat volume attached to one of our Kubernetes clusters for as little as \$0.10 per month”.