

Modern Kubernetes storage organizes billions of crypto transactions

The leading provider of crypto asset data reduced their digital footprint by 80% with the intelligent performance of Dell's modern, flexible storage.



Business needs

Providing clients with actionable data analytics compiled from rapid searches of over 100 blockchain full nodes, each with differing data structures, led Coin Metrics to search for intelligent storage to simplify IT operations, while staying agile to constant changes.

Business results

- 80% reduction in footprint reduces costs and eases growth
- 50% improvement in memory and CPU use streamlines operations
- Trusted, mission critical storage empowers clients to make informed crypto-financial decisions
- Continuously modern storage dynamically allocates high speed content
- Unified architecture provides high input/output bandwidth to support applications
- Tight Container Storage Interface (CSI) integration with Kubernetes automates workflow
- Dell Technology Services proactive recommendations maximize productivity and uptime

Customer profile

COINMETRICS

Cryptoasset data provider | United States



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Kerry Yndestad

Chief Technical Officer
Coin Metrics

Solutions at a glance

- [Dell PowerStore](#)
- [Dell PowerEdge](#)
- [Dell Container Storage Modules](#)
- [ProDeploy Plus for Enterprise](#)
- [ProSupport Plus for Enterprise](#)

One of the biggest challenges faced by Coin Metrics was storage. Crypto exchanges are relatively new and frequently lack robust systems, making it difficult for Coin Metrics to have secure connections, while keeping up with rapid growth in the industry.

“We were basically just using JBOD inside of servers, explained Kerry Yndestad, Chief Technical Officer for Coin Metrics. “So, you’re limited by how much storage you can fit in the server. Then every time you have to make an adjustment, it requires this orchestration dance. It was quite a complicated process.”

Evolving needs met with continuously modern storage

To provide clients with instant data collected from crypto exchanges that never go down, Coin Metrics turned to Dell PowerStore.

“Just having intelligent storage for a database on the PowerStore is a huge advantage,” Yndestad says. “We’ve collected over 100 billion trades from the exchanges that we’ve been connected to so far. We keep all of our history and we’re continuing to expand.”

For this volume, the AI/ML automation in PowerStore simplified operations, while providing the optimization Coin Metrics needed for agility.

“With PowerStore, we are able to dynamically allocate and easily access the high-speed content from multiple worker nodes and a whole variety of other great enhancements that we’re achieving as a result of our new install.” notes Yndestad. “Now any one of our machines has access to this vast array of storage over a high-performance interface.”

Adaptable architecture streamlines operations

Coin Metrics has recently begun to separate storage and compute to streamline operations and increase availability and scalability. PowerStore’s modern architecture and software first design adapts for dynamic allocation of resources.



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Coin Metrics had been using software compression at the cost of using more CPU. With compression built directly into PowerStore storage, the company saw a 50% improvement in use of both memory and CPU. Also, more streamlined operations were achieved when migrating data.

“In one day on the Dell PowerStore we were able to replicate nine different major databases, something that we thought was going to take us potentially weeks,” Yndestad remarks.

80% reduction in footprint enables growth

In addition to data center space savings and reduced costs, an 80% reduction in footprint gave Coin Metrics the ability to move from crisis planning to contingency planning.

“Of course, we’re going to continue to grow and add new capabilities,” Yndestad remarks. “But the rate at which we have to do that has been greatly reduced by the simplified footprint.”

“Instead of being spread across hundreds of servers, we can consolidate into PowerStore for better capacity and connect them all to an integrated SAN storage system,” Yndestad emphasizes.

Multiple solutions enhance the playbook

Along with PowerStore, Coin Metrics relies on Dell switches for interconnectivity and Dell PowerEdge Servers to increase performance for compute intensive workloads. PowerEdge’s strength in addressing evolving compute demands, while easily scaling, was perfect for Coin Metrics changing needs. And PowerEdge’s Integrated Dell Remote Access Controller (iDRAC9) allowed deployment and updates from anywhere, anytime.

“Our ability to configure servers remotely and to have access to the system consoles enabled us to come in and create and enhance the playbook and replicate that across the rest of the servers. That was an efficiency for sure,” Yndestad reports.

Dell Container Storage Modules (CSM) drives the future of cloud native storage

Taking advantage of the CSI driver for PowerStore allows Coin Metrics to gain advanced data services, managing Kubernetes on-prem.



“Our impression of working with Dell on support and installation configuration has been very impressive.”

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Chief Technical Officer
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“PowerStore and Kubernetes talk to each other very nicely. There’s an underlying API that’s built in that lets us issue commands directly to the PowerStore,” Yndestad explains.

Dell’s container storage interface automates workflow, providing resiliency, replication, and observability to Coin Metric’s Kubernetes workloads, with the security that comes from direct integration.

“If you’re using some open source or third-party CSI, that becomes potentially wrought with peril. With PowerStore, we’re very excited about the integration with the CSI. The observability for our monitoring is critical to us,” says Yndestad.

Dell Services Drive Innovation

Coin Metrics chose ProDeploy Plus and ProSupport Plus for Enterprise as key adds to their storage purchases.

“In terms of overall value of support for us, the proactive monitoring of what’s going on, on the equipment and from remote resources with Dell, that’s very important. Also, our ability to at a moment’s notice take a look at what the status of all of the equipment is that we have and be reassured that everything is functioning as it’s supposed to. I think those are the two most critical pieces of support that we have experienced so far,” Yndestad comments.