Panda Power Funds Gets Flash-Powered Performance, Archive Economics, and Big Admin Time Savings

PANDA POWER FUNDS
CASE STUDY

Energy
pandafunds.com

Challenge
Find a high-performance solution with compelling economics to process and maintain the company's power plant data.

Results
- 35-40% better performance
- 3.5x effective capacity for applications such as MS Access and email
- 5-7x data reduction for MS SQL
- 25 hours per week of storage system maintenance reduced to zero
- Outstanding proactive support – "I've never received better support from any organization in my 35 years in IT."

> "I get the performance of all-flash, but the authoritative copy of my data is deduped, compressed, and deduped again, then stored on low-cost, high-capacity SAS drives. Datrium provided us an affordable way to keep years of high-performance data literally at our fingertips."

Darel Stokes
IT Director

Company Challenge
Maintain Growing Power Plant Data Indefinitely

The IT team at Panda Power Funds contends with a large and ever-growing datastore. Compounding its challenges, the company must maintain power plant records indefinitely; in fact, at least 80% of Panda's data goes back more than 10 years.

As Panda explored the market for a replacement of its Dell EqualLogic solution, IT decision-makers found the same challenges with nearly every solution they evaluated.

"Our current solution demanded a significant amount of planned and unplanned maintenance, but many of the alternatives were not much better," said Jay Pickett, Senior Network Systems Architect. "We needed a high-performance system with great economics that actually gave us time back."

Results
All-Flash Performance, Archive Economics

Datrium, however, was a different story. With Datrium's DVX, I/O processing happens on the server, leveraging commodity flash SSDs for extremely fast and low latency read performance. Data deduplication and compression occur in-line, in real time, then are globally deduped across all servers and stored affordably on a low-cost, high-capacity network data node.

In Panda's trial of DVX, the solution delivered as promised in terms of real-time data reduction and high performance for Access, email, and other MS Office applications, as well as for SQL data or image files. Overall, DVX performed 35-40% better than a high-end Dell solution that would have cost considerably more in both expense and time. For Office applications, Panda observed 3.5x data reduction with always-on deduplication and compression. On the SQL side, DVX achieved a 5-7x data reduction. After including video and PDF images – data already compressed by the application – the overall data reduction currently averages 2.2x, which Panda expects to increase to 3x over time. "I get the performance of all-flash, but the authoritative copy of my data is deduped, compressed, and deduped again, then stored on a low-cost, high-capacity data server," said Darel Stokes, IT Director. "Datrium provided us an affordable way to keep years of high-performance data literally at our fingertips."

> "Previously, we were losing probably 25 hours per week of staff time on care and feeding of three storage devices. That, literally, has gone down to zero. The box simply runs. It's the ultimate IT product for me."

Darel Stokes
IT Director

Less Staff Time, More Uptime

Datrium replaced one SAN and two NAS units with a single DVX comprised of host software and a 2U persistent data server. In addition to data center space savings, the company also handles its unpredictable data growth in much less time, retaining a single pool of capacity headroom within the DVX solution to handle whatever comes its way.

Likewise, Panda appreciates the ease of managing DVX through vCenter. Plus, Stokes and his team no longer need to manage storage artifacts and can spin up a new VM in minutes. "Previously, we were losing probably 25 hours a week of staff time on care and feeding of three storage devices," Stokes says. "That, literally, has gone to zero. The box simply runs. It's the ultimate IT product for me."

Similarly, for user acceptance testing, Stokes performed five tests that would have previously required 50 minutes of load time alone on the previous SAN. With DVX, the load time for dropping/reload of the database took just two minutes, saving Stokes 48 minutes of test time. "The downtime between the beginning and end of this data migration was significantly reduced due to DVX performance," he said.

Stokes credits the time savings to the ease of management as well as Datrium's proactive support team, which alerts Panda quickly regarding any issues. "Datrium Support calls me before I know I have a problem in one of my switches and before the server vendor even notices – and we pay for 24x7 Pro support from them," Stokes said. "That service level and time savings is a bonus we did not expect with the Datrium solution. Hands down, I would have to tell you that I have never received better support from any organization in my 35 years in IT – ever!"

About Panda Power Funds

Panda Power Funds is a private equity firm that develops, owns, operates and manages investments in clean energy. Panda has five combined-cycle power plants in operation in Texas and Pennsylvania, and two combined-cycle power plants currently under construction in Pennsylvania and Virginia with a combined capacity of more than 5,800 megawatts. Panda Power Funds also has a 990 megawatt power project in Maryland in advanced development. The fund built a 20 megawatt solar farm in southwest New Jersey that is one of the largest solar facilities in the Northeast United States.

Learn more about Datrium at www.datrium.com.