



**SCALEMATRIX**  
Cloud. Colocation. Managed IT.

## CASE STUDY



# ScaleMatrix Provides White Glove Cloud Era Service with SanDisk® and Nexenta

## Solution Focus

- Cloud hosting
- Data Center 2.0

## Products

- Optimus Eco™ 400GB\* SSD
- CloudSpeed Ultra™ 800GB SSD
- NexentaStor™ from Nexenta

## Background

ScaleMatrix was founded in the 'Cloud Era.' The company began building data centers and cloud platforms with a vision toward leveraging software-defined architectures, with Data Center 2.0 in mind. "Years ago we looked at a way to improve on the traditional data center delivery methods," said Chris Orlando, Co-founder and Chief Sales and Marketing Officer at ScaleMatrix. "When you walk through our data centers today, you see that we've made that dream a reality. We have changed the way that we manage air flow and density, and have improved on every level of efficiency within the data center. That's what we do here at ScaleMatrix."

Roy Bettel, Vice President of Technology for ScaleMatrix, expanded on this concept. "Everything from the proprietary cabinets to having no exposed wiring anywhere in the facility is unique. We have copper flakes in the paint on the floor of the data center so that the entire building is grounded. If there was a way to improve on a legacy practice, we considered it."

Data Center 2.0 allows ScaleMatrix to offer additional value to their clients. By providing increased density at the cabinet level, ScaleMatrix can accommodate especially heavy compute workloads, such as genomics sequencing, day trading, and analytics. "We are a privately held organization with a focus on high-touch client service and we enjoy being able to provide our clients with a level of concierge service which not everybody else is capable of doing," explained Bettel. "While being nimble and agile are key assets in how we operate, we offer extremely competitive products and services just like you'd find at our larger competitors. Our clients receive white glove treatment, but still count on us for the same level of service or better than they could get from organizations that might not be able to treat them with such individuality. ScaleMatrix truly is Data Center 2.0."

*"In our industry we're competing with giants. How do you compete with giants? By providing better service, better support, better availability, and better data integrity."*

**Roy Bettel,**  
Vice President of Technology  
for ScaleMatrix

**SanDisk®**  
a Western Digital brand

## The Challenge

Although the company started small, ScaleMatrix is doubling in size annually and expects similar growth to continue for the foreseeable future. The company began with 100 terabytes of storage and is at nearly two petabytes today. ScaleMatrix services clients from nearly every industry vertical, including healthcare, biotech, finance, government, and retail. For the savvy clients of ScaleMatrix, everything is about performance. It is the new metric by which service providers are measured. Equally important components for clients today include data protection and integrity.

“The problem that we were looking to solve came in two parts,” Bettel told us. “First, we needed very low-latency, highly scalable storage where we could put tens of thousands of virtual machines on the system and maintain a consistent level of performance across all of them. The second and equally important component was data protection. It does no good to have a fast SAN if there is even a chance of losing data.”

The company had initially deployed in-server hard disk drives that did not scale well. However, the ScaleMatrix team was trying to service a number of clients with demanding workloads which varied in both size and requirements—from extreme speed requirements to vast data migrations. ScaleMatrix had to be sure that their infrastructure could continue to support these varied client needs.

## The Solution

ScaleMatrix offers a wide portfolio of services, including co-location, cloud hosting, managed services, and data protection. Early on, the company decided to evaluate a software-defined platform that would provide the flexibility that they needed to service each product category. “Four years ago when we were looking at deploying a managed storage solution for our clients, both for cloud clients as well as co-location hybrid clients, we looked at everybody,” said Bettel. “All the names that people would normally think about when they talk about storage.”

ScaleMatrix evaluated dozens of products from dozens of vendors. They discovered after multiple POCs and hundreds of tests that the best-in-class, the fastest, the most reliable, and the best data integrity solution for their clients was the combination of Nexenta and SanDisk. “What we wound up with was a marriage of Nexenta and SanDisk,” explained Bettel. “This combination gave us the flexibility, data integrity, and the ability to stand up multiple performance tiers. We can provide 100 percent availability 100 percent of the time—with blazing fast speeds and no data loss or data corruption.”

The combination of the firmware—Guardian Technology™ Platform from SanDisk—with built-in data integrity checks supported by Nexenta, provides not only the needed speed, but also the data integrity end to end—at both the SAN operating system level and the drive level. “Ultimately, we chose to go with Nexenta as the operating system for our storage systems. Data integrity is built into their Z file system (ZFS),” Bettel said. “When we got to SanDisk—with both the CloudSpeed Ultra and Optimus Eco products—what resulted was a storage system that is faster than anything we’ve ever seen before. It was a natural evolution of the storage portfolio to move to these vendors for the extreme speed requirements that our clients have.”

ScaleMatrix also realized that there was a very real need for storage at different tiers. The company has deployed the combination of Nexenta and SanDisk to provide multiple tiers of managed storage to their clients—from dedicated to shared. “We found that the combination of speed and cost that we put together through those two platforms enables us to deliver a more flexible platform of services for our clients,” explained Orlando. “The gap that we were trying to fill when we looked to Nexenta and SanDisk was specifically about delivering performance at scale.”

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*“At ScaleMatrix, we like to be able to service not only the entry level clients, but also those folks at the very top echelon—the power users. Through our relationship with Nexenta and SanDisk we truly can deliver almost unlimited performance. And that really sets us apart here at ScaleMatrix.”*

**Chris Orlando,**  
Co-founder and Chief Sales and  
Marketing Officer at ScaleMatrix



Optimus Eco™ 400GB SSD  
CloudSpeed Ultra™ 800GB SSD

*"It's all about the data. Our clients demand fast access to it. They demand reliable access to it. They demand that the data integrity be there as well. We couldn't have done that without SanDisk."*

**Roy Bettel,**  
**Vice President of Technology**  
**for ScaleMatrix**

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**SanDisk®**  
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At SanDisk, we're expanding the possibilities of data storage. For more than 25 years, SanDisk's ideas have helped transform the industry, delivering next generation storage solutions for consumers and businesses around the globe.

## The Result

Leveraging the combination of NexentaStor, Optimus Eco, and CloudSpeed Ultra SSDs has enabled ScaleMatrix to better address the demands of their enterprise clients. "Scale, speed, and capabilities are at the heart of all the services that we offer. And the relationship that we have with Nexenta and SanDisk has enabled us to do more."

When ScaleMatrix refers to their white glove service, they are referring to the fact that each client has a unique performance profile. Clients can select and carve up their own performance and storage tiers, placing workloads where they fit the best—whether it is a performance, archive, or real-time IOPS tier. Clients pay only for the services they need, while receiving the best performance for their specific applications. Through NexentaStor and SanDisk SSDs, ScaleMatrix can manage, monitor, and deploy IOPS based on client needs. "When you think about data centers, you think about these large monolithic facilities with a very traditional capability set," Orlando told us. "Here at ScaleMatrix, we're the complete opposite of that. We are, instead, agile, focused, and innovative. And through relationships with vendors like Nexenta and SanDisk, we truly are able to deliver differentiated services that make us unique to our clients."

One of the things that ScaleMatrix does on a regular basis is evaluate their services against those of their competitors. "We recently wrapped up a test of our cloud performance, specifically the storage, against some of the larger competitors in the industry," said Bettel. "Frankly, we were stunned. We believed we were faster. We were told by our clients that we have the fastest cloud storage they've ever used. However, we didn't realize how truly wide the gap is between what we're providing and that of our competitors."

ScaleMatrix has also been very satisfied with the support and responsiveness from both Nexenta and SanDisk. "The relationship today with SanDisk and Nexenta is a very fruitful one," said Orlando. "We work closely with both their product and development teams. That enables us to get a look forward at the roadmap so that we can plan the products and services that will be next generation here at ScaleMatrix. It's a really great relationship. This has allowed ScaleMatrix to differentiate ourselves and deliver a better product and service for our clients."

"SanDisk has created magic with their products," confirmed Bettel. "When you pair NexentaStor with a product like CloudSpeed or the Optimus Eco SSD from SanDisk, the speeds don't even make sense. That is the question we keep receiving from our clients, 'Why is your storage so much faster than your competitors?' We just tell them, 'It's magic.'"

Clients of ScaleMatrix are reaping the benefits of this relationship. "The number one problem that we solve for our clients, the number one need that they bring to us is 100 percent access all the time. 100 percent support all the time. 100 percent responsiveness all the time. That's the solution that we provide to our clients," concluded Bettel. "The speed of our storage systems allow our clients to, in some cases, get five, seven, ten times as much work done in a similar block of time to what they were doing somewhere else. Our clients are able to get more done in less time."

\* 1 GB = 1,000,000,000 bytes. Actual user capacity less.

The performance results and cost savings discussed herein are based on internal testing and use of CloudSpeed & Optimus products. Results and performance may vary according to configurations and systems, including drive capacity, system architecture and applications.

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