



CLOUD4Y accelerates cloud storage with high-performance solutions from LSI

Learn how LSI® MegaRAID® 6Gb/s SAS RAID controller cards and CacheCade® Pro 2.0 caching software help enable CLOUD4Y to deploy fast, RAID-protected hosting platforms in the cloud.

The Challenge:

Need for resilient, high-performing, future-oriented solution for cloud services. CLOUD4Y needed to be able to provide enhanced cloud backup technologies, mail hosting storage services and computing services in order to satisfy and retain existing clients and attract new customers.

The Solution:

The LSI MegaRAID SAS 9280-16i4e controller and CacheCade Pro 2.0 caching software were implemented with SSDs to help bring high performance to cloud nodes for client services. Cluster architecture based on Windows DC 2008, Exchange 2010 and virtualisation HyperV were applied to build a resilient Exchange Hosting solution. Each node provides 24TB of storage, allowing for large capacity as well as very high performance.

The Result:

CLOUD4Y has increased the productivity of its disk I/O by 3 times, significantly reducing I/O latencies and downtime while accelerating application response times and lowering RAID access and rebuild times.

Cloud computing is the intersection of business imperatives and technical capabilities. Business needs to contain cost, offer higher service levels with limited or shrinking resources, and improve responsiveness to changing business requirements. Technical capabilities enabling cloud-based services include the horsepower, the bandwidth, and the applications to deliver infrastructure, platforms or services anywhere, anytime, on demand.

For the cloud to succeed as a flexible, responsive pool of computing potential that can be called on when needed, run flawlessly and be “released” back into the cloud when no longer needed, it has to be built on components designed to perform to those standards... and that is why Cloud4Y chose LSI.

“Cloud4Y was founded on the belief that cloud technology is the future”, said Nikolay Fokin, CIO at CLOUD4Y. “We believe we are at a crossroads where technology is finally enabling a utility computing model. Businesses can dial up or dial down the hosting infrastructure provided by Cloud4Y. This moment in the information age is very exciting for us and for our customers.”

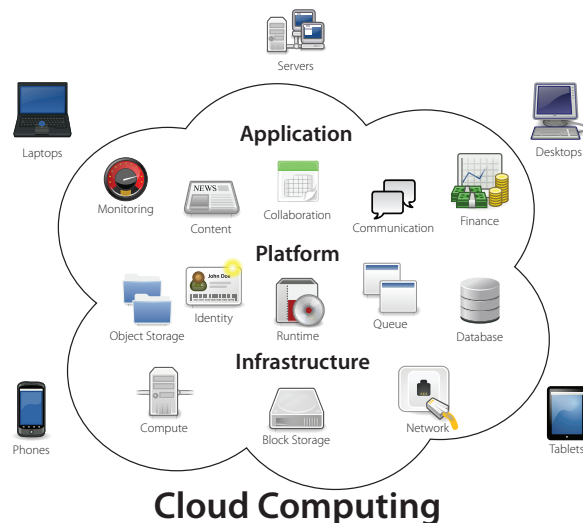


Figure 1: Cloud computing resources which include LSI storage technology can deliver infrastructure, platform or application services separately or in combinations.

“Our mission is to provide the best possible value, security, and reliability”, Nikolay continued. For example, Cloud4Y recently implemented their most resilient and scalable backup services solution – to complement a robust Exchange practice – which they believe will provide new levels of performance and flexibility to their customers.

“The LSI CacheCade software proved to be the perfect solution for us to boost IO performance of HDD volumes, unlocking application acceleration and ultimately improving the quality of cloud services that we can offer.”

Nikolay Fokin
CIO at CLOUD4Y

To achieve their mission, Cloud4Y needed to find a RAID card that offered support for 6Gb/sec SAS and SATA drives, with the I/O per second (IOPS) and bandwidth performance to support hundreds, possibly thousands, of simultaneous requests.

“Along with our performance requirements, we also needed a product with good features from a company we could trust, a company in a leadership position, with reliable software and support we could access whenever we had a question”, explained Nikolay.

They chose the MegaRAID SAS9280-16i4e 16-Port Internal / 4-Port External PCI Express® SATA and SAS RAID controller card from LSI. In-house performance testing at Cloud4Y showed that the LSI solution offered performance several times higher than comparable competitive solutions.

“A critical factor in our decision to use the MegaRAID SAS9280-16i4e was the product’s support for CacheCade® Pro 2.0 caching software”, Fokin said. “We wanted to be able to build fault-tolerant storage and to achieve maximum possible performance.”

LSI CacheCade Pro 2.0 software was used together with solid state drives (SSDs) to provide high performance to cloud nodes for client services where “hot spot” data was frequently accessed. The CLOUD4Y nodes use RAID 5 and RAID 10 with hot spare hard drives. Each node has 24TB of storage capacity with room to scale out when demand requires.

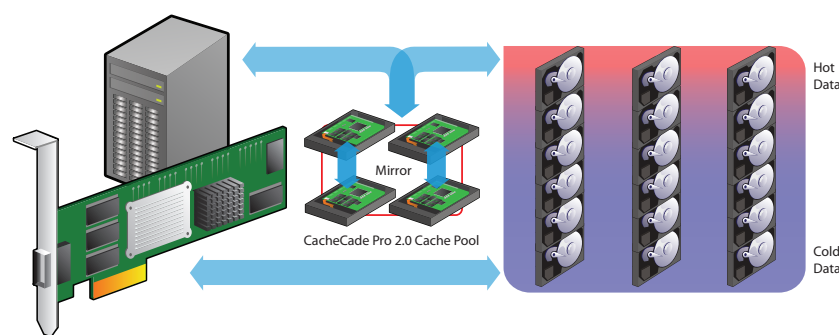


Figure 2: CacheCade Pro 2.0 software intelligently copies hot data to low latency, redundant SSD cache.

The solution was implemented in phases over a 6-month period, ultimately being used for cloud computing, server email and storage.

“Compared to other storage solutions, the LSI MegaRAID controllers, together with CacheCade software, increased our I/O performance by approximately 3 to 6 times. It also significantly reduced I/O latency and downtime, accelerated application response time and lowered RAID access and rebuild times, ultimately increasing the return on our initial investment”, stated Nikolay.

Today Cloud4Y has a fault-tolerant, high-performance cloud storage system that is meeting the company’s business needs and delivering reliable, fast backup and exchange services to their customers. CLOUD4Y has raised the quality level of its cloud services, allowing it to attract and retain customers and grow its business.

Benefits

- Increased productivity of disk I/O
- Reduced latency and downtime
- Faster application responsiveness

Product Overview – LSI

MegaRAID® SAS 9280-16i4e

LSI MegaRAID SATA+SAS controllers can help provide a new level of reliability, availability and performance to businesses that are facing storage challenges. The MegaRAID SAS 9280-16i4e, with sixteen internal and four external ports, supports both internal drive storage and external JBOD expansion for up to 240 SATA or SAS devices. With a large number of internal ports, the 9280-16i4e connects up to 16 drives inside the server via direct connection or passive backplane. Using the external SAS ports, multiple JBODs can be connected to a server, providing a scalable and affordable solution for growing storage requirements.

LSI MegaRAID CacheCade Pro 2.0 software

LSI MegaRAID CacheCade Pro 2.0 software is designed to dramatically accelerate application I/O performance of hard disk drive (HDD)-based arrays by intelligently caching frequently accessed or “hot spot” data to solid-state drives.

About Cloud4Y

Cloud4Y (Cloud For You), headquartered in Moscow, provides cloud infrastructure for small, medium and large businesses around the world as a platform for secure, reliable and productive use of IT services and applications. The company is focused on empowering its customers to use cloud technologies to reduce IT costs, and to improve productivity and business efficiency. For more information, please visit www.cloud4y.com.



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