

Cloudian HyperStore safeguards research data and intellectual assets for a leading UK research university

As a leading supplier of object storage solutions, Cloudian needs to ensure high availability and scalability for customers with critical research data and other intellectual assets of international importance. To keep back-up systems running at all times, it uses solutions from Loadbalancer.org to help it store and secure hundreds of terabytes of data every week.



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Shawn Snider
Director of Product Management
OverDrive, Inception and Streamline, Ross Video

Challenge

- Ensure high availability of Cloudian HyperStore

Solution

- Loadbalancer.org Enterprise 40G
- Loadbalancer.org support services

Partnership Benefits

- Simple set-up using Cloudian-specific deployment guide
- High availability for critical object storage solution
- Exceptional performance with large throughput
- Effortless scalability to support anticipated storage growth
- Improved security between public and private networks
- "Fantastic" support from a responsive team

Challenge

One of the UK's leading research universities needed to safeguard over 1.5 petabytes of research data and intellectual assets generated by around 21,000 students and 5,000 staff. It decided to replace its aging storage area network with Cloudian's HyperStore object storage system and needed to deploy compatible load balancers to help it keep this vital back-up system running.

At the time, the only load balancers used within the university were 'home-grown' solutions, built many years before using open source software by technicians who no longer worked at the university. As these solutions were difficult to manage and maintain, the university wanted to move to fully-supported, commercial load balancers.

Solution

The university started by setting up a proof-of-concept for Cloudian HyperStore and evaluated load balancers from Loadbalancer.org in this test environment.

"We were impressed by how easy it was to set up the Loadbalancer.org solutions and get going," says the university's Systems Specialist (Infrastructure). "We had a couple of calls with the team at Loadbalancer.org, and the whole experience was excellent. We didn't look at anything else."

Loadbalancer.org has an ongoing partnership with Cloudian and is able to provide predefined configurations for HyperStore environments, giving customers what the Systems Specialist describes as a "turnkey solution". They added: "The Loadbalancer.org deployment guide gave us a really good starting point and the confidence that the load balancers would work with Cloudian."

The university now uses two Loadbalancer.org Enterprise 40G appliances, installed as a high availability pair across two data centers. These solutions balance traffic across 15 HPE Apollo servers, and back up or 'churn', on average, 120 terabytes of data per week.

Results

The Loadbalancer.org appliances play a vital role in ensuring the high availability of the university's Cloudian HyperStore solution. "We have been very impressed with the way that the Loadbalancer.org solutions have reacted to storage node failures during testing," the Systems Specialist says. "The failover occurs so quickly that storage jobs don't even know that an incident has occurred."



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Critically, the Loadbalancer.org solutions have proven capable of handling an exceptionally high throughput with ease. At peak times, the load balancers handle 3.3 gigabytes of storage per second with no impact on performance. "The load balancers have not twitched," adds the university's specialist.

Operating at Layer 7, the Loadbalancer.org solutions also help to provide a high level of security. The university configured the Loadbalancer.org appliances to provide a secure gateway from the private Cloudian network to external services on the university's public network. "This is a really neat bit of functionality, which improves security and saved us a huge amount of configuration time," said the Systems Specialist.

The university's data volumes are steadily increasing, so scalability is a key requirement for the load balancers. In the first five months alone, the university had to increase its storage solution from 12 nodes to 15 nodes. According to the university's Systems Specialist, the Loadbalancer.org appliances "will be able to support double this capacity."

Last, but not least, the specialist and their colleagues have been very impressed with Loadbalancer.org's support services. "Support has been really responsive," they add. "Even when we had a problem unrelated to the Loadbalancer.org appliances, the Loadbalancer.org support team was happy to get involved and help us resolve the issue. They've been really fantastic."

About Loadbalancer.org

Loadbalancer.org's mission is to ensure that its clients' businesses are never interrupted. The load balancer experts ask the right questions to get to the heart of what matters, bringing a depth of understanding to each deployment. Experience enables Loadbalancer.org engineers to design less complex, unbreakable solutions - and to provide exceptional personalised support.

