I'l'I LOADBALANCER

Loadbalancer.org helps the University of Leicester safeguard its intellectual assets

To protect research data and other intellectual assets of international importance, the University of Leicester has to keep its Cloudian data back-up system running at all times. The university uses solutions from Loadbalancer.org to help store and secure over 120 terabytes of data every week.

UNIVERSITY OF LEICESTER

Challenges

- Ensure high availability of Cloudian HyperStore

Solution

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

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

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Mark Penny,
Systems Specialist (Infrastructure), University of Leicester

Challenges

As one of the leading research universities in the UK, the University of Leicester needs 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 of Leicester 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 of Leicester 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 Mark Penny, Systems Specialist (Infrastructure) at the University of Leicester. "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 Penny describes as a "turnkey solution". He says: "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 Enter-prise 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," Penny 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," Penny says.

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," says Penny.

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 Penny, "The Loadbalancer.org appliances will be able to support double this capacity."

Last, but not least, Penny and his colleagues have been very impressed with Loadbalancer.org's support services. "Support has been really responsive," he says. "Even when we had a problem unrelated to Loadbalancer.org's appliances, their 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.