LOADBALANCER

CASE STUDY

SaaS company achieves multi-site resilience for internal storage application with GSLB from Loadbalancer.org

This SaaS company's internal storage application played a critical role in their disaster recovery and business continuity strategy.

With operations spread across three separate data centers, there was a desire to provide additional redundancy to ensure uptime and a consistent user experience, regardless of site.

The resulting solution delivered not just greater multi-site resilience, but also optimized resource utilization.

Challenges

- 3 separate data centers
- Critical storage application used at each site
- Need for additional redundancy in case of site failure

Solution

- 6 x Loadbalancer.org Enterprise MAX hardware load balancers
- Professional services
- Topology-weighted GSLB services

Benefits

- Multi-site resilience
- Increased throughput
- Reduced latency

> *We now have seamless failover of our storage services to the live site of our choosing when maintenance is carried out, or one of our data centers goes down."*
>
> **System Manager,**
> **SaaS company**

Challenge

For many years, this SaaS company used load balancers from Loadbalancer.org to provide high availability to their critical Cloudian storage application, Hyperstore, at their Michigan headquarters, in the United States.

However, as their footprint expanded, they set up two more data centers nearby. However, with three separate data centers came the need to synchronize operations and a desire for greater multi-site resilience and redundancy.

Solution

The company already owned 6 Enterprise MAX hardware load balancers (one at each site, configured in clustered pairs for high availability) which they had deployed on Layer 7.

However, in order to achieve their multi-site objectives, they needed to add Global Server Load Balancing (GSLB) to this.

Due to the complexity of the deployment, Loadbalancer.org provided Professional Services to ensure the GSLB service was set up correctly.

"If our HQ went down, we wanted immediate failover to our sister site, three miles away. But if our sister site went down, then we wanted to preconfigure our IP ranges to failover to one of the remaining two sites," explains the System Manager.

Loadbalancer's technical team were able to preconfigure the load balancers to provide the desired GSLB services for multi-site resilience.

> *The Loadbalancer.org team took any headaches away, walking us through the process and configuration so we could do it ourselves if needed in the future."*

At the start of the process this SaaS company had a DNS server per site, but they shared a master configuration which was disseminated through to each data center.

The Loadbalancer.org team were able to help them implement a topology weighted GSLB service to preferentially send the DNS requests, achieving not just high availability, but also the desired site affinity.

Benefits

For this SaaS company, the biggest benefit of the GSLB configuration was multi-site resilience across their three data centers, meaning storage services would remain uninterrupted in the event of a site failure.

"With GSLB, the DNS query could be intercepted by the GSLB service, analyzed, and the best data center to deal with the request identified, based on a series of rules and conditions that we had chosen" said the System Manager.

However, a number of other benefits were seen, in addition to multi-site resilience:

1. **Reduced latency:** With GSLB, users were directed to the nearest site, leading to reduced latency and slower response times.
2. **Increased throughput:** Overloading a single data center would have presented a potential bottleneck to a single group of storage nodes, impacting user experience and application performance. With GSLB, this can be avoided.
3. **Optimized resource utilization:** More efficient distribution of traffic led to better utilization of the available data center resources.
4. **Effortless scalability:** With GSLB, it was much easier to scale their HyperStore storage application and services to other sites, should the company's footprint expand still further.
5. **Big data:** Now they can grow their critical storage services as their users need, rather than be dictated to by the resources in a single data center.

And because GSLB is included by default on all Loadbalancer.org appliances, at no extra cost, they achieved these benefits at very little expense — with a professional services team standing by the System Manager and his colleagues along the way to ensure a smooth implementation.