Radiology practice unlocks seamless scalability for their medical imaging workflows

CASE STUDY

Laurel Bridge Software's (LBS) Compass solution had served this radiology practice well for many years. But with plans to significantly expand the use of this critical application, and an ever-growing list of patients, they needed to be able to supercharge and scale their critical workloads.

While their existing F5 load balancers provided the functionality the radiology practice needed, the cost and complexity of those appliances meant they weren't viable at scale. They therefore needed to find a better alternative.

"We needed to be able to scale seamlessly as the number of studies increased. That simply wasn't possible with our F5s."

Christopher Diehn,
Senior IT Manager

Challenges

- HA needed for new Laurel Bridge Compass Routing Workflow Manager application

- Need for easy scalability to accommodate more than 50,000 studies a month

- Need for more cost-effective load balancing solution

- Needed persistence settings to be optimized

- Needed a pre-ratified, combined load balancer and Laurel Bridge solution

Solution

- Laurel Bridge Compass

- HA pair of Loadbalancer VA Prime licenses

- Validated, step-by-step LBS Compass configuration and deployment guide

Benefits

- More intuitive load balancer WebUI

- More affordable load balancer appliance

- Easier scale-up of LBS Compass nodes

Challenge

A physician-owned, private radiology practice in Florida provided a wide range of hospital and outpatient radiology and medical imaging services.

They were already an avid user of Laurel Bridge Software's (LBS) medical imaging solutions, chosen for their ability to solve complex imaging workflow problems by providing a flexible and robust platform that connects disparate systems.

But the radiology practice was expanding their application stack to supplement their existing LBS Compass solution (known formally as Compass Routing Workflow Manager). Needing to deploy multiple LBS Compass nodes to handle the practice's increasing volumes and workloads, it became apparent that the cost and complexity of their existing F5 appliances was not viable at scale.

This necessitated a search by the practice for an alternative load balancing provider who could secure the seamless performance of their critical imaging workflows. They were also looking for a load balancer vendor that offered 'persistence' configuration options to allow for optimized PACS operations.

The practice was already using F5 elsewhere in their network, but as Christopher Diehn (the Senior Information Technology Manager) explained:

> "In order to meet growing patient demand, we needed a load balancer that was more user-friendly and wasn't going to restrict our ability to scale."

Solution

Loadbalancer.org already had a pre-existing relationship with Laurel Bridge Software, and had created a detailed, combined deployment guide which the practice discovered on their website.

This guide explained in detail how the pre-validated solution could be configured and deployed for optimum performance and easy scalability of the LBS Compass solution, using a Loadbalancer appliance.

At the same time, Laurel Bridge kindly introduced Loadbalancer to the practice, to discuss how a high availability architecture might be achieved.

Together with Loadbalancer's proven experience deploying in complex medical imaging environments, Diehn was satisfied the combined LBS Compass/Loadbalancer solution would meet the practice's unique needs.

Benefits

Following the deployment of the joint solution, the radiology practice experienced several key benefits.

Scales easily as studies grow

The pair of VA Prime licenses selected by the practice support up to 4 Gbps of throughput, which means Loadbalancer is able to supercharge their critical LBS Compass workflows. The appliance also offers unrestricted SSL transactions per second (TPS), which is critical for securing a high volume of web traffic without performance bottlenecks.

This means the practice is now able to run more than 50,000+ studies per month through LBS Compass, and easily scale as their volumes increase.

More cost-effective

The VA Prime licenses also allow for an unlimited number of virtual and real servers (VIPs/RIPs), providing excellent scalability without additional costs as the practice's infrastructure grows.

"We can now seamlessly scale up the number of studies we run a month," explained Diehn.

More intuitive WebUI

In addition, the Loadbalancer appliance is also more intuitive than F5's — designed to be clever, not complex, with a simple and intuitive WebUI. This makes it easier for the practice to deploy and manage the load balancers, saving time and reducing their operational burden.