LOADBALANCER

CASE STUDY

NHS Trust boosts application performance and resilience

The acquisition of a Loadbalancer.org Site License has helped Birmingham and Solihull Mental Health NHS Foundation Trust to transform the performance of clinical and operational IT systems. The Trust has the flexibility to install dedicated load balancers for each of its vital systems, simplifying system maintenance and improving application resilience.

NHS

Challenge

- Stalled migration to new hardware
- Insufficient features in Microsoft Windows Network Load Balancing (NLB) feature

Solution

- Loadbalancer.org Enterprise VA
- Site License

Partnership Benefits

- Improved performance across eight pivotal clinical and business systems
- Greater application resilience, as each application has its own dedicated load balancer
- Reduced calls to helpdesk relating to application performance
- 230 hours saved annually in IT team from simplified systems management
- Flexibility to add load balancers to more applications, at no additional cost Improved performance across eight pivotal clinical and business systems

> *The Loadbalancer.org virtual appliances save time for the IT and helpdesk teams, but most importantly for our clinical staff. With better application performance they can get the information they need straight away, delivering a more efficient service for patients."*

Chris Griffin,
Technical Specialist,
Birmingham and Solihull Mental Health NHS Foundation Trust

Challenge

Birmingham and Solihull Mental Health NHS Foundation Trust was in the process of migrating to new hardware in its back-end IT infrastructure, when it hit an unexpected and unwelcome problem. It was using Microsoft's Windows Network Load Balancing (NLB) feature, but discovered too late that this product did not have the functionality the Trust needed to meet the configuration requirements of the new hardware. The whole migration project stalled.

"We were left in a difficult situation," explains Chris Griffin, Technical Specialist, Birmingham and Solihull Mental Health NHS Foundation Trust. "We couldn't complete the migration of our IT services to the new hardware, but we also could not continue to use our old hardware as it was unsupported and up to ten years old. We had to replace Windows NLB – quickly."

Solution

The Trust trialed several alternative load balancers with its new hardware, and Loadbalancer.org's virtual appliances came out on top, particularly for usability. The IT team found the appliances easy to configure and quick to deploy. "Through the trial, we were able to prove that the Loadbalancer.org appliances worked with our new hardware, and this enabled us to press ahead with our migration with confidence," Griffin says.

> *"The Loadbalancer.org virtual appliances save time for the IT and helpdesk teams, but most importantly for our clinical staff."*

The Trust opted for a Loadbalancer.org Site License, which gives it the freedom to implement as many pairs of virtual load balancers as it needs on one site. Within the first six months alone, it implemented eight district pairs of load balancers for eight separate applications, including the Trust's two most critical clinical IT systems, used for managing patient information and drug administration.

Benefits

The Loadbalancer.org Site License has given the Trust the ability to install dedicated load balancers for each of its critical systems. This per-application approach improves the resilience of vitally important clinical applications by preventing an issue on one platform from inadvertently causing downtime on another.

High application availability is understandably an absolute priority for the Trust, which delivers comprehensive mental healthcare services for a population of 1.3 million people.

Ever since the Loadbalancer.org appliances were installed to load balance the Trust's drugs administration system, there has been a notable improvement in the availability of this pivotal application and a significant reduction in calls to the help desk about it.

There has also been a marked improvement in the performance of the Trust's remote access system, which is used 24 hours per day by the Trust's 6,000 staff, whether they are working remotely in the community or at any of the Trust's 50 sites throughout the region, with up to 1,000 simultaneous connections.

Griffin says: "The Loadbalancer.org virtual appliances save time for the IT and helpdesk teams, but most importantly for our clinical staff. With better application performance they can get the information they need straight away, delivering a more efficient service for patients."

Taking full advantage of the Site License, the Trust has been able to add load balancing, for the first time, to their switchboard console. "The introduction of load balancers has completely transformed the user experience for the 70-80 people who use the switchboard system daily," Griffin says.

Loadbalancer.org's virtual appliances have more functionality than Windows NLB, in particular, the ability to perform routine application-specific health checks. The Trust is making good use of these capabilities to monitor application performance and proactively identify potential problems with specific web servers in a cluster. It can see that server memory and CPU capacity rarely exceed 5% for its core patient care system, despite 3,000 simultaneous connections, which gives it peace of mind.

The IT team is saving tremendous amounts of time following the introduction of the Loadbalancer.org appliances. Griffin estimates a saving of around 230 hours annually due to simplified and proactive systems maintenance.

Birmingham and Solihull Mental Health NHS Foundation Trust has been very impressed with the support. "When we contacted Loadbalancer.org, the support was second to none," Griffin says. "The Loadbalancer.org team is very responsive and their deployment guides are fantastic. They haven't just sold us a solution and left us to it."

The Trust is now planning to roll out more load balancers in the coming months and years. "The Site License gives us the freedom to set up a new load balancer whenever we want to," Griffin says. "This has opened up a lot of new possibilities for us that we look forward to exploring."