

## IBM recommends Loadbalancer.org to 4ways for maximum scalability and ultra-reliability across its Merge PACS and iCEA platform

4ways is a UK-based market leader in the provision of high-quality remote radiology reporting services. As a trusted partner to the NHS and private healthcare clients, it offers flexible and responsive services in routine, urgent and advanced super-specialist reporting, and clinical audit.

Since 2005, clients have relied on 4ways to provide high-quality, cost-effective radiology diagnoses – contributing to better clinical decision-making and improved patient outcomes. 4ways is the market leader in offering advanced remote super-specialist reporting that includes CT-colonography, nuclear medicine, PET-CT, breast MRI, mammography, cardiac CT, and cardiac MRI.

The company currently supports over 70 NHS Trusts and numerous private companies across 160 sites.



*Loadbalancer.org is a fantastic team that always goes the extra mile to help out customers. Their products are functional, versatile, and offer great value to the business.”*

**William Cheung, Infrastructure manager, 4ways**



### Challenges

- Ensure clinicians have uninterrupted access to patient data from primary and contingency data centers, irrespective of high traffic or users

### Solution

- Loadbalancer.org Enterprise MAX hardware solutions

### Benefits

- Elegant solution that load balances multiple IPs (LAN and WAN) with virtual IP
- Quick and simple to implement
- Instant failover between data centers ensures reliable uptime
- Solution enables system maintenance to take place without interrupting access
- Facilitates high performing IBM PACS and iCEA

## Challenges

4ways was already using IBM Watson Health Imaging Merge PACS, an AI-ready workflow platform, as its core clinical reporting platform. It added the IBM iConnect Enterprise Archive (IBM iCEA) VNA, which enables physicians to access a consolidated view of a patient's health records while storing, managing, and sharing DICOM and non-DICOM enterprise-wide images from disparate PACS, specialties, service lines, and sites – regardless of the source or format.

Access to diagnostic images is critical to patient care so, with data centers that are remote and redundant, the challenge for 4ways was to ensure that patient data remain accessible and retrievable at all times from primary and contingency data centers, to give physicians and care providers the best possible opportunity to deliver positive patient outcomes.



For 4ways, this meant ensuring that its servers were up and running all the time and ready for urgent reporting. In order to facilitate uninterrupted data access, it's essential to have high performing servers, so that images and patient data load urgently. 4ways had to make sure their data centers were capable of handling high volumes of data – irrespective of the workload or the number of users accessing data. It also meant application maintenance, performance updates and security patches would need to be carried out without causing user interruptions or inconvenience.

## Solution

Load balancing provides a fast, redundant, and scalable architecture for the transfer, storage, and retrieval of medical images and patient data. IBM recommended that 4ways use load balancing appliances from Loadbalancer.org in order to make its Merge PACS and IBM iCEA systems scalable and ultra-reliable. In an industry where uptime saves lives, Loadbalancer.org's extensive experience helped design an unbreakable solution to tackle enterprise imaging's unique challenge – deploying two Enterprise 10G appliances in an active-passive setup enabled 4ways to failover the complex IBM PACS and iCEA platform to its remote DR site in a matter of minutes.



*The configuration was tweaked and finalized remotely. The Loadbalancer.org engineers were extremely helpful throughout the project.”*

## Results

The appliances are easy to use and provide good functionality, including the monitoring of core servers and systems. “We wanted to ring-fence our core system within its own network whilst maintaining connectivity to the existing systems and the Loadbalancer appliances allow just that,” said William Cheung, Infrastructure Manager at 4ways.

“Loadbalancer.org engineers came on-site for an initial kick-off meeting which led to the configuration of the appliances. The configuration was tweaked and finalized remotely. The engineers were extremely helpful throughout the project and often joined in on all the discussions and meetings held in the (UK) evening hours due to the US time zone offset,” Cheung added.

The Enterprise 10G appliances offer a wide range of capabilities and functionalities, and help to associate and load balance multiple IPs (LAN and WAN) with a VIP – a simple and effective solution to implement according to 4ways.

Apart from the intended instant IP failover of systems and servers between data centers, the appliances also enable system maintenance to be carried out while guaranteeing uptime, and make the IBM PACS and iCEA platform highly scalable, to deliver maximum performance with no interruption to user workflow.

## 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.

