

## How Loadbalancer partnered with Philips and local resellers to deliver PACS high availability to a large group of hospitals

Loadbalancer.org worked with Philips, local resellers and system integrators to boost medical imaging capacity and capability across a series of hospitals in the Middle East.

With highly available, scalable load balancing solutions it was possible for this multinational healthcare provider to overcome some inherent PACS challenges to build a best-in-class Picture Archiving and Communication System (PACS).



# PHILIPS



*This is not the first time I've had the pleasure of working with Loadbalancer. When you email them they respond quickly. They always provide the information I need, and even go the extra mile. The bottom line is this: performance, efficiency and customer service matter – and the Loadbalancer team get that. Great team. Great service.”*

Philips Engineer, EMEA

### Challenge

- Needed a proven and validated ADC solution for Philips RIS
- Needed an ADC vendor that could provide the flexibility demanded for seamless partner integration

### Solution

- Clustered pair of Loadbalancer Enterprise Prime appliances supplied for deployment at 16 separate sites in the United Arab Emirates
- With additional deployments across 8 sites in Saudi Arabia.

### Benefits

- Highly available, scalable PACS applications
- Multi-site resiliency using GSLB
- DICOM health checks
- Industry-leading training for local partners

## Challenge

The primary goal of this particular project was to help a group of hospitals in the Middle East establish highly available medical imaging systems. The end solution also had to continue to meet the needs of an ever-increasing patient population so needed to be scalable. A load balancer was therefore required.



*As the preferred and validated solution for leading ISVs PACS systems globally, and the only load balancing vendor with a dedicated medical imaging team, they were keen to work with Loadbalancer.”*

Philips (formally Carestream), has been using Loadbalancer Enterprise appliances since 2012, with over 500 deployments in the field, so they approached Loadbalancer to assist them with the project.

As the preferred and validated solution for leading ISVs PACS systems globally, and the only load balancing vendor with a dedicated medical imaging team, the local reseller was also keen to work with Loadbalancer.

## Solution

Loadbalancer helped achieve PACS high availability and scalability with multi-site load balancer deployments across 16 locations in the United Arab Emirates, and 8 across Saudi Arabia. The Loadbalancer appliances were built on Dell hardware for extended hardware warranty and next-day on-site replacement.

A Layer 7, two-arm load balancer deployment was used, which leveraged Global Server Load Balancing (GSLB) for multi-site failover. Loadbalancer’s intelligent DICOM health checks were also utilized to ensure the DICOM servers were able to receive traffic, creating an additional layer of resilience for the applications being deployed.

Loadbalancer’s involvement in the project involved working closely with the ISV and local partner to advise on best practice architectures, configurations, and sizing for the deployments. Training was also provided to local technical teams on how to use the load balancers deployed, to ensure they were familiar with how to manage and maintain these solutions themselves.

Ongoing technical support was also provided for the project, with Loadbalancer’s tierless support team available 24/7 to support the end-user, and partners, over a 5-year cycle.

## Benefits

Loadbalancer’s load balancing solution, tailored specifically for this project, provided high availability, multi-site resilience, scalability, and flexible licensing.

The hospitals’ PACS systems were able to avoid downtime and deliver uninterrupted patient care, boosting their medical imaging capacity and capability. Furthermore, by utilizing Loadbalancer’s DICOM health checks, the hospital was subsequently able to proactively monitor the health of its DICOM servers, verifying their readiness to receive traffic. This intelligent use of health checking created an additional layer of resilience for the hospital.



By utilizing Global Server Load Balancing (GSLB) for multi-site failover, multi-site resilience was also achieved by configuring the load balancers to failover across two sites within the hospital’s networks. This allowed the healthcare provider to adhere to their strict Service Level Agreements (SLAs) of downtime avoidance.

Maximum scalability was additionally achieved with the easy addition of multiple PACS nodes, future-proofing this critical healthcare environment for expected growth in the region.

Finally, Loadbalancer’s licensing model was directly aligned to the vendor and their market needs, providing a tailored support contract, and personalization payment plan.

This partnership enabled Philips and other local partners to deliver the complete solution demanded by the customer, in a way that benefitted all the technology providers involved.

## 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.

