

## Reno Diagnostic Centers maintains 100% availability of patient data and medical images

To deliver a high standard of care for patients, the well-respected healthcare provider Reno Diagnostic Centers needs to provide its employees, doctors and patients with dependable access to the two business applications that manage patient data and medical imagery. The organization now uses a single Loadbalancer.org installation to ensure the high availability and performance of both these vitally important systems.



*Our Loadbalancer.org platform has been running flawlessly ever since it was installed. We have 100% application availability in the two systems that are most critical to our business for delivering a high quality of service to our patients and healthcare partners.”*

**Ronald Milbank**  
IT Director, Reno Diagnostics Centers

### Challenges

- Two separate load balancing products used for two key business systems

### Solution

- Loadbalancer.org Enterprise R20

### Benefits

- 100% availability of PACS and RIS applications
- Optimal application performance for over 5900 users per year
- 50% reduction in costs from removing one load balancer from network
- Simplified application maintenance
- An exceptional support experience

## Challenges

Reno Diagnostics Centers is a healthcare provider that specializes in delivering outpatient radiology and medical imaging services. Every year, the organization undertakes over 72,000 scans and examinations for 55,000 patients living in Nevada, USA.

The organization relies on two key systems to run its business: a Radiology Information System (RIS) for the management of electronic patient records; and a Picture Archive and Communication System (PACS). Given the criticality of RIS and PACS for day-to-day operations, both applications require load balancing functionality. However, as the two systems had different network configurations, Reno Diagnostic Centers had set up each application with its own dedicated load balancers.

## Solution

Initially, Reno Diagnostic Services just wanted to acquire a new load balancer to support its PACS. However, it discovered that Loadbalancer.org could not only meet its functional requirements for PACS, but could also balance traffic for its RIS as well. As a result, the organization had the opportunity to use a single load balancer installation for both of its critical patient systems for the first time.



Loadbalancer.org is highly experienced in the medical imaging industry, with a proven track record for load balancing a variety of PACS and RIS products. Reno Diagnostic Services now uses one high availability pair of Loadbalancer.org Enterprise R20 appliances to manage traffic for both its PACS and RIS applications at Layer 4 and Layer 7. Now, the devices balance PACS application traffic across two application servers to maximize performance. In tandem, the same products direct RIS traffic to a production server, and redirect it to a back-up server if a fault occurs or maintenance is required.

“Loadbalancer.org allows two different types of load balancing to occur within our network to support two different systems – at the same time on the same devices,” says Ronald Milbank, IT Director at Reno Diagnostic Centers. “There are lots of vendors out there that provide load balancers, but none where the products are so straightforward, elegant and easy to understand as those from Loadbalancer.org.”

## Results

Over more than three years, Reno Diagnostic Centers has experienced consistently high performance from its load balancers. “Our Loadbalancer.org platform has been running flawlessly ever since it was installed,” Milbank says. “We have 100% application availability in the two systems that are most critical to our business for delivering a high quality of service to our patients and healthcare partners.”

Critically, the Loadbalancer.org installation plays a key role in optimizing the performance of the RIS and PACS applications used by 100 employees and over 800 referring doctors, as well as more than 5,000 patients per year, who access the results of their tests via an online portal. “The performance of Loadbalancer.org is stellar,” Milbank says. “We don’t see any degradation in the speed of our applications through the insertion of a load balancer into the process.”

From the financial perspective, Reno Diagnostic Centers has reduced its load balancing costs by 50%, as it no longer has to buy, manage and maintain two separate load balancer installations for its two patient systems. An aging Kemp load balancer that was once used for the organization’s RIS system did not need to be replaced or upgraded, saving thousands of dollars.

In addition, IT technicians save time, as they no longer have to make load balancer software updates twice and the pair of Loadbalancer.org Enterprise R20 devices makes RIS and PACS maintenance very straightforward. Milbank explains, “My team can maintain our PACS and RIS applications with no disruption to patient services. I don’t have to bring IT staff in during the evenings to do updates out of hours either. It is surprisingly easy to swap between our primary and back-up patient systems using the Loadbalancer.org product.”

Reno Diagnostics Centers has only needed to contact Loadbalancer.org for support on one occasion and was very happy with the response it received. “It was clearly one of the best support experiences we have ever had,” Milbank recalls. “Unfortunately I live in a world where support from IT vendors is often horrific. Loadbalancer.org is definitely the exception to that rule.”

