



Brazil | Healthcare

# The latest network and virtualization radically improves patient experience at HAOC

## Client profile

The Hospital Alemão Oswaldo Cruz, was founded in 1897 and is one of Brazil's largest hospitals. They provide specialist services in a number of areas including oncology and cardiology from their three units in São Paulo.

**'From the moment a patient sets-up an appointment, technology plays a key role in the patient's experience.'**

**Cesar Lisboa,**  
IT Operations and  
Infrastructure, Hospital  
Alemão Oswaldo Cruz

## Summary

Hospital Alemão Oswaldo Cruz (HAOC) is one of Brazil's largest hospital networks, but was hamstrung by an aging, legacy network infrastructure that was unable to keep up with the demands of patients and medical staff. To improve the customer experience, HAOC needed to modernize their entire networking landscape.

The hospital deployed a next-generation networking solution, alongside a new contact center system and a virtualized server environment based on the latest server technology. This allowed for full redundancy, solid disaster recovery plans, energy and space savings, cost savings and better visibility and control over the network. HAOC's thousands of staff and hundreds of thousands of patients, benefited with a powerful, resilient network and fail-safe data storage that produce the very best customer experience. This made it possible to scale with ease and to adopt the most advanced cloud-based hospital management systems in the future.

## Vision

### Why HAOC needed to modernize their infrastructure

HAOC has 4,000 employees and 3,700 physicians across five offices and one major hospital center in São Paulo. Having experienced rapid growth – establishing new specialist centers and expanding its operations – HAOC's technology landscape had grown in a largely unstructured manner.

Their network infrastructure was based on aging PBX and telephony equipment, which was unable to keep up with the high demands of patients and medical staff. It also prevented HAOC from embracing truly integrated and consolidated hospital information systems. In addition, it provided very limited visibility into network performance and couldn't capture rich data to inform better network design and decisions.

With average wait times of up to two minutes, and an unacceptable level of dropped calls, they couldn't give patients key information as quickly as they wanted.

To provide fast and efficient responses, and serve patients with the information they require, they needed to modernize their entire networking landscape.

### Which technologies?

- Cisco UCS Blade Servers
- Cisco Nexus 9000 Series Switches
- Cisco CMX (Connected Mobile Experience) used in tandem with Cisco wireless solution

### Which services?

- Managed Services
- Technology Infrastructure Services
- Network modernization
- Data center virtualization
- Contact center solutions
- Network expansion
- Wi-Fi and guest network access

### Which partners?

- Cisco

**'The quality of our service is getting better and better. The rate of dropped calls decreased, the service rate has improved, and the average wait time has decreased.'**

**Cesar Lisboa,**  
IT Operations and  
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## Transformation

### How HAOC reimagined their network and improved productivity and patient care

HAOC deployed next-generation equipment to increase service availability, decrease telephony costs and set the foundation for advanced services to be added in the future.

The new contact center system allowed their frontline staff to better manage, schedule and route incoming calls. They were able to implement this new system within just 24 hours, as the teams came together to quickly learn how to operate the new system.

In total, the migration of the entire network – covering five sites and 1,500 endpoints – was completed in three days.

Their aging legacy network was replaced with a highly secure corporate wireless network, as well as a guest network for patients and other visitors.

They also modernized HAOC's data center – migrating their outdated physical servers to an almost 100% virtualized environment based on the latest server technology.

## Results

### What HAOC can achieve with a modernized network and data center

The hospital network saw an immediate impact. Average call waiting times fell from 2 minutes to just 30 seconds and customers enjoyed improved service in all their interactions with the hospital group.

The new technology architecture made it possible to scale with ease, as shown during its network expansion program for a new branch: Referenciada Vergueiro. The teams designed a high-performance network for this site that seamlessly integrated into their core network and data center infrastructure. The modernized network meant that there was no need for Referenciada Vergueiro to have local data centers, servers, databases or storage infrastructure.

The powerful, resilient network and fail-safe data storage using the latest virtualized architecture opened the way for new data-driven strategies and advanced hospital management systems. These nerve centers link up everything from admissions, to patient records, doctor engagements, theatre and specialist equipment usage, pharmaceuticals, billing and medical aid interactions.