

CASE STUDY



KUWAIT



HEALTHCARE

SETTING NEW BENCHMARKS FOR DIGITAL HEALTHCARE SERVICES IN KUWAIT



AL-AMIRI HOSPITAL

Delivering robust and secure wired and wireless network infrastructure to support hospital's ongoing transformation and innovation in digital healthcare and medical services.



As a leading healthcare institution in Kuwait, the 415-bed Amiri Hospital viewed its impending expansion as the ideal opportunity to modernise its processes with state-of-the-art technology.

“To enhance our operations, we were seeking a Healthcare Information and Management Systems (HIMSS) EMRAM Level 5 certification and aimed to establish ourselves as a smart hospital that offers digital services and advanced technologies for patient care. We recognised that a secure, reliable, and high-performance network infrastructure would be essential to achieving this ambition,” said Dr Ali Al Alanda, Director at Amiri Hospital.

ENABLER OF RAPID DIGITAL TRANSFORMATION

The Aruba deployment enabled Amiri Hospital to achieve its HIMSS EMRAM Level 5 objective. “We have achieved 99.9% availability of the network over the last two years and are now on track to become the first hospital in the country to achieve HIMSS Level 6 status,” said Dr. Raed Syed Hashem, Head of Disaster Management Team at Amiri Hospital.

In line with its digital transformation vision, the hospital now delivers all services – including registration, appointment setting, and prescription management – digitally. “We have set up a web portal for the convenience of our patients with seamless and secure access, and high-performance for a remarkable user experience,” he said.

Pathway to mobility

With a pervasive wireless coverage now in place, underpinned by a robust and scalable wired network, Amiri Hospital has been able to introduce new and innovative



REQUIREMENTS

- Establishes secure, high-performance wired and wireless network infrastructure
- Attain HIMSS Level 5 certification
- Supports introduction of new digital health and remote patient care services
- Enables secure and intuitive wireless network access for staff and doctors

SOLUTION

- Indoor Unified Access Points
- Mobility Controllers
- Mobility Conductor
- Aruba CX 8400 Core Switches
- Aruba 2930M Access Switches
- AirWave for network management
- ClearPass for network access control

OUTCOMES

- Delivers 99.9% network availability
- Enabled introduction of remote healthcare, staff mobility, and other digital healthcare services
- Facilitated 60% reduction in hospital footfall while serving same patient volumes
- Increased appointment efficiency by 120% infrastructure with the intelligence, scalability and intuitive tool sets to accommodate future needs

technologies to enhance patient care. “We have implemented over 50 portable devices that give our medical practitioners instant secure access to patient records, wherever and whenever they need it,” said Dr. Hashem.

“This not only empowers our staff to perform their duties more effectively, but it also serves as a highly visual example to patients of Amiri Hospital’s commitment to pioneering the latest digital technologies,” he said.

Steps towards paperless operations

The transition from traditional labour-intensive processes to digital services has furthered another ambitious ob-



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jective set by Amiri Hospital’s management. “In line with the government’s vision, we aim to become paperless by 2035,” said Dr. Hashem.

“Barring protocols that we must follow for regulatory and compliance purposes, we intend to go fully digital in the vast majority of processes. This will not only drastically enhance operational efficiency, but is sure to present significant environmental benefits as well,” he said.

NETWORK PROVES PIVOTAL THROUGH THE PANDEMIC

While Aruba’s network firmly set Amiri Hospital on track to achieve its long-term digitalisation objectives, it was the COVID-19 pandemic that perhaps best demonstrated the value and capabilities of the infrastructure. “Nearly overnight, we had a pressing need to serve thousands of patients remotely,” said Dr. Hashem.

With the sudden need to manage remote network access for thousands of people, Aruba’s platform not

only delivered the performance required, with ClearPass integrated with the hospital’s firewall solution, Amiri’s IT team effectively protected the network from the fifty plus attacks and malicious access attempts they were typically facing each day.

Intuitiveness drives acceptance and adoption

While Amiri Hospital was able to rapidly deploy the infrastructure for telehealth offering on site thanks to the scalable and high-performance network, it also relied on Aruba’s solution to address concerns around staff acceptance. “We had to make sure clinicians had a smooth, hassle-free experience to mitigate any resistance to adoption,” Dr. Hashem explained.

Aruba ClearPass made seamless and secure access for these practitioners possible, and thus, greatly aided the rollout. “As a result, we were able to deliver remote services like never before and became a model for other hospitals and government institutions in the country,” he said.

Remote services with a personal touch

“During the lockdown, we successfully migrated 80% of our services to digital channels and consequently, were able to reduce the footfall in our hospital by 60% while still offering world-class care to all our patients,” said Dr. Hashem.

As pandemic-related restrictions were lifted, Amiri Hospital managed to maintain this reduction in footfall while enhancing patient and staff satisfaction. “Today, we still have over 400 patients per day who receive remote consultancy. This is not only more convenient, but it has also enhanced appointment efficiency by 120% as we have been able to manage scheduling and staff utilization in a far more effective manner,” he said.

A COMPREHENSIVE SOLUTION, THE CLEAR CHOICE

Guided by systems integrator, Virtus Informatics, and its implementation partner in Kuwait, Amiri Hospital evaluated switching and wireless access solutions from several global-leading vendors. Amiri Hospital’s IT team conducted many meetings and evaluated many proposals but ultimately Aruba’s technology and established reputation





in the region made them stand out. In terms of value too, Aruba came out on top.

Testament to its position as an industry pioneer, Amiri Hospital became the first organisation in Kuwait to deploy Aruba's 8400 core switches in their data centre hosting their critical workloads. The hospital's comprehensive unified wired access and wireless architecture also includes Aruba 2930M access switches for medical devices, workstations, IP-telephony, IP-TVs, printers, CCTV and IOT devices, as well as powering a blanket of Aruba 300-series Access Points which are controlled by Aruba 7220 mobility controllers, overseen by a redundant cluster of mobility conductors.

Simplified management and comprehensive oversight of this network – which spans three large-scale hospital buildings – is made possible by AirWave, and the IT team utilises ClearPass Policy Manager to define and automate the enforcement of robust unified security policies over the wired and wireless networks.

FURTHER INNOVATION AHEAD

In addition to regular upgrades and scaling of its network in line with business expansion, Dr. Hashem and his IT team are looking to continue to use Aruba's solutions in further innovative projects. The hospital is currently assessing Aruba's Meridian mobile engagement platform to facilitate wayfinding and location based services around the hospital. "This will enhance the patient experience while also preventing overcrowding in corridors and other common areas," said Dr. Hashem.



The hospital is also testing an asset management system based on Aruba Asset Tags. "Given the scale of our operations it is no surprise that, sometimes, equipment such as oxygen tanks and wheelchairs go missing. The solution we are testing will not only prevent this, but will enable better inventory management," he said.

A platform that enhances patient care

"Because it works silently in the background, the network isn't something staff and patients think about unless something goes wrong. Our deployment has given us the confidence to drive innovation, at scale and at an accelerated pace," said Dr. Hashem.

"With the wellbeing of our patients ultimately dependent on our network and digital services, this translates to better care and outcomes," he concluded.