

## CASE STUDY

# ADNEC DELIVERS UAE'S FASTEST WI-FI AT ABU DHABI NATIONAL EXHIBITION CENTRE WITH ARUBA



Abu Dhabi National Exhibition Company (ADNEC) owns and operates the 73,000 sqm Abu Dhabi National Exhibition Centre with a vision of being 'the region's leading exhibitions venue'. Wi-Fi is a vital part of the exhibition experience, leveraged for everything from running demos, essential services and social media engagement, to keeping international guests and visitors connected without the prohibitive cost of roaming services.

Ahmed Al Marzooqi, Director – IT, ADNEC and his team saw this as a business risk, as the shortcomings of their ageing wireless infrastructure inhibited their ability to correctly deliver this fundamental service.

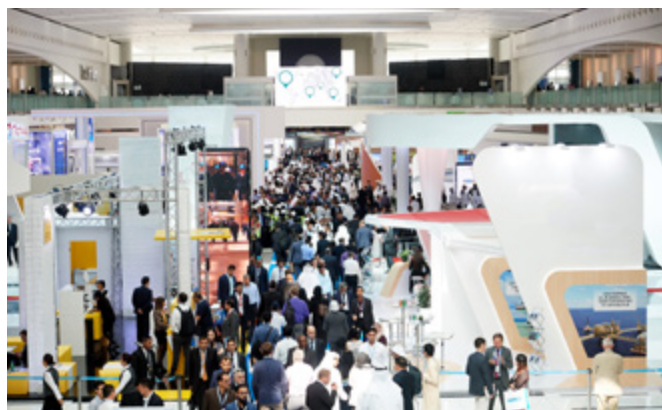
### A REPUTATIONAL RISK

ADNEC's legacy Wi-Fi infrastructure, based on a 7-year technology, presented a host of performance challenges. Feedback collected from exhibitors, organisers, internal staff and attendees after each event had consistently highlighted poor speed and regular connectivity drops as leading pain-points.

"These connectivity shortcomings were unbecoming of the Middle East's largest exhibition centre. They significantly impacted our reputation and even resulted in loss of revenue as exhibitors looked for alternative venues based on the poor feedback this critical service received," explained Al Marzooqi.

### RIGHT TO THE BASICS TO GET THE BASICS RIGHT

While Al Marzooqi and his team saw the wireless upgrade as an opportunity to build a platform for innovation, they decided the pressing concern was to first address Wi-Fi performance and reliability. Careful evaluation of solutions from leading vendors, analysis of independent reports from reputed industry research firms, and feedback from other large public venues in the Emirates led ADNEC to select Aruba. "In addition to meeting all our requirements, they demonstrated a flexible OpEx based model and readiness to meet the unique logistic challenges of our deployment," he said.



### OBJECTIVES

- Reliable, high-speed wireless connectivity across 73,000 sqm
- Seamless roaming the venue
- Support for multiple generations and diverse types of Wi-Fi enabled devices
- High-density coverage with concurrent connectivity
- Meet the tight time-frames for deployment

### SOLUTION

- 802.11ac Indoor & Outdoor Aruba APs
- 7200 Series Aruba Mobility Controllers
- Aruba AirWave Network Management
- Aruba ClearPass Policy Manager
- 15,000 concurrent connections
- Wi-Fi connected communications, security systems
- Wi-Fi connected CCTV, digital signage, payment terminals

### OUTCOMES

- Raised Wi-Fi satisfaction to 95% from previous 70-80% average
- Enabled bandwidth cap to be raised from 5Mbps to 150Mbps per device
- Real-time monitoring of RF health and connection density increases efficiency of operations
- Improved crowd management abilities
- A new platform for transformation to an IoT-driven exhibition centre

“ Aruba has enabled us to become an exhibition venue offering the fastest Wi-Fi services in the region. Extending beyond the performance and reliability benefits, the solution offers a clear innovation roadmap with tangible benefits to our IT, operations, and marketing teams as well as our 1.8 million annual visitors. ”

**AHMED AL MARZOOQI**  
DIRECTOR – IT, ADNEC

### A HOST OF UNIQUE REQUIREMENTS

With over 100 events and conferences held at its Exhibition Centre each year, ADNEC hosts exhibitors and attendees from across the globe which raises peculiar challenges.

"We have users from developed nations with the very latest smart devices, as well as those from developing countries with less advanced hardware. We have to ensure everyone has a consistently positive experience from the perspective of ease of login to quality of service," explained Sunando Chaudhuri, Advisor – IT, ADNEC.

### Density demands and short deployment windows

The sheer volume of events and seasonal nature of business affords ADNEC only two short windows – during the summer and again, at the end of the year – for major technology upgrades. This elevates the complexity associated with overhauling systems such as Wi-Fi wherein Access Points (APs) are distributed across the entire venue.

Connection density is another area where exhibition centres are among the most demanding environments. "In some instances, we have up to 5,000 people, each with an average of three devices, in a single hall or conference centre. And the first thing they do on arrival is to connect these devices to the network," stated Al Marzooqi.

### DEPLOYING WORLD-CLASS INFRASTRUCTURE

To deliver seamless coverage across the 73,000 sqm facility, ADNEC deployed 436 indoor and 14 outdoor 801.11ac Access Points (APs) in a specially designed small cell configuration for high-density support.

The APs were connected to 7200-series Aruba Mobility Controllers and ADNEC implemented Aruba AirWave to proactively monitor wireless health and performance and gain granular visibility and reporting capabilities across its network.



### Aruba delivers a plan for success

Aruba's local team also delivered dedicated design, planning and logistics support. "Before a single AP was ever installed, Aruba delivered a comprehensive design based on heatmaps, and presented a clear plan for product delivery and implementation. This meticulous planning was essential, given the mere three weeks we had to complete the entire installation," explained Chaudhuri.

Aruba's rollout plan, combined with the plug-and-play nature of its APs, made it possible for all 450 APs to be installed in just 15 days, leaving sufficient time for the systems to be thoroughly tested in preparation for its first real-world trial.

### SUCCESS FROM THE GET-GO

Just weeks after the Wi-Fi overhaul, ADNEC hosted the 'World Future Energy Summit', featuring 850 exhibitors from 40 countries and hosting high-profile dignitaries including leaders of the UAE.

"It was a data-intensive event that presented a rigorous real-world test, and Aruba came through with flying colours. We didn't have a single instance of AP failure and even with over 8,500 simultaneous connections, no complaints about performance or coverage were raised," beamed Chaudhuri.

### A message from the CEO

Shortly after this massive success, Al Marzooqi received a personal letter of appreciation and a call from his Group CEO. "He had personally attended the event and noted the remarkable change over previous years. His appreciation was a validation of the outstanding achievement ADNEC and Aruba accomplished together in such a short period," he said.

Post-event feedback was validation of the success of the wireless project. It showed an increase in Wi-Fi satisfaction among all stakeholders to 95% – a vast improvement over the Exhibition Centre's previous 70-80% average.

### PERFORMANCE AND INNOVATION UNLEASHED

"We can now extend the performance of our 1Gbps leased line right down to the end-user. This unlocks the true potential of our connectivity investment and opens up a host of new possibilities for improving and introducing services," said Chaudhuri.

The company has raised Wi-Fi speeds from 5Mbps to an incredible 150Mbps for its free service and can finally meet and exceed the SLAs set for the premium service offered to exhibitors. Aruba also gives ADNEC confidence that when it sees expected spikes of up to 15,000 simultaneous connections, users will face no degradation in performance.

### Everything under control

"Earlier, APs failed regularly, presenting a huge challenge during exhibitions as it was impossible for us to commission a boom lift and replace the AP. With Aruba, in over 6 months, we have not had a single instance of failure," said Al Marzooqi.

He has also seen his team's workload reduce significantly as Aruba's Mobility Controllers centralise management and enable auto-configuration and update of all APs across the entire expanse of the venue via a single user-friendly dashboard.

### Unexpected areas for innovation

While Wi-Fi performance and reliability had prompted the undertaking, ADNEC now runs its communications, security systems, CCTV, digital signage, and payment terminals on the Aruba Wi-Fi platform.

AirWave's granular monitoring capabilities allows the team to streamline operations as Chaudhuri explained, "When visitors congregate in a single location, it can lead to lines at washrooms, mosques and restaurants, and the need for more cooling, bandwidth and regular housekeeping in that particular area."

"Wi-Fi is now our primary source of footfall-related data which we use to track visitor movement in real-time. By sharing this with our operations teams, we empower them to pre-emptively address the challenges associated with crowd concentration before complaints are raised," he said.

### EXHIBITING A CLEAR VISION

Outlining ADNEC's objective for the next phase, Al Marzooqi said, "We have many physical assets such as our building management system that handles cooling, lighting, fire and life safety and parking management. All this is IoT-ready and we intend to utilise Aruba to transform into an IoT-driven business."

The company is currently implementing Aruba ClearPass Policy Manager for authentication and policy enforcement among its diverse set of stakeholders. ADNEC also intends to develop a wayfinding solution on the Wi-Fi platform, looking into the Aruba mobile engagement and analytics solution based on Bluetooth beacons, the Meridian mobile app platform and the Aruba Analytics & Location Engine (ALE).

"Aruba has enabled us to become an exhibition venue offering the fastest Wi-Fi services in the region. Extending beyond the performance and reliability benefits, the solution offers a clear innovation roadmap with tangible benefits to our IT, operations, and marketing teams as well as our 1.8 million annual visitors," he concluded.