

# DEPLOYMENT WITH ARUBA'S 802.11N WIRELESS TECHNOLOGY BRINGS SOPHISTICATION INTO HIGH-SPEED WIRELESS NETWORK FOR HOTEL GUEST



Mandarin Oriental, Singapore is one of the city's most luxurious hotels flaunting modern and impressive design with distinct personality and exotic oriental roots. Located in the heart of the Marina shopping belt, it has the close proximity of only 20 minutes drive via the expressway to the Changi International airport, short walking distance to the Suntec International Convention and Exhibition Centre, and the Singapore Flyer, currently the world's largest observation wheel.

With guestrooms overlooking the breathtaking views of Marina Bay, Singapore Harbour or City, the multiple awards winning Mandarin Oriental is committed to completely delight, satisfy and exceed the expectations of every guest.

Featuring a Grand Ballroom and thirteen meeting rooms fitted with the latest conferencing systems, Mandarin Oriental's function facilities has played host to many major local and international events.

To meet the increasing demand for high-speed internet access in corporate functions and conventions, the hotel has recently upgraded its meeting and function rooms facilities including implementation of high-speed 802.11n Draft 2.0 wireless LANS, the first hotel in Singapore to have adopted this latest in wireless standards.

With this implementation, Mandarin Oriental is poised to position itself as a technology forerunner, making it a natural choice for functions and events requiring high-technology and sophisticated internet access facilities. Aruba's 802.11n Access Points enhances network performance through increased data rates, and improves 802.11a and 802.11g connection range by open extension.

The primary benefit of 802.11n is its superior radio performance, allowing connection at much higher data rates with saturated coverage that reduces the 'dark spots' with poor coverage that are sometimes experienced in legacy Wi-Fi networks. This in turn translates into reliable and consistent high quality internet access required of in major internet functions and events.

Aruba's Adaptive Radio Management (ARM) takes the guesswork out of RF management by using automatic, infrastructure-based controls to maximize client performance and enhance the stability and predictability of the entire Wi-Fi network. This ensures that the hotel wireless space is automatically changed to the most optimal RF channels without any manual intervention from the hotel IT staffs.

## REQUIREMENTS:

- Upgrading from current legacy wireless service to the latest 802.11n technology
- Visibility and centralized management of wireless network
- Meet the growing demands of high-speed secured wireless access

## SOLUTION:

- Aruba A6000 Mobility Controller with dual 128 AP Supervisor Card
- Aruba A3600 Mobility Controller
- 119 units AP125 access points inclusive of 27 Units 802.11n standards
- 236 units AP61 access points

## BENEFITS:

- Cost effectiveness with deployment of 355 access points, down from 600 in the previous setup
- Increase of speed due to 802.11n Draft 2.0 connectivity
- Ability to support more network application and devices over wireless
- Centralized management and configuration of all access points within one location

*"Our team is very pleased to work with the luxurious Mandarin Oriental hotel in assisting them with this technology upgrade. Together with Aruba and our partners, we are certain that this exercise has achieved its goals of meeting and exceeding the high expectations of the hotel's customers."*

**Mr Steven Ng**  
Managing Director  
Nexwave Telecoms

With technological advances and the growing trend of internet-savvy international travelers and major events requiring high-speed wireless and secured internet access, the hotel's IT team foresee and started evaluating the requirements to upgrade its internet access technologies in a bid to provide flexibility and mobility to meet the impending demands of its customers. During the evaluation level, the following issues were posed that needed to be addressed while planning for the upgrade.

- Upgrading to a newer technology that is more efficient than the existing one
- Meeting the growing demands for highspeed and secured wireless internet
- Detecting wireless intrusion
- Manage all its wireless access points throughout the hotel in a centralized and organized manner

Nexwave Telecoms, representing Aruba's Secured Wireless solution was invited to participate in this evaluation. Nexwave's team of experts comprising Aruba Certified Mobility Expert (ACMX) Pre-Sales Consultant, Sales Manager and Aruba Certified Mobility Professional and Associate (ACMP and ACMA) Engineers conducted a thorough site survey covering three floors and nine guest rooms.

The site survey had its fair share of problems as the team went about conducting radio frequency test for redundancy, finding missing access points, while the hotel went about its business as usual with guest checking in and ongoing functions and meetings. At the end of the comprehensive site survey, the team worked with its value-added partners and Mandarin Oriental to develop a complete solution to facilitate this technology upgrade.

Mr Steven Ng, Managing Director of Nexwave Telecoms said, "Our team is very pleased to work with the luxurious Mandarin Oriental hotel in assisting them with this technology upgrade. Together with Aruba and our partners, we are certain that this exercise has achieved its goals of meeting and exceeding the high expectations of the hotel's customers".

## APPLICATION

Using Aruba Network's state-of-the-art secured wireless technology, the Mobility Controllers and Access Points provided the sophisticated functionality and secured wireless coverage in all of Mandarin Oriental's meeting and function rooms, and guest rooms with centralized management.

Encompassing RF management, the WLAN operation is further improved through real-time monitoring and troubleshooting of all Access Points including detecting unauthorized network intrusion. With this enhancement, RF coverage is optimised within the premises and interference reduced to the minimum.

## ORGANIZATION OVERVIEW:

Recently voted Best in the Top 25 World Cities by TripAdvisor Traveller's Choice Award 2009 and The Gold List 2009 by Conde Nast Traveler, Mandarin Oriental, Singapore, is one of the city's foremost luxury hotel, featuring an impressive atrium lobby with 527 beautifully refurbished rooms, suites and a premium Oriental Club Lounge. The hotel also has extensive meeting and banqueting facilities, and five renowned restaurants and a lounge overlooking the spectacular Marina Bay. It is located close to the financial hub with easy access to Marina Square Mall, Singapore International Convention & Exhibition Centre, Suntec City, Millenia Walk and Esplanade – Theatres on the Bay.



## DEPLOYMENT

To minimize any business impact or inconvenience for the hotel and its guest, the deployment was split into two phases and achieved zero disruption as they were done during off-peak hours. The entire deployment was completed in almost five weeks including integration into existing wired switches and Superclick – the hotel's existing guest proxy portal.

In all, a total of 355 access points using Aruba Adaptive Radio Management were deployed for the entire application. This was a significant achievement in terms of cost savings from the existing solution which has 600 access points. Furthermore, the deployment provided for management of the entire systems within a centralized location.

Moving forward, the hotel is looking into wireless applications in the areas of Voice Over Internet Protocol (VOIP), Luggage Tracking and Wireless Point of Sales (POS) for its retail and food and beverage outlets. Some of these applications aim at expediting peak hour's service and integration into the internal network to enable seamless roaming by hotel staff using mobile applications.



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