



## CASE STUDY Healthcare

### Boston Medical Center Deploys Aruba to Improve Reliability of Hospital Wireless LAN

Boston Medical Center is a private, not for profit, 626-licensed bed academic medical center located in Boston's historic South End. The hospital is the primary teaching affiliate for Boston University School of Medicine. Emphasizing community-based care, Boston Medical Center with its mission to provide consistently accessible health services to all is the largest safety net hospital in New England.

Boston Medical Center provides a full spectrum of pediatric and adult care services from primary to family medicine advanced specialty care. Boston Medical also has the largest 24-hour Level 1 trauma center in New England.

This established medical center requires world-class IT infrastructure to support its physicians, staff, and guests. "Our legacy wireless infrastructure was plagued with a number of issues, including dropped connections, poor roaming capabilities, and difficult or impossible device integration," said Brad Blake, BMC's Director of Information Technology. "The system required a lot of hands-on management to maintain, and we literally had a team of senior network engineers and field staff on-call to address wireless issues as they came up so frequently. We run a technically advanced teaching hospital with demanding wireless needs, and it was clear that we needed a better solution that was reliable, flexible and didn't require significant overhead to operate."

BMC needed an iron-clad wireless LAN solution that could reliably deliver wireless access to clinical systems (including EMR, CPOE, ED, and OR applications), wireless voice communications, utilizing a Vocera badge system, e-mail and data services to computers-on Wheels and physician laptops, and guest Internet access.

#### The Selection Process

The BMC ITS technical groups engaged in a three month pilot program to find an improved wireless solution. The comprehensive trial covered provisioning, deployment, test use, troubleshooting

and management of the three vendors solutions. The areas of focus for the technology pilot included overall architecture design, end-user network experience, RF propagation and problem resolution, ease of management, and the effectiveness of customer support.



"Following a long and exacting technical evaluation," explains BMC's Blake, "we selected Aruba because their solution positioned us to reliably and securely handle all of our current and projected future wireless needs."



#### Solution:

- 600 AP-125 802.11n Access Points
- 2 Centralized Multi-Service Mobility Controllers
- Policy Enforcement Firewall Module
- Wireless Intrusion Protection Module

#### Benefits:

- Adaptive Radio Management technology eliminated wireless coverage and reliability issues
- Built-in role-based firewall and wireless intrusion prevention addressed security requirements for guest access and regulatory compliance
- Integrated location tracking capabilities are one example of new applications easily supported using the Aruba platform

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### The Right Infrastructure for Mission-Critical Wireless

Aruba's Adaptive Radio Management (ARM) technology automatically optimizes Wi-Fi performance, an essential requirement in a healthcare facility's dynamically changing and challenging RF environment. By automating site surveys and using infrastructure-based controls to optimize the performance of Wi-Fi clients in real-time, ARM helps ensure that data, voice, video, telemetry, guest traffic, and nurse call applications all have sufficient network resources, including airtime, to operate reliably.

Identity-based security, Quality of Service (QoS) control, and traffic management capabilities are provided by Aruba's policy-enforcement firewall network. The firewall classifies on the basis of user identity, device type, location, and time of day, and provides differentiated access for different classes of users. For example, medical telemetry and nurse call traffic can be assigned a high priority and reserved bandwidth to ensure reliable delivery.



### Summary

The Aruba deployment addressed the issues presented by BMC's legacy wireless network and delivered a host of new features:

- Hospital-wide coverage for multiple clinical, hospital administration and guest access;
- Reliable coverage and fewer help desk calls;
- Quality of service for Vocera voice devices;
- Security for HIPAA compliance;

- Elimination of coverage and reliability issues;
- Security for guest access;
- New applications such as integrated location tracking.

With a high-performance, secure, and reliable wireless LAN infrastructure in place, BMC's ITS department can focus on projects and initiatives that drive their organization forward to ensure they consistently deliver "Exceptional Care, Without Exception."

### Organization Overview:

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