



# LIBERTYHEALTH SYSTEM Jersey City | New Jersey | U.S.A.

**LIBERTYHEALTH SYSTEM ASSURES 24X7 WIRELESS WELLNESS** Meru virtualized wireless LAN infuses new life and predictability into essential healthcare applications.

“We gained the coverage we needed with 20 percent fewer units than we expected. The final cost of the Meru wireless LAN came in at approximately 50 percent of what other vendors had proposed.”

**Michael Verna** | Technical Support Manager

## Challenges

- ❑ Wireless access and performance of essential patient care applications was unpredictable.
- ❑ Wireless network was unreliable and often unavailable.
- ❑ Hospital was limited in its ability to implement mobile applications to improve patient care.

## Solution

Meru Networks’ virtualized wireless LAN solutions

## Results

- ❑ Gained 24-hour-a-day wireless LAN availability.
- ❑ Reduced capital expense by approximately 50 percent.
- ❑ Simplified wireless LAN management and improved flexibility for adding new applications.

## Challenge

The people of the Jersey City, New Jersey area rely on LibertyHealth for vital services, including high-tech infant care, in-hospital rehabilitation, and friendly home care services. The doctors, nurses, and pharmacists of LibertyHealth in turn depend on a reliable wireless network.

LibertyHealth had installed a wireless network in the emergency department of its Meadowlands Hospital in Secaucus, which was used for patient registration. However, the network lacked the reliability required for emergency care applications.

We wanted to fix that situation, as well as add new wireless applications that require seamless roaming.”

Verna and his team began looking for an alternative solution, but most of the wireless systems he evaluated could not assure the reliable coverage that his applications needed.

“Of the wireless vendors we looked at—including our incumbent switch and router vendor—only Meru offered to install a pilot network,” he says. “The weekend that the Meru virtualized wireless LAN went up was the first time that we received no complaints from the emergency department. Our coverage issues had gone away.”

## Solution

LibertyHealth selected a Meru virtualized wireless LAN for deployment in the Jersey City Medical Center and at the Meadowlands Hospital. Installed in 2009, the network provides 24-hour, facility-wide wireless access for staff, patients, and visitors alike.

The LibertyHealth network is based on two Meru wireless LAN controllers in each hospital, providing redundant centralized management. These controllers manage a total of 148 Meru access points, which come with IEEE 802.11a/b/g functionality and can later be software-upgraded to high-performance 802.11n capabilities. The Meru access points can also scan for 802.11n security threats, helping ensure that even legacy networks are protected from rogue access points.

Instead of tuning neighboring access points to separate channels, the Meru Virtual Cell architecture assigns all access points to a single channel. This simplifies network design and implementation, because it means that channel assignments and power levels do not have to be calculated individually for each access point.

“When I first plugged in an access point and walked away, within minutes it was up with a full RF signal,” says Verna. “For a small, resource-constrained IT shop like ours, simple installation and management is great. With other vendors, we would have had to configure every access point on site. With Meru, we configure them on the controller, plug in the access point, and go.”

## Results

Meru’s virtualized wireless LAN solution immediately solved the instability problems that had plagued the hospital’s legacy wireless LAN. The new network helps assure optimum performance and consistent connectivity for every application—24 hours a day, seven days a week. Staff know that their applications are always available with high performance so that they have the resources they need to provide high-quality patient care. In addition to improving application performance and reliability, the Meru virtualized wireless architecture gives LibertyHealth the flexibility to securely segment the network for providing patients and visitors with public wireless access.

The Meru virtualized wireless LAN also reduced LibertyHealth’s cost of ownership. Expecting to install hundreds of access points, LibertyHealth was pleasantly surprised.

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In addition to reducing the initial cost of ownership, the Meru virtualized wireless LAN is expected to significantly reduce operating costs. A reliable network that delivers predictable application performance increases staff and caregiver productivity, as well as significantly reduces the amount of troubleshooting required. If LibertyHealth wants to extend wireless coverage, the hospital’s IT team can easily install additional access points without assistance. LibertyHealth’s IT team can also easily manage the network from a central dashboard

“As hospitals increasingly depend on wireless LANs for critical communications and documentation, it is imperative that the network be stable and reliable,” says Brad Johnson of Atrion Communications Resources, the system integrator that helped LibertyHealth with its Meru deployment. “A single-channel, virtual cell architecture is able to handle a high influx of users signing on simultaneously. The Meru wireless LAN not only eliminated LibertyHealth’s wireless instability issues, it was also completely plug-and-play.”

LibertyHealth plans to deploy new capabilities over its Meru wireless LAN. One proposed application uses wall-mounted Ergotron wireless units to support Emergency Department Information Manager systems. With the Meru virtualized wireless LAN, LibertyHealth infused new life into its existing applications and gained the vitality to implement new mobile capabilities everywhere the network goes.

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Corporate Headquarters  
894 Ross Drive  
Sunnyvale, CA 94089  
T +1 (408) 215-5300  
F +1 (408) 215-5301  
E [info@merunetworks.com](mailto:info@merunetworks.com)