



HIGHER EDUCATION



MORRISVILLE STATE COLLEGE Morrisville | New York | U.S.A.

MORRISVILLE STATE COLLEGE, A PIONEER IN CAMPUS MOBILITY, ENABLES STUDENTS BY LEVERAGING NETWORKING TECHNOLOGIES. Morrisville State College’s Meru wireless solution is recognized as the world’s fastest wireless network, befitting the college’s image as a technology leader in education.

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Jean Boland | Vice President of Technology Services

Challenges

- ❑ Antiquated wireless LAN was not meeting student application needs.
- ❑ The risk of being the first to deploy the new 802.11n standard.
- ❑ Network must be simple to manage and provide 5-7 year life span.

Results

- ❑ Meru’s architecture eliminated complexities found with other wireless systems.
- ❑ 720 access points across 40 buildings and two campuses were deployed within months.
- ❑ Solution seamlessly supports 1,500 simultaneous users.

Challenge

In 1998, the College became the first in the SUNY system to integrate laptop computers into its teaching and learning environment, partnering with IBM to become a ThinkPad University. Further, in 2003, the College was the first campus in the nation to comprehensively replace all residence hall phones with individual cell phones for students. In 1999, the college became one of the first in the nation to install a campus-wide wireless network.

Fast forward to 2007, however, and the College, a pioneer in campus mobility, found itself with an end-of-life wireless solution supporting 2Mbps connectivity when most higher education campuses were providing its users with Wi-Fi standard speeds of 11-54Mbps.

By every measure, Morrisville State College was overdue for a wireless upgrade. The College's legacy wireless network, which was deployed in residence halls and academic buildings, fueled student expectations for Internet connectivity from anywhere at anytime on campus. Similarly, the demands on the wireless network had changed significantly. Rather than occasional access to basic data applications such as e-mail, students wanted instant access to bandwidth intensive application such as video file downloads from YouTube and on-line gaming.

Beyond greater speed and broader coverage, the College's Informational Technology Services team added to the list of requirements: ease of management, support for multiple operating systems (responding to the proliferation of devices), and a product lifespan of 5 to 7 years.

All of these requirements supported the case for leapfrogging existing 802.11 standards and implementing an 802.11n network.

Solution

Once the decision was made to go with 802.11n, Morrisville College, quickly narrowed their solution options and selected Meru Networks for their 802.11n wireless and IBM Global Services as their systems integrator.

Morrisville's 802.11n solution consists of 720 Meru AP300 access points, each equipped with two a/b/g/n radios to support all current

standard WiFi clients and newer clients based on 802.11n draft 2.0. The Meru WLAN System ensures optimal performance for every client on the network by assigning each client to the best physical access point. Adding capacity or dedicating spectrum to a specific access technology or user group is just a matter of layering more channels and can be accomplished without increasing network complexity, which is an important consideration for future expansion.

Unlike the design-intensive channel planning architectures from other vendors, Meru's single channel approach does not require complex channel planning to mitigate co-channel interference between access points. In addition, Meru's unique approach allows administrators to more easily compensate for coverage holes and fluctuating data rates, thereby both significantly accelerating network planning and deployment, and simplifying ongoing network management and diagnostics.

Results

By October of 2007, only months after launching its ambitious wireless upgrade plan, Morrisville State College announced the world's first 802.11n campus-wide deployment. The College's campus-wide network boasts coverage for more than 40 buildings across two campuses with approximately 3200 students and 140 faculty members. With a successful deployment in primarily academic areas, the College also expanded coverage to provide wireless access in non-traditional spaces such as the parking lot, football field, and equine barns.

In the first few months of using 720 Meru 802.11n APs, Morrisville College has been able to effectively support over 1,500 simultaneous users at peak usage, with connection speeds of up to 300Mbps.

Deployment of the high-speed access points at the college was smooth according to Matt Barber, Morrisville's network administrator. And deployment tests have confirmed that the new network exceeds expectation. "Some of the statistics [from the tests] were just unbelievable," says Jean Boland, vice president of technology services at Morrisville State College. "[In general,] speeds were five times that of 11g." Often, they were higher. According to Boland, a 50MB file uploaded from a laptop took 3 min 51 sec with an 11g connection, but only 26 sec with the 11n connection – nearly nine times faster.

For more information about Meru Networks wireless networking solutions, visit | www.merunetworks.com |
For more information about Morrisville State College | visit www.morrisville.edu |

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CS_Morrisville_0310_v5



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