



## ST. JOHN'S PREP

### About St. John's Prep

Founded in 1907, St. John's Prep is a Xaverian Brothers sponsored secondary school for young men located in Danvers, Massachusetts.

### The Challenge

Across their sprawling 175 acre campus, St. John's Prep experienced a proliferation of Wi-Fi-enabled devices. The school required a highly scalable, yet cost-effective WLAN solution, which could be deployed quickly and seamlessly to users.

### The Solution

To meet their current Wi-Fi® needs and provide the scalability needed for future growth, the school's campus-wide deployment consisted of Bluesocket's virtual Wireless LAN (vWLAN®) solution running on VMware® and Bluesocket® 1800 Series, 802.11n access points.

### The Benefit

St. John's Prep leveraged its VMware infrastructure to virtualize its WLAN and realize the many advantages of virtualization within its Wi-Fi environment. The deployment created a "campus-wide classroom", enabling teachers and students to use Wi-Fi enabled devices to effortlessly connect anywhere on campus.

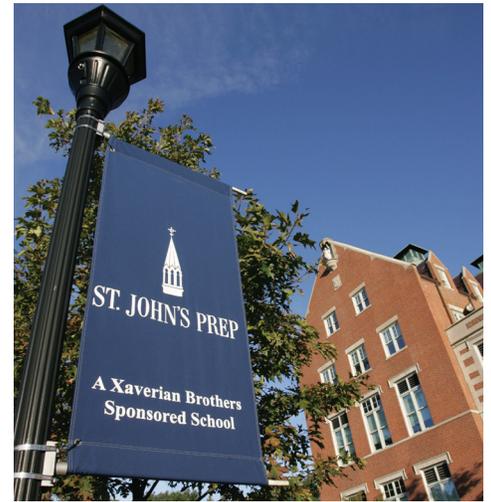
## St. John's Prep Embraces the Cloud with Bluesocket's Virtual Wireless LAN Solution

### A Long-standing History of Fostering Intellectual Growth

St. John's Prep is a rigorous college preparatory school located 15 miles northeast of Boston, MA. Its 175 acre campus serves 1,200 students. Focused on creating an atmosphere that fosters intellectual growth, St. John's Prep is dedicated to preparing all of its students to take full advantage of today's technology resources and encourages the use of Wi-Fi-enabled devices in the curriculum. The faculty utilizes Web-based technology in the teaching process. The school continues to launch more and more digital learning initiatives, creating the need for a highly scalable, reliable Wi-Fi infrastructure.

### Constant Wi-Fi Growth Throughout the Campus

Wireless access has been available within the campus, however to support the growing user demand and planned e-learning programs, the original wireless network needed a major upgrade. The school's goal was to ensure that students and staff have full access to online resources throughout the campus. To support this "anytime" network access, the school needed to implement a highly reliable, and easily scalable wireless network that could also be efficiently managed across the large 175 acre campus. To support this demand for network access, St. John's Prep turned to ADTRAN® to help architect the ideal solution for the campus, students and faculty.



"In the end, we achieved significant savings by avoiding all costs and bottlenecks associated with a hardware based controller solution and gained a future proof network with immense scalability to address growing demand on our network."

— Christopher Butler  
Director of Information Services

### Embracing the Cloud and Virtualization

Committed to virtualization as an important IT strategy, St. John's Prep had experienced the enormous benefits that virtualization (via VMware) had brought to their server environment. Since the school recognized that the same benefits could be brought to its wireless network, virtualizing its wireless LAN and further leveraging its VMware investment was an easy decision and the logical next step. Rather than deploying a traditional hardware based solution to operate its wireless network, vWLAN allowed St. John's Prep to leverage virtualization to eliminate the operational constraints and costs of physical WLAN hardware controllers. ADTRAN's vWLAN solution provides centralized user control and software based, virtualized device management residing on a hypervisor—a key advantage for the school's modest I.T. department given its existing VMware infrastructure, large number of users and 175 acre coverage area.

The solution enabled the school to create a private, secure cloud for the entire campus. Since vWLAN is software based, scaling is simple and cost-effective, and easily enables more access points to be added without requiring the typical upgrade (or associated costs) of WLAN controller hardware. vWLAN frees the control of the wireless network from the LAN, making it possible to control wireless access points from anywhere in the networked world. St. John's I.T. department can enjoy more flexibility across their wide coverage area since the control function does not have to reside on the same LAN as the access points.

### "Grow as You Go" Scalability

vWLAN makes scaling the network simple and cost-effective—only limited by the size of the data center capacity. Typically, a large WLAN hardware controller can only support 150 access points and about 4,000 users. ADTRAN's vWLAN software running on VMware can support 1,500 access points and up to 48,000 users. System capacity is no longer determined by the backplane capacity of the hardware controller; rather with vWLAN, capacity is a function of the aggregate throughput of all the access points combined (e.g.: a deployment of 1,000 access points could easily reach 200 to 300 Gbps). vWLAN enables St. John's Prep to effortlessly accommodate new access points and users as needed without incurring additional WLAN controller costs.

### WLAN Virtualization = Cost Savings

By abolishing the functional need for hardware controllers, ADTRAN's vWLAN solution thereby eliminates the associated costs of controllers such as OPEX, and CAPEX costs which can amount to considerable cost-savings during the initial wireless deployment phase. vWLAN decreases the Total Cost of Ownership (TCO) of the WLAN and will dramatically reduce energy usage since legacy WLAN hardware controllers typically account for 80 percent of the total energy usage within a wireless network.

### Future Plans: Investment Protection for Ongoing Learning Initiatives

Beginning in September 2013, St. John's will launch a 1:1 iPad® program. Every student will be required to use an iPad in Wi-Fi mode in the classroom, to collaborate with students and teachers, and to research and do homework assignments. The iPad



**"All other solutions required additional hardware which added significant cost and operational burden to our IT staff's resources. ADTRAN's vWLAN solution is certified as VMware Ready, the installation of the vWLAN software on to our VMware instance was quick and effortless."**

**— Christopher Butler,  
Director of Information Services**

will be integral to the way students work in courses across the curriculum. Students will also be able to use digital ebooks for the coming school year. ADTRAN's vWLAN architecture will empower the WLAN cloud-based control and management needed to ensure the success of these critical learning initiatives.

Wireless standards continue to evolve to the next generation of access points. The next standard, 802.11ac, is scheduled to be released in 2013. ADTRAN's vWLAN software is currently 802.11ac ready. When the time comes for St. John's Prep to transition to the new 802.11ac standard, the school will avoid the cost of the required upgrade for solutions based on legacy WLAN hardware controllers.



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