CASE STUDY:
# Mainline Helps Victor Central School District Achieve Academic Excellence with High Performing Wireless Network

## THE BUSINESS CHALLENGE

Victor Central School District (VCS) strives for excellence in every aspect – academics, faculty, athletics, facility and community involvement, to name a few. In fact, because of its rich curriculum and outstanding faculty, student academic achievement exceeds state and national levels. Newsweek magazine ranked the VCS high school in the top 1% in the United States.

The district's success would not be possible without superior technology. A priority is placed on providing the best technologies to support and enhance the educational process. A sophisticated wireless local area network (WLAN) and reliable, high speed internet access to serve all students and staff members are critical for continued success.

Like most organizations, the district was experiencing high growth in the use of mobile devices on campus. According to David Henderson, Director of Computer Services for Victor Central School District, "The number of devices accessing the district's wireless local area network every day had grown astronomically since its original implementation seven years earlier." Approximately 4,500 students at all grade levels and 400 professional staff members utilize computer technology for teaching, information gathering, research, reports and presentations. The number of district-owned devices as well as personal devices, estimated at 4,000, were causing availability issues.

Additionally, there were multiple high density usage areas in the school buildings. Certain areas of the buildings had a higher density of users than other areas causing access issues and slow connections. "We had blocks of rooms with nearly 25 kids in each room all on Chromebooks trying to access the internet," described Henderson. "Our network just could not handle this concentration of users."

The tipping point came when the network could not accommodate NY State online testing requirements. Entire grade levels were supposed to participate in standardized testing via an internet-based testing program. Within minutes of trying to administer the online testing, VCS knew its WLAN could not handle the volume.

**Overall, the network was experiencing these specific issues:**

- Users had difficulty connecting to the network.
- The network was unreliable, causing users to lose access.
- The network could not accommodate new, online NY State testing requirements.
- The network could not support the growing number of mobile devices.
- Secure guest access not provided.
- Security policies were outdated and put the district at risk.

**Industry:**
Education

**Client:**
Victor Central School District

**Business Need:**
Outdated wireless technology could not accommodate needs of students and faculty

**Business Value Provided:**
Reliable Wi-Fi connections throughout the campus; reduced help desk tickets; up-to-date security policy; ability to scale with expected growth

"Mainline's consultative approach and expertise enabled us to select, design and implement the optimal networking solution for Victor Central Schools. The classroom experience is elevated and our students and staff couldn't be more pleased."

*- David Henderson, Director of Computer Services for Victor Central School District*

## The Solution

Because of the high demand on computer technologies for teaching and learning, the district needed to evaluate the effectiveness of its wireless network. Victor Central School District asked Mainline Information Systems, its long-term technology partner, to evaluate the situation and propose a solution. Mainline's dedicated team conducted an on-site assessment and client interview to get to the root of the problem. It was agreed that VCS needed a new wireless network to meet the needs of its modern learning environment.

**As a trusted consultant for VCS, Mainline led the process for selecting the vendors for the project. Including Mainline, the project team included:**

- Ruckus – WLAN hardware
- Vantage Point Network Systems (VPN) – Network configuration and installation

Once Ruckus was selected for the WLAN equipment, Mainline and VPN completed a logical and physical design for the network plus a radio frequency site survey, which included an exterior survey for the athletic fields. Working closely with the cabling supplier, Mainline ensured that the Ruckus access points were installed in the designated locations. A policy design for guests, students, and teachers was completed to ensure a high degree of security for the new wireless network.

"I value Mainline's expertise and trust their consultative approach," said Henderson. "Mainline was instrumental in selecting the best vendors for all the complex components of this project."

**Mainline's solution included:**

- Consultation services – logical and physical designs, radio frequency site survey
- Expanded existing Juniper infrastructure with additional 11 Juniper EX4200 switches
- 402 Ruckus indoor access points; 5 outdoor Ruckus access points
- 2 Ruckus Virtual SmartZone WLAN controllers
- Ruckus Cloudpath security and policy management
- Verification and testing
- Knowledge transfer

## The Result

Immediately after installation, students and teachers experienced faster connection times and no more class interruptions due to dropped connections. Users can now move throughout the campus and not lose their connection. The frustrations that users had previously experienced were eliminated. Trust in the wireless network was restored.

By expanding the existing Juniper infrastructure, the school district was able to install more PoE+ ports for the wireless expansion. This laid the groundwork for faster connection times and smooth hand offs across the campus.

The technology helpdesk rarely receives calls because of a problem with the wireless network. VCS students can now participate in the New York State online testing mandate.

The network can handle high density user areas. In fact, a VCS teacher said: "I've noticed a big improvement with the Chromebooks! Gone are the days fearing that 23 students could not be using the Chromebooks at the same time."

Security for all connected devices has significantly improved. For user and device authentication, Cloudpath is being used for all students and staff. This security and policy management platform enables IT to easily keep track of who is on the network. Cloudpath extends secure Wi-Fi to visitors inside and on the campus grounds.

For more information, call your Mainline account representative or call Mainline directly at 866.490.MAIN(6246).