



CIRRUSWORKS

Case Study: Eagle Academy

CirrusWorks Provides Optimized Network Performance for Online Testing

Eagle Academy Public Charter School was attempting to embrace and meet the evolving needs of online Next-Generation Common Core testing in the classroom. IT Staff quickly discovered that existing network infrastructure was inadequate to support the increase in network traffic, making it impossible for students to take tests simultaneously. This would have resulted in teachers having to reschedule their testing to avoid network congestion. Increasing overall bandwidth to support concurrent testing wasn't feasible so the school looked to CirrusWorks to help them during these times of peak congestion.

Overview

Eagle Academy Public Charter School in Washington DC serves more than 1000 faculty and students, from Pre-K to 3rd grade. The school's mission is to build the foundation for a promising future for all students in a rich, robust learning environment that fosters creativity and problem-solving abilities. Eagle Academy emphasizes cognitive, social and emotional growth by engaging children as active learners in an inclusive learning environment.

Challenges

Over the past few years, Eagle Academy has embraced digital learning. Eagle utilizes tablets and laptops in the classroom to access educational applications and cloud-based programs. Additionally, Eagle Academy has adopted common core online testing. While these programs have streamlined and improved the learning experience, they have placed increasing demands on the network. These demands, in turn, have created periods of data congestion.

On a typical school day, the Academy uses around 35 Mbps of its existing 100 Mbps bandwidth circuit. As such, most of the time, the school's existing available

bandwidth is sufficient to support day-to-day operations. When students take tests online; however, data usage grows exponentially and often exceeds available supply of bandwidth. When this occurs, students must often wait for pages to load or pages never load at all, forcing proctors to re-start entire tests or portions of tests. To remedy this situation, administrators decided to schedule tests out to ensure no two tests were given simultaneously.

While this reduced the incidence of data spikes and helped to improve responsiveness, the process of scheduling tests out amongst teachers quickly became an administrative burden. Purchasing more bandwidth was considered, however the amount needed to account for data spikes during testing or other periods of the day when students access online programs simultaneously far exceeded the amount needed for everyday use. Since user behavior in an educational environment is almost impossible to predict, planning for adequate bandwidth proved to be difficult. Most importantly, the school didn't want to incur additional operating expenses and purchase unnecessary levels of bandwidth just to account for periods of data congestion.



SUMMARY

Industry

- Education (Public; Charter)

Number of Users

- More than 1000 users and 1,500 devices

Challenges

- Simultaneous next-generation (Common Core) online testing caused periods of data congestion
- High Administrative Burden of scheduling tests to ensure no simultaneous overlap
- No budget for additional bandwidth

Solution

- Dynamically eliminate the negative impact of data-intensive activities
- Maximize existing bandwidth infrastructure
- Minimal ongoing maintenance or support

Results

- Dynamically reduced congestion
- Automated bandwidth allocation fairly across users
- Faster and more reliable Internet allowed for simultaneous testing
- Maximized existing infrastructure

Solution

Eagle Academy needed a cost-effective way to smooth out data usage to mitigate the negative impact of data-intensive activities. Since user behavior is highly unpredictable, the solution needed to operate automatically – allocating bandwidth fairly and evenly across users to ensure fast and reliable Internet performance for everyone.

If and when usage exceeded available supply, heavy users had to be kept at bay to ensure that all users had sufficient bandwidth to perform normal operations throughout the day.

Results

Within 5 minutes of installing the CirrusWorks Governor, the IT department noticed that the data spikes in usage that previously brought the network to a grinding halt were all but eliminated. Students could now stream video in a fraction of the time and upload large presentation files to the cloud within seconds. Faster page turns during online testing allowed students to take tests simultaneously, eliminating the administrative burden for proctors and administrators.

Not only did the Governor save teachers and students time, it saved the Academy money. The Governor's dynamic AutoAlgorithms™ mitigated the negative impact of data congestion for a fraction of the cost of adding bandwidth.

"The CirrusWorks Governor saves us time and money," reports Eduardo Trigueros, IT Director, Eagle Academy. "We needed a fast, easy, and dynamic bandwidth management solution that adjusted to our needs in real-time, without any ongoing configuration. Page downloads, especially during online testing periods, have improved, allowing us to conduct testing simultaneously."

ABOUT CIRRUSWORKS

CirrusWorks™ is the leader in dynamic bandwidth management. The CirrusWorks Governor™ optimizes traffic during peak congestion periods to ensure fast and reliable Internet performance for all users. Only CirrusWorks employs AutoAlgorithms™ that adapt to unpredictable traffic patterns in real time, without the need to pre-configure static rule sets or policies. For more information, visit www.cirrusworks.net.

"The CirrusWorks Governor saves us time and money. We needed a fast, easy, and dynamic bandwidth management solution that adjusted to our needs in real-time, without any ongoing configuration."

—EDUARDO TRIGUEROS, IT DIRECTOR, EAGLE ACADEMY