

## Westminster Public Schools Ensures Flawless Online Testing Experiences; Squashes Snapchat Disruptions

Westminster Public Schools (formerly Adams County School District 50) is one of Colorado's largest school districts, home to 9,500 students and 1,200 faculty across the district's 20 school locations.

As the district began a 1:1 Chromebook deployment and moved standardized testing initiatives online, Westminster realized an application control solution was needed to stop the district from routinely hitting its bandwidth cap and negatively impacting quality of experience.



Prioritized  
Online Testing



Reduced Streaming  
Traffic by 40%



Decreased Help  
Desk Calls

### The Challenge

To provide its students with innovative, personalized learning experiences, Westminster Public Schools deployed a district-wide 1:1 Chromebook program. But with upwards of 10,000 devices connected to the network at any given moment, Westminster was regularly hitting its bandwidth cap. The Network Team was using a web filter, firewall and Multi Router Traffic Grapher (MRTG) to track bandwidth usage, but all these tools together could not help to identify which applications and users were maxing out the district's bandwidth.

This surge in activity from the new Chromebooks on the network was routinely impacting the performance of Office 365, Pearson and Khan Academy, and lead to an increase in help desk calls for the Network Team from frustrated faculty. Additionally, due to Snapchat misuse, Westminster's administration decided to ban the photo sharing app, but Snapchat kept evading the district's web filter and could not be contained.

Most importantly, with Colorado's recent move to online testing, Westminster Public Schools needed to be able to guarantee flawless experiences during the Colorado Measures of Academic Success (CMAS) standardized testing season, and was concerned this would not be possible given the bandwidth challenges they were facing.

"Snapchat was notoriously bad for the classroom and was causing a big disruption. Our district's administration made the decision to block it in every way, shape and form. Our web filter on its own was not able to adequately control Snapchat as the app would release updates every few weeks, which would then allow that traffic to bypass our filter and we were always left playing catch up. Exinda has handled this problem magnificently by detecting all Snapchat traffic and dropping those connections."

— **Jefferey Miller**  
Technology Manager,  
Westminster Public Schools

## The Solution

Having used a PacketShaper in the past, the Network Team was well-versed in traffic shaping software, and knew exactly what they were looking for in a new application control solution – layer 7 traffic identification and a robust traffic prioritization engine.

As a small team with many critical projects on the go, it was key for Westminster to invest in a low maintenance, easy to use solution. After a recommendation from their local reseller, EPC USA, Westminster determined an Exinda 6000 series solution was the best fit for the district's needs.

Once the Exinda was deployed, Westminster was finally able to confirm its suspicions about what was using up so much of the district's bandwidth. The Network Team had an inkling that streaming media was consuming a significant chunk, but with Exinda's real-time monitoring, they were able to see exactly how much was being used, and YouTube was consuming a resounding 75% of the district's total bandwidth.

## The Results

Once the Network Team could identify all the traffic crossing the network, optimization policies were created to ensure testing platforms like Pearson and Khan Academy always get the highest possible priority. With bandwidth bottlenecks eliminated, students can now complete tests without any disruptions or time outs.

By using Exinda's multi-dimensional policy-based control, Westminster was able to restrict access to district-unsanctioned applications like Snapchat, Tor, Ultrasurf, Anonymous Proxies, limit the amount of bandwidth that can be used on Chrome OS updates, and reduced the amount of streaming traffic by 40%.

As Westminster looks to continuously enhance its students' learning experiences, a few classes have started video conferencing using Skype and Google Hangouts. The Network Team predicts that demand for video calling will increase in the near future, but are confident they will be able to deliver the high quality calls teachers and students expect with Exinda in place.

"Prior to using Exinda, our number one pain point was that we were maxing out our bandwidth, but couldn't identify what was causing us to keep hitting our cap. We were using MRTG and our firewall to monitor how much bandwidth we were using, but had no idea what was actually using up the bandwidth. After we implemented Exinda, we could finally pinpoint what was consuming the district's bandwidth and control it."

– **Mark Hanson**  
Network Administrator,  
Westminster Public Schools

"Online testing platforms are very network-sensitive, so ahead of testing schedules we use Exinda to create policies that guarantee the highest quality of service to our testing applications. This has helped to reduce interruption and lag during student testing, loading times have been improved, we receive far less help desk calls, and it has promoted an overall better testing experience for our district."

– **Jefferey Miller**  
Technology Manager,  
Westminster Public Schools