F5's FirePass Delivers Content Faster To Students and Staff While Reducing Support Calls By 90%

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Thuan Nguyen
Project and Technical Systems manager

KENT SCHOOL DISTRICT
Successfully Prepare All Students For Their Future

Industry:
Education

Challenges:
- Improve remote access performance for 40 schools and 26,000 students
- Reduce administration duties

Solution:
F5's FirePass® 4100 SSL VPN

Benefits:
- Reduce support calls by 90%
- Increase remote access performance by 50%

Overview

Kent School District is the 4th largest school district in Washington, with 40 schools and over 26,000 students. With 40 different web sites and one of the largest data centers in the state for an educational facility, it is also nationally recognized as a true innovator in using technology to improve students' learning.

One of District's largest initiatives, in fact, is to expand a first-of-its-kind program that provides every student with a laptop computer that they can use at school and also take home after the traditional school day has ended. The pilot program – known as one-to-one -- essentially removes the walls of the classrooms so all 26,000 students and staff will have around-the-clock access to school resources from the comfort of their home or even while traveling on the road.

Challenge

Unfortunately, the underlying technology (an IPSec VPN) that would supposedly provide remote access from home was receiving a failing grade.

"We were never able to get it to work," said Thuan Nguyen, project and technical systems manager for the Kent School District. "Students and staff couldn't utilize the system without constantly calling our customer support center."

Worse, students and staff grew so frustrated or intimidated by the difficulty of the system that nobody wanted to use it, or even try it.

"The alarming statistic I share is that the system in place was capable of handling thousands of staff members and students, but we never saw more than a hundred users connect into it," Nguyen said, adding that "we had to abandon the project completely."

Solution

Nguyen decided to evaluate a different type of remote access technology – one where anyone with a computer, an Internet connection, and a Web browser could tunnel into the school network quickly, easily and securely. The underlying technology, called SSL VPN, eliminates the complexity of using IPSec VPN-type solutions. The system Nguyen decided to evaluate was called FirePass, from F5.

Benefits

F5"Within the first three minutes of the evaluation (of FirePass), I was completely blown away," said Nguyen. "It was so easy to use. Within five minutes I was sold, and immediately began thinking about how to get the funding to buy it. The funding, by the way, came very easily once people saw how easy it was to use.

The ease of use of FirePass wasn't lost the Kent School District's IT staff, either. Because SSL VPN-type systems utilize encryption capabilities that already come built into Web browsers, they don't require separate software installation and maintenance on each user device beyond the browser. This eliminates the deployment and ongoing support costs of traditional remote VPNs that require software to be loaded on every computer.

"Our previous IPSec solution took us about two and a half months to set up," said Nguyen. "FirePass was up and running in a week and a half."

Besides IPSec, Nguyen also evaluated other SSL VPN-type solutions that were supposedly similar to FirePass, but "as far as the user interface and the setup, it was day and night," he said. "With FirePass, if the user's laptop computer isn't set up correctly, FirePass will show you them the problem and how to fix it. Whereas the other solutions would just fail to work."

That interaction, Nguyen said, is invaluable because it shows users how to quickly solve any issues on their own without having to make a call to the support center.

As for student and staff acceptance of the new system, the numbers speak for themselves. In the first two weeks of implementing FirePass, more than 500 users logged on – a 5-times increase. Today more than 2,000 are on the system at any one time – and that number continues to grow, while calls to support center have fallen dramatically.
In fact, because the District received so many support calls with their old system, they had dedicated network engineers that were constantly being trained and updated just so they could answer the phone and walk people through the system. Network Engineers, of course, don't come cheap, and "for schools to implement a technology (FirePass) where you don't need a dedicated network engineer to support it, is absolutely critical," Nguyen said.

And according to Nguyen, within weeks of implementing FirePass, calls to the District support center dropped by 90%.

FirePass also included a capability to compress traffic and file transfers, improving page rendering and performance speeds for users by up to 50% over the previous IPSec VPN solution. And because the compression functionality works over dial-up connections as well as broadband, no student or staff member is left out of these performance gains.

"Our previous solution was practically unusable with dial-up," said Nguyen. "The reason that we're doing the one-to-one program is so that every student has access from home. The answer wasn't to wire every kid's home with broadband, but to give them dial up accounts. That would've never worked using our previous IP Sec solution."

For the District's IT personnel, FirePass allows for centralized, fine-grained policy administration, security enforcement, and access control.

The product's Visual Policy Editor lets administrators quickly set up and define policies, authorizing access to applications based on the user and the type of accessing device being used. FirePass can also prevent infected computers from connecting to the network, automatically re-routing non-compliant computers to a self-healing network – while simultaneously reducing help desk calls. This capability, along with other features like anti-virus protection, ensures that the network remains secure.

"The anti-virus capabilities (on FirePass) are extremely valuable to us," said Nguyen. "If a student's machine is infected with a virus or worm, that data doesn't make it onto our network at all."

FirePass has been so successful that the District plans to roll out a new portal site for staff members using Microsoft's SharePoint, running through FirePass.

"Teachers will be able to grade student work from home, add new curriculum to their personal site, or perform business services like updating their healthcare providers," said Nguyen. "All of those services will run on MS SharePoint, and will be secured with FirePass."

Currently, the District is using one FirePass 4100 system, is in the process of getting another one for redundancy, and as they expand their portal and one-to-one program, "we'll be getting more."

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