

# When High Availability is a Need - Not an Option - For School District

*KEMP Technologies LoadMaster 5500  
Makes the Grade*



## Overview

The Springfield, MA public school district views itself as a partnership between parents and the community all working toward the common goal of “a culture of educational excellence for our children.” To that end, technology plays a critical role in that mission and the district is considered a leader in information technology. The school offers students the ability to explore and gather information through its website and the Internet; teachers use data tools to manage grading and curriculum; and parents and students can access critical information on school events over the Web.

For the new 2010-2011 school year, the district implemented PowerSchool Management, the school’s first web-based student information system. PowerSchool allows Springfield to store all student records, grades and attendance data for all 26,000 students for use by approximately 4,400 staff members, including about 2,500 teachers and paraprofessionals. With PowerSchool, all files are stored in a centralized database with appropriate security governing access.

While the school district saves on distributed hardware, the centralized architecture also creates availability issues. Through its value-added reseller, Springfield learned about the need for a load balancer to assure high availability and to avoid congestion with its new system, which could clog the

server during such important times as report-card day, when thousands of parents may be accessing the newly implemented system.

## Realizing Load Balancing Potential

Prior to installing the PowerSchool Management system this year, the Springfield school district had a manual, distributed student information system where each school had its own server and records were manually scanned into the system. While implementing the new automated online system, Springfield’s goal was to consolidate its server count from 300 to 200 and eventually to 80 and consequently needed an application delivery solution that enabled it to do reduce server numbers while maintaining improved performance and availability.

The school is using VMware Vsphere 4 running on one physical box at each location connected to one centralized VMware server cluster. With fewer servers online, it increased the importance of assuring that each one is able to handle the increased load placed upon it, especially given the size of the school system. Springfield still has 58 networked buildings, including 51 schools, each one of which has every room wired for high-speed Internet access.

Springfield’s IT department almost immediately saw the benefit of deploying KEMP’s LoadMaster 5500 application delivery controllers. “Due to the server configurations, hardware load balancing was a necessity,” said Benjamin Wilson, Springfield Technology Operations Manager.

The decision process to implement load balancing technology at Springfield included examining a large number of

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load balancers and then narrowing the selection down to KEMP and one other vendor, F5. They decided on KEMP because of its combination of easy-to-use features and pricing. Even when F5 lowered its price, it was still not able to match what KEMP could offer in features and value. Overall, the deciding factor was, according to Benjamin Wilson, “KEMP’s products are built with the end user in mind with a leg up on ease-of-use of the product.”

Specifically, the products are easy to deploy and integrate with in-place hardware and Wilson added, “KEMP’s products are tailored toward organizations that do not have the expertise of a Fortune 500 IT staff.”

The LoadMaster 5500 is KEMP’s top-of-the line application delivery controller. The LoadMaster intelligently and efficiently distributes user traffic and offloads and accelerates Layer 7 applications such as SSL security and content, to optimize web and application servers, ensuring users get the best experience possible. The 5500 provides 99.999 percent high-availability, thereby removing the server load balancer as the single point of failure. The LoadMaster also simplifies the management of networked resources and accelerates user access to diverse servers, content and transaction-based systems.

As one of the school districts with an advanced technology plan, Springfield runs Microsoft SharePoint over the same LoadMaster 5500s. With SharePoint 2007, staff can share information across web sites, collaborate on documents and access and manage databases easily. With KEMP’s LoadMasters now in service, it can sufficiently handle Springfield’s current traffic load, and Wilson described the load balancers as “more

capable than what we’re throwing at them.”

### **Bring It On With Load Balancing**

If Springfield needs additional load balancers for the district’s move toward an overall virtual environment, they can deploy KEMP’s Virtual LoadMaster (VLM). The district is also planning to migrate to a Microsoft Exchange 2010 server for unified communications, improved access to email, voicemail, and instant messaging from any platform. Springfield is also planning to implement a Windows Terminal Server farm for virtual desktop creation and remote desktop access. With each of these applications, the school system needs to continue to assure high availability; and with their enhanced support for these applications, Wilson says he “cannot imagine adopting any of these applications without including the LoadMaster because high availability is a need not a preference.”

As the school year begins, the pair of LoadMaster 5500s will be put to the test again and again, and Ben Wilson fully expects that they will be able to keep the Springfield school district’s server traffic up and running as well as provide an easy-to-access online system for its faculty, administration students and parents. With KEMP LoadMasters in place, Wilson adds, “We knew it was supposed to be user friendly, but we were surprised how easy it was to use and very pleased with its ability to scale to our future needs.”

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