

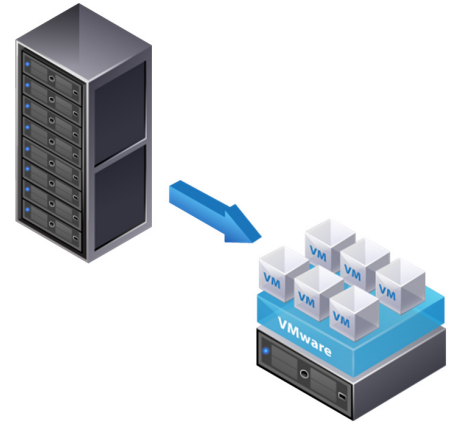
## Promedia Deploys Virtualization Solution for North Arlington

Promedia Technology Services recently completed a virtualization project for the school district of North Arlington. With just under 2,000 students and over 120 classroom teachers, the school district heavily relies on their network infrastructure to provide 21st century learning environment network resources such as student and staff central databases, mail servers, file servers and many other web and applications servers. This project encompassed an effort to decrease the North Arlington Data Center physical servers while deploying VMware, Cisco and NetApp solutions to create a first class virtualization platform.

To begin the project, a VMware capacity planner test was performed on the existing server devices. This gave Promedia engineers the ability to gauge the status of the current configuration, decide how a virtualization solution could be deployed to aid with server consolidation, and make the necessary improvements to allow the virtual infrastructure to run at an optimal level.

Promedia employed their expertise after recently becoming the 1st Cisco partner in the East and 8th in the nation to achieve the Data Center Architecture specialization.

North Arlington housed a great number of physical servers in their High School Data Center before undertaking this project. Deploying Cisco UCS C200 Series UCS servers with NetApp SAN storage, Promedia was able to reduce these legacy physical servers down to a 2+1 ESX physical server architecture. With this three physical server model, Promedia ensured a deployment of 20+ virtual servers per physical ESX host. This allowed for the virtualization of domain controllers, file servers, email servers and various other web and applications servers.



As a result, North Arlington will receive the many benefits of decreasing the hardware footprint in their data center. By moving to virtualization, the district cut costs not only on hardware purchasing and upkeep, but also on energy spending and administration. Legacy physical server environments become a costly expense leaving cooling to become the number one concern for schools. By cutting the physical environment in more than half, Promedia was able to present North Arlington with a much more cost effective solution to providing critical and necessary network resources for their students and staff.

Mike Asmus, the Technology Director for North Arlington said, "We realized we needed to update our network. The servers that we had in place were old, and they took up a lot of space and a lot of power. We considered a few different options to address this, and decided virtualization was the way to go. Promedia has a wealth of knowledge and experience with virtualization through VMware software, so we knew they could execute a project like this successfully."

North Arlington Superintendent of Schools, Dr. Oliver Stringham indicated, "Executing network solutions that are cost effective and economize our tight facilities infrastructure are key to our current and future plans for student success. The problem solving skills of Director of Technology, Mr. Asmus, and our long standing network relationship with Promedia continue to collaboratively work to successfully visualize our goals."

This new infrastructure of ESX host servers running virtual machines is achieved through the use of VMware vSphere technology. This technology gives an institution the ability to run multiple different types of applications and software on a single physical server. The data and applications maintained separately on many different legacy physical servers are consolidated onto a much smaller amount of hardware fully utilizing the device resources. This technology also allows the systems to be controlled seamlessly from a single console easing management and streamlining operations.

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**DESKTOP VIRTUALIZATION**

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**INFRASTRUCTURE VIRTUALIZATION**

In addition to the Cisco UCS C200 Servers and VMware technology, a NetApp storage area network was deployed to store all of the virtual servers and data. The NetApp SAN provides a fully redundant system of data storage and backup, which aids in the prevention of downtime of critical applications and data. To combat failures, the vSphere technology, in conjunction with the SAN, can automatically move all of the virtual machines on the failed node to the other ESX host member server. This allows network resource continuity of all virtual servers without any work stoppage.

With the virtualization project in process, it was an ideal time for Promedia to upgrade North Arlington's Active Directory Infrastructure and Microsoft Exchange Server to their newest editions, leveraging all of the new features and functionality. These applications will run inside the new virtualized environment providing easy access and administration with the capability to deploy new virtual servers when necessary. After finalizing the deployment, Promedia concluded this project by providing North Arlington IT with training to smooth the transition to the new virtual infrastructure.