



Solution ■ Microsoft Azure DevOps Labs ■ Industry K-12 Education ■ Use Case Remote Desktop

ADVANCED MATH AND SCIENCE CHARTER SCHOOL IMPLEMENTS AZURE LABS

CLOUD-BASED SERVICE REDUCES COSTS, IMPROVES FLEXIBILITY FOR COMPUTER SCIENCE PROGRAMS

SUMMARY

“[AMSA] now has the chance to allow students access to high end programs from their homes and personal devices”

Joseph DiMarco,
Network Administrator, Advanced Math and Science Academy Charter School

Challenge- Offering extensive computer science programs to their students, Advanced Math and Science Academy Charter School (AMSA) was facing costly hardware and software maintenance costs. To keep programs running efficiently and provide top-tier education for their students, AMSA needed to find a cost-effective solution to run and expand their computer science program.

Solution- Rather than routinely upgrading hardware to meet the software specifications, AMSA implemented Azure Lab Services. This cloud-based service is configured to host the software required for computer science classes and run them via virtual machines during designated class times or as needed by the students.

Benefit- Azure Labs Services not only allows AMSA to run intensive programs on lower-powered devices but it also allows them to manage the time students spend in the virtual machine, deploy and scale quickly, and explore new software with ease.

BACKGROUND & CHALLENGES

Advanced Math and Science Academy Charter School (AMSA) is located in St. Marlborough, Massachusetts, just 35 miles west of Boston. Founded in 2005, AMSA dedicates itself to bringing quality education, typically available only at exclusive private or exam schools, to an all-inclusive public-school setting. Furthermore, AMSA believes that “children of diverse backgrounds with a wide range of abilities can achieve a world-class education if given the opportunity to apply themselves diligently”.

Ranked the #2 high school in Massachusetts, AMSA provides specialized programs, such as computer science, which enables the school to provide its students with valuable knowledge and skill sets to help guide them in their future careers. However, because the cost to maintain hardware and software has become costly, AMSA was seeking a cost-effective cloud remote desktop solution to provide its students and faculty.

"AMSA has six Computer Science lab rooms to teach its yearly Computer Science courses. Though AMSA is able to purchase computers with sufficient specifications, we still have to use 5 year old computers in certain cases."

Erica Piotrowski
IT Director of AMSA

SOLUTION

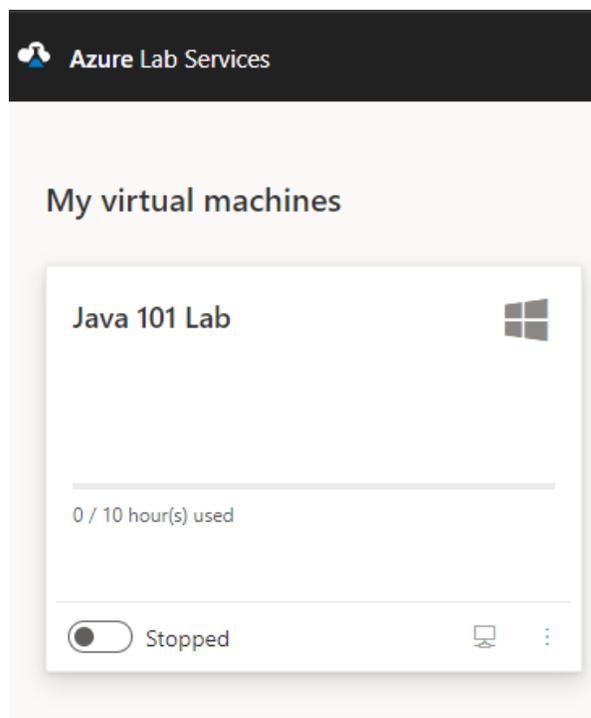
AMSA required a solution that would lower hardware costs, would be easy to use, and would be adaptable for future classes. They also needed a solution to work with Kali Server Lab, an ethical hacking program currently being used by their students. After researching options, AMSA set their minds on Azure Labs to host their software programs and contacted Datalink Networks for guidance.

To ensure this was the right fit for AMSA, Datalink Networks provided a demonstration of Azure Labs and funded a Proof of Concept. After configuring Kali Server Lab as a new template in Azure Labs, AMSA ran it on a test group of 16 students.

"AMSA has been looking for a cloud remote desktop solution for a few years. We knew that Microsoft recently simplified the Azure Lab tools and then Datalink reached out with an opportunity for us to trial it out."

Erica Piotrowski
IT Director of AMSA

After testing and configuration, AMSA believed Azure Labs to be the best solution to host their software programs. As this solution is typically easy to configure and extremely scalable, AMSA identified future uses for Azure Labs within the school such as classes in advanced CAD, digital media, and web design.



BENEFITS

Rapid remote desktop deployment

With Microsoft Azure Labs, AMSA is able to quickly spin up individual remote desktops for each student in the class. The students are given rights to their own virtual machines that will allow them to access all the software they need to complete their assignments. Scaling is as easy as deployment and new students can be added as a lab user at any point in time.

Simplified way to accomplish teaching objectives

Implementing Azure Labs has proven to be a more straightforward and simplified way to accomplish teaching objectives for AMSA. Students in their cybersecurity course have two instances of Virtualbox installed in their virtual machines that enables them to perform security tests and practice hacking skills within the cloud computer environment itself.

"Azure Labs has helped me as a teacher worry less about the setting up of a lab. It has enabled me to run a lab seamlessly by giving access through a browser. This has been especially helpful in the current hybrid situation - where the access of the lab is consistent for students at home and in person".

Padmaja Bandaru
AMSA Computer Science Teacher



Low cost and maintenance

The overall IT management and maintenance for Azure labs has proven to be minimal. Additionally, since Azure Labs runs on a consumption-based pricing model, costs for utilizing virtual machines remain low and cost efficient. Educators have the ability to limit students' hours of usage to minimize wasted resources and keep their class budget friendly, no matter how high-powered of a virtual machine their software requires.

"Azure Labs will benefit our campus by allowing us to run specialized software without needing to purchase specific hardware. The cost to run Azure Labs is relatively low and the school retains control of who can access the lab environment and when. Datalink Networks generously allowed us to run a trial of Azure Labs with our Cybersecurity class and has also been available for troubleshooting along the way. We appreciate having such an involved vendor to help us implement this new solution" stated Piotrowski.

MORE ON AZURE LABS

Azure Labs Services, a Microsoft Application, takes complex programs and software such as Power BI, SQL, SolidWorks, and places them in virtual machines. Once an Azure Lab class is set up with the required program or software, users are invited to join and can have access to the virtual machine from anywhere, on any device. To learn more about Microsoft Azure Lab Services and how it can work for your organization, contact Datalink Networks today.



sales@datalinknetworks.net



1-877-IT-SERVE



www.datalinknetworks.net