



Putting a computer lab in students' hands

How students in Logansport, Indiana, are securely accessing software in their Career Center's lab from any location, on any device

Like schools throughout the U.S., the Logansport Community School Corporation quickly transitioned to remote learning in the spring of 2020 when social distancing requirements for COVID-19 meant students could no longer gather in the classroom full time. Logansport also introduced a new virtual learning opportunity for students in its Century Career Center, with computer lab as a service (CLaaS).

"We introduced CLaaS to allow students working remotely to do their projects for class on their student devices," says Cyle Dibble, director of technology at the Logansport Community School Corporation. "Without this solution, students would not be able to do their work and participate in class remotely."

Taking career tools into the cloud

The Logansport Community School Corporation serves approximately 4,300 students in four elementary schools, a sixth-grade academy, a junior high for grades seven and eight, a high school, and the Century Career Center. COVID forced the district to switch to remote learning for much of the spring 2020 semester. In the 2020–2021 school year, the district used a hybrid model much of the time, combining in-person and distance learning, until it was able to resume full in-person instruction in April 2021.

The Career Center prepares students in grades 9 through 12 for careers in health science; advanced manufacturing; art, media, and communications; architecture and construction; and several other fields. Some classes rely on specialized software tools, including Adobe Creative Suite, AutoCAD, and Autodesk Inventor.

Traditionally, students have used that software in the Center's computer lab. Since 2019, Dibble and his team have explored ways to move those tools into the cloud so students could use them even when they were away from the lab.

When the pandemic forced a switch to virtual learning, the search for a cloud-based solution evolved from a nice-to-have project to a top priority. A hosted solution does more than give students more flexible access to applications that were available before, only on more robust desktop machines. With students learning from home, a cloud solution was the only way to provide them with access.

Several of the available hosted solutions that Logansport considered proved cost-prohibitive, Dibble says. Then his team evaluated the CLaaS solution from ByteSpeed, an IT solutions provider based in Moorhead, Minnesota.

With CLaaS, schools can give students greater access to higher-end applications without buying more expensive workstations for their labs or converting precious real estate in a school building to make more lab space.

The game-changer

ByteSpeed developed CLaaS to meet the needs of numerous school districts whose students were using devices to attend class and complete work from home during the pandemic. With the Amazon AppStream 2.0 desktop as a service platform from Amazon Web Services (AWS) as its foundation, CLaaS securely streams applications that students need to do their work, whether those applications are bandwidth-intensive engineering platforms or Microsoft Office programs.

ByteSpeed worked with SynchroNet, an AWS Advanced Consulting Partner in Houston, Texas, to design and build CLaaS, conduct a pilot, and then release the solution to the K-12 education market.

After launching its first school pilot on September 1, 2020, ByteSpeed began working with Logansport in early December. Students began using Appstream on December 9.

Since CLaaS can use Google or Microsoft Azure for authentication, students can log in with the same credentials they use in their everyday classroom instruction. They can then access lab applications from home or any other location using a laptop, Chromebook, tablet, or another device that runs a web browser.

“ByteSpeed presented a solution that is cost effective for schools,” Dibble says. Rather than charge a recurring subscription fee, ByteSpeed offers a package of usage hours that schools consume at their own pace. For example, one student who uses CLaaS from 2:00 PM – 5:00 PM consumes three usage hours. So do three students who each use CLaaS from 2:00 PM – 3:00 PM.

“The idea of purchasing hours versus paying for fully hosted services and resources was the game changer for us,” Dibble says.

To launch the new service, Logansport simply needed to provide a purchase order based on ByteSpeed’s quote. “We have not incurred any extra fees to get CLaaS up and running,” Dibble says.

Implementation took just a few days. “After that, it was a matter of monitoring and making adjustments to the amount of resources available for students and at what times,” Dibble says.

Rather than operate 24/7/365, CLaaS provides access to Career Center applications on days and at times when Logansport’s students are most likely to use them, Dibble says. But fine tuning that availability wasn’t difficult.

The other aspects of implementing CLaaS were simple, too. “As with any project, there is upfront time invested in requirements analysis, research, demo, piloting, and deployment,” Dibble says. “ByteSpeed made that very easy, and it was not a big burden on my department, with ByteSpeed doing all the setup. My team’s role was to serve as a facilitator and train the teachers on how to show students how to use the new system.”

Dashboard helps with planning

As students started to take advantage of CLaaS, Logansport employed a dashboard included in the solution to gain insight into how students use the cloud-hosted applications. The dashboard lets school officials track which applications students use, when they use them, and for how long.

“We asked for the dashboard early on to help us monitor our usage so we could better plan and not be surprised by running

low on hours,” Dibble said. “It also gave us the ability to see our peak usages and learn how to work with ByteSpeed so we would have the necessary resources available.”

The information helped Logansport determine during which hours students most needed access to CLaaS. “ByteSpeed configures the environment to add more resources as we hit thresholds during peak hours,” Dibble says. “This way, students don’t have to wait 10 to 15 minutes for a resource to become available during peak usage times.”

Long-term benefits

Although Logansport adopted CLaaS to help with remote learning during the pandemic, the solution will benefit students long after. With CLaaS at their disposal, students can use advanced software in the evening, on weekends, or any other time when school is closed. This is a particular advantage for students who need extra time to complete class projects or who can’t use a computer lab in the late afternoon because of commitments to jobs or sports.

With CLaaS, schools can give students greater access to higher-end applications without buying more expensive workstations for their labs or converting precious real estate in a school building to make more lab space. Students can work on their own devices, or schools that gave students Chromebooks during the pandemic can increase the return on that investment by using them as lab devices.

“We plan to keep this solution and make it available for after school hours and for eLearning days,” Dibble says. Whether a student needs to catch up on a project after dinner, or a teacher needs to deliver a lesson remotely on a snow day, students will have ready access to the educational tools they need.

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