IBM

Memphis City Schools leverages online educational resources with IBM.

Overview

■ **Challenge**
Inefficient systems were hampering the productivity of school district, keeping students from accessing powerful e-learning tools and lengthening time spent on administrative tasks for teachers and principals

■ **Why Become an On Demand Business?**
With an affordable online system, the district could provide modern educational resources and be more responsive to the needs of its students and teachers

■ **Solution**
Implemented an improved network infrastructure and provided managed hosting solution for online educational network that enables students, faculty and administrators to access realtime information and new educational tools

■ **Key Benefits**
School district saves US$700,000 annually in salaries; teachers can produce reports up to 160 times faster, while students enjoy benefits of multimedia resources and distance learning

Using network resources managed by IBM, Memphis City Schools maximized its ability to reach every child with quality educational programs.

The future of Memphis, Tennessee, is in the hands of Memphis City Schools (MCS), one of the state's largest employers and the 21st-largest metropolitan school district in the U.S. Serving 118,000 students in 182 schools, MCS attempts to use its budgetary resources wisely to give each of its students the best education possible.

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—Linda Mainord, former director of Information Technology, Memphis City Schools

ON **DEMAND BUSINESS**™

On Demand Business Benefits

- US$700,000 annual savings in school district's IT staffing through managed hosting solution, which provides Memphis City Schools with high-availability network services without high up-front investment costs

- Teachers and administrators create plans and reports up to 160 times faster than before

- Students have access to multimedia teaching resources and distance learning that makes more effective use of resources by making them available online

However, MCS was struggling with inefficient, antiquated educational processes. Unable to afford a modern IT infrastructure, MCS was awash in paper. Teachers had no timely way to tell whether students were making the grade or in need of intervention, because the student performance reports that were circulated on paper were frequently out of date. School principals, moreover, spent weeks preparing reports and planning documents—time that could have been spent improving educational programs. And with textbooks as their only learning resource, students couldn't access innovative new multimedia educational programming or take advantage of distance learning to study subjects that were not popular enough to be taught in all the schools.

"When you start adding up the time it took to keep up with grades, attendance and staffing, it was taking a lot of attention away from educating the kids," says Linda Mainord, former director of Information Technology, Memphis City Schools. "And since other school districts around the country were taking advantage of modern educational tools, our limitations were putting our students at a disadvantage for the future."

The district clearly had to find a way to add the efficiency of electronic systems and realtime information to its widespread physical facilities so that it could meet its schools' educational and administrative needs. Because of budgetary constraints, MCS needed to find a system that would not require a large initial investment—one that would be easy to maintain and allow it to be more responsive to the educational needs of students and teachers. By doing so, it would be able to continue delivering the level of education to which it was committed. "The key word in education today is accountability. We have a commitment to account for the progress of every child and to give that child the best education possible," says Mainord. "With new online systems in all our schools, we expect to be able to deliver on that promise."

Serving every child better

To achieve its goals, MCS chose an online network solution that empowers students, teachers and administrators with instant access to educational information. Reaching all the schools, the new learning system has replaced MCS's manual procedures with realtime access to student performance information, attendance records and easy lesson-planning tools. Students have access to subjects that would ordinarily not be taught because of light demand, such as

Russian language courses. They also have the benefit of new multimedia programs on technology and sciences that will strengthen their ability to compete for higher education and jobs. Eliminating mountains of paperwork, principals can easily transform online information into electronic reports that are circulated through the network. And because it has a managed hosting solution, Memphis City Schools doesn't have to worry about infrastructure maintenance, staff training and system resilience.

"When we look around at the school district today, we see a very different picture than we saw before we had our outsourced solution," says Mainord. "We can give specialized attention to students who need it, without moving them around or taking resources away from other students. Teachers and administrators simply have more time to devote to education. We've used current information technology to make sure that the participants in the educational process have the tools they need."

Stellar management services without burdensome costs
Seeking ways to acquire and maintain a multimillion-dollar wide area network (WAN) for its many students and employees, MCS decided to apply for federal government funding under the Telecommunications Act of 1996. The government paid approximately 90 percent of the cost, but the district still needed to bear the cost of monitoring and maintaining the network.

"Our network is in every location, every school building and every administrative building," says Mainord. "You can't just put an infrastructure like that out there. You have to have a way to control it and ensure its stability. If you don't have the necessary monitoring devices and software components in place, there's no way to do all that. So we decided that we would partner with a technology vendor and purchase the systems we wanted on a pay-as-you-go basis, like a utility."

Memphis City Schools approached longtime technology vendor IBM, which assisted in designing and implementing a network that provides high bandwidth transmissions and Internet access, while integrating the school's telephone systems and video distance learning materials onto the same network. For network monitoring and management, IBM Network Services developed a hosted support solution that provides state of the art network management capabilities.

Key Components

Software

• IBM WebSphere® MQ

• IBM DB2® Universal Database™

• IBM Tivoli® Framework

Servers

• IBM @server® xSeries®

• IBM @server pSeries®

Services

• IBM Network Services

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IBM @**server** xSeries and pSeries machines host the solution, while IBM DB2 Universal Database, IBM Websphere MQ, IBM Tivoli Framework and other Tivoli monitoring software from IBM control backups and network performance. "It's absolutely crucial that our network have 99.999 percent availability since we've shifted a great deal of our day-to-day operations to the online environment," says Mainord. "And because we pay only a monthly fee, we can afford tools like Tivoli software to ensure the high availability of our network services."

Memphis City Schools was one of the first school districts to buy from IBM. "That was a time-clock," says Mainord. "Eventually we got into the habit of turning to our IBM account team to brainstorm ideas for solving problems and using budget resources most efficiently." It was a natural outcome of this relationship for the district to discuss managed hosting with IBM Network Services, which built an open-standards-based operating environment to provide the schools with the most economical service.

More time to teach
As a result of the IBM Network Services solution, the Memphis City Schools district has been able to put better resources into its schools. Principals can produce reports and plans in a matter of 30 minutes now, as opposed to two weeks. That leaves more time for closer supervision of teachers and better management of the educational process.

The district has also saved itself the cost of adding 13 IT technicians to manage the network internally, at an estimated yearly cost of US$700,000 plus training. "I look for ways we can improve our efficiency and provide services to the schools to help them better carry out our educational objectives," says Mainord. "Because of the on demand environment that we enjoy thanks to IBM Network Services, we can keep quality educational resources flowing into the schools."

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