

Mahoning County, Ohio Information Technology Department



Digital transformation has enabled the entire county government, from the dog warden to the courts, to better serve constituents.

Company description

Mahoning County is located on the eastern edge of Ohio at the border with Pennsylvania. It has a total area of 425 square miles, and as of the 2010 census, its population was 238,823. The county seat is Youngstown.

In Brief

Challenges

- Eliminate application slowdowns caused by backups spilling over into the workday
- Automate remaining county offices that were still paper-based
- Extend use of data-intensive line-of-business applications such as GIS

Solution

- Riverbed® SteelFusion™ Core
- Riverbed® SteelFusion™ Edge

Benefits

- Significant cost savings and simplified maintenance and other IT operations by replacing remote office infrastructure with SteelFusion Edge appliances
- IT staff no longer has to travel to remote offices to maintain equipment
- Backups no longer hamper application performance; performance is good at all sites, even where it was slow previously
- More efficient use of data-intensive applications such as GIS and other core business applications
- Offices that were paper-based have been upgraded to digital processes

Drowning in data, with backups killing application performance

Mahoning County's IT Department, led by County Auditor Ralph T. Meacham, and IT Director Jacob Williams, supports 50 county offices and departments operating in 20 locations. The staff of 10 provides and maintains all of the information technology the county's 1,800 employees need to do their jobs.

This includes applications such as the Common Pleas & Probate Court Case Management System, Sheriff's Jail Management System, Juvenile Justice Courts Systems, Dog Kennel Management and Licensing, Building Permits, Highway and Sanitary Engineers Systems, and Developmental Disabilities Case Management Systems, geographic information systems (GIS) systems used by a number of offices, the 911 system used by Emergency Management Services, and the county-wide ERP/payroll and tax accounting software used by the County Auditor and Treasurer. This is a very partial list. As Meacham says, "We are the IT arm for the entire county." In addition to maintaining the applications, the IT team manages the network, servers, backup and DR systems, etc.

IT services were introduced to the county in the early 2000s and were originally delivered from servers located at eight different sites across the county to provide the optimal computing environment for the majority of users. As the volume of each office's data grew, backing it up to a central location became a serious problem.

"Over time we accumulated mass sets of data that became our ball and chain," says Williams. He explains that the majority of the data that county agencies deal with is a public record or potentially a public record, and as a result, nothing can be deleted. "About a year and a half ago we started to realize that there's not enough time in the day to get all of the backing up done," he adds.

It had gotten so bad that some backups that started on a weekend, and should have been finished by Monday morning, didn't complete until Tuesday or Wednesday. When backups spilled over into the workday, application performance was terrible. At times it got so bad that court employees, for example, switched back to paper processes until performance improved. This essentially doubled their workload since they had to enter the information into the application eventually.

Williams tried adding bandwidth. He initially had T1 lines connecting the remote sites to the data center. "So we went to five-meg and 10-meg connectivity and it became a cycle of needing more and more bandwidth," he recalls. With the data volume growing exponentially, this was an expensive, and ultimately futile, strategy.

Application performance wasn't the only problem related to backup-induced network saturation. As long as the problem persisted, Williams couldn't automate some of the offices and departments that really needed automation because he couldn't risk putting more data onto the already burdened network. A digital case management system for the dog warden's office is a good example. "They were still paper-based and we really needed to bring them into the twenty-first century," Williams notes. "We needed to come up with new ideas and new ways of delivering a good computing environment, while at the same time covering the issue of data security."

SteelFusion enables a county-wide digital transformation

After doing some research, Williams realized that some of the newer approaches to edge (remote office) infrastructure might solve his problems. “I realized that maybe we’d be better off bringing everything to one location, our data center,” he says. “If we could get good-enough speed over the line, we could run these services for our user base from our data center.”

After a 60-day trial of one solution (that should have fit nicely into the county’s Dell infrastructure), Williams almost abandoned the idea when it didn’t deliver what he needed. Then he learned about Riverbed® SteelFusion™, a Software-Defined Edge (SD-Edge) solution that delivers a unique combination of infrastructure consolidation and local application performance, both delivered with a unique capability for data protection. It would allow the county to converge remote storage, server, backup and networking infrastructure into one small appliance, while securing 100% of its data in the data center and delivering application performance as if the data resided locally, and enabling remote IT operations to function as though there were no distance about which to worry.

Following a successful trial run at one location, Williams deployed a SteelFusion Core appliance in the county’s data center and SteelFusion Edge appliances at nearly all of the remote sites. (The deployment is about 90% complete as of this writing.) At the remote sites, the SteelFusion appliance—“the size of a pizza box,” Williams notes—replaces the entire previous IT infrastructure, which no longer has to be cooled or maintained, for a significant cost savings. Another advantage is that the IT staff, which has always been centralized, no longer has to travel to the remote sites to maintain equipment.

Since the SteelFusion deployment, the problem of backups degrading application performance has been eliminated since all data is now stored and backed up centrally. But that is just the beginning of the benefits of the SteelFusion solution. Most importantly, Williams has been able to automate offices that were previously paper-based, and expand the use of IT in places that already had it.

Take the office of the dog warden. With the newly freed-up network, Williams was able to upgrade that office to a digital case management system, making things easier for the staff as well as providing surprising insights for law enforcement. With access to the dog warden’s data, law enforcement found a correlation between high numbers of dog bites and incidents of domestic violence—an insight that would have been nearly impossible back when that data was kept on paper.

Another great example is the growing use of the county’s geographic information system (GIS), one of the best in Ohio, with high-resolution aerial images covering the entire county. These images are so detailed that engineers can zoom in on a single manhole cover. Previously, however, they were so data-intensive that they were virtually unusable except by people in the office where the server resided. That is no longer the case, and departments such as Sanitary Engineering and the Auditor’s office now take advantage of that information.

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Ralph T. Meacham
County Auditor, Mahoning County

Meacham says it’s accurate to say that by deploying SteelFusion, the county government is better able to serve its constituents. And to him, it’s important that he was able to enable this transformation in a way that was painless for the user base. “When we can do things from an IT perspective behind the scenes, and it results in things being better and faster for the users, transformation can happen real quickly,” he says.



About Riverbed

Riverbed Technology, Inc. enables organizations to modernize their networks and applications with industry-leading SD-WAN, application acceleration, and visibility solutions. Riverbed's platform allows enterprises to transform application and cloud performance into a competitive advantage by maximizing employee productivity and leveraging IT to create new forms of operational agility. At more than \$1 billion in annual revenue, Riverbed's 28,000+ customers include 97% of the *Fortune* 100 and 98% of the *Forbes* Global 100. Learn more at [riverbed.com](https://www.riverbed.com).