Case Study: Fulton County School System

A 100,000-student school district employed PrinterLogic's professional services organization to eliminate problematic print servers and streamline Active Directory deployments.

Challenges

- Having rapidly expanded from one print server to seven, the organization was all too aware of the snowballing complexity of conventional print-management solutions.

- Restrictive rights management created a long chain of specialized support personnel, which prolonged ticket-based printer-installation requests.

- Department-specific printing requirements called for the ability to print securely as well as conveniently select destination printers on a per-job basis.

Results

- Fulton County Schools took advantage of PrinterLogic professional services to achieve a smooth, enterprise-scale implementation and continue to apply best practices.

- Role-based access control expedited the support process by eliminating GPOs; the self-service portal empowered end users to carry out printer installation themselves.

- By enabling PrinterLogic's native pull-printing functionality, dual printing needs were addressed through a single feature.

The Fulton County School System is the fourth-largest school district in Georgia. Established in 1871, the district now serves nearly 100,000 students each academic year across an area that extends 70 miles from north to south. It employs upward of 14,000 individuals in approximately 60 elementary schools and a combined total of nearly 40 middle and high schools, not to mention several charter schools and administrative buildings.

With such a massive student base and geographic coverage, the district is no stranger to challenges. There are considerable socioeconomic disparities between many of its service areas, and the City of Atlanta, which is both the county seat and the state capital, exerts an unusually strong influence on the surrounding county. Fulton has historically met these issues head-on, garnering a reputation for being a highly responsive school district that is wholly committed to the success of its students.

From an IT standpoint, Fulton County Schools faced a perennial challenge in printing. Managing the fleet of 3,600 printing devices—a broad mix of brands and models, legacy and newer devices—and 60,000 workstations became close to impossible using traditional print solutions.

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"At one point, years before we started down the PrinterLogic path, we were direct IP. Eventually, we changed the networks in every one of our buildings to a centralized print server. Initially it was just one server, but we then realized very quickly that wasn't going to cut it. By the end, we had seven print servers with thousands of printers serving various groups and performing all sorts of functions," explains Kenny Kosslow, an infrastructure coordinator for Fulton County Schools.

"We were getting a lot of performance issues, and we couldn't just reboot a print server in the middle of the day for one printer. We were also having drive-space issues because people in multiple locations were spooling up large jobs," he says.

"And when it wasn't working, we heard about it. I remember trying to do something on a printer and there was a line of people: 'I need these printouts now!' Even as we move to a more digital environment, printing is still a huge requirement."

Around 2014, having added six virtual print servers over a four-year period, Fulton County Schools decided that the current print-management solution was too costly, too unreliable and too resource-intensive. The organization researched alternatives and implemented PrinterLogic as a proof of concept.

"We started on a small scale," says Kosslow. "We rolled with that at one or two locations, and then we worked with the local support personnel to see if it was a viable solution for us. After about a year and a half, it seemed like a good move for us to begin deploying PrinterLogic on a large enterprise scale."

Challenge #1—Achieving the Smoothest Possible PrinterLogic Implementation

Given the complexity and scope of the organization, Fulton County Schools wanted expert one-on-one advice on how to achieve the smoothest deployment of PrinterLogic across the district.

"On these types of implementations, I'm big on having a single point of contact," says IT Project Manager Donald Brown, who was responsible for overseeing the PrinterLogic roll-out. "We wanted someone who was consistently there. Someone who knew the solution inside and out, who was familiar with what we were trying to do, with our deployment methods as well as our environment."

> "PrinterLogic centralized our way of printing and made it a lot more efficient. The professional services really triggered us to seriously look at the ways we were printing and deploying printing capabilities at various schools and facilities."

Above all, Fulton County Schools sought to avoid the snowballing complications that are common with conventional print-management solutions. The organization's negative experience with a rapid and undesired expansion from one problematic print server to seven was a perfect case in point.

"We didn't want to continue on the same path we had been going down," says Brown.

Solution

Like many large organizations, Fulton County Schools opted to leverage PrinterLogic's professional services, which provides tailored, personal guidance from a dedicated representative at every stage of a PrinterLogic implementation—from early planning and design to the initial roll-out, then on to training and ongoing support.

"Our rep gave great direction and advice," he says. "We were still looking at some of the same challenges [using direct IP] that we had in a print-server environment, and as we were rolling out PrinterLogic to each location, we were able to eliminate a lot of those. Most of that was based on his recommendations on how we should deploy it."

Brown says that direction from PrinterLogic's professional services had an unexpected side benefit: Fulton County Schools was able to "clean up" its Active Directory and streamline printer deployment through organizational units (OUs).

"Without professional services, I can guess that the implementation would have taken us longer, that's for sure—with some missteps along the way, because we wouldn't have known the best practices."

Challenge #2—Eliminating GPOs and Empowering End Users in Routine Printer Management

"A lot of the challenges that we had prior to PrinterLogic came down to restrictions on who could even create a new printer object. For example, if a school went out and purchased a new printer and wanted it installed, they had to submit a service ticket and do a bunch of waiting. Then somebody from our infrastructure team would have to

go in and add a printer to the print server, add permissions, then verify that it worked," explains Kosslow.

Group Policy, although a common rights-management system, therefore became an obstacle rather than a tool. The organization encountered similar problems with printer deployment, as end users who needed access to new printers were passed along a specialized support chain.

"Most of our users didn't know how to map a printer," he says. "If someone was doing online testing and needed a different printer, somebody would have to go in and move those computers to a different OU, reboot, make sure that the correct printer was showing up for the application that they were testing, that sort of thing."

Solution

PrinterLogic's role-based access control eschews the need for Group Policy objects (GPOs) while allowing authorized IT staff to make printer deployments based on specific Active Directory (AD) criteria. This gave Fulton County Schools the ability to retain its OU-based printer deployments and simultaneously streamline its support process.

"This way, we don't have to go into Active Directory and make a bunch of delegation changes for who can do what. Now we can just do that from a centralized management point," Kosslow says. "How we handle things now is that end users submit a service-desk ticket. It then goes to the appropriate PrinterLogic admin, and they can go into the system and add it. The turnaround is much quicker, and it involves only one person instead of multiple people."

Additionally, PrinterLogic's self-service installation portal has empowered the organization's end users to identify and install printers themselves using floorplan maps and simple point-and-click. This has been particularly helpful for the small but important pool of roaming personnel.

"Self-service is the majority of our deployments," says Brown. "Either we send an e-mail link that teachers need to click on, or they visit the portal page, where they can see any printer that's available to them, but only for the school they're located in. The user-friendliness is really good."

Challenge #3—Enabling Convenient Yet Secure Pull-Printing Functionality

Fulton County Schools' broad variety of end users naturally comes with a broad variety of printing requirements.

"In our administrative office, each floor has four to five printers, and they're usually positioned at each end of a row of cubicles. So, if you're in the middle, you have to decide which way you want to go to get a printout," Kosslow says.

"And, depending on their department, sometimes our users are printing sensitive documents. Maybe they contain financial information. Maybe they have user information that's confidential. Maybe they're getting ready to act on an HR case. But they don't always want to stop what they're doing to go pick up a printout."

The organization came to the conclusion that pull-printing functionality would meet both needs. It would allow users to execute a print job at the most convenient printer, regardless of where the user happened to be. It would also introduce a secure methodology to the printing process.

Solution

PrinterLogic's print-management solution offers an optional pull-printing feature that splits the customary print process into two intentional steps. Users can print their documents as they normally would, but the job does not execute immediately. Instead, by using an authorization mechanism like an ID-card reader or PIN entry, the user then releases the job for printing once they are physically present at the printer.

"Pull printing helps us with that added security. Users can print without having to stop what they're doing, then go to the printer and collect their printout when they're ready. It's a similar experience to private printing but a little easier to set up," says Brown.

"Here in the IT department, we have a combination of badge-release printing and the more traditional PIN method. So far, people really like that ability. For us, it's been largely set it and forget it."

Conclusion and Savings Summary

"At the end of the day," says Brown, "PrinterLogic centralized our way of printing and made it a lot more efficient. The professional services really triggered us to seriously look at the ways we were printing and deploying printing capabilities at various schools and facilities."

What's more, Brown was able to achieve one of his chief directives as project manager—that is, decommissioning unnecessary servers. That has had more than one positive effect.

"PrinterLogic ended up helping with our VM environment, because when printers were having issues for whatever reason, they would then impact our VM host, and it had that kind of a cascading effect," he says. The elimination of those issues has reduced the number of support tickets, lifted the day-to-day burden on IT staff and led to more satisfied end users. "We could probably measure ROI in terms of time spent," adds Kosslow. "PrinterLogic has made our printing lives by and large much easier. AD changes, print-server maintenance—all that stuff's gone. Our de facto print guy can concentrate on more important things instead of having to create printers and DHCP reservations and things of that nature. He can focus solely on what he needs to focus on."