

Moving Courts to the Cloud

How software-as-a-service simplifies modernization



Introduction

As agencies move mission-critical applications to the cloud, court and justice leaders are learning that deploying their own cloud solutions often generates new infrastructure challenges, such as orchestrating the migration, managing clouds, ensuring disaster recovery, and updating software and keeping it secure.

Software-as-a-service (SaaS) — software solutions that are fully managed by a vendor and provided as a subscription service — avoids these challenges and helps courts upgrade systems, launch new services and scale services to meet growing demand.

For most people, experiences with the courts are “either the worst day of their life or the best day of their life,” says John Anderson, chief deputy of operations for the Okaloosa County Clerk of Court in Florida. “[The cloud] is another tool to provide better service to our employees so we can serve the public.”





The SaaS Shift

Many courts and justice agencies have taken a cautious approach to cloud adoption.

One reason for that is the sprawling scope of justice systems. “They are very complex,” says Stephen Stehling, strategic account executive for Tyler Technologies. “When you think about how the criminal justice system works, it’s an end-to-end process that requires multiple applications to manage. It’s challenging to combine them to get a holistic view of the data. A lot of large agencies have 40 to 50 servers.”

Compliance is another issue. Justice systems must protect sensitive data, which can include personally identifiable information (PII) and criminal convictions, as well as confidential records about family adoptions, mental health issues and more. In addition, systems must safely integrate with other parts of the justice ecosystem — from courts and law enforcement to prosecutors and parole agencies.

Given these factors, agencies traditionally have preferred on-premises solutions. “There’s been a little bit of hesitation over the concern of whether everything is going to continue to run securely if systems move to the cloud,” says Shannon Hydu, Tyler’s director of client services.

That’s changing. Tyler Technologies, for example, will soon have more than 100 court customers — ranging from individual courts to statewide systems — in the cloud on the secure Amazon Web Services (AWS) platform. Most of the company’s public-facing solutions, such as e-filing and signature tools, are now cloud-native.

Much of the shift to cloud stems from the growth of SaaS offerings for courts and justice agencies. SaaS has emerged as a more practical and cost-effective model than individual agencies migrating applications and data to the cloud and managing these deployments themselves.

“Self-deployed solutions give you some benefits of the cloud, but you still have the responsibility of managing that system and supporting it,” says Terry Derrick, Tyler’s general manager for courts solutions. “The cost profile could become substantial to get the right expertise, the right skills and the redundancy needed to run a 24/7 shop.”

Conversely, the SaaS model allows agencies to leverage best-of-breed expertise in cloud security, redundancy and disaster recovery provided by technology partners and secure cloud infrastructure providers like AWS — all at considerably lower cost.

SaaS Defined

Like other cloud-based models, SaaS eliminates the need to install and run applications on agency-operated servers. It streamlines maintenance and support because applications, storage and networking are managed by a software provider.

SaaS providers offer efficiency and cost savings by managing multiple clients on a single secure cloud platform. SaaS applications can be scaled to meet changing needs and seamlessly updated to offer new capabilities and address evolving cybersecurity threats. They also integrate with the growing number of public-facing applications in the justice space, such as self-filing solutions.

“Constituents expect these services to be online. They don’t want to drive to the courthouse,” says Jon Running, Tyler’s senior director of cloud strategy.

Brandon McEachern, IT director for Shreveport City Court in Louisiana, agrees. “It’s almost your duty to push the court forward,” he says.

SaaS solutions can also simplify data integration across the criminal justice ecosystem, giving agency leaders and policymakers longitudinal information for decision-making. “You can get insights into data and metrics that you have never been able to in the past,” Stehling says.

For example, data analysis can reveal demographic trends, identify which law enforcement agencies or officers are likely to have cases accepted or diverted by prosecuting attorneys, or track how long it takes to resolve different types of cases. “As you look through each segment, you find out where the bottlenecks are and start working to eliminate them,” Stehling says.

In addition, SaaS solutions let agencies devote their limited IT staff and resources to other projects and priorities. “It’s not losing control. It’s having someone provide that level of service so you can focus your resources on the objectives you’ve always wanted to tackle,” Derrick says.

DeKalb County Courts Move to the Cloud

Adopting a cloud-first strategy was a priority for John Matelski when he became chief innovation and information officer for DeKalb County, Georgia, in 2012. Matelski viewed stronger cybersecurity as a key benefit of cloud adoption, but county courts and justice agencies were skeptical.

“The courts were less willing to just jump in. Their information and data are so critical — one mistake could mean a case gets thrown out of court,” says Matelski. “County IT had to convince them that cloud vendors could provide a higher level of security than we could ever hope to in an on-premises environment.”

After other county systems were migrated to the cloud — and an attempted hack of county systems by a foreign entity in 2021 provided a reminder of the threats they face — justice stakeholders bought in. In 2023, DeKalb migrated its entire suite of Tyler justice

applications, including courtroom, corrections and pretrial software, to a SaaS solution. County IT staff worked closely with the courts, sheriff’s department, district attorney’s office and others to bring systems together on the Tyler platform.

“At the end of the day, we wanted to get to a place where we have one system and get rid of third-party integrations wherever possible,” Matelski says.

Since completing the transition, DeKalb’s justice systems haven’t experienced any downtime, and agencies have reported improved connectivity and availability. Secure offsite access to justice solutions is vastly improved, and county IT staff are focused on continuing the county’s cloud-first journey.

“We had at least 10 servers we had to be managing, maintaining, upgrading and patching,” Matelski says. “We don’t have to do that anymore.”

Factors to Consider

Agencies need to consider a range of factors as they transition to the cloud:

✓ Infrastructure

Along with adequate internal network capacity, agencies need bandwidth to connect to SaaS services. Initially many agencies were concerned about connectivity, particularly in rural areas. But experience has shown that most agencies have adequate bandwidth for cloud solutions.

Agencies also need to understand the remaining service life of their existing infrastructure hardware. The return on investment for cloud adoption is highest when your current systems are approaching end of life.

✓ Staff expertise

SaaS solutions reduce demands on in-house IT staff, an important benefit for agencies struggling to find and keep staff to support on-premises systems.

“Can you maintain staff that can manage services or keep up with optimizing databases?” Stehling asks. Another important question is whether your agency has dedicated in-house IT staff capable of responding to threats and recovering systems and data in the face of a breach.

✓ Backup and disaster recovery

Cloud services strengthen resiliency through redundant hosting in multiple geographic locations. This is particularly important for agencies in areas prone to natural disasters.

✓ Regulatory compliance

On-premises systems may be out of compliance with Criminal Justice Information Services (CJIS) rules and other important security policies. For example, CJIS

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requires agencies to secure on-site server rooms with biometric entry systems.

Agencies need to assess their ability to keep pace with these mandates versus partnering with compliant cloud providers. “Can you sustain existing systems amid ongoing reductions in staffing levels and budgets?” Stehling asks. “If not, can you consider alternatives to better position you to do that?”

✓ Cost

Government leaders point to the cost savings that come from moving to the cloud and SaaS models. “The benefits have become clearer as the costs have come down and are so much more competitive,” says John A. Matelski, chief innovation and information officer of DeKalb County, Georgia. “When looking at a total cost of operations model, we are saving money.”

Calculating the true return on investment can be difficult, particularly for agencies that are new to cloud-based models. But the benefits are clear. For Matelski, consistent annual cloud costs have eliminated large capital funding requests that could be tabled and delayed for years. “Being able to have a number that is predictable and sustainable over a five-year budget plan is really helpful,” he says.

The pricing models for SaaS services may look different — and perhaps seem more costly — than on-premises or self-deployed cloud solutions. But it’s important to factor in expenses for overhead, security, management, scalability and 24/7 service. “When you do a true apples-to-apples comparison, some of the misconceptions are swept away,” Derrick says.

Public sector experience

Your partner needs to understand unique government requirements. Find a vendor with proven experience working with agencies like yours.

Financial stability

Make sure your vendor has the resources to continue investing in its SaaS solution and the underlying infrastructure.

Redundancy and disaster recovery

Look for 24/7 availability, geographically dispersed data centers, and compliance with CJIS and other security requirements. Find out if there are additional costs for these services.

Support

Vendor support is crucial. Look for capabilities like continuous monitoring to identify issues before they affect systems. Also, clearly define shared support responsibilities.

Selecting a SaaS Vendor

Once you decide to adopt a SaaS solution, the next step is to select a vendor. Consider these factors when choosing a SaaS partner.

Scalability

Make sure your vendor can add computing capacity to meet unanticipated or changing needs. Be aware of the pricing structure for such changes.

Data Migration

Understand your vendor's strategy for migrating your data to the cloud. Be aware of any extra costs involved in this move.

Security

Understand your SaaS vendor's security posture and services, as well as the security capabilities of their cloud infrastructure providers.

Integration

Look for a SaaS solution that includes secure integrations with your agency's other software applications.



What's Next

Migrating to SaaS solutions provides courts and other agencies multiple benefits, including better security, integration, and insights into data and metrics that can improve operations and eliminate bottlenecks. These capabilities enable courts and justice agencies to better serve their constituencies.

"The end result is the public's going to have more access to the criminal justice system," McEachern says. "That's ultimately why we're here."

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