On track to solving more crimes, with the Microsoft cloud

"We chose Microsoft because it has a strong commitment to the criminal justice and public security market in which we operate, and Azure Government met all our scalability and security requirements for a cloud solution."

Frank Barret, Director of Cloud Services, MorphoTrak

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MorphoTrak, a global provider of biometric solutions to help crime scene investigators match fingerprints and faces to criminals, needed to respond to customer demands for a cloud-capable version of its traditionally on-premises Automated Biometric Identification System (ABIS). To meet the need, the company moved ABIS to the Microsoft Azure Government cloud, giving police departments a flexible, secure solution that solves crimes faster.

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Business Challenge

At a typical crime scene, you'll find investigators and forensics professionals closely analyzing every square foot of space. They're looking for latent fingerprints—marks left behind at a scene but not immediately visible. And when investigators find those prints, chances are good they'll use the MorphoTrak Automated Biometric Identification System (ABIS) to process them, in hopes of matching the prints to a criminal's fingerprint record. "Our law enforcement customers have limited time and resources, and our systems make latent print processing fast and efficient," says Frank Barret, Director of Cloud Services at MorphoTrak.

MorphoTrak is the global leader in fingerprint and facial recognition systems for police agencies, owning more than 50 percent of the U.S. market. The company's ABIS solution is based on a biometric technology engine and database, designed to help investigators identify criminals faster.

While the company has long been successful, it recently needed to address new customer needs. "More and more of our customers are asking us for a cloud version of our solution," says Barret. "One of the reasons for that is a need for disaster recovery capabilities. Many police agencies cannot

afford an on-site disaster recovery solution." MorphoTrak also saw the opportunity to more easily scale its solutions by taking advantage of the cloud. "By moving to the cloud, we knew we would provide greater value to our customers, with disaster recovery, the ability to scale up and down, and an evergreen ABIS that always offers the best and latest technology," Barret says.

Solution

Once it made the decision to develop a cloud-based ABIS offering, MorphoTrak started searching for the right technology. The organization's search led it to Microsoft Azure Government, a government-focused cloud which offers hyper-scale computing, networking, storage, and identity management services, as well as security capabilities. Azure Government also provides a contractual commitment to the FBI's Criminal Justice Information Services (CJIS) security policy, FedRAMP, and other government compliance standards.

"Our customers deal with sensitive criminal justice data every day, so we were looking for a cloud provider that complied with CJIS requirements," says Barret. "We chose Microsoft because it has a strong commitment to the criminal justice and public security market in which we operate, and Azure Government met all our scalability

MorphoBIS fingerprint examination

Microsoft

and security requirements for a cloud solution. Security was of paramount importance in our decision to work with Microsoft. FedRAMP accreditation, the support of CJIS security requirements, and the additional security measures that come with Azure Government will really make a difference for our customers."

Working with Microsoft, MorphoTrak developed an Azure Government–based version of its ABIS solution. This new solution will be used by law enforcement agencies of all sizes, to process forensic data. For example, the cloud ABIS will be used to process the fingerprints and photographs of people who have been arrested. The difference in procedure will be transparent to the users—it will be just as if they were using the on-premises ABIS. Once fingerprints and photos are taken and submitted online to the cloud version of ABIS, the system automatically checks the individual's

identity against a biometric database and produces search results in seconds. MorphoTrak also plans to offer a Microsoft hybrid cloud ABIS solution, designed for on-premises customers who want better disaster recovery capabilities but aren't quite ready to migrate fully to the cloud. "We will use Microsoft virtualization technologies for our on-premises deployments, and in the event of a disaster, our customers will be able to switch over to an Azure Government instance of the solution," says Barret.

Benefits
By offering an Azure Government cloud-based version of its ABIS solution, MorphoTrak can easily grow to meet customer demands, help police agencies solve more crimes, and provide cost-effective disaster recovery capabilities.

MorphoBIS facial recognition

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Solving major crimes through scalability and security

By taking advantage of the scalability and security of Azure Government, MorphoTrak can help its customers tackle major crimes more easily. "We essentially have unlimited extensibility for our ABIS solution by hosting it on Azure Government," Barret says. "That means police departments can work more easily to solve major crimes or terrorist attacks, because the system can expand to support both local investigators and experts from around the U.S. Forensics professionals and investigators do not have to travel to the crime scene to use a closed-LAN system. Instead, they can be granted highly secure access to a central, cloud-based system for collaboration."

Offering fast access to computer, network, and storage resources

Using the cloud, MorphoTrak can now provision resources for customers faster than before. "When our customers need to increase system throughput, database size, or number of users, the system will adapt instantly with Azure Government," says Barret. "Previously, if customers wanted to expand their database or increase their throughput, they would have had to go through lengthy system upgrade planning and procurement processes, have the hardware shipped, and then install it. It was a long, tedious process that can now be eliminated, saving time and resources, and enhancing agency agility."

Enabling cost-effective disaster recovery

The company is also able to offer disaster recovery capabilities, no matter how large or small the customer's budget. The flexibility of the cloud solution means increased system throughput without an increase in system downtime, which translates into increased system availability. In addition, the geo-synchronous data replication in Azure Government eliminates the risk of downtime or data loss in the event of a natural disaster, as the system's redundant version will be situated at least 500 miles away.

Growing the business

MorphoTrak anticipates rapid adoption of its cloud-based ABIS solution. "Our plan is to migrate our existing customers to the cloud as they renew their systems, and that will help us grow our business in the long term," says Barret. "We will also increase customer loyalty, because we can continuously upgrade our customers' technology using the Azure Government cloud. And in the very near future, we will be able to meet our customers' needs for additional biometric functions. We see a tremendous potential for growth with Azure Government."

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