Video Security Provider Offers Customers Cloud-based Security and Reliability

Customer Profile
From its base in Montreal, Genetec and its more than 400 employees provide unified IP security solutions to a global customer base that spans more than 80 countries.

Business Situation
Genetec wanted to augment its offerings with a cloud-based solution to make its services more attractive for small to medium-sized businesses lacking the budget or space for on-premises deployments.

Solution
The company developed a cloud-based solution, creating its Stratocast application for deployment on the Windows Azure Platform.

Software and Services
- Windows Azure
- Windows Azure Platform
- Windows Azure SQL Database
- Microsoft Visual Studio 2012

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Pierre Racz, CEO, Genetec

Montreal-based Genetec has developed a global customer base with its enterprise grade Security Center solution for unifying and managing images from an organization's video security, access control, and license plate recognition cameras to help reduce theft and other crimes. To make its services more affordable to smaller organizations, the company decided to create a cloud-based offering, but required a platform that provided the same high level of security and reliability as its Security Center. Genetec created its Stratocast solution built on the Windows Azure Platform. The Azure-based offering provides Genetec with a game-changing offering for small to medium-sized businesses that is more affordable, provides strong security, robust reliability, and includes a deployment model that doesn't require capital expenditure for traditional on-site servers.

Situation

For over 15 years, Genetec has been a leader in protecting organizations with its world-class unified Internet Protocol (IP)-based security solutions. The company provides its global customer base with IP-

based video surveillance, access control, and video license plate recognition solutions—all integrated into an on-premises application called the Genetec Security Center.

Genetec works with partners on six continents to help provide safer, more secure physical environments for organizations in more than 80 countries. Customers range from Avis Budget Group, to the City of Calgary, to the University of Brussels. The company's safety-critical video surveillance systems are used by some of the world's most traveled airports, largest retailers, and many Fortune 500 businesses.

As part of the company's commitment to developing innovative concepts to unify business and security systems, Genetec wanted to provide an affordable solution for small and medium-sized businesses (SMBs) so they too could benefit from the same technology its enterprise customers were experiencing with Genetec Security Center. After analyzing its options, the company determined that creating a cloud-based offering would provide a more affordable security solution for its SMB customers—a market that typically will have anywhere from 3 to 16 cameras to manage.

Genetec liked the fact that cloud deployment would lower the cost to its customers—eliminating the capital expenditure for on-premises servers for storing video images and image management applications, as well as avoiding the added operational costs involved in having personnel dedicated to systems administration and maintenance of on-premises systems. A cloud-based offering would also help SMBs who simply don't have the space to place (or personnel to maintain) a dedicated server in locations

such as the back of a restaurant, in the storeroom of a retail outlet, or within other SMB environments.

As Genetec considered the best way to host its applications in the cloud, it quickly decided against providing cloud server infrastructure. "We didn't want to get into the business of building our own on-premises server farm service because that isn't our core competency," says Christian Morin, Director of the Stratocast Product Group at Genetec. "We want to focus on creating solid software and building great solutions for our customers."

Genetec needed to find a cloud provider that delivered the same levels of security and reliability to its customers that Genetec provides with its on-premises Security Center deployments. The solution would also have to seamlessly integrate with its own infrastructure and development environment.

Solution

The company deployed a new cloud-based video management software solution called "Stratocast" on Windows Azure, a cloud computing platform and infrastructure. Stratocast provides cloud-based hosting of its video surveillance as a service (VSaaS) offering for storing and managing video data from Genetec customers. Stratocast is built upon Windows Azure Platform as a Service (PaaS) services that enable developers to be more efficient during development and reduce ongoing infrastructure operations management efforts. The solution uses Windows Azure SQL Database for storing relational data and Windows Azure Storage for videos.

"We considered a number of cloud vendors including AWS, EMC, and Dell," Morin says. "We opted for the Windows Azure platform because of the capabilities of the PaaS provided by Azure, the development tools available, and the relative ease of migrating our existing on-premise software to Azure by using these tools. The relationship we have with Microsoft played a huge role as they accompanied us during the migration, providing us guidance along the way."

The company built Stratocast using security development best practices based on Microsoft's Security Development Lifecycle (SDL), a software development security assurance process developed by Microsoft and provided free to the industry to help organizations reduce the number and severity of vulnerabilities found in their product offerings.

Genetec developed Stratocast internally using Microsoft Visual Studio 2012 and Windows Azure. The project took 12 months to complete, with a core team of 12 developers that ramped up to 18 during the peak of the project. Stratocast uses Windows Azure to host its complete VSaaS product including web servers, application servers, and the database tier. Windows Azure Storage service is used for holding terabytes of video images.

While Stratocast was developed for SMBs, the company soon found that its enterprise customers desired the cloud-based product as well. Enterprise customers that had already deployed Genetec Security Center, an on-premises product, saw Stratocast as a scalable solut-ion ideal for extending coverage to branch offices and other locations around the world.

Enterprise Customer
Hybrid Cloud / On-Premise Systems

SMB Customer Site 1
IP Cameras

SMB Customer Site 2
IP Cameras

Stratocast
Multi-tenant/High Availability

Smart Phones & Tablets
Android, iOS, Windows Phone 8, Windows 8 RT

Web Applications
Internet Explorer, Firefox, Safari, Chrome

Alarm Monitoring Central Station
Live Monitoring and Alarm Services

Stratocast provides Video Security as a Service – based on Microsoft's Security Development Lifecycle.

"The strong security and reliability capabilities of Azure and the rest of the Microsoft platform made this an easy decision for us," Morin says. "We developed Stratocast as an Azure application, taking advantage of the entire Visual Studio development framework, to engineer our existing on-premises Security Center application to the cloud."

All of the Stratocast server roles—web servers, application servers, and database— are configured on Windows Azure for automatic failover, so if one piece of hardware fails, the load is automatically shifted to another server. Morin notes: "This automatic failover, plus the maintenance and updates Microsoft continually performs on its Azure platform,

provides our partners and customers with an extremely robust and reliable, platform—including Microsoft's 99.9 percent uptime guarantee for Azure."

Genetec credits the robust offering of the Windows Azure platform and Visual Studio for enabling a swift and efficient development process. "We leveraged many of the built-in services of Windows Azure, such as SQL Database, Azure Access Control Service, and message queues to help us accelerate development," Morin says. "Building on Azure helped us build an application that could scale very elegantly and efficiently."

Benefits

The Windows Azure-based Stratocast offers Genetec and its customers a number of benefits including strong security, robust reliability, support for constant code improvement, and a competitive

advantage for cost and convenience in approaching SMB markets.

Strong Security
Finding a secure cloud platform for Stratocast was a key driver in choosing a cloud provider for Genetec. "In order to safely bring video security data, access control, and video license plate recognition to a cloud-based resource we needed a safe, secure and reliable computing platform," says Pierre Racz, CEO of Genetec. "Based on our research, there was no better cloud provider than Microsoft and its Windows Azure platform upon which to build our video security-as-a-service offerings. Microsoft's cloud-based offering gives our customers the added security Microsoft provides in handling infrastructure updates while creating a secure foundation from which we could build and host our application. We believe that all of this makes Microsoft the most secure infrastructure to build our service offerings on."

Genetec also values the security development best practices of the SDL. "We've integrated the SDL throughout our development of Stratocast, from design to deployment," Morin says. "Security is a top priority for our customers and our business. Developing the software in accordance with the SDL helps mitigate potential threats that could otherwise have been encountered after release."

Morin notes that deploying on Azure, which is managed and regularly updated by Microsoft, enables Genetec to focus on application development. "Our Stratocast customers benefit from our highly secure application running on a highly secure platform," Morin says.

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>
> Christian Morin, Director of the Stratocast Product Group, Genetec

From a sales standpoint, Genetec has found that its cloud-based offering benefits from Microsoft's experience and reputation for trustworthy computing and commitment to security. "Microsoft has a reputation for proactively addressing the security of its infrastructure," Morin says. "Simply mentioning our products are built on Microsoft services helps build trust with our customers. They know that Microsoft understands secure coding, as well as how to run—and secure—a data center."

Stratocast's cloud-based storage provides an added security benefit to customers: video images are stored offsite—in the cloud—meaning that the images are beyond the reach of a thief or anyone else who might otherwise want to destroy or tamper with locally stored images"

Robust Reliability
The Windows Azure platform served Genetec well in providing cloud-based customers with the robust reliability that it

has long provided customers using its on-premise video security solutions. "We already had the building blocks within our enterprise system for creating a highly scalable and reliable system," Morin says. "It was just a question of transferring the scalability and robust reliability of our Security Center to the cloud."

Genetec was attracted by the ability to use the Azure platform to provide redundant failover for every function within its cloud deployment. "Our on-premise Security Center is famous for its reliability, and we wanted the same reliability for our cloud-based systems, which we've achieved with Azure."

Racz notes: "With a 99.9% monthly SLA [Service Level Agreement], automatic OS updates and service patching, built in network load balancing, and resiliency to hardware failure, Windows Azure is ideal for supporting highly-available applications without having to worry about downtime."

Support for Constant Code Improvement
Genetec is committed to continuous improvement of its cloud-based service offering. The company can now deploy Stratocast upgrades in real time—enhancing the customer experience.

"An ongoing challenge with on-premise deployments is encouraging customers to stay current with our application upgrades," Morin says. "Anyone that provides on-premise solutions ends up with customers who are running old lines of code over time, which means they're at increased risk from changes in the threat landscape and not benefiting from the continuous investments we're making in

R&D. They're not getting the greatest value out of their investment, because they're not keeping up-to-date."

With Genetec's cloud-based solution, application enhancements are seamlessly deployed. "This also helps us stay close to the customer," Morin says. "They get to see how we are providing them with continuous improvement."

Competitive Advantages for Cost and Convenience
Stratocast provides a competitive advantage for Genetec, as the company can now approach small organizations that otherwise might not have had the budget—or room—for an on-premises video security solution. Cameras can simply be plugged in as IP devices with all the images stored in the cloud.

"With Stratocast, the owner of a small retail outlet could plug its cameras into our cloud-based system for just $10 per camera per month," Morin says. "They may have only three or four cameras, so it becomes easily affordable for them to obtain an enterprise-class video monitoring and storage solution."

Another advantage is that customers don't have to store a physical server onsite in a closet, under a desk or some other place. "On-premise equipment is prone to being damaged or stolen, and if it stops working, often times this goes unnoticed until a video record is needed, and then it is too late," Morin says. "Stratocast makes it simple to pull-up the day and time required, which is so much better than fumbling through a stack of DVDs or other locally stored media."

The simplicity of the Stratocast solution provides exactly what many of Genetec's customers—of all sizes—are looking for.

"We've been pleasantly surprised by the number of large organizations expressing interest in Stratocast," Morin says. "All of our customers—large and small—are searching for simplicity. They don't want complexity. They don't want to have to become a car mechanic. They simply want to drive the car."

Racz sums it up by saying, "Microsoft's cloud solutions give us the ability to provide our reseller channels and their customers with simple, trustworthy, and turn-key cloud applications that are a game-changer for the security industry."

Summary
Genetec used Visual Studio 2012 and the Windows Azure platform to create a cloud-based application that provides customers with the enterprise grade security and reliability of its on-premises Security Center, while offering the low entry cost of a hosted solution.