

Cloud: The IT Force Multiplier



In this Q&A, **Ryan Reynolds**, Public Safety Strategy Leader for Amazon Web Services (AWS), explains how the cloud can be a force multiplier by enabling law enforcement agencies to streamline processes and deploy crime-fighting tools faster.

What trends are you seeing in terms of law enforcement's use of technology?

We're seeing two main trends. The first is a fundamental change in how agencies consume mission-critical applications. These applications traditionally operated on premises, but software-as-a-service (SaaS) has now become the predominant approach for using records management systems, computer-aided dispatch systems, body worn cameras and other applications. The second trend is the increasing necessity for highly available systems. The accepted availability standard for emergency response systems is 99.999 percent, or five nines; that's about five minutes and 15 seconds of downtime per year. Five nines availability requires geographic distribution of multiple data centers and a level of redundancy that can be too costly and complex for most law enforcement agencies to achieve in house.

What data challenges do law enforcement agencies face as they embrace digital technology?

Storing, managing and effectively using an ever-increasing volume of digital data presents multiple challenges. Buying and maintaining hardware for data storage is expensive and challenging and diverts resources from the core mission of public safety. Then, agencies must manage stored data so it is discoverable, retrievable and in

compliance with legally mandated retention policies. Without a sound digital evidence management solution and automated life cycle retention solutions, data management is nearly impossible. Finally, because data is produced in multiple systems, integrating and normalizing that data so it can be searched, analyzed and shared is challenging. Without a strong data management approach and systems, agencies must access multiple systems to discover data that is in different formats, making it very difficult to integrate and gain insights from that information.

What can agencies do in the cloud that they couldn't do as well – or at all – on premises?

The cloud enables effective, efficient management of data. Storage in the cloud can scale infinitely, so agencies don't have to worry about running out of space or over-buying hardware. In addition, automated data life cycle policies and tiered storage enable cost optimization. The cloud's scalability also makes sure computing resources for mission-critical applications like computer-aided dispatch and records management systems are always available, regardless of time or volume of demand. Security is another important benefit. Because cloud service providers (CSPs) work with customers across verticals and industries that have stringent security and compliance requirements, CSPs have the assets to employ top experts and develop tools and resources that help organizations optimize security and compliance.

Finally, the cloud enables that high availability we discussed earlier. Instead of applications existing in a single data center, availability zones make sure that applications are redundant across geographies. This means even with a massive outage or loss of

infrastructure, applications will continue to function to meet public safety needs.

How can agencies prepare for the adoption of data analytics and media analytics?

Data and media analytics can help law enforcement personnel make better and faster decisions. Because of the volume of data and the amount of computing required, these analytics are very difficult and expensive to host on premises. Having your data in the cloud enables access to resources and tools that aren't available in house. For example, the cloud provides tools to help control the cost of storing and analyzing massive data volumes.

How can technology facilitate collaboration among law enforcement agencies, district attorneys, the courts, detention centers and other justice system stakeholders?

The cloud enables secure and efficient sharing of information. Previously, sharing of evidence or sensitive information required thumb drives, CDs or paper. Because the cloud offers shared infrastructure with highly robust access controls and auditing capabilities, collaborating and sharing data can be much more efficient.

Given the budget cuts ahead, how can agencies invest so their dollars have the most impact?

Spending efficiently and strategically will be critical for municipalities that face reduced budgets in the coming months and years. Investing in cloud infrastructure and services can help agencies take advantage of the economies of scale the cloud provides. For agencies that are due for hardware refreshes, the cloud enables them to avoid large upfront capital expenditures and spread the cost over time as resources are consumed.



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