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in·telligent

Creating a Responsive Cloud Application to Ensure the Delivery of Time-Sensitive Emergency Messages

Situation

In-telligent offers a global communications platform that enables government agencies, municipalities and sports organizations to send targeted, time-sensitive messages. The company's patented emergency alert technology is able to override the receiving devices' silent and do-not-disturb settings to ensure specified individuals, as grouped by geofencing technology, have access to information during critical events.

For example, a government agency can quickly alert the residents of a subdivision who are in the path of an approaching tornado that they are in danger and need to take immediate cover.

In-telligent hosted its communications platform in the cloud on Amazon Web Services (AWS). As the company grew the number of clients it served, it needed help to ensure that the underlying infrastructure of its applications was reliable, optimized, secure and stable. There was no time for downtime when an emergency arose.

> "SenecaGlobal is our partner in saving lives. With them, we've been able to confidently launch our products to flexibly and reliably serve hundreds of thousands of users."
>
> – Al Sutherland, founder and CEO, In-telligent

The SenecaGlobal Solution

In-telligent engaged SenecaGlobal as the primary software product development and management partner for the solution. The company wanted to leverage SenecaGlobal's extensive knowledge and expertise in planning and architecting applications optimized for AWS.

SenecaGlobal tapped its world-class technical talent to plan for scale to reliably support the tens of millions of In-telligent communications platform users and respond seamlessly to more clients as added. The team refactored In-telligent's back-end application programming interfaces (APIs) to be cloud native and created custom mobile applications for dozens of government agencies and sports organizations while reducing the amount spent for AWS services to a small fraction of previous costs.

Alerta Panama — Panama's Official Mobile Alert System

The government of Panama recently launched Alerta Panama — its official emergency communication app — powered by In-telligent. Residents and visitors with Alerta Panama enabled on their mobile phones can receive location-specific alerts directly from the government during emergencies, natural disasters and other time-sensitive situations. During life-threatening events, app users receive audible alerts, even if their phones are set to silent.

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Additionally, SenecaGlobal's AWS Managed Services team made regular architectural tunings to In-telligent's cloud infrastructure to optimize the AWS environment to be as fast, secure, reliable and efficient as possible.

Scalability: The nature of emergency communications means usage and alerts arrive in unexpected spikes. SenecaGlobal enabled AWS to scale services up and down, depending on the actual usage, need and traffic patterns, with the utilization of true on-demand compute needs to avoid waste.

Efficiency: User data must be updated constantly to ensure that messages reach the right people at the right time. By using Aurora read replicas, SenecaGlobal ensured that all SQL connections and queries for database transfers were highly efficient to reduce the amount of time and resources required.

Security: User data was secured with strict identity and access management (IAM) protocols and processes, ensuring end-user privacy and data security. Technologies utilized include security groups, network access control lists (ACLs), public/private subnets, AWS CloudTrail, AWS Config and VPC Flow Logs.

Modularity: Because In-telligent offers its technologies to third parties, the core architecture is built with plug-and-play APIs, enabling existing communications networks to rapidly integrate In-telligent tools.

"As we look to implement the In-telligent solution as the emergency communications platform of many countries around the world, we're confident we can meet the high demands that this will place on our infrastructure with SenecaGlobal and AWS as our partners."

– Al Sutherland, founder and CEO, In-telligent

Results

The COVID-19 pandemic illustrates the need for governments and other organizations to be able to reach individuals quickly, securely and reliably. With SenecaGlobal's help, the In-telligent solution became prepared for compute-usage spikes to support such critical communications to massive recipient lists.

In-telligent became well positioned to take advantage of the scalability, reliability and security benefits of AWS.

- Support for tens of millions of users — Using a combination of cloud-native refactoring and an optimized AWS architecture, SenecaGlobal positioned In-telligent for continued growth by dramatically increasing user tolerance from a concurrent user maximum of several thousand

- Reduced costs — SenecaGlobal reduced In-telligent's compute spend by more than 800% by leveraging microservices and right-sizing the compute capacity needed for low-demand times with higher-demand emergency communications

Serverless architecture for a new application

SenecaGlobal and In-telligent recently developed BuzzBell, a personal messaging platform that In-telligent marketed as a way for friends and family to stay connected during an emergency. The application was architected with AWS Lambda functions, Amazon API Gateway and Amazon Relational Database Service (RDS) to operate on a serverless framework to ensure high availability with no downtime.

About SenecaGlobal

Founded in 2007, SenecaGlobal is a global leader in software development and management. We specialize in cloud-native software development and management and enterprise resource planning (ERP) managed services. The company is an AWS Advanced Consulting Partner and a certified Great Place to Work® (2020).

Contact SenecaGlobal to learn more about how the right software development and management partner can help your organization:

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