Emergency Communications Service Provider Seamlessly Migrates AWS Regions

AWS Premier Consulting Partner, Flux7, Maintains 100% Uptime, Security and Availability

Profile

This emergency communications service provider develops mass notification software that communicates during critical events to keep people safe, informed and connected. Its two-way notification platform keeps employees informed and connected when urgent messages arise.

Business Needs

- Seamlessly migrate to a new AWS Region
- Maintain uptime
- Take maximum advantage of new AWS features

Challenge

This company has a vibrant, growing business that poses a positive challenge: how to keep up with business growth while ensuring security, optimum performance, scalability, global availability and redundancy of its real-time alerting system. With an AWS setup in CA, the team learned of new AWS features made available in the Virginia Region like Lambda and DataPipeline. They were interested in taking advantage of these new features which meant a migration from their AWS CA Region to the VA Region.

Solution

While the company's technology team is very savvy and could have executed the AWS migration themselves, with a thriving business, they had limited time for extra projects and as a result, called in the AWS experts at Flux7. As the communications solution is meant to work in an emergency, the migration needed to be seamless without any downtime. It needed to be flawlessly executed, which meant lots of testing before the move to ensure 100% confidence in the migration.

In addition, the Flux7 team proposed that the migration could be more than just access to new AWS services, but an opportunity to introduce best practices, and create other business improvements. As a result, with the migration Flux7 introduced the customer team to DevOpsSec best practices such as the use of AWS CloudFormation, AWS Service Catalog and Infrastructure as Code for Disaster Recovery.

The Migration Strategy

The migration strategy was to move one component at a time to the VA Region. From here, the team would point to a public DNS in CA, confirm it is working and then move to the next component to move. The key was properly ordering when each thing would be moved. They took a front-to-back approach, front being the customer facing side of the setup. Doing so allowed the team to move lower risk items first, ensuring success before moving higher risk items. For example, the team first recreated all infrastructure components in Virginia, and then tested and migrated the database to Virginia.

CloudFormation & Service Catalog

Flux7 used AWS CloudFormation templates to create two Service Catalog portfolios (one for admins and the other for dev) for infrastructure deployment. Admins have access to create the VPC, IAM Roles and network rails and all other resources needed to manage the network, e.g., OpenVPN, the Jenkins server, and the NAT Gateway. Admins also have access to the application rail, that is all the resources needed to manage the application such as Elastic Load Balancers, Elastic Beanstalk clusters, SQS queues, and SNS. Developers have access to the application rail to deploy resources in their environment. Developers are able to request tools in their environment, and alert admins of the changes needed to be made to production.

This CloudFormation and Service Catalog solution helped achieve a specific goal of the team: one-click infrastructure deployments. Now with the push of a button, developers can create and deploy an environment. Moreover, they are able to do so without depending on IT queues or affecting the production or QA environment. Now all individuals have access to the AWS resources they need to create needed infrastructure.

Disaster Recovery with Infrastructure as Code

Another goal of the communication company's team was to ease its Disaster Recovery (DR) deployment using Infrastructure as code. The company's DR systems were to remain in a separate region, Oregon, where the overall security and DR approach was to be reviewed for improvements. Using CloudFormation templates, Flux7 and the organization's team were able to easily provision and manage the DR infrastructure. In fact, they can easily manage any changes from here and with automation, ensure configurations are set appropriately to avoid against manual errors that could cause security issues down the road.

Benefits

As with many Flux7 engagements, the team assessed, built and set-up the solution, providing the customer with the keys to facilitate the migration themselves. Critically, Flux7 provided all necessary knowledge transfer to ensure the communication company was able to execute and maintain the migrated solution moving forward. The migration was executed flawlessly -- just as expected -- with no downtime or other hiccups that could affect its end users. The team was provisioning within weeks and fully migrated within its goal time frame, quickly taking advantage of the new AWS features in the VA Region.

In addition to the migration, the company has grown its DevOpsSec practices, embracing CloudFormation and Service Catalog for greater automation and self-serve IT as well as growing the flexibility and security of its Disaster Recovery. In all, the communications company's AWS solution is able to take on any emergency its customers could possibly have.

About Flux7

Flux7, an NTT DATA Company, is an IT services firm that helps enterprises reduce the complexities of a new or evolving cloud automation strategy. Agile and DevOps-native, Flux7's robust services portfolio prioritizes a fast path to ROI that meets the immediate needs of technical and innovation teams focused on transformation while forging a secure and stable pathway for security and operational excellence. Learn how Flux7 helps businesses bring solutions to market faster at https://www.flux7.com