

Scottish Fire and Rescue Service

HOW PRESIDIO ENABLED THE SCOTTISH FIRE AND RESCUE SERVICE TO ACCELERATE ITS TECHNOLOGY MODERNISATION JOURNEY.

The Customer

The Scottish Fire and Rescue Service (SFRS) is the national fire and rescue service for Scotland, responding to emergencies in water, at height and on the roads, as well as where fire is involved.

The Relationship

SFRS has a significant technology infrastructure, which helps to ensure its resources are deployed effectively. However, several aspects of this infrastructure needed modernisation to meet evolving operational demands.

The Challenge

The Scottish Fire and Rescue Service (SFRS) has a complex technology stack that supports emergency operations and day-to-day services for a workforce of 7,600 people. Advances in available technology have created opportunities to make this more effective and economical. However, some of SFRS's applications are critical to life-saving services that must be available 24/7/365 – upgrading these safely represents a unique challenge. Moreover, many other technologies contribute to the organisation's life-saving effectiveness. It was imperative that any changes and improvements enhanced this effectiveness.

Three key challenges were identified. First was resolving SFRS's application development environments, which had become more difficult to manage cost-effectively. Second was improving the update process for the geospatial database underpinning the command-and-control system. Third was to move business applications from a legacy data centre to AWS. SFRS engaged Presidio to drive this journey of technology transformation.

Business Challenges

- Life-critical applications and technology
- Need to deploy public resources wisely
- Complex business applications and services

Services Used

- AWS Control Tower
- AWS Landing Zone
- EC2

Outcomes

- More control over computing resource
- Improved resilience for mission-critical applications
- Automation of routine onboarding tasks



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“When we respond to an emergency, every second counts – accurate data is key to that, and the new update process for Gazetteer means our data is as current as possible.”

Stuart Chalmers,
Scottish Fire and Rescue Service



The Solution

Initially, Presidio addressed existing application development environments on AWS. These had been provisioned at a time of less development activity and had subsequently become harder to control. In response, Presidio implemented AWS Landing Zone and AWS Control Tower, put in place principles of least privilege, created an approval process for higher-powered resources, and designed intelligent alerts to inform the team of unexpected costs.

Then, Presidio created a new update process for Gazetteer, the geospatial database that supports SFRS's main command-and-control system. Gazetteer contains the details of billions of geographic and environmental features, which are used both for routing, and for planning responses to developing incidents. Previously, updates required that the whole system be taken offline, and a back-up application used. This process was time-consuming and could not keep pace with changes to the underlying data, which is evolving every day. The Presidio team designed an improved process whereby a new version of the application and database is deployed in a fresh EC2 instance, and the new instance brought online once tested. This enables daily updates, rather than updates every six weeks. Now, routing data is as accurate as can be, ensuring that the response to an emergency is as fast and effective as possible.

Finally, Presidio worked with SFRS to move business applications and services from an existing data centre to AWS. The SFRS team were keen to make sure that the project was not a simple 'lift and shift' task, but that value was added wherever possible. The Presidio team began by mapping interdependencies between applications and environments and then identifying where improvements could be made. This analysis was used to enable the build of new machines and environments on AWS.

Results / Benefits

The renewed process for updates to the mission-critical Gazetteer database means that there is now no appreciable downtime in the primary command-and-control application. Further, performance has improved, with new data now going live within 24 hours of being received.

The new update process has resulted in savings of two to three person-days in every thirty working days. In addition, the move away from the data centre environment has resulted in further savings. For example, some machines had been over-specified but, on AWS, capacity can be more easily matched to demand, using less resource without compromising safety or effectiveness.

The updates from Presidio have enabled more extensive automation for routine tasks. The advantages of this include reducing the time needed to onboard new users for some applications from days to hours. This allows the technology team to focus more resource on tasks that add directly to the effectiveness of the organisation.



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