



Cloud Enablement Using AWS

SUMMARY

SystemsUp was responsible for the Quality Assurance, project management and design of the AWS infrastructure at a UK government agency

BENEFITS

- ◆ Successful deployment
- ◆ Management of multiple suppliers
- ◆ Quality assured delivery

The Challenge

Collaboration across vendors was key to helping this agency meet the government's 'cloud first' mandate and create a new IT infrastructure using AWS. SystemsUp was appointed to help the agency and its third party suppliers architect its key application for reliability and scalability in the new environment.

The Approach

SystemsUp was responsible for the design of the AWS infrastructure and the governance and quality assurance of the two other suppliers who were responsible for the build of the environment and the application itself. Communication and project management was achieved using Slack, daily stand-up calls and JIRA to track open issues. Design documents were stored via Confluence and Huddle and a private GitHub repository was created to hold the infrastructure code. This allowed the separate third parties to come together and work effectively as one single team. End-to-end governance and quality assurance was managed by SystemsUp to ensure that best practice was being followed and to ensure that the implementation matched the design and the requirements of the customer.

The Solution

Two AWS accounts were deployed to keep the development and test environments separate from production. A combination of Terraform and Ansible were used to deploy the infrastructure and resources. Once proven in

development and testing, the code could then be re-run to create the production environment infrastructure. Software configuration was controlled using Puppet, and again the code was tested in the dev account before being deployed into production. Agility and automation was built into the software deployment lifecycle so the infrastructure could be provisioned quickly.

The key application that needed to be migrated into the new AWS environment had a number of dependencies that required network connectivity to the agency's existing data centres and offices. SystemsUp helped the agency's enterprise architects to understand the new network and the Virtual Private Network (VPN) connectivity into AWS.

We also helped re-educate the agency's own Information Assurance team to explain how the new security management tools could be used to enable the IT team to become self-sufficient with the new solution. Numerous IT security health checks were carried out and CloudWatch was used to monitor the services and ensure AWS best practice. SystemsUp took part in Well-Architected Review sessions with AWS to ensure best practice had been followed.

The Result

The agency gained a new AWS environment which was secure and met its performance requirements. Infrastructure can now be deployed quickly to scale the service at peak times and the key application was migrated successfully by SystemsUp using a range of PaaS level services.