

# AWS Application Migration: Department for Work and Pensions - An Ubertas Consulting AWS Case Study



## The Challenge

Over the course of the past 36 months the DWP has been working on a range of projects to migrate selected internal and public facing applications to a new cloud provider. Ubertas Consulting assisted the Retirement & Bereavement Team to migrate eight (8) of those applications over to Amazon Web Services (“AWS”).

## The Project

The DWP team utilised the G-Cloud Government Framework to procure services to support the project which commenced with a migration Proof-of-Concept. This exercise is routinely provided by Ubertas Consulting to assist customers commence their Cloud migration journey, focused on moving one (1) application environment to AWS. The platform then underwent a Well-Architected Framework Review (WAFR) as an input to ‘drive-out’ the tasks that would eventually lead to a fully functional production instance of the target application.

The migration project had three high level requirements:

- Application Migration -> The migration of eight (8) internal and public facing applications from an existing private cloud environment to AWS;
- DevOps Approach -> Infrastructure-as-code by default;
- On-boarding -> A migration and partner approach that enabled knowledge transfer to the DWP through a combination of cross team working, and AWS training.

The Retirement & Bereavement Team migration project commenced with the deployment of a range of components that would be common to all applications, including secure networking, code control, deployment pipeline and authentication. These supporting technologies along with a baseline VPC design, established working practices and the set-up of a joint Ubertas Consulting and DWP DevOps team formed the Migration Factory.

The applications migrated to AWS as part of the project were:

- Check Your State Pension;
- Bereavement Support Payment;
- Find Your State Pension;
- Get Your State Pension;
- Job Seekers Benefit Enhancement Service;
- Pension Deferral Lump Sum Calculator;
- Record of Call.

Each application was then adapted and scripted for deployment to AWS, making use of AWS services where appropriate. Services used beyond EC2 included Lambda, RDS and Amazon Elasticsearch. Code promotion pipelines were created using Jenkins and S3; Jenkins pipelines were also utilised to automate the creation of custom AMI's.



## About the Department for Work and Pensions

The Department for Work and Pensions (“DWP”) is a UK government organisation responsible for welfare, pensions and child maintenance policy. As the UK’s biggest public service department, it administers the State Pension and a range of working age, disability and ill health benefits to around 20 million claimants and customers.

“The proof-of-concept exercise really gave us the re-assurance that Ubertas Consulting were offering a partnership approach combining our internal team with the architectural and technical knowledge of an Advanced Partner, as well as AWS. It also enabled us to more accurately size the project, both in terms of duration and required AWS services. ”

**Richard Jolly,**  
**Department for Work and Pensions**

“The team at Ubertas Consulting really listened to us when it came to our need to onboard AWS migration and support knowledge internally. Throughout the project they integrated with our team and gave us the reassurance we needed that we could complete the migration as one team. ”

**Stu Cairns,**  
**Department for Work and Pensions**

The applications were migrated sequentially over an 8-month timeline during which each environment was iterated upon to increase automation of several functions across the deployment.

During the migration Ubertas Consulting and AWS assisted DWP personnel with knowledge transfer activities ranging from generic technical essentials training to more specific DevOps consulting. Over the course of the year DWP were able to scale down their requirement for Ubertas Consulting assistance as they onboarded knowledge internally.

## Outcomes

- As a PDU we now have a platform from which we can not only support our existing services but have also started to expand it to enable new developments for our users.
- We’ve gone from single datacentre with manual configuration to multi-AZ redundancy coupled with full infrastructure as code for our entire platform.
- Multiple reusable components such as ECS services, WAFs, MongoDB clusters that allow new projects to quickly leverage infrastructure options as part of their designs with the knowledge they have already been through IT Health Checks.
- We’ve extended iteration from beyond the application codebase to the infrastructure as well with many two week sprints applying significant updates to the architecture.
- Proven reproducibility of deployments through destroying dev, test and staging environments every evening.
- Migration away from a fixed architecture to a dynamic with auto-scaling to give services an ability to flex according to demand.
- Knowledge transfer of AWS/Terraform development techniques to enable the Dev Ops team to deliver a successful migration of multiple applications.
- Ultimately we can now adapt our infrastructure as needs change over time in conjunction with Product Ownership and Delivery.

## Why Ubertas Consulting

Ubertas Consulting is a Cloud consultancy specializing in Amazon Web Services.

As an Advanced Partner, AWS Channel Reseller (Solution Provider Program) and Well-Architected Framework Program Partner, our mission is to assist companies drive innovation and build new capabilities through embracing “Cloud Native” technologies and modernising with Amazon Web Services (AWS).

Our consultancy services span the breadth of AWS technologies and range from advisory through to full implementation as we assist customers in applying the foundations of Well-Architected to migrate and operate their mission critical workloads in the Cloud.

To find out more about Ubertas Consulting and take your next steps to being Well-Architected visit us at [www.ubertasconsulting.com](http://www.ubertasconsulting.com) or contact us at [info@ubertasconsulting.com](mailto:info@ubertasconsulting.com).