

Case Study: MTCnovo Production

When MTCnovo sought a cost effective, scalable and secure cloud platform to host their Case Management System and their Government Client's sensitive data, they looked to Cloud Fundamental to establish an accredited solution in the public cloud using Amazon Web Services (AWS), in a ground-breaking first for the UK.

Client

MTCnovo was founded with the aim of reducing re-offending in the United Kingdom by harnessing the skills of probation staff and delivering modern methods of rehabilitation.

Specific Challenge

Achieving accreditation for a public cloud based solution which would be capable of securely holding "Official Sensitive" categorised data.

Solution Summary

Platform as a Service (PaaS) solution in the AWS London Region to meet the security and regulatory requirements.

Outcome

A scalable, secure and flexible hosting platform which delivers significant cost savings.



MTCnovo

MTCnovo was founded in 2014 to bid for Community Rehabilitation Companies (CRCs) formed following the part-privatisation of the National Probation Services (NPS).

Their aim is to reduce reoffending in the United Kingdom by harnessing the skills of probation staff and delivering modern methods of rehabilitation, which are rooted in the traditional values of the UK Probation Service.

Ministry of Justice

In 2014 the UK Government passed the Rehabilitation Act, which replaced 35 individual Probation Trusts with a single NPS, responsible for the management of high-risk offenders; and 21 CRCs, responsible for the management of low to medium risk offenders across England and Wales.

In February 2015, third party organisations were, for the first time, allowed to enter the rehabilitation market, with rewards based on outcomes.

MTCnovo was appointed as the provider to manage all low to medium risk offenders under the supervision of the London and Thames Valley CRCs. Using a Case Management System (CMS), MTCnovo were responsible for managing information and events relating to those offenders being supervised by these CRCs.

The Requirement

MTCnovo required a scalable and secure hosting platform to accommodate their CMS and reporting solution. The CMS needed to communicate with the central MoJ System which provides the central record for all offenders across the NPS and CRCs. The communication between the CRC and the MoJ would be across the Public Services Network (PSN) Protected network using the MoJ's Strategic Partner Gateway (SPG) to allow messages to be passed securely between the parties.

The environments and security controls had to host data classified as Official (up to Official-Sensitive with additional handling caveats) whilst having access to the PSN Protected network for production environments and the Internet for development and test environments. The PSN Protected network connectivity required access to the SPG solution provided by the MoJ.

In addition, MTCnovo had other business-critical applications requiring a cost-effective hosting platform capable of scaling on-demand to meet future business needs.

The Challenge

The traditional approach, favoured by MTCnovo's client, was to use private UK cloud providers but MTCnovo preferred a more innovative approach and were keen to investigate the advantages of public cloud hosting.





Solution Considerations

There were many considerations when designing the production solution for MTCnovo. Some of the important goals are listed below:

- **Reduction of Complexity**

A key goal of any solution would be to reduce the complexity of the existing solution in terms of networking, number and type of computing instances running and back-end database usage.

- **Dynamic Capacity**

The solution would need to be able to scale upwards and downwards depending upon utilisation. The elasticity of the cloud was a big factor.

- **Enhanced Security**

Security to be considered and applied at all layers (virtual servers, load balancers, network subnets and storage)

Due to the type of data being processed and stored, security was key to any proposed solution. All key data needed to be encrypted during transmission and at rest.

All changes to the environment needed to be monitored, logged and audited.

- **Availability**

It was critical that the system be highly available during the core hours and that workloads be balanced.

Defined recovery time and point objectives dictated that the availability of the solution be monitored.

The solution needed to be resilient across multiple availability zones with automatic recovery from the failure of individual services.

- **Performance**

Historically data transfers from external sources were slow as was the processing of the data. Any new solution needed to have responsive computing, storage and database services.

Proof of Concept

MTCnovo engaged Cloud Fundamental to perform a proof of concept phase for the deployment of their CMS (Omnia) on Amazon Web Services (AWS) in Ireland. In parallel, as risk mitigation, a traditional private cloud offering proof of concept was also carried out.

Cloud Fundamental needed to prove the public cloud would provide a low, variable cost platform that could scale with the business needs and replace traditional high upfront infrastructure expenses without compromising security.

The proof of concept phase, successfully completed within 3 months, delivered a full code deployment that proved that the application could function at a performant level within AWS..

Solution Implementation

In conjunction with AWS and their Well-Architected Framework, Cloud Fundamental designed and built a secure Platform as a Service (PaaS) solution in the AWS London Region to meet the CMS and reporting requirements.

The solution included multi-layered security services across all Internet and PSN Protected network environments, along with Security Information and Event Management (SIEM).

An Established Team

Thanks to the success of the implementation and support services, Cloud Fundamental are now a trusted partner of MTCnovo and are currently involved in the delivery of additional services in AWS.

Amazon Web Services

AWS has more than 15 years' experience in delivering global infrastructure on a large scale. In 2017, they launched a UK-based Region with the ability to connect to the PSN for central Government.

Cloud Fundamental with their experience of AWS and traditional hosting models within UK Government, became an AWS certified partner – cementing their place as a UK leader in cloud migration within secure environments.

Solution Benefits

- Reduced cost and complexity of the solution
- Ability to adjust capacity on demand with 'Pay as you go' pricing
- Solution approved for connection to the PSN
- A reduced time to market and agility
- Increased opportunities for innovation
- Enhanced security.

"Cloud Fundamental came in at a critical moment in the programme to help MTCnovo realise our cloud strategy and specifically our move into AWS for all application hosting. They helped us quickly set up the necessary secure and flexible infrastructure for development, test and production leading to a successful overall implementation. Their dedication, flexibility and overall technical capability proved critical to us realising our goal of leveraging the strategic benefits of cloud first".

Jonathan Snowball
former CIO and SIRO MTCnovo



About Cloud Fundamental

Cloud Fundamental's reputation and continued success is the result of unrivalled technical expertise in the design and implementation of secure solutions in both the private and public sector. Their technical team has a wealth of experience honed over several decades and are recognized for their successful implementations and unsurpassed service levels.

As an AWS Certified Partner, they specialise in delivering secure, public cloud deployments - from small scale cloud pilots to phased mass migration. Able to work to strict timeframes and within tight budgets, their services range from initial technical guidance and advice to end delivery of full cloud migrations.

Dedication, commitment and flexibility are the cornerstone of Cloud Fundamental's approach, ensuring they are the preferred business partner on an increasing number of cloud migrations..

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