

Amazon Connect Call Centre Solution



Executive Summary

In early 2021, UKHSA set up a Single Service Centre (SSC) to provide citizen communication capability for pandemic and health incident management. The model of SSC is more than just a contact centre, it provides a breadth of scalable services, technologies and capabilities that will enable UKHSA to provide a flexible and proportionate response to national and/or local health incidents which may occur.

Later that year, Cloud Fundamental in partnership with Marathon Managed Services (MMS) and Hinduja Global Services (HGS) were awarded the contract to design, build and deliver this service which provided a secure, cost effective and easy to manage solution.

Customer Challenge

UKHSA needed a reliable solution capable of dealing with approximately 2,700,000 calls per month with an expected maximum of 3,750 agents working remotely from home.

Other high-level operational requirements included:

- Operational between 07.00 and 23.00, Monday to Friday including bank holidays
- Inbound calls transferred from a 3rd party interactive voice response system to 36 individual DDIs
- Provision of primary and secondary DDIs from different telephony providers for each inbound queue
- Outbound calling
- Ability to scale quickly to handle a high but yet undetermined volume of concurrent calls
- Transfers from HGS to 3rd party provider
- A large number of agents working from home with their own devices
- Handle English and Welsh callers



The UK Health Security Agency (UKHSA) is a government agency in the United Kingdom, responsible since April 2021 for England-wide public health protection and infectious disease capability, and replacing Public Health England. It is an executive agency of the Department of Health and Social Care (DHSC).

The formation of the UKHSA essentially transferred Public Health England's health improvement functions to DHSC, while its health protection elements form part of the new government agency. Staff and systems were moved into the new organisation in 2021.





Why AWS?

The AWS platform was able to respond to all the customer challenges, offering a tightly integrated, flexible, scalable telephony platform in Amazon Connect, and other supporting services all competitively priced with excellent security, auditing and reporting.

Why Cloud Fundamental?

Cloud Fundamental were chosen due to their expertise with AWS and the Amazon Connect platform. Cloud Fundamental provided the skills and insight to correctly interpret the customer needs and architect a solution which was secure and functional.



Partner Solution

The solution designed and developed by Cloud Fundamental for UKHSA SCC exclusively utilises managed services from AWS, this approach gives several benefits:

- Simplifies the management and maintenance of the solution
- Scales automatically to support demand
- Leverages the built-in resilience of the services
- Mitigates disaster recovery
- Easier to secure

Amazon Connect

Amazon Connect is the core of the solution, it provides the robust telephony services required by SCC.

Agents are authorised to access Amazon Connect from Microsoft Azure via SAML federation and AWS IAM controls.

Several Amazon Connect Contact Flows are used to control the flow of calls through the system to the agents. SCC specified that interactive voice response menus be offered to callers to ensure consistency with their previous telephony offering. Custom attributes have been used to track option selection for later analysis via management information reporting.

AWS Lambda is utilised as part of the Amazon Connect Contact Flows to check for the availability of the SCC service (bank holidays, emergencies etc.) via an updatable Amazon DynamoDB "Events" table. Callers are also warned of heavy service utilisation via a custom message.

In addition, another AWS Lambda Function uses the incoming number (the service the customer selected) to look up service information in an Amazon DynamoDB table. This information is inserted into custom attributes which are used in the Contact Flow to route the call to the correct queue and provide the correct whisper to the agent.



Management Information Reporting

The HGS Management Information team require detailed call information from Amazon Connect to enable them to analyse the service provision and plan resources. Every evening a process runs to produce a comprehensive report of information of the calls for the day. This process uses Amazon EventBridge and AWS Step Functions for the scheduling, AWS Glue for the collation of the data from Amazon Connect streams and Amazon Athena for Analysis of the data.

Detailed Billing Breakdown of Calls

UKHSA require a monthly call summary report explaining the breakdown of the minutes used by each SSC service and the resulting outcomes. This report has to tally with the bill from AWS. The detailed call breakdown was created using Amazon Athena to analyse and summarise the call information by outcome (inbound, outbound, success, failure, queued, abandoned, etc.)

Agent Dashboard

One of SSC's requirements was for agents to work from home, however, it was vital that the agents be able to also see the current call volumes and service levels provided.

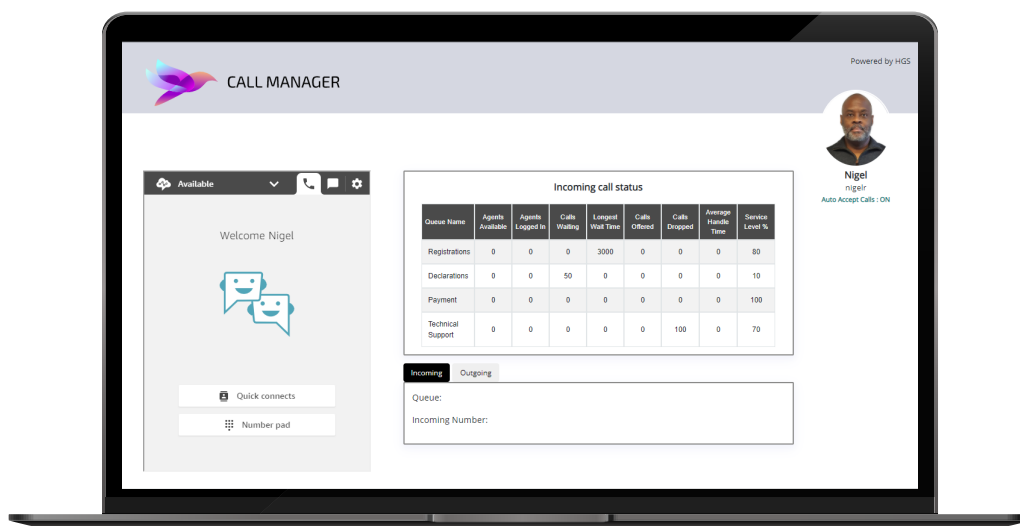
Fortunately, Cloud Fundamental have a tool for that!

Call Manager

Cloud Fundamental's proprietary Call Manager tool offers a user-friendly view for agents to access their dialler, caller data and agent statuses.

Features:

- Embedded Amazon Connect CCP for handling calls
- Realtime/historic queue data





Results and Benefits

Initially built and configured in our dedicated development environment, the SSC build passed detailed testing in our quality assurance environment in the month prior to production go live.

- This approved solution went into production for 75 agents in September 2021
- Since going live, the service has handled an average of 700,000 minutes per month
- An average of 360 agents have been logged on concurrently and there have been no service outages



Next Steps

UKHSA have requested additional functionality including the implementation of multiple new services. These have been built using Amazon Connect Contact Flows and will be introduced imminently.



About Cloud Fundamental

At Cloud Fundamental, we're inspired by the sheer potential of cloud technology and how it revolutionises the way in which private and public sector businesses operate. Avoiding unnecessary technical jargon and working in a collaborative way, our days are spent developing new solutions and migrating legacy applications and data securely to the cloud. Our focus is on solutions that make business sense for you, our partners, like reducing IT overheads, increasing flexibility and enhancing productivity.

Cloud solutions that enable you to concentrate on what matters most – growing your business.

