

# Servei d'Ocupació de Catalunya AWS Connect

## Executive summary

This case study shows how T-Systems has helped digital hubs in “Servei Public d'Ocupació de Catalunya” (SOC) to adapt to the “new normal” in times of global pandemic by providing a solution for their intelligent call center. The project has been completed within less than two weeks, resulting in a solution adhering to DevOps as well as AWS best practices. The application is in productive use for around a year already, managed by T-Systems on AWS.

## Customer challenge

During the global pandemic, “Servei Public d'Ocupació de Catalunya” (SOC) should reinforce its support to citizens and companies whilst all SOC employees were forced to work at home. At that time (April 2020) there was no company standard to facilitate teleworking of the telephone support service, so SOC needed the urgent set-up of a contact center solution taking into account the following challenges:

- Quick deployment (days) due to urgency
- Up to 400 agents distributed
- All agents were already at home, so a quick and transparent implementation process was needed.
- Integration with authentication platforms

The customer chose Amazon Connect because of its ease of deployment, as it is a platform managed by AWS and meets all data privacy and security requirements. So the challenge was to set up the app very quickly (days) and then run it reliably.



Generalitat de Catalunya  
**Departament d'Empresa i Ocupació**

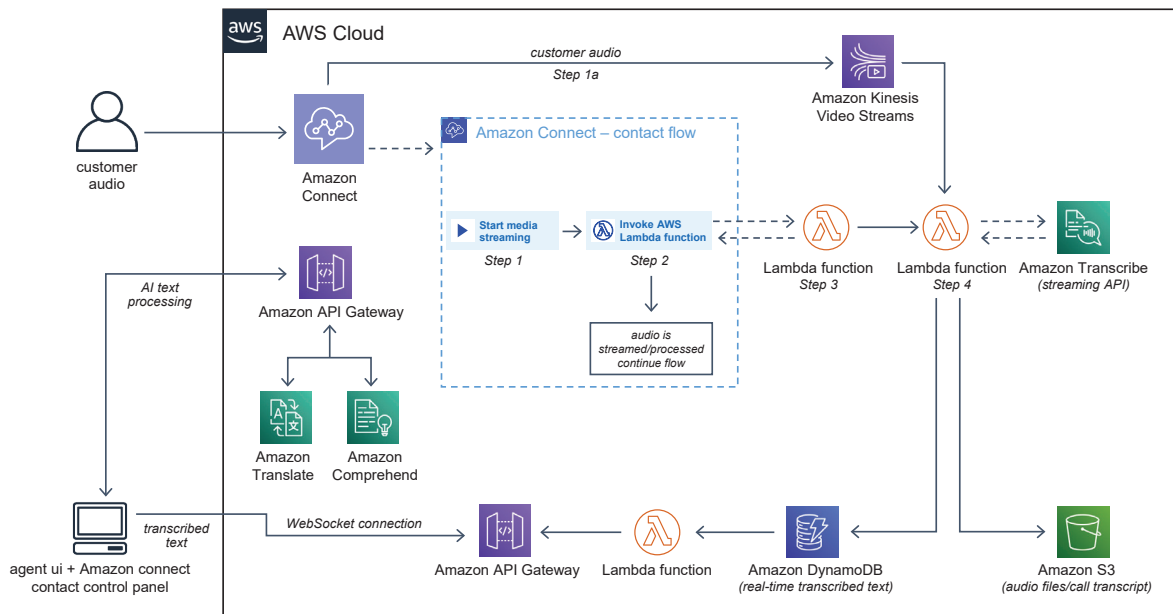
**SOC**

Servei d'Ocupació  
de Catalunya

## About Servei Public d'Ocupació

Servei d'Ocupació de Catalunya (SOC) is a public institution, attached to the Labor Department of Generalitat de Catalunya that takes care about the quality and development of occupational services in Catalonia, Spain.

The IT department of SOC is in the middle of a large-scale transformation program, adopting cloud as well as agile methods such as the Scaled Agile Framework.



## Solution architecture

T-Systems designed the solutions in collaboration with AWS, from the ground up to be omnichannel. Amazon Connect provides a seamless experience across voice and chat for your customers and agents. This includes one set of tools for skills-based routing, task management, powerful real-time and historical analytics, and intuitive management tools – all with pay-as-you-go pricing, which means Amazon Connect simplifies contact center operations, improves agent efficiency and lowers costs. T-Systems sets up the SOC contact center with two numbers and in minutes that can scale to support millions of customers from the office or as a virtual contact center.

T-Systems deploys the solution with two phone numbers and distinct contact flows.

## AWS Connect - Automation, Omnichannel, & Telephony

The solution deployed and configured by T-Systems, Amazon Connect has a single UI across voice, chat, and tasks for contact routing, queuing, analytics, and management. This omnichannel experience means that call center agents don't have to learn and work across multiple tools. With Amazon Connect you can also use the same automated interactions and chatbots across both channels, so you don't have to rebuild interaction flows, increasing operational efficiency. For Servei d'Ocupació, this means that they can interact with their agents on voice or chat based on factors such as personal preferences and wait times. Servei d'Ocupació can keep working with the same agent across channels, but if it's a different agent, their interaction history is preserved, so they don't have to repeat themselves. Amazon Connect's omnichannel contact center improves the customer experience while reducing resolution time. With Amazon Connect, T-Systems can build new call flows, rules, and reports once and enable across channels.

## Contact center automation

Amazon Connect works on behalf of Servei d'Ocupació supervisors and agents to save time and money while providing the best possible contact center experience to the customers of T-Systems. Amazon Connect implemented by T-Systems has self-service tools and intelligent automation, such as natural language, Interactive Voice Response (IVR), and automated customer voice authentication. Amazon Connect provides a seamless omnichannel experience for agents and managers for voice, chat, and task management to ensure customers are routed with their conversation's full context or work across applications when switching channels. Once Amazon Connect has identified the customer's needs, skills-based routing matches them with the best available agent most likely to resolve their issue. Amazon Connect has all the automation capabilities you need to improve efficiency and reduce agent time performing repetitive functions.

## Agent experience

T-Systems configured the Contact Control Panel (CCP) to SOC. CCP provides a single, easy to use interface for agents to receive calls, chat with contacts, transfer them to other agents, put them on hold, and perform other tasks. Amazon Connect's CCP includes features that improve agent productivity, such as Amazon Connect Customer Profiles, Amazon Connect Tasks, and Amazon Connect Wisdom. It is also easy to customize your agent experience allowing you to integrate with external applications like CRM or marketing automation but in the Servei d'Ocupació they are not yet deployed. Amazon Connect Customer Profiles configured by T-Systems equips contact center agents with a more unified view of a customers' current information to provide more personalized customer service to Servei d'Ocupació. Customer Profiles automatically bring together customer information from multiple applications into a unified customer profile, delivered to agents at the beginning of the customer interaction.

When a customer calls in, Customer Profiles scan, match phone numbers or customer IDs to customer information located in connected applications, and surfaces a unified profile to the agent. Customer Profiles combine contact history information from Amazon Connect like the number of hold, transcript, customer sentiment with customer information from CRMs, e-commerce, and order management applications like phone number, address, and current order status.

## Set up, Administration, & Reporting

An Amazon Connect contact flow defines the Servei d'Ocupació experience with the contact center from start to finish, including setting logging behavior, setting voice, capturing customer inputs (spoken or by pressing 0–9 on the phone keypad), playing prompts, transferring to appropriate queue, etc.. T-Systems could use Amazon Connect's contact flow builder's graphical user interface. Contact center managers can easily create dynamic, personal, and automated customer experiences, without the need to write a single line of code. Amazon Connect makes it possible to design automated contact flows that dynamically adapt to the caller experience in real-time.

In addition, Amazon Connect is highly flexible and allows you to leverage other AWS services in Amazon Connect. T-Systems used AWS Lambda service to create targeted and personal experiences by virtually accessing any back-end system and easily pull in information such as: past purchases, contact history, and customer tendencies, which can be used to anticipate end-customer needs and deliver answers to questions before they are even asked.

Servei d'Ocupació can also design contact flows to change based on information retrieved by Amazon Connect from AWS services (e.g. Amazon DynamoDB, Amazon Redshift, or Amazon Aurora) or third-party systems (e.g. CRM or analytics solutions).

### Real-time and historical analytics

Understanding SoC contact center at the most granular level is key to improve performance and lower costs. Amazon Connect offers powerful analytics tools, including a visual dashboard with customizable real-time and historical metrics. With Amazon Connect, T-Systems could also stream your most detailed contact metrics to the data lake of Servei d'Ocupació choice where he can join and analyze them with other data like conversion rates or customer satisfaction. This enables Servei D'Ocupació contact center manager to make data-driven decisions to increase agent productivity and reduce customer wait times. Historical metrics also provide longer-term insights to identify common trends with customer issues and overall operational performance.

### Call recording

Amazon Connect also comes with integrated call recording for agent performance assessment to help monitor and improve customer experiences. T-Systems implemented this option and all the calls were recorded in some buckets s3 to improve the call center agent's quality.

Servei d'Ocupació data privacy and security are of highest priority. That's why every internally used application needs to pass a rigorous Privacy and Security Assessment (PSA). For AWS-based applications we use a broad range of AWS security services, including Cloudtrail for security logging, KMS for encrypting data at rest, GuardDuty for security monitoring and SCPs as well as AWS Config Rules for compliance enforcement. Also, we carefully design IAM roles according to the least privilege principle, limit human access to sensitive data and avoid permanent credentials on platform as well as operating system layer. We use hardened operating system images (AMIs) according to Servei d'Ocupació requirements including vulnerability scanning and also rely on secure pre-configurations for all AWS.

## Results and benefits

The project was complete according to an ambitious schedule. While the setup of the application on AWS and hand-over to application operation took only a couple of days, getting all the way through the process and assessment with PSA approval took around four weeks, which is pretty fast in an enterprise environment.

Now the solution is live for around a year already, fully managed by T-Systems.

The performance and reliability of the solution achieved high user satisfaction and good feedback from client side. With this solution in place the digital hubs could focus on their core tasks, i.e. delivering features for SOC Solutions and end-clients in an agile setup according to SAFe, while T-Systems took care for setting up the infrastructure and application on AWS following the cloud provider's best practices (well-architected framework), supporting the procedure and operating the application 24x7.

While most employees look forward to eventually meet in person again, the productivity tools for the new normal are certainly here to stay.

## Next steps...

Everyday T-Systems is working on a continuous improvement of SOC's Amazon Connect following AWS recommendations and Well Architected best practices.

In our scope is the chatbot creation to decrease load and waiting time.





## Why AWS

With Amazon Connect, AWS proved the feasibility to deploy a full cloud contact center solution in weeks, solving a critical issue for the customer.

AWS has been selected as a platform for several reasons. The client is following a cloud strategy and is about to migrate most of their applications to the public cloud within the next few years.

So, all new applications that do not process data with very specific compliance requirements are set up in the public cloud. But even more importantly, application landscapes and environments can be deployed on AWS very quickly and without any infrastructure constraints.

## Why T-Systems

T-Systems has a long record of accomplishment of successfully running mission critical applications on various platforms, from enterprise systems such as SAP to cloud-native applications. In addition, T-Systems is a trusted AWS partner for Servei d'Ocupació, to deploy AWS Connect as intelligent call center. T-Systems is an accredited AWS managed service provider and advanced consulting partner with a growing list of competencies. T-Systems teams have years of experience in Voice Systems and Contact Center solutions, from design of architectures, provision and deployment to its maintenance and operation.

Our knowledge and understanding of Contact Center's business and technical requirements and our accredited capabilities on AWS solutions make T-Systems the best partner for customers that search for Intelligent Cloud Contact Center solutions with Amazon Connect.

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