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Telefónica validates network quality on demand with AWS Wavelength

- Telefónica's network services combined with AWS Wavelength provide partners like Cinfo a frictionless experience to easily extend their offerings to more users.

Madrid, 28th February 2023. – Telefónica validated the integration of their network application programming interfaces (APIs) with the Pilot AWS Wavelength Zone in a Telefónica Edge location in Madrid in collaboration with Amazon Web Services (AWS) to provide developers the ability to combine AWS edge services with quality on demand (QoD) specialized services from Telefónica. The collaboration allows developers to build next-generation, network-aware applications in a frictionless way. Telefónica is launching an *Early Adopter Program* to empower the developer community to carry out a first integration and validation of services based on network APIs. Cinfo's Tiivii product, a real time AI-based cloud production for sports and music, was selected as the partner for the demonstration.

Companies that are building next-generation applications that are quality of service (QoS) sensitive such as augmented reality, virtual reality, live event production, gaming, artificial intelligence- machine learning inference at the edge face major hurdles in enabling the experience for their users. These emerging experiences require low latency, high bandwidth, which requires substantial effort from the customers to manage multiple aspects (e.g., placement to the closest multi-access edge compute and enabled enhanced QoS).

Telefónica and AWS worked with Cinfo, a Spanish startup that enables live production and streaming of events, to test network QoD with AWS Wavelength. Cinfo's TiiVii solution, a cloud-based automated video production service powered by artificial intelligence, is highly sensitive to connectivity quality parameters such as latency and jitter, as it needs to send more than 50 commands per second to each camera in a venue and must make automated decisions in milliseconds such as moving and panning of the camera. In the Pilot, an AWS Wavelength Zone together with Telefónica's 5G enhanced connectivity enabled Cinfo to provide its Tiivii service to the Madrid Volleyball Federation event. The cameras at the event streamed a live video over Telefónica's 5G network with the configured enhanced connectivity to the Pilot AWS Wavelength Zone, reducing the deployment time of the application to minutes. The output stream of the Tiivii service, as compared to regular deployment, provided a superior viewing experience on live streaming by reducing the frozen frames and allowing viewers to seamlessly follow the play by enabling Cinfo's artificial intelligent

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control commands to cameras on time as required. This test solution reduced latency by ~20 milliseconds and jitter by ~90% during cell congestion, which is critical for a consistent user experience.

The validation of this integration has been made possible by an agreement between Telefónica Tech Cyber Security and Cloud and AWS to jointly deploy the Pilot AWS Wavelength Zone in Madrid. This allows for companies to easily test use cases that require low latency, which is provided by the integration of AWS compute and storage services in facilities at the edge of Telefónica Network. Other applications envisaged range from connected cars to smart devices and any other application that requires minimum response times. Tests can be made without the need of heavy-upfront investments.

“We have a vision to democratize the production and streaming of sports events globally,” said Antonio Rodriguez Del Corral, CEO of Cinfo. “Our AI-based solutions significantly reduce the cost to produce such events, making it accessible to all leagues. However, to deliver a great experience to our customers, we need the enhanced connectivity to the venues and ability to run our solution on the nearest edge location. With this test solution, we have managed to produce a live event for the Madrid Volley Federation reducing the latency and verifying the difference between a cloud node connected to 5G and a cloud node connected to the internet, without the need of complex deployment and integration”.

“Madrid Volleyball Federation has been working for the development of beach volley in the region and we are proud to include this improvement in our center, making it one of the most advanced beach volley courts in Europe. This will allow us to offer the best experiences for our users and fans of this sport,” said Felipe Pascual, President of the Madrid Volleyball Federation.

This project comes from the GSMA initiative Open Gateway, a global partnership across heterogenous telco operators to address industry network API interoperability. The API standardization, under CAMARA project, helps developers access network capabilities, regardless of a customer’s network, allowing applications to run consistently between telco networks and different countries.

“This project is a relevant step in opening up the functionalities of the new generation networks and public edge cloud computing services to application developers. It is a strongly coordinated telco industry move, hand in hand with the GSMA through the GSMA Open Gateway initiative, that provides an interoperability framework for the premium services to comply with the needs of business and consumer customers” said David del Val, Telefónica Open Gateway Director.

“Our customers are looking for frictionless ways to build and scale next-generation applications," said Jan Hofmeyr, Vice President of Amazon Elastic Compute Cloud (Amazon EC2). "In collaboration with Telefónica, we are empowering our customers to

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use network APIs to leverage the combined power of 5G connectivity with AWS Wavelength to deliver high-speed, low-latency experiences for end users. This is an example of how we continually improve our customer's experience by building on innovative AWS services."

For more information: Telefónica at MWC 2023

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