Telefonica and Ericsson pioneer end-to-end automated network slicing in 5G Standalone for consumer and enterprise use cases

- Telefónica and Ericsson mark a key milestone with a successful end-to-end, 5G Standalone network slicing demo on securing dedicated slices for diverse use cases.

- Network slicing, including dynamic partitioning of radio resources, is key to delivering advanced 5G use cases for consumers and enterprises in a fully automated way.

- The test was carried out at 5TONIC lab facility in Madrid, Spain.

Madrid, 18th July 2022 – Telefónica and Ericsson have demonstrated pioneering end-to-end, automated network slicing in 5G Standalone, including Dynamic Radio Resource Partitioning, achieving, in a first phase, full automated end-to-end network slicing based on 5G SA. The proof-of-concept shows end-to-end orchestration for full slicing life cycle support and radio resources partitioning, offering a key differential user experience to customers.

The lab test was carried out at 5TONIC, a Madrid-based open research and innovation laboratory focused on 5G technologies, founded by Telefónica and IMDEA Networks. The proof-of-concept covered different use cases including a 360-video production in motion in collaboration with technology start-up YBVR, remote control of an automated guided vehicle (AGV), and gesture recognition in collaboration with Spanish SME Fivecomm.

The network slicing for enterprise demo was carried out on Android 12 and 13 Beta powered smartphone devices. The demo proved that the onboarding of a network slice, from core to radio, may be configured and deployed in less than 35 minutes thanks to the solution's automation capabilities. All the use cases executed needed a specific and complex service configuration, therefore full automation is a key success factor to turn network slicing concept into a reality and accelerate time to market.

User experience and end-to-end capabilities have been validated thanks to the participation and collaboration of Google, smartphone manufacturers (Google Pixel,

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Samsung, TCL, and Xiaomi) and chipset vendors (MediaTek, Qualcomm Technologies Inc. and Samsung LSI). Testing on current commercial products has not only enabled end-to-end slicing within the smartphone ecosystem but has also generated valuable results and insights that will help the different parties to land product definitions required for ensuring a successful commercial service.

The most relevant capabilities of network slicing technology that have been validated are:

- Automation in the provision and life cycle management of end-to-end network slices.
- Network Slicing service assurance.
- Definition of different scenarios for the traffic prioritization in a network slice, such as Radio Resource Partitioning (RRP) that enables the sharing of radio resources between use cases with different service requirements.
- Simultaneous access of a handset to different network slices, having the possibility to select the traffic sent to the different network slices.

Telefonica aims to accelerate the network slicing capabilities across its networks as well as in the industry. Through its program called LIME, Telefonica is collaborating with Ericsson as a key partner to further develop network slicing as a technology that will bring to life a variety of new 5G applications and services

There is already a roadmap for further collaboration between the different parties that seek to enhance the slicing roadmap. Telefonica, Ericsson and Google have also agreed to share their findings with the GSMA and the industry to accelerate the standardization of network slicing and its mass adoption.

"Ericsson has achieved a key milestone by demonstrating fully-automated deployment of end-to-end network slices (from RAN to Core) in cooperation with Telefónica, at 5TONIC lab. The deployed network slices will secure dedicated resources in the radio access network as well as in the Core for satisfying specific needs of selected use cases, enabling that Telefónica meets new customer demands on a zero-touch operation. Network Slicing is key to accommodating new use cases leveraging 5G, with the promise to provide new capabilities to a variety of users and enterprises with minimal or no manual intervention", Jorge Navais, Global Account Manager of Telefónica, said.

"Bringing together the end-to-end ecosystem required for network slicing to thrive as a product is key for Telefonica and the rest of the telco industry. We are proud of being one of the first operators to demonstrate the benefits and differentiators of network slicing to our customers thanks to Radio Resource Partitioning and automation for full end-to-end slicing life cycle management. We look forward to continue the collaboration with our partners and the rest of the industry to make slicing a commercial success for all", Cayetano Carbajo, Director of Core & Transport in Telefonica CTIO, said.