

## Telefonica and NTT DATA test successfully 5G slicing Technology in an end-to-end multivendor scenario

- Telefónica and NTT DATA achieve a key milestone by delivering a multi-vendor end-to-end full automated Network Slicing solution over advanced 5G standalone networks technology.
- The testing was carried out in a hybrid cloud scenario between Telefonica laboratory facilities and public cloud resources to probe the benefits of the hybrid cloud.

**Madrid, 24th February 2023.** Telefónica and NTT DATA mark a new milestone towards the network automation and Network-as-a-Service concept by demonstrating a pioneering end-to-end multivendor Network Slicing as a Service solution including Cisco SDN transport, Mavenir Open vRAN, Mavenir 5G Converged Packet Core, Nokia 5G RAN with Radio Resource partitioning, end-to-end orchestration based in ONAP (NTT DATA supported) and NTT DATA ONE OSS assurance solution, achieving a full automated end-to-end network slicing life cycle management and service assurance use cases. The architecture has been implemented following a hybrid cloud approach, placing the different products involved in the solution in both Telefonica laboratory premises and Amazon Web Services (AWS) Cloud.

Network Slicing, including the dynamic radio resource management but also a strong core and transport integration, is key to deliver advanced 5G use cases for consumers and enterprises in a fully automated way.

The proof-of-concept covered different use cases including an augmented reality application for live sports streaming with technology designed by NTT DATA. The service levels requested by the application include low latency and high bandwidth requirements to meet customer experience expectations.

The test proved that the allocation process for an end-to-end network slice from Core, Radio and Transport can be less than 25 minutes thanks to the automation capabilities provided by the solution in a real multivendor scenario.

User experience and end-to-end capabilities have been validated thanks to the participation and collaboration of Cisco, Mavenir, Nokia, device manufacturers as, (in alphabetical order) Google, OPPO, SIMCom Wireless Solutions Limited and Xiaomi Corporation and chipset vendors like (in alphabetical order) MediaTek or Qualcomm Technologies, Inc., among others.

The use cases executed needed a specific service design and a complex multi domain service orchestration that is key to turn network slicing a reality. Testing with commercial products from different suppliers has not only enabled the 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:

- Real multivendor scenario with commercial products and interoperability challenges.
- Automation in the life cycle management of end-to-end network slices, including allocation, activation, modification, deactivation and deallocation use cases.
- End-to-end Network Slicing service assurance monitoring, exploring the relevant end-to-end metrics to monitor in multidomain services.
- Definition of different scenarios for the traffic management such as prioritization and resources management in a network slice for Ran, Core and Transport in a multivendor scenario.

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 NTT DATA as a key partner to further integrate different network slicing vendor solutions that will bring to life a variety of new 5G applications and services.

Teodoro Lopez, Telecommunications Partner at NTT DATA, believes that this project is a great milestone to progress in the automation of 5G slicing in multivendor environments. “Undoubtedly, this type of achievements in the technological field will accelerate operators towards the network automation and NaaS concepts and are key steps to achieve network slices as automated services in a simple and agile way. 5G network slicing is the starting point to achieve the opening of network capabilities to the complete ecosystem and is the key to accelerate the creation of solutions that will make tangible the value of these advanced Communications to allow the use of disruptive technologies for the benefit of Society and vertical industries”.

Cayetano Carbajo, Director of Core & Transport in Telefonica CTIO, stress the importance of the testing in a multivendor ecosystem. “One of the main challenges for Network Slicing is to meet full end-to-end automation in a multi-vendor environment. We are proud to have achieve this milestone with NTT DATA and the technology partners involved in this phase of the LIME programme. Network Slicing is a key part of our 5G monetization strategy, and we plan to bring the technology soon to our live networks”.

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