

5G dynamic Slicing

Objective: Telefónica seeks to demonstrate how flexible 5G networks will enable the dynamic provision of capacities to different services and customers, while boosting the ecosystem, thus promoting interoperability and standardization of this technology together with the different players involved. In this project, a demonstrator will be implemented on laboratory infrastructure in which three slices will be deployed to offer differentiated services: low latency, high bandwidth and emergencies.

Description: 5G communication systems aim to become a universal mechanism to support very different devices and use cases (industrial robots, connected cars, IoT devices, smartphones, etc), with very different requirements, simultaneously. To achieve this, 5G networks must be flexible, scalable, programmable and adaptable to different communication requirements dynamically, for a group of users or even for each user. One of the key concepts contributing to this is Network Slicing, where each slice acts as a self-contained logical network. For example, communications for an emergency service (critical communications, but only used for a specific moment) can be guaranteed regardless of saturation or other services offered by 5G networks.

This technology is in an incipient stage of definition and standardization, and has direct implications in the domains of access, transport and network core. The project will define 3 slices with dedicated 5G core functions based on Kubernetes technology, key to provide the required flexibility. An orchestrator will be deployed, and both the terminals and the radio access network will be emulated in order to obtain the key KPIs to identify the next action points to continue advancing in the promotion and demonstration of this technology.

[Additional reference](#)

[Press release](#)



Low Latency



Network slicing



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