Press release
Nota de prensa

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5TONIC takes a further step towards Network as a Service

5TONIC, the open research and innovation laboratory focused on 5G technologies, founded by Telefónica and IMDEA Networks, takes a further step towards Network as a Service by integrating the 5G SA network and a multiaccess edge computing platform, with **Ericsson, Intel, Telefónica, DeepSight and Capgemini Engineering.**

The use case has been developed with the 5G SA core and the Network Exposure Function of Ericsson and the Multiaccess Edge Computing platform of Capgemini Engineering. A computer vision application developed by DeepSight AI Labs has been deployed on this platform to demonstrate its capabilities, showing that the Edge application can adapt to different network conditions and optimize itself to deliver a consistent service.

The use case demonstrates a pioneering solution that probes the integration of an Edge platform, in this case Capgemini's edge platform ENSCONCE with Ericsson's 5G core through the Network Exposure Function. **This integration allows the network quality and capacities to be adapted to the needs of the Deepsight computer vision application**. With this integration, the Edge becomes more than a distributed data center, it becomes a platform that communicates with the network, requests configuration and receives status and performance information.

The best user experience for B2B and B2C services

This type of integration can be applied to many B2B and B2C use cases where quality can be adapted and configured to ensure the best user experience. Vehicle to everything communications, drone control, immersive comms and gaming are only some of them.

The **integration of the 5G SA core and the Edge platform enables developers to launch customized Edge applications for fast-growing areas such as safety and security**, connected cars, mobile gaming, as well as innovation in traditional IoT use cases, combining robust connectivity, ultra-fast information processing and real-time dynamic network optimization. It is about fostering innovation where customers or developers can use these APIs for the creation of new services or new propositions. Network as a Service concept leverage a new paradigm by shaping network quality and capabilities.

Future communication service platforms are adopting this approach. The next wave of API consumption will happen around 5G networks APIs provided as a Network-as-a-Service service.

This joint project has verified the speed of integration offered by the APIs in the integration of

the edge platform with the 5G network, demonstrating the agility of the solution.

The tests demonstrated that a critical Computer Vision-based service can be maintained independently of the network load. The integration of the 5G core with edge computing platforms strengthens the ability to deliver an enhanced experience at the network edge for end users and developers.

The network exposure feature is a key element that enables rapid integration of third-party platforms to access 5G functionalities, opening the door to network-as-a-service use cases such as on-demand Quality of Service based on application criticality.

After achieving the expected results during the latest tests, we can highlight, as Miguel Hernandez, expert in Services and Voice Platforms at Telefónica GCTIO, says, «The integrations between the Edge and the Core are quite agile. This move to the Cloud makes the integration process very agile and boosts innovation«, with the speed of integration offered by the APIs being the cornerstone of this development, whose integration did not last more than a few days.

Services such as computer vision, vehicular communications, augmented, virtual or mixed reality applications, immersive communications as well as critical communications and emergency services are likely to require a certain quality of service and specific network capabilities from the network. Future evolution of digital services such as Industry 4.0 and Metaverse will require that the quality and capabilities offered by the network be adapted to their needs. This is what the Network as a Service concept is all about, a concept that will accelerate new business opportunities.

About 5TONIC

5TONIC was initiated by Telefónica and IMDEA Networks Institute with a clear vision to create an open research and innovation ecosystem laboratory in which industry and academia come together to boost technology and business innovative ventures. The laboratory promotes joint project development, joint entrepreneurial ventures, discussion fora, events, and conference sites, all in an international environment of the highest impact. 5TONIC shows the capabilities and interoperation of pre-commercial 5G equipment, services, and applications, by leading global companies in the 5G arena. The laboratory was recently awarded Digital Innovation Hub status by the European Commission.

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About us

IMDEA Networks Institute, promoted by the Regional Government of Madrid, is a research organization on computer and communication networks whose multinational team is engaged in cutting-edge fundamental science and technology. As a growing, English speaking institute located in Madrid, Spain, IMDEA Networks offers a unique opportunity for pioneering scientists to develop their ideas. IMDEA Networks has established itself internationally at the forefront in the **development of future network principles and technologies**. Our team of highly-reputed researchers is designing and creating today the

networks of tomorrow.

Some keywords that define us: 5G, Big Data, blockchains and distributed ledgers, cloud computing, content delivery networks, data analytics, energy-efficient networks, fog and edge computing, indoor positioning, Internet of Things (IoT), machine learning, millimeter-wave communication, mobile computing, network economics, network measurements, network security, networked systems, network protocols and algorithms, network virtualization (software defined networks – SDN and network function virtualization – NFV), privacy, social networks, underwater networks, vehicular networks, wireless networks and more…

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