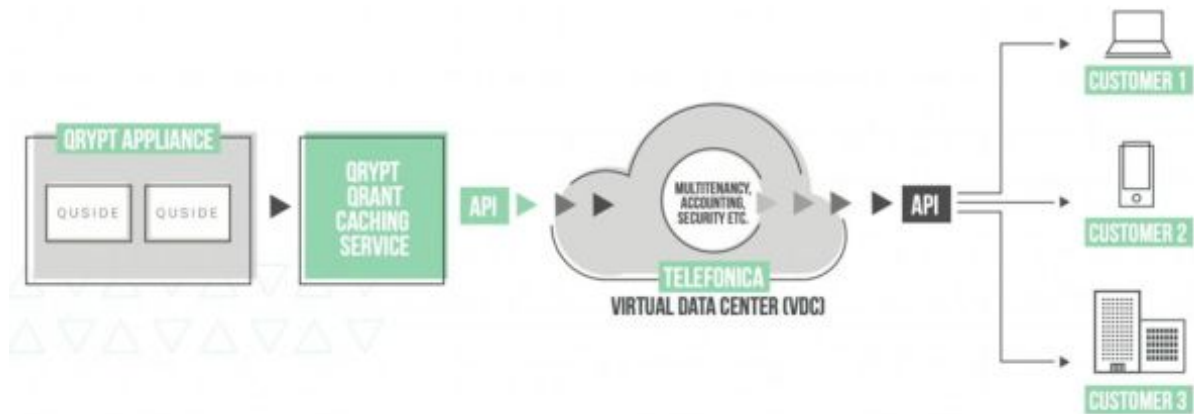


**TELEFONICA, QRYPT & QUSIDE ARCHITECTURE**  
**QUANTUM RANDOM NUMBERS AVAILABLE FROM THE CLOUD**



## Telefonica Tech, Quside and Qrypt collaborate to validate quantum technology

ICFO Spin-off forms part of Telfonica's next-generation solutions in its VDC cloud service

April 12, 2021

[Telefonica Tech Ventures](#) has collaborated with [Quside](#), an ICFO spin-off and industry-leading manufacturer of high-performance quantum random number generators, and New York-based [Qrypt](#), a producer of cryptographic quantum security solutions enabled by its Quantum Entropy-as-a-Service (EaaS) solution, to successfully complete the integration of a new quantum technology into its cloud service hosted in its Virtual Data Centers (VDC).

The availability of large quantities of high-quality random numbers has become an essential requirement in many fields. Its application ranges from high-quality encryption keys, which encrypt the exponential growth of data transfers, to the creation of highly accurate simulations for science, engineering, finance, and insurance.

In addition, *go-to-cloud* and *cloud-first* strategies are now a necessity in the ICT industry. It is forecast that a high percentage of total spending on enterprise applications will be spent on cloud services by 2023, with a significant portion of this to be spent on tasks that require random numbers, especially in the financial sector.

This collaboration allows Telefonica Tech to enhance its cloud services by providing its customers with easy-to-use, high quality and high-performance quantum random numbers so they can integrate them into their business processes.

Telefonica Tech has validated the use of quantum random number generators in a new Entropy-as-a-Service (EaaS) architecture, integrated into its VDC cloud offering. Several use cases have been demonstrated using this EaaS integration, including seeding for cryptographic devices (HSM), Monte Carlo simulations for scientific, engineering, and financial applications, gaming, as well as for a new proof-of-transit protocol that improves the security of data transiting software-defined networks (SDN).

**"Offering this key quantum-generated resource is a significant advantage for both our internal and external customers,"** remarks Hugo de los Santos, Director of Products and Services at Telefonica Cyber & Cloud Tech. **"It is especially important for our enterprise customers with demands for high quality and high-performance random numbers, who will benefit from this unique feature".**

**"Randomness is an essential resource for a wide range of ICT systems, including cybersecurity,"** adds Dr Carlos Abellan, Quside CEO and ICFO alumnus. **"We are thrilled to be part of Telefonica Tech's efforts to deploy stronger security features to their global customers using emerging quantum technologies."**



Quside FMC 400- successfully integrated and proven by Telefonica