



A 5G Convergent Virtualized Radio Access Network Living at the Edge

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5G-CORAL in a Nutshell

A joint EU-Taiwan bid to the Research and Innovation Action H2020 ICT-08-2017, addressing 5G Convergent Technologies with focus on Access Convergence.



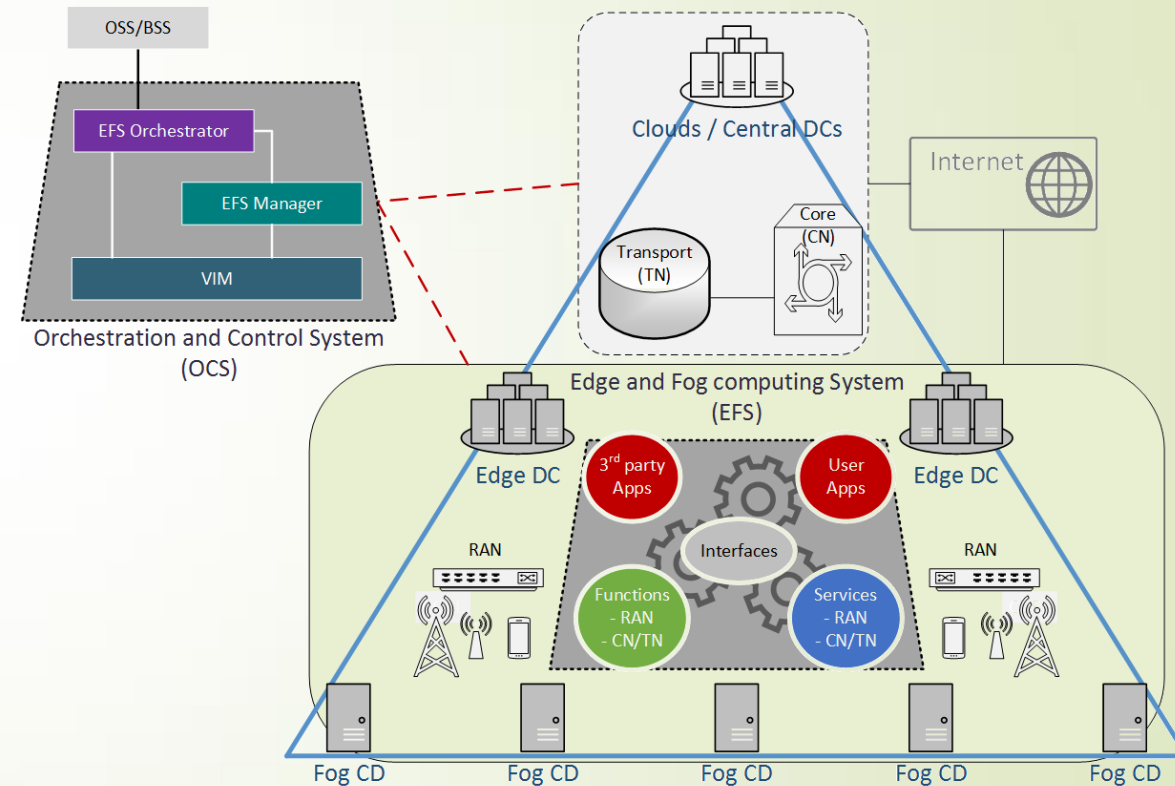
Elevator Pitch

Goal: Deliver a convergent 5G multi-RAT access through an integrated virtualized edge and fog solution that is flexible, scalable, and interoperable with other domains including transport (fronthaul, backhaul), core and clouds.

Target products: Access nodes, terminal devices, controllers and clouds

Virtualization framework

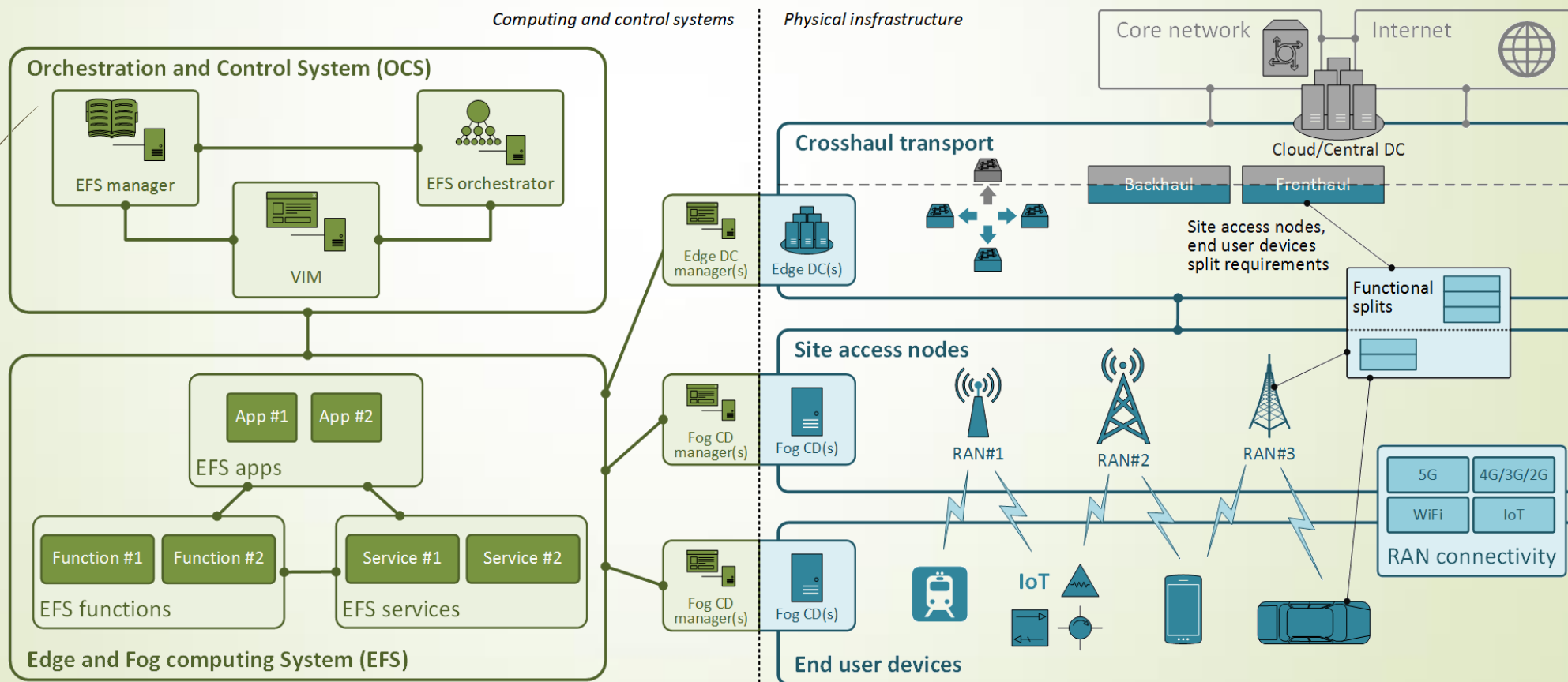
- A hierarchical multi-tier computing infrastructure, from clouds and central data centers (DCs) on top, down to edge data centers (Edge DCs), and further distributed down into fog computing devices (Fog CDs)
- Mobile (non-stationary) Fog CDs are also considered, for example when hosted on moving devices (e.g., car, train, mobile user).
- **The focus is on the edge and fog tiers of the distributed computing infrastructure, along with their interaction with the distant tiers.**



Solution Building Blocks

(1) EFS: hosting all proposed virtualized functions, services, and applications

(2) OCS: managing and controlling the EFS, and its interworking with other domains



Trials @ Large-Scale Test beds in Taiwan



Major Objectives

- 1 Develop a system model inc. use cases, requirements, architecture, and business models to design and validate 5G-CORAL solution **WP1**
- 2 Design virtualized RAN functions, services, and applications for hosting in the 5G-CORAL Edge and Fog computing System (EFS) **WP2**
- 3 Design an Orchestration and Control system (OCS) for dynamic federation and optimized allocation of EFS resources **WP3**
- 4 Integrate and demonstrate technologies in large-scale testbeds making use of facilities offered by Taiwan, and measure their KPIs **WP4**
- 5 Disseminate and contribute results into international research and innovation venues to pave the way for their successful exploitation **WP5**



Thank You

Q&A