



COMAC

CONVERGED MULTI ACCESS & CORE

OĞUZ SUNAY
CHIEF ARCHITECT FOR MOBILE NETWORKING



BIG 5G EVENT
MAY 6, 2019

COMAC

Scope

- Develop a **modular, cost-efficient platform and components with well-defined interfaces** to enable access and core networks, including
 - A streamlined, **simple and cost-efficient implementation of 3GPP cellular core**,
 - A **converged user plane function** (CUPF) that unifies user plane components of fixed broadband network gateway, 3GPP cellular core and virtualized 3GPP cellular radio access that would be hosted at the multi-access edge cloud,
 - A suite of **control plane functions/applications** that would intelligently be engaged to ensure proper, and standards compliant and programmatic control of CUPF,
 - **Access and Core Controllers** that intelligently and programmatically map CUPF with the corresponding suite of control plane applications.

SUPPORTING OPERATORS



AT&T

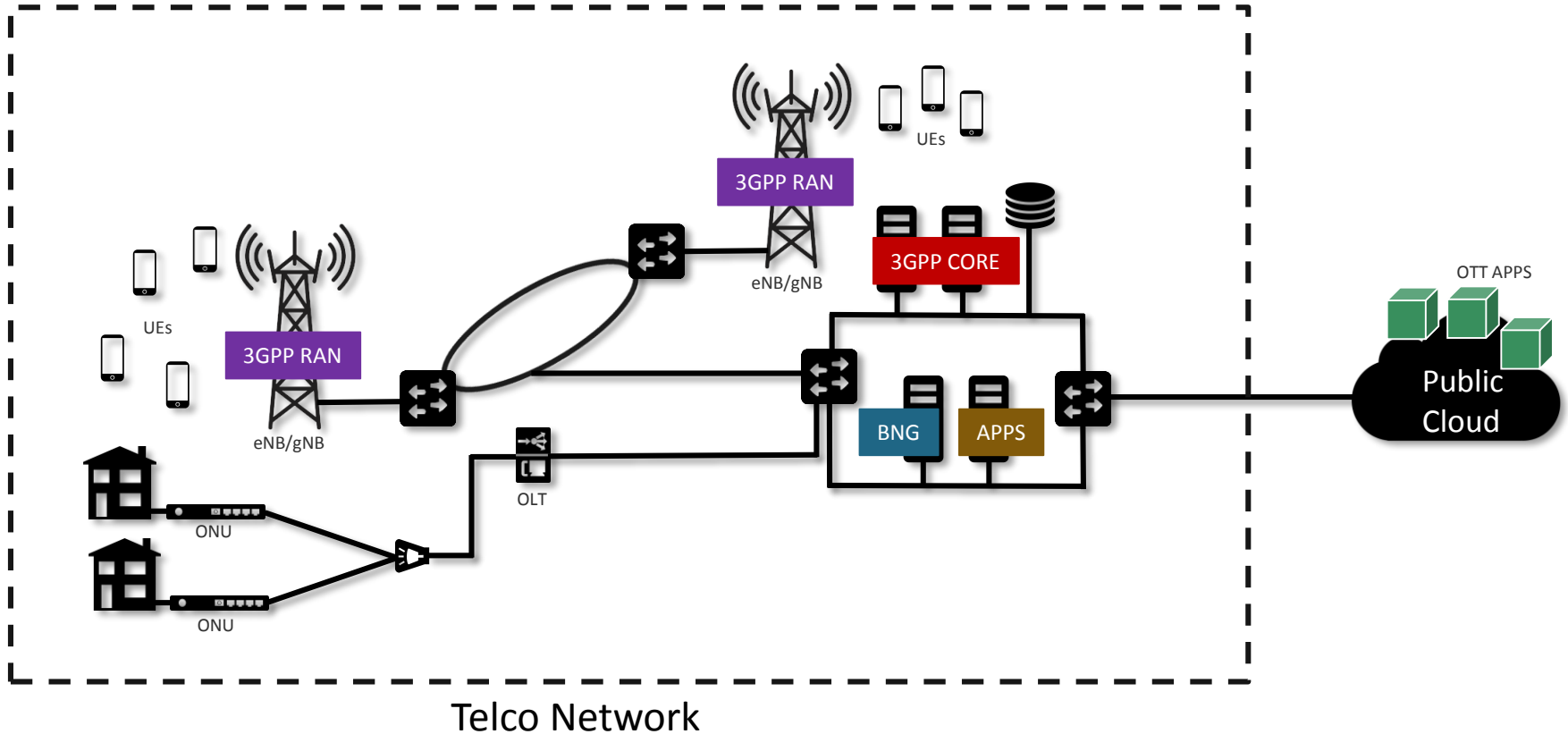


BIG PICTURE: EDGE CLOUD

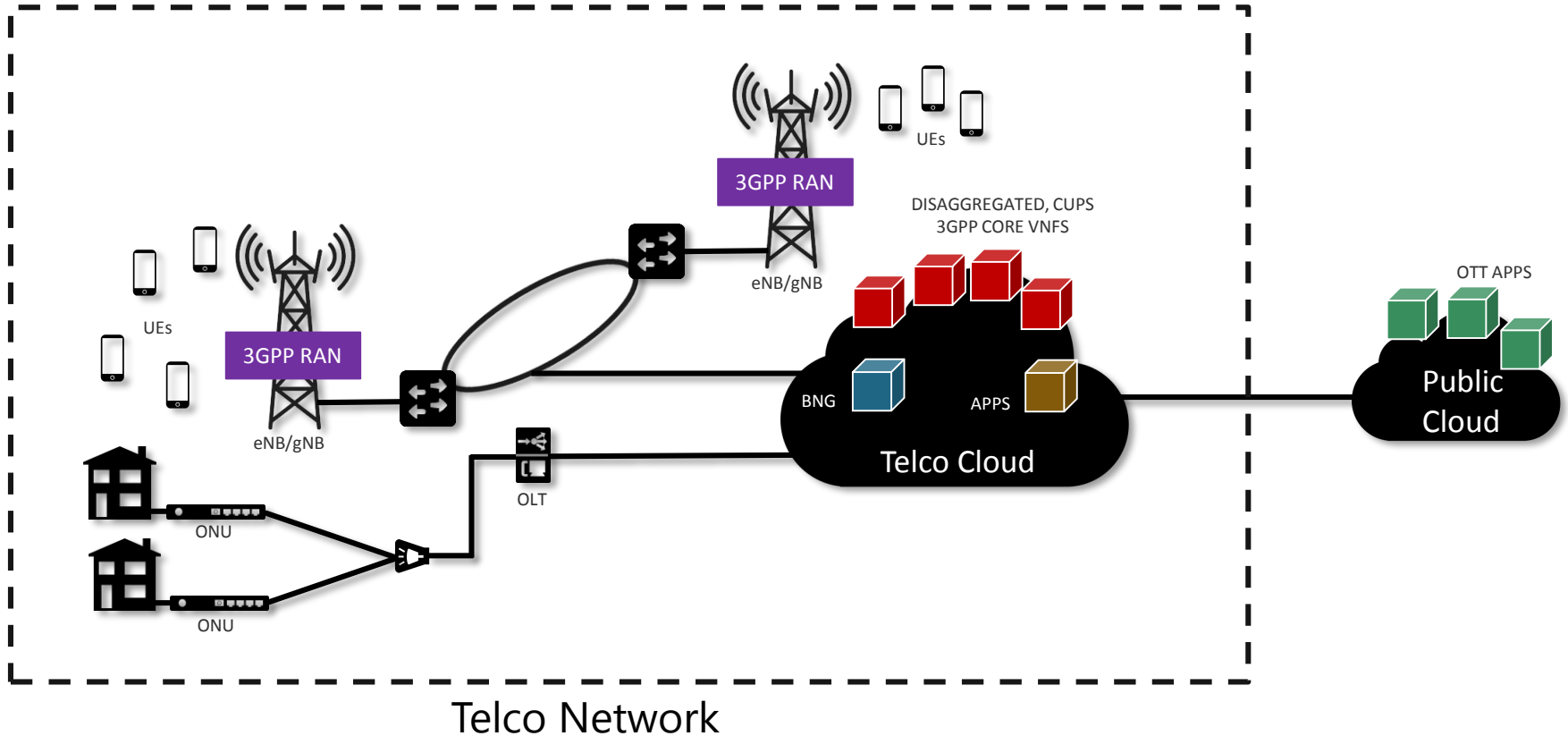


WHY MULTI-ACCESS? WHY CONVERGENCE?

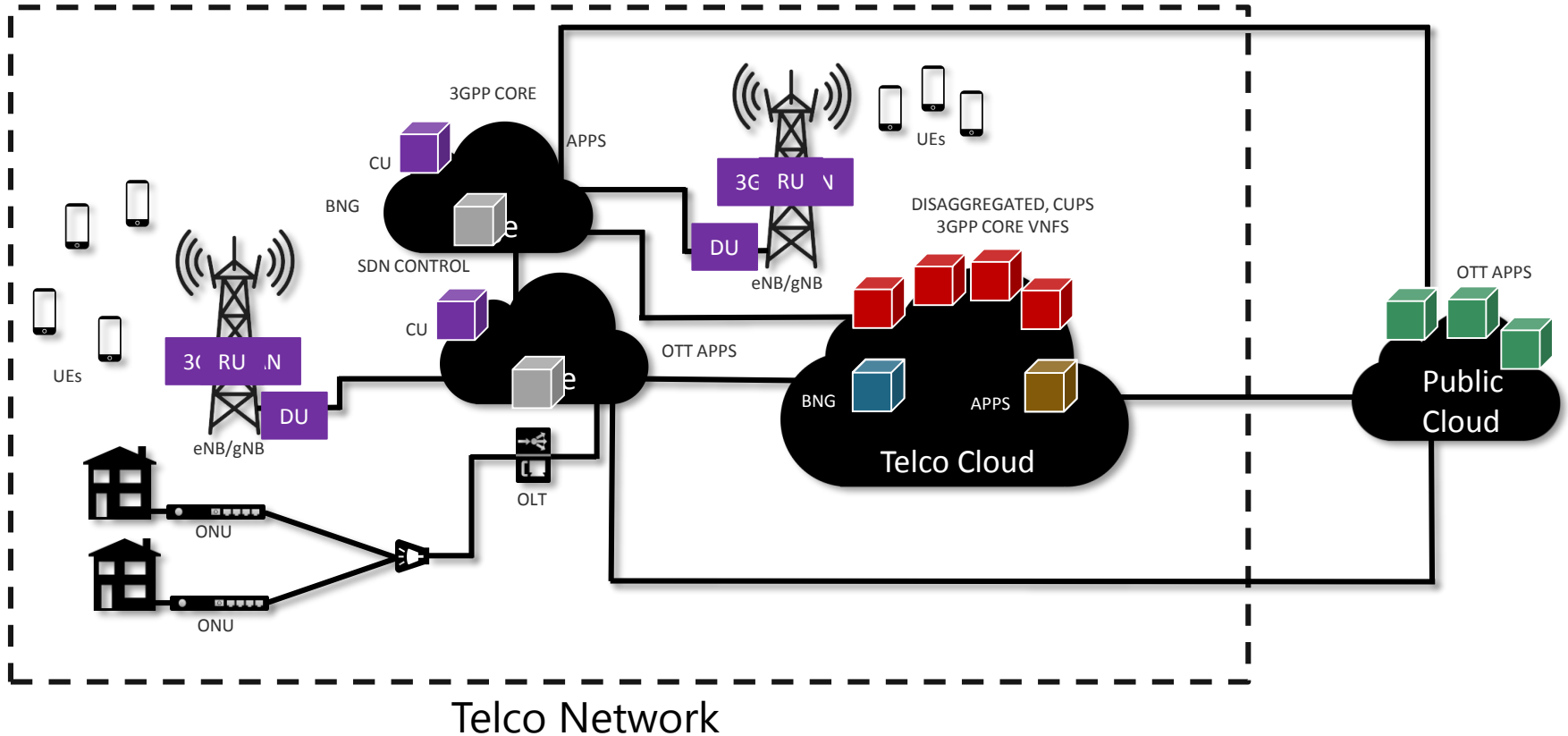
EVOLUTION TOWARDS THE EDGE



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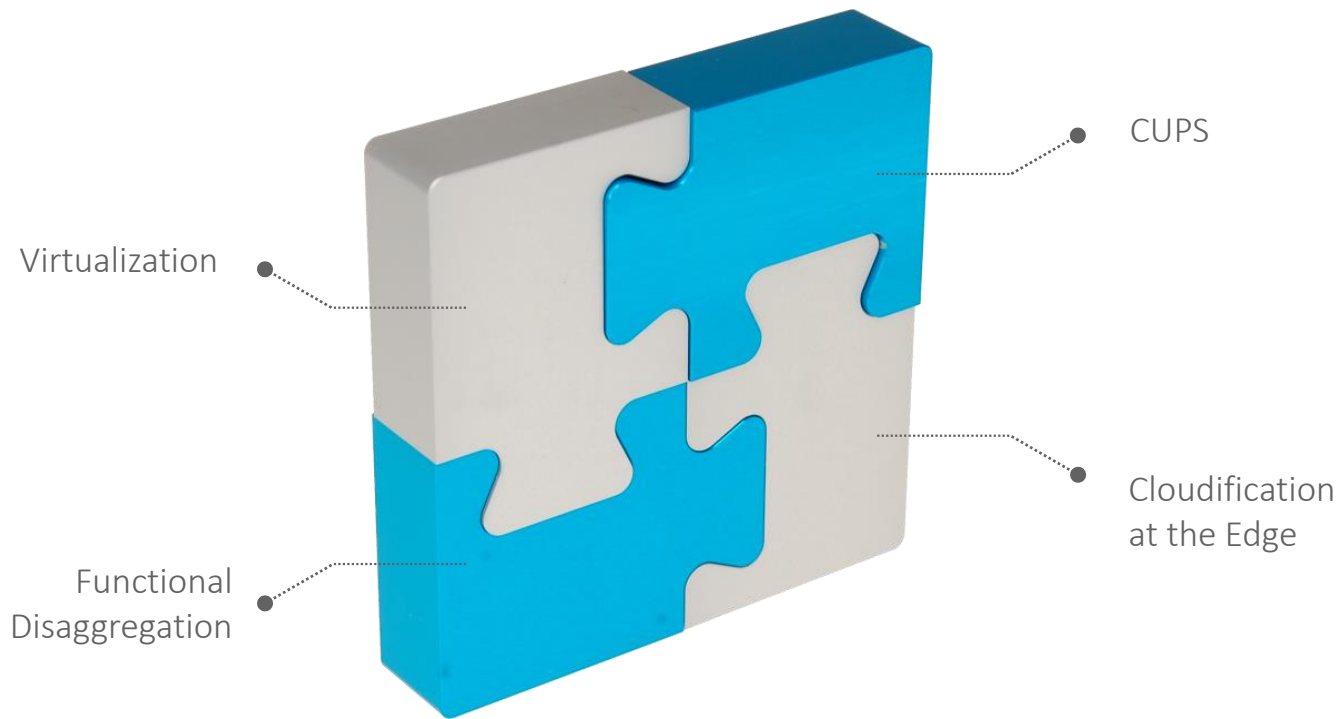
COMAC PROJECT



PILLARS, COMPONENTS AND EVOLUTION

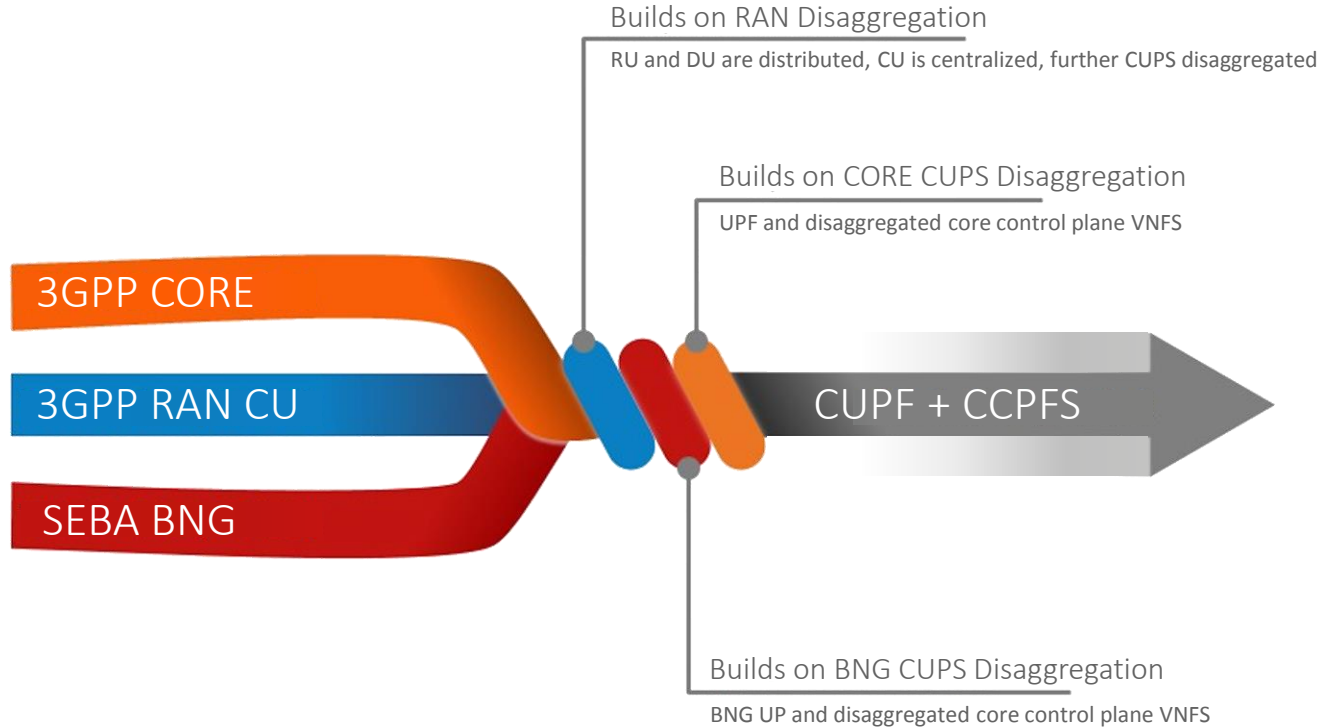
COMAC PILLARS

Why is Convergence Relevant Now?



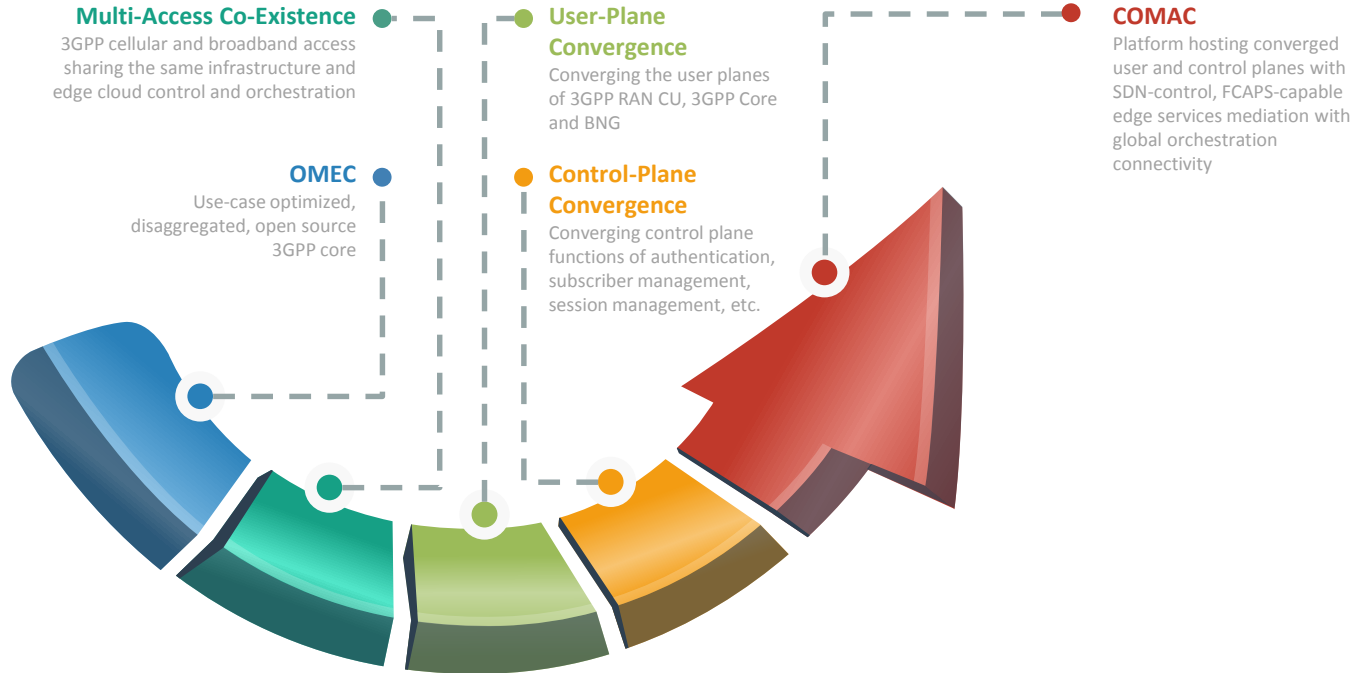
COMAC COMPONENTS

Problem Scope



COMAC EVOLUTION

Phased Approach

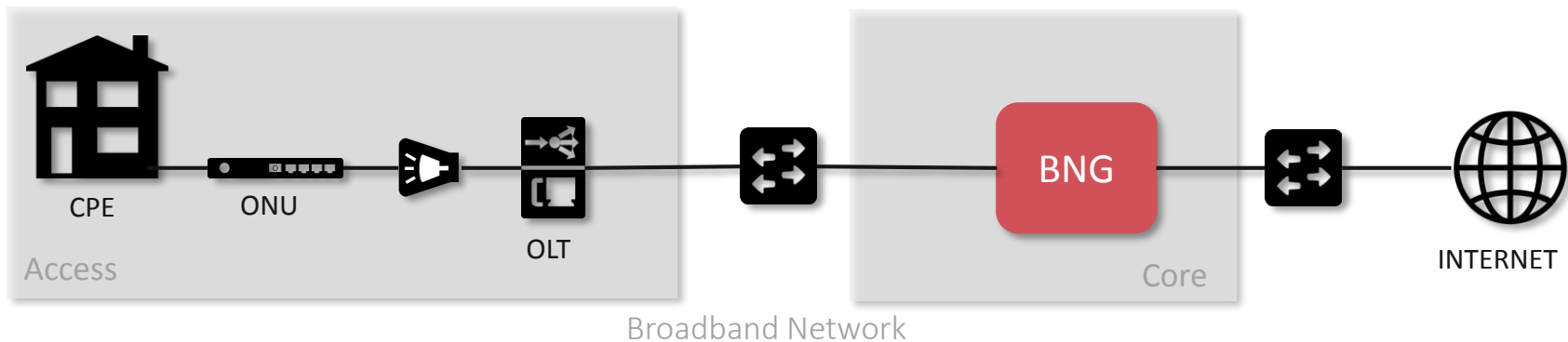
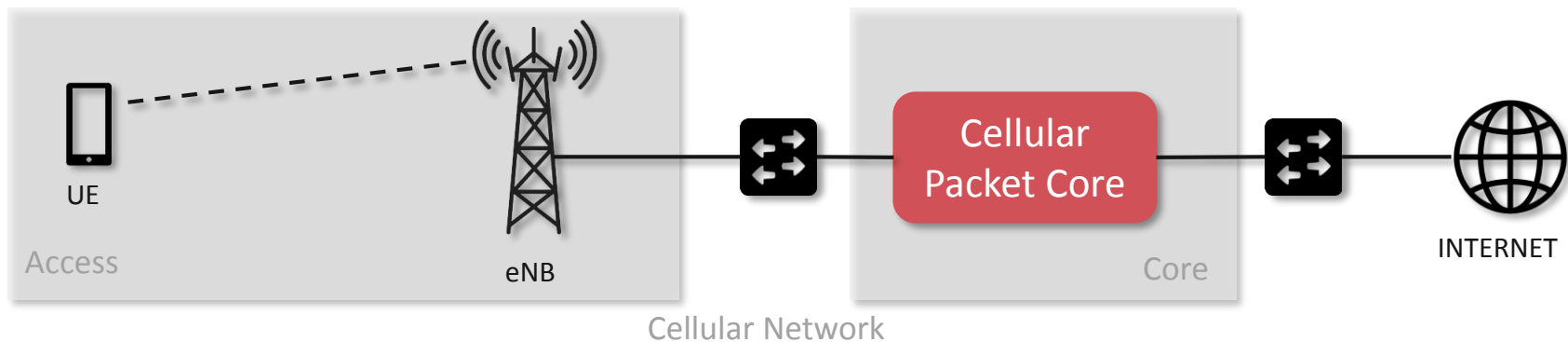


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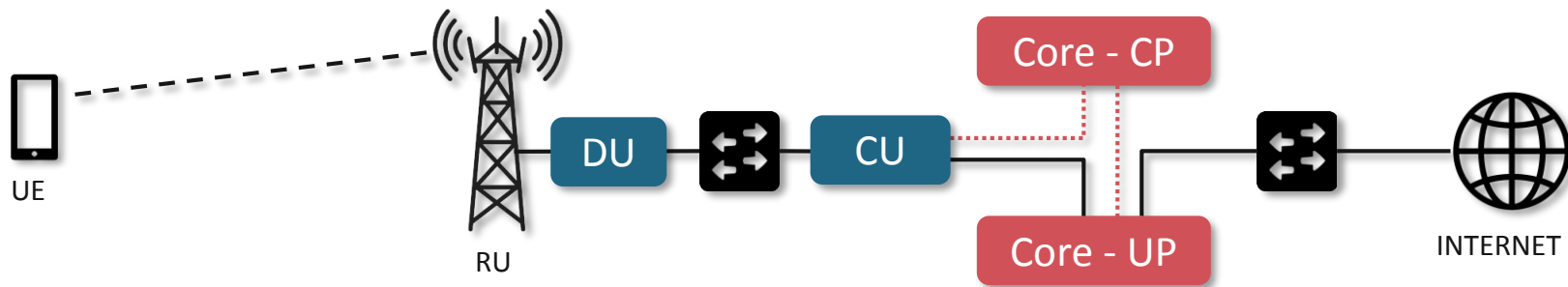


DISAGGREGATE FIRST

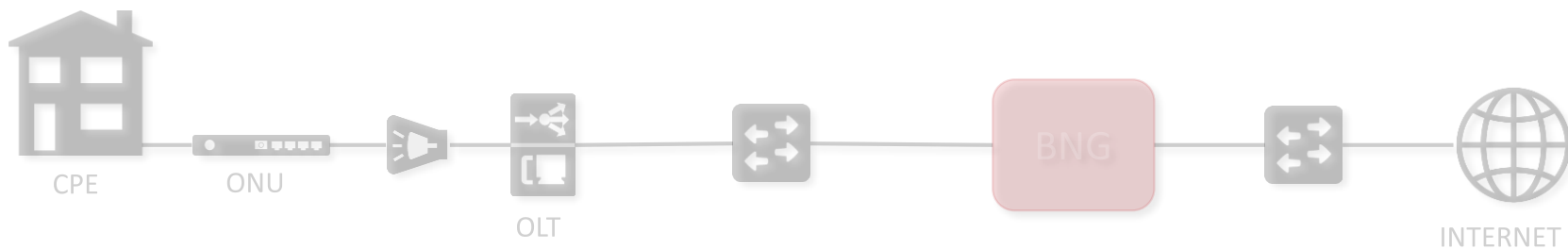
ACCESS & CORE



DISAGGREGATION & VIRTUALIZATION

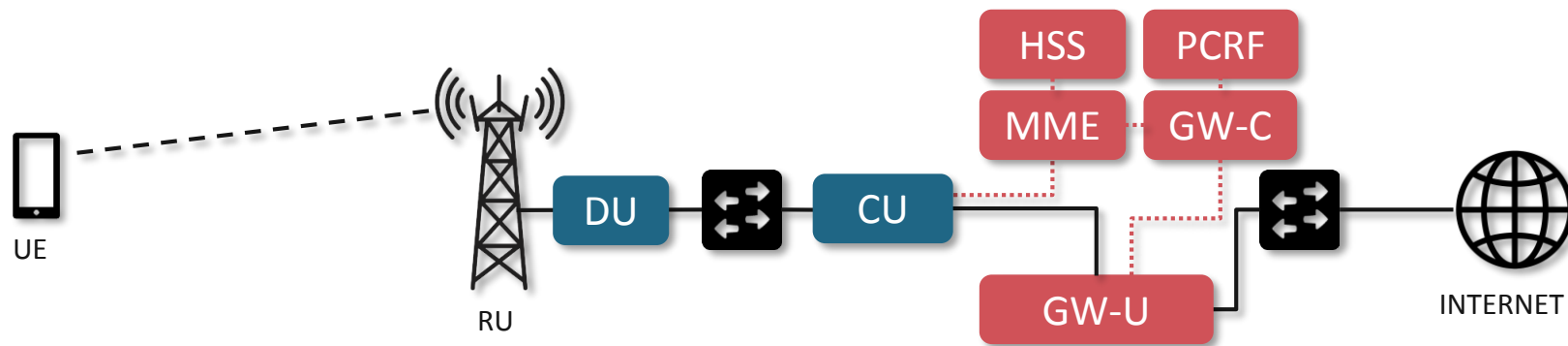


Cellular Network

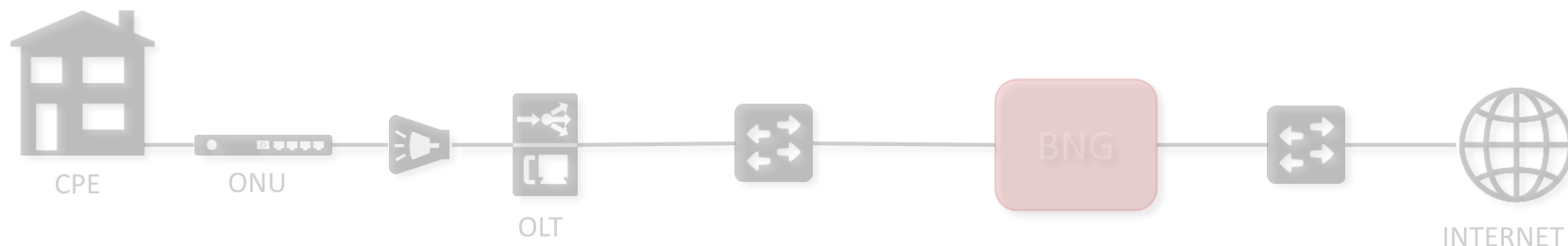


Broadband Network

DISAGGREGATION & VIRTUALIZATION

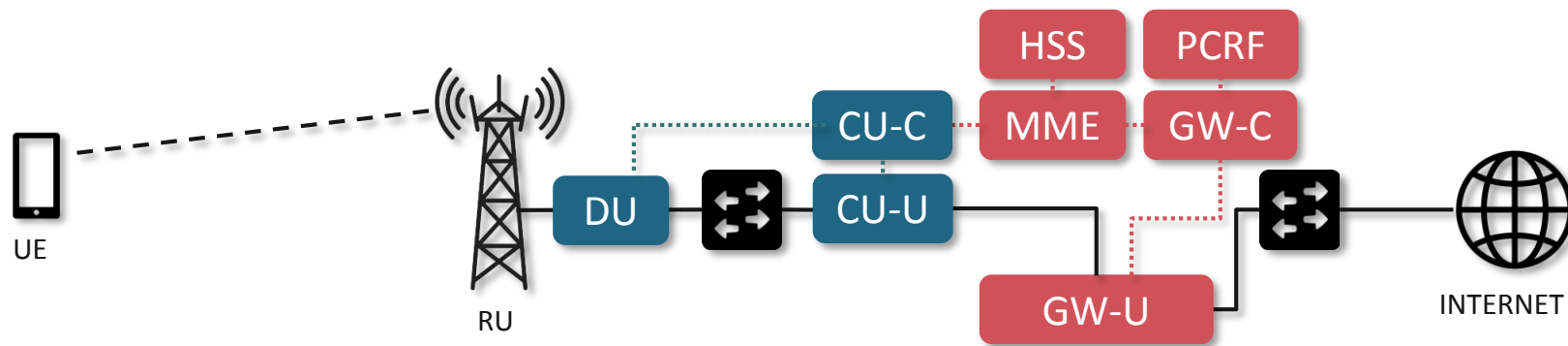


Cellular Network

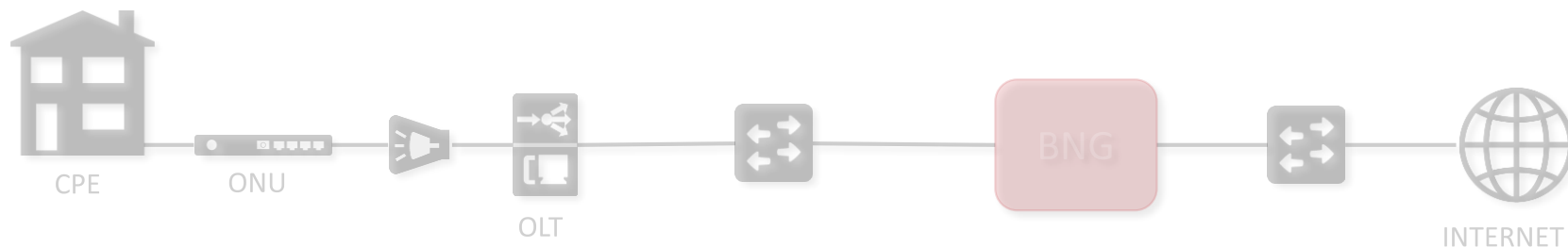


Broadband Network

DISAGGREGATION & VIRTUALIZATION

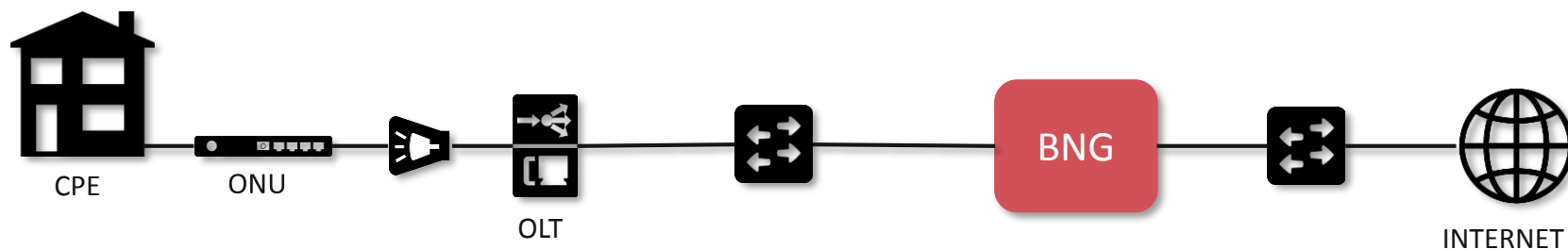
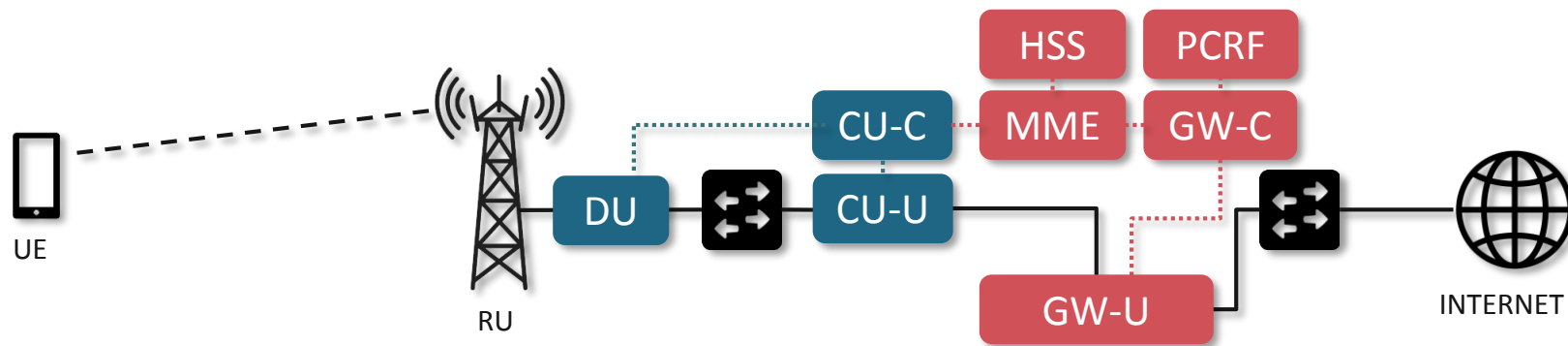


Cellular Network



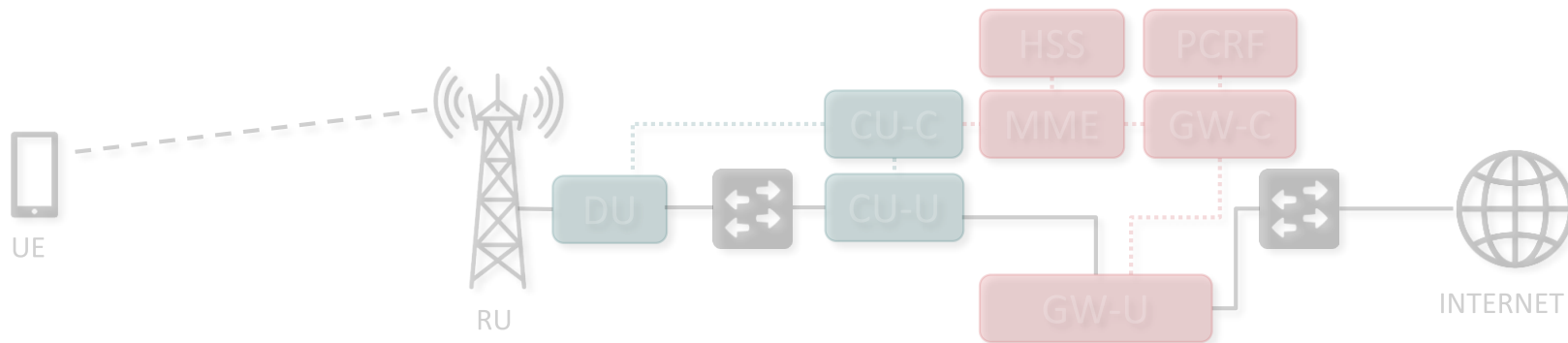
Broadband Network

DISAGGREGATION & VIRTUALIZATION

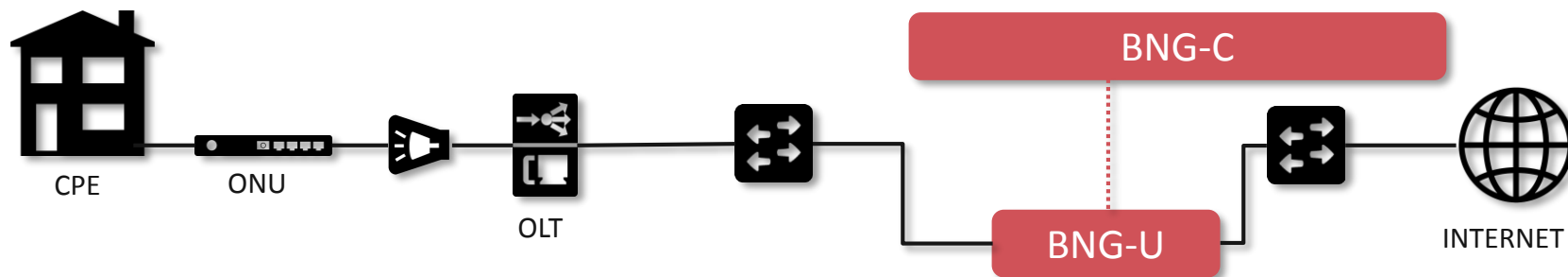


Broadband Network

DISAGGREGATION & VIRTUALIZATION

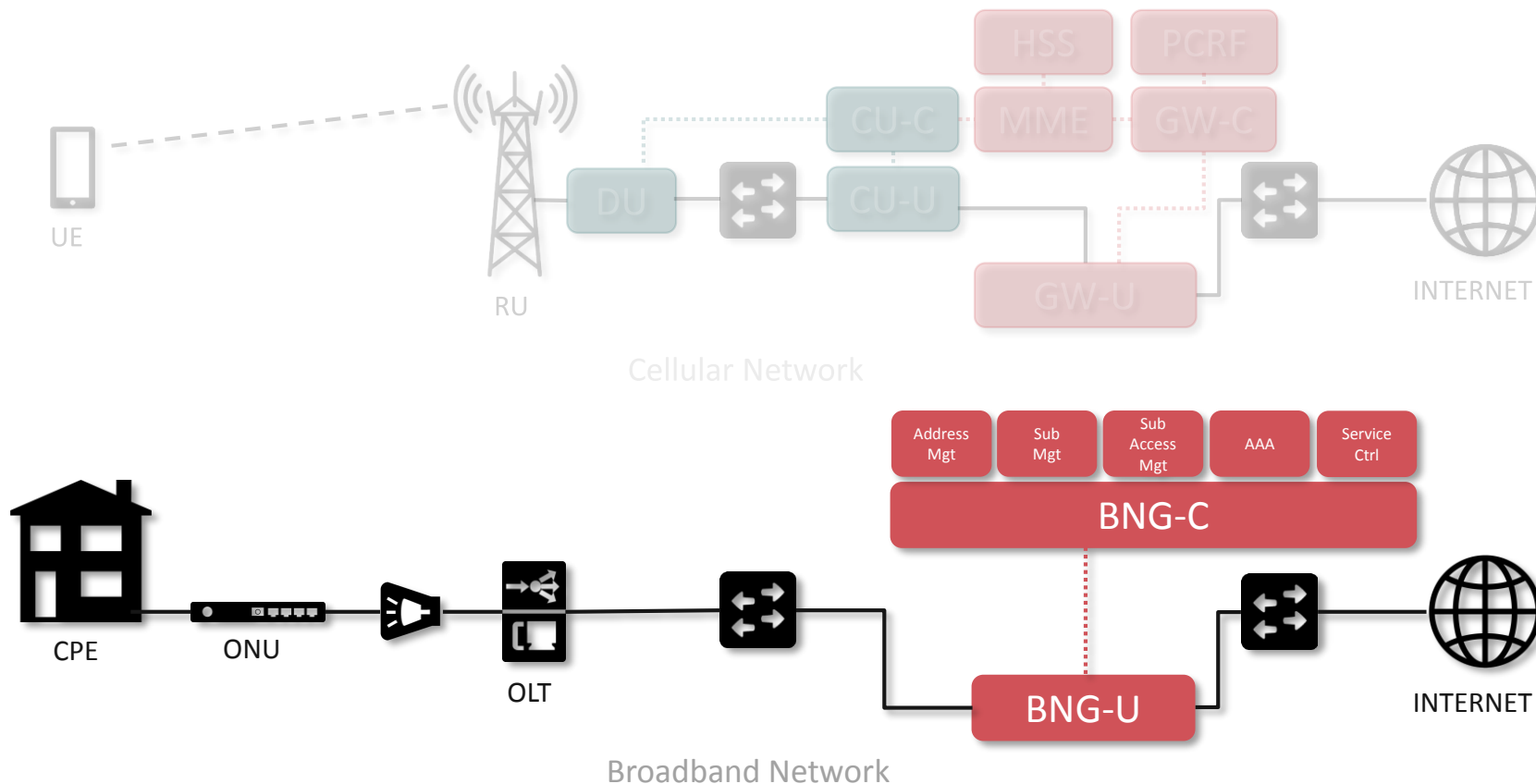


Cellular Network



Broadband Network

DISAGGREGATION & VIRTUALIZATION

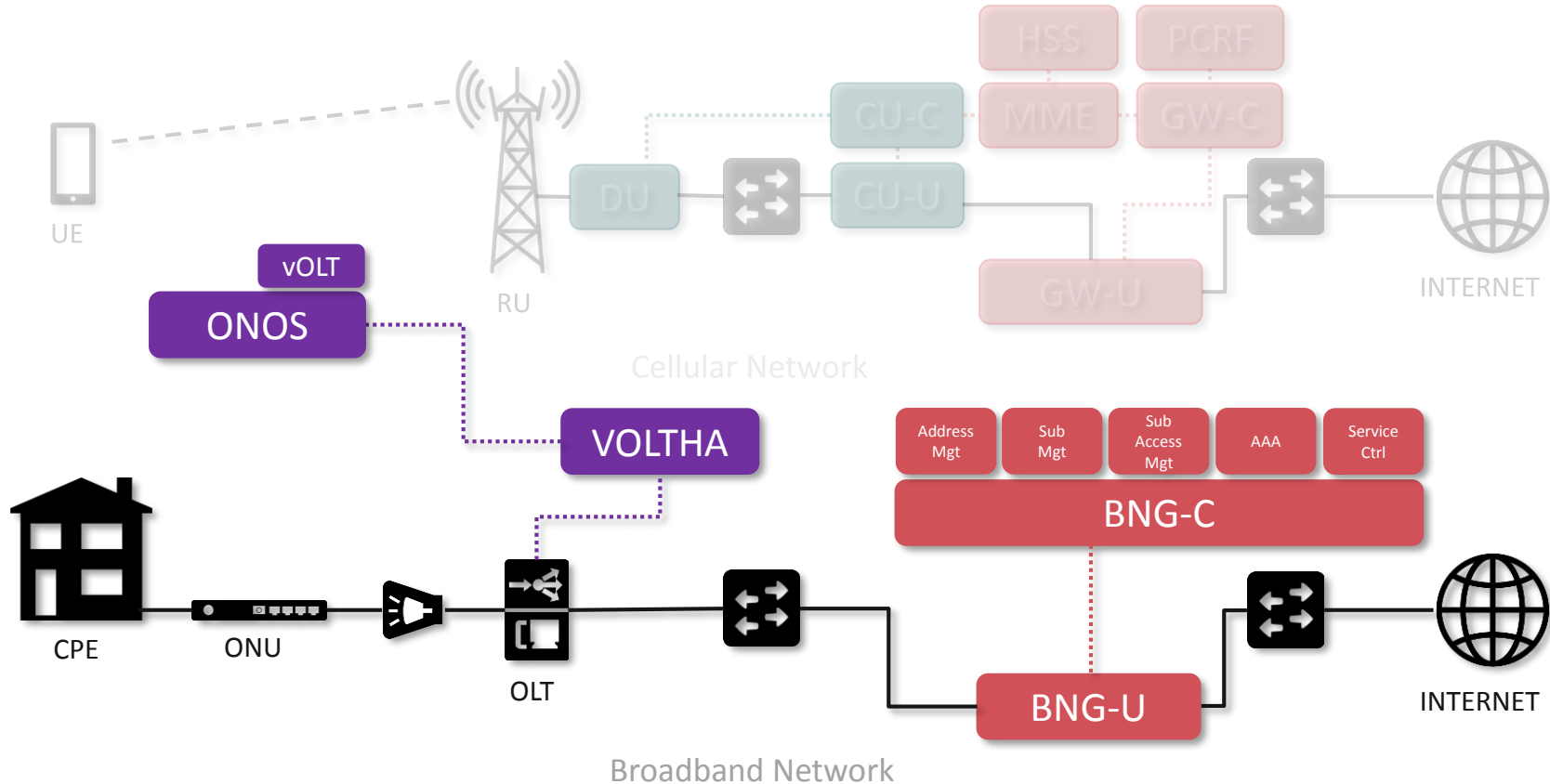


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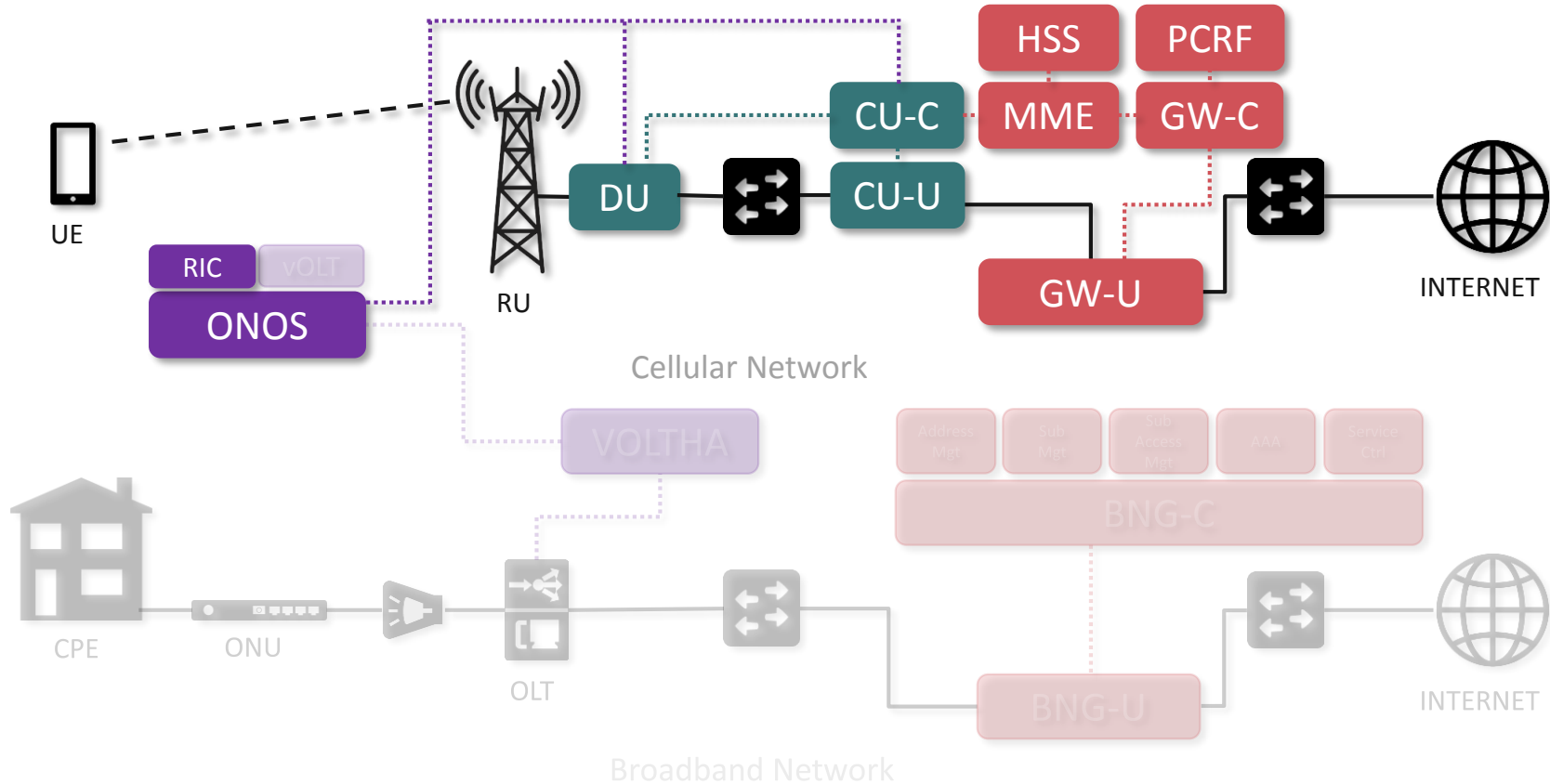


INTEGRATE WITH PROGRAMMATIC ACCESS

PROGRAMMABLE ACCESS



PROGRAMMABLE ACCESS

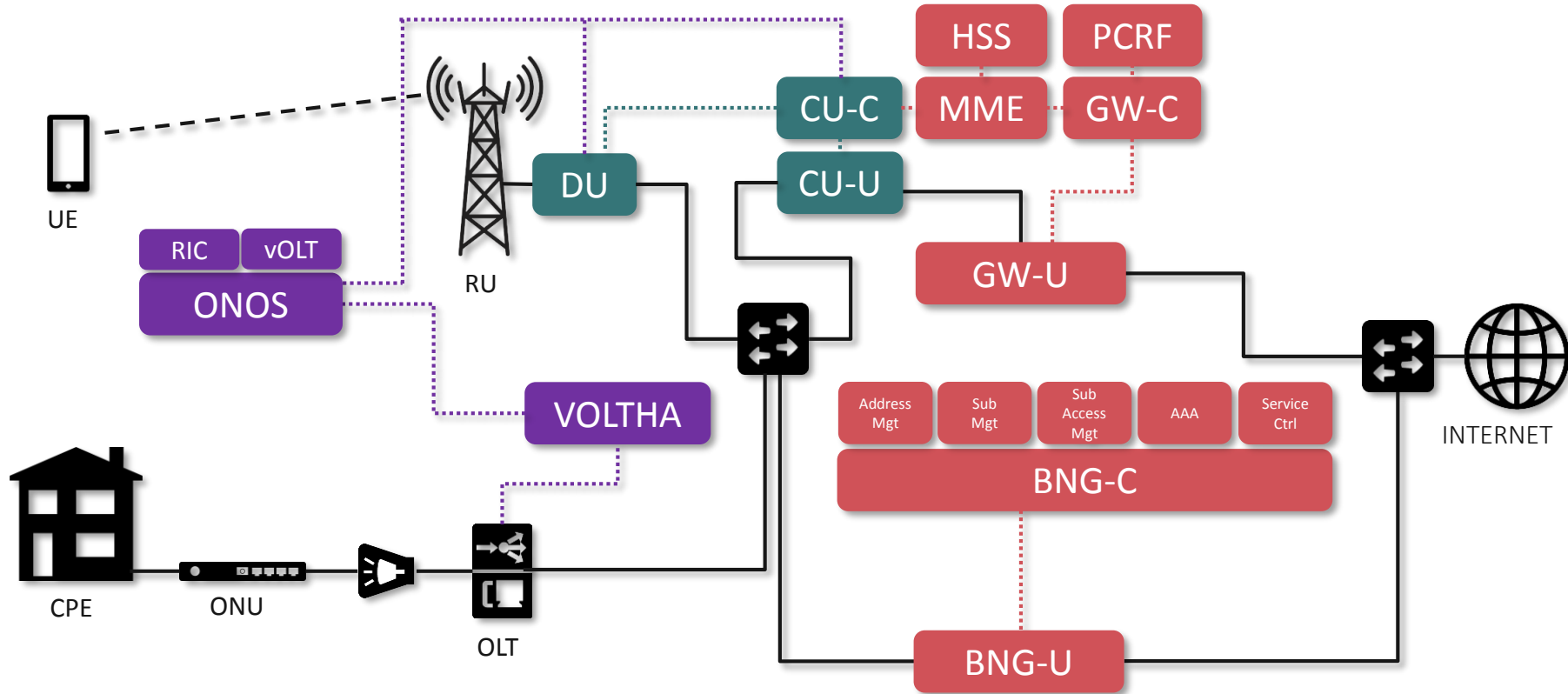


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ENABLE CO-EXISTENCE

COEXISTENCE AT THE EDGE

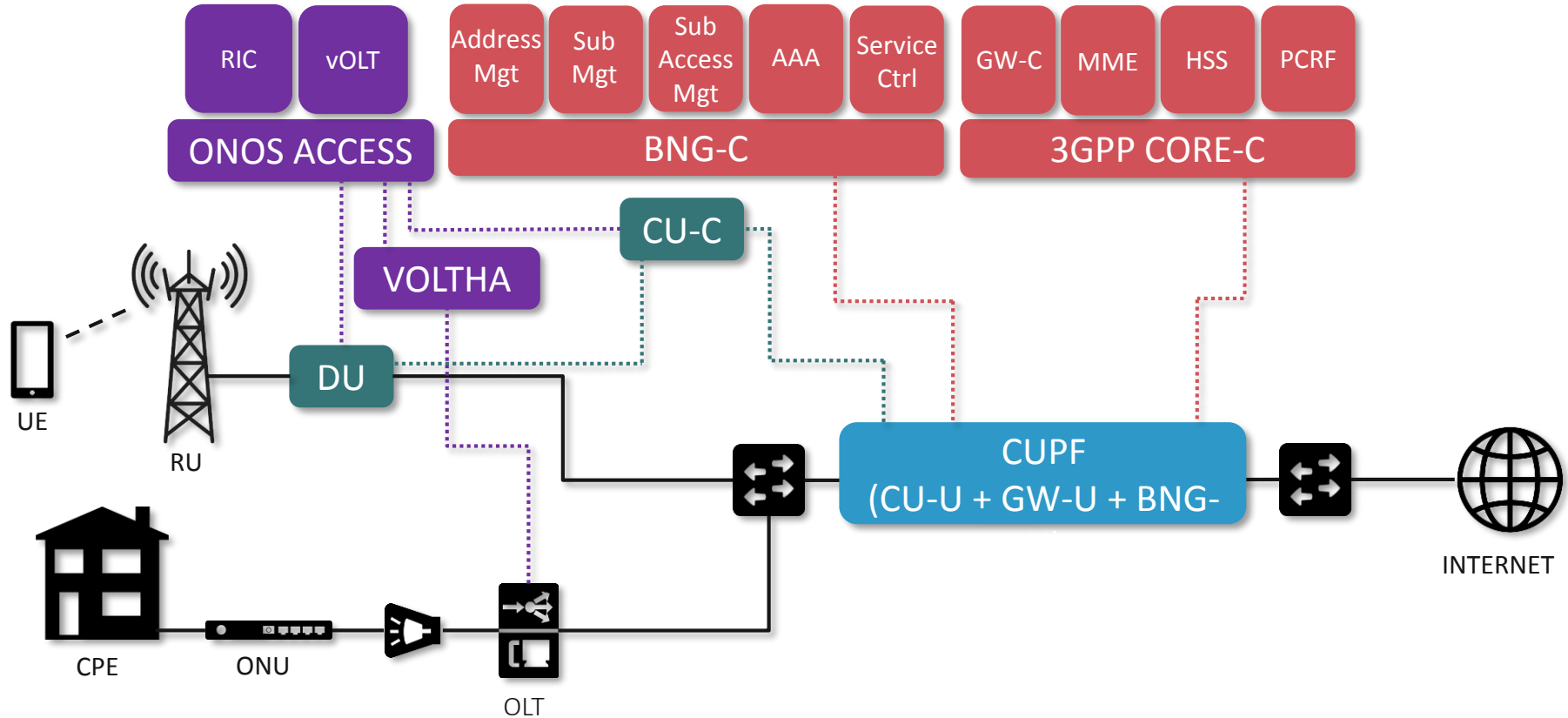


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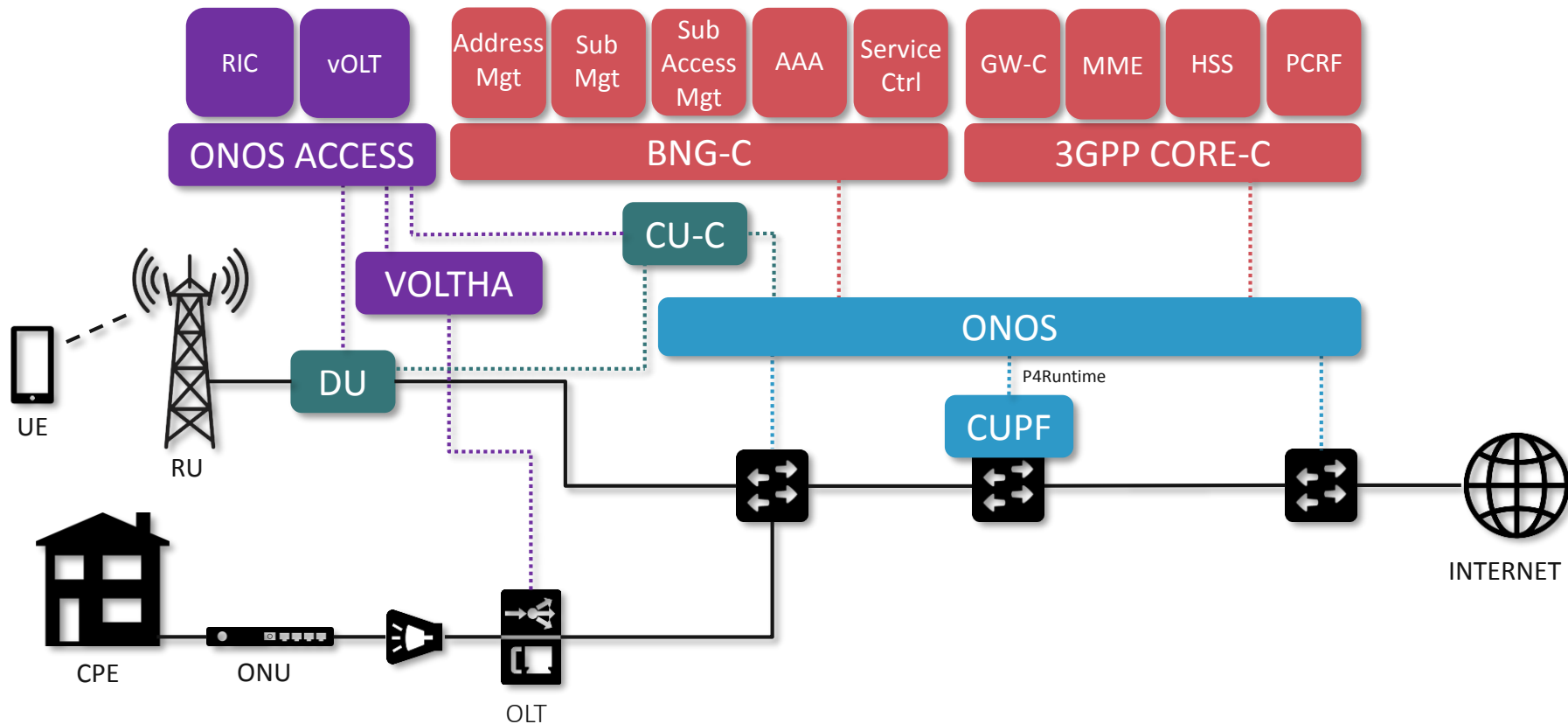


RE-AGGREGATE

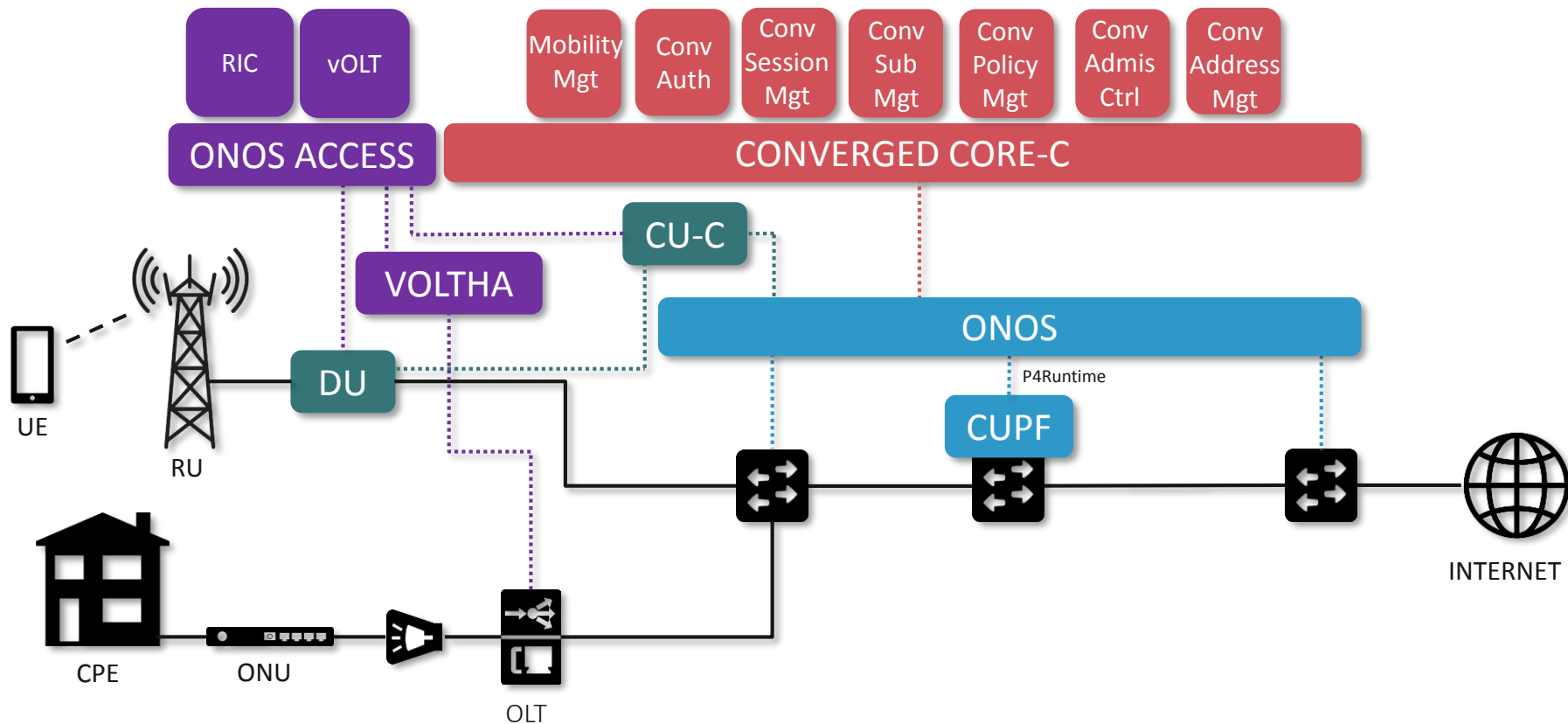
USER PLANE CONVERGENCE



P4-BASED USER PLANE CONVERGENCE



CONTROL PLANE CONVERGENCE

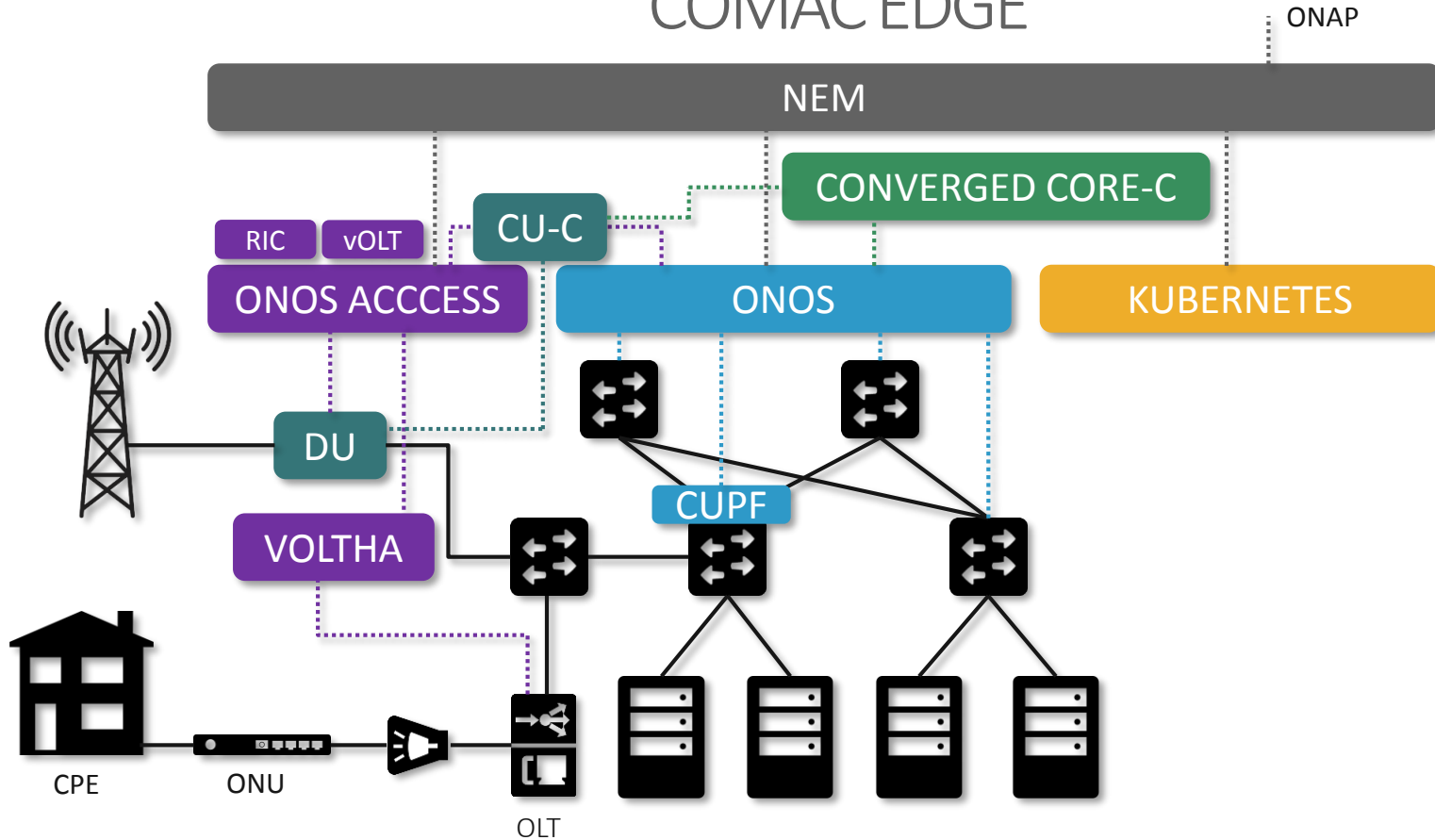


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PLATFORM

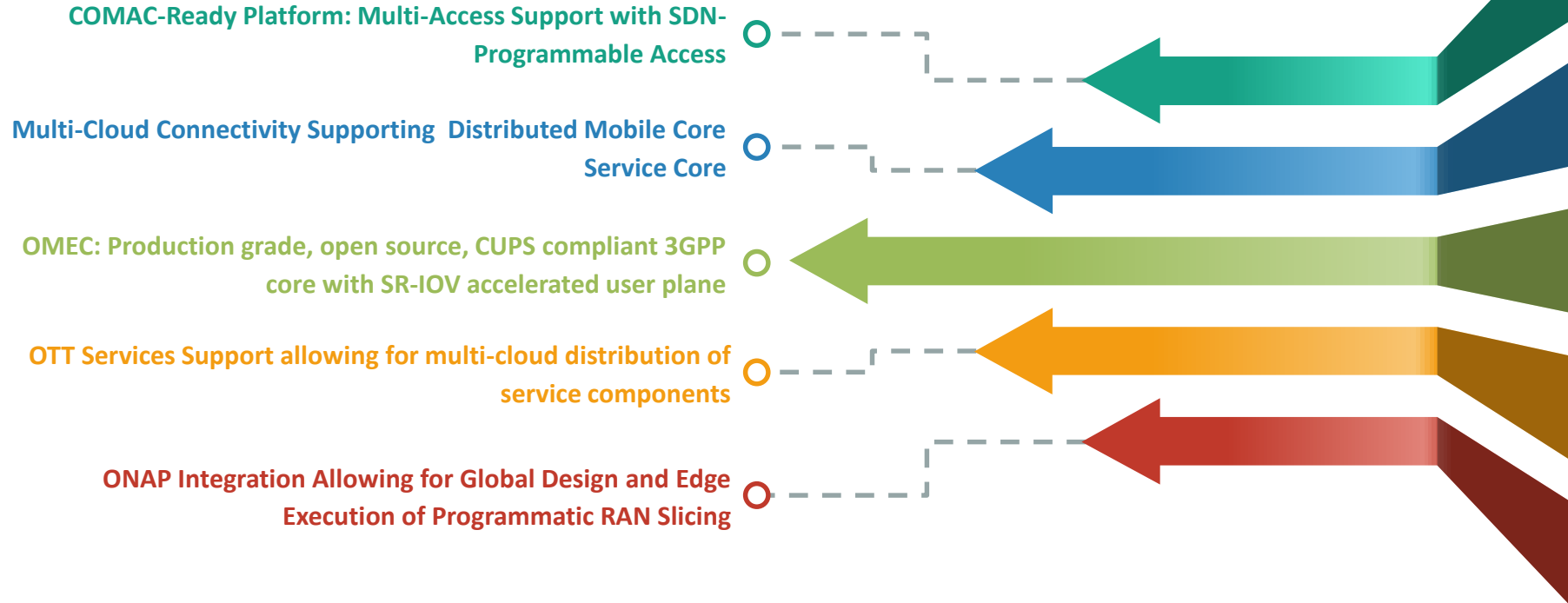
COMAC EDGE



COMAC CO-EXISTENCE DEMO AT MWC 2019



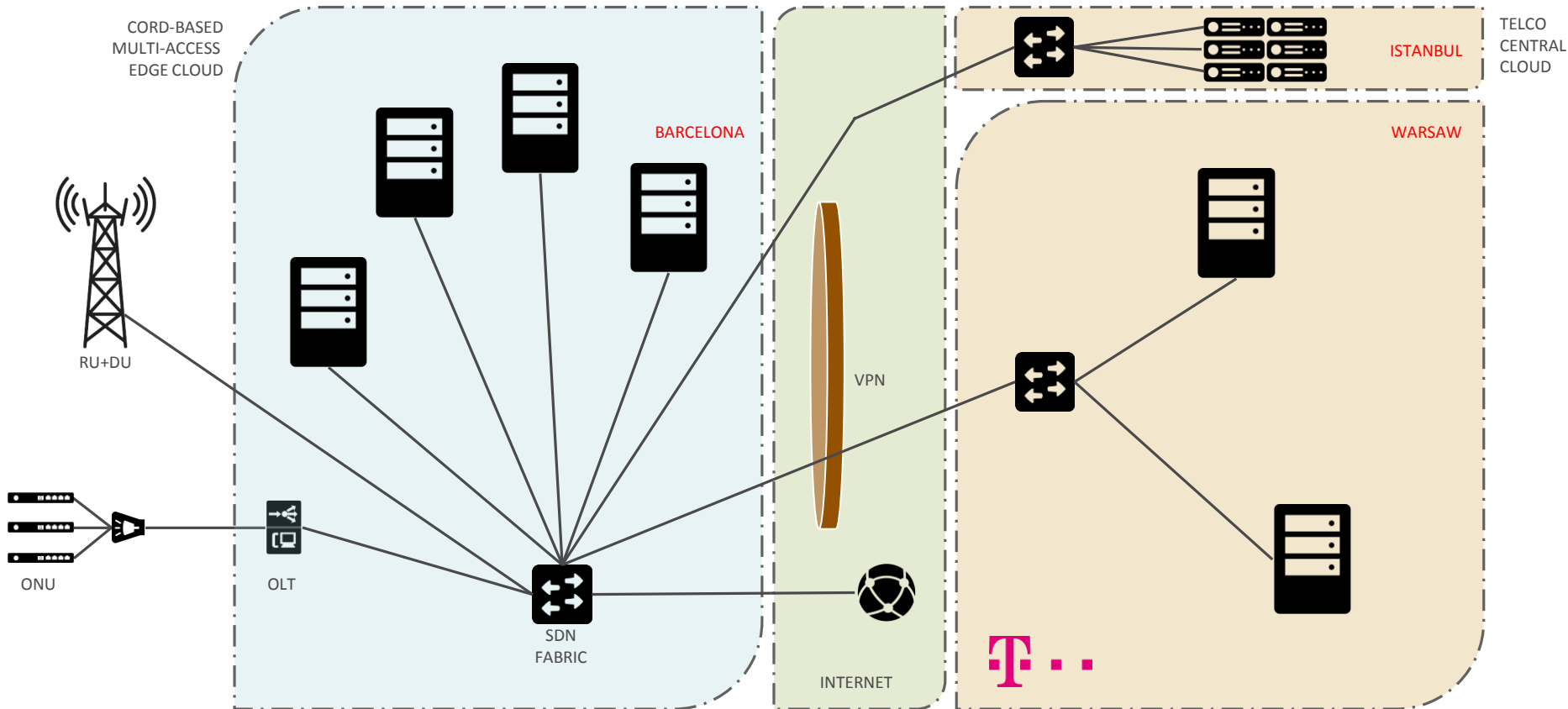
MWC 2019 DEMO FEATURES



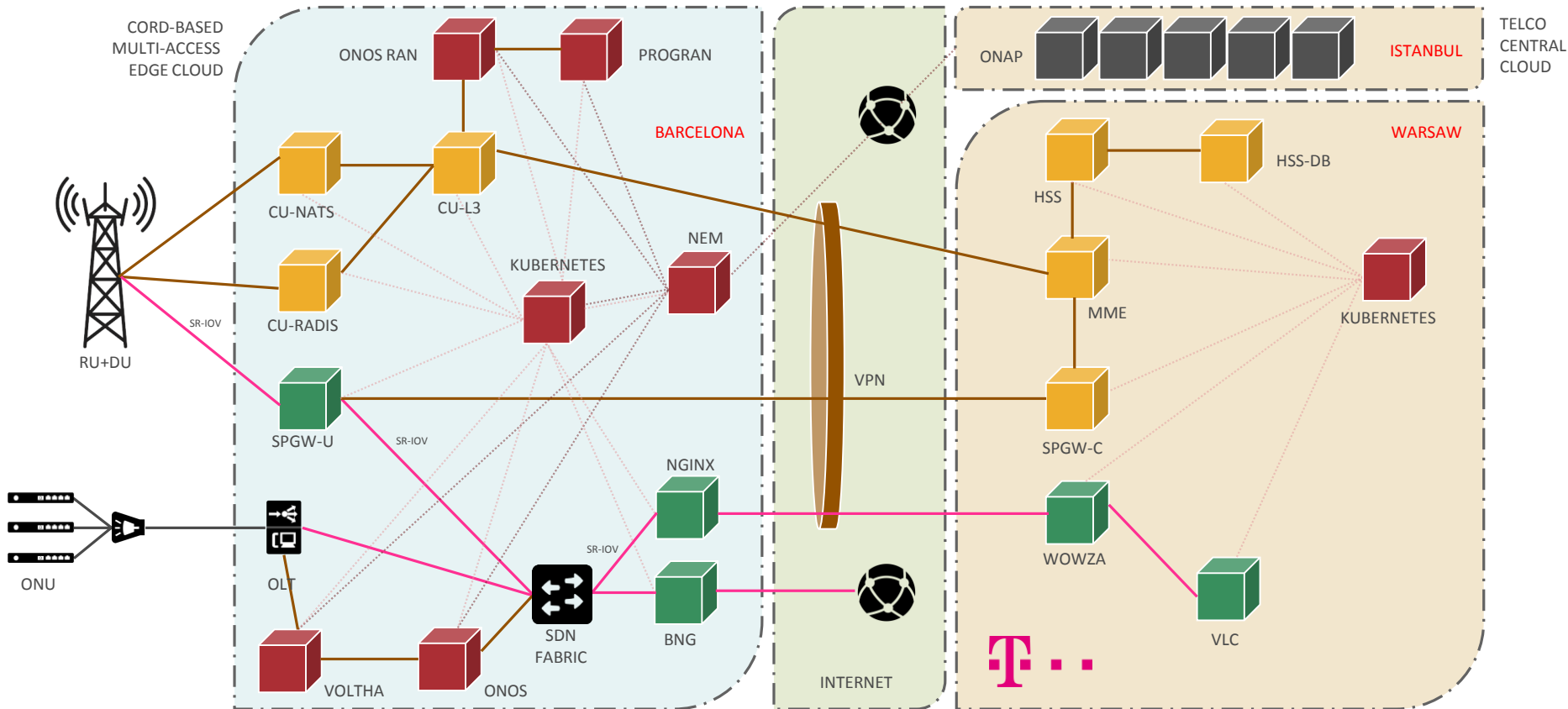
MWC 2019 DEMO PARTICIPANTS & SPONSORS



MWC 2019 DEMO INFRASTRUCTURE



ZERO-TOUCH DEMO SOFTWARE INSTALLATION



MULTI-CLOUD CONNECTED MULTI-ACCESS EDGE

Key Takeaways

Multi-Access Edge

CORD, designed to simultaneously support multiple access technologies is the perfect platform for the envisioned access and core convergence with COMAC

Multi-Cloud Connectivity

CORD allows connectivity to central clouds, enabling VNF-based service graphs as well as OTT service components distributed across such hybrid clouds

Open Source 3GPP Core

ONF's OMEC is a production-grade, release 13, CUPS-compliant core network platform that is tailored for use cases such as IoT. Containerized OMEC components can be natively hosted on CORD.

Open Source Driving Telco Transformation

Open source is a catalyst for the telco community to come together to deliver a comprehensive and highly integrated demonstration for the mobile edge

SDN-Based Programmatic Control of Access

CORD's SDN controller is the perfect choice to enable simultaneous programmatic control of subscriber management for broadband access and network slicing management for mobile access.

Multi-Vendor Platform

CORD presents a mobile edge platform that can be constructed using hardware and software from multiple vendors – ensuring a break from vendor lock-in



THANK YOU

