

The top of the page features a circular inset image of a man and a woman looking at a tablet together at night. The woman is smiling and holding the tablet, while the man looks on. They are both wearing winter clothing like scarves and hats. In the background, there are blurred city lights. The Nokia logo is positioned in the top left corner of the page, partially overlapping the image.

NOKIA

Packet core deployment flexibility and performance

Introduction

Communications Service Providers (CSPs) can capture new revenue opportunities by delivering a diverse range of exciting services. This requires a high-performing and reliable packet core that can be deployed without limitations and evolved with confidence on any cloud and using any access technology (2G/3G/4G/5G).

To meet their business objectives, CSPs need to be able to scale their packet cores in line with demand and do so rapidly while maintaining their high quality services.

Challenge

Large packet core deployments must be able to be scaled up to handle multiple terabits of capacity. Scaling must also be achievable while using multiple access technologies to deliver services effectively.

In contrast, highly distributed network edge deployments that include multi-access edge computing (MEC) require a smaller packet core footprint because of limited space and power in edge data centers. Yet, small deployments must still provide high throughput to support functional packet core user planes with value-added and integrated IP services. Small deployments must also provide local breakout for all applications at the MEC site to minimize latency and reduce network bandwidth.

Packet core flexibility meets the needs of CSPs
wherever they are in their cloud journey

Solution

Nokia offers products that form the key components of a webscale-class evolved packet core (EPC) and 5G core network. The Cloud Packet Core (CPC) can be deployed using cloud-native network functions (CNFs) and virtualized network functions (VNFs) that are correctly sized according to location and use case.

The Cloud Mobile Gateway (CMG) provides 2G/3G/4G and 5G core network gateway-related functions to support increasing numbers of users, devices and services.

The Cloud Mobility Manager (CMM) delivers the scalability, flexibility, high-availability and performance to meet growing network signaling loads for consumer mobile and Internet of Things/Machine Type Communications (IoT/MTC) services.

Nokia Cloud Network Resource Director (CNRD) provides 5G service-based architecture network function registration and assigns devices to network slices.

Benefit

Nokia CPC provides key deployment benefits for CSPs:

- Minimized latency - a compact, high performance and distributed packet core for user plane slice selection and local traffic offload helps to meet the needs of ultra-reliable low latency use cases.
- Increased flexibility - packet core network functions can be introduced or expanded rapidly with a simple software upgrade or a pre-integrated appliance.
- Resource efficiency - the unified control plane can manage multiple wireless and wireline user plane functions located anywhere in the network.

Result

Nokia's Cloud Packet Core offers deployment flexibility, with appliances giving additional options for CSPs that have limited cloud infrastructure, or for deployment at edge locations.

Discover more about how Nokia CPC allows CSPs to build a universal and adaptive core network.

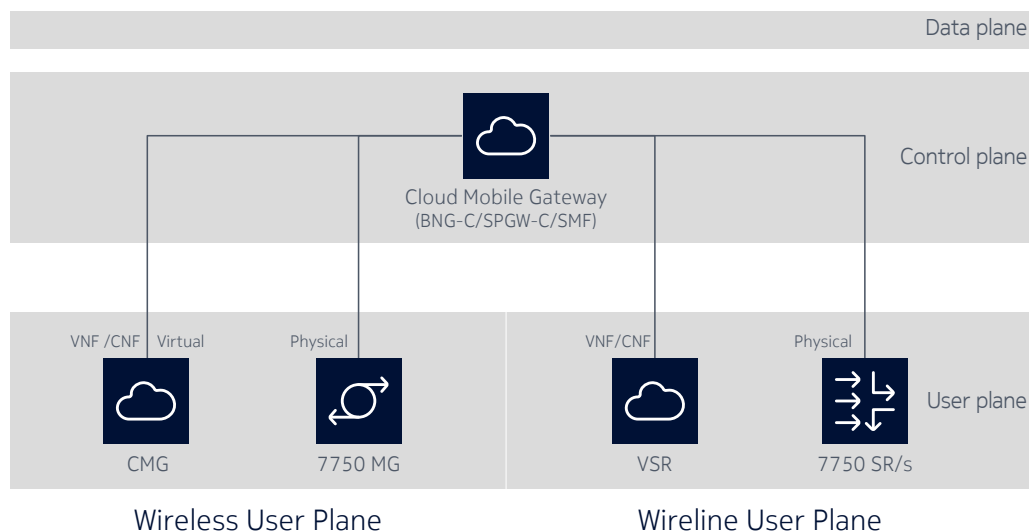
Visit the [Nokia Cloud Packet Core website](#), read our [eBook](#) and [executive brief](#) for more information.

Converged

Session management for wireless and wireline

Limitless

Right platform for every deployment scenario



About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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Document code: CID210712 (April)