

Maximize packet core throughput and minimize latency

Introduction

Communications Service Providers (CSPs) can capture new revenue opportunities by delivering diverse and 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 enable CSPs to meet their business objectives, the packet core must deliver the highest performance, which is most effectively achieved by integrating IP services to eliminate external components. New access types, new threats.

Challenge

Most of the data traffic processed by the packet core require IP services, such as deep packet inspection (DPI), firewall (FW) and network address translation (NAT).

Conventional packet core networks typically use dedicated external network elements to handle these frequently used IP services. This results in packets being continuously sent back and forth between elements. Latency is increased, degrading the performance of services and applications. Processing loads also increase, requiring a larger, more costly equipment footprint.

Industry-leading performance from integrated IP services
and a high-performance IP forwarding engine

Solution

Nokia offers products that provide the key components of a webscale-class evolved packet core (EPC) and 5G core (5GC) network.

The Cloud Mobile Gateway (CMG) integrated user plane function (UPF) / packet gateway (PGW) IP services minimize latency, eliminate inter-network element traffic and reduce server footprint as packets only need to be processed once.

Nokia's 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

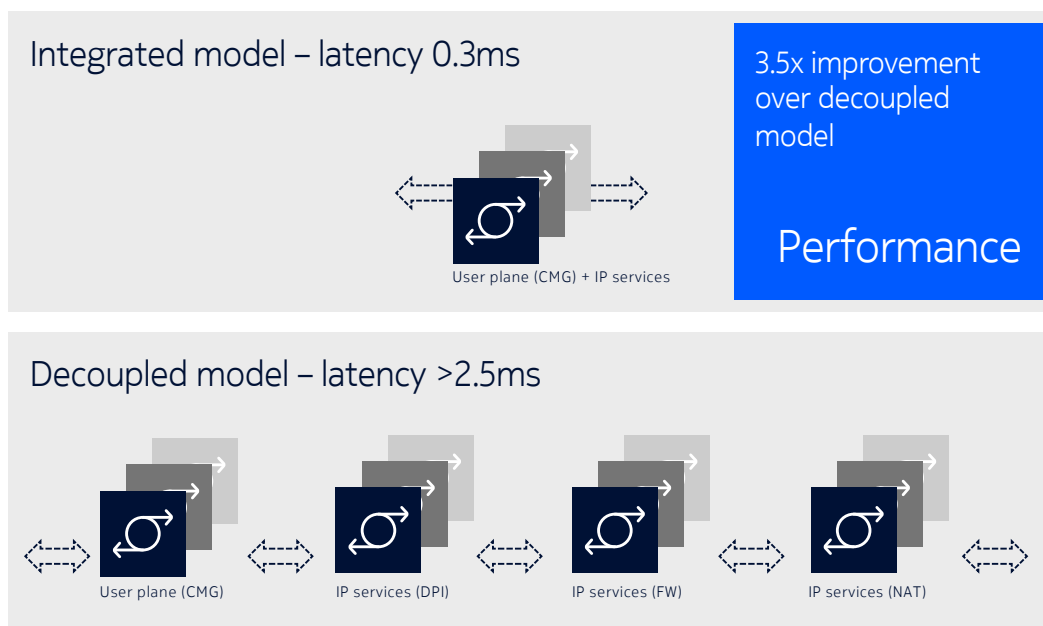
- **Cost-effective network** - 3.5x greater throughput compared to dedicated external network elements.
- **Improved customer experience** - the high-performance packet core gateway minimizes latency for the delivery of uRLLC use cases.
- **Lower OPEX** - fewer network functions need to be processed and maintained.

Result

Implementing a Nokia Cloud Packet Core (CPC) creates an efficient network that lowers costs and increases customer satisfaction by supporting exciting services that require ultra-low latency and high throughput.

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.



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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