



Case study

Automated, customer-centric network management with the Nokia Network Services Platform

NOKIA NETWORK SERVICES PLATFORM

NOKIA



Any communications service provider (CSP) looking to roll out a new 5G network has to ensure the complexity of managing that network doesn't compromise its ability to deliver the performance demanded by its customers. By using the Nokia Network Services Platform, one large CSP in the Asia-Pacific region was able to automate its transport network, leading to greater operational efficiency, reduced costs and faster time to market for 5G services.

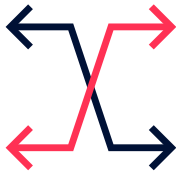
Business benefits



\$US 4 million in operating cost savings per year (expected)



\$US 2 million in revenue loss savings per year (expected)



Improved network resiliency and service availability



Challenge

A large CSP in Asia-Pacific was preparing to roll out new 5G services to support its 5.8 million subscribers. To ensure it could provide the quality and reliability demanded by the broad range of enterprise and B2B2X use cases 5G will enable, that meant building an all-new, end-to-end IP, optical and microwave transport network to serve its top 12 cities.

But a 5G network can be complex to manage due to its mix of centralized and distributed components, all of which can be created and moved around dynamically based on evolving customer needs. The CSP knew it wouldn't be able to fully realize the promise and potential of 5G — and meet the needs of its customers — unless it had a way to manage the network (and its complexity) in an intelligent, dynamic way.

To realize the promise and potential of 5G, the network needs to be managed in an intelligent, dynamic way.

Solution

The first phase of the CSP's new 5G network was rolled out in 2020, with the Nokia Network Services Platform (NSP) at the heart of its operations. NSP provides a single platform to manage, control and automate the IP, optical and microwave transport domains — abstracting the complex, multi-layer transport network by presenting it as one simplified network service to the upper orchestration layer.

NSP provides unified visibility into and coordination across those network layers, which are usually managed by different teams with little or no awareness of what the others are doing. By ensuring those teams don't work at cross-purposes, NSP helps optimize network resource utilization and improve overall network performance.

With zero-touch provisioning and intent-based workflows, the CSP's services operations team can work on the “what” (specifying customer requirements for bandwidth, latency and so on) while NSP automatically

takes care of the “how” (configuring and deploying the infrastructure to meet those requirements, with new components up and running within minutes). And based on user demands and real-time network monitoring, NSP can dynamically instantiate and optimize traffic-engineered paths to deliver the best possible performance.

NSP is just one part of the end-to-end 5G solution Nokia provided to this operator, which also included not just operations software but also physical hardware and managed services to fast-track 5G delivery — without disrupting the existing 4G infrastructure the CSP's customers still depend on.

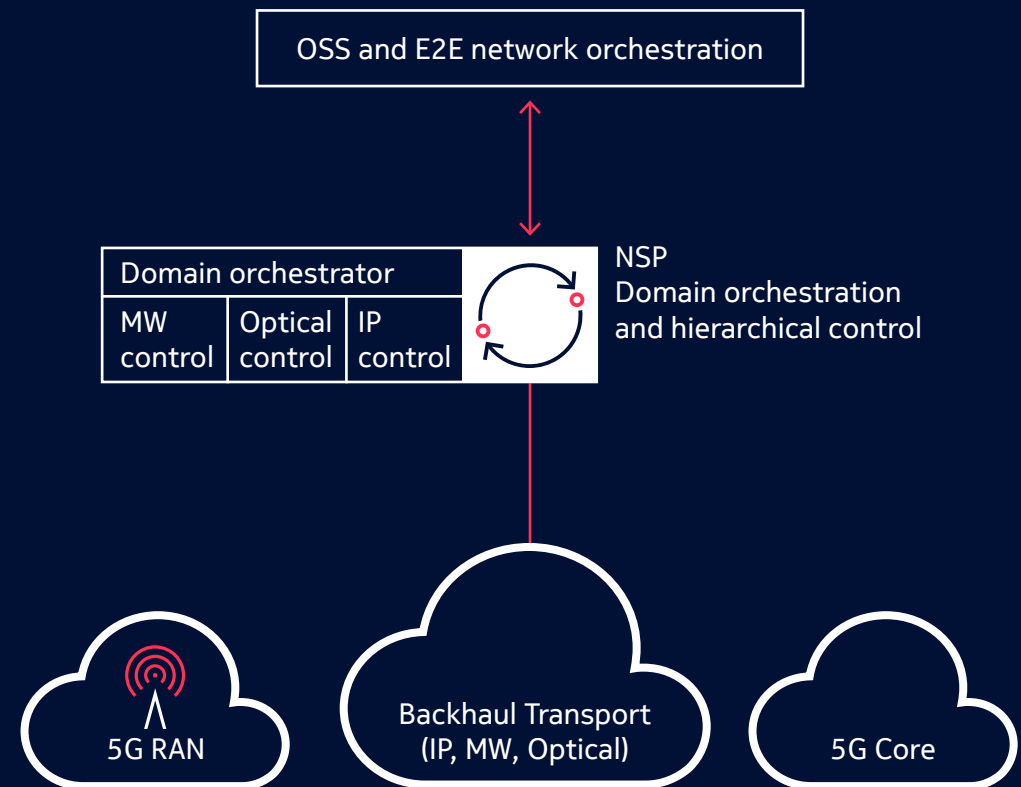


Figure 1. Nokia NSP cross-domain orchestration and control



Results

Thanks to the improved network performance enabled by NSP, the operator is able to meet the demanding needs of 5G use cases and can deliver the services enterprises want much faster — and at lower cost.

Multi-layer coordination is expected to lead to operating cost savings of nearly \$US 4 million each year. The ability to resolve problems faster without having to send engineers into the field is expected to reduce annual revenue loss by more than \$US 2 million, thanks to fewer truck rolls and less customer churn.

Results

NSP will also help this operator save on capital expenditures by allowing it to run its transport network “hotter”. Most networks are overprovisioned, utilizing just 20–30% of available capacity to allow room for re-routing around interference or expansion during peak periods. Because NSP provides greater visibility into transport routes and disjoint paths, automatically re-routing traffic to the clearest paths in real time and identifying root causes of service-affecting issues faster, the CSP can run the network at closer to 60% of its capacity, avoiding the need to purchase new equipment — while also greatly improving network reliability and service availability.

The CSP also benefits from operational flexibility thanks to its agreement with Nokia that allows it to place orders for site delivery. This enables the CSP to scale up or down the pace of its 5G rollout as needed, so it can make sure each piece works as intended before deploying the next — ensuring optimal network performance every step of the way.

50%
Increase in transport
network resource utilization

\$US 3.8 million
Anticipated OPEX
savings per year

\$US 2.4 million
Anticipated revenue loss
savings per year



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