DELLTechnologies

Communication Service Provider builds their 5G standalone core network

This Tier 1 CSP drastically reduced the time and cost to update and manage their 5G core infrastructure with integrated telecom solutions by Nokia, VMware, and Dell Technologies.

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Industry:
Telecom

Region:
APJ

Business needs

As this Tier 1 CSP needed to standardize and scale its national 5G infrastructure, the existing packet core infrastructure could not keep up with data transmission growth. Nokia, VMware, and Dell Technologies delivered a 5G standalone core solution to quickly install and scale new revenue-generating services.

Solutions at a glance

- Nokia Cloud Packet Core
- Nokia 5G Standalone Core
- VMware Telco Cloud Platform
- Dell Technologies Ready Architecture
- Dell Technologies PowerEdge Servers
- Dell Technologies Unity Storage

Business results

- Fast implementation with proven design
- Maximum uptime with best-in-class infrastructure and support

- Monetized new 5G services
- Reduced opex and capex with proven cloud-native blueprints

Achieved 30-day time savings to design complete system
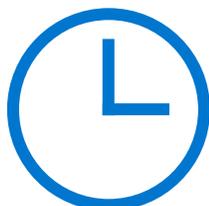
Reduced cost to integrate with existing systems by 15%

The Challenge of 5G

To support new services and applications, every CSP must transform from 4G to 5G technology, architecture, and business models. They must monetize new services, spend less operating their network, and avoid vendor lock-in. Ultimately, CSPs must activate new 5G revenue streams as quickly as possible to achieve healthy return-on-investment.

This Tier 1 CSP in Asia faced soaring connected device counts and traffic outpacing revenue growth. Complex core network operations required massive labor-hours and spending just to maintain it. How could they serve more people and connected devices in a reliable, manageable, proven way?

They knew the core must radically change. They needed cloud-native design, superior service automation, and standardized core services. In addition, they needed to build for the open multi-vendor 5G future of secure, reliable, and massively scalable networks.

Opportunity for Change

Facing this crossroads, they turned to Nokia, VMware, and Dell Technologies as trusted technology advisors. Together, the team built a best-in-class 5G standalone core network to achieve business goals. The solution design and deployment were accelerated by having an integrated end-to-end solution with unified services.

This new architecture automation should enable cost-effective network management. The network design should be flexible, programmable, and distributed to shorten time-to-market and provide excellent performance and efficiency.

The CSP wanted a new powerful, efficient 5G standalone core to differentiate them from competitors. They wanted to build their brand for the next decade on manageable, scalable, reliable 5G services. Customers should leverage ultra-low latency ultra-reliable connectivity to power their growth. This smart investment improved margins and generated new revenue streams.

Proven Reference Architecture Model

The demands of a next-generation standalone core require a strong team of technology partners.

Nokia's 5G Core (5GC) is open, modular, and infrastructure-agnostic. It deploys network functions as micro-services. Nokia Cloud Packet Core provides key components needed for a webscale-class core network that includes the 5G core, evolved packet core (EPC), and 2G/3G packet switched domains.

VMware's Telco Cloud Platform is a consistent horizontal platform supporting both containerized and virtualized network functions. It modernizes CSPs' clouds and reduces operational complexity, enabling CSPs to deploy innovative 5G services fast.

Dell Technologies sees the core as an open, disaggregated, best-in-market environment that brings together solutions from cloud-native network function vendors, OEMs, RAN vendors, cloud service providers, and more. They brought purpose-built telecom-grade servers, storage, management, services, and support. As systems integrators, they partnered with these technology leaders to create and certify end-to-end solutions in their labs with a secure global supply chain and 24/7/365 support.

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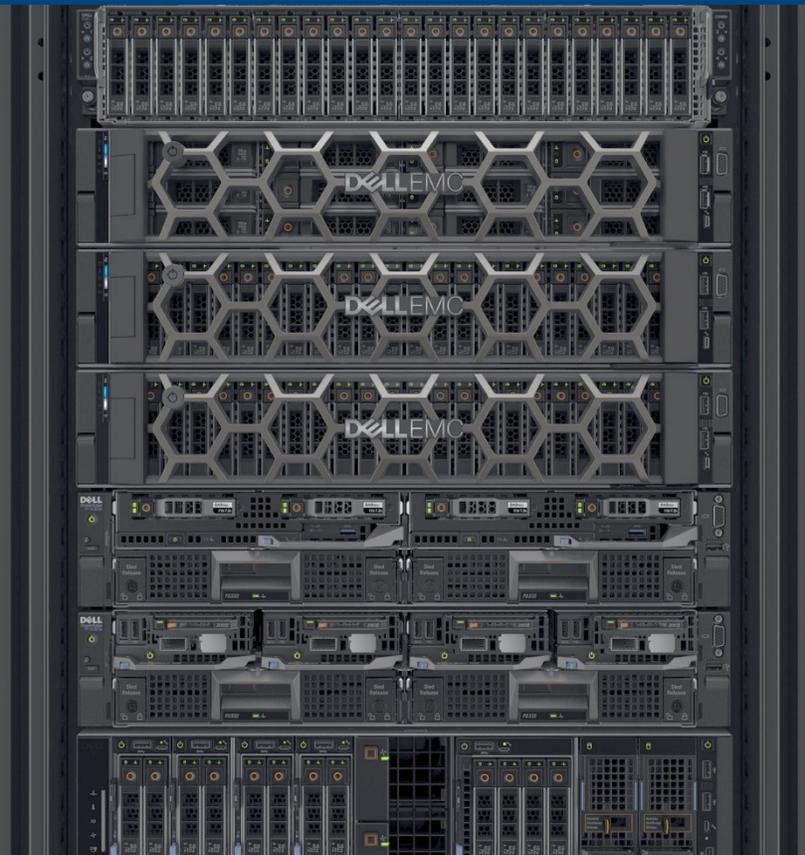
Reliable Up-Time and Performance

Together, the joint team of Nokia, VMware, and Dell automated deployment and lifecycle operations. They deployed cloud-native and virtualized network functions consistently, at web-scale speed, and without disruption. This Tier 1 CSP achieved telco-grade resiliency and service availability with a consistent experience.

This CSP is now generating revenue from next-generation customer use cases in manufacturing, logistics, energy, agriculture, retail, and remote office backup to wireline.

Validated designs helped them move faster with confidence. Expert consulting on hardware and software automation accelerated their new network build. Together, they strengthened customer loyalty with new services, and established customer confidence in network availability and reliability. Dell Technologies is uniquely ready to help CSPs on their 5G cloud journey.

"By forging strong partnerships across the 5G ecosystem and validating designs that global CSPs can quickly and confidently deploy, we delivered a 5G core solution with a consistent foundation and an open environment."

Tony Jeffries
Director of Product Management, Telecom
Dell Technologies

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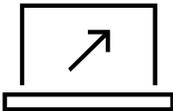
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