DELL Technologies

Simplify your Cloud Core transformation

START

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As data volumes rapidly increase, today's 5G networks offer greater intelligence and flexibility for communications service providers (CSPs) than ever before – and a 5G core is critical to this evolution.

It enables the transition towards cloud-native, disaggregated network architectures, while integrating Operational Support Systems (OSS) and Business Support Systems (BSS) that deliver monetizable services such as network slicing and private wireless for enterprises.

The 5G Cloud Core is critical to future success amid the demanding Telecom industry, which is why CSPs need to begin their transformation asap. However, the transition from a proprietary, closed stack core to an open, disaggregated Cloud Core architecture built on a horizontal cloud is complex and requires strategic oversight to design, deploy and support.

This eGuide shows how CSPs can partner with Dell Technologies to accelerate their Cloud Core adoption and optimize their operations.

Total 5G core spending (core, policy and subscriber management) will grow by 8% to reach $5.8 billion in CYP27.

Build your Future Cloud Core with Dell Technologies

The Open Telecom Transformation Program helps CSPs create a blueprint of their future transformed network. Once this is complete, the Core is a natural place to start their transformation journey. The program covers every aspect of the Cloud Core transformation journey, from strategizing based on business objectives, to implementing the design, to the adoption and scaling of new architecture. It helps CSPs to:

Simplify transformation: Leverage the Open Telecom Transformation Program, which draws on extensive expertise in network transformation, to understand your business objectives and then design, deploy and support your Cloud Core. This results in a future-proof network.

Automate operations: Flexible automation software enables infrastructure lifecycle management in multivendor core environments and aggregates infrastructure telemetry for AIOps and observability. This helps to increase overall network efficiency.

De-risk transformation: Collaborate closely with top core workload partners to certify comprehensive solutions and ensure the transformed Cloud Core meets your requirements. This provides confidence and operational assurance.

Dell Telecom Infrastructure Blocks

As CSPs build their Cloud Core, they need underlying network infrastructure that can support new technologies, automation and high-performance workloads at scale. Dell Telecom Infrastructure Blocks offer pre-configured, validated systems CSPs need to accelerate their transition to a cloud-native Telecom network:

- Delivers a fully validated cloud platform hardware/software stack, with a choice of workloads, cloud platform software and telecom infrastructure
- Simplifies network disaggregation by automating discovery, deployment and lifecycle management on a purpose-built cloud foundation
- Accelerates deployment time and reduces risk through pre-engineering and validation at Dell's facility, ensuring fast and secure integration
- Supports customers through a single point of contact, while delivering against carrier-grade SLAs

By simplifying the building and scaling out of complex networks, Dell Telecom Infrastructure Blocks enable CSPs to maximize their 5G investments faster.

Verified Cloud Core and OSS/BSS solutions with Dell Telecom Infrastructure Blocks

VALIDATED APPLICATIONS / NETWORK FUNCTIONS

ERICSSON **Charging & Billing** BSS	amdocs **Policy & Charging** Core/BSS	FNT **Resource Management** OSS	compaxDigital **Customer & Revenue Management** BSS	6D Technologies Smart Ideas, Delivered **Digital BSS Suite** BSS	MATRIXX SOFTWARE **Digital Commerce Platform** BSS
ciena **vBNG** Core	AXYOM.CORE **5G Core Network** Core	NEC **5G Core (AMF)** Core	expeto **Expeto Gateway** Core	ngvoice **IMS & VoLTE** Core	

Red Hat

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Infrastructure Automation

Dell Telecom Infrastructure Blocks

Open Telecom Ecosystem Lab

CSPs adopting new core infrastructure want to de-risk the transition process and accelerate their time to valuable 5G services – which is why Dell built its Open Telecom Ecosystem Lab (OTEL). A neutral platform built to foster innovation and collaboration, it enables CSPs to:

- Test and validate every component in a controlled, secure environment to ensure a successful launch
- Work with leading core workloads providers such as Nokia and Ericsson to certify solutions and co-create innovative services
- Establish hybrid lab connectivity using facilities in Round Rock, Texas and Cork, Ireland, removing the need for costly lab infrastructure investment
- Access an ecosystem of partners to validate software and build confidence in their 5G investments

CERTIFICATIONS
for RAN/Core/OSS/BSS Networks

NOKIA, ERICSSON, amdocs, expeto, 6D Technologies, MATRIXX Software, networks, 6WIND, A10, casa systems, MDS, Druid, ngvoice, BLUEARCUS, ATTOCORE, AMANTYA, kinetica, Beyond Now, STARSOLUTIONS, SummaNetworks, Red Hat, vmware by Broadcom

Design
Test

VALIDATED DESIGNS
and Reference Architectures

5G CORE NETWORK
BUSINESS SUPPORT SYSTEMS
DATA PROTECTION
ORCHESTRATION
GENERATIVE AI

Rakuten, amdocs, NVIDIA, vmware by Broadcom, Red Hat, ORACLE, SUSE

Design
Test
Publish

ENGINEERED SYSTEMS
for Telco Cloud

DELL TELECOM
INFRASTRUCTURE BLOCK

Red Hat, DELL Technologies

Design
Test
Publish
Sustain

SOLUTION VALIDATIONS
Lab as a Service

SOLUTION VALIDATIONS
PROOF OF CONCEPTS

Example customer projects

5G Core Network — SoftBank
Policy Control — Globe

Design
Test

Dell Technologies – Open Telecom System

Dell Telecom Infrastructure Automation Suite

As CSPs shift from vendor-locked infrastructure to the possibilities of an open ecosystem and CloudOps, the Dell Telecom Infrastructure Automation Suite drives new levels of efficiency and flexibility. It supports:

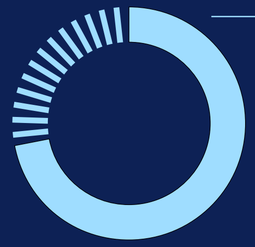
- Automated discovery of bare metal devices for up-to-date system inventory
- Intent-based deployment that implements blueprints without human error
- Lifecycle management across multivendor environments
- Aggregated infrastructure telemetry for AIOps and observability
- Plug-ins for additional flexibility and functionality

By reducing the need for custom integrations and scripts, CSPs can simplify and scale their networks when needed, while also optimizing performance and lowering costs.

Dell PowerEdge: optimized for Telecom performance and efficiency

Available in single and dual-socket configurations, Dell's new PowerEdge servers are purpose-built to support the next generation of core architectures. Available with a choice of next-gen Intel and AMD processors, they offer a highly optimized, energy-efficient foundation for your Telecom data center:

78%
server consolidation



72%
annual power savings over 16G servers

Built for DUPF / FWA

XR8000

Distributed UPF/FWA

Deploy at the Edge for Bearer Plane offload. Save backhaul fiber bandwith and improve end user RTTs

Built for Cloud Core Workloads

R6725

R7725

R6715

R7715

R670

R770

R470

R570

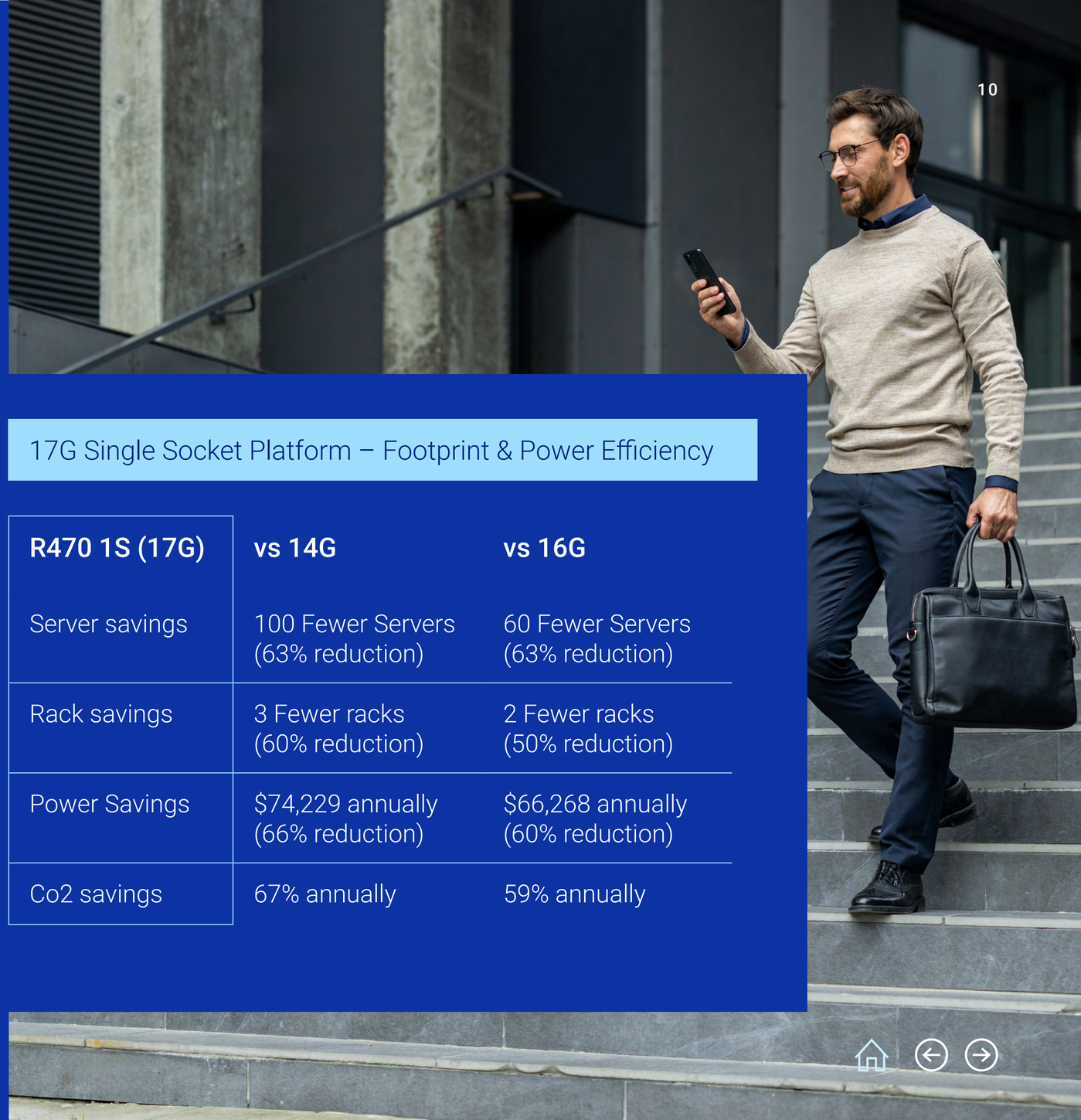
5G SA/4G EPC Core

High density virtualization and Cloud-Native requiring low-medium local storage

OSS/BSS Applications

Dense compute options to efficiently manage Networks and Core deployments

PowerEdge servers provide secure, scalable infrastructure that supports your 5G core and optimizes total cost of ownership (TCO). Dell builds on this high-performance foundation through automation and collaborations that streamline both the transition process and longer-term lifecycle management.



17G Dual Socket Platform - Footprint & Power Efficiency

R670 2S (17G)	vs 14G	vs 16G
Server savings	133 Fewer Servers (83% reduction)	93 Fewer Servers (78% reduction)
Rack savings	4 Fewer racks (75% reduction)	3 Fewer racks (67% reduction)
Power Savings	$83,543 annually (73% reduction)	$75,522 annually (72% reduction)
Co2 savings	74% annually	66% annually

17G Single Socket Platform – Footprint & Power Efficiency

R470 1S (17G)	vs 14G	vs 16G
Server savings	100 Fewer Servers (63% reduction)	60 Fewer Servers (63% reduction)
Rack savings	3 Fewer racks (60% reduction)	2 Fewer racks (50% reduction)
Power Savings	$74,229 annually (66% reduction)	$66,268 annually (60% reduction)
Co2 savings	67% annually	59% annually

Dell Technologies is the strategic partner for your Cloud Core transformation

Transitioning to a 5G core unlocks significant benefits for CSPs, from faster networks to monetization opportunities such as network slicing. Dell Technologies provides an ecosystem of Telecom services and partners to drive this transformation, while helping you to:

Simplify your transformation by leveraging Dell's extensive knowledge and experience helping CSPs transition to a 5G Cloud Core

Automate operations through the Dell Telecom Infrastructure Automation Suite for enhanced efficiency and lifecycle management

De-risk transformation by partnering with leading core workloads providers to certify comprehensive solutions

Discover how Dell Technologies can build the Cloud Core foundation that establishes your CSP's future success today:

Learn More