

# Dell EMC Powers IT Transformation with New Open Networking Products



Dell EMC Open Networking switches pair with PowerEdge 14th generation servers and industry-leading storage as foundation for software-defined data centers

## News Summary:

- New analyst research shows open networking models with 53% of the total-cost-of-ownership compared to proprietary models
- Industry's first 25GbE Open Networking top-of-rack switch raises switching speed limits, offers more than 2x in-rack throughput of 10GbE switches
- Dell EMC's first optimized Open Networking platform for unified storage network switching with support for 16Gb/32Gb Fibre Channel
- New family of energy-efficient and cost-effective Open Networking switches for small- and medium-sized organizations enable workforce transformation

## Full Story:

Dell EMC announces new Open Networking capabilities to help customers transform their IT operations to lower IT costs, get quicker returns on investments and deliver new digital capabilities.

Remaining competitive today requires Digital Transformation. A logical first step in the process is IT Transformation to modernize the data center, automate productivity and change operating models. Flexible network architectures are key to allowing organizations to react quickly to changing business or customer requirements with less disruption and lower costs.

"At Dell EMC, we believe networks work best when open, granting customers of all sizes maximum choice and capability," said Tom Burns, senior vice president, Networking, Enterprise Infrastructure & Service Provider, Dell EMC. "By disaggregating networking system software, and by decoupling networking software from hardware platforms, companies can free themselves from the rigid and proprietary environments of yesterday to embrace software-defined principles and unlock innovation at any scale."

A recent total cost of ownership (TCO) report from ACG Research, partially underwritten by Dell EMC, studied a prominent Tier 1 service provider that did extensive analysis and testing of network functions virtualization (NFV) models at scale in its national services infrastructure. The Tier 1 service provider chose an open, modular and extensible design as the foundation for deploying key elements in its service delivery PODs (a dimensioned set of infrastructure designed for rapid deployment and replication) The results show:

- Five-year cumulative TCO of an open architecture POD (OAP) in this operator's design is 53% of the cumulative TCO compared to the tightly bundled POD (TBP)
- Capital expenditures of the OAP are 47% less
- Five-year operating expenditures of the OAP are 57% of the TBP
- New application or service creation in the OAP requires 1/3 the time on average
- Underlying reasons for these advantages are openness in components' hardware and software designs, extensive automation based on open standards as well as standard application programming interfaces (APIs) and information models

## Open Networking Portfolio Additions Increase Performance, Reduce Ongoing Costs

The Open Networking pioneer, Dell EMC delivers on the promise of software-defined networking (SDN) to make network operations more flexible, programmable and easier to manage. An agile, programmable network is fundamental to transforming IT operations and addressing the ever-changing needs and demands of applications and workloads in the data center.

- New S5100-ON series is the industry's first 25GbE Open Networking switch, offering more than 2x throughput of 10GbE switches for in-rack connectivity. The S5100-ON matches the new Dell EMC PowerEdge 14th generation servers shipping with native 25GbE support. The switches 100GbE uplinks are designed for 100GbE fabric connectivity, accelerating rack-to-rack (east-west) network traffic. This is ideal for Web 2.0, enterprise, and cloud service providers looking to maximize application and service performance.
- New S4100-ON series delivers multifunctional, top-of-rack data center Open Networking switches optimized for high densities of 10GbE fiber/copper or Fibre Channel 8/16/32 server and converged local area networks (LAN)/storage area networks (SAN) within racks. All of these switches include the high-performance 100GbE uplink ports for inter-rack communication. Included in this family is the S4148U, a new unified switch for both Ethernet and Fibre Channel traffic for connecting to Dell EMC's industry leading storage solutions. This Open Networking switch pushes the upper limits of Fibre Channel connectivity as Dell EMC's first optimized to support 32Gb Fibre Channel for customers who want to further converge LAN/SAN operations. The S4148U's unique design enables customers to deploy Ethernet top-of-rack and Fibre Channel switching in the same physical switch or further converge LAN/SAN using Fibre Channel-over-Ethernet.

The S5100-ON and S4100-ON are the first to ship standard with OS10 Enterprise Edition, Dell EMC's new flagship networking operating system. Based on open source technologies from the Linux Foundation and Open Compute Project, OS10 Enterprise Edition is a next-generation, modular and programmable network operating system designed for both traditional networking and DevOps environments.

The OS10 Enterprise Edition package provides layer 2 and layer 3 networking functionality but also allows customers to easily customize the software for different environments. Customers can integrate additional open source capabilities, add third-party Linux applications, or develop their own software using standard Linux and DevOps tools.

- New Dell EMC N1100-ON series is a family of energy-efficient and cost-effective switches for campus environments. The series includes a number of fanless switches in half and full width options, Power over Ethernet (POE/POE+) and non-POE versions, and port configurations from 10/100/1000Mbps to 1/10GbE. The N1100-ON series switches are designed to pair with Aerohive's HiveManager NG - a next-generation cloud-based management solution that greatly simplifies end-user wired and wireless access, setting a new standard for network convergence by bringing enterprise-class management to the public or private cloud.

The new N1100 switches support IoT initiatives and workforce transformations that drive a wireless-first work space, where end users and access points get connected wherever they are located. Ideal for small to medium size business environments, the switches complement the recently announced N3100-ON and N2100-ON switches designed for larger campus environments. The N3100-ON and N2100-ON switches are Multi-Gig Open Networking switches optimized for emerging 2.5GbE/5GbE high speed campus networking to enable next generation wireless LAN infrastructure in the enterprise.

New Dell EMC Services Jump-start Networking Solutions

Strategic partnering with technology and industry subject matter experts can help accelerate IT and workforce transformations. By using the best practices, tools and services of trusted partners, IT organizations can perform initial transformative tasks more efficiently while focusing resources and talent where it makes the most difference in an enterprise.

NFV Advisory Services feature:

- A workshop to research the customer's foundational requirements and provide design recommendations to implement NFV infrastructure solutions
- Proof of technology for a detailed on-site assessment of an operator's infrastructure and operational environment as well as their readiness for the insertion of virtualized network nodes
- The return on investment advisory, which delivers a detailed analysis on the key financial impacts that will result in the transformation to NFV and SDN

IoT Technology Advisory Service is a new consulting offer to help organizations determine the key capabilities and architecture required to leverage IoT data (e.g., sensors, beacons, mobile phones, wearables, connected devices). This information can be used for initiatives such as optimizing key operational processes, reducing compliance and security risks, uncovering new revenue opportunities and creating more compelling customer engagements.

Availability:

- The Dell EMC S5100-ON series is expected to be available in the third quarter of Dell Technologies' 2018 fiscal year
- The Dell EMC S4100-ON series is expected to begin shipping select models in the second quarter of Dell Technologies' 2018 fiscal year. Additional models will begin shipping throughout the year
- The Dell EMC N1100-ON series is expected to be available in the second quarter of Dell Technologies' 2018 fiscal year
- The NFV Advisory Services are expected to be available in the second quarter of Dell Technologies' 2018 fiscal year
- The IoT Technology Advisory Services are available now

Additional Resources:

- Direct2Dell EMC Blog: Powering IT Transformation with Open Networking
- Connect with Dell EMC via Twitter, Facebook, YouTube, LinkedIn and ECN.
- For the latest news from Dell EMC, follow @DellEMCNews on Twitter and use #DellEMCWorld

Dell EMC

Dell EMC, a part of Dell Technologies, enables organizations to modernize, automate and transform their data center using industry-leading converged infrastructure, servers, storage and data protection technologies. This provides a trusted foundation for businesses to transform IT, through the creation of a hybrid cloud, and transform their business through the creation of cloud-native applications and big data solutions. Dell EMC services customers across 180 countries - including 98 percent of the Fortune 500 - with the industry's most comprehensive and innovative portfolio from edge to core to cloud.