

High-performance enterprise  
networking solutions

Dell Networking  
Solutions



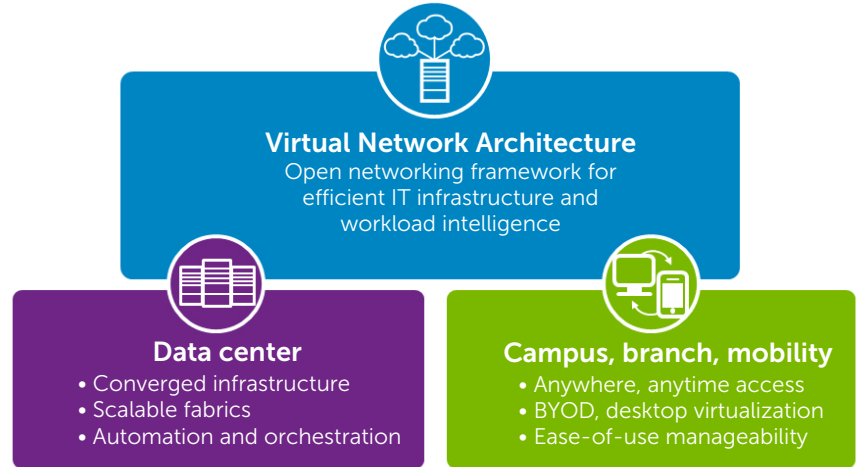
# Dell networking portfolio

Dell has been delivering high-performance, reliable networking solutions for over a decade and today powers some of the world's most demanding Enterprise and Cloud/Web 2.0 environments. For data centers, this means feature-rich Top-of-Rack and Blade Switching solutions and high-performance 10/40GbE networking fabrics that fit your business and budget. For campus and branch environments, this means complete solutions to mobilize users, desktops and devices securely, meeting the fast-paced needs of business-on-the-go. And throughout, Dell adds advanced management software to help save time and money while simplifying the complex. Dell backs up each and every deployment with a comprehensive suite of design, deployment and management services to help customers of any size every step of the way. All of this translates directly into a capability set designed to fit your needs, granting you and your business the power to do more.

## Dell Virtual Network Architecture (VNA)

Dell unifies its networking offerings with the Virtual Network Architecture (VNA), an open networking framework for efficient IT and workload intelligence. For data centers, this means powerful capabilities to virtualize infrastructure and services for any size cloud deployment whether private, hybrid or public. For the campus and branch, this means simple yet sophisticated mechanisms to mobilize end-users and virtualize desktops.

## Solutions for the Virtual Era

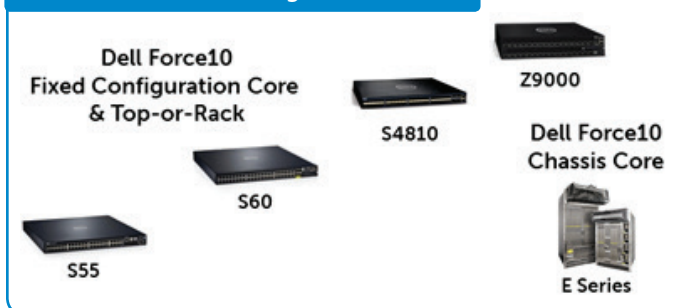


## Data center

Dell Networking data center products enable high-performance, scalable and open solutions that meet the requirements of the most demanding enterprise business environments. These innovative products are engineered from the ground up to deliver uncompromising performance. When combined with Dell

software simplifies management for virtualized environments and streamlines operations to cost-effectively scale to the largest capacity data centers. This in turn helps customers to significantly improve their return on investment (ROI), while delivering unparalleled business and technology value.

## Data Center Networking



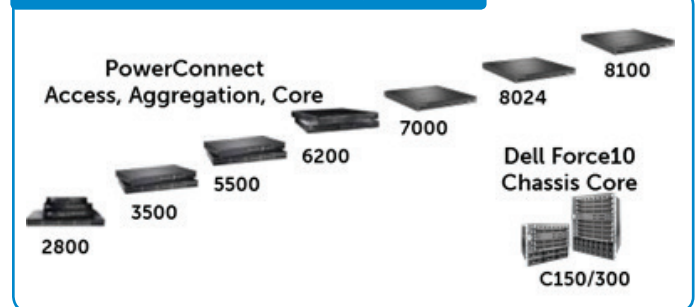
network automation and orchestration software they provide feature-rich flexibility for any size deployment. Dell data center products include high-performance, chassis-based E-Series switches, along with fixed form factor switches including the Z9000 and S4810 for high-performance fabric applications. The portfolio also includes a range of 1/10GbE Top-of-Rack systems and 1/10/40GbE blade switching products.

All data center switching systems are powered by the industry-hardened and feature-rich Force10 Operating System (FTOS) for maximum dependability and uptime. Additionally, for ease-of-use at scale, Dell's Open Automation framework and orchestration

## Campus and branch

Dell Networking products provide a full suite of campus and branch networking solutions designed to deliver maximum ease-of-use, reliability, control and scale. Dell Networking campus





## Campus & Branch Networking



and branch products, including PowerConnect fixed form factor stackable Ethernet switches and C-Series chassis switches, deliver essential capabilities including Power over Ethernet (PoE), feature support for Unified Communications and built-in storage networking capabilities. Together, these feature-rich switches present customers with maximum choice and value at any scale.

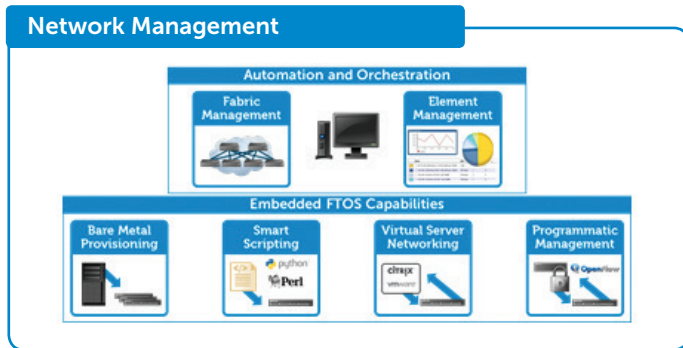
## Mobility

Dell Networking W-Series wireless products deliver industry-leading connectivity solutions for enterprise mobility that are highly secure, simple to deploy, and easy to manage. Dell W-series provides highly differentiated context-aware access policies based on the type of user, device, application and location. Customers ranging from small to large enterprises can enable optimized email, guest access to Internet, real-time telephony and video conferencing to wireless devices with the Dell W-Series portfolio. In addition, they can provide users the flexibility of using any mobile or computing device by implementing a bring-your-own-device (BYOD) access policy.

| Wireless Networking  |  |  |
|--|--|--|
| Controllers + Access Points  | Instant Access Points  | Guest Access & BYOD  |
| <b>Small, medium &amp; large controllers</b><br><br>W-650 W-3400 W-6000 | <b>Simple and affordable wireless solution with built-in controller</b><br><br>W-AP124 W-AP93 | <br><b>W-Series ClearPass</b> |
| <b>Indoor and outdoor AP models</b><br><br>W-AP105 W-AP90 W-AP175       |  |  |

## Simplify the complex

Dell offers a comprehensive suite of management tools for campus, branch and data center environments purpose-built to simplify the complex.



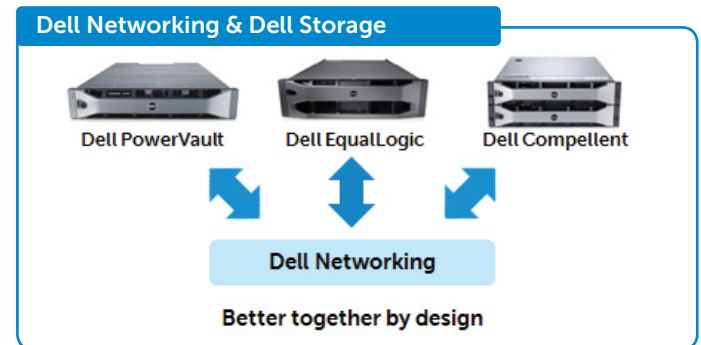
For campus and branch environments, this means simplification of network operations with Dell Open Manage Network Manager (OMNM) that provides a unified network view and proactive monitoring. OMNM enables ease of networking management with geographical or logical network views, report generation, inventory management and ability to roll out changes to multiple devices simultaneously. This simplification enables a reduced total cost of ownership (TCO) for campus and branch network operations.

For data centers, this means simplification of design, deployment and monitoring with Dell Fabric Manager (DFM), along with comprehensive element management with OMNM. The management platforms work in conjunction with automation and orchestration capabilities integrated into the Dell Force10 Operating System (FTOS) including Bare Metal Provisioning (BMP) for software and configuration updates, Smart Scripting to

facilitate on-box scripting capabilities for Perl and Python, Virtual Server Networking (VSN) for dynamic interworking in a virtualized environment and Programmatic Management for easier integration with third-party management software.

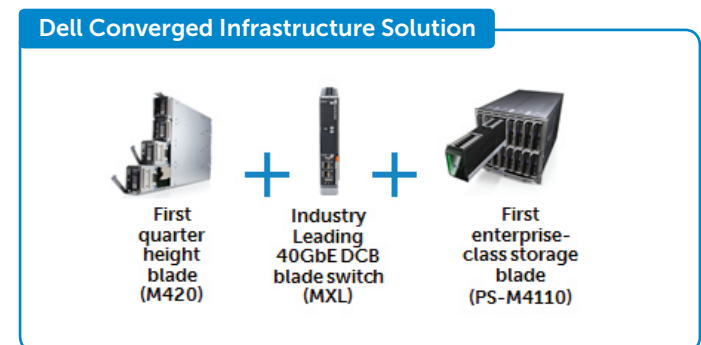
## Dell networking and Dell storage

Dell Storage Networking solutions help organizations of any size, from small workgroups to large enterprise data centers, derive the full value of their IT investments, while protecting intellectual property, ensuring business continuity and maintaining flexibility and scalability. Dell Networking solutions for storage provides cost-effective 1GbE and 10GbE infrastructure for EqualLogic and PowerVault iSCSI environments and Compellent iSCSI or Fiber Channel environments. Dell's open, standards-based solutions let customers of all sizes integrate new technologies without sacrificing performance or their existing IT investments. Fully optimize your existing IT infrastructure, or create a roadmap that allows your storage to



efficiently scale with future growth. Dell can help you design and deploy a data management solution and accelerate the time to value with simplified implementation resources and reference architectures.

## Converged infrastructure solution



Dell Converged Infrastructure solution integrates compute, storage and networking into a single scalable platform to deliver comprehensive, on-demand virtualized compute and storage capabilities. This solution is based on the PowerEdge M1000e platform combining state-of-the-art compute, storage and

networking technologies. This includes the industry-leading Dell Force10 10/40GbE MXL switch that combines high-density 10GbE local fabric switching coupled with high-speed 40GbE uplinks for core connectivity. Dell's industry-leading 12G servers and storage solutions work seamlessly with the integrated Dell Force 10 MXL blade switch and embedded software to enable maximum business agility with an attractive total cost of ownership.

## Networking solutions for today's workloads

Dell networking solutions embrace a wide range of architectures and capabilities to suit any type of server and workload deployment—from physical and virtual server deployments, to Big Data deployments, to Virtual Desktop Infrastructure (VDI) deployments. Dell networking offers traditional hierarchical architectures for legacy workload deployments, hypervisor-optimized fabric solutions for virtual machine deployments and robust end-to-end 10G capabilities from data center to campus to optimize desktop and end-user computing performance.

### Server Virtualization: vStart

Powered by Dell Force10 and PowerConnect switches, Dell vStart systems—including vStart 50, 100, 200 and 1000 systems—are pre-engineered and pre-built virtualization solutions that include server, storage, networking and management tools. The vStart components operate together seamlessly as a single system and are designed for simpler deployment and management. A vStart system ships pre-assembled and ready to integrate into the enterprise environment. All the customer needs to do is choose the right hypervisor based on their needs: Dell vStart solutions are validated to run on both vSphere™ from VMware® and Hyper-V™ from Microsoft®. vStart solutions are designed to scale; growing

the infrastructure becomes as simple as adding more capacity to an existing vStart rack or integrating additional racks as needed. It's that simple.

### Big data: Hadoop

Hadoop is a framework for data intensive distributed computing. It enables an application to work with thousands of independent compute resources and petabytes of data, performing complex computations or lookups in a fraction of a second. Yahoo! has been the largest contributor to Hadoop, and deploys it extensively across its businesses. Other contributors and users include Facebook, LinkedIn, eHarmony, and eBay.

Dell Hadoop solution includes Dell S4810, Dell PowerEdge servers, Dell Crowbar software and OpenStack Cloud operating system. Dell Hadoop solution includes optimized hardware, software and services to streamline deployment and enable a superior customer experience. This solution provides a foundation for other value added services as the Hadoop environment evolves and expands.

### Desktop Virtualization: Virtual Desktop Infrastructure (VDI)

VDI is the ideal solution for enterprise environments that are looking to unlock innovation in the virtual era. With streamlined desktop management, stronger security, increased agility and flexibility, and a rich user experience, you can make your IT organization a strategic contributor to business success.

Dell VDI solutions are based on the Microsoft® Windows Server® 2008 R2 Hyper-V™ platform, Microsoft System Center Virtual Machine Manager 2008 R2 and Dell™ servers and storage. Dell VDI solutions offer an efficient, high-performance foundation for enterprise desktop virtualization—helping to increase security, streamline client deployment and management and reduce costs.

## Networking services

Whether you are seeking product support or complete IT outsourcing, Dell can deliver services based on your need.

### Consulting services

Achieve better business outcomes with professional guidance pertaining to your network. Improve network performance, add functionality, and leverage existing infrastructure to maximize your investment.

### Deployment services

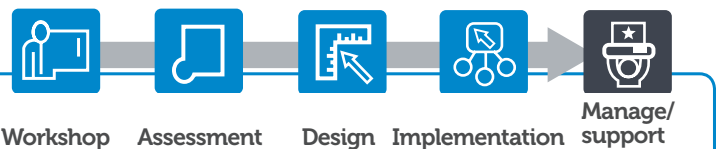
Let us install and correctly optimize your network with a comprehensive set of remote and onsite deployment services.

### Managed services

Free yourself to focus on your business and allow Dell to fully manage and monitor your multivendor network with triage, resolution, and tier 2 and 3 engineering support.

### Support services

Gain access to service professionals 24 hours a day who help you configure, troubleshoot, and diagnose your network. Dell ProSupport™ experts also help resolve complex issues related to third-party connectivity to Cisco, Brocade, Juniper, HP, and Aruba.



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