Dell Networking Solutions
The business/technology gap – Bridge it with Dell

The profitability of a business directly correlates with their ability to satisfy their customers’ needs. This is as true for you as it is for your customers; your position as trusted advisor hinges upon your ability to help your customers develop technologies that can contribute to their success. As your customers face new challenges, their networks have taken center stage, growing to play a vital role in the ultimate survival or failure of their business. Your customers simply cannot survive without efficiency and innovation in their networking infrastructure.

Regardless of size, vertical or location, businesses have embraced the concept of virtualization. Applications have been migrated from laptops to “the cloud” and this has put additional demands on the network; in many cases these demands were never factored into the network design when it was first architected. The result — added complexity and cost in a network that never fully met the demands of the business. That means that your customer’s bottom line suffers.

In today’s highly competitive environment, businesses have to become more agile and flexible to keep up. Their workforce has become mobile, demanding ubiquitous, secure access to all applications, from virtually anywhere, anytime and on any device. These business requirements place incredible demands on the network. Perhaps the most impacted portion of the network is the data center, the “center of gravity” for the entire organization. Whether at the campus or at a remote facility, on a corporate issued device or a personal smartphone, this extreme departure from “the way business was done in the past” also demands that your customers take a new approach to networking.

You can deliver what your customer needs, with Dell’s Virtual Network Architecture (VNA).

Virtual Network Architecture

Anytime, anywhere connectivity is no longer enough. Today, your customers must flawlessly support a more heterogeneous audience that is using more devices, in more locations. Cloud-based initiatives must deliver centrally managed and secured business-critical applications, while concurrently delivering a “LAN-like” user experience to the extended user base—who is constantly mobile, or in “the cloud” themselves.

In order to accomplish this, Dell has developed its networking technology using Virtual Network Architecture (VNA), which is based on three key tenets:

- Open and Optimized
- Agile and Automated
- Flexible and Cloud-driven

As you know, the increased competitive environment, combined with a highly mobile workforce accessing cloud-based applications, is redefining not just technology, but the way your customers do business. Together with Dell, you can be a driving force in helping enterprises achieve more with innovative, open technology that simply works.

The challenge: network complexity & inflexibility can impact your customer’s business

Too many layers, devices, and operating systems make managing your customer’s network needlessly complex. Deployment is disruptive, provisioning is slow, environmental costs are high, and scaling the network to meet ever-changing business requirements is a constant challenge. And all of this costs money. Today, most companies spend 80 percent of their IT budget not to move ahead, but rather to simply keep up.

The typical legacy network is unwieldy to manage and inefficient to operate. Multiple layers of unnecessary switches add to the complexity without providing any real advantage. Existing networks have become too complex, too slow, too expensive, and far too inflexible to support your customer’s business. They simply can’t cope with the onslaught of more users, devices, locations, and cloud-based applications. To resolve this, many vendors would advise your customer to start over and rebuild the network from the ground up. But at Dell, we believe that “ripping and replacing” is not the best answer. By helping your customer to leverage what they already own, you will cement your position as a trusted advisor and help them create a network for the future.

With Dell Networking Solutions, you can provide:

**At the data center**
- A dynamically scaled network to meet virtualization needs for all locations
- Cost-effective performance to meet heavy converged video, voice and data
- Open architecture enabling network agility without disruption due to rip and replace

**At the campus**
- Automation to support dynamic traffic flows
- Heterogeneous audience support
- Support for resource-heavy, cloud-based applications

**At the branch**
- Reliable anywhere, anytime access
- Secure role-based access
- LAN-like performance regardless of location
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Complex and Inefficient WAN Interface Tier 1 Core Tier 2 Aggregation Tier 3 Access

Optimized & Efficient Using Dell Networking WAN Interface Collapsed Core & Aggregation Layers Virtualized Switching Architecture

Figure 1: A simplified network streamlines operations.

Dell’s VNA Approach

Open & Optimized

Dell can help you address your customer’s current challenges while also reducing costs, streamlining cumbersome processes, and improving performance. With Dell, you can help your customer:

- Streamline their network: By reducing the number of layers and “boxes” in a customer’s network topology, they can achieve a smaller footprint, lowering both capital and operational expenses.
- Access the experts: Staging and deploying new technology in a production environment can be costly and disruptive. Accessing Dell’s Advanced Services lets you help your customer with scoping, architecting, training, deployment, maintenance and much more. It also frees their IT staff to strategize and innovate rather than manage, which does not contribute to the bottom line. And it gives you great upsell opportunities.

A broad portfolio of products, including Dell and alliance partner offerings, enables you to offer exactly what the customer needs. Open and standards-based solutions empower you to deliver best-in-class products making you a solutions provider rather than a “box pusher.” Comprehensive tools and support help you to reduce the sales cycle and shorten time to revenue.

Build your business with one of the most recognized and trusted names in the world.

Why Dell?

Agile & Automated

In most organizations, the greatest assets and expenditures are people, and your customers are no different. Assigning people to mundane and tedious tasks saps the organization of innovation that could be occurring. To achieve greater control and agility, it is essential to deploy a better, more automated method of management, by moving intelligence near the edge and closer to workloads. This enables dynamic provisioning management and control without the tedious manual intervention traditionally required of such networks. With an optimized network and management at the edge, it is easy to identify underutilized areas anywhere in the network and balance workloads across the network, thereby optimizing performance without over consuming resources. This helps you and your customers.

Deploy a platform for the future

Many networking vendors offer products that solve today’s issues, but do not easily scale for future requirements. Many customers that have purchased such technologies realize only years after that they are locked into a technology that they cannot operate in a multi-vendor environment. In such instances, your customer’s IT and business strategy becomes completely reliant on the vendor’s strategy. Once locked in, the vendor does not have to innovate or even be competitive on price. The result is that any technology change or additional business requirements that impacts the network requires a disruptive and costly rip and replace.

A flexible environment allows the creation of an efficient, shared infrastructure through the use of virtual switching, which is optimized for your customer’s unique needs. While the hot topic today is mobility, the next “killer app” is just over the horizon. Deploying a flexible infrastructure allows you to solve your customer’s business challenges today. With Dell, you can offer a comprehensive networking solution portfolio that gives your customers freedom of choice, and Dell expertise can help you select the optimal solution for them.

Dell’s networking solutions are forward-thinking and take the “big picture” into account. Dell will help you and your customers deploy a platform for forward compatibility. Because we build our solutions on open standards, they can take back their strategy from proprietary vendors and avoid lock-in to “yesterday’s solution,” further cementing your relationship as trusted advisor.

Figure 2: A distributed user base places increased demand on the network infrastructure.
Dell Network Solution elements

Solution components products

**Dell PowerConnect Family**
The PowerConnect family offers a set of flexible, manageable and comprehensive switch solutions supporting up to 10 Gigabit Ethernet and optimized iSCSI performance with Dell Storage solutions, ideal for enterprise and campus LAN environments alike.

**Dell Force10 Family**
Force10 datacenter solutions consist of open, standards-based, networking, hardware and software. The family consists of the S-Series: High-performance 1/10/40 GbE top-of-rack systems, C-Series: 1/10 GbE chassis core/aggregation systems, E-Series 1/10 GbE chassis core systems and Z-Series: 10/40 GbE distributed core systems.

**PowerConnect W-Series Access Points and Controller Products**
The PowerConnect W-Series extends the Enterprise network beyond the datacenter and into distributed enterprise and branch environments with full 802.11abgn support for APs and centralized management, controllers, which reduce configuration setup and deployment to enable secure productivity and mobility.

**PowerConnect M-Series Blade Servers**
Dell PowerEdge M-Series blade servers and enclosures offer a flexible platform for managing physical, virtual, and logical infrastructures. The modular blade enclosures are designed to provide a flexible infrastructure that accelerates delivery of strategic IT services by combining high density with innovative power and cooling, exceptional manageability, and integrated connectivity for virtually any network, storage, or management environment.

Networking services

Dell services are an integral part of our solutions. Dell offers a full spectrum of networking services to address key customer pain points using end-to-end services capabilities.

**Consulting Services**
Network Consulting Services is Dell’s approach to help enable organizations to evolve and improve their Enterprise Networking & Cloud performance, Datacenter performance and end user site network performance. This enables faster and more efficient applications delivery to any location where you do business. Workshops to share best practices, paid assessments to make recommendations and design measures to create a “Transformational Blueprint” for customers large & small.

**Deployment Services**
Create “fast time to value” for customers by efficiently deploying IT infrastructure according to validated reference architectures & customer specific best practices and policies.

**Managed Network Services**
24x7 network monitoring and management service operates, administers, maintains and provisions all networked devices. The monitoring service includes incident triage, resolution and event correlation on contracted devices. Network management provides full network management outsourcing, including all the features in Monitoring as well as Tier 2 and 3 engineering support. IPS patching, complex routing issues and firewall management are all handled as part of this service offer.

**Support Services**
Dell empowers you & your customers to triumph over IT obstacles — with ease. Our robust suite of Support Services, your customers will optimize budgets, maintain a stable environment and deliver exceptional service so they may focus on other forward-thinking initiatives. Dell’s technical, warranty and product support services reduce the cost and complexity of owning and supporting Dell networking devices to maintain compliance and uptime.

Learn more at [Dell.com/networking](http://Dell.com/networking)