Bringing order to IT chaos in remote offices

By Tad Walsh, Chad Fenner and Brad Lawrence

Many distributed offices are eager to simplify a complex, unwieldy mix of heterogeneous IT equipment. The Dell™ PowerEdge™ VRTX platform converges servers, storage, networking and management into an office-optimized chassis the size of a tower server.

Picture the IT systems of a typical remote office/branch office (ROBO) site: two or three virtualized servers, perhaps a fourth one for backup or standby, a shared external storage system and a network switch or two. All too often, the servers are different technology generations and brands — the result of growth over time. Along the way, external storage may have been installed to accommodate expanding data and a network switch acquired to concentrate networking. The result is a complicated jumble of equipment that takes up

a considerable amount of floor or rack space and is complex to manage.

Accordingly, IT administrators and business-unit managers alike are seeking simplified, flexible and efficient solutions that enable — rather than hinder — business success while boosting worker productivity and customer satisfaction.

To heighten simplicity, efficiency and versatility in ROBO sites, the Dell PowerEdge VRTX shared infrastructure platform integrates servers, storage, networking and management in a single chassis. (For more information, see the

Proactive support for mission-critical systems

Keeping mission-critical systems such as the Dell PowerEdge VRTX up and running at peak performance is essential to business continuity and organizational success. To minimize disruptions and maximize productivity, the Dell ProSupport Plus plan is both proactive and personalized to specific organizational needs.

While Dell ProSupport 24x7x365 phone support and on-site response options are well suited for routine systems support, ProSupport Plus adds several important features designed for mission-critical environments. In particular, ProSupport Plus includes a dedicated technical account manager who is familiar with the organization; Dell SupportAssist automated proactive monitoring and performance intelligence; and access to expert ProSupport Plus engineers for problem resolution *(see figure)*. Next-business-day, two-hour or four-hour parts-and-labor response options are also available.

A dedicated technical account manager partners with an organization to gain expertise in its business operations and mission-critical IT infrastructure, providing a familiar and accountable point of contact. For quick problem resolution, organizations have direct access to elite ProSupport Plus engineers, who are trained to

recommendations and health checks. The technical account manager reviews these recommendations with the organization and helps plan for implementation.

SupportAssist remote monitoring streamlines problem resolution by automatically detecting faults and opening cases with ProSupport Plus

> "Organizations can take advantage of top experts armed with intelligence gathered from across the Dell support base."

troubleshoot across all Dell server, storage, networking and converged products, including PowerEdge VRTX. ProSupport Plus engineers also provide hypervisor and OS support.
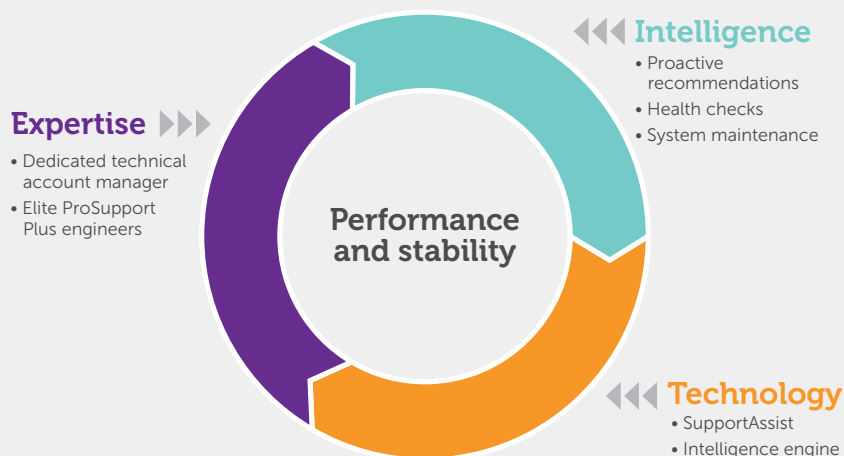
The SupportAssist intelligence engine is designed to collect and analyze information across all Dell customers to spot trends and quality issues as the basis for customized monthly performance

experts, saving time and enhancing the organization's productivity by avoiding several manual steps.

Monthly contract renewal and support history reporting, along with as-needed systems maintenance, optimize the computing environment and minimize the burden on an organization's IT resources. These efficiencies are particularly valuable in remote office/branch office (ROBO) environments with little or no IT staff.

So whether mission-critical workloads are running in a data center or in ROBO environments where the PowerEdge VRTX acts as a data center, organizations can take advantage of top experts armed with intelligence gathered from across the Dell support base. Over 7,000 Dell support engineers have received advanced enterprise technical education and hold certifications to support mission-critical data center environments. With this level of support, organizations can adopt advanced technologies for accelerated business growth with confidence.

Find out more at qrs.ly/yv3c9p6.

Expertise ▶▶▶
• Dedicated technical account manager
• Elite ProSupport Plus engineers

◀◀◀ **Intelligence**
• Proactive recommendations
• Health checks
• System maintenance

Performance and stability

◀◀◀ **Technology**
• SupportAssist
• Intelligence engine

Dell ProSupport Plus delivers proactive, personalized support for mission-critical systems.

sidebar, "Big power, small package.") PowerEdge VRTX is designed for rapid deployment and smooth ongoing operations. In addition, Dell ProSupport offerings help ensure system uptime. (For more information, see the sidebar, "Proactive support for mission-critical systems.")

Integrated servers, storage and networking

In mathematics, *vertex* means the intersection of multiple lines into a single point. Likewise, PowerEdge VRTX (pronounced *ver-teks*) converges servers, storage, networking and management into an optimized 5U rack-mount chassis.

Whether installed upright on the office floor or rack-mounted in an IT closet, PowerEdge VRTX is well suited for office environments ranging from a single, stand-alone small business location to hundreds of distributed offices serving large enterprises and public organizations. The requirements of these environments differ from those of headquarters data centers, where ample floor space, cooled air and a trained, dedicated IT support staff can be found. Consequently, simply bundling data center servers, storage and networking into full-height or half-height racks and offering them as packaged solutions for ROBOs may not address the specific needs of these environments.

On the other hand, with its customer-inspired design and innovative engineering, PowerEdge VRTX was purpose-built to meet ROBO requirements. Support for up to four PowerEdge M-Series half-height blade server nodes, internal storage up to 48 TB and a built-in network connection provides remote offices with ample resources for virtualization, backup and growth. Along with a locking front bezel for security and office-quiet acoustics, PowerEdge VRTX fits unobtrusively into ROBO sites.

The PowerEdge M-Series blade server nodes driving compute performance in PowerEdge VRTX are the same PowerEdge M520 and PowerEdge M620 servers that are used in data centers. The PowerEdge M620, with its large memory capacity, powerful performance and extensive high-availability features, is a workhorse server for consolidation and virtualization. The resilient PowerEdge M520

is an outstanding platform for mainstream business applications. By supporting these servers both in the data center and in remote offices, organizations can standardize on field-tested technologies while data center staff can minimize training time by leveraging their existing product knowledge.

The large, integrated shared-storage capacity of PowerEdge VRTX not only permits remote offices to grow at their own pace, it also supports the explosion of data in areas such as customer information management and business intelligence in the retail industry; medical imaging in healthcare; and financial modeling in banking and accounting. Moreover, internal storage enables ROBOs to protect their workloads with high-availability capabilities including live migration, VMware vSphere® Storage vMotion® technology and high-availability clustering, all inside the chassis. These capabilities not only help protect workloads and maintain uptime, they also avoid the cost and complexity of external storage devices. The integrated, internal storage of PowerEdge VRTX enables ROBOs to reduce both up-front capital expenditures (CAPEX) and ongoing operational expenditures (OPEX).

Big power, small package

The Dell PowerEdge VRTX platform is designed to seamlessly deliver big-time data center performance and capacity in remote office/branch office (ROBO) environments.

- **Innovative space-saving design** helps eliminate hardware sprawl by converging servers, storage, networking and management into a single, sleek chassis that fits beside a desk or under a countertop.
- **Easy deployment and management** enables exceptional IT efficiency, including automated updates and unified management that frees administrators to reclaim valuable time for strategic initiatives.
- **Versatile, virtualization-ready platform** allows extensive scalability and flexible workload provisioning to optimize performance and uptime.

Consistent systems management across the enterprise

PowerEdge VRTX also brings consistency to the realm of systems management. It is managed using the same Dell OpenManage™ systems management tools as other members of the PowerEdge family. For example, headquarters data center staff who are already managing PowerEdge M-Series blades and the PowerEdge M1000e chassis with the Dell Chassis Management Controller (CMC) experience the same look and feel with the CMC for PowerEdge VRTX installed in remote offices. Just like in the data center, CMC for PowerEdge VRTX helps eliminate the traditional model of managing servers, storage and networking with separate tools and consoles. Instead, it unifies and presents hardware management in a single console. Streamlining management in this way brings time-saving efficiency to IT administration tasks and helps reduce the potential for error. Consistency between data center management and remote systems management also allows IT administrators to use existing knowledge and minimize training time.

Another option for managing remote PowerEdge VRTX systems is the Dell OpenManage Essentials console. OpenManage Essentials enables IT administrators to monitor up to 400 remote VRTX systems, providing a vast view of networked IT resources all the way out to the distributed offices.

Geographic View, a tool offered exclusively for PowerEdge VRTX, helps simplify the distributed infrastructure even further (*see figure*). Geographic View is a color-coded map that gives IT administrators an instant, at-a-glance assessment of remote system health and location. Compared to the traditional, hierarchical tree view of remote systems, Geographic View helps greatly reduce the time it takes for IT staff to become aware of remote system problems and to begin
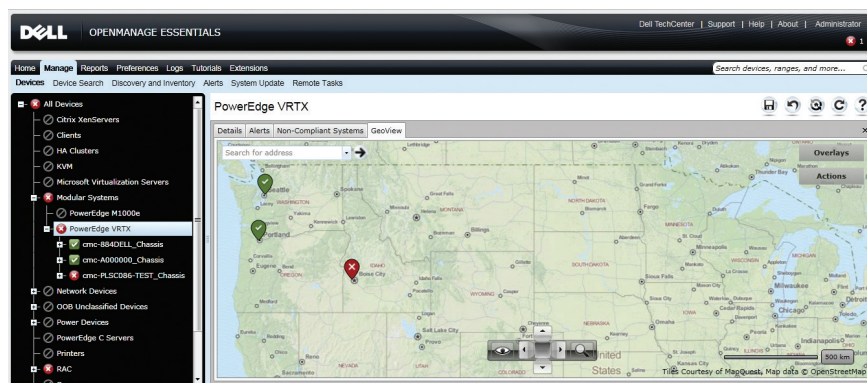
Geographic View provides a color-coded, real-time view of remote system health.

problem diagnosis and resolution. For example, maximizing uptime enables retail enterprises to capture revenue streams in their retail outlets, medical facilities to ensure continued patient care in their distributed clinics and logistics companies to keep packages moving from their warehouses to their ultimate destinations.

Agile IT for remote offices

PowerEdge VRTX is a 5U data center that is designed to bring simplicity, efficiency and versatility to ROBO environments. The space-saving chassis of the PowerEdge VRTX enables organizations to eradicate hardware sprawl, reduce CAPEX and OPEX, and deliver extensive scalability within a stable platform to support enterprise growth. Its unified management helps reduce the number of tools and consoles needed, minimizing complexity and freeing IT administrators to spend time on strategic initiatives that advance business and organizational outcomes. PS

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