

Redefine Connectivity with Open, High-Performance Fabrics

Accelerate AI, HPC, and modern workloads with industry-leading networking switches and innovative software solutions.



The world is advancing at an unprecedented pace. The rapid evolution of technology, coupled with the rise of AI and data processing at the edge, has created extraordinary demands on IT infrastructure and placed immense pressure on networks.

Traditional, proprietary networks are struggling to keep up, facing challenges such as unpredictable traffic patterns driven by AI workloads and remote operations, complex manual management processes that stifle innovation and increase errors, and rigid systems that lack the flexibility to adapt to emerging technologies. The result is a network landscape that is inefficient, error-prone, and incapable of scaling to meet the demands of the future.

At Dell Technologies, we're redefining networking to meet the needs of modern workloads. Our open networking vision is built on four key pillars to empower your business:



Scalability: Build AI, data center and edge networks that can seamlessly scale to meet evolving workload demands. Leverage flexible architectures, validated designs, and simplified deployments to ensure your network grows with your business.



Flexibility: Embrace an open-standards model that integrates the best hardware and software for your unique requirements. Avoid vendor lock-in and gain the freedom to innovate with multi-silicon support and open-source-based solutions.



Automation: Simplify operations with advanced network management tools that automate deployment, orchestration, monitoring, and lifecycle management. Reduce complexity and operational overhead while improving efficiency and reliability.



AI-Optimized Performance: Accelerate the latest AI technologies with high-performance, low-latency switches purpose-built for hyperscale AI fabrics. Enable seamless connectivity and maximize throughput for demanding AI workloads.

Challenges with the modern networking landscape

Does your network feel like it's always in "response mode"? Are you grappling with unpredictable traffic patterns, rigid proprietary solutions, and the constant struggle to maintain capacity? Is your network overly complex, spanning from the edge to the cloud, and consuming valuable time just to keep it running? Are you concerned about its ability to deliver the scalability, performance, and reliability required for modern fabrics? If you answered "yes" to any of these questions, you're not alone.

The networking landscape has fundamentally shifted. Traditional traffic patterns, once predictable, are now disrupted by the rise of edge computing, hybrid-cloud, and AI-driven workloads. The influx of data being generated and processed at the edge is placing unprecedented demands on your network. At the same time, modern GPU-driven workloads, such as AI and machine learning, are generating massive amounts of data that require constant, high-speed communication between GPUs, storage, and end users. Without a robust network, bottlenecks emerge, slowing training and inferencing times, reducing GPU utilization, and delaying insights.

Proprietary systems, with their rigid architectures and slow development cycles, are ill-equipped to handle these dynamic demands. Many organizations still rely on manual, command-line-based network management, which is not only time-consuming but also prone to errors that can disrupt critical workflows. The result? Underutilized GPUs, delayed insights, and missed opportunities to innovate.

To fully unlock the potential of GPU-powered workloads, organizations need networks that are scalable, flexible, and optimized for high-bandwidth, low-latency performance. It's time to move beyond outdated systems and embrace solutions designed to drive innovation forward.





The Dell Technologies Approach: Simplifying the Complex

At Dell Technologies, we understand the challenges of today's networking landscape and the limitations of legacy, proprietary networks. That's why we're committed to simplifying edge-to-multi-cloud connectivity and transforming your networking experience. With powerful, scalable AI and agile data center and edge networking solutions, we help you overcome these challenges and elevate your infrastructure to the next level.

Our open networking, standards-based approach disaggregates networking software from the hardware. This provides the freedom to choose the best components for your needs, ensures silicon diversity, and eliminates vendor lock-in. You can build a network that is tailored to your unique requirements and ready to adapt to future demands.

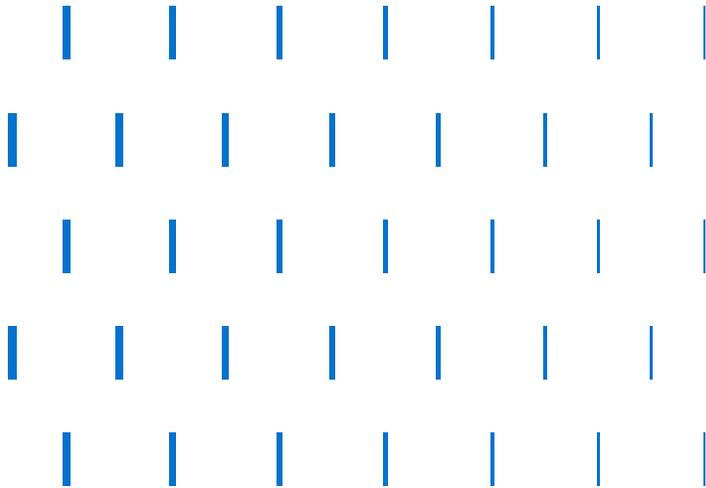
As capacity requirements shift and emerging technologies like AI bring new challenges, networking becomes a critical component of the infrastructure. When the unexpected occurs, you need a network that is flexible, simple to operate, and scalable. AI workloads, running on large clusters of servers, demand robust networking to avoid bottlenecks. Without sufficient networking, training and inference times increase, slowing data processing and delaying time to insights.

Dell Technologies delivers the solutions you need to confidently move forward. With our open, scalable, and AI-optimized networking solutions, you can ensure your infrastructure is ready to meet the demands of today and tomorrow.

Unlocking Potential with Dell's Open Networking Strategy

Dell Technologies open networking approach empowers organizations to build networks that are scalable, agile, and future-ready. By combining standards-based hardware with innovative, best-in-class software solutions, we deliver a flexible and open ecosystem that eliminates vendor lock-in and adapts to your unique needs.

Our strategy is designed to simplify operations and reduce complexity through advanced automation tools, minimizing manual intervention and streamlining network management. This enables you to meet the demands of modern workflows and applications with greater efficiency, flexibility, and control. Whether scaling AI fabrics, optimizing edge-to-cloud connectivity, or supporting high-performance workloads, our open networking solutions provide the foundation for a network that evolves with your business.

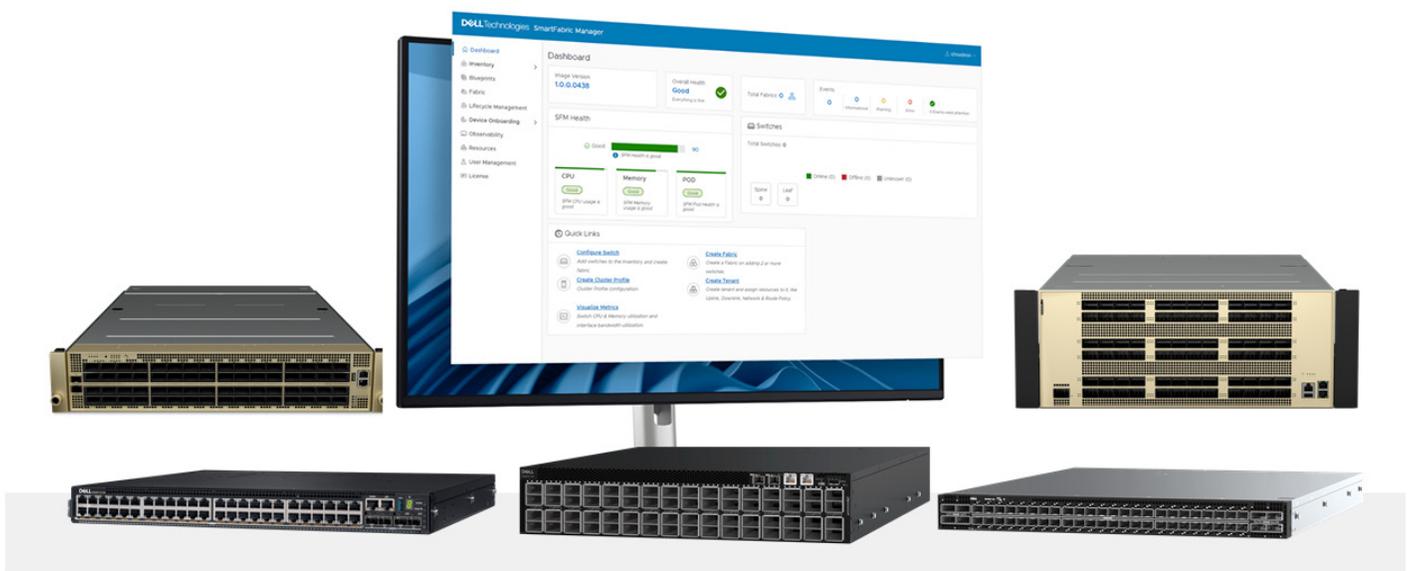


Open Networking for Seamless Scalability

Dell Technologies' open networking solutions are designed to scale and simplify the management of large, complex networks. At the core is the [Enterprise SONiC Distribution by Dell Technologies](#), a commercial SONiC offering with enterprise-grade features, rigorous testing, and robust support. Built for hyperscale networks, SONiC's containerized architecture and standards-based APIs provide flexibility to adapt to your environment while supporting modern workloads like AI and virtualization.

Dell SmartFabric Manager streamlines large-scale fabric deployment by automating up to 93% of configuration steps. With user-defined fabric blueprints, you can design a fabric once and deploy it repeatedly across environments, reducing manual effort and human error. Its centralized GUI simplifies orchestration and monitoring, offering a single pane of glass for managing multi-silicon Ethernet architectures, including Broadcom® and NVIDIA® platforms.

With features like dynamic load balancing, adaptive routing, and multi-tenant fabrics, Dell SONiC ensures your network is scalable and optimized for high-performance workloads. Together, SONiC and [SmartFabric Manager](#) enable efficient scaling, seamless AI fabric deployment, and simplified operations, ensuring your network is ready for today's demands and tomorrow's growth.



Dell SONiC also supports NVIDIA Spectrum platforms for enhanced AI networking while SmartFabric Manager offers plug-and-play automation with validated blueprints to simplify AI fabric deployment and accelerate adoption.

Freedom of Choice Drives Innovation

Dell Technologies empowers you with unparalleled choice in designing and scaling your AI and high-performance networks. With the Dell SONiC and SmartFabric Manager now extended to support NVIDIA Spectrum silicon, you can combine the openness and flexibility you want with the automation, scalability, and simplicity you need to deploy large-scale AI fabrics with ease.

Our [Dell PowerSwitch portfolio](#) further expands your options, offering high-performance, scalable switches tailored for AI, data center, and edge environments. With options that include NVIDIA® Quantum™ for InfiniBand, NVIDIA® Spectrum™ and Broadcom® Tomahawk™ & Trident™ for Ethernet, Dell open networking solutions allow you to select the silicon that best aligns with your strategy while delivering low-latency, high-throughput connectivity for AI-driven and other demanding workloads.

Designed to meet the needs of modern infrastructure, these solutions provide exceptional reliability, advanced congestion management, and robust performance. They are also optimized for advanced cooling environments, including liquid-cooled data centers, enabling you to confidently scale dense, high-performance systems without compromising efficiency or sustainability.

With Dell open networking solutions, you gain the freedom to innovate, the flexibility to adapt, and the confidence to scale your infrastructure for the future.

Cut Complexity, Boost Efficiency

At Dell Technologies, we make it easier than ever to design, deploy, and manage network infrastructure across AI, data center and cloud environments. By breaking down operational silos and automating repetitive tasks, we enable IT teams to shift their focus from maintenance to innovation and delivering new services.

Dell SmartFabric Manager streamlines operations through validated blueprints, automated lifecycle management and deep analytics and monitoring, accelerating deployment and reducing overhead. Built on a standards-based architecture, Dell SONiC provides the flexibility to integrate with other common third-party orchestration tools like BE Networks, Racksnet, Red Hat® Ansible®, and others. Seamless integration with these tools minimizes manual workloads, ensuring consistent, error-free operations. This is critical in today's fast-paced IT landscape, where 90% of network issues are caused by human error, such as misconfigured ports or protocols. This gives customers the freedom to choose the orchestration platform that best fits their needs, simplifying infrastructure management and ensuring seamless operations.

By reducing manual intervention and automating key processes, Dell's open, standards-based solutions enhance efficiency, improve reliability, and future-proof your infrastructure. Whether you're managing AI fabrics, edge-to-cloud connectivity, or high-performance data centers, our solutions empower you to simplify operations, boosting efficiency and productivity.

Open up the network – and connect to new possibilities

Network modernization is no longer a choice—it's a necessity. At Dell Technologies, we understand that you need more than just a network; you need a solution that is enterprise-grade, scalable, and tailored to your unique requirements. Our open-standards approach empowers you to build a network that integrates seamlessly with existing systems, adapts to evolving traffic patterns, and supports the adoption of cutting-edge technologies like AI and virtualization. With advanced automation tools simplifying management and reducing complexity, we help you unlock the full potential of your infrastructure. Together, let's build a network that's ready for the future—one that's scalable, adaptable, and powered by open, standards-based solutions to meet the demands of modern workloads.

Learn more Dell.com/networking

SONiC is currently running on 50,000+ Azure® switches

PowerSwitch is enhancing AI and high-performance networking with up to 1.6TbE bandwidth