

Dell Technologies NVMe IP SAN Solution

Helping to accelerate the evolution of your storage connectivity with a modern, automated, and secure solution

Introduction

Enterprises are being challenged with the need to modernize IT infrastructures in order to keep up with growing data storage and traffic demands of today's workloads and applications while also preparing for the future. The market is shifting towards next-generation disaggregation and composability of compute, storage and networking infrastructures as customers move to a software-defined-data center (SDDC).

The rapid adoption of NVMe all flash arrays within storage platforms is helping to enhance performance by 5x to 10x with lower latency. In addition, new open standards like NVMe over Fabric (NVMe-oF) that leverage transport such as TCP/IP along with the rapid integration of higher Ethernet-based speeds like 25GbE/100GbE and 400GbE are paving the way for modern, cost-effective storage interconnect offerings that can easily scale up and out to help meet these demands.

Modern infrastructures are critical for the high-performance access, delivery, and response times needed to lead in today's business marketplace. Dell Technologies is driving products and services by a vision of well-engineered solutions that can deliver both operational and infrastructure efficiencies with leading edge technologies, automation and global support and services.

NVMe IP SAN Solution With Dell Technologies

Agility with cutting edge NVMe storage technology providing secure, policy-driven storage and adaptive connectivity that easily scales up and out with significant cost savings

Automation of complex storage and fabric tasks and management to help simplify deployment and life cycle management tasks of storage connectivity through autonomous operations

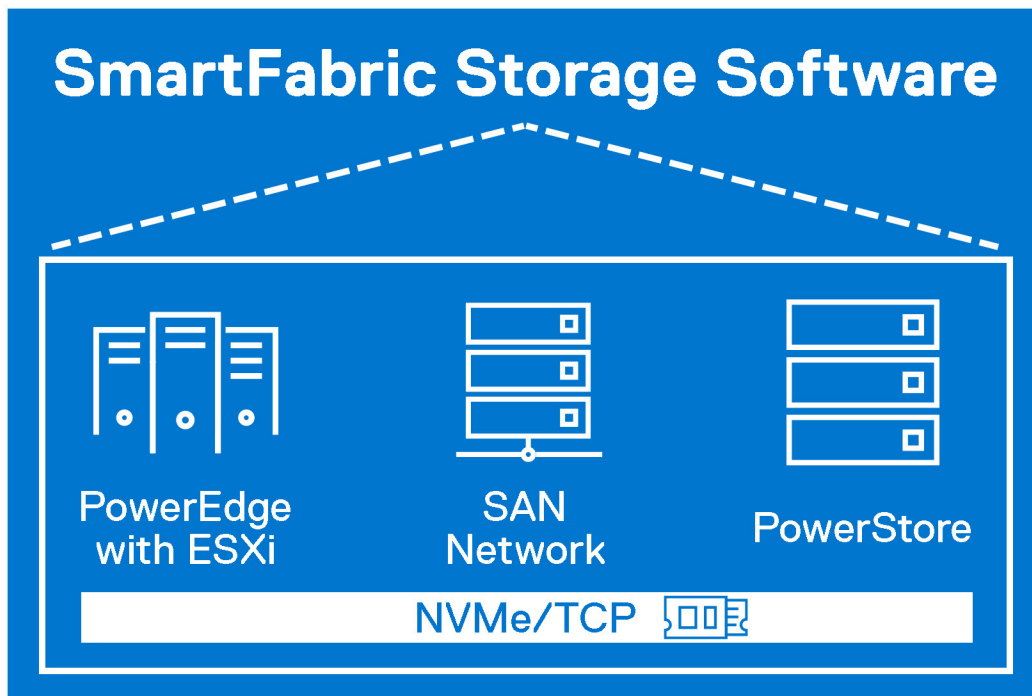
Reliability with global support and services across a tightly integrated server, storage, and networking solution to increase performance and availability

Challenges

While making this transition toward next-generation, software-defined technologies, enterprise organizations are looking for storage connectivity solutions that not only meet the exploding data and traffic demands of today's workloads and applications, but will also scale to help them continue to meet demands in the future. There is also a strong desire for these new storage interconnect solutions to help reduce CAPEX and OPEX expenses with open standard-based products that incorporate automation capabilities much like existing Fibre Channel offerings. The final requirement encompasses a modern end-to-end storage solution that is tested and validated across compute, storage and networking platforms and is backed by global support and services.

An End-to-End NVMe IP SAN solution from Dell Technologies

In partnership with VMware, Dell Technologies has engineered a complete end-to-end NVMe/TCP solution to help provide enterprise organizations with the agility to stay ahead of growing workload demands with modern, automated, and secure storage connectivity both today and as they migrate to extended hybrid clouds.



The initial release of this solution consists of three main components:

- **SmartFabric Storage Software**

The Dell Technologies SmartFabric Storage Software (SFSS) product is a standards-based centralized discovery controller for NVMe/TCP hosts (servers) and subsystems (storage). In this initial release, SFSS is a stand-alone software solution packaged as a containerized application enabling an end-to-end automated and integrated NVMe-oF solution running TCP over an Ethernet fabric. The key functions of SFSS are policy-driven to help automate NVMe-oF storage service discovery, end-point registration, connectivity, and zoning.

- **PowerEdge with VMware ESXi and NVMe/TCP**

On PowerEdge servers running VMware ESXi, VMware has expanded their support for NVMe across PCIe storage, Fibre Channel, and RDMA to now include NVMe over TCP. This new feature maps NVMe onto the TCP protocol to enable the transfer of data and commands between a host server and a target storage device.

- **PowerStore with NVMe/TCP**

Dell's PowerStore mid-range arrays already include support for NVMe Flash drives and iSCSI, Fibre Channel, and NVMe-FC block protocols. The latest PowerStore release introduces support for NVMe/TCP to allow hosts to access storage systems across a network fabric using the NVMe protocol.

E-Labs Qualified

Components of the NVMe IP SAN have been qualified by E-labs allowing customers to deploy an end-to-end validated solution.

Dell EMC Services

Organizations deploying solutions based on Dell Technologies Networking are never alone: Dell Technologies provides a comprehensive set of deployment and support options covering the entire lifecycle of the enterprise IT investment.

Services such as planning and design, deployment and integration, and education are just a few offerings within a comprehensive set of customer services available. Dell EMC ProDeploy and ProDeploy Plus provide full-service installation and configuration of both hardware and system software by certified deployment engineers. Dell Technologies delivers single vendor support, eliminating the usual headaches encountered when dealing with a multi-vendor solution.

Summary

Whatever the size of your organization, Dell Technologies NVMe IP SAN solutions can help you derive the full value out of your server, storage, and networking investments. We offer proven end-to-end solutions, comprehensive global services, and a vision that sets the pace in a rapidly changing industry. To find out how we can help you and your network, contact your Dell Technologies representative today.

One of the industry's
first end-to-end NVMe/TCP
solutions

Nearly **25%** the cost of a
comparative Fibre Channel
implementation



[Learn more](#) about
Dell Technologies NVMe
IP SAN solution



[Contact](#) a Dell
Technologies Expert



[View more](#) resources



Join the conversation
with [@DellNetworking](#)