

Top 5 Reasons to Introduce SmartFabric Storage Software

How to transition to a high-performance & cost-effective SAN based on NVMe standards

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SmartFabric Storage Software (SFSS) is an innovative new software product from Dell Technologies that enables an end-to-end automated and integrated NVMe/oF Ethernet fabric connecting NVMe hosts and targets using TCP.

1 | Purpose-built protocol

Non-volatile Memory express (NVMe) is a protocol that was designed to replace the SCSI protocol and allows end users the maximum benefit from Solid State Drives (SSDs). Today the NVMe protocol is widely used in a variety of modern servers and storage systems with SSD drives across the industry and has been extended to work across a SAN with NVMe/TCP.

2 | Standards-based centralized discovery controller for NVMe/TCP

SFSS is a standards-based, stand-alone containerized software package (e.g. running on a VM on VMware ESX) enabling an end-to-end automated and integrated NVMe-oF Ethernet fabric running over TCP. The key functions of SFSS are policy-driven to help automate NVMe-oF storage service discovery, end-point registration, connectivity, and zoning services.

3 | Lower CAPEX and OPEX costs

The network infrastructure CAPEX cost of an NVMe/TCP Ethernet fabric is nearly 25% the cost of a similar Fibre Channel configuration on a \$/GB of bandwidth basis. From an OPEX perspective, SmartFabric Storage Software helps to automate most of the normal manual configuration steps for NVMe systems in an end-to-end configuration and provides a single pane of glass for Day 2 operations with VMware vCenter and Dell Open Manage Network Integration (OMNI) application.

4 | Lower latency and higher throughput

NVMe as a protocol provides lower latency than legacy storage communication protocols, while also providing higher throughput due to its multi-queue architecture. When SFSS is deployed across an Ethernet-based SAN, NVMe/TCP provides comparable transport performance when tested against Fibre Channel and outperforms iSCSI.

5 | Fully tested and validated across Dell NVMe server and storage portfolio

Integral centerpiece of one of the industry's first end-to-end NVMe/TCP solutions including Dell EMC PowerEdge running VMware ESXi, Dell EMC PowerStore, and a centralized discovery controller the Dell EMC SmartFabric Storage Software. The entire solution has been qualified by E-labs allowing customers to deploy an end-to-end validated solution and is backed by a comprehensive set of deployment and support options covering the entire lifecycle of the enterprise IT investment.



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