

Dell EMC SmartFabric Services For PowerStore

Dell Technologies enables simple, agile, and efficient network fabrics for PowerStore with integrated SmartFabric Services

There is a clear need for faster and predictable business outcomes.

SmartFabric Services can drive simplicity, agility and efficiency to your PowerStore storage by automating up to 99% of LAN connectivity tasks with a plug-and-play fabric.

PowerStore X with AppsON deployments enjoy additional benefit with dynamic network operations for the VM network needs.

Read on to learn more about Dell Technologies' approach to simplifying PowerStore network fabrics with SmartFabric Services.

Introduction

To enable IT organizations, effectively address their data needs, and improve agility to enable digital transformation Dell Technologies introduces PowerStore – a modern storage appliance that is designed for the data era. PowerStore provides our customers with data-centric, intelligent, and adaptable infrastructure that supports both traditional and modern workloads.

PowerStore is designed to support any workload by delivering unified storage (physical or virtual, file-based, or container-based) in a performance optimized appliance that supports end-to-end NVMe and can scale up and out when demands increase.

Driving automation and operational efficiency across the management environment is a top priority for organizations seeking to free up resources and reduce staffing requirements for IT specialists who are difficult to hire and retain. PowerStore enables autonomous, consistent operations with programmable infrastructure that enables automation and DevOps by streamlining development environments and automating end-to-end workflows.

Following a traditional networking approach for PowerStore can make deployment complex and error prone due to manual operations and negate the agility and operational efficiency inherent in deploying modern data-centric workloads with PowerStore. Often the infrastructure teams must rely on networking experts to preconfigure the networks correctly before the PowerStore nodes can be deployed. This consumes a lot of bandwidth from the networking experts for simple tasks that can otherwise be automated and integrated.

Autonomous Fabric Interconnect for PowerStore

With Dell Technologies' integrated PowerSwitch portfolio and SmartFabric Services, we offer a holistic Dell on Dell solution, that is easier than ever to automate networking as an extension of the modern infrastructure solutions offered by Dell Technologies, making difficult networking a thing of the past.

Dell EMC SmartFabric Services enables an autonomous fabric interconnect for PowerStore with up to 99% of the tasks automated, enabling turnkey fabrics for cluster deployments and expansions. The single pane of management with vCenter allows users to operate and perform life cycle management of one or more fabrics from within vCenter.

With SmartFabric Services, customers can extend the value of PowerStore and achieve

- **Deployment Agility:** With an automated fabric that is deployed on end-to-end validated designs and best practices, it offers a predictable and repeatable fabric experience eliminating human errors.
- **Operational Efficiency:** Operating the network as an extension of the PowerStore cluster providing the interconnect, the solution admin can perform day-to-day LAN connectivity tasks for PowerStore without relying on networking experts and eliminating operational silos.
- **Greater Expandability:** Build and deploy a plug-and-play network fabric that can start from a single rack and automatically expand to a multi-rack leaf and spine fabric, with dynamic discovery of PowerStore nodes and zero-touch fabric expansion. An additional benefit is zero-touch network automation for VM networking in vCenter for PowerStore X with AppsON deployments.

Dell EMC SmartFabric Services

SmartFabric Services is a “one-of-a-kind” feature, part of the Dell EMC SmartFabric OS10 flagship networking operating system. It creates a fully integrated solution between the fabric and PowerStore infrastructures.

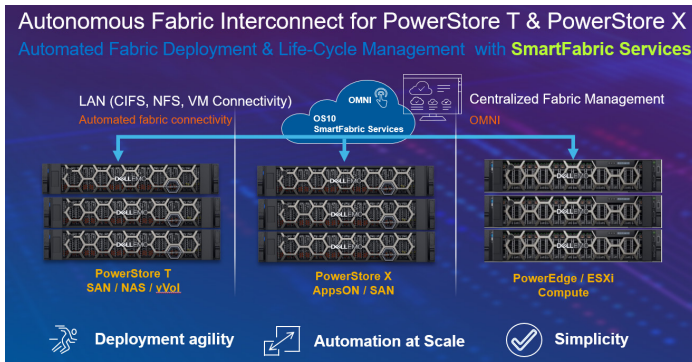


Figure 1 – Dell EMC SmartFabric Services for PowerStore

With SmartFabric Services, customers can quickly and easily deploy and automate data center networking fabrics within a single rack, between multiple on-site racks and through multi-site interconnects between SmartFabric instances. SmartFabric services only require customers to perform a single configuration step per switch, automating over 99% of multiple leaf and spine configuration steps per rack, providing elastic network provisioning, tightly integrating with the VMware ecosystem and delivering an enhanced support experience.

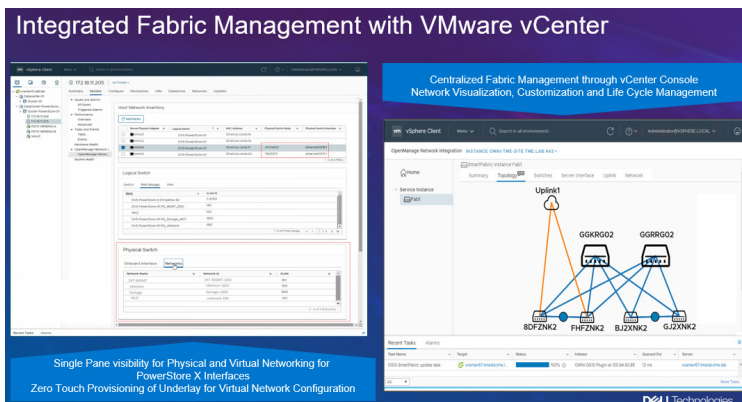


Figure 2 – Integrated Fabric Management

The Value of SmartFabric Services

- Provides a unified and automated infrastructure for solution administrators.
- Simplified procurement as part of a single, unified solution
- Pay-as-you-grow with automated fabric expansion aligned with scale-out infrastructure growth
- Dynamic infrastructure for applications with agile workload deployment and migration across AppsOn deployments
- Automation at scale with up to 8 racks of 25GbE server facing ports in a predictable 3-hop Clos architecture
- Automation empowering the smallest scale customer environments with the same dynamic solutions – starting with just 12 ports per switch
- Simplified operations with vCenter for unified management and Ansible based DevOps
- Comprehensive Dell EMC ProDeploy and ProSupport services with expertise in end-to-end infrastructure

SmartFabric Services for PowerStore automates up to

99%

of network configuration steps for leaf and spine switches across multiple racks.

E-Labs Qualified

PowerStore nodes have been qualified with PowerSwitch by E-labs allowing customers to deploy an end-to-end validated solution. View the complete list of PowerSwitch platforms qualified for PowerStore Interconnect [here](#).

Turnkey Network Designs with Fabric Design Center

Customers can login to <https://fdc.emc.com> to create turnkey network designs for PowerStore and automatically generate the bill of materials for the network interconnect and wiring diagrams. To accelerate deployments and DevOps integration, customers can also download switch configuration files and Ansible playbooks from FDC.

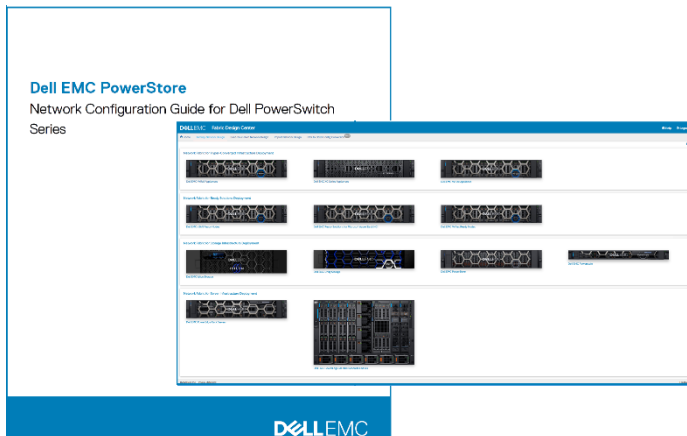


Figure 3 – PowerStore Design Automation with FDC

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.

PowerSwitch Fabric Building Blocks

With a full range of 10/25/40/50GbE and 100/400GbE PowerSwitch Ethernet data center switches plus a distributed architecture, Dell Technologies delivers a highly scalable purpose-built fabric for leading virtualization environments.

At the spine, our high-performance Z-series 100/400GbE switches provide optimum multi-rack communications, while at the leaf (or top-of-rack) layer, our high performance, low latency S-series 10/25GbE switches provide an efficient 10GbE-to-25GbE evolution path for single rack connectivity.

Summary

Dell Technologies wants to be a partner on our customers' digital transformation journey. Whatever the size of your organization, Dell Technologies can help by providing solutions that are:

- **Purpose-built:** our purpose-built Open Networking product portfolio is optimized for I/O intensive networking workloads and traffic patterns.
- **Future-ready:** Networking fabrics that span from 10GbE through 400GbE.
- **Validated:** our production-ready solutions are tested and validated.
- **Supported:** global secure supply chain and support services ensure deployments of any scale virtually anywhere in the world.



[Learn more](#) about
Dell EMC SmartFabric
Services



[Contact](#) a Dell
Technologies Expert



[View more](#) about
PowerStore



Join the conversation
with [@DellNetworking](#)