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DELLTechnologies
PowerStore Scalable All Flash Array

DELL PowerStore Scalable All Flash Array User Guide

Contents

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Product Information

Specifications

- **Product Name:** PowerStore
- **Current Release:** PowerStore OS Version 3.6 (3.6.0.0)
- **Previous Release:** PowerStore OS Version 3.5 (3.5.0.0)
- **Target Code for PowerStore T models:** PowerStore OS 3.5.0.2
- **Target Code for PowerStore X models:** PowerStore OS 3.2.0.1

Product Usage Instructions

Code Recommendations
It is important to ensure that you are on the latest version of the code for optimal functionality and security.

1. Check your current code version.
2. If not on the latest code, update to the Latest Code OR Target Code.
3. For PowerStore T models, ensure you are on code level 3.5.0.2 or greater. For PowerStore X models, aim for 3.2.0.1 or greater.
4. Refer to the Target Revisions document for more information.

Recent Release Information
The recent release, PowerStore OS Version 3.6 (3.6.0.0), includes bug fixes, security updates, and enhancements in data protection, file networking, and scalability.

- PowerStoreOS 2.1.x (and greater) can upgrade directly to PowerStoreOS 3.6.0.0.
- Upgrade to PowerStoreOS 3.6.0.0 is encouraged for NVMe Expansion Enclosure customers.
- PowerStore X models can upgrade to PowerStoreOS 3.2.x.

FAQ

- **Q: What should I do if I am having issues getting connected to the Secure Connect Gateway?**

  A: If you are having issues getting connected, please make sure to contact customer support for assistance.
- **Q: What is the retirement plan for Secure Remote Services?**

  A: The Virtual and Docker editions of Secure Remote Services v3.x will be fully retired on January 31, 2024. Monitoring and support for these editions will be discontinued for supported Dell storage, networking, and CI/HCI systems.

Code Recommendations

Are you on the latest version of code?
Updating/Upgrading to the Latest Code OR Target Code is important. Customers on latest code enjoy greater functionality and fewer outages/service requests.

Is your PowerStore on latest code?

Updating to the Latest Code OR Target Code ensures that you can take advantage of the newest features, functionality, fixes, and security enhancements. For PowerStore T, that means code level 3.5.0.2 or greater. (3.2.0.1 for PowerStore X)
To learn more about the Target Codes, please refer to the **Target Revisions document**.

Recent Release Information

PowerStore OS Version 3.6 (3.6.0.0) – Latest Code
PowerStoreOS 3.6.0.0-2145637 is now available for download from Dell Online Support.
This minor release contains feature rich content built on top of PowerStoreOS 3.5.0.x

- Further information may be obtained from the **PowerStoreOS 3.6.0.0 FAQ**.
- This release includes additional bug fixes and security updates.

Refer to the **PowerStoreOS 3.6.0.0 Release Notes** for additional details.

PowerStore OS Version 3.5 (3.5.0.2) – Target Code (NEW)
PowerStoreOS 3.5.0.2-2190165 is now available for download from Dell Online Support.

- This patch release addresses critical field issues discovered with PowerStoreOS versions 3.5.0.0 and 3.5.0.1
- Review the **PowerStoreOS 3.5.0.2 Release Notes** for additional content details.

Installation & Deployment Guidelines

- PowerStoreOS 3.6.0.0 is recommended for installation on supported platforms.
  - PowerStoreOS 3.6.0.0 is required for Data-in-Place (DIP) upgrades / conversions.
  - PowerStoreOS 3.6.0.0 is required for new NVMe Expansion Enclosure deployments
- For PowerStore T model-types:
  - PowerStoreOS 2.1.x (and greater) may upgrade directly to PowerStoreOS 3.6.0.0

- NVMe Expansion Enclosure customers are encouraged to upgrade to PowerStoreOS 3.6.0.0
- For PowerStore X model-types:
  - PowerStoreOS 3.6.0.0 is not supported with PowerStore X model-types
  - PowerStore X customers may upgrade to PowerStoreOS 3.2.x
- PowerStore OS 3.5.0.2 has been promoted to target code for all PowerStore T configurations.
  - Systems with NVMe enclosures are encouraged to upgrade to 3.6.0.0
  - Systems utilizing replication are encouraged to upgrade to 3.6.0.0 or 3.5.0.2
- PowerStore OS 3.2.0.1 remains target code for all PowerStore X configurations.
- Customers running PowerStore 2.0.x should follow PFN recommendations to upgrade to target code.

Current Release: PowerStore OS Version 3.6 (3.6.0.0)
3.6.0.0 is a software release (October 5, 2023) focused on data protection, security as well as file networking, scalability, and more.

- Highlights of this release:
  - New Third Site Witness – This capability enhances PowerStore's native metro replication by maintaining metro volume availability on either appliance in a replication pair during a site failure event.
  - New Data-in-Place Upgrades – Now upgrade PowerStore Gen 1 customers to Gen 2 without a forklift migration.
  - New NVMe/TCP for vVols – This industry-first innovation puts PowerStore at the forefront by combining two modern technologies, NVMe/TCP and vVols, which boost VMware performance by up to 50% with cost-effective and easy-to-manage ethernet technology.
  - New Remote Syslog support – PowerStore customers now have the ability to send system alerts to remote syslog servers.
  - New Bubble Network – PowerStore NAS customers now have the ability to configure a duplicate, isolated network for testing.

Previous Release: PowerStore OS Version 3.5 (3.5.0.0)
3.5.0.0 is a software release (June 20, 2023) focused on data protection, security as well as file networking, scalability, and more.

- The following blog post offers a rich content overview: **link**
- Review the **PowerStoreOS 3.5.0.0 Release Notes** for additional content details.

Note: If you are operating your PowerStore system with 3.0.0.0 or 3.0.0.1 code, you should upgrade to version 3.2.0.1 (or greater) code to mitigate an issue with 3.0.0.x code and unnecessary drive wear. See KBA **206489**. (Systems running code < 3.x are not impacted by this issue.)

Target Code

Dell Technologies has established target revisions for each product to ensure stable and reliable environments. PowerStore Operating System target code helps identify the most stable builds of the PowerStore product, and Dell Technologies encourages customers to install or upgrade to these versions to ensure a stable and reliable environment. If a customer requires features that are provided by a new version, the customer should install or upgrade to that version. The Dell Technologies Technical Advisories (DTAs) section provides more information about applicable enhancements.

Models	Target Code
PowerStore T models	PowerStore OS 3.5.0.2
PowerStore X models	PowerStore OS 3.2.0.1

You can find a full list of Dell Technologies product target codes at: **Reference Code Document**

Support Announcements

Secure Connect Gateway

Secure Connect Gateway The Secure Connect Gateway technology is the next generation consolidated connectivity solution from Dell Technologies Services. Support Assist Enterprise and Secure Remote Services capabilities are integrated into Secure Connect Gateway technology. Our Secure Connect Gateway 5.1 technology is delivered as an appliance and a stand-alone application and provides a single solution for your entire Dell portfolio supporting servers, networking, data storage, data protection, hyper-converged, and converged solutions. For more details, the **Getting Started Guide** and **FAQs** are great resources to start with.

*Note: If you are having issues getting connected, please make sure to contact customer support.

Update: Secure Remote Services Retirement

- **What is happening?**

  Virtual and Docker editions of Secure Remote Services v3.x, our legacy remote IT monitoring and support software solution, will be fully retired on January 31, 2024.
  - **Note:** For customers with PowerStore and Unity products that utilize direct connect***, their technology will be retired on December 31, 2024. To avoid service disruptions, an operating environment update will be made available prior to the end of service life.

As a result, by January 31, 2024, the monitoring and support (including remediation and mitigation of security vulnerabilities) for Secure Remote Services Virtual and Docker editions of the software will be discontinued for the supported Dell storage, networking and CI/HCI systems.

The replacement solution – the next-generation **secure connect gateway 5.x** for servers, networking, data storage, data protection, hyper-converged and converged systems – provides a single connectivity product for managing the entire Dell environment in the data center. Note: All software is customer upgradeable or installable.

To upgrade to Secure Connect Gateway:

- First, ensure you are running the latest release of Secure Remote Services version 3.52.
- Follow the instructions in the banner to upgrade to Secure Connect Gateway.
- Click HERE for additional upgrade details.

Note: Customers running Secure Remote Services Virtual and Docker edition software will be encouraged to upgrade to or install the relevant next-gen secure connect gateway technology solution. Limited technical support for upgrades is available thru April 30, 2024. Customers must open a service request to get started with upgrade support.
Note: Effective immediately, Secure Remote Services will no longer provide remediation for critical security vulnerabilities. This will leave Secure Remote Services exposed to vulnerabilities which Dell Technologies will no longer remediate or mitigate for customers.
*** Direct connect: The connectivity technology (known internally as eVE) is integrated into the product's operating environment and allows for direct connection to our Services backend.

Did You Know

- **New Health Check package available**

  PowerStore-health_check-3.6.0.0. (build 2190986) is compatible with PowerStoreOS 3.0.x., 3.2.x, 3.5x and 3.6.x (But NOT with 2.x). This package adds essential validations that are performed by the System Check feature and the Pre Upgrade Health Check (PUHC) to monitor the health of the PowerStore cluster. Prompt installation of this package will ensure optimal system health. Package is available for download from the Dell Support website **HERE**

- **Getting the most from PowerStore Manager**

  Stay up to date with all of the latest PowerStore features and functionality available at your fingertips via the PowerStore Manager interface. **This document** describes the functionality available in the PowerStore Manager to monitor and optimize various PowerStore appliances.

- **From Itzik Reich's Blog**

  Itzik Reich is Dell VP of Technologies for PowerStore. In these blogs he focuses on PowerStore technologies and feature-rich capabilities. Check out his interesting PowerStore content **HERE**.

- **PowerStore Resources and Info Hub**

  There is a wealth of PowerStore information available to provide guidance to PowerStore users in the areas of System Management, Data Protection, Migration, Storage Automation, Virtualization, and much more. See **KBA 000133365** for full details on PowerStore technical white papers and videos and **KBA 000130110** for PowerStore: Info Hub.

- **Prepare for your Upgrade to PowerStore Target or Latest Code**

  Before performing a PowerStoreOS upgrade, it is essential to validate the health of the cluster. These validations are more thorough than the continuous background checks performed by the alert mechanism of PowerStore. Two mechanisms, Pre-Upgrade Health Check (PUHC) and the System Health Checks, are used to validate health. Follow **KBA 000192601** for instructions on how to proactively do this.

- **Maximizing your Online Support experience**

  The online support site (Dell.com/support) is a password-protected services portal that provides access to a

suite of tools and content to gain the most out of Dell products and obtain technical information and support when needed. There are different types of accounts depending on your relationship with Dell. Follow **KBA 000021768** for detailed instructions on how best to configure your account to take full advantage of Online Support capabilities.

- **CloudIQ**

  CloudIQ is a no-cost, cloud-native application that monitors and measures overall health of Dell Technologies storage systems. PowerStore reports performance analytics to CloudIQ, and CloudIQ provides valuable feedback such as Health Scores, products alerts and availability of new code. Dell Technologies strongly encourages customers to take advantage of this free service. Follow **KBA 000021031** for instructions on How to configure CloudIQ for PowerStore, and **KBA 000157595** for PowerStore: CloudIQ Onboarding Overview. Remember to both Enable and Onboard with CloudIQ.

- **PowerStore Host Configuration Guide has been discontinued**

  The PowerStore Host Configuration Guide document was decommissioned. Following this change, PowerStore host configuration guide content is only available on the E-Lab Host Connectivity Guide documents. The E-Lab Host Connectivity Guide documents include PowerStore host configuration guide content as well as content for other Dell storage systems. E-Lab Host Connectivity Guide documents can be found on the E-Lab Interoperability Navigator site on **https://elabnavigator.dell.com/eln/hostConnectivity**. See the specific E-Lab Host Connectivity Guide document that matches the operating system of the host that is connected to PowerStore.

Top Customer Viewed Knowledgebase Articles

The following Knowledgebase articles were frequently referenced in the previous 90 days:

Article Number	Article Title
000220780	PowerStore SDNAS: Files appear hidden when saved to SMB share from MacOS clients
000221184	PowerStore: 500T appliances with NVMe expansion enclosure(s) may not be able to resume IO service after appliance shutdown or simultaneous node reboot
000220830	PowerStore: PowerStore Manager UI may become inaccessible due to accumulated telemetry records
000217596	PowerStore: Alert for storage resource offline in 3.5.0.1 due to checksum issue
000216698	PowerStore: Security Change for LDAP User Login in Version 3.5
000216639	PowerStore: Mapping an NVMeoF volume may lead to service disruption on multi-appliance clusters
000216997	PowerStore: Add Remote System Results in "File Not OK," Unable to Reach Remote NAS System, Cannot Copy From Tape to Disk – 0xE02010020047
000216656	PowerStore: Snapshots created on non-affined node may lead to node reboot
000216718	PowerMax/PowerStore: SDNAS switch both Replication sides VDMs to maintenance mode on a production mode conflict
000216734	PowerStore Alerts: XEnv (DataPath) States
000216753	PowerStore: System Health Check May Report Multiple Failures After an Upgrade to PowerStoreOS 3.5
000220714	PowerStore: Volume is in a state where only valid operation is delete

New Knowledgebase Articles

The following is a partial list of the Knowledgebase articles that were created recently.

Article Number	Title	Date Published
000221184	PowerStore: 500T appliances with NVMe expansion enclosure(s) may not be able to resume IO service after appliance shutdown or simultaneous node reboot	16 Jan 2024
000220780	PowerStore SDNAS: Files appear hidden when saved to SMB share from MacOS clients	02 Jan 2024
000220830	PowerStore: PowerStore Manager UI may become inaccessible due to accumulated telemetry records	04 Jan 2024
000220714	PowerStore: Volume is in a state where only valid operation is delete	26 Dec 2023
000220456	PowerStore 500T: svc_repair may not work following M.2 drive replacement	13 Dec 2023
000220328	PowerStore: NVMe Expansion Enclosure (Indus) Indication LED status on PowerStoreOS 3.6	11 Dec 2023
000219858	Powerstore : SFP information shown in the powerstore manager after SFP was removed	24 Nov 2023
000219640	PowerStore: PUHC Error: The web server for GUI and REST access is not working and multiple checks were skipped. (0XE1001003FFFF)	17 Nov 2023
000219363	PowerStore: Unexpected Node reboot can occur after an excessive number of Host ABORT TASK commands	08 Nov 2023
000219217	PowerStore: RUN SYSTEM CHECK From PowerStore Manager May Not Complete with the Error "Fireman Command Failed"	03 Nov 2023
000219037	PowerStore: Frequent alerts for "0x0030e202" and "0x0030E203" Expansion Enclosure Controller port 1 speed state was changed	30 Oct 2023
000218891	PowerStore: PUHC fails for "CA serial number validity check failed. Please call Support. (invalid_ca)"	24 Oct 2023

E-Lab Navigator

E-Lab Navigator is a Web-based system that provides interoperability information to support hardware and software configurations. This is done through integration and qualification and creating customer consumable solutions that respond to their business challenges. From the **E-Lab Navigator home page**, select the 'DELL TECHNOLOGIES SIMPLE SUPPORT MATRICES' tile, then select the appropriate PowerStore hyperlinks on the next page.

Dell Technical Advisories (DTAs)

DTAs	Title	Date
	No new PowerStore DTAs this quarter	

Dell Security Advisories (DSAs)

DSAs	Title	Date
DSA-2023-366	Dell PowerStore Family Security Update for Multiple Vulnerabilities (Updated)	17 Oct 2023
DSA-2023-433	Dell PowerStore Security Update for VMware Vulnerabilities	21 Nov 2023

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Access the SolVe website here

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Please feel free to suggest any modifications.

Documents / Resources

DELL PowerStore Scalable All Flash Array [pdf] User Guide
PowerStore Scalable All Flash Array, PowerStore, Scalable All Flash Array, All Flash Array, Flash Array, Array

References

- **Smartsheet Forms**
- **Submit Form**
- **Submit Form**
- **Submit Form**
- **You searched for powerstore?ref=newsletter - Itzikr's Blog**
- **User Manual**