

Overview

HPE Smart SAN for HPE 3PAR

Storage Area Networks and the tools that are used to manage them have become increasingly complex. Because of this, SAN administrators spend more time learning multiple SAN tools and in labor intensive configuration tasks for example SAN Zoning – tedious manual activities which can potentially result in unplanned downtime. The reasons for the complexity include the increased adoption of Virtualization – a complexity stemming from mapping the virtual and physical layers of the SAN and the adoption of multiple protocols such as iSCSI along with the traditionally popular FC & FCoE fabrics. Another factor that increases a SAN administrator configuration time is the best practice of single initiator zoning to a single target, which can result in hundreds or thousands of zones. Even with scripts, the SAN zoning process is tedious and error prone. These are the key reasons to have a different approach that offers an industry standards based approach and a protocol agnostic solution with diagnostics that would simplify the configuration and management of SANs through a target driven approach to keep the SAN healthy and resilient.

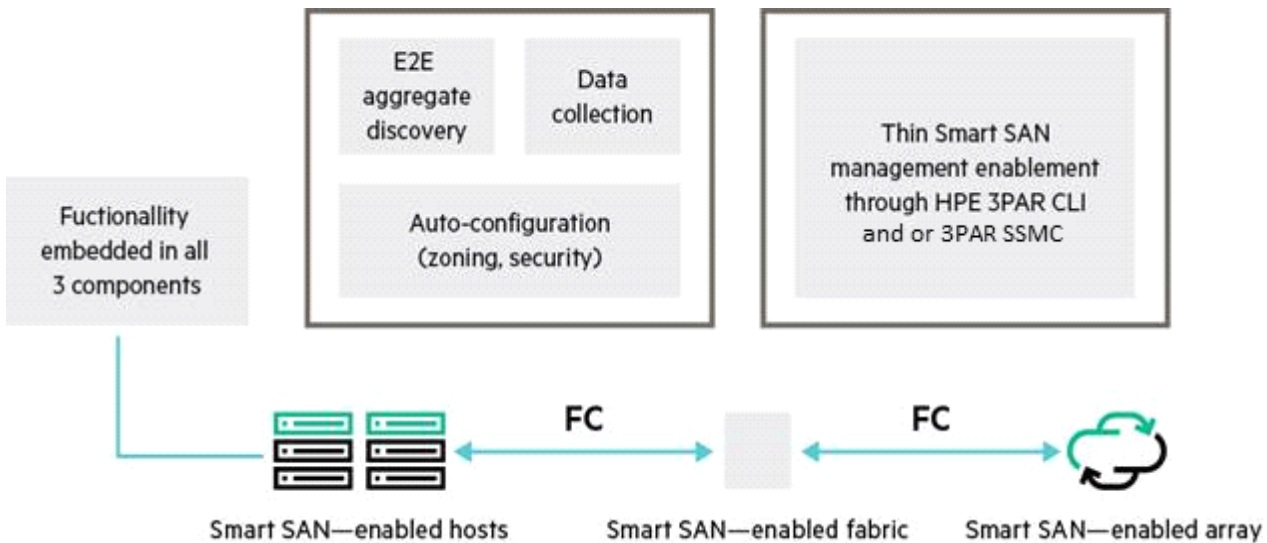
HPE 3PAR extends its leadership in Flash storage to the SAN by centralizing configuration and management tasks down to a few simple commands, which reduces the probability of human errors through automation for a more resilient fabric. It is an application embedded in HPE StoreFabric SAN hosts, switches and software on 3PAR. Smart SAN collects intelligence from the SAN and enables the array to orchestrate configuration, settings and policies in a SAN. HPE Smart SAN for 3PAR through its Target Driven Peer Zoning (TDPZ) feature enables customers to provision hosts and to automate peer zoning in a single 3PAR Storage System or in a 3PAR Storage Federation, resulting in the creation of fewer zones and enables configuration of zones in minutes and not in hours as was the case traditionally. Through automation, it reduces the probability of errors and potential downtime. Without HPE Smart SAN, an administrator needs to pre-configure zones on the switch before configuring hosts and VLUNs on the HPE 3PAR StoreServ. With HPE Smart SAN, the administrator can configure and automatically control zoning directly from the 3PAR CLI or SSMC. HPE Smart SAN also supports standards based device registrations and diagnostics data collection for better configuration visibility and diagnostic purposes.

HPE Smart SAN for 3PAR simplified fabric zoning and SAN diagnostics, benefits the experienced storage administrator in smaller organizations who are dealing with less staff, and the seasoned storage administrator in large enterprises who values SAN simplification through storage automation.

The automatic discovery mechanism creates a powerful platform which can be utilized in the future to get real-time diagnostics (reactive and predictive) across multi-protocols with self-healing and extends 3PAR's best in class QoS features to the SAN - resulting in end-to-end QoS orchestration and control from within the 3PAR.

Overview

Figure 1. HPE Smart SAN architecture overview



What's New?

HPE Smart SAN for 3PAR Software version 2.0:

- Support for HPE 3PAR StoreServ Management Console (SSMC) 3.1
- HPE 3PAR Storage Federation Target Driven Peer Zoning (FTDPZ)
- New CLI extensions
- Alias support
- Expanded HPE SAN Interoperability
- Automatic Port Binding – security profile enforcement for Select HPE FlexFabric 5900 Series Switches
- Remote Diagnostic Parameter (RDP) enhancements for select HPE FlexFabric 5900 Series Switches

Features

Features

- Protocol agnostic framework for SAN management and orchestration enabled via in-band metadata collection
- Automated Target Driven Peer Zoning for a single 3PAR Storage System or 3PAR Federation makes SAN zoning simple, error prone and more SAN resilient for a HPE 3PAR SAN
- Industry standards based implementation:
 - Automatic discovery using FC in-band FC-CT/FDMI access
 - Diagnostic data collection based on Read Diagnostic Parameters (RDP)
 - Peer Zoning based on Fibre Channel Standard Technical Committee T11
- From a single point in the fabric, display meaningful information for any device to ease network troubleshooting
- Orchestration and control through 3PAR CLI or SSMC 3.1
- Support for HPE StoreFabric B-series FC Switches and Directors and StoreFabric FC adapters (16Gb and 32Gb), and select HPE 5900 Series Switches
- Embedded in the firmware - No additional software needed on hosts and switches

Models

HPE Smart SAN for HPE 3PAR 7xxx LTU	L7D48A
HPE Smart SAN for HPE 3PAR 8xxx LTU	L7D49A
HPE Smart SAN for HPE 3PAR 10xxx LTU	L7D50A
HPE Smart SAN for HPE 3PAR 20xxx LTU	L7D51A

NOTE: Insert AE at the end of a part number for an electronic LTU (e.g. XXXXBAE). E-Delivery should be ordered with any Standalone or Upgrade software order.

NOTE: For factory installed 7000 and 10000 3PAR StoreServ systems, you must upgrade to 3PAR OS 3.2.2 or later, and order the Smart SAN electronic license L7D48AAE (3PAR 7000) or L7D50AAE (3PAR 10000) to enable Smart SAN on the array.

Software Licensing

Software Licensing (Pre ALL 3PAR Inclusive Software)

HPE Smart SAN for HPE 3PAR follows a frame based licensing approach. The frame based licensing approach requires that the HPE Smart SAN for 3PAR software is licensed only once for the array. Licensing for Smart SAN for 3PAR is not required on Smart SAN supported HPE StoreFabric FC host and switches.

HPE 3PAR ALL Inclusive Software includes Smart SAN for 3PAR

For HPE 3PAR Storage Systems shipping with HPE 3PAR ALL Inclusive Single System Software, the HPE 3PAR All Inclusive Single System Software is the foundation software of HPE 3PAR StoreServ 8000 and 20000 Storage. HPE 3PAR All Inclusive Single System Software is bundled with the HPE 3PAR StoreServ 8000 and 20000 controllers and is not available for purchase separately. The ALL Inclusive software includes *HPE Smart SAN for 3PAR* as well as many other HPE 3PAR software titles. Therefore on 3PAR systems with 3PAR ALL Inclusive software, a Smart SAN for 3PAR license is not required. Refer to the HPE 3PAR Software products QuickSpecs for more details

Order HPE 3PAR Transition License to get HPE Smart SAN for 3PAR on non-ALL Inclusive Software 3PAR Storage Systems

If you are a customer on an existing 3PAR StoreServ Storage System, and do not have 3PAR ALL Inclusive software, you can order a 3PAR Transition license and you will be entitled to all the same base software that is offered in the 3PAR ALL Inclusive Software including *HPE Smart SAN for 3PAR*. Please refer or your HPE representative for specific details pertaining to ordering a 3PAR Transition License.

Support Matrix

NOTES:

High level additional information for HPE Smart SAN for 3PAR can be found here: <http://www.hpe.com/storage/smartsan>

NOTE: 3PAR StoreServ storage with OS 3.3.1 or later with only 16Gb FC Host Adapters is required for SSMC 3.1 support and 3PAR Storage Federation Target Driven Peer zoning support.

NOTE: Supports 3PAR StoreServ storage with OS 3.2.2 or later with only 16Gb FC Host Adapters. (CLI support only)

NOTE: Supports HPE StoreFabric B-series (16Gb and 8Gb) FC switches with FOS 7.4.0a or later and FOS 8.0.1 or later is required for (32Gb FC) B-series switches.

NOTE: Supports HPE StoreFabric FC Host Bus Adapters (8Gb, 16Gb and 32Gb).

NOTE: Supports select HPE FlexFabric 5900CP Series switches, and HPE FlexFabric 5930 Series switches with 24-port CP 2QSFP option- HP Comware Software, Version 7.1.045, Release 2422P01

For detailed and the most current interoperability information and supporting documentation, refer to the comprehensive HPE Smart SAN for 3PAR Support Matrix at <https://h20272.www2.hp.com/spock/>

Services

Services

Services to accelerate time to results

HPE Storage Services bring you a rich portfolio of consulting and support services designed to add value to our core storage products and solutions. We have the know-how and experience to put storage technology to work for you. We work closely with you as your strategic partner, leveraging our full services portfolio to make sure that everything works to optimize your enterprise.

Choose from services aligned to our storage product offerings and lifecycle. From mission-critical onsite services to innovative web-based remote support, you choose the precise level of attention and support your business demands.

For more information <http://www.hp.com/services/storage>

To learn more on HPE Storage Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner

HPE Care Pack Services are sold by HPE and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.

Customers purchasing from a commercial reseller can find HPE Care Pack Services at: <http://www.hp.com/go/lookuptool>

Summary of Changes

Date	Version History	Action	Description of Change
13-Feb-2017	From Version 2 to 3	Changed	Added what's new, and general edits for HPE Smart SAN for 3PAR version 2.0 new features and updated licensing due to 3PAR ALL Inclusive Software License.
02-Sept-2016	From Version 1 to 2	Changed	Entire document updated.
17-Aug-2015	Version 1	Created	Document Created



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c04716040 - 15318 - Worldwide - V3 - 13-February-2017