



HP 3PAR StoreServ 3.2.x New Features and Functions H9P96S

This 1-day course reviews HP 3PAR StoreServ OS 3.2.x features and includes:

- High-level overview of the new features and functions included with HP 3PAR OS 3.2.1 and 3.2.2
- Data deduplication, a space reduction technique
- Adaptive Flash Cache (AFC), a flash memory-based caching solution
- Storage Federation and Data Migration enhancements
- File Persona, a file level storage technology

HP 3PAR StoreServ 3.2.x New Features and Functions

Price USD \$900

Links to local schedules, pricing and [US/Canada](#)
[Mexico/Latin America](#)
[Brazil](#)

HP course # H9P96S

Category Storage

Duration 1 day

Audience

- HP 3PAR administrators who desire training on the OS 3.2.1 and 3.2.2 features and functions

Additional Detail

- New features of the 3PAR OS include SSMC GUI, the newest hardware models (8000 and 20000), enhancements to the on-node database, Adaptive Optimization and Remote Copy changes/enhancements, new Optimization features, and VMware vVOLS.
- Data duplication identifies redundant/duplicate data in physical storage and maintains only a single copy of data for all the redundant copies on SSD capacity.
- Adaptive Flash Cache uses SSD capacity as an augmentation to DRAM cache to improve the performance of random read workloads.
- Enhancements to Storage Federation and Data Migration include multi-array/ bi-directional data migration capabilities using HP 3PAR Peer Motion functionality and improvements to the HP 3PAR Online import functionality.
- File Persona unlocks the native file and object access capabilities within the HP 3PAR array.

Prerequisites

- Students must have attended HK902S

Course objectives

At the conclusion of this course you should be able to:

- Work with Adaptive Flash Cache from the CLI and interpret reports showing the performance gains for random read workloads using AFC.
- Explain the benefits of HP 3PAR modern GUI: StoreServ Management Console (SSMC)
- Explain the newest hardware models: the 20000 Series and the 8000 Series and know how they differ from the 7000 Series and 10000 Series models
- List the newest features related to Adaptive Optimization including the Premium mode Explain the new functionality available with the on-node data file .srdata
- Understand the advantages of the newest Remote Copy mode: Asynchronous Streaming
- Explain the Persistent Checksum and Express Writes optimization features
- Understand at a high level the VMware VVOLs feature
- Explain the benefits of Deduplication
- Understand the deduplication process
- Interpret the dedup output from CLI commands
- Explain the purpose of the Garbage Collector
- Understand how dedup works with Snapshots, Clones, and Remote Copies
- Explain the benefits of Adaptive Flash Cache (AFC)
- Understand what can and cannot be moved into AFC
- Explain the different LRU (Least Recently Used) queues and the concept of LRU queue demotion
- Use the appropriate CLI commands to setup, enable, disable, remove, and monitor AFC
- Understand the guidelines and rules regarding AFC
- Work with AFC using SSMC
- Monitor AFC using the statcache and srstatcache commands
- Explain the benefits of Storage Federation
- Understand the new features for Peer Motion
- Work with basic Peer Motion and Storage Federation in SSMC
- Understand the new features for HP 3PAR Online import for data migration from non-HP 3PAR arrays
- Explain the benefits of File Persona
- Install and configure File Persona
- Work with File Persona Authorization and Authentication
- Understand the logical layers of File Persona

Benefits to you

- Gain the knowledge necessary to understand the features of 3PAR StoreServ OS 3.2.1 and 3.2.2

Course outline

Overview

- SSMC GUI
- SSMC Wizards
- SSMC On-Node System Reporter Overview
- Recent Hardware Models
- HP 3PAR Gen5 Thin Express ASIC
- HP 3PAR StoreServ 20000 Controller Nodes and Adapters
- HP 3PAR StoreServe 20000 Drive Enclosures
- HP 3PAR StoreServ 8000 Controller Nodes
- 8000 Series 12 Gb SAS Drive Overview
- Adaptive Optimization

- Premium Mode
- On Node Volume: .srdata
- Remote Copy
- Asynchronous Streaming Mode
- Optimization Features
- VMware vVOLS

Thin Deduplication

- Terminology
- Express Indexing
- Garbage Collector
- Compaction and dedup savings
- Online Volume Conversion
- TDVVs and Snapshots
- TDVVs and Remote Copies

Adaptive Flash Cache

- Introduction and AFC Explained
- AFC Data Flow in the Controllers
- Least Recently Used (LRU) Queues
- Configuring and Monitoring AFC
- Adaptive Flash Cache CLI Commands
- Monitoring Cache
- Warm-up Time

Storage Federation and Data Migration Enhancements

- HP Peer Motion Bi-directional Migration
- Zoning for Multi-array bidirectional Peer Motion
- Storage Federation Limits
- Storage Federation in SSMC
- Peer Motion in SSMC
- Peer Motion: Remote Copy Support
- File HP 3PAR Online Import Enhancements

File Persona Concepts and Overview

- Enablement and Setup
- Authentication and Authorization
- Provisioning and Management
- File Stores Explained
- File Shares
- Additional Features

Learn more at

hpe.com/us/training/storage