

Szkolenie: HPE
Managing HPE 3PAR StoreServ I: Management and Local Replication



Cel szkolenia:

The Managing HPE 3PAR StoreServ I course is designed for the new or entry-level HPE 3PAR administrator. The goal of the class is to acquaint the 3PAR administrator with the most common day-to-day tasks and best practices associated with administration of the 3PAR array. The levels of provisioning storage are emphasized.

This training reflects the newest release of the HPE 3PAR OS: 3.3.1. The course is approximately 50% lecture and 50% hands-on labs using HPE 3PAR arrays. NOTE: Hosts used in the lab environment are MS Windows.

At the conclusion of this course, the student should be able to:

- Explain the numbering schemes for the HPE 3PAR hardware components: controllers, ports, and physical disks
- Use the StoreServ Management Console (SSMC) GUI and the CLI to perform administrative tasks
- Create and work with a Common Provisioning Group (CPG)
- Administer Virtual Volumes using the SSMC and the CLI
- Understand the advantages of Thin Provisioning and create a Thin Provisioned Virtual Volume (TPVV)
- Understand the advantages of Dedup and Compression for storage allocated from SSDs
- Export and un-export virtual volumes from hosts
- Use HPE 3PARinfo to analyze luns presented to hosts
- Use Host Explorer to simplify addition of hosts
- Use Host Sets and Volume Sets to simplify provisioning storage
- Create a Snapshot and promote (restore) from a Snapshot
- Create a Clone and promote a Clone
- Convert a Virtual Volume (i.e. from fully provisioned to thin provisioned or thin provisioned to thin dedup or vice versa)
- Use the SSMC reporting feature to monitor capacity and performance

Audience:

HPE 3PAR administrators who desire training on basic concepts and best practices needed to administer the array.

Plan szkolenia:

- HPE 3PAR StoreServ I
 - Register here to access to the Pre-Study WBT course
- HPE 3PAR Solution Introduction and Review
 - HPE 3PAR Hardware Current models
 - Hardware overview for the 7000, 8000, and 20000 models: controllers, drive cages, and disks
 - Controller port number naming conventions for the 7000, 8000, and 20000 models
 - Disk number naming convention for disks in the HPE 3PAR arrays
 - ASIC chip functionality
 - HPE 3PAR virtual storage architecture benefits
 - Big Picture HPE 3PAR component connectivity
 - SSMC GUI introduction and functionality overview
 - HPE 3PAR CLI overview and introduction
- Storage Concepts and Terminology
 - HPE 3PAR provisioning terminology
 - HPE 3PAR concept of a disk chunklet and Logical Disk (LD)
 - HPE 3PAR concept of a Common Provisioning Group (CPG)
 - HPE 3PAR Virtual Volumes (VV) types: full provisioning and thin provisioning
 - HPE 3PAR provisioning terminology
 - HPE 3PAR concept of a disk chunklet and Logical Disk (LD)
 - HPE 3PAR concept of a Common Provisioning Group (CPG)
 - HPE 3PAR Virtual Volumes (VV) types: full provisioning and thin provisioning
- Storage Configuration
 - CPGs using SSMC and the CLI
 - Working with virtual volume templates
 - Working with fully provisioned and thin provisioned volumes using SSMC and the CLI
- Host Connectivity and Storage Allocation
 - How to prepare a host to access an HPE 3PAR storage array
 - HPE 3PAR Port Persistence
 - Adding hosts in an HPE 3PAR storage array
 - Adding FC ports to a host
 - Export virtual volumes to hosts as VLUNs
 - Unexport VVs/VLUNs from a host
 - Using SSMC and CLI to work with hosts and storage

- Working with Smart SAN
- Use Host Explorer to add hosts and explore host details
- Use HPE 3PARInfo to gather storage information
- Host Sets and Virtual Volume Sets
 - Host and virtual volume sets advantages
 - Host and virtual volume sets use cases
 - Creating and maintaining host and volume sets using SSMC and the CLI
 - Host and volume sets guidelines and rules
- Thin Features: A Deep Dive
 - Benefits of the Zero Detection/Thin Persistence
 - Zero Detection use cases
 - Space reclamation: UNMAP and other utilities
 - Compaction ratio explanation and thin overprovisioning
 - Thin provisioning: seeing what is allocated vs. used by a host
 - Online Virtual Volume conversion: converting volumes from full to thin or thin to full using
- SSMC and the CLI
 - Compacting a CPG to free up space
- Adaptive Data Reduction for Flash: Dedup and Compression
 - Thin Dedup: saving space using deduplication and dedup detail
 - Thin Dedup: what to dedup: good candidates and bad candidates
 - Compression and how it works
 - Compression: what to compress--good candidates and bad candidates
 - Data Packing: packing data for space and cost savings
 - DECO: Dedup and Compression together
 - Working with Dedup and Compression using the SSMC GUI and the CLI
 - Performing a Dedup Estimate and a Compression Estimate
 - Seeing if Dedup and Compression are working
 - Analyzing Adaptive Data Reduction ratios: Dedup ratio, Compression ratio and overall Data
- Reduction ratio
 - Online Virtual Volume conversion: converting volumes to thin-dedup, compressed or DECO
- Snapshots and Clones
 - Snapshots and Clones: benefits
 - Creating, exporting, unexporting, and deleting a snapshot
 - Rules and relationships regarding snapshots
 - Restore from a snapshot

- Scheduling the creation of a snapshot
- Using the Virtual Lock feature to delete outdated snapshots
- Resynchronize a clone to a base volume
- Promote a clone to a base volume
- Use SSMC and the CLI to manage snapshots and clones
- Reporting: Performance and Capacity
 - The on-node database: the .srdata database volume
 - Using SSMC reports to analyze capacity needs and trends
 - Using SSMC reports to analyze performance
 - Using SSMC default reports and creating custom reports
 - Scheduling and emailing reports
 - Using the Excel client
 - Using the CLI stat commands to analyze performance and capacity
 - Using the CLI sr* commands to analyze performance and capacity

Poziom trudności



Certyfikaty:

The participants will obtain certificates signed by HPE (course completion).

Prowadzący:

Authorized HPE Trainer.