Szkolenie: HPE

Managing HPE GreenLake for Block Storage (MP)

Hewlett Packard Enterprise

Cel szkolenia:

The Managing HPE GreenLake for Block Storage MP course describes the HPE Alletra Storage MP hardware platform building blocks, theory of operation and HPE GreenLake for Block Storage features. Using hands-on labs (HOL), students learn how to perform common dayto-day management tasks, including how to create hosts, volumes, sets, and how to monitor the product. This course also provides knowledge of more advanced features, including local and remote replication, disaster recovery, QoS, as well as maintenance and data migration. You gain a practical understanding of HPE GreenLake for Block Storage MP capabilities using extensive hands-on lab exercises, performed on all applicable user interfaces.

After completing this course, you should be able to:

- Describe HPE Alletra Storage MP hardware and features
- List and compare HPE GreenLake for Block Storage MP management options, roles, and security
- Explain provisioning terminology
- Perform on-boarding and initialization
- Work with volumes, hosts, and corresponding sets
- Protect data with snapshots, clones, and use protection policies
- Describe priority optimization and quality of service (QoS)
- Explain different types of replication implementations and failure scenarios
- Briefly describe data migration, high availability, and disaster tolerance solutions
- Describe monitoring and alerting options
- Describe the HPE GreenLake for Block Storage MP OS update procedure, maintenance

Audience

This course is ideal for customers, administrators, and channel partner sales or technical sales.

Plan szkolenia:

- Module 1: HPE GreenLake for Block Storage MP Hardware and Features

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ul. Tatarska 5, 30-103 Kraków, tel.: (12) 298 47 77
ul. Bielska 17, 02-394 Warszawa, tel.: (22) 417 41 70

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- HPE GreenLake for Block Storage built on the HPE Alletra Storage MP
- Features of HPE Alletra Storage MP platform
- Features of HPE GreenLake for Block Storage
- HPE Alletra Storage MP - the basics
- HPE Alletra Storage MP chassis
  - Switchless configuration
  - Switched configuration
- HPE Alletra Storage MP compute IO Module
- details
- HPE Alletra Storage MP OCP adapters
  - Slot population rules for different platform
- models
- HPE Alletra 6000 and HPE Alletra 5000 series
- head shelf drive layout
- HPE Alletra Storage MP JBOF IO Module details
- HPE Alletra Storage MP drive enclosure/cage
- (JBOF) connectivity
- HPE Alletra Storage MP - the architecture
- HPE GreenLake for Block Storage built on the
- HPE Alletra Storage MP
  - Data-at-Rest encryption
  - Drive configuration best practices
  - Releases and features
  - OS software details
  - Software and support subscription

- Module 2: HPE GreenLake for Block Storage MP Management Options
  - HPE GreenLake for Block Storage MP manageability
  - HPE GreenLake Edge-to-Cloud platform, and Data Services Cloud Console
    - HPE GreenLake Edge-to-Cloud Platform services
    - Data Services Cloud Console introduction
    - Data Services Cloud Console overview
    - Data Ops Manager
    - HPE GreenLake for Block Storage
    - Intent-based provisioning
  - Data Services Cloud Console Public REST API
    - Data Services Cloud Console Rest API

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        - Knowledge training
        - YouTube Demo for the Data Services Cloud Console API
    - HPE GreenLake for Block Storage MP local UI overview
    - HPE GreenLake for Block Storage MP command line interface - CLI
    - HPE GreenLake for Block Storage MP Web Services API (WSAPI)
        - REST(ful) API Introduction
        - Usage basics
        - REST operations
        - URI
        - Usage example
- Module 3: HPE GreenLake for Block Storage MP Provisioning Terminology
    - HPE GreenLake for Block Storage MP OS virtualization
    - Caching techniques
    - System Wide Sparing
    - RAID concepts
    - High availability
    - Virtual Volume overview
    - HPE GreenLake for Block Storage MP O - Enhanced software vs legacy architectures comparison
    - HPE GreenLake for Block Storage MP data reduction overview
    - Discover the array
    - Data reduction technologies overview
    - Thin Provisioning overview
        - Windows Server space reclamation
        - Linux space reclamation
        - VMware space reclamation
        - Allocation units and alignment
        - Migrating virtual machines with VMware vCenter Converter
    - Deduplication and compression
    - Data packing
- Module 4: Provisioning Terminology
    - Installation
    - Documentation and resources
    - Initialization process
        - Create an HPE GreenLake user account
        - Collect information

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        - Device registration and onboarding
        - Preparing for discovery
        - HPE Discovery Tool and Cloud Connectivity Wizard
        - Initializing using the mobile app
        - Data Services Cloud Console Setup Service
- Module 5: Working with Hosts
    - HPE GreenLake for Block Storage MP OS
        - Virtualization
        - Host OS support
    - Front-end configuration: FC example
    - HPE GreenLake for Block Storage block I/O
    - connectivity
    - NVMe-oF host support
    - WWN format of host ports
    - Obtaining Host HBA WWNs
        - Switch
        - Command and utilities
    - Creation of host profiles
- Module 6: Volumes and Sets
    - HPE GreenLake for Block Storage MP OS Virtualization
    - Virtual Volume Review
    - Host Sets and Virtual Volume Sets
    - Virtual Volume Sets and Hosts
    - Working with sets
        - Data Services Cloud Console
        - HPE GreenLake for Block Storage MP UI
        - Command Line Interface (CLI)
    - Online Virtual Volume Conversion
    - HPE Virtual Lock
        - Creating HPE Virtual Lock snapshots from Data Services Cloud Console
        - Creating HPE Virtual Lock snapshots from the CLI
- Module 7: Protection Policies, Snapshots and Clones
    - Snapshot - Virtual Copy
    - Virtual Copy for backup use case
        - Virtual Copy creation
        - Virtual Copy writes

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- HPE Virtual Lock review
  - Customer example: Cyber-attack
  - Creating HPE Virtual Lock snapshots from
- Data Services Cloud Console
- Creating HPE Virtual Lock snapshots from the CLI
- How to show how HPE Virtual Lock snapshots work
- Promote or restore a Snapshot
- Clone terms and specifics
- Protection Policies
  - Data Services Cloud Console
  - HPE GreenLake for Block Storage MP UI
  - Plan snapshots when creating App volume sets
- Command Line Interface (CLI)
  - Snapshot CLI overview
  - Clone CLI overview

- Module 8: Replication
  - Replication overview
  - Replication network transport methods
  - Volume set replication
  - Replication modes
  - Replication operations
    - Failure scenario
    - Replication actions
  - Replication setup and management
    - Data Services Cloud Console
    - CLI
    - HPE GreenLake for Block Storage MP UI

- Module 9: Scale-Out
  - Active Peer Persistence
  - HPE Peer Persistence infrastructure view
  - HPE Peer Persistence deployment matrix
  - Quorum Witness software
  - Automatic transparent failover
    - Failure scenarios
  - Working with the Quorum Witness
  - Review the Quorum Witness

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- Configuration via HPE GreenLake for Block Storage MP UI
- Module 10: Monitoring, Alerts and Events
  - Performance reporting introduction
  - Performance metrics available using API and CLI
  - CLI: stat commands
  - CLI: hist* commands
  - CLI: srstat commands
  - Performance alerts
  - SNMP
  - Alerts and events
    - Alerts overview
    - Alert message codes
    - Sample message
  - Managing alerts with the CLI
  - Setting system alerts
  - Example alert
  - Monitoring and managing the event log
  - Example event
  - Syslog support
  - Checkhealth procedure
  - Options available in Data Services Cloud Console
  - Options available in HPE GreenLake for Block Storage MP UI
- Module 11: Maintenance, OS Update and Data Migration
  - Software updates and recommendations
  - Operations performed via Data Ops Manager
    - Running readiness checks and installing updates
    - User notified of update requirements
  - On-array management/local UI
  - HPE GreenLake for Block Storage MP maintenance
    - On-array management UI
    - Customer self-repair option
    - Part replacement
    - HPE Call Home
    - HPE GreenLake for Block Storage MP CLI
  - Data migration
    - Storage migration methodologies

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- Peer motion
- Online Import

Wymagania:

Before attending this course, you should have:

- An understanding of general storage concepts including Fibre Channel, iSCSI technology, and RAID
- Operator level functionality in a Windows Environment

Poziom trudności

Certyfikaty:

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

Prowadzący:

Authorized HPE Trainer.

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