Szkolenie: HPE

HPE XP8 Data Replication and High Availability

Cel szkolenia:

This course introduces students to the HPE XP8 disk array replication and high availability solutions. The course covers provisioning options, data protection options, an introduction to high availability, HPE XP8 Data Protection Manager, HPE XP Continuous Access Journal, and HPE XP Continuous Access Synchronous. Students learn to use HPE XP Intelligent Storage Manager, HPE XP8 RAID Manager, and HPE XP8 Data Protection Manager to manage and monitor replication pairs. Hands-on labs reinforce the lectures.

Course objectives

Upon completion of this course, students will be able to:

- Identify and configure the tools to manage data replication
- Identify replication technologies
- Configure the environment supporting data replication
- Protect volumes with high availability using:
  - HPE XP8 Intelligent Storage Manager
  - HPE XP8 Data Protection Manager
  - HPE XP8 RAID Manager
- Protect volumes with Continuous Access Journaling and Continuous Access Synchronous using:
  - HPE XP8 Data Protection Manager
  - HPE XP8 RAID Manager
- Protect applications using HPE XP Data Protection Manager
- Manage data protection and site disaster recovery using:
  - HPE XP8 Data Protection Manager
  - HPE XP8 RAID Manager
- Adopt HPE XP8 RAID Manager configurations with HPE XP Data Protection Manager

Audience

This course is for storage administrators responsible for the configuration and management of HPE XP8 disk arrays.

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Plan szkolenia:

- Module 1: Provisioning Options
  - Provisioning options at a glance
  - HPE XP8 Intelligent Management Suite, portal, and architecture
  - HPE XP8 Intelligent Storage Manager
  - HPE XP8 Data Protection Manager
  - HPE XP8 Automation Director
  - Demonstration: Lab 1 preparation
  - HPE XP8 RAID Manager
- Module 2: Data Protection Options
  - HPE XP8 Data Protection
  - HPE XP8 Continuous Access Synchronous
  - HPE XP8 Continuous Access Journal
  - HPE XP8 High Availability
  - Continuous Access Synchronous vs high availability positioning
  - Advanced topologies—3 Data Center
- Module 3: Introduction to High Availability
  - High level overview
  - High availability requirements
  - Remote path overview
  - Configure remote connection
  - Quorum device
  - High availability requirements and configuration
  - Creating an external storage LUN on a third site
  - Virtual storage machine
  - Register HPE XP8 storage in HPE XP8 Data Protection Manager
  - Create HA (High Availability) pairs from HPE XP8 Intelligent Storage Manager
- Module 4: HPE XP8 Data Protection Manager
  - HPE XP8 Data Protection Manager total protection
  - HPE XP8 Data Protection Manager/HPE XP8 Intelligent Storage Manager architecture
  - Building blocks
  - Nodes
  - Policy
  - Dataflow
  - Manage replication

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- Schedules
- Logs
- Monitoring
- Notifications
- Jobs
- Restoring data
- Storage inventory
- Reports
- Role based access control (RBAC)
- Authentication services
- Licensing
- Repositories
- Deduplicated repositories

- Module 5: HPE XP8 High Availability
  - High availability - overview
  - HPE XP8 High Availability Read function and ALUA (Asymmetric Logical Unit Access)
  - HPE XP8 High Availability Write function and ALUA
  - HA components - data volumes
  - HA components - quorum disk
  - HA components - remote copy connections
  - HA components - virtual DKC
  - VDKC configuration types
  - HA components—cross site paths
  - VDKC configuration—LDEV IDs
  - Failure scenario
  - HPE XP8 High Availability —when failure occurs
  - HPE XP8 High Availability—modes
  - HA failure scenarios—array failure
  - HA failure scenarios—array failure (with cross site paths)
  - HA failure scenarios—link failure Site A to Site B (Site A I/O)
  - HA failure scenarios—link failure Site B to Site A (Site A I/O)
  - HA failure scenarios—link failure Site A to Site B (Site B I/O)
  - HA failure scenarios—link failure Site B to Site A (Site B I/O)
  - HA failure scenarios—link failure both links (same time)
  - HA failure scenarios—quorum failure to Site A
  - HA failure scenarios—quorum failure to Site B

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- HA failure scenarios—quorum failure to Site A and Site B
- HA failure scenarios—quorum located on PVOL site
- Double failure scenario
- Post quorum failure –remote copy failure
- Operations
- Create a pair
- Suspend a pair
- Resynchronize a pair
- Delete a pair
- Enable ALUA mode
- Reversing the PVOL and SVOL
- Disaster recovery
- Forcibly changing I/O mode of HA pairs for recovery

- Module 6: HPE XP8 Continuous Access Journaling
  - Continuous Access Journal overview
  - Journal Volume
  - Journal Groups
  - Consistency Group
  - CA (Continuous Access) Journal—sizing the link for average I/O rate
  - CA Journal—link failures
  - Journal performance
  - Operations
  - Journaling status
  - Continuous Access Journaling operations
- Module 7: HPE XP8 Continuous Access Synchronous
  - Continuous Access Synchronous overview and I/O operations
  - Data path
  - Continuous Access Synchronous fence levels
  - Continuous Access Synchronous operations

Wymagania:

- Handle multiple paths to a LUN
- Understanding of storage technologies and interconnects
- Working knowledge of connecting storage and mounting file systems on storage devices in Windows and VMware®

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- Working knowledge of fiber channel switched fabrics
- Working knowledge of HPE XP8 basic provisioning tasks including:
  - Creating volumes and attaching volumes to servers using HPE XP8 Intelligent Storage Manager
  - Configuring and operating HPE XP8 RAID Manager instances
  - Creating LDEV, Host Group and LUN (logical unit) using HPE XP8 RAID Manager

Poziom trudności



Certyfikaty:

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

Prowadzący:

Authorized HPE Trainer.

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