Managing HPE 3PAR StoreServ III: Performance and health management (H9P97S)

ID H9P97S   **Price** 2,250.— €(excl. tax)   **Duration** 3 days

Who should attend

A storage administrator who has been managing 3PAR StoreServ arrays on a daily basis for at least a year. This training is not for an individual who has no experience managing a 3PAR array.

Prerequisites

- Students must have attended HK902 and HK904 and should have managing a 3PAR array for at least 12 months.

Course Objectives

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

- Name the current HP 3PAR hardware offerings and describe virtualization concepts
- Describe virtualization concepts
- Explain how space is distributed in HP 3PAR storage arrays
- Size Adaptive Optimization and work with AO reports
- Interpret different HP 3PAR performance metrics and how the arrays features can affect performance
- Tune and rebalance HP 3PAR storage arrays
- Perform hardware and software upgrades
- Configure, interpret and handle HP 3PAR alerts and notifications

Detailed Course Outline

Module 1: Product Overview and Concepts

- Management Software Options
- 3PAR Hardware Offerings Review
- Concepts and Terminology Review
- Common Provisioning Group (CPG)
- Virtual Volume (VV)
- Physical disks

Module 2: Space Explained

- Data Layout
- Regions
- Virtual Volumes
- Common Provisioning Group
- System Space
- Logical Disk Types
- Understanding Space Allocation
- Space Mapping
- Space Reclaim

Module 3: Understanding Adaptive Optimization Region Density Reports

- Purpose of Adaptive Optimization
- Adaptive Optimization tiers
- Region I/O Density Reports
- Locality of Data
- Work with AO Using the Management Software
- Generate and Interpret AO Reports
- Adaptive Optimization Improvements
- Sizing an AO Solution

Module 4 : Understanding Performance

- Common Terms and Definitions
- CPG Best Practices
- RAID Performance Limitations
- Caching Algorithms
- Adaptive Flash Cache
- 3PAR Thin Deduplication
- Component Metrics
- Interactive Response Time Law
- CLI Counters
- 3PAR Distributed Sparing
- System Reporter
- On-Node System Reporter
- 3PAR Performance Checklist

Module 5: Rebalancing

- Rebalancing Concepts

- Introduction to tunesys
- Tuning phases and algorithms
- Tuning the System Using the Management Console
- Tuning the System Using the CLI
- Tuning and Modifying Virtual Volumes
- Considerations
- Limitations
- Troubleshooting
- Scenarios

Module : Upgrading 3PAR

- Steps to perform when upgrading
- Servicing the Storage System
- Service Processor Onsite Customer Care
- Repair/replace Disk Procedures
- Upgrading the Storage System Hardware
- Upgrading Disk Drives
- 7000 Upgrade Best Practice Scenarios
- 7000 Minimum Upgrade Scenarios
- Upgrading the Storage System and Service Processor Software

Module 7: Alerts

- 3PAR Events and Alerts
- Responding to 3PAR Alerts
- Managing Alerts with the GUI and CLI
- Managing Events
- External System Reporter Performance Alerts
- On-Node System Reporter Performance Alerts
- SNMP
- HP 3PAR CIM API
- Service Processor Local Notification Service

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