

# HP Education Services Course Overview

Configuring, Managing and Maintaining HP Storage Essentials 5 (UC424S)



This 4-day course gives a scenario based and solution oriented introduction into HP Storage Essentials 5. Based on scenarios with specific business problems that need to be solved, students will be introduced to using, configuring and administering Storage Essentials in a typical networked storage and server environment.

## Prerequisites

The following course is required:

- SAN Fundamentals Web Based Training (u5527aae)
- The following courses are recommended:
- SAN Boot Camp (u4235s)
- Managing HP StorageWorks Enterprise Virtual Array (u4879s)
- Introduction to HP SIM Web Based Training (u8695aae)
- Enterprise Systems Management using HP SIM (u8474s)

## Course Objective

- Enable students to understand storage management issues and how to address them with the SRM tools.
- Identify the needs of an organization in term of resource management and how to develop the strategies to manage storage resources.
- Learn how to gather information about capacity and identify underutilized and overutilized resources.
- Demonstrate how Storage Essentials can help simplifying complex tasks and reduce the impact of change.
- Learn how to gather information about the whole infrastructure including servers, how to get details and use this information for documentation and active management and alerting and task automation.
- Enables students to set up centralized security with defined roles and permissions for monitoring and modifying resources.
- Use Storage Essentials to setup basic ILM policies and how to setup a chargeback system for tiered infrastructure.

## Why education services from HP?

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- Experienced and best-in-the-field HP instructors
- More than 80 training locations worldwide
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**Course Title:** Configuring, Managing and Maintaining HP Storage Essentials 5

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**HP Product Number:** UC424S

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**Category/Subcategory:** Storage

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**Course Length:** 4 days

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**Level:** Intermediate

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**Delivery Language:** English

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**To Order:** You can order this course online at <http://www.hp.com/learn>. At the site, select a country, then choose "registration" or "Book a course" and fill out the online registration form.

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# Detailed Course Outline

## Introduction

### Storage Basics

- Storage Types - Online storage, Nearline storage and Offline storage
- Technologies - Direct Attached Storage (DAS), Network Attached Storage (NAS) and Storage Area Network (SAN)
- Switches
- HP Storageworks XP and EVA disk arrays
- HP Storageworks Modular Smart Array
- HP Storageworks Tape Devices
- Fibre Channel
- Storage Components
- Lab: Storage Basics

### Storage Management Basics

- Understand the basics of Storage Management
- Realities in Storage
- Storage Resource Management (SRM) defined
- Storage Management Challenges
- Why Storage Management ?
- "top 10" requirements list
- SRM – realizing ROI
- Storage Essentials Components
- Storage Essentials Enterprise Edition
- Customer Case Study

### Dealing with underutilized resources

- Discovering Resources
- Capacity Manager
- Application and Exchange Viewers
- Oracle, Sybase and SQL Viewers
- Working with file systems
- Dealing with underutilized resources
- Capacity Monitoring
- Policy Management
- Reporting
- Planning Capacity Migration
- Lab: Dealing with underutilized resources

## Performance Diagnostics

- Introduction to Performance monitoring and analysis
- Performance Manager and identifying performance hotspots
- How to monitor the infrastructure
- Optimizing environments and predicting bottlenecks
- Optimize the SAN layout for growth
- Lab: Performance diagnostics

## Managing Change

- Change Management Basics
- Storage Area Discovery Steps
- Discovery Methods
- Scheduling automatic discovery
- Migrating resources to or from hosts (LUN and path provisioning)
- Replacing Components on the SAN
- Lab: Managing Change

## Unified Server and Storage Management

- Challenges and objectives in the modern infrastructure
- How to achieve the objectives
- How to use Storage Essentials to simplify management
- How to use Storage Essentials to enable simple management collaboration
- How to use Storage Essentials to increase availability
- How to use Storage Essentials to increase troubleshooting efficiency
- How to use Storage Essentials to assist in configuration changes
- How to use Storage Essentials to enable end-to-end management and provisioning
- Architecture of SE supporting unified storage and server management
- SMI-S Storage Management Initiative specification
- Clients, servers, and providers
- CIM model - Hosts, Switches and Storage
- WBEM communication overview

- Storage Essentials architecture
- CIM extensions
- Types of architectures
- Integrating HP SIM and Storage Essentials
- Deployment options
- Infrastructure management
- Lab: Unified Server and Storage Management

### **Auditing security**

- Introduction to Infrastructure Security
- Security in a SAN
- What security problems are we addressing?
- How secure is your SAN?
- Security Implementation Hierarchy
- Planning SAN Security Prevention
- Data Path and Management Path Security
- Personnel and Operating Practices
- Managing security
- Organizations and hierarchies
- Users and Role Based Security
- Lab: Auditing Security

### **How to build ILM tiered infrastructures**

- ILM – Information Lifecycle Management
- Information Lifecycle Management Challenges
- Typical ILM Approach – Tiered Storage
- Lab: ILM Tiered Infrastructure Case Study
- ILM and Tiered Storage – pragmatic approach
- ILM and Tiered Storage - The Role of Storage Essentials
- Lab: How to build ILM tiered infrastructures

### **Compliance and Reporting**

- What is Compliance? – theory and practice
- The origin of compliance requirements
- Regulations driving requirements

- Compliance and Storage
- Role of IT Administration in the Financial Services sector
- Managing reports and Reporting Architecture
- Backup discovery
- Managing the display of events
- Managing logging
- Database Management
- RMAN backups
- Lab: Compliance and Reporting

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