# HP Education Services Course Overview

HP EVA and P6000 Business Continuity and Availability (HF839S)

This 2-day instructor-led training course introduces the student to the HP P6000 Enterprise Virtual Array data replication environment. The focus of this course is the remote replication capability represented by Continuous Access. Also discussed is the Replication Solutions Manager (RSM) software application.

## Audience

System Administrators responsible for managing the many types of copy sets found in the HP P6000 Enterprise Virtual Array (EVA) environment.

## Prerequisites

Students should successfully complete the following course prior to attending this course:

- HP EVA and P6000 Administration and Management 3-day (HK975S)
- It is preferred that students have a working knowledge of at least one of the supported operating systems

## Course objectives

- Describe the purpose and concepts of HP P6000 Continuous Access
- Install the Replication Solutions Manager application
- Work with the Job Scheduler, Job Creation and Templates
- Describe the planning process for implementation of HP P6000 Continuous Access
- Configure HP P6000 Continuous Access and use the replication functions available within RSM and Command View EVA
- Perform HP P6000 Continuous Access failover operations
- Describe HP P6000 Continuous Access extended configurations
- Identify and implement HP P6000 Continuous Access best practices
- Perform basic troubleshooting techniques for HP P6000 Continuous Access

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| **Course title:** | HP EVA and P6000 Business Continuity and Availability |
| **HP product number:** | HF839S |
| **Category/Subcategory:** | Storage |
| **Course length:** | 2 days |
| **Level:** | Advanced |
| **Delivery language:** | English |
| **To order:** | You can register your interest for this course online at **http://www.hp.com.au/education** .At the site, select the course under Storage portfolio and you will see dates for the course. Register your interest for the date of your choice. |

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## Detailed course outline

**HP P6000 Continuous Access Solution Overview**

- Market trends
- Business continuity requirements
- HP P6000 Continuous Access

- Disaster tolerance
- HP P6000 Continuous Access concept
- HP P6000 Continuous Access features
- HP P6000 Continuous Access configuration limits
- HP P6000 Continuous Access requirements
- HP P6000 Continuous Access failover
- Bidirectional replication
- Multiple array relationships
- Fan-out replication
- Fan-in replication
- Cascaded replication
- Operating system support

**HP P6000 Continuous Access Concepts**

- DR group
- DR features
- DR group replication features
- DR group properties
- DR group states
- DR group state flow
- Synchronous and Basic/Enhanced Asynchronous write mode
- Failsafe enabled mode
- Failsafe modes
- Failsafe on link-down/power-up
- Failsafe on unavailable member
- Failsafe locked
- Logging
- Log states
- Log space
- Full logs
- Full copy
- Merging
- Suspend
- Resume
- Managed sets
- Failover

**HP P6000 Continuous Access Planning and Setup**

- Basic HP P6000 Continuous Access configuration
- Array cabling
- Basic configuration limits
- HP P6000 Continuous Access configuration rules
- DR group guidelines
- HP P6000 Continuous Access zoning
- Alternate configurations
- Advanced configurations
- Planning an array
- Planning disk groups
- Planning DR groups
- Planning DR group logs
- Planning a HP P6000 Continuous solution
- Boot from SAN
- Bootless failover
- Application considerations
- Array management considerations
- HP P6000 Continuous Access licensing
- License management
- Firmware updates
- HP P6000 Continuous Access user interfaces
- Replication Solutions Manager
- Installation
- Standby storage management servers
- Switch considerations

**HP P6000 Continuous Access Operations**

- Pre-HP P6000 Continuous Access configuration tasks
- RSM remote replication functions
- DR groups
- Managed sets
- Storage systems
- Virtual disks
- RSM icons
- Command View EVA remote replication functions

**HP P6000 Continuous Access Failover**

- HP P6000 Continuous Access failover
- Failover principle
- Failover considerations
- Planning for disaster recovery
- Failover decision
- Planned and unplanned failover
- Performing failover operations
- Recovery from failsafe-locked condition
- Activating the standby storage management server
- Activating RSM

**HP P6000 Continuous Access Extended Configurations**

- Supported HP P6000 Continuous Access extended configurations
- HP P6000 Continuous Access with stretched clusters

**HP P6000 Continuous Access Best Practices**

- Planning ahead for a disaster
- General recommendations
- Effects of array size and distance
- Improving performance of extended solutions

- Recommendations for FC-IP networks
- Load balancing controllers & intersite links
- Comparing synchronous & asynchronous modes
- Moving data using HP P6000 CA
- Managing disk groups
- FATA/Nearline drives
- Comparing full copy and merge operations
- Throttling of merge I/O after logging
- Creating destination snapclone or mirrorclone before full copy
- Storage mgmt server offline during replication operations
- Using multiple servers to manage storage
- General RSM recommendations
- Saving HP P6000 CA configuration information
- Local replication best practices
- Managing replication events

**HP P6000 Continuous Access Troubleshooting**

- Troublshooting replication problems
- HP P6000 CA tunnels
- HP P6000 CA replication protocol
- Normalization
- Write I/Os
- EVAperf tool
- CA round trip delay
- EVAperf Host connection counters
- EVAperf port statistics
- EVA physical disk group
- Real life latency example

## For more information

To locate contact information and to learn more about education services, please visit our web site at **http://www.hp.com.au/education** .



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