

## DELIVERY METHODS



**ILT – Instructor-Led Classroom Training**  
ILT sessions are conducted in a physical classroom environment.



**ILO – Instructor-Led Online Training**  
ILO sessions are conducted via WebEx in a VoIP environment



**FLEX Classroom™ – Combined ILT & ILO**  
FLEX Classroom sessions are delivered via ILT and ILO giving you the ultimate flexibility.

# Configuring and Monitoring NetApp E-Series and EF-Series Storage Systems (CMESERIES)

**ID NA-CMESERIES Price US\$ 4,044 Duration 4 days**

## Course Overview

In this course, you learn how to deploy, configure, and monitor NetApp E-Series or EF-Series storage systems. In the deployment phase, you use both the NetApp SANtricity® Storage Management and System Management software to create the configuration, perform administrative tasks, and employ data protection features. You also learn how to configure attached servers for I/O operations. During post-deployment, you use SANtricity Unified Manager and System Management software and to collect storage system information for trend analysis, troubleshooting, performance monitoring and tuning.

## Who should attend

This course is designed for Professional Services workers who are NetApp employees, NetApp partners or NetApp customers.

## This course is part of the following Certifications

NetApp Certified Implementation Engineer – SAN Specialist, E-Series (NCIE SAN E-SERIES)

## Prerequisites

- Basic Windows administrative experience
- Technical Overview of NetApp E-Series

## Storage Systems

## Course Objectives

By the end of this course, you should be able to:

- Install the SANtricity 11.50 Storage Management software
- Install SANtricity Unified Manager
- Access System Manager features
- Configure attached servers for I/O operations
- Administer your storage using the E-Series storage management features
- Monitor E-Series storage system performance
- Troubleshoot common hardware and performance issues with the E-Series and EF-Series product lines

## Detailed Course Outline

### Module 1: Introduction to E-Series and EF-Series Storage

- E-Series and EF-Series storage products
- SANtricity management interfaces
- SANtricity storage manager
- SANtricity unified manager
- System manager overview

### Module 2: E-Series and EF-Series Functionality

- Configuration and I/O Operations

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- Cache and battery operation
- Data assurance
- Media scan
- Drive security

#### Module 3: Configuration Concepts and Initial Setup

- Host-Side configuration concepts
- Disk-side configuration concepts
- Pool and volume group configuration concepts
- Initial setup steps
- Additional setup steps

#### Module 4: Volume Group Administration

- Volume groups
- Creating volume groups and volumes
- System administration tasks
- Managing volume group disks

#### Module 5: Pools Administration

- Pools
- Creating unsecured disk pools and volumes
- Creating secure pools
- System administration tasks
- Managing disk pool disks

#### Module 6: SSD Cache Administration

- SSD Cache overview
- SSD Cache administration

#### Module 7: Snapshot Administration

- The SANtricity Snapshot Feature
- Snapshot administration
- Snapshot volume operational sequences
- Snapshot volume administration
- Snapshot consistency group administration

#### Module 8: Copy Volume Function

- Copy volume function overview
- Copy volume administration

#### Module 9: Mirroring Administration

- Mirroring technology
- Synchronous mirroring
- Synchronous mirroring administration
- Asynchronous mirroring
- Asynchronous mirroring administration
- SANtricity feature considerations

#### Module 10: Data Collection and Monitoring

- Resources for collection and monitoring
- Storage array component information
- AutoSupport support tool
- Informational files
- Performance monitoring

#### Module 11: General Administrative Tasks

- General administrative tasks
- Alert management
- Storage array, controller and drive tasks
- Managing upgrades

#### Appendix A: E-Series Configuration tools and Resources

- Interoperability matrix tool
- Performance sizing
- Config advisor
- Synergy
- SANtricity Unified Manager support center
- SANtricity system manager support center
- SANtricity cloud connector

#### Labs:

- Installing SANtricity storage manager
- Adding a storage array to the EMW management domain
- Exploring SANtricity system manager

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- Using the setup wizard to configure the storage array
- Creating volume group configurations
- Managing volumes in volume groups
- Managing hot spares
- Creating volume groups from the command line
- Deleting a volume group configuration
- Creating pool configurations
- Managing volumes in pools
- Managing failed drives
- Using the command line to create pools
- Creating an SSD cache drive
- Creating and preparing pool volumes for I/O
- Creating a Snapshot environment
- Rolling back a file system
- Creating a Snapshot volume
- Mounting and accessing a Snapshot volume
- Performing an online volume copy operation
- Performing an offline volume copy operation
- Collecting data
- Taking a controller offline for servicing
- Installing SANtricity unified manager software
- Exploring SANtricity unified manager functions
- Exploring E-Series and EF-Series resources