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**Learning Style: Virtual Classroom**

**Provider: NetApp**

**Difficulty: Intermediate**

**Course Duration: 4 Days**

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



### **About this course:**

In this course, you learn how to recommend configurations based on a predeployment assessment for a new NetApp E-Series or EF-Series storage system. 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. During post-deployment, you use SANtricity system management software to collect storage system information for trend analysis, troubleshooting, performance monitoring, and tuning.

The average salary for a NetApp storage administrator is **\$122,000** per year.

## **Course Objectives:**

In this course, you learn how to configure and monitor E-Series and EF-Series storage systems, including:

- Identify and use administrative and support tools for E-Series storage systems
- Install SANtricity Storage Manager software on a host platform
- Recommend and create logical configurations on E-Series storage systems
- Manage volume group and dynamic disk pools using SANtricity System Manager
- Perform routine E-Series administrative tasks using SANtricity System Manager
- Configure and administer E-Series features such as SANtricity Snapshot image, volume copy, and mirroring technologies
- Collect E-Series storage system information such as the event log, profile, and support bundle

## **Audience:**

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

## **Prerequisite:**

- Basic Windows or Linux administrative experience

## **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 manger overview

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

- Configuration and I/O Operations

- 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
- 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

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