

Information Storage and Management - 5 Days

Course 174 Overview

You Will Learn How To

- Evaluate storage architectures, including storage subsystems, DAS, SAN, NAS, CAS
- Define backup, recovery, disaster recovery, business continuity and replication
- Examine emerging technologies including IP-SAN, storage virtualization and security
- Decipher logical and physical components of a storage infrastructure
- Establish business continuity (BC) concepts and principles
- Identify components of managing and monitoring the data center

Course Benefits

The explosion of digital data has made the storage industry one of the highest growth sectors in the IT industry—and one of the most vital. Learning Tree has partnered with EMC Corporation to offer this course, which focuses on concepts and principles of storage technology, rather than on specific products.

Who Should Attend

Those working in any storage environment, including storage managers and administrators, database and network administrators, project managers, and others. A basic understanding of operating systems, networks and databases is required.

Workshop Course

In-class workshops and case studies reinforce the concepts of storage technologies taught throughout this course. Participants work in small groups to apply the knowledge gained to solve particular problems.

Workshops include:

- Selecting appropriate RAID protection schemes
- Deciphering the best local and remote replication technologies
- Choosing between DAS, SAN, NAS and CAS technologies
- Deploying the most effective technology for your organization

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Course 174 Outline

The Complex Issues of Information Storage and Management

Challenges of today's storage needs

- Vast amounts of data being created
- The value of data to a business
- Identifying obstacles in data storage and data management

Investigating data storage solutions

- Comparing options for various needs
- Direct Attached Storage (DAS)
- Storage Area Network (SAN)
- Network Attached Storage (NAS)
- Uncovering the advantages of disk arrays

Data center infrastructures

- Assembling core elements to support business activities
- Outlining storage system requirements

Information Storage System

Examining the host environment

- Logical components
- File systems
- Volume management
- Host Bus Adapters
- Key protocols and concepts

Defining the connectivity environment

- Bus technologies
- Cables
- Ports
- Logical connectivity components

Deciphering the disk environment

- Determining performance through disk drive access characteristics
- Partitioning physical drives
- Distinguishing RAID components
- Exploiting common RAID levels

Considering your storage system environment

- Maximizing an intelligent storage system
- Integrated vs. modular storage
- Handling data flow

Storage Networking Technologies and Virtualization

Direct Attached Storage (DAS)

- Employing a DAS-based storage strategy

- Connectivity options: IDE, ATA and SCSI protocols
- Sustaining the I/O flow
- Challenges of managing a DAS solution

Storage Area Network (SAN)

- Assessing common SAN topologies
- Comparing connectivity devices
- Navigating the Fibre Channel log-in process
- The value of a SAN solution

Network Attached Storage (NAS)

- Weighing NAS connectivity options
- Deciphering management considerations
- Benefits of a NAS-based solution

Adopting other storage options

- Physical and logical elements of IP-SAN
- Advantages of a Content Addressable Storage (CAS) strategy
- Server and storage virtualization

Information Availability Principles

Business continuity (BC) concepts

- The causes and impacts of planned and unplanned outages
- Accounting for the impact of downtime
- Differentiating between business continuity and disaster recovery
- The importance of information availability to your business
- Defining RTO, RPO and RGO

Data availability

- Detecting potential physical infrastructure failures before they fail
- Strategies to avoid data vulnerability

Backup and recovery

- Purpose and considerations
- Backup process
- Backup technologies

Local and remote data replication

- Inspecting types of replication methods
- Adopting the appropriate information availability technology

Disaster recovery (DR)

- Establishing the definition of a disaster

- Identifying appropriate recovery strategies

Storage Security and Management

- Identifying, analyzing and mitigating security threats in the storage environment
- Assessing industry standards for optimal monitoring
- Choosing the appropriate management tool for the activity