



**Storage Essentials**

**Total Duration: 10 Days**

<b>Day 1 &amp; 2</b>	<b>Module 1 Information Storage and Management</b>  <b>Storage System Environment</b> Host Logical Components of the Host How Files are Moved to and from Storage Connectivity Storage: Medias and Options Disk Drive Disk Drive Performance Flash Drives  <b>Data Protection: RAID</b> RAID Array Components RAID Implementations RAID Levels RAID Comparison RAID Impacts on Performance RAID Penalty Exercise Hot Spares	
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Day 3,4 & 5

**Module 2 Storage Networking and Virtualization Technologies**

**Direct Attached Storage and Introduction to SCSI**

- 2.1.1 Direct-Attached Storage (DAS)
- 2.1.2 Introduction to SCSI
- 2.1.3 Evolution of Parallel SCSI
- 2.1.4 SCSI-3 Architecture
- 2.1.5 SCSI Device Model
- 2.1.6 SCSI Addressing
- 2.1.7 SCSI Addressing Example

**Storage Area Network**

- 2.2.1 Business Needs and Technology Challenges
- 2.2.2 Understanding Fibre Channel
- 2.2.3 FC SAN Evolution
- 2.2.4 Components of SAN
- 2.2.5 SAN Interconnectivity Options
- 2.2.6 Port Types
- 2.2.7 Inter Switch Links (ISL)
- 2.2.8 Login Types in a Switched Network
- 2.2.9 FC Architecture Overview
- 2.2.10 Fabric Topology
- 2.2.11 Fabric Management: Zoning

**Network-Attached Storage**

- 2.3.1 File Sharing Environment
- 2.3.2 File Sharing Technology Evolution
- 2.3.3 What is NAS?
- 2.3.4 NAS Management

**IP SAN**

- 2.4.1 Block Storage Over IP – Protocol Options
- 2.4.2 What is iSCSI?
- 2.4.3 iSCSI Topologies
- 2.4.4 Internet Storage Name Server
- 2.4.5 What is FCIP (Fibre Channel over IP)
- 2.4.6 Fibre Channel over Ethernet (FCoE)
- 2.4.7 Lossless Ethernet
- 2.4.8 Network Stack Comparison

**Content Addressed Storage**

- 2.5.1 What are Fixed Content and Archives
- 2.5.2 Challenges of Storing Fixed Content
- 2.5.3 Traditional storage solutions for Archive
- 2.5.4 What is Content Addressed Storage (CAS)
- 2.5.5 Example 1: CAS Healthcare Solution
- 2.5.6 Example 2: CAS Financial Solution

**Storage Virtualization**

- 2.6.1 Forms of Virtualization
- 2.6.2 SNIA Storage Virtualization Taxonomy
- 2.6.3 What is Virtual Provisioning
- 2.6.4 Cloud Storage Infrastructure



<b>Day 6,7 &amp; 8</b>	<b>Module 3 Business Continuity</b>  <b>Introduction to Business Continuity</b> 3.1.1 What is Information Availability (IA)? 3.1.2 BC Terminologies 3.1.3 Business Continuity Planning (BCP) Process 3.1.4 BC Technology Solutions  <b>Backup and Recovery</b> 3.2.1 What is a Backup? 3.2.2 All About Recovery 3.2.3 Backup/Recovery Considerations 3.2.4 Backup Granularity 3.2.5 Backup Methods 3.2.6 Backup Architecture and Process 3.2.7 Backup Topologies 3.2.8 Backup in NAS Environment 3.2.9 Backup Technology Options  <b>Local Replication</b> 3.3.1 What is Replication 3.3.2 Possible Uses of Local Replicas 3.3.3 Replication Considerations 3.3.4 Understanding Consistency 3.3.5 Local Replication Technologies 3.3.6 Restore/Restart Operation  <b>Remote Replication</b> 3.4.1 Synchronous Replication 3.4.2 Asynchronous Replication 3.4.3 Remote Replication Technologies 3.4.4 Three Site Replication 3.4.5 SAN Based Remote Replication	
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<b>Day 9 &amp; 10</b>	<b>Module 4 Storage Security and Management</b>  <b>Securing the Storage Infrastructure</b> 4.1.1 Storage Security Framework 4.1.2 Understanding Security Elements 4.1.3 Storage Security Domains 4.1.4 Security Implementation in SAN 4.1.5 Basic SAN Security Mechanism 4.1.6 Security Implementation in NAS 4.1.7 Securing Implementation in IP SAN  <b>Managing the Storage Infrastructure</b> 4.2.1 Storage Infrastructure Management 4.2.2 Monitoring Storage Infrastructure 4.2.3 Monitoring Hosts 4.2.4 Monitoring the SAN 4.2.5 Monitoring Storage Arrays 4.2.6 Storage Infrastructure Management Activities 4.2.7 Reporting 4.2.7 Storage Infrastructure Management Challenges	
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