

# Information Storage and Management – ILT

## Course Description



### Course Number

MR-1CP-STF

### Delivery Method

Instructor Led

### Duration

5 Days



This course material supports the  
EMC Proven Professional Program



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### Overview

Information Storage and Management (ISM) is the only course of its kind to fill the knowledge gap in understanding varied components of modern information storage infrastructure. It provides a strong understanding of information storage technologies which prepares you to learn advanced concepts, technologies and also enable you to make more informed decisions in an increasingly complex IT environment. You will learn about the architectures, features, and benefits of Intelligent Storage Systems; storage networking technologies such as FC-SAN, NAS, and IP-SAN; long-term archiving solution – CAS; business continuity solutions such as backup and replication, the increasingly critical area of information security, and the emerging field of storage virtualization including storage resource management. The technologies described in the course are illustrated and reinforced with EMC product examples. Realistic case studies enable the participant to design the most appropriate solution for given sets of criteria.

### Audience

This course is intended for

- Experienced storage professionals who may not have exposure to all of the segments of modern storage infrastructure.
- Experienced IT professionals taking on the responsibility to manage storage infrastructure.
- Students and IT professionals who want to build their career in the storage industry.
- Organization-wide IT teams who are directly or indirectly responsible for planning, designing, deploying, managing or leveraging information infrastructure.
- Individuals who are seeking EMC Proven™ Professional Information Storage and Management Associate (EMCPA) level certification.

### Prerequisite Knowledge/Skills

To understand the content and successfully complete this course, a participant must have a basic understanding of computer architecture, operating systems, networking, and databases. Participants with experience in specific segments of storage infrastructure would also be able to fully assimilate the course material.

### Course Objectives

Upon successful completion of this course, participants should be able to:

- Evaluate storage architectures; understand logical and physical components of a storage infrastructure including storage subsystems, RAID and Intelligent storage systems
- Describe storage networking technologies such as FC-SAN, NAS, IP-SAN and data archival solution – CAS
- Identify different storage virtualization technologies and their benefits
- Understand and articulate business continuity solutions including, backup technologies, and local and remote replication solutions
- Define information security, and storage security domains
- Identify parameters of managing and monitoring storage infrastructure and describe common storage management activities and solutions

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### Modules

These modules are designed to support the course objectives. The following modules are included in this course:

- **Section 1. Storage System:** • Review the amount of information being created and understand the value of information to a business • Identify Data Center infrastructure elements and their requirements • Understand role of ILM strategy • List physical and logical components of host, connectivity, and storage • Detail the disk drive architecture and performance • Describe the concept of RAID and different RAID levels (RAID 0, 1, 3, 5, 0+1/1+0, and 6) • Define Intelligent Storage System (ISS) and its components • Implementation of ISS as high-end and midrange storage arrays.
- **Section 2. Storage Networking Technologies and Virtualization:** • Describe the implementation of DAS and overview of SCSI • Define and detail the architecture, components, and topologies of FC-SAN, NAS, and IP-SAN • Understand the object based storage system CAS and its application as long-term archiving solution • Describe block-level and file-level storage virtualization technologies and processes • Overview of emerging technologies such as cloud computing and virtual provisioning
- **Section 3. Business Continuity:** • Understand the concept of information availability and its measurement • Describe the causes and consequences of downtime • Define RTO, and RPO • Identify single points of failure in a storage infrastructure and solution for its mitigation • Describe the backup/recovery purposes and considerations • Discuss architecture and different backup/Recovery topologies • Describe local replication technologies and their operation • Describe remote replication technologies and their operation.
- **Section 4. Storage Security and Management:** • Define information security • List the critical security attributes for information systems • Define storage security domains • List and analyze the common threats in each domain • Identify key parameters and components to monitor in a storage infrastructure • List key management activities and examples • Define storage management standards and initiative.

### Labs

Labs reinforce the information you have been taught. The lab for this course is based on Navisphere Manager simulator, which simulates the configuration and management interface for EMC CLARiiON storage array. This course also includes scenario based case-studies and exercises to practice the real world implementations.

### Assessments

Assessments validate that you have learned the knowledge or skills presented during a learning experience. This course includes self assessment quiz at the end of each section and free online practice test. This course has an associated EMC Proven Professional Information Storage and Management exam (E20-001).