Information Storage and Management
Cursusduur: 5 Dagen     Cursuscode: STF

Beschrijving:
Information Storage and Management is the only course of its kind to fill the knowledge gap in understanding varied components of modern storage infrastructure. It is the first course in the Storage Technologist Track (EMCST) and provides a comprehensive introduction to storage technology which will enable you to make more informed decisions in an increasingly complex IT environment. It builds a strong understanding of underlying storage technologies and prepares you to learn advanced concepts, technologies and products. You will learn about the architectures, features, and benefits of Intelligent Storage Systems; networked storage technologies such as FC-SAN, NAS, and IP-SAN; long-term archiving solutions such as Content Addressed Storage (CAS); the increasingly critical area of information security and the emerging field of storage virtualization technologies. This unique, open course focuses on concepts and principles of storage technology. These are illustrated and reinforced with EMC examples.

Doelgroep:
Experienced storage professionals knowledgeable in specific segments who may not have exposure to all of the other 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 Storage Technologist Associate (EMCPA) level certification

Doelstelling:
- 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
- Understand logical and physical components of a storage infrastructure
- Identify components of managing and monitoring the data center
- Define information security and identify different storage virtualization technologies

Vereiste kennis en vaardigheden:
- Understanding of computers, operating systems, networking, and databases
- Experience in specific segments of storage infrastructure

Examens en certificering
-
Cursusinhoud:

1. Introduction to Storage Technology
   - Review data creation and the amount of data being created and understand the value of data to a business
   - Identify challenges in data storage and data management
   - List the solutions available for data storage
   - List and describe the core elements of a Data Center infrastructure
   - Describe the role of each element in supporting business activities.

2. Storage Systems Architecture
   - List the hardware and software components of the host environment
   - Define the key protocols and concepts used by each component
   - Describe the physical and logical components of a connectivity environment
   - Describe the major physical components of a disk drive and their function
   - Define the logical constructs of a physical disk, access characteristics, and performance implications
   - Define the concept of RAID and components
   - Describe the different RAID levels and their suitability for different application environments - RAID 0, RAID 1, RAID 3, RAID 4, RAID 5, RAID 0+1, RAID 1+0, RAID 6
   - Compare and contrast integrated and modular storage systems
   - Describe the high level architecture and working of an intelligent storage system.

3. Introduction to Networked Storage
   - Describe the evolution of networked storage
   - Describe the architecture, components, and topologies of FC-SAN, NAS, and IP-SAN
   - Describe the benefits of the different networked storage options
   - Understand the need for long-term archiving solutions and describe how CAS fulfills the needs
   - Understand the appropriateness of the different networked storage options for different application environments.

4. Information Availability
   - List reasons for planned / unplanned outages and the impact of downtime
   - Describe the impact of downtime
   - Differentiate between Business Continuity (BC) and Disaster Recovery (DR)
   - Define RTO and RPO
   - Identify single points of failure in a storage infrastructure and list solutions to mitigate these failures
   - Describe the architecture of Backup/Recovery and the different Backup/Recovery topologies
   - Describe local replication technologies and their role in ensuring information availability and business continuity
   - Describe remote replication technologies and their role in providing disaster recovery and business continuity capabilities.

5. Managing and Monitoring
   - Identify key areas to monitor in a data center
   - Define industry standards for data center monitoring and management
   - List key metrics to monitor for different application environments - RAID 0, RAID 1, RAID 3, RAID 4, RAID 5, RAID 0+1, RAID 1+0, RAID 6
   - List key management tasks in a data center.

6. Securing Storage and Storage Virtualization
   - 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 different virtualization technologies
   - Describe block-level and file-level virtualization technologies and processes.

Labs

The technologies described in the course are reinforced with EMC examples of actual solutions. Realistic case studies enable the participant to design the most appropriate solution for given sets of criteria.