

## SNIA Certified Storage Professional - SCSP Course Code – S10-101

### About SNIA

The Storage Networking Industry Association (SNIA) INDIA is a non-profit organization spanning virtually the entire storage industry in India. SNIA members share the common goal of advancing the adoption of storage networks as complete and trusted solutions. To this end, the SNIA is uniquely committed to delivering standards, education and services that will propel open storage networking solutions into the broader market. SNIA conducts major storage industry events and offers services like education, training, certification and tutorials to its members. To help professionals in getting SNIA certifications and creating a pool of storage networking experts.

### About Network Labs

In this fast paced world where technological benchmarks are constantly pushed higher and higher, organizations and individuals are seeking for training programs that transcend the barriers of time and keep the employee morale and confidence strong all the time. Network Labs, with its next level approach to IT Infrastructure training, offers highly refined and comprehensively structured courses with the flexibility and scalability to exactly fit into the individuals, business and corporate objectives of organizations worldwide. We entail the services of highly experienced and result-oriented experts in training to give the benefit of proven track record and precise understanding of changing needs of the industry worldwide. The uniqueness of our courses is their in-built processes, which give them superior edge over other courses, because of their depth and breadth and best-in-class training methodologies.

### Course Overview

Explosive information growth has resulted in a people shortage in storage area network industry. Many individuals have taken storage product training. However, few people understand the breadth of storage capabilities. Still fewer understand the basic building blocks that underpin those capabilities. As a result, it is difficult to find people with an integrated literacy across storage disciplines.

Balanced technical breadth enables the storage administrator to improve problem-solving skills while gaining transferable technical depth. Broad fundamental knowledge enables the manager to understand limits and choose strategic direction. Both are no longer bound by vendor specific language, and in fact, they share a common storage industry language.

The many terms including SAN, Array, Migration, Replica and Clone, by name sound like characters in a science fiction movie. Understanding the terms composition, roles and interactions provide the foundation for developing and maintaining storage solutions. Business depends on these storage solutions. They are not just building blocks they are put together certain ways to meet a purpose.

This course highlights storage technology in vendor neutral terms. It introduces fundamental storage capabilities and the building blocks that underpin those capabilities across storage disciplines. The setting is practical and applied to help the student participate in addressing storage issues as part of a multidisciplinary team

## Course Objectives

The primary objective of this course is to develop fundamental knowledge and skills required to understand current and emerging capabilities and infrastructures. The course provides a set of practical required to help new and experienced storage administrators and managers their job better. The objectives include:



- **Basic Storage Technology**
- **Disk Technology**
- **SCSI**
- **FC SAN**
- **IP Storage**
- **NAS**
- **Virtualization**
- **Storage Management**
- **Data Management**
- **Continuity Management**

## Detailed Course Contents

### Basic Storage Technology

Describe common storage elements including caching and I/O technologies. Differentiate between DAS, SAN, NAS, CAS and IP Storage networking architectures and environments. Demonstrate understanding of the SNIA Shared Storage Model. Describe RAID data protection strategies. Identify standards organizations.

### Disk Technology

Identify disk components. Compare and contrast disk interface technologies. Describe capabilities and attributes of Mid-Tier and High-End storage arrays. Demonstrate understanding of disk controller features. Describe disk placement criteria within tiered storage models.

### SCSI

Describe SCSI as architecture and physical interface including its relationship to end devices (disk, tape and robotics.) Identify advantages and disadvantages of using SCSI interface technology. Describe SCSI protocol elements. Demonstrate understanding of SCSI command and operations concepts. Identify implementation parameters.

### FC-SAN

Describe FC-SAN general concepts. Identify advantages and disadvantages of FC SAN. Identify topologies and components. Describe protocols, classes of service and addressing. Demonstrate understanding of fabric-enabled technologies. Develop a response to a design scenario for distance extended SAN, demonstrating understanding of key concepts, costs, risks and implementation methods.

### Network Attached Storage (NAS)

Describe NAS concepts. Identify advantages and disadvantages of using NAS technology. Compare and contrast NFS and CIFS protocols. Describe NAS operating system characteristics. Identify NAS backup and recovery risks.

### Virtualization

Define storage virtualization in terms of abstraction, transparency and taxonomy. Identify advantages, disadvantages and benefits of virtualization at various levels. Compare and contrast the virtualization placement and management. Identify taxonomy elements in terms of the Shared Storage Model. Describe virtualization enabled technologies, including snap, clone and replication. Identify criteria for selecting virtualization techniques in risk management terms.

### Storage Management

Describe storage management components and the relationship of device and network management. Identify performance management risks created by management infrastructure. Describe common elements; their instrumentation points and the relationship to SMI-S enabled products. Identify SMI-S components and relationships. Describe the SMI-S product certification process.

### Data Management

Describe data management concepts including backup and recovery, ILM, tiered storage and data placement based on usage. Compare backup techniques including network, snapshot, NDMP, backup to disk, backup to tape and tape virtualization. Describe backup design trade-offs as they relate to scalability, manageability and performance. Manage data in given scenarios, identifying techniques and risks.

## IP Storage Networking

Describe IP networking storage general concepts including protocol differentiation. Identify advantages and disadvantages of using IP Storage Networking. Describe iSCSI implementation concepts. Demonstrate understanding of IP Storage Networking enabled technologies. Identify risks. Describe selection criteria for IP Storage Networking solutions.

## Continuity Management

Identify steps using high availability and disaster recovery in a SAN infrastructure. Discuss the role of infrastructure resolution in backup recovery and disaster recovery scenarios.

### Who Should Attend this course:

Everyone responsible for storage service delivery and support for new and existing storage products and services; this typically includes both new and experienced development, administration, implementation, delivery, support and management staff. Staff members required to complete the internationally recognized SNIA S10- 101 Storage Network Foundations examination will find this course essential.

### Prerequisites:

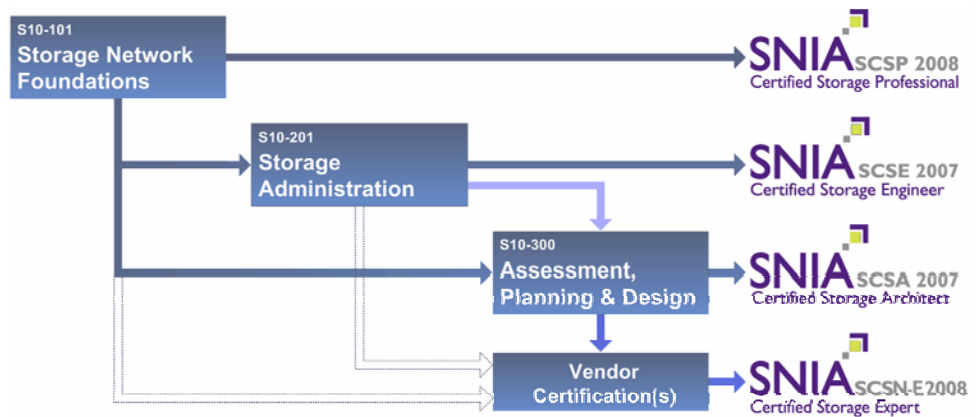
A basic level of IT literacy including at least six (6) months experience in IT and/or Storage Networking Operations. Advanced computer skills and knowledge in at least one operating system. Technical skills as a team member to develop complex solutions. A course specific non-disclosure agreement is required to attend this course.

### Examination:

Examinations leading to SNIA CERTIFIED PROFESSIONAL (SCP) are held on all continents. Possession of this certificate is mandatory for all candidates who wish to reach 'full certification' as a SNIA CERTIFIED STORAGE NETWORKING EXPERT.

### Certificate Path:

**KNOWLEDGE  
TRANSFER.**



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### Certificate Advantages:

- Certification insures that staff has a benchmarked level of knowledge and skill.
- Recruiting and retention are simplified.
- Possession of an internationally recognized competence certificate is a personal achievement that will help foster commitment and increase job satisfaction.
- A mandatory requirement for some organizations. Customers of IT Storage Services are demanding that their suppliers have a 'license to operate'.
- More than 2,000 professionals now hold the qualification.

**SNIA** SCSP 2008  
Certified Storage Professional