

**Module Title** : Course SN712MY : Storage Area Networking Fundamentals  
**Duration** : 4 days

## Course Description

Provide an overview of storage network and data center networking technology.

## Audience

This course is for personnel who are assessing and planning to deploy a storage area network.

## Pre-requisites

You should complete:

- *Introduction to Storage Networking* ([SN70MY](#)) or have equivalent knowledge base

This course assumes that you understand a basic SAN knowledge.

## Course Objective

- Examine Fibre Channel services such as login processes, name server, addressing, loop initialization and arbitration, frame routing, and registered state change notification as they relate to configuring the SAN infrastructure
- Plan for the implementation of SAN interconnect components, such as Fibre Channel HBAs, the IBM TotalStorage SAN switches and directors (b-type, m-type), and the Cisco directors and switches by reviewing their default configurations and assessing tailoring options
- Plan for the Implementation of resource access control to ensure data integrity by using zoning interfaces in the IBM TotalStorage SAN switches and directors (b-type, m-type), and the Cisco MDS 9000 directors and switches
- Interpret topology, routing, and trunking data displayed by switch management interfaces for a given fabric
- Describe Converged Enhanced Ethernet
- Explain why Converged Enhanced Ethernet is needed
- Describe the additional capability Converged Enhanced Ethernet provides
- Compare the overhead for SCSI traffic using Fibre Channel over Ethernet, TCP/IP, and fibre
- Describe the basics of Fibre Channel over Ethernet
- Explain the advantages and disadvantages of Fibre channel over Ethernet
- Explain the different terminology used with Fibre Channel over Ethernet

- Describe the challenges associated with data center networking and the need for switch network convergence
- Describe the DCN, j-type, b-type, and Cisco switches
- Discuss when one switch solution would be better for a given circumstance

## Course Outline

### Day 1

- Welcome
- Unit 1: Evolution of storage area networks
- Unit 2: Fibre Channel

### Day 2

- Unit 3: Fibre Channel switches and directors: Brocade (b-type)
- Unit 4: Brocade DCFM

### Day 3

- Exercise 0: Lab setup and preliminary instructions
- Exercise 1: Brocade switch 2109: Initial configuration
- Exercise 2: Management software installation
- Exercise 3: Brocade Fabric Manager
- Exercise 4: Brocade switch: Zoning configuration
- Exercise 5: Configuring the DS4000 storage subsystem
- Exercise 6: Brocade switch: Zoning configuration update
- Exercise 7: Brocade switch: Merging switches
- Exercise 8: Brocade Fabric Manager: Basic usage
- Exercise 9: DCFM Manager

### Day 4

- Unit 5: Fibre Channel switches and directors: Cisco MDS
- Exercise 10: Cisco switch: Basic configuration
- Exercise 11: Cisco switch: Management tools installation
- Exercise 12: Cisco switch: VSAN creation
- Exercise 13: Merging Brocade and Cisco fabrics
- Exercise 14: Zoning configuration on Cisco

## Day 5

- Unit 6: Converged Enhanced Ethernet
- Unit 7: Fibre Channel over Ethernet
- Unit 8: Data center networking