

## Storage Fundamentals

Duration: 0 Days

### What you will learn

The Storage Fundamentals course provides students with a broad survey of the current state of network storage. By focusing on concepts, terms, and technologies and avoiding product-specific features, this course provides foundation knowledge that is applicable to the further study of storage products.

Students who can benefit from this course:

Entry-level Storage Administrators

### Related Training

#### *Required Prerequisites*

System Administration on the Solaris 10 OS, Part 2 (SA-202-S10)

Network Administration on the Solaris 10 OS (SA-300-S10)

Understand computer operating systems and computer components

Understand network concepts

### Course Objectives

Define and differentiate between types of network storage configurations and the types of logical storage configurations

Apply a specific network storage configuration to an application by choosing the configuration that best meets the requirement

Define data services and their application to storage

Define storage management software and its application to storage

Describe storage backup systems, such as tape libraries

Discuss network storage in basic terms

Define and differentiate between various storage technologies, including small computer system interface (SCSI), Fibre, peripheral component interconnect (PCI), and SBUS

Apply a specific technology to an application and provide rationale for that choice

Identify and differentiate various storage components

Describe storage systems, such as storage arrays, and define the specific technologies associated with arrays

## Course Topics

### Storage Overview

State the significance of the storage industry today

State Sun's vision of storage

Identify the features of Sun's vision of storage

### Data Transfer Technologies and Physical Connectors

Define the Sbus and PCI Bus

Define integrated development environment (IDE) devices

Define SCSI technology and circumstances under which it is an appropriate data transfer technology to utilize based on p

Correlate the SCSI standard to images of SCSI connectors

Define the Fibre Channel Bus and list its advantages and limitations

Define the types of Fibre Channel, including Fibre Channel Arbitrated Loop (FC-AL), and list the advantages and limitatio

Correlate the Fibre Channel standard to images of Fibre Channel connectors

### Network Devices

Define Host Bus Adaptors (HBA) and versions (including PCI and SBus) and determine which of the versions is more app

Define gigabit interface converters (GBICs)

Identify advances in GBIC technology embodied in the small form factor GBIC compared to the standard

Define a Hub and its use with storage

Define the purpose of switches and identify the circumstances under which the use of a switch is more appropriate than a

Define the types of cabling and distinguish their advantages and limitations

### Arrays

Identify the definition of an array storage system and a JBOD

Identify standard array components

Consider array selection criteria based on capacity, speed, availability, cost, multipathing, and scalability

### RAID

Describe redundant array of independent disks (RAID) and define the features that make up a RAID configuration

Describe RAID levels and specific applications and performance characteristics

Define and differentiate between software and hardware implementation of RAID with respect to performance

### Tape Library Storage Backup Systems

Identify two types of tape technologies, digital linear tape (DLT) and linear tape open (LTO), and state the purpose of eac

Identify standard tape library components, including tape, tape drives, robotics, controllers, and I/O subsystems

Define the criteria associated with tape libraries and how they are implemented, including speed and capacity

### Storage Configurations

Describe the use and structure of NAS, especially in relation to its advantages and limitations

Describe the use and structure of DAS, especially in relation to its advantages and limitations

Describe the use and structure of SAN, especially in relation to its advantages and limitations

### Storage Virtualization

Define storage virtualization

### Define Data Services

Describe network data replication and its advantages and limitations

Describe point-in-time copy and its advantages and limitations

### **Storage Management Software**

Describe the issues related to resource management and the types of software solutions available

Describe the issues related to storage network management and types of the software solutions available

Describe the issues related to component management and the types of software solutions available