COURSE DESCRIPTION

# Veritas InfoScale Storage 7.3 for UNIX/Linux: Administration

## COURSE DESCRIPTION

The *Veritas InfoScale Storage 7.3 for UNIX/Linux: Administration* course is designed for the IT professional tasked with installing, configuring, and maintaining Veritas InfoScale Storage environments, including Volume Manager (VxVM), File System (VxFS), and Cluster File System (CFS).

This class covers how to use InfoScale Storage to manage disks, disk groups, and volumes by using a variety of InfoScale Storage user interfaces, including the Veritas InfoScale Operations Manager (VIOM) Web console. You learn the basics of online file system administration and recovery from disk failures. In addition, you learn about data replication using Veritas File Replicator and Veritas Volume Replicator. You also learn how to configure Veritas Cluster Volume Manager and Veritas Cluster File System.

### Delivery Methods

This course is available in the following delivery methods:

- Instructor-led training (ILT)
- Virtual instructor-led training (VILT)

### Duration

- Instructor-led training (ILT): 5 days
- Virtual instructor-led training (VILT): 5 days

### Course Objectives

By the completion of this course, you will be able to:

- Create, configure, and manage disks, disk groups, and volumes.
- Administer file systems.
- Manage components in the VxVM architecture.
- Manage multiple paths to disk devices.
- Identify types of disk failures and how to resolve them.
- Describe concepts and components specific to Veritas Replicator, and Veritas File Replicator.
- Configure a CFS cluster according to a specified sample design.
- Configure shared disk groups and volumes.
- Configure shared file systems.
- Share local disks among systems in a cluster.

### Who should attend

This course is for UNIX/Linux system administrators, system engineers, technical support personnel, network/SAN administrators, and systems integration/development staff, who will be installing, operating, or integrating InfoScale Storage.

### Prerequisites

Knowledge of and hands-on experience with UNIX/Linux systems administration is required.

### Hands-On

This course includes practical lab exercises that enable you to test your new skills and begin to transfer those skills into your working environment.

## COURSE OUTLINE

### *InfoScale Storage Basics*

#### Virtual Objects

- Operating system storage devices and virtual data storage
- Volume Manager (VxVM) storage objects
- VxVM volume layouts and RAID levels

#### Creating a Volume and File System

- Preparing disks and disk groups for volume creation
- Creating a volume and adding a file system
- Displaying disk and disk group information
- Displaying volume configuration information
- Removing volumes, disks, and disk groups

#### Working with Volumes with Different Layouts

- Volume layouts
- Creating volumes with various layouts
- Allocating storage for volumes

#### Making Configuration Changes

- Administering mirrored volumes
- Resizing a volume and a file system
- Moving data between systems
- Renaming VxVM objects

#### Administering File Systems

- Benefits of using Veritas File System
- Using Veritas File System commands
- Logging in VxFS
- Controlling file system fragmentation
- Using thin provisioning disk arrays

### *Managing Devices*

#### SmartIO

- InfoScale Storage 7.3 SmartIO
- Support for caching on Solid State Drives (SSDs)
- Using SmartAssist Tool

#### Dynamic Multi-Pathing

- Managing components in the VxVM architecture
- Discovering disk devices
- Managing multiple paths to disk devices

**Dynamic Multi-Pathing for VMware**
- DMP in a VMware ESX/ESXi environment
- Managing DMP for VMware
- Administering the SmartPool
- Performance monitoring and tuning using the DMP console

**Resolving Hardware Problems**
- How does VxVM interpret failures in hardware?
- Recovering disabled disk groups
- Resolving disk failures

### *Cluster File System*

**Storage Foundation Cluster File System Architecture**
- SFCFS overview
- SFCFS architecture
- SFCFS communication
- VCS management of SFCFS infrastructure

**Cluster Volume Manager**
- VxVM and CVM overview
- CVM concepts
- CVM configuration
- CVM response to storage disconnectivity

**Cluster File System**
- Cluster File System concepts
- Data flow in CFS
- Administering CFS Flexible Storage Sharing
- Understanding Flexible Storage Sharing
- FSS storage objects
- FSS case study
- Flexible Storage Sharing implementation
- FSS configuration

### *Replication*

**Disaster Recovery and Replication Overview**
- Disaster recovery concepts
- Defining replication
- Replication options and technologies
- Veritas technologies for disaster recovery

**Veritas File Replicator**
- Understanding Veritas File Replicator
- Setting up replication for a Veritas file system
- Error recovery with Veritas File Replicator

**Veritas Volume Replicator Components**
- Veritas Volume Replicator overview
- Comparing volume replication with volume management
- Volume Replicator components
- Volume Replicator data flow

**Veritas Volume Replicator Operations**
- Replication setup
- Assessing the status of the replication environment
- Migration, takeover, and fast failback