

Veritas File System

The Veritas File System 5.1 for UNIX course provides instruction on how to install, configure, verify, and troubleshoot Veritas File System configurations. You will learn how the core component products of SFCFS, such as Veritas Cluster Volume Manager, Veritas Cluster File System, and Veritas Cluster Server, are combined to manage volumes and file systems in a shared configuration.

Group rates available – Inquire for more details

Duration: 20 hours

Objectives

- After completing this course, students will be able to:
- Install the Veritas Storage Foundation Cluster File System (SFCFS)
- Configure a cluster to provide messaging services.
- Upgrade product using the procedures
- Upgrade cluster nodes to the latest version of Storage Foundation Cluster File System
- Add a node to an existing cluster and remove a node from a cluster
- Create, mount, tune a VxFS performance
- Monitor free space Tuning I/O
- Perform backup using file system snapshots

Audience

System administrators who configure and maintain UNIX systems with the VERITAS File System (referred to as VxFS® or vxfs)

Prerequisites

- You should have experience as a system administrator working in a UNIX environment.
- Basic understanding of system administration
- Working knowledge of the UNIX system
- General understanding of file systems

Course Content

Lesson 1: Introducing Veritas File System

- About Veritas File System
- Logging
- Extents
- File system disk layouts
- Veritas File System features
- Extent-based allocation

- Extent attributes
- Fast file system recovery
- Extended mount options
- Enhanced data integrity modes
- Enhanced performance mode
- Modes of temporary file systems
- Improved synchronous writes
- Support for large files
- Access Control Lists
- Storage Checkpoints
- Online backup
- Quotas
- Support for databases
- Cluster file systems
- Cross-platform data sharing
- File Change Log
- Multi-volume support
- Dynamic Storage Tiering
- Veritas File System performance enhancements
- About enhanced I/O performance
- Using Veritas File System
- Veritas Enterprise Administrator Graphical User Interface
- Online system administration
- Application program interface

Lesson 2: VxFS performance: creating, mounting, and tuning

- File Systems
- mkfs command options
- Block size
- Intent log size
- Choosing mount command options
- The log mode
- The delaylog mode
- The tmplog mode
- The logiosize mode
- The nodatainlog mode
- The blkclear mode
- The mincache mode
- The convosync mode

- The ioerror mode
- The largefiles|nolargefiles option
- The cio option
- Combining mount command options
- Using kernel tunables
- Tuning inode table size
- vx_maxlink
- Veritas Volume Manager maximum I/O size
- Monitoring free space
- Monitoring fragmentation
- Tuning I/O
- Tuning VxFS I/O parameters
- Tunable I/O parameters

Lesson 3: Extent attributes

- About extent attributes
- Reservation: preallocating space to a file
- Fixed extent size
- Other controls
- Commands related to extent attributes
- Failure to preserve extent attributes

Lesson 4: VxFS I/O Overview

- About VxFS I/O
- Buffered and Direct I/O
- Direct I/O
- 4 Contents
- Unbuffered I/O
- Data synchronous I/O
- Cache advisories
- Freezing and thawing a file system
- Getting the I/O size
- Getting the I/O size
- Getting the I/O size
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Lesson 5: Storage Checkpoints

- About Storage Checkpoints
- How Storage Checkpoints differ from snapshots

- How a Storage Checkpoint works
- Copy-on-write
- Types of Storage Checkpoints
- Data Storage Checkpoints
- Nodata Storage Checkpoints
- Removable Storage Checkpoints
- Non-mountable Storage Checkpoints
- Storage Checkpoint administration
- Creating a Storage Checkpoint
- Removing a Storage Checkpoint
- Accessing a Storage Checkpoint
- Converting a data Storage Checkpoint to a nodata Storage Checkpoint
- Space management considerations
- Restoring a file system from a Storage Checkpoint
- Restoring a file from a Storage Checkpoint
- Storage Checkpoint quotas

Lesson 6: Online backup using file system snapshots

- About snapshot file systems
- Snapshot file system backups
- Creating a snapshot file system
- Backup examples
- Snapshot file system performance
- Differences between snapshots and Storage Checkpoints
- Snapshot file system disk structure
- How a snapshot file system works

Lesson 7: Quotas

- Quota limits
- Quota files on &ProductNameLong;
- Quota commands
- Quota checking with Veritas File System
- Using quotas
- Turning on quotas
- Turning on quotas at mount time
- Editing user and group quotas
- Modifying time limits
- Viewing disk quotas and usage

- Displaying blocks owned by users or groups
- Turning off quotas

Lesson 8: File Change Log

- About the File Change Log file
- File Change Log administrative interface
- File Change Log programmatic interface
- Reverse path name lookup