



COURSE DESCRIPTION

The *Veritas InfoScale Availability 7.3 for UNIX/Linux: Advanced Administration I* course is designed for the IT professional tasked with managing, configuring, and using clusters in an enterprise environment.

This class covers how to set up advanced networking and fencing configurations, as well as disaster recovery solutions.

Note: This course does not teach basic clustering concepts and is a follow-on course from the *Veritas InfoScale Availability 7.3 for UNIX/Linux: Administration* course.

Delivery Method(s)

This course is available in the following delivery method(s):

- [Instructor-led training \(ILT\)](#)
- [Virtual instructor-led training \(VILT\)](#)
- [Learning Lab](#)

Duration

- Instructor-led training (ILT): 5 days, including 6 months of lab access
- Virtual instructor-led training (VILT): 5 days, including 6 months of lab access
- Learning Lab – Self-paced lesson guide plus 6 months of lab access

Course Objectives

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

- Configure advanced networking environments.
- Implement advanced fencing configurations.
- Configuring and manage disaster recovery environments and campus clusters.

Who Should Attend

This course is for system administrators, architects, and technical support personnel who are responsible for implementing, managing, and supporting clusters in complex enterprise environments.

Prerequisites

You must have administrator-level experience with UNIX or Linux, TCP/IP networking, and clustering using Veritas Cluster Server.

Hands-On

This course includes practical hands-on exercises that enable you to test your new skills and begin to transfer them into your working environment.

COURSE OUTLINE

Advanced Networking

Reviewing an Existing VCS Environment

- Understanding the VCS architecture
- Building the cluster configuration

- Configuring VCS

Labs

- Exercise A: Adding hosts to VIOM
- Exercise B: Using SORT
- Exercise C: Verifying the installed clustering software
- Exercise D: Understanding cluster memberships and communication
- Exercise E: Getting familiar with the cluster configuration

Configuring LLT

- LLT over bonded interfaces
- LLT over UDP
- LLT over RDMA
- LLT with different network interfaces
- Manually configuring LLT

Labs

- Exercise A: Configuring LLT over UDP
- Exercise B: Restoring the original configuration
- Exercise C: Using a bonded interface for LLT

Using Multiple Public Network Interfaces

- Configuring multiple service groups with network resources
- Managing multiple public network interfaces
- MultiNICB and IPMultiNICB for UNIX
- MultiNICA and IPMultiNIC for Linux

Labs

- Exercise A: Using multiple network interfaces for increased availability
- Exercise B: Observing NIC failover
- Exercise C: Configuring a parallel network service group
- Exercise D: Replacing NIC resources with Proxy resources
- Exercise E: Restoring the original configuration

Data Protection

Implementing Disk-Based I/O Fencing

- Data protection requirements
- I/O fencing concepts
- I/O fencing operations
- I/O fencing implementation
- Fencing configuration

Labs

- Exercise A: Verifying I/O fencing configuration
- Exercise B: Verifying data disks for I/O fencing
- Exercise C: Testing protection from data corruption
- Exercise D: Observing response to system fault
- Exercise E: Observing response to interconnect failure
- Exercise F: Configuring SCSI3 disk-based fencing in a VCS cluster

Implementing Coordination Point Server

- Coordination point concepts
- Server-based fencing architecture
- CPS operations
- Installing and configuring a CP server

- Configuring I/O fencing with CPS
- Coordination point agent

Labs

- Exercise A: Installing a single-node VCS cluster
- Exercise B: Configuring a single-node CP server
- Exercise C: Verifying the CP server configuration
- Exercise D: Configuring for I/O fencing with a CP server
- Exercise E: Testing CP server communication failure
- Exercise F: Testing CP server caching
- Exercise G: Restoring the original configuration

Administering Fencing Configurations

- Installing and configuring clustered CP servers
- Administering CPS
- Administering disk-based I/O fencing
- Configuring preferred fencing

Labs

- Exercise A: Configuring CP server on a VCS cluster
- Exercise B: Verifying the clustered CP server configuration
- Exercise C: Modifying the fencing configuration on the application cluster
- Exercise D: Testing CP server failover and communication failure
- Exercise E: Restoring the original configuration

Disaster Recovery

Global Clustering Architecture and Concepts

- Global cluster architecture
- Global cluster components
- VCS features for global cluster management
- Intercluster communication failure

Labs

- Exercise A: Preparing the lab environment for global clustering
- Exercise B: Configuring a local service group for the application

Configuring a Global Cluster

- Configuring the Global Cluster Option
- Linking clusters
- Configuring a global service group
- Managing dynamic IP address updates

Labs

- Exercise A: Configuring the global cluster option
- Exercise B: Securing communication between the wide-area connectors
- Exercise C: Linking clusters
- Exercise D: Verifying DNS server access from cluster systems
- Exercise E: Configuring a global service group

Managing a Global Cluster

- Managing clusters in a global cluster environment

- Managing global cluster heartbeats
- Managing global service groups

Labs

- Exercise A: Testing dynamic DNS updates
- Exercise B: Adding another Icmp heartbeat link

Notification and Failover Behavior in a Global Cluster

- Notification in a global cluster
- Failover behavior of a global service group
- Cluster state transitions
- Simulating global clusters using the VCS Simulator

Labs

- Exercise A: Configuring notification and event triggers
- Exercise B: Testing local failover
- Exercise C: Testing intercluster failover with ClusterFailOverPolicy set to Manual
- Exercise D: Testing intercluster failover with ClusterFailOverPolicy set to Connected
- Exercise E: Testing intercluster failover with ClusterFailOverPolicy set to Auto
- Exercise F: Restoring the original configuration

Administering Campus Clusters

- Campus clustering solutions with InfoScale
- Preparing to set up a campus cluster configuration
- Configuring Storage Foundation for campus clustering
- Configuring a VCS service group for campus clusters
- Testing site awareness
- Failure scenarios with campus clusters
- Optional: Legacy campus clustering

Labs

- Exercise A: Reviewing the lab environment
- Exercise B: Configuring site awareness at the Storage Foundation level
- Exercise C: Configuring the campus cluster
- Exercise D: Testing service group failover in a campus cluster