Course Outline

# Veritas InfoScale Availability 8.0 for UNIX/Linux: Administration

## Course Summary

### Description

The Veritas Infoscale Availability 8.0 for Unix Linux: Administration Training course discusses how to use InfoScale Availability to manage applications in a high availability environment and support for Cloud environments. The course is designed to enable you to gain the necessary fundamental and advanced skills that are required to manage a highly available application in a cluster. It also discusses how to deploy InfoScale Availability in the lab environment to practically implement a sample cluster design and deployment.

### Objectives

At the end of this course, students will be able to:

- Provide an overview of the InfoScale product suite and InfoScale support for cloud environments.
- Create a cluster, and configure service groups and resources.
- Outline the different VCS cluster communication mechanisms.
- Explain InfoScale support for multi-version clusters.
- Perform common administrative cluster operations.
- Summarize VCS user and agent account passwords encryption standards.
- Outline online and offline configuration procedures.
- Configure notifications and triggers to customize VCS behavior in response to events.
- Explain how VCS responds to resources faults.
- Describe how the Intelligent Monitoring Framework improves fault detection.
- Describe VCS response to common system and cluster interconnect failures.
- Illustrate how I/O Fencing protects data in common cluster scenarios.
- Manage applications and databases in a VCS environment.
- Explain InfoScale support for containers and Kubernetes.
- Summarize the architecture of VMware vSphere HA.
- Summarize the architecture for supporting HA in VMware environments.
- Set up cluster configuration using shared storage for CFS clusters.

### Topics

- Cluster Server Basics
- Cluster Server Additions
- Cluster Server Applications
- Global Clustering

### Audience

The Veritas Infoscale Availability 8.0 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 Availability.

### Prerequisites

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

### Duration

Five days

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*I. Cluster Server Basics*

A. High Availability Concepts
   1. High availability concepts
   2. Clustering concepts
   3. High availability applications
   4. Clustering prerequisites

B. VCS Building Blocks
   1. VCS terminology
   2. Cluster communication
   3. VCS architecture

C. VCS Operations
   1. Common VCS tools and operations
   2. Service group operations
   3. Resource operations

D. VCS Configuration Methods
   1. Starting and stopping VCS
   2. Overview of configuration methods
   3. Online configuration
   4. Controlling access to VCS

E. Preparing Services for VCS
   1. Preparing applications for VCS
   2. Performing one-time configuration tasks
   3. Testing the application service
   4. Stopping and migrating a service
   5. Collecting configuration information

F. Online Configuration
   1. Online service group configuration
   2. Adding resources
   3. Solving common configuration errors
   4. Testing the service group

G. Offline Configuration
   1. Offline configuration examples
   2. Offline configuration procedures
   3. Solving offline configuration errors
   4. Testing the service group

H. Configuring Notification
   1. Notification overview
   2. Configuring notification
   3. Overview of triggers

*II. Cluster Server Additions*

A. Handling Resource Faults
   1. VCS response to resource faults
   2. Determining failover duration
   3. Controlling fault behavior
   4. Recovering from resource faults
   5. Fault notification and event handling

B. Intelligent Monitoring Framework
   1. IMF overview
   2. IMF configuration
   3. Faults and failover with intelligent monitoring

C. Cluster Communications
   1. VCS communications review
   2. Cluster interconnect configuration
   3. Cluster startup
   4. System and cluster interconnect failures
   5. Changing the interconnect configuration

*III. Cluster Server Applications*

A. Using I/O Fencing for Application Data Integrity
   1. Data protection requirements
   2. I/O fencing concepts
   3. I/O fencing operations
   4. I/O fencing implementation
   5. Fencing configuration

B. Clustering Applications
   1. Application service overview
   2. VCS agents for managing applications
   3. The Application agent
   4. IMF support and prevention of concurrency violation

C. Clustering Databases
   1. VCS database agents
   2. Database preparation
   3. The database agent for Oracle
   4. Database failover behavior
   5. Additional Oracle agent functions

## **Course Outline** (cont'd)

*IV. Global Clustering*

A. Global Cluster Architecture and Concepts
   1. Global cluster architecture
   2. Global cluster components
   3. VCS features for global cluster management
   4. Intercluster communication failure

B. Configuring a Global Cluster
   1. Linking clusters
   2. Configuring global cluster heartbeats
   3. Configuring a global service group
   4. Managing dynamic IP address updates

C. Managing a Global Cluster
   1. Managing clusters in a global cluster environment
   2. Managing global cluster heartbeats
   3. Managing global service groups
   4. Using VIOM for disaster recovery

D. Notification and Failover Behavior in a Global Cluster
   1. Notification in a global cluster
   2. Failover behavior of a global service group
   3. Cluster state transitions
   4. Simulating global clusters using the VCS Simulator