Enterprise Computing Solutions - Education Services

# TRAINING OFFERING

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# Veritas InfoScale Availability 7.3 for UNIX/Linux: Administration

| CODE: | LENGTH: | PRICE: |
|---|---|---|
| VER_ISA-7.3 A-U | 40 Hours (5 days) | Request Price |

## Description

The Veritas InfoScale Availability 7.3 for Unix/Linux: Administration course is designed for the IT professional tasked with installing, configuring, and maintaining Veritas Cluster Server (VCS) clusters.

This class discusses how to use InfoScale Availability to manage applications in a high availability environment. After gaining the necessary fundamental skills that are required to manage a highly available application in a cluster, the course enables you to deploy InfoScale Availability in the lab environment to practically implement a sample cluster design and deployment.

## Objectives

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

Describe how clustering is used to implement high availability in the data center environment.
Describe VCS and cluster communication mechanisms.
Create a cluster, and configure service groups and resources.
Implement and verify failover and failback capability for application, storage, and network services.
Configure and optimize cluster behavior.
Protect data in a shared storage environment.
Describe I/O fencing operations, and its implementation.
Configure VCS to manage an Oracle database and other applications.
Configure and manage VCS clusters on virtual machines in VMware environment.
Implement Just in Time Availability for single node VCS cluster on virtual machine in a VMware environment.

## Audience

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 Availability.

## Prerequisites

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

## Programme

High Availability Concepts
- High availability concepts
- Clustering concepts
- High availability application services

Cluster Server Basics
- Clustering prerequisites

VCS Building Blocks
- VCS terminology
- Cluster communication
- VCS architecture

Labs
- Exercise A: Installing InfoScale Enterprise using the Common Product Installer (CPI)]
- Exercise B: Running a post-installation check
- Exercise C: Adding cluster systems to VIOM as managed hosts

VCS Operations
- Common VCS tools and operations
- Service group operations
- Resource operations

Labs
Exercise A: Displaying cluster information
Exercise B: Displaying status and attributes
Exercise C: Performing service group operations
Exercise D: Manipulating resources

VCS Configuration Methods
Starting and stopping VCS
Overview of configuration methods
Online configuration
Controlling access to VCS

Preparing Services for VCS
Preparing applications for VCS
Performing one-time configuration tasks
Testing the application service
Stopping and migrating an application service
Collecting configuration information

Labs
Exercise A: VCS configuration state and stopping VCS
Exercise B: Configuring automatic backup of the VCS configuration
Exercise C: Setting non default VCS stop options

Online Configuration
Online service group configuration
Adding resources
Solving common configuration errors
Testing the service group

Labs
Exercise A: Configuring and examining storage for the service
Exercise B: Examining the application
Exercise C: Manually starting and stopping the application

Labs
Exercise A: Creating a service group for the loopy application
Exercise B: Configuring resources for the loopy application
Exercise C: Performing a virtual fire drill on the service group
Exercise D: Testing the service group
Exercise E: Setting resources to critical
Exercise F: (Optional) Examining Veritas File System locking by VCS

Offline Configuration
Offline configuration examples
Offline configuration procedures
Solving offline configuration problems
Testing the service group

Labs
Exercise A: Editing a copy of the main.cf file using a system editor
Exercise B: Stopping VCS
Exercise C: Restarting VCS using the edited main.cf file

Configuring Notification
Notification overview
Configuring notification
Overview of triggers

Handling Resource Faults
VCS response to resource faults
Determining failover duration
Controlling fault behavior
Recovering from resource faults
Fault notification and event handling

Labs
Exercise A: Configuring and testing the notifier using VIOM
Exercise B: Configuring trigger scripts

Cluster Server Additions

Intelligent Monitoring Framework
IMF overview
IMF configuration
Faults and failover with intelligent monitoring

Labs
Exercise A: Examining IMF monitoring on a resource
Exercise B: (Optional) Examining the IMF default configuration

Cluster Communications
VCS communications review
Cluster interconnect configuration
Joining the cluster membership
Changing the interconnect configuration

Labs
Exercise A: Reconfiguring LLT
Exercise B: Observing jeopardy membership

Cluster Server Applications

Using I/O Fencing for Application Data Integrity
Data protection requirements
I/O fencing concepts
I/O fencing operations
I/O fencing implementation
Fencing configuration

Labs
Exercise A: Fencing configuration pre-checks
Exercise B: Configuring VCS for I/O fencing
Exercise C: I/O fencing configuration verification
Exercise D: Verifying data disks for I/O fencing

Clustering Applications
Application service overview
VCS agents for managing applications
The Application agent
IMF support and prevention of concurrency violation

Labs
Exercise A: Adding a resource of type Application
Exercise B: Testing the resource
Exercise C: IMF and Application agent monitoring options

Labs
Clustering Databases
VCS database agents
Database preparation
The database agent for Oracle
Database failover behavior
Additional Oracle agent functions

Exercise A: Verifying the Oracle configuration
Exercise B: Preparing storage and network resources for the Oracle service group
Exercise C: Testing the Oracle database manually
Exercise D: Configuring Oracle under VCS control
Exercise E: Running a virtual fire drill and switching the Oracle service group
Exercise F: (Optional) Oracle monitoring

VMware vSphere high availability architecture
VMware administration
VMware storage architecture

In-Guest Clustering VMware vSphere Data Center Architecture
Server and storage migration

Veritas High Availability Deployment in VMware
Veritas high availability architecture in VMware
Deploying Veritas InfoScale on VMs
Configuring VIOM to manage InfoScale on VMs
Configuring the vSphere Web Client for Veritas HA

Labs
Exercise A: Verifying the VMware vSphere lab environment
Exercise B: Connecting to the nested virtual machines
Exercise C: Testing vMotion

Labs
Exercise A: Preparing the nested virtual machine lab environment
Exercise B: Deploying a Veritas cluster on nested virtual machines
Exercise C: Adding cluster systems as managed hosts to VIOM
Exercise D: Installing the VIOM Control Host add-on on mgt
Exercise E: Adding virtualization information to the VIOM management server
Exercise F: Installing and registering the Veritas HA Plug-in for vSphere Web Client
Veritas High Availability Configuration and Administration
Configuring storage for VCS failover clusters
Configuring shared storage for CFS clusters
Configuring availability
Just In Time Availability solution
Labs
Exercise A: Preparing the nested virtual machine lab environment
Exercise B: Using the vSphere Web Client to monitor Veritas high availability
Exercise C: Setting EnableUUID parameter for virtual machine disks
Exercise D: Configuring a VCS service group with the VMwareDisks resource to manage virtual machine storage
Exercise E: Managing the VCS service group from the vSphere Web Client
Exercise F: Testing vMotion with Veritas in-guest clustering
Exercise G: Exercise G: (Optional) Completing the Oracle service group configuration

## Session Dates

Ved forespørsel. Vennligst kontakt oss

## Tilleggsinformasjon

Denne treningen er også tilgjengelig som trening på stedet. Kontakt oss for å finne ut mer.