



Administration of Veritas Storage Foundation™ High Availability 5.0 for Windows Study Guide

The following tables list the Symantec Certification exam objectives for the *Administration of Veritas Storage Foundation High Availability 5.0 for Windows* exam and how these objectives align to the *Veritas Cluster Server 5.x for Windows* and *Veritas Storage Foundation 5.x for Windows* courses.

For more information on the Symantec Certification Program, visit:

<http://go.symantec.com/certification>.

EXAM SECTION 1

Manage Storage with Storage Foundation

Certification Objectives	Course Topics from
Describe the benefits of Storage Foundation for Windows (SFW).	Storage Foundation for Windows Lesson: Course Introduction Lesson: Virtual Objects Topic: Physical and Virtual Data Storage Lesson: Performance Monitoring Topic: Changing the Volume Layout
Describe the structural characteristics of a disk before and after it is placed under SFW control.	Storage Foundation for Windows Lesson: Virtual Objects Topics: Physical and Virtual Data Storage, SFW Storage Objects Lesson: Creating a Volume Topic: Preparing Disks and Disk Groups for Volume
Describe the benefits and uses of SFW mirrors.	Storage Foundation for Windows Lesson: Virtual Objects Topic: SFW RAID Levels Lesson: Selecting Volume Layouts Topic: Comparing Volume Layouts Lesson: Making Basic Configuration Changes Topic: Administering Mirrored Volumes
Describe the benefits of offhost processing with SFW and the flashsnap option.	Storage Foundation for Windows Lesson: Offline and Off-Host Processing Topics: Offline and Off-Host Processing Tasks, Performing Dynamic Disk Group Split and Join, Enabling Fast Resynchronization, Implementing Off-Host Processing
Describe how dynamic multipathing works with active-active and active-passive storage arrays.	Storage Foundation for Windows Lesson: Administering DMP Topics: Overview of Dynamic Multipathing, Managing Arrays, Individual Disks, and Paths, Displaying Performance Information, Specifying Load Balancing Settings

Certification Objectives	Course Topics from
Identify the virtual objects that are created by SFW to manage data storage.	Storage Foundation for Windows Lesson: Virtual Objects Topic: SFW Storage Objects
Define RAID levels and volume layouts that can be created by SFW.	Storage Foundation for Windows Lesson: Virtual Objects Topic: SFW RAID Levels Lesson: Selecting Volume Layouts Topic: Comparing Volume Layouts
Given a scenario, explain how to manage SFW objects.	Storage Foundation for Windows Lesson: Creating a Volume Topics: Preparing Disks and Disk Groups for Volume Creation, Creating a Volume, Adding a File System to a Volume, Removing Volumes, Disks, and Disk Groups Lesson: Making Basic Configuration Changes Topics: Administering Mirrored Volumes, Resizing a Volume, Moving Data Between Systems Lesson: Recovery Essentials Topic: Monitoring Objects and Events
Given a cluster scenario, explain how to manage SFW objects.	Veritas Cluster Server for Windows Lesson: Preparing Services for VCS Topics: Configuring Shared Storage, Bringing Resources Online, Monitoring Resources, Stopping Application Components Lesson: Online Configuration Topic: Adding Resources

EXAM SECTION 2

Verify the Environment and Install Software

Certification Objectives	Course Topics from
Define the prerequisites to install SFW.	Storage Foundation for Windows Lesson: Installation and Interfaces Topic: Installation Prerequisites
Describe the optional features of SFW.	Storage Foundation for Windows Lesson: Installation and Interfaces Topic: SFW Software Packages
Given a scenario, verify that the environment is suitable for SFW and which options would be required	Storage Foundation for Windows Lesson: Installation and Interfaces Topics: Installation Prerequisites, SFW Software Packages, Installing SFW
Verify the environmental suitability for Storage Foundation High Availability for Windows (SFWHA), the requirements to cluster an application with SFWHA, and/or the process for verifying the installation of SFWHA.	Veritas Cluster Server for Windows Lesson: High Availability Concepts Lesson: Preparing a Site for VCS Lesson: Installing Veritas Cluster Server Lesson: Preparing Services for VCS Lesson: Clustering Applications

Certification Objectives	Course Topics from
Given a scenario, describe the methods for installing SFW.	Storage Foundation for Windows Lesson: Installation and Interfaces Topic: SFW Software Packages, Installing SFW
Describe the process for verifying the installation of SFW.	Storage Foundation for Windows Lesson: Installation and Interfaces Topic: SFW Software Packages, Installing SFW
Define the prerequisites to install SFWHA.	Veritas Cluster Server for Windows Lesson: High Availability Concepts Topic: Clustering Prerequisites Lesson: Preparing a Site for VCS
Given a scenario, describe the methods for installing SFWHA.	Veritas Cluster Server for Windows Lesson: Installing Veritas Cluster Server

EXAM SECTION 3

Configure and Manage Veritas Storage Foundation for Windows High Availability

Certification Objectives	Course Topics from
Describe the strengths and weaknesses of different cluster configurations.	Veritas Cluster Server for Windows Lesson: High Availability Concepts Lesson: Reconfiguring Cluster Membership Lesson: Data Center Availability
Describe intra-cluster communications.	Veritas Cluster Server for Windows Lesson: High Availability Concepts Lesson: VCS Building Blocks Lesson: Cluster Communications
Describe how to configure and verify a cluster.	Veritas Cluster Server for Windows Lesson: VCS Operations Lesson: VCS Configuration Methods
Given a scenario, determine whether a system is configured correctly.	Veritas Cluster Server for Windows Lesson: Preparing a Site for VCS Lesson: Installing Veritas Cluster Server Lesson: Cluster Communications
Describe the configuration and types of notification within SFWHA.	Veritas Cluster Server for Windows Lesson: Configuring Notification Lesson: VCS Response to Resource Faults
Describe how to configure a service group.	Veritas Cluster Server for Windows Lesson: VCS Operations Lesson: VCS Configuration Methods Lesson: Online Configuration Lesson: Offline Configuration Lesson: VCS Response to Resource Faults Lesson: Service Group Dependencies Lesson: Startup and Failover Policies

Certification Objectives	Course Topics from
Describe the different resources and how to configure them within a service group.	Veritas Cluster Server for Windows Lesson: VCS Operations Lesson: VCS Configuration Methods Lesson: Online Configuration Lesson: Offline Configuration Lesson: VCS Response to Resource Faults
Given a scenario, describe how resources behave within a service group.	Veritas Cluster Server for Windows Lesson: VCS Operations Lesson: Online Configuration Lesson: Offline Configuration Lesson: VCS Response to Resource Faults Lesson: Startup and Failover Policies
Given a scenario, describe how service groups behave within a cluster.	Veritas Cluster Server for Windows Lesson: VCS Operations Lesson: VCS Configuration Methods Lesson: Online Configuration Lesson: Offline Configuration Lesson: VCS Response to Resource Faults Lesson: Service Group Dependencies Lesson: Startup and Failover Policies
Given a scenario, describe the effects of changes to default resource type definitions.	Veritas Cluster Server for Windows Lesson: High Availability Concepts Topic: Resource types and type Attributes Lesson: VCS Response to Resource Faults
Given a scenario, describe the procedure for modifying a running cluster.	Veritas Cluster Server for Windows Lesson: VCS Operations Lesson: VCS Configuration Methods Lesson: Online Configuration Lesson: Reconfiguring Cluster Membership

EXAM SECTION 4

Perform Advanced Configuration

Certification Objectives	Course Topics from
Given a scenario, determine which service group attributes to set.	Veritas Cluster Server for Windows Lesson: Online Configuration Lesson: Configuring Notification Lesson: VCS Response to Resource Faults Lesson: Service Group Dependencies Lesson: Startup and Failover Policies Lesson: Reconfiguring Cluster Membership
Given a scenario, determine which resource type attributes to set.	Veritas Cluster Server for Windows Lesson: High Availability Concepts Topic: Resource types and type Attributes Lesson: Configuring Notification Lesson: VCS Response to Resource Faults
Describe trigger locations and roles.	Veritas Cluster Server for Windows Lesson: Configuring Notification

Certification Objectives	Course Topics from
	Lesson: VCS Response to Resource Faults
Given a scenario, determine which failover policy is most appropriate.	Veritas Cluster Server for Windows Lesson: Online Configuration Lesson: VCS Response to Resource Faults Lesson: Startup and Failover Policies
Given a scenario, determine the appropriate SFWHA Enterprise agent.	Veritas Cluster Server for Windows Lesson: Clustering Applications Lesson: Clustering SQL Server Lesson: Clustering Exchange Server Lesson: Clustering File Shares
Describe uses and implementation of the Veritas Cluster Server (VCS) Simulator.	Veritas Cluster Server for Windows Lesson: VCS Operations Topic: VCS Management Tools Topic: Using the VCS Simulator Lesson: VCS Configuration Methods Topic: Overview of Configuration Methods Lesson: Offline Configuration Topic: Using the VCS Simulator Lesson: Startup and Failover Policies Topic: Modeling Startup and Failover Policies
Describe how to manage user access to VCS.	Veritas Cluster Server for Windows Lesson: Preparing a Site for VCS Topic: Preparing Cluster Information Lesson: VCS Configuration Methods Topic: Controlling Access to VCS

EXAM SECTION 5

Troubleshooting

Certification Objectives	Course Topics from
Given a scenario, troubleshoot a service group.	Veritas Cluster Server for Windows Lesson: Online Configuration Topic: Solving Common Configuration Errors Topic: Testing the Service Group Lesson: Offline Configuration Topic: Testing the Service Group Lesson: Troubleshooting
Given a scenario, troubleshoot SFW objects.	Storage Foundation for Windows Lesson: Recovery Essentials Topics: Monitoring Objects and Events, Maintaining Data Consistency, Configuration Backup and Restore, Troubleshooting Disk Replacement and Recovered Volumes
Given a scenario, troubleshoot intra-cluster communications.	Veritas Cluster Server for Windows Lesson: Cluster Communications Lesson: System and Communication Faults Lesson: Troubleshooting

Certification Objectives	Course Topics from
Given a scenario, troubleshoot common cluster-wide outages.	Veritas Cluster Server for Windows Lesson: System and Communication Faults Lesson: Troubleshooting
Given a scenario, troubleshoot resource fault behavior.	Veritas Cluster Server for Windows Lesson: VCS Response to Resource Faults Lesson: Troubleshooting
Given a scenario, troubleshoot DMP option.	Storage Foundation for Windows Lesson: Administering DMP Topics: Managing Arrays, Individual Disks, and Paths, Displaying Performance Information, Specifying Load Balancing Settings
Describe the troubleshooting tools for SFW.	Storage Foundation for Windows Lesson: Recovery Essentials Topics: Monitoring Objects and Events, Maintaining Data Consistency, Configuration Backup and Restore
Describe the troubleshooting tools for SFWHA.	Veritas Cluster Server for Windows Lesson: VCS Response to Resource Faults Lesson: Cluster Communications Lesson: System and Communication Faults Lesson: Troubleshooting

Obtaining Symantec Certification

To become Symantec certified, candidates must pass exam(s) available through Prometric testing centers. To assist in preparation for the certification exams, candidates are strongly encouraged to attend training course(s) available through Symantec, in addition to meeting any necessary prerequisites, on-the-job experience, and study. Be cautioned that attendance in a training course does not guarantee passage of a certification exam.

If you have questions about the Symantec Certification Program, send an email to Customer_Certifications@Symantec.com.

About Symantec

Symantec is a global leader in providing security, storage and systems management solutions to help consumers and organizations secure and manage their information-driven world. Our software and services protect against more risks at more points, more completely and efficiently, enabling confidence wherever information is used or stored.

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