# Veritas Storage Foundation™ High Availability Solution for Microsoft® Exchange

Advanced high availability and disaster recovery solution for Microsoft Exchange environments

The Veritas Storage Foundation High Availability Solution for Microsoft Exchange is comprehensive in delivering data and application availability. It combines two industry-leading availability technologies from Symantec: Veritas Storage Foundation *for Windows®* and Veritas™ Cluster Server.

The solution provides both online storage management—enabling high availability of data and optimized I/O performance across multiple hardware platforms—and application monitoring, including database, network, and storage resources.

For data protection and for business continuity, the solution provides a comprehensive, integrated package tailored to Exchange environments with the flexibility to suit individual infrastructures and the ability to scale as business needs change.

## Highlights

- **Availability across any distance**—The Veritas Storage Foundation builds both local and remote clusters for disaster recovery and local availability.
- **Fast recovery from logical errors**—FlashSnap™ snapshots enable fast recovery from errors and data corruption without the need for lengthy tape restores.
- **No single point of failure**—The scalable Veritas Cluster Server architecture has no "master" node, so it can gracefully move Exchange to an available server in the event of a failure and coordinate the movement with storage ownership.
- **Multi-cluster management and reporting**— A single unified Web console manages and reports on multiple local and remote clusters.
- **Automated disaster recovery testing**—Tests cover both failover and replication configurations without affecting the primary environment.
- **Tight integration with Exchange**—Unique integration and optimization with Exchange results in increased performance and availability.
- **Simple to install, configure, and maintain**— Using configuration wizards with simple, quick, and error-free configuration capabilities allows advanced high availability, disaster recovery, and Fire Drill testing.
- **Advanced application failover logic**—Veritas Cluster Server ensures that application uptime is maximized and server resources are efficiently utilized.
- **Advanced virtual machine support**—Veritas Storage Foundation provides clustering support for virtual machine architectures.
- **Replication integration with zero data loss**— Veritas Cluster Server manages Exchange failover and failback, including support for the Veritas™ Volume Replicator Option and other array vendors' replication solutions.

## Availability across any distance

Whether the infrastructure is a local cluster, campus cluster, metropolitan cluster, or a global cluster, Veritas Storage Foundation HA *for Windows* enables local, metropolitan, and wide area high availability and disaster recovery (DR) using a single solution. Veritas Cluster Server can scale from a simple 2-node local cluster up to a 32-node cluster that spans thousands of kilometers across different IP subnets. Upon failover to a different IP network, Veritas Cluster Server updates the application's network identity so clients can quickly connect to the alternate site. Veritas Cluster Server also automates the replication takeover so that replicated storage groups are imported and replication roles are reversed.

## Fast recovery from logical errors

A FlashSnap snapshot is an independently addressable volume that mirrors the production volumes. By splitting the mirror, a point-in-time image of the data is preserved. The snapshot can be restored, but that is just the first step in Exchange recovery; the transaction logs then need to be rolled forward to the point immediately before the failure. Veritas Storage Foundation HA *for Windows* automates the recovery process, resynching the production data with the most recent FlashSnap image and then restoring the transactions. The result is a much faster recovery from data corruption or logical errors than a restore from tape.

## No single point of failure

Veritas Cluster Server is a highly resilient, scalable architecture in which each node in the cluster synchronizes its configuration information and status with the other nodes. As a result, there is no single point of failure—a vital requirement for true high availability and disaster recovery. In addition, Veritas Cluster Server does not require that a majority set of nodes be online for services to continue running. Other solutions require extra server hardware to ensure that a majority is maintained after multiple failures or a site outage. By eliminating this requirement, Veritas Cluster Server gives users the flexibility to run fewer servers at a DR site relative to a primary site cluster, resulting in reduced hardware and administration expenses.

## Multi-cluster management and reporting

The Web-based Cluster Management Console (CMC) simplifies the task of managing multiple clusters. CMC provides a centralized GUI to monitor, manage, and configure Veritas Cluster Server clusters running in multiple data centers. With CMC, administrators can manage configuration changes across multiple systems in a cluster with just a few clicks. They can also run detailed historical trend reports by cluster, applications, and servers, measuring service-level agreements in aggregate and tracking results over time. Notification policies across all clusters can be easily modified. Administrator rights and roles can be set for different users in the IT organization. Most important, CMC provides a single place to instantly view the health of all clustered applications in the data center.

## Automated disaster recovery testing

With the Fire Drill feature of Veritas Cluster Server, organizations can test DR scenarios regularly without exposure to risk or downtime of email. Veritas Cluster Server is the only solution that integrates automated testing with a market-leading disaster-recovery solution. Now administrators can make frequent changes to

the IT infrastructure and simultaneously reflect those changes at a remote site. Also, because Fire Drill does not disrupt production applications, it can be run as often as necessary to ensure that Exchange is recovered in the event of an actual disaster.

## Tight integration with Exchange

Veritas Cluster Server is uniquely integrated with Exchange. It also provides detailed monitoring of all application resources, helping to ensure the highest levels of availability. Veritas Cluster Server manages more than just the Exchange instance; it handles all associated components, including runtime processes, network, and associated storage, ensuring a robust and graceful failover (over any distance) of all relevant resources.

## Simple to install, configure, and maintain

To simplify the task of configuring Fire Drill, data replication, and HA/DR solutions, new wizards with a common GUI provide easy step-by-step, wizard-driven workflow. This minimizes configuration errors and decreases implementation times of high-availability and disaster-recovery infrastructure. Configuration wizards are designed not only for SQL and Exchange but also for other supported applications. In addition to helping with the initial setup of the HA/DR infrastructure, Veritas Cluster Server helps to ensure the configuration is consistent over time. It's able to detect cluster configuration drift and reports back on configuration deviance. Configuration wizards for each instance can be saved as templates when cloning of host service groups and storage configurations are required for repetitive standardized implementations.

## Advanced Exchange failover logic

With Storage Foundation HA *for Windows*, IT administrators can set failover policies based on server capacity. Veritas Cluster Server then chooses the best server at the time of failure, based on application needs and the current state of resources in the cluster. It allows true N+1 "roaming spare" capability for maximum availability without the cost of a dedicated spare per application. When a failure occurs, Veritas Cluster Server automatically chooses the least utilized server and automatically adds repaired servers back into the selection pool when they rejoin the cluster. Advanced failover logic in Veritas Cluster Server ensures that application uptime is maximized and server resources are utilized as efficiently as possible.

## Advanced virtual machine support

With server virtualization technologies, multiple virtual machines are commonly hosted on a single physical server and the need to provide highly available services increases with the use of virtualization technologies. Veritas Cluster Server provides a single solution for clustering both physical and virtual systems. With Veritas Cluster Server, administrators can monitor an application running within a virtual machine (e.g., VMware ESX) and recover it in the event of a failure. Additionally, Storage Foundation HA *for Windows* provides unparalleled support for physical-to-virtual (P2V) and virtual-to-virtual (V2V) configurations, so organizations can protect Exchange over local or wide area distances.

## Replication integration and zero data loss DR

Veritas Cluster Server combines with the Veritas Volume Replicator Option to provide a fully integrated and coordinated solution for application availability and data replication. This coordination ensures that if a failure occurs, both the Exchange application and the Exchange database can be failed over and recovered in an alternate location. Just as important, the application and data can be failed back to the original location at the appropriate time. Additionally, with the new bunker replication feature of the Veritas Volume Replicator Option, organizations can select the ultimate data replication strategy by replicating data over any distance without losing a single transaction—a recovery point objective (RPO) of zero over any distance. While Veritas Cluster Server is tightly integrated with the Veritas Volume Replicator Option, it also manages array-based replication technologies, including EMC SRDF and SRDF/A, EMC MirrorView and MirrorView/A, Hitachi TrueCopy, IBM PPRC, IBM® MetroMirror, and NetApp SnapMirror.

## More information

*Visit our Web site*

http://enterprise.symantec.com

*To speak with a Product Specialist in the U.S.*

Call toll-free 1 (800) 745 6054

*To speak with a Product Specialist outside the U.S.*

For specific country offices and contact numbers, please visit our Web site.

*About Symantec*

Symantec is a global leader in infrastructure software, enabling businesses and consumers to have confidence in a connected world. The company helps customers protect their infrastructure, information, and interactions by delivering software and services that address risks to security, availability, compliance, and performance. Headquartered in Cupertino, Calif., Symantec has operations in 40 countries. More information is available at www.symantec.com.

*Symantec World Headquarters*

20330 Stevens Creek Boulevard
Cupertino, CA 95014 USA
+1 (408) 517 8000
1 (800) 721 3934
www.symantec.com

Confidence in a connected world. symantec™


09/07 12996147