Veritas™ Cluster Server *for VMware ESX*

Veritas™ Cluster Server is the industry's leading cross-platform high-availability solution. Now, companies can provide a higher level of availability for their VMware ESX environments with Veritas Cluster Server *for VMware ESX*, which monitors not only the application within the virtual machine, but also the health of the virtual machine itself and that of the underlying server. With the ability to manage multiple physical and virtual clusters from one console regardless of platform or location, this powerful solution can simplify and automate disaster recovery through failover of virtual machines locally or between clusters in remote locations.

Highlights

- Availability across any distance for VMware ESX environments—Builds both local and remote clusters for local availability and disaster recovery
- Application and resource monitoring—Provides a more granular level of visibility and management by monitoring the application as well as virtual resources
- Multi-cluster management and reporting—Manages multiple local and remote clusters in physical and virtual environments from a single console, regardless of the operating system
- Leverages VMware ESX advanced features—Recognizes and works seamlessly with VMotion and VMware Distributed Resource Scheduler (DRS)
- Support for most replication technologies—Provides flexibility to use any of the major replication technologies for disaster recovery
- Simple to install, configure, and maintain—With wizard-driven installation and simulated failovers, it is easier to implement and manage more than any other clustering product
- Out-of-the-box support for applications and databases—Application compatibility reduces time to deployment and cuts consulting costs

Availability across any distance for VMware ESX environments

Building an infrastructure for high availability at a local site may meet many business availability requirements, but other requirements may involve greater protection that spans multiple locations. With Veritas Cluster Server, organizations can deploy both local and remote clustering for complete disaster recovery. With a single click of a button, applications can be migrated between single servers in a local data center, or all of a server's applications can be moved to data center several thousand miles away.

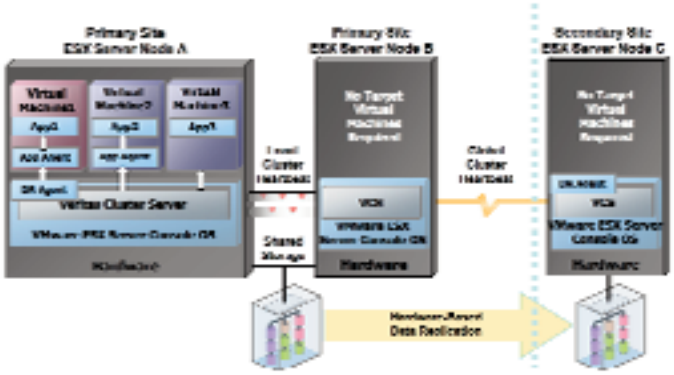

Figure 1. Veritas Cluster Server (VCS) for VMware ESX maintains availability across any distance—local or remote.

Application and resource monitoring

The need to monitor not only the physical server, but also the virtual components residing inside the virtual servers becomes a necessity in order to maintain highly available systems. Veritas Cluster Server can not only monitor the status of virtual resources (virtual NIC, storage, server, application, switch, IP address) but also take into account the dependencies among the resources so that any type of failure will prompt it to take the necessary actions to automatically fail over the virtual server in the correct sequence. This feature is critical in an environment where resources have no physical existence and the links are virtual. Veritas Cluster Server maximizes the benefits of running a virtual environment while allowing administrators to manage a mixed virtual and physical environment just as they would manage a physical environment.

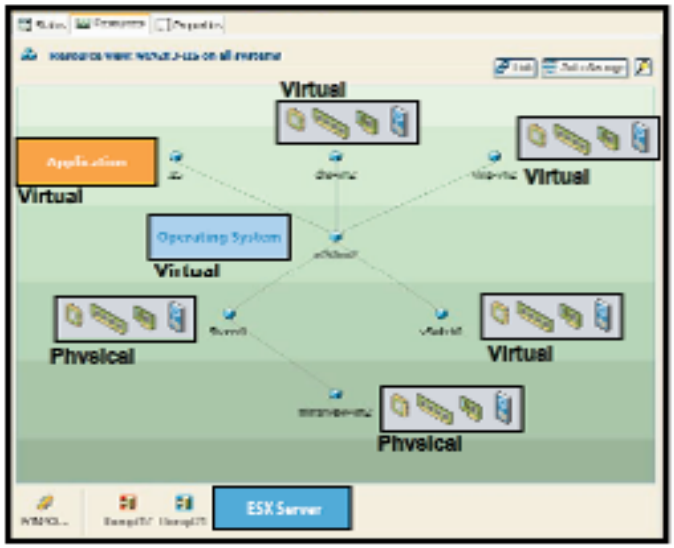

Figure 2. Veritas Cluster Server maintains virtual and physical resource dependencies and manages them as a service group.

Multicluster management and reporting

With the distribution of an increasing number of applications and heterogeneous clustered servers across multiple data centers, management of clusters can be painful. Now, with Veritas Cluster Server, organizations can use a single, Web-based resource—called the Cluster Management Console—to monitor, manage, and report on implementations of Veritas Cluster Server on different platforms, virtual and physical.

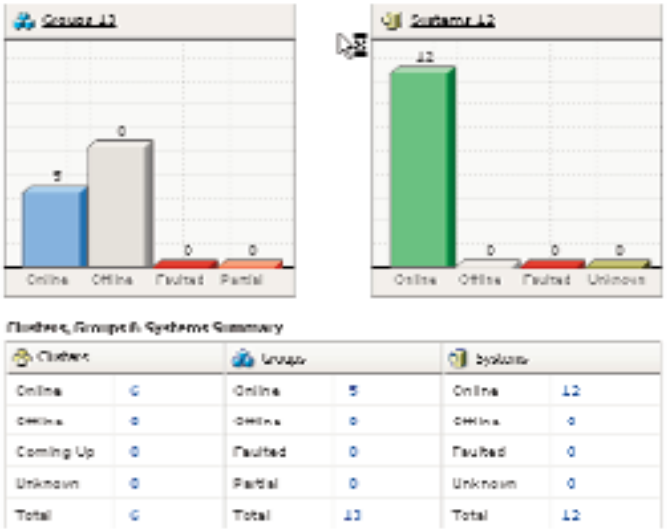

Figure 3. View all your clusters and servers and their status from the Cluster Management Console.

The solution offers enhanced management capabilities that increase administrator efficiency by providing enhanced visualization of the managed clusters, centralized control of global applications, and complete reports of each application's availability status. It also reduces application downtime by helping administrators avoid common cluster configuration mistakes and audit unexpected cluster configuration changes, and it provides a standard way for

administrators to detect and investigate cluster problems and to track the management history of all the managed clusters.

Leverages VMware ESX advanced features

VMware has introduced VMotion and Distributed Resource Scheduler (DRS) features so that virtual servers can be migrated to other physical servers without any planned downtime. As the high-availability solution for the VMware platform, Veritas Cluster Server is fully aware of these dynamic system-wide "adjustments" and can update the cluster status accordingly to work seamlessly with VMware's workload optimizing feature. Customers can also initiate VMotion migrations and perform VMware specific tasks centrally, using the Cluster Management Console as a single point of control while ensuring that all cluster nodes are managed with the same level of high availability and disaster recovery protection that has been available from Veritas Cluster Server for UNIX, Linux®, and Windows.®

Automated disaster recovery testing

Because data center servers and applications are constantly changing, organizations must regularly test a disaster recovery strategy to help ensure a successful recovery in the event of a system-wide or site-wide outage. To better guarantee the success of a disaster recovery strategy, Veritas Cluster Server offers automated "fire drill" functionality that reduces the time and expense of disaster recovery testing. In fact, it 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. And because these fire drills don't disrupt production applications, they can be run as often as necessary.

Support for most replication technologies

Since a good disaster recovery plan should include both data and application availability, Veritas Cluster Server supports all major hardware replication technologies. It completely automates the process of replication management and application startup at the remote site without the need for complicated manual recovery procedures involving storage and application administrators. It provides all the necessary logic to completely control the underlying replication configuration. Plus, it provides full support for all major third-party data replication solutions, including Hitachi TrueCopy, EMC MirrorView, and others.

Simple to install, configure, and maintain

Veritas Cluster Server provides administrators with easy-to-use configuration wizards for simplified server and storage management and cluster implementation. Configuring clusters has never been easier. Wizards enable simple setup of new and existing virtual servers for high availability, including disaster recovery capabilities. Wizards also provide storage-related features that allow for online volume growth, configuring shared storages for cluster configurations and more. Maintaining virtual servers is a breeze with the patch guest operating system tool in addition to the service group framework that can manage applications, virtual servers, storage, and other resources with a click of a mouse.

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Out-of-the-box support for applications and databases

Veritas Cluster Server provides off-the-shelf support for applications commonly used in virtual environments, including, but not limited to, applications such as Microsoft® Exchange 2003, SAP, Apache and IIS, and enterprise-class databases such as Oracle® and Microsoft SQL Server. In addition, new agents are continually being developed to support upcoming new applications. For custom-built applications, custom agents can be created by Symantec Consulting or end users using the generic application agent.

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