Data Sheet: High Availability

Veritas™ Cluster Server from Symantec

Reduce application downtime

Overview

Veritas™ Cluster Server provides high availability and disaster recovery for the most important applications in your data center.

Veritas Cluster Server monitors an application and all its dependent components, and if it detects a fault, it takes action, recovering applications automatically. If your whole site goes down, it restores those applications at another data center, so even during a disaster, your IT services keep running.

Veritas Cluster Server can also reduce planned downtime by temporarily moving applications to a standby server when routine maintenance such as upgrades or patches requires that the primary server be taken offline.

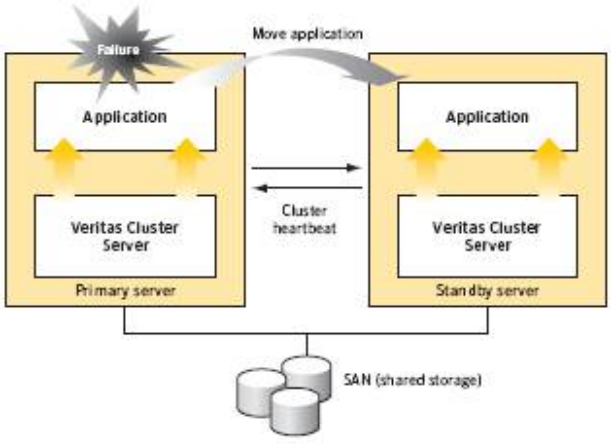

Figure 1. In the event of failure of a mission critical application, Veritas Cluster Server gracefully fails over the application stack, including associated directory, network and disk group resources.

Highlights

- **Out-of-the-box support for applications and databases–** Guarantees application compatibility, reduces deployment times and cuts consulting costs
- **Comprehensive hardware and platform support–**Using the same tool across platforms reduces training, administrative and hardware costs
- **Advanced virtual machine support–**Provides clustering for virtual machine architectures
- **Faster failure detection -** Detect failures faster than traditional clustering solutions and utilizes less system resources
- **Advanced failover logic–**Ensures that server resources are utilized as efficiently as possible by failing over applications to the most appropriate server
- **Availability across any distance–**Builds both local and remote clusters for local high availability and disaster recovery
- **Support for all replication technologies–**Provides flexibility to use any of the major replication technologies for disaster recovery
- **Automated disaster recovery testing–**Tests application failover without affecting the primary environment
- **Simple to install, configure, and maintain–**Provides wizard driven installation and simulated failovers for easier implementation and management than other clustering products
- **Multi-cluster management and reporting–**Manages and reports on multiple local and remote clusters from a single console

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

Veritas Cluster Server provides off-the-shelf support for a wide range of applications, including, but not limited to; SAP®, BEA®, Siebel®, Oracle Applications, Microsoft Exchange®, and PeopleSoft® as well as enterprise-class databases such as Oracle®, DB2®, SQL Server®, and Sybase®. In addition, Symantec continually provides support for new applications. Support for custom-built applications can also be added.

Figure 2. Sample of supported applications, databases, and storage

Comprehensive hardware and platform support

Veritas Cluster Server is the only solution that can support all leading operating systems, including UNIX, Microsoft Windows, Linux and virtual platforms, as well as the widest range of heterogeneous hardware configurations. Using Cluster Server, customers can add high availability to the current infrastructure without having to purchase additional hardware. Organizations can mix and match the servers and storage within a single cluster and share storage infrastructure using the same tool across platforms to reduce training, administrative, and hardware costs.

Advanced virtual machine support

With virtualization technologies, multiple virtual machines are commonly hosted on a solitary physical server. A failure of that physical server can lead to a loss of availability for several applications. As a result, the need to make services highly available increases with the use of virtualization technologies. Veritas Cluster Server provides a single solution for clustering both physical and virtual systems. With Cluster Server, administrators can monitor an application running within a virtual machine and recover it in the event of a failure.

Faster failure detection

Veritas Cluster Server enables the faster detection of faults by asynchronously monitoring selected resources with its Intelligent Monitoring Framework. This means that failures can be detected instantaneously instead of waiting for a non-response from a faulted resource. This also reduces the CPU overhead associated with traditional poll-based monitoring. Intelligent Monitoring Framework support is available for Process-based and Mount-based agents and will support more agents in the future.

Availability across any distance

For mission critical applications that must remain online even in the event of a site failure, Veritas Cluster Server provides disaster recovery across any distance. Cluster Server allows organizations to deploy both local high availability and remote clustering for complete disaster recovery. With the single click of a button, Cluster Server can migrate applications between servers in a local data center or move all applications to a data center thousands of miles away.

Automated disaster recovery testing

Because production servers and applications are constantly changing, regularly testing a disaster recovery strategy is critical to guarantee a successful recovery in the event of an outage. To better guarantee successful recovery, Veritas Cluster Server includes Fire Drill, a tool that simulates disaster recovery tests, by starting up an application at the DR site like it would in an actual disaster. Because it is a simulation, Fire Drill does not disrupt production applications so it can be run as often as necessary, without the disruption and cost of traditional DR testing.

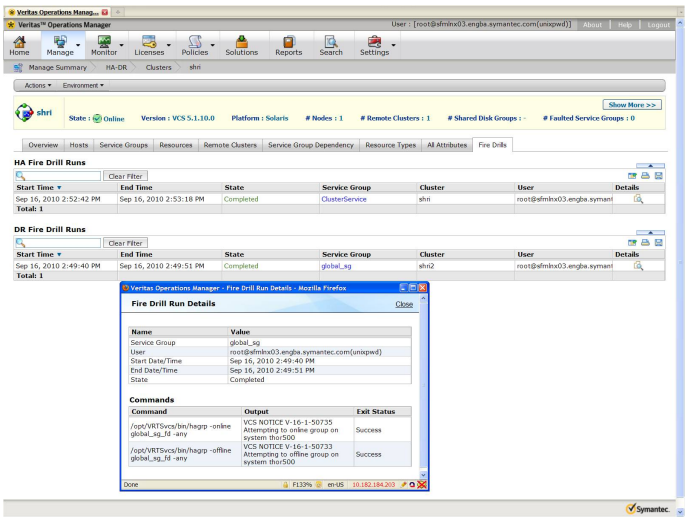

Figure 3. With Veritas Cluster Server, you can test your disaster recovery failover without disrupting production applications.

Simple to install, configure, and maintain

Symantec offers Installation and Upgrade Assessment Services to ensure server readiness for the Veritas Storage Foundation™, Veritas Storage Foundation™ for Windows® and Veritas™ Cluster Server products. Veritas Cluster Server provides administrators with easy-to-use configuration wizards for simplified storage management and cluster implementation. The Cluster Simulator, a free download, allows cluster administrators to simulate application failover scenarios and familiarize themselves with Cluster Server. Cluster Simulator helps administrators simulate high availability environments from their laptops and test multiple application failover scenarios without affecting production environments.

Advanced failover logic

With Veritas Cluster Server, IT administrators can set failover policies based on server capacity. Cluster Server then chooses the best server for a specific application 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" or N+M "active – active" capability for maximum availability without the cost of a dedicated spare per application. When a failure occurs, Cluster Server can automatically choose the least utilized server and add repaired servers back into the selection pool when they rejoin the cluster. Advanced failover logic in Cluster Server ensures that application uptime is maximized and server resources are utilized as efficiently as possible. Additionally, when intra-cluster communication breaks down, it is possible that two systems in a cluster try to write to the same storage and cause data corruption. Cluster Server advanced data protection logic shields data from becoming corrupted when a split brain situation arises by providing arbitration over cluster membership decisions. This guarantees data integrity as well as availability of service. The membership arbitration is provided using SCSI III protocol utilizing an odd set of coordinator disks or optionally through a software solution that is enabled via a Coordination Point Server.

Support for all major replication technologies

Since a good disaster recovery plan should include both data and application availability, Veritas Cluster Server supports all major hardware, software, and database replication technologies. Cluster Server 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. Cluster Server provides all the necessary logic to completely control the underlying synchronous or asynchronous replication configuration. Symantec offers an integrated solution for application and data availability. Veritas™ Volume Replicator, an option of Storage Foundation, provides continuous data replication that transfers data across any distance. Unlike traditional array based replication, Volume Replicator offers synchronous and asynchronous data replication across different storage hardware to enable storage tiering or use of existing storage at the DR site. In addition to Volume Replicator, Veritas Cluster Server provides full support for all major third-party data replication solutions, including Hitachi® TrueCopy, HP® Continuous Access XP, HP® Continuous Access EVA, EMC® SRDF, EMC® RecoverPoint, EMC® MirrorView, NetApp® SnapMirror,

IBM® Metro Mirror, IBM® Global Mirror, IBM® HADR, Oracle® DataGuard, and others.

Multi-cluster management and reporting

With the increasing number of applications and heterogeneous clustered servers distributed across multiple data centers, management of clusters can be painful. Using Veritas Operations Manager, customers can now monitor, manage, and report on Veritas Cluster Server implementations on different platforms from a single web-based console. The Veritas Cluster Server management capabilities increase administrator efficiency by providing enhanced visualization of the managed clusters, centralized control for global applications, and complete reports of each application's availability status. Cluster Server also reduces application downtime by helping administrators avoid common cluster configuration mistakes, audit unexpected cluster configuration changes, and provide a standard way for administrators to detect and investigate cluster problems and track management history of all the managed clusters.

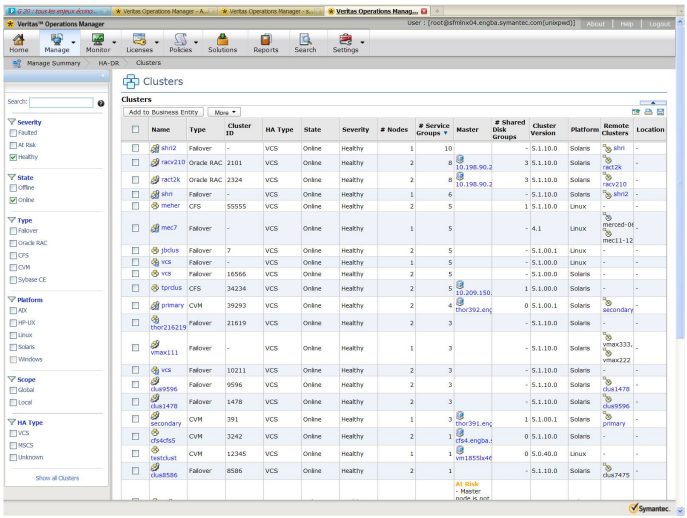

Figure 4. With Veritas Operations Manager, one can view the status of all the clusters in a data center.

Supported operating systems

For complete operating system support, please visit support.symantec.com or contact your local Symantec representative.

- IBM AIX®
- HP-UX®
- Oracle® Solaris™
- Linux
- Microsoft® Windows
- VMware®

More Information

Visit our website

http://enterprise.symantec.com

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Symantec World Headquarters

350 Ellis St.
Mountain View, CA 94043 USA
+1 (650) 527 8000
1 (800) 721 3934
www.symantec.com

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