Data Sheet: High Availability

Veritas™ Cluster Server One by Symantec

The next generation of high availability solutions

Overview

Data center applications are becoming increasingly distributed and interdependent. The use of server virtualization for cost savings and simpler server provisioning is also adding another layer of complexity to IT infrastructures. The challenge for IT organizations now is to maintain the end-to-end availability of mission-critical applications in this complex, interconnected, and heterogeneous environment.

To respond to this challenge, Symantec is introducing the next generation of high availability solutions with Veritas Cluster Server One. Veritas Cluster Server One combines the core Veritas Cluster Server DNA, i.e., rich application awareness and control, with a new, flexible and highly scalable architecture designed for virtual and scale-out environments. Veritas Cluster Server One increases application availability, maximizes cost effectiveness, and prepares IT managers to meet the rising challenges in managing data centers.

Highlights

- **Highly scalable solution across heterogeneous platforms** - Supports up to 256 nodes per cluster, across multiple operating systems and virtualization platforms.
- **Application-centric virtualization support** - Ensures the high availability of applications and virtual servers by providing control and visibility over the virtual servers and applications running within.
- **Multi-tier application support** – Supports dependency relationships between applications and databases running across operating systems and physical and virtual platforms. Automatically restarts applications on failure.
- **Priority-based availability** – Ensures availability of mission critical applications based on business priority in consolidated server environments.
- **Increase operator efficiency** – Controls thousands of applications running across scores of virtual and physical servers from a single console. Increases automation and reduces manual activities and errors.
- **Role-based access control (RBAC)** – Supports granular access privileges to ensure security and reduce operation errors.

Highly scalable solution across heterogeneous platforms

The growing number of mission critical applications and virtual servers in data centers requires a highly scalable solution for high availability and application control. Veritas Cluster Server One is designed to bring a larger number of servers, comprising an entire business application, under one control framework. While traditional HA clusters are limited to a few nodes of a single operating system, Veritas Cluster Server One scales to scores of physical and virtual servers spanning multiple operating systems.

Application-centric virtualization support

With the wide adoption of server virtualization

technology, there is a growing need for providing high availability to manage applications running across physical and virtual environments. Competitive products force a tradeoff between protecting applications (clustering between virtual servers) and protecting virtual servers (clustering the actual virtual server with no monitoring of what runs inside). With Veritas Cluster Server One, applications and virtual machines are monitored for potential outages. Should a failure occur, Veritas Cluster Server One will automatically start the appropriate application and its associated virtual server.

Multi-tier application support

Many critical multi-tier applications are composed of different components, the web server, the application server, the database, etc. Failure of any of these components will cause the outage of the entire application. Maintaining the availability of these complex architectures is difficult or even impossible with traditional clustering tools. Veritas Cluster Server One allows customers to configure dependencies between application tiers running across different operating systems on physical and virtual servers. For example, consider the following sample three-tier application environment: Web servers running on Linux require one or more application servers running on AIX, which in turn requires a database server on Solaris. On any restart or failover of the database, the application servers must be restarted, while the web servers may remain running. In traditional environments, legacy application clustering would be used on the database, and the application and web tier would be handled manually via scripting. With Veritas Cluster Server One, the user can completely automate the start-up, shut-down, and fault handling of the entire application stack.

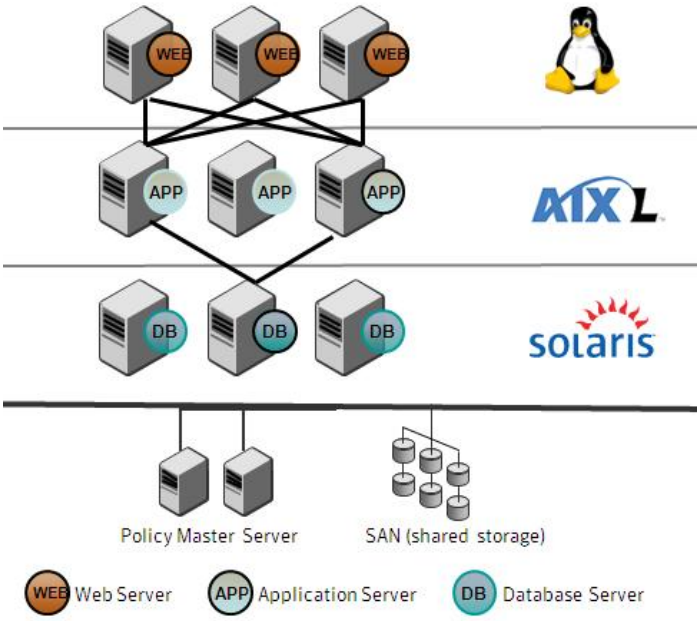

Figure 1. A three-tier application with dependency relationships configured between application tiers running across different operating systems.

Priority-based availability support

As organizations consolidate servers to drive up server utilization, they may find it difficult to distinguish which applications have a higher precedence over others. With Veritas Cluster Server One, each application can be configured with a business priority, resource requirement, and compatibility settings. During simple outages, available capacity in the cluster can usually handle application needs. In cases of multiple server

outages, higher priority applications take precedence over low priority ones to ensure your most critical applications remain available.

Increasing operator efficiency

Front-line operators often have the difficult task of starting and stopping applications. This requires coordination between different teams, complex run books, and custom scripting. Veritas Cluster Server One provides a web-based console for centrally managing and controlling a large number of applications running on physical and virtual servers. Within this console, administrators can easily monitor the status of applications and start, stop, and move applications or virtual machines with a few clicks. This capability comes without a requirement for the user to actually have a log-in to the systems, or administrators to employ complex scripting or permissions. By using the same Service Group concept Veritas Cluster Server users have traditionally used for failing over applications, Veritas Cluster Server One is able to automate and standardize application movement and control on a much larger scale, enabling front line operators to take action, without increasing backline support costs.

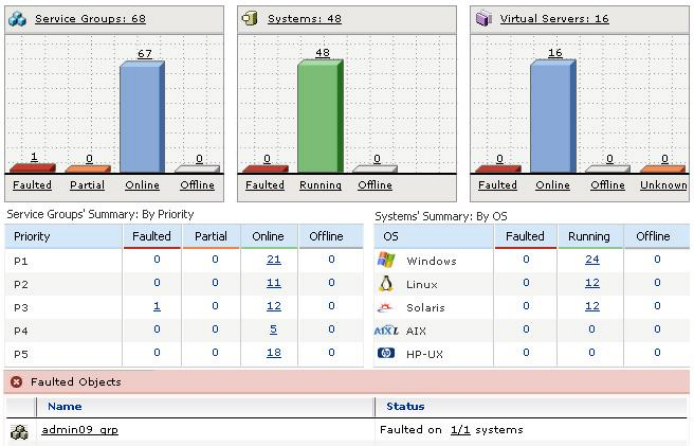

Figure 2. Veritas Cluster Server One's web-based console allows users to centrally manage and control a large number of applications running on physical and virtual servers.

Role-based access control (RBAC)

In large enterprises, there are usually different user groups performing operations on different applications. Veritas Cluster Server One allows granular access control by defining specific user privileges, which are based on a user's login or enterprise group membership. Each user or user group's privileges can be individually customized as needed to meet specific needs. Veritas Cluster Server One would, for example, allow a business unit's IT team to only have access to the specific applications for which they have responsibility.

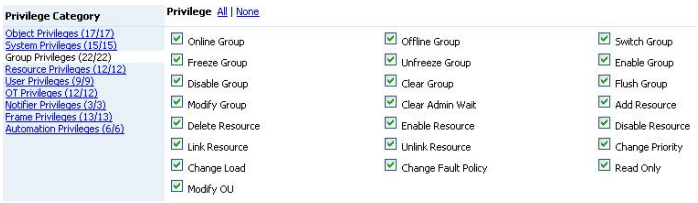

Figure 3. Within Veritas Cluster Server One's web-based console, one can view and change the fine-grained user permissions.

Supported Veritas Cluster One client operating systems

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

Policy Master Server

- Red Hat Linux
- Sun™ Solaris™

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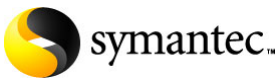

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