Veritas™ Dynamic Multi-Pathing

Heterogeneous storage path management

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Overview

The Veritas™ Dynamic Multi-Pathing technology (included within various Veritas InfoScale™ offerings) delivers improved storage I/O performance and availability across heterogeneous server and storage platforms using intelligent algorithms and load balancing for faster throughput. In the event of a storage path failure, Dynamic Multi-Pathing reroutes I/Os to other available data paths, increasing application availability and automatically restores failed paths that become healthy. Dynamic Multi-Pathing may also be centrally managed through the included Veritas InfoScale™ Operations Manager, easily facilitating common activities such as array firmware upgrades and pro-active path management. The load-balancing and management capabilities in Dynamic Multi-Pathing enhance administrators' productivity, improve overall storage performance, increase application uptime, and bridge storage and server administrator communications. Dynamic Multi-Pathing can also work with all major operating systems' native volume managers and file systems, in addition to InfoScale solutions.

Highlights

- **Increased data availability**—Provides storage path failure protection and fast failover
- **Optimized I/O performance**—Distributes I/O across multiple storage paths for maximum performance
- **Reduced complexity and increased efficiency**—Centralizes storage path management regardless of operating system or storage hardware
- **Storage connectivity virtualization**—Increases storage hardware choices
- **Opens communications between server and storage administrators**—Allows more informed storage decisions based on global visibility

Increased data availability

Business-critical workloads mean business critical data availability. If a path to a storage subsystem fails, Dynamic Multi-Pathing automatically reroutes I/O requests to an available alternate path, transparently, without requiring administrator intervention. When a failed path returns to a healthy state, the software restores the original path configuration automatically. With intelligent probes, Dynamic Multi-Pathing proactively monitors storage paths to identify failing paths before I/O is sent, thereby providing maximum availability and performance.

Optimized I/O performance

Maintaining and improving system and application performance is an ongoing challenge. Dynamic Multi-Pathing enhances I/O performance by distributing the storage workload across all available paths, according to predefined load-balancing policies. An administrator can select one of several policies, depending on the characteristics of the I/O workload, storage area network (SAN) layout, and performance needs while keeping systems online.

Reduced complexity and increased efficiency

If an IT organization is locked into a single storage vendor, it is likely that they are paying a premium for storage. By fully virtualizing connectivity from the host to storage, Dynamic Multi-Pathing increases data center agility and provides flexibility in choosing a storage vendor. Storage administrators benefit by being able to choose the type of storage hardware that best suits the organization's needs, knowing that the multi-pathing driver on the host either already supports that storage hardware or can easily be enhanced to support it. Dynamic Multi-Pathing supports more than 1,000 different storage array models from all of the leading vendors.

Storage connectivity virtualization

Managing the complex web of multiple data paths can be difficult due to decreased visibility and disparate pathing tools. InfoScale Operations Manager enables central management, monitoring and reporting across all Dynamic Multi-Pathing paths in a data center. Operations Manager centralizes path management across multiple server platforms to provide complete visibility into application, server, and storage resources. It further assists operators and administrators when they perform multi-pathing tasks. For example, by using a guided workflow, Dynamic Multi-Pathing reduces the complexity of managing thousands of I/O paths in case they need to be temporarily disabled for array maintenance.

Opens communications between server and storage administrators

The lack of a common language or reporting between systems and storage administrators can lead to confusion and misconfiguration. Combined with Operations Manager, Dynamic Multi-Pathing allows deeper visibility and reporting. It has the ability to discover and report more meaningful attributes of a device to the system administrator that traditionally were only visible to the storage administrator. This allows administrators to make more informed decisions, as well as allowing the system and storage administrators to refer to the same device names. Dynamic Multi-Pathing solves key challenges in device naming by using array specific identifiers in the device names, making them more meaningful and consistent. This reduces errors and enables more accurate troubleshooting.

Supported systems

- DMP: Red Hat® Linux, SUSE® Linux, Microsoft® Windows®, Oracle® Solaris™, IBM® AIX®, HP-UX®
- DMP for VMware: VMware ESX® 5.5, VMware ESX® 6.0

For a complete list of supported systems please check the Services and Operations Readiness Tool at **https://sort.veritas.com**

More Information

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Veritas Technologies LLC enables organizations to harness the power of their information, with solutions designed to serve the world's largest and most complex heterogeneous environments. Veritas works with 86 percent of Fortune 500 companies today, improving data availability and revealing insights to drive competitive advantage.

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