



SAN SETUP—PUTTING SERVERS ON THE SAN QUICKLY AND EASILY

IT ADMINISTRATORS NEED FAST AND EASY IMPLEMENTATION AND MANAGEMENT

Many technology advancements are designed to make tasks simpler, more efficient, and less time consuming. This is the case for recent improvements in SAN installation and server connectivity. With specific tools and operating systems, SAN connections for multiple servers can be “a walk in the park”—enabling fast installation and configuration as well as continuous monitoring and automated optimization.

SIMPLE SAN SOLUTION SETUP IN MINUTES

Recent advances now allow an operating system to be placed on the SAN in minutes, without reboots. Many operating system vendors have improved their SAN integration not only by providing iSCSI initiators, but also by enabling online installation. Plus, many operating systems support additional SAN feature integration—making installation of features such as Multi-Path I/O (MPIO), backup integration with snapshots, and even basic SAN storage provisioning significantly easier.

Dell™ EqualLogic™ storage arrays provide Host Integration Tools, allowing any Windows® system to be set up in minutes. Certified as a Microsoft Simple SAN Solution, the tools enable a new server with an installed Windows operating system to be integrated on the SAN in minutes—fully configured and working with no lengthy installation process, no reboots, and no licenses to buy or track. By automatically configuring hardware and software components such as management tools, initiators, feature drivers, and application integration modules, Dell makes getting your SAN up and running headache-free. Your SAN-aware operating system makes this possible, dramatically easing setup for every server.

In fact, not only will the Host Integration Tools install Windows Servers on the SAN, they also install and configure Volume Shadow Copy Service (VSS) for easy snapshot integration and Virtual Disk Service (VDS) for server-based storage provisioning. This system provides advanced features that simplify your environment (and the IT administrator’s life) for improved backup and recovery operations, automated management, low total cost of ownership, and enterprise-class reliability. With the Dell-Microsoft partnership for a Simple SAN Solution, configuration works on both physical and virtual servers, providing seamless operations regardless of current or future server deployments. And, the solution demonstrates once again that when the storage array and operating system work together easily, your IT infrastructure removes burdens from your IT staff instead of creating them.

With the Dell™ EqualLogic™ storage array Host Integration Tools, you can configure and install Windows® servers on the SAN in minutes and without reboots.



APPLICATION INTEGRATION: AUTO-SNAPSHOT MANAGER/MICROSOFT EDITION

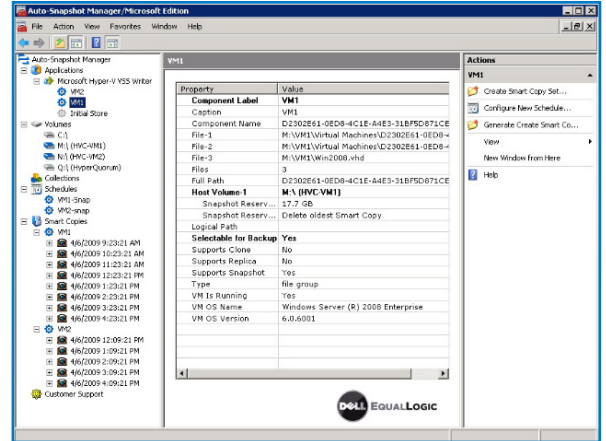
In addition to fast SAN setup, the Host Integration Tools provide application integration for Microsoft® SQL Server®, Exchange® and Hyper-V™. With Auto-Snapshot Manager/Microsoft Edition (ASM/ME), administrators can create and restore Smart Copy snapshots, local database clones, and remote replicas of NTFS file systems, Exchange storage groups, SQL Server databases, and Hyper-V virtual machines for fast online backups and quick restores. ASM/ME is also tightly integrated with VSS and VDS, eliminating the extensive scripting and configuration that other snapshot-based backups require. The ability to create application-consistent copies of these running applications with several quick-restore options maximizes your data availability and simplifies management.

Dell EqualLogic can also simplify MPIO configuration for Windows servers and PS Series storage. The PS Series Device Specific Module (DSM) eliminates the time-consuming, multi-step operation required to configure multiple data paths with iSCSI initiators. Instead, you gain significant time savings and the assurance that MPIO has been properly configured to maximize availability and performance. In addition, once in operation, PS Series arrays automatically monitor and load-balance I/O continuously without disrupting servers to ensure optimal performance, and when new arrays are added, loads are distributed and balanced automatically across all storage resources.

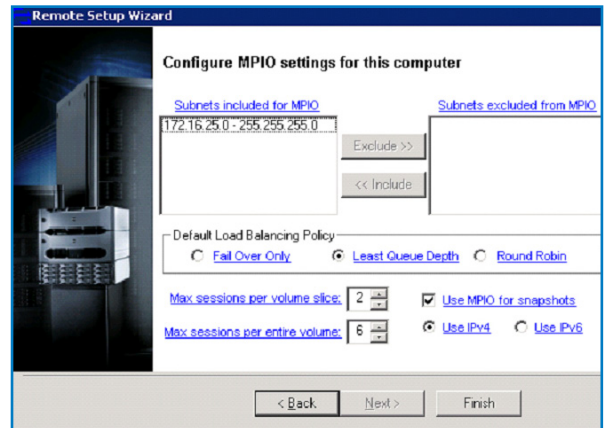
SAN HEADQUARTERS

Administrators can monitor all PS Series storage from a single location using SAN HeadQuarters multi-group performance and event monitoring tool (SAN HQ). SAN HQ collects performance, alarm, and health status from your PS Series Groups, and provides event monitoring and performance reporting to assist with operational planning, trend analysis, and troubleshooting. Flexible viewing options range from high-level Group summaries to sophisticated analyses, including detailed statistics on performance, latency, capacity, volumes, and network activity.

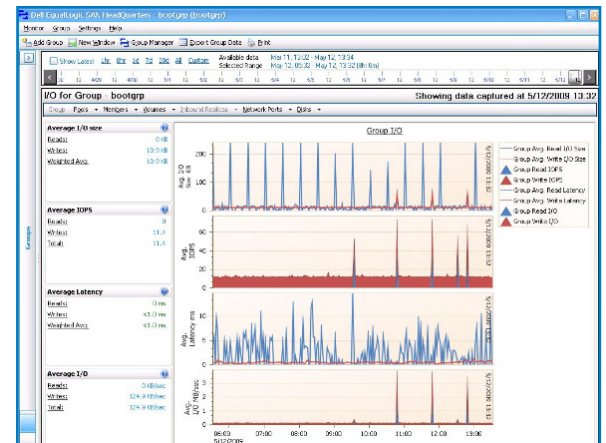
Technology advancements that simplify tasks and ease administrative burdens are extremely valuable—with Dell EqualLogic storage arrays and Host Integration Tools for Microsoft Windows, you can save time and money on your SAN implementation.



Application Snapshot Manager/Microsoft Edition (ASM/ME)



MPIO



SAN HeadQuarters