



AUTO-SNAPSHOT MANAGER/ VMWARE® EDITION

AUTOMATED, INTEGRATED, AND SCALABLE PROTECTION OF VIRTUAL MACHINES

SIMPLIFIED VIRTUAL DATA PROTECTION WITH AUTO-SNAPSHOT MANAGER/VMWARE EDITION:

- High performance, space-efficient hypervisor-aware SAN-based snapshot
- Automated, consolidated VM backup and recovery
- Scalable HW-based solution for online data protection
- Fast recovery of VMs and VMFS DataStores
- Easy to navigate Graphic User Interface with SAN and VMware-centric views
- Snapshot policies logically assigned to VM hierarchies

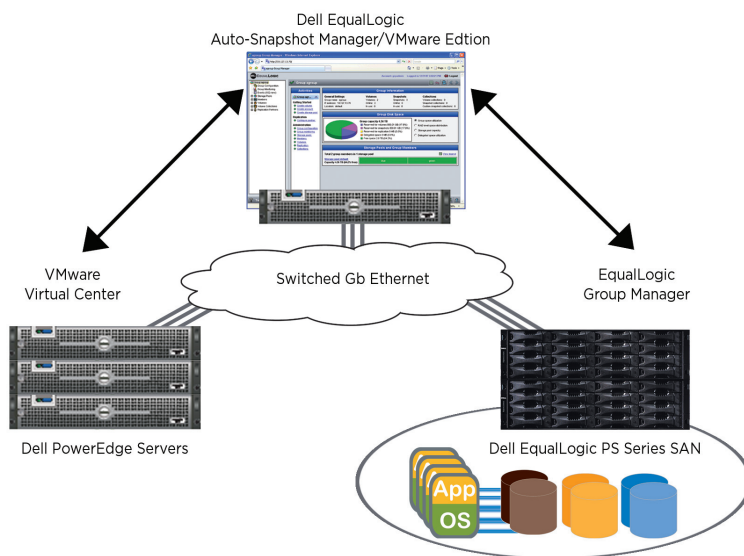
DATA PROTECTION INCREASINGLY DIFFICULT FOR CONSOLIDATED IT ENVIRONMENTS

As organizations consolidate more virtual machines (VM) on fewer servers and IT computing infrastructure is expected to support 7x24 operations, data protection and recovery becomes a greater challenge for IT managers. With nightly backup windows shrinking and more application data sets sharing fewer physical servers, both bandwidth and computing cycles require existing backup methods to be augmented with new technologies. Virtual server- and hypervisor-based snapshotting and replication tools are available today, but they can consume far too much of the physical servers' resources and less than optimal storage utilization. In both scenarios, data recovery is often slow and sometimes unreliable.

SAN-based data protection tools provide some relief. By offloading the snapshotting operations from the host servers, snapshots can be efficiently created and stored without using server resources. Unfortunately, SAN-based snapshots are not integrated, which may result in an inordinate amount of

time dedicated to data management and a concern as to whether the copies are in fact recoverable. Current SAN-based solutions often lack scalability, centralized management and tight integration with the server virtualization platforms they serve, while adding significant cost and complexity.

SIMPLIFIED VIRTUAL DATA PROTECTION MANAGEMENT FOR ENHANCED PERFORMANCE AND PROTECTION



Auto-Snapshot Manager/VMware Edition (ASM/VE) is a new innovative data management tool that is designed to enhance the speed, quality, and scalability of data protection in a VMware environment. ASM/VE coordinates and manages SAN-based snapshots of virtual machines residing in VMware VMFS file systems, offloading the ESX Server of snapshot processing. As with all of the Dell EqualLogic advanced data protection and disaster recovery features, ASM/VE is included at no additional cost or licensing fees.

SCALABLE, INTEGRATED DATA PROTECTION FOR VMWARE ENVIRONMENTS

Auto-Snapshot Manager/VMware Edition (ASM/VE) is a unique and innovative data protection feature of the Dell EqualLogic™ PS Series iSCSI SAN that enables fast online backups and quick restores of VMware virtual machines and VMFS file systems. ASM/VE provides an easy-to-use graphical interface that coordinates the creation, recovery and scheduling of PS Series snapshots with VirtualCenter and VMware's native snapshotting technology,

helping to provide enhanced protection, storage utilization, and performance of VMware-based virtual infrastructures. The resulting Hypervisor-aware snapshot (Smart Copy) can be now easily and rapidly recovered.

Integrated directly with standard VMware application programming interfaces (APIs), Auto-Snapshot Manager/VMware Edition understands the relationships and location of virtual machines, VMFS Datastores, and PS Series SAN-based volumes. With intuitive SAN and VMware-centric navigation and a built-in scheduler, the VMware administrator can simply and flexibly set snapshot creation schedules of individual virtual machines, groups of virtual machines, or even all virtual machines in a VMware Datacenter, coordinating snapshot creation across all SAN-based volumes upon which the virtual machines reside.

BENEFITS OF DEPLOYING AUTO-SNAPSHOT MANAGER/VMWARE EDITION:

- **Simple and Rapid Deployment**
ASM/VE can be flexibly deployed as a virtual machine for fast and cost-effective data protection.
- **Quick, Scalable Quick, Scalable Creation of VMFS-consistent Snapshots**
Using advanced API-based integration with VMware's VirtualCenter, ASM/VE automates the creation of coordinated SAN-based point-in-time Smart Copies of the entire virtual infrastructure. Create Smart Copies of individual VMs, VM folders, data stores, clusters and even the entire data center for maximum scalability.
- **Quick Recovery of Virtual Machines from SAN-based Snapshots**
With just a few clicks, virtual machines and virtual machine data sets can be quickly recovered and brought back online, allowing organizations to get back to business faster.

- **Simpler Data Management Through Graphical Navigation**
With multiple logical data views, easy navigation, and a built-in scheduler, administrators can simply define data protection policies, create online backups, and quickly recover their data, all with just a few button clicks.
- **Automated Snapshot Scheduling**
Using its built-in scheduler, ASM/VE simplifies data management by providing automatic periodic snapshot creation of individual virtual machines, VMFS DataStores, and the entire ESX Cluster.
- **Integrated VirtualCenter Organized Views**
With intimate knowledge of VMware's virtual machine folder hierarchy, ASM/VE consolidates data logically, allowing administrators to intuitively manage their data, reducing learning curves and the potential for mistakes.
- **Enhanced Performance, Scalability and Protection**
By offloading snapshot processing to the PS Series SAN, ASM/VE enables virtualized server environments to scale better and perform more efficiently.
- **VM Copies for Test and Development**
Gain new insight into your VMware Infrastructure by using ASM/VE-created snapshots to analyze performance, software updates, and interoperability. Quickly and easily use snapshots to test new patches or software builds in your environment.

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