

SANtricity® Storage Manager

SANtricity® Storage Manager software provides a powerful, yet easy to use, Java-based GUI for administering Pantera storage subsystems – Model E500. SANtricity software enables online configuration, reconfiguration, expansion and maintenance, provides a consistent interface across all operating systems, and allows Model E500 storage subsystems to be monitored and managed from any location on the network. SANtricity software's premium features — SANshare® Storage Partitioning, volume snapshot, volume copy and remote volume mirror — are fully integrated, creating a single point of control for all storage administration, partitioning and replication functionality.

HIGHLIGHTS

- Perform management tasks online without disruption
- Broad range of platform support
- Create as many as 64 logical arrays and up to 1,024 volumes (LUNs) with SANshare Storage Partitioning
- Create point-in-time (PiT) images with Volume snapshot
- Create a complete physical copy of a volume within a storage system with Volume copy
- Implement Disaster recovery via continuous mirroring of local data to a remote storage system with RVM

FEATURES

Centralized management – monitor and manage all Model E500 storage subsystems from any location on the network.

Intuitive GUI – SANtricity software's array management window (AMW) displays information about the storage system's logical components, physical components, topological elements and volume-to-LUN mappings in an easy to understand interface.

Configuration flexibility – All volume settings are configured individually to ensure the exact desired characteristics for a specific volume are met. Volume configuration settings include: capacity, segment size, modification priority, enable/disable read cache, enable write cache (write back), disable write cache (write through), enable/disable write cache mirroring, read-ahead multiplier, enable/disable battery-backed write cache and enable/disable background media scan with or without redundancy check.

Online administration – SANtricity software enables all management tasks to be performed while the storage remains online with complete read/write data access. This allows storage administrators to make configuration changes, conduct maintenance or expand the storage capacity without disrupting I/O to its attached hosts. SANtricity software's online capabilities include:

- Dynamic expansion with HotScale™ technology enables new drive modules to be added, volume groups to be configured, and volumes to be created without disrupting access to existing data. SANtricity software's "hot add" features enable the new volumes to be instantly mapped and accessed by a host(s)
- Dynamic capacity expansion (DCE) adds up to two drives at a time to an existing volume group, creating free capacity for volume creation or expansion.
- Dynamic volume expansion (DVE) allows you to expand the capacity of an existing volume by using the free capacity on an existing volume group.
- Dynamic RAID level migration (DRM) changes the RAID level of a volume group and Dynamic segment size migration (DSS) enables the segment size of a given volume to be changed.
- Dynamic defragmentation rearranges volumes and consolidates free capacity within a volume group resulting in optimized access patterns for existing and newly created volumes.
- Non-disruptive controller firmware upgrades (no interruption to data access).



Unique configuration metadata – Model E500 storage subsystem's controllers store configuration metadata in a private region on every configured drive called the DACstore. The nonvolatile DACstore provides the highest availability and enables controller-level upgrades and drive-level reconfigurations as system requirements change. The entire system can be upgraded when a capacity or performance boost is desired. Drives can be relocated within the storage system to improve channel utilization/protection or even migrated as a complete volume group into another storage system. And in each instance, all configuration and user data remains intact on the drives.

Highest availability – SANtricity software ensures uninterrupted access to data with automated path failover, online storage management and support for up to 15 global hot spares.

Intuitive diagnostics and recovery – The Recovery Guru provides valuable troubleshooting assistance by diagnosing storage system problems and determining the appropriate procedure to use for recovery. The Recovery Guru displays a summary list of storage system problems, detailed information about a selected problem, and recovery steps to follow for the selected problem.

PREMIUM FEATURES

SANshare Storage Partitioning can create as many as 64 logical arrays and up to 1,024 volumes (LUNs) from a single Model E500 storage subsystem. Its heterogeneous host support enables storage consolidation implementations in multi-platform environments. SANshare's logical partitioning combined with SANtricity software's robust configuration capabilities enables administrators to choose from a range of volumes with different characteristics to meet a server's exact needs for a given LUN. This flexibility enables a range of hosts with different capacity, performance or data protection demands to effectively share a single Model E500 storage subsystem. And SANshare partitioning storage-based implementation ensures data integrity by regulating volume access at the controller level.

Volume snapshot creates a point-in-time (PiT) image, or logical copy, of a storage volume — enabling secondary servers to access a suspended version of production data for a variety of applications including backup, application testing or development, information analysis or data mining. The capacity-efficient snapshot volume can also be used for fast file restoration, saving the time and expense of going to a tape archive. And SANtricity software's DVE feature can be used to dynamically expand the repository volume ensuring the snapshot stays active even if it's maintained longer or encounters higher write activity than expected.

Volume copy creates a complete physical copy (clone) of a volume within a storage system. The clone volume is a unique entity that can be assigned to any host and used by applications requiring a full PiT copy of production data without affecting the performance of the production volume. Volume copy can also improve application performance or optimize capacity utilization by relocating volumes to faster or higher-capacity drives. And since the clone volume can reside on a different volume group with different RAID level and different configuration settings volume copy provides storage administrators with maximum flexibility.

Remote volume mirror – RVM protects the information stored on your Model E500 storage subsystems by continuously replicating local data to a remote storage system. For each set of volumes that comprise a mirror pair, RVM supports a variety of replication options to provide administrators with the flexibility to optimize data protection and utilization. RVM's robust functionality includes multiple data transfer modes, dynamic mode switching from one mode to another without suspending or breaking the active mirror, suspend/resume with delta resynchronization, and the ability to create a volume snapshot of the remote data while the mirror remains active. Additionally, support for cross mirroring enables two separate systems to function as remote disaster recovery sites.