DataCore SANsymphony™ 6.0 Enterprise Edition

DataCore Software has significantly extended the capabilities of its flagship, enterprise storage virtualization and management software. SANsymphony 6.0™ Enterprise Edition software sets a foundation for the future and advances the art of SAN data protection, automation, interoperability and usability. Built upon years of experience gained from DataCore's thousands of storage virtualization deployments and users, SANsymphony 6.0 delivers new features, tools, enhancements, and innovative capabilities that empower users with greater control to regulate and manage their storage infrastructures.

"DataCore Software's SANsymphony 6.0 represents the next generation of virtualization. It begins to change the focus of the conversation from how companies manage their storage to how they manage their enterprise" --Jerome M. Wendt, Chief Analyst and President, Datacenter Infrastructure Group Inc.

Higher Level, SAN-Wide Control Places IT Managers in Command

- SAN Domains: Easily set up intelligent virtual SANs within the larger physical SAN environment in order to dramatically improve resource, performance and Quality of Service (QOS) management. Industry-standard storage and infrastructures can be managed as sets of services and shared resources that can be dynamically defined for and allocated to different business units or projects. Quality of Service (QOS) can be regulated and assured to all clients, including virtual machines; highly productive and cost-efficient Tiered Storage environments can be readily achieved; and Service Level Agreements (SLAs) can be met.

- Far-reaching, 'Span the SAN' usability and productivity services allow many operations and policies to be applied against entire groups of resources. IT Managers can now work across the SAN and set policies to regulate and automate capacity growth, data protection levels, and performance, non-disruptively, to address changing business demands. Instead of spending the bulk of their time performing repetitive detail level tasks, IT Managers gain time to focus on more important issues - their business applications and user needs.

- A new, advanced User Interface that elevates control and monitoring to a higher vantage point. SANsymphony 6.0 transforms control and monitoring by allowing the user to manage resources and services at each level or grouping within the entire SAN Infrastructure (volume lists, sets of paths, groupings, storage pools, regions, domains, etc.), going well beyond the device and volume level of monitoring and control to which SAN administrators were previously limited.

- Point and Click Administrative Simplicity; Powerful Storage Network and Storage Pool-wide Commands. SANsymphony 6.0 adds a higher level command structure that lets users manage greater complexity and scale by directing higher level objects (groups, storage pools, selected device lists, etc.) and attributes (high availability, channel paths, etc.), instead of only directing individual devices and disks within the infrastructure.

- Tiered Storage and Storage Classes: Heterogeneous Storage Device Management. SANsymphony 6.0 simultaneously supports and can organize through priority classes a broad range of disk storage devices (i.e., Fibre Channel, SCSI, SAS, IDE, SATA, etc.) and vendor independent storage arrays (i.e., IBM, EMC, HDS, HP, etc.) that can be directly connected or switch connected. All SANsymphony 6.0's high-end features (i.e., synchronous mirrors, snapshots, asynchronous mirrors, static or thin provisioned virtual volumes, SAN Domain controls, etc.) can be applied to all of these different types of storage subsystems under the SANsymphony management umbrella.

- New Data Migration and Re-Purposing Capabilities

- Network-wide Auto Discovery and Diagnostic Utilities

- Sophisticated I/O Monitoring Tools and Virtual Storage Performance Objects

- Remote Management Console: "Manage the SAN from Your Office" enables "lights out operation" remotely.

- Intuitive Central Management and Administrator Console to simplify storage management across the SAN infrastructure and to monitor domains, storage pools, I/O performance, resource usage and alerts and alarms .

A Next Generation Architecture for Greater Protection, Connectivity and Service

- Next-Generation N+1 GRID Scalability, Business Continuity and Data Protection services that surpass conventional clustered or dual controller systems in failover protection and time to recovery, as well as ease of configuration, change and growth. Storage hardware failures can be automatically overcome with no or minimal disruption. Scalable on a single node increment basis. Supports iSCSI or Fibre Channel (FC) or Hybrid net between nodes.

- Enterprise Level iSCSI delivering for iSCSI-based networks true equality with enterprise-level, Fibre Channel SANs. An industry-first, SANsymphony 6.0's support for hybrid mixed mode multi path I/O drivers allows, for example, the use of FC connections as a primary path and iSCSI over Ethernet as secondary path in failover scenarios for greater flexibility and additional cost savings.

- Comprehensive, End-to-End, SAN Failover, Disk Backup and Migration across FC iSCSI or both, resulting in true "wire agnosticism" without sacrificing enterprise service levels. Services include high availability protection (e.g., synchronous mirrors), disk backup and migration capabilities (e.g., SANmotion, snapshots), and storage capacity automation (i.e.., thin provisioning).

- Full range of local and remote data replication. Synchronous (real-time) high availability remote mirroring over iSCSI or FC or both. Asynchronous (store and forward)

LAN/WAN IP-based remote mirroring. Point-in-Time Snapshots. Fast disk to disk backup services.

- New, High-Availability, Thin Provisioning Storage Pools enabling a new level of redundancy and data protection across storage pools.

- H/A Support distributed over distances; Co-localize storage to clusters.

- New classes of virtualization services, beginning with Traveller™ time addressable CDP volumes.

Optimized and Automated for High Production Environments

- Adaptive, High Performance Software Cache that automatically adjusts based on workload patterns to accelerate storage I/O (reads/writes), typically by a factor of 2-4X.

- Automation Built In Throughout: Thin Provisioning, Auto Failover, Auto Recovery, Network Auto-Discovery, etc. Non-Disruptive Capacity Allocation that increases allocated disk capacity "on the fly." Resizing facility to accommodate unforeseen data capacity expansion.

- Smart Auto-Recovery Services that prioritize data volume recovery to speed up critical business applications. User-definable, Prioritized Mirror Recovery.

- Data Protection without impact to production.

- Powerful, Non-Disruptive Data Migration and Re-Purposing Capabilities

- Applications can be provisioned with storage instantly and recovered at the same or remote locations easily – regardless of the operating system and hardware.

SANsymphony 6.0: Flexible and Productive Virtual Storage Infrastructures

- Centralized and Simplified Management for greater staff productivity.

- Optimal Resource Utilization, plus the flexibility to address change and growth

- Hardware Independence: The freedom to choose any server or storage. Liberates infrastructures from the high cost of limited choices.

- Industry standard FC or SCSI disk storage technologies. Independence from back-end storage types (SATA, EIDE [ATA], FC, SCSI, SAS, etc). Bridging across different protocol types (e.g., Fibre Channel to SCSI, SAS, etc.)

- Network Choice: iSCSI or Fibre Channel or hybrid. With SANsymphony 6.0's innovative iSCSI support, any conventional Ethernet LAN-connected system - even

wireless - can partake of the storage pool and still experience surprisingly fast performance. At the same time, higher performance iSCSI and mission-critical Fibre Channel connected servers can still utilize the storage resources.

- Serves Virtual Storage to Windows, MacOS, Linux, Netware, Many UNIX variants including Solaris and AIX, VMware and other VM platforms.

- High-Availability design throughout to avoid costly downtime impacts.

- Broad Range of Business Continuance and Disaster Recovery Options. Protects critical applications at one or more remote contingency sites. DataCore offers Synchronous Networking Mirrors over FC or iSCSI connectivity, and an Asynchronous IP Mirroring (AIM) option that operates over conventional LANs and WANs using standard TCP/IP. In both cases, the originating and remote sites may use dissimilar storage equipment.

- Scalability and Performance for the Entire Organization. As the number of storage consumers and performance requirements grow, SANsymphony can scale economically by configuring the underlying commercial hardware platforms with faster processors, more memory and more host and storage ports. In addition, each additional storage server node brings a corresponding expansion in aggregate I/O bandwidth and throughput.

A New User-Driven Era in Storage and SAN Infrastructure Management

With SANsymphony 6.0, DataCore Software ushers in a new generation of transparency and integration, grouped operations, and automated management. Many of the changes are subtle in appearance and, in some cases, invisible to the user. Current SANsymphony customers can be confident that they will find version 6.0 comfortable, familiar and easier to use. What is different is that SANsymphony 6.0 is much more powerful, and not only in performance and features. SANsymphony 6.0 elevates SAN management, control and automation from the arduous and limiting, individual device and volume level, to higher level, logical units with the SAN Infrastructure, such as volume lists, sets of paths, groupings, storage pools, regions, domains, etc., and to higher level attributes, such as high availability, channel paths, etc., on a SAN-wide basis. The result is that IT managers now have power over forests, not just the trees. With SANsymphony 6.0, the needs of users, not hardware, prevail.

And there is more to come:

"SANsymphony Enterprise Edition 6.0 is the first half of our Virtualization II strategy, and as such it lays the architectural foundation for the future. In the second half of Virtualization II, these capabilities will continue to be advanced and the SANsymphony kernel will be updated to an entirely new 64-bit storage kernel." -- Ziya Aral, Chairman and CTO, DataCore Software.