



Kayo 2.0 Features and Benefits

Kayo provides the simplicity of LAN-based file sharing to SANs.

As you move from a direct attached storage solution to SAN architecture you may ask yourself, “ What additional software functionality must I add to allow the sharing of files through the SAN”? Your quest is to optimize SAN cost and increase productivity through improved data sharing.

SANs bring you storage consolidation, improved availability, improved performance, greater scalability, centralized storage management and data backup without affecting current network performance; However, you need additional software to provide you the power of data sharing.

Kayo is a software tool that enables SANs to be more than just consolidated storage, it allows SAN users to work collaboratively and share data within a workgroup of users at Fibre Channel speeds; allowing users to do more work in less time.

Kayo was developed as a complementary solution to Windows NT/Windows2000, to seamlessly provide added functionality to the OS, allowing multiple workstations or hosts to share files through the SAN.

Kayo 2.0 supports all standard Windows NT and Windows 2000 applications and can be utilized in the following environments:

- Digital Video and Audio editing
- Pre-Press
- Web farms
- Clustered servers
- CAD/CAM
- All Windows NT/Windows 2000 SANs, requiring file/volume sharing.

Benefits of Kayo 2.0:

- **Increased access to data through SAN volume/file sharing. The ability to read and write to multiple volumes on a SAN.**

With Kayo, multiple systems or workstations can simultaneously share data, greatly increasing workgroup productivity. With the appropriate privileges, virtually any application in the SAN can access and share any file, at any time, at Fibre Channel speeds.

- **No additional training required**

Kayo provides an easy to use, intuitive interface saving precious learning time and money. Configure your storage as you always have, using the tools within Windows.

- **Works with any storage and most HBA's**

Kayo works in an open environment giving the user the ability to choose the best platform value for the application.

- **Lower cost of ownership than other comparable systems**

Kayo provides better value than competing solutions.

- **Works in stand-alone and clustered servers**

Regardless if the SAN configuration has clustered systems or not, Kayo provides the ability of data sharing.

- **NTFS native solution**

Kayo is an NTFS native solution, providing compatibility with existing and future operating systems, applications and management utilities, access control and security.

- **Automatic data updates to SAN users**

The automatic refresh function (ARF) updates all Kayo users when a change is made to a file/volume. Thus, SAN users are ensured of always being aware of changes made by other users on the SAN.

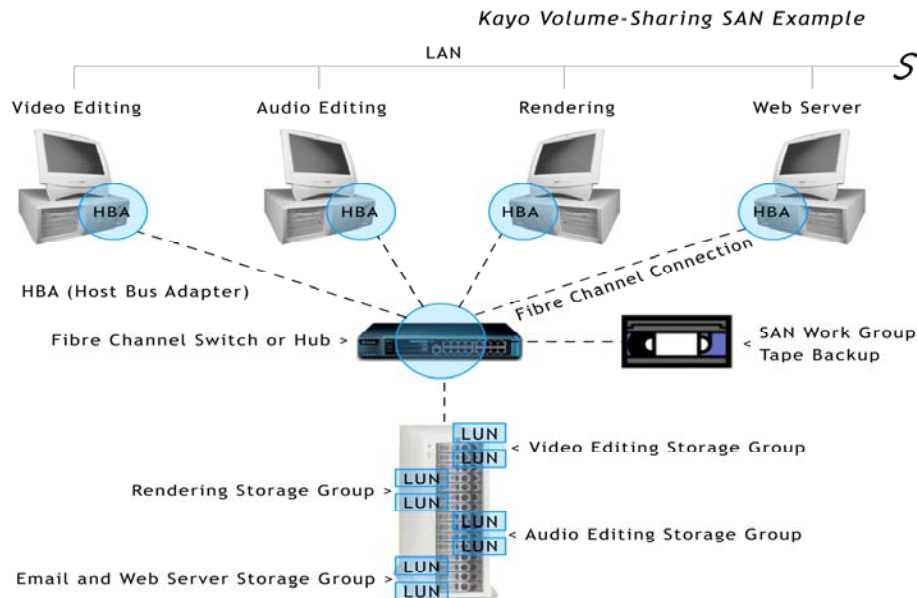
- **Increased reliability**

Should one server or workstation in a SAN fail, with Kayo another computer can easily access that file/volume. Thus, Kayo can also be used to implement preventative measures to reduce unscheduled downtime of revenue generating applications.

- **ROI, Can pay for itself in the first month of use**

Kayo can reduce storage costs by better utilizing or eliminating the use of redundant storage. The real impact, however, is that Kayo 2.0 will improve many of your operational tasks, but it will also raise your company to increased level of efficiency and competitive advantage.

A More Detailed Look at Kayo 2.0



Kayo Adds functionality to share files/volumes within Windows NT and Windows2000 SANs; all readers can share a file; while write privileges to a file are assigned on a volume basis.

- SAN volume sharing - Kayo provides read and write access to the same volume from multiple machines. Unmanaged write operations from several machines to the same volume will inevitably corrupt data. Kayo resolves this issue by allowing only one computer at a time to write to a given volume. The write access is automatically transferred between computers on the SAN, so each one of them can write data to the volume as the need arises.
- Transparent to the user - Kayo integrates seamlessly into the Windows environment after the initial setup. Kayo is incorporated into the Windows Explorer interface and is a hardware independent solution.
- Automatic update – SAN users want to share the most up-to-date information that the writing computer has put to the volume. Modern operating systems use caching to increase performance, but these techniques may get in the way in a SAN environment. The OS assumes that there is no reason for cache update, since

it has changed nothing on the volume - being unaware to the fact that another machine has written new data to the same volume. Kayo takes care of cache synchronization and makes sure that all machines 'see' an up-to-date copy of the data on the volume.

- Increased reliability - a SAN with Kayo can be designed without a single point of failure. Kayo systems are organized in a kind of a peer-to-peer network. There is no main or central computer, such as a metadata server. With Kayo, if a system goes off-line due to a hardware or software failure or because it is just turned off, the other systems still can access the volumes/files on the central storage and remain fully functional. Kayo also has built-in fault tolerant functions to avoid possible data corruption resulting from domain break down (LAN or FC). Kayo relies on another network beyond FC (i.e. TCP/IP) to relay its system communications, thus, it is theoretically possible a malfunction in this network to divide it into two non-connected, but still working networks. Kayo uses an additional mechanism for another level of protection, preventing what technicians refer to as the “split brain problem”. Kayo is designed to ensure the maximum level of data sharing, maximum up-time and maximum productivity for the users.

About Sanbolic:

Sanbolic's mission is to provide advanced software products and solutions to address the infrastructure needs of the storage area network (SAN) market. It was founded by early adopters of SAN technology to develop platform-independent solutions that provide true interoperability and compatibility.

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