

The Bungie logo is displayed in a large, black, sans-serif font with a blue dot over the 'i'. To the right of the logo is a screenshot from the Halo franchise, showing a Spartan in blue armor holding a weapon, with a large, dark, curved object in the background.

BUNGIE®

Bungie Studios Uses Sanbolic's Melio File System for a Scalable and Secure Windows Storage Server 2003 NAS Deployment

Bungie Studios is a division of Microsoft Game Studios and a leading developer of interactive games. Founded in 1991, Bungie Studios designs games that combine brilliant technology, art, intelligent stories and deep gameplay. Over the past 10 years Bungie Studios has produced games such as the "Marathon Trilogy," the first two "Myth" games, and the "Halo" franchise, hailed as classics by critics and gamers around the world. Released in 2004, the award winning "Halo 2" for Xbox has achieved phenomenal success and has sold more than 7.5 million units worldwide.

Bungie Studios recently implemented a workgroup solution using SAN file sharing that allows their development team and outside testers to share data in a protected scalable NAS environment without having exposure to network or system intrusion.

Bungie Studios needed to install a solution that allowed file sharing between two separate domains/networks without creating a routed network relationship— allowing the ability to keep two

environments separate yet, easily move assets back and forth securely. In the past, the only way to transfer files between networks was with removable storage such as USB drives. Bungie Studios investigated cluster products from various vendors, but most required the host servers to be located on the same domain and network.

Steve Lopez, IT Manager of Bungie Studios, ultimately selected Sanbolic's Melio clustered file system, since it enabled shared access to data without requiring both hosts to be on the same domain. "We needed a way to securely share files between domains and networks without using a routed network relationship or VPN. Melio enabled us to do this by allowing two hosts that are not in the same domain to share a single volume." Using Melio file system, multiple Windows Storage Server 2003 file servers can be clustered into a common file system on external SAN storage. All storage servers have concurrent read and write access to the shared storage, so a file call can be processed by any of the Storage Servers.

For the Bungie Studios solution, Melio clustered file system was installed on internal and external Windows Storage Server 2003 NAS heads, all of which shared access to data volumes on the SAN. This allowed the development team and the outside testers to share data and projects in a protected NAS environment and only interact through the SAN without having any exposure to network or system intrusion. Over 100 users utilize the solution. Melio's capability to run in-band or out-of-band communication between the NAS heads is critical in this type of deployment. Bungie can use domain security using standard Windows ACLs on both domains to control access to the same set of data.

The solution is based on HP Servers running windows storage server 2003 R2. One is on Domain A; the other is on Domain B. They connect via fiber HBA to an HP MSA1000 SAN and share a volume created there.

More information on Bungie can be found at <http://www.bungie.net/>.

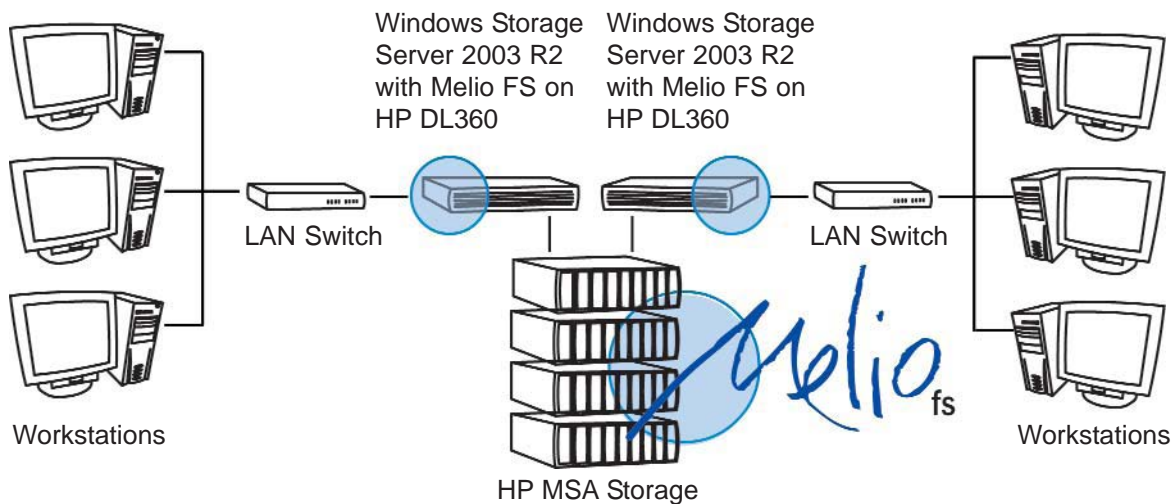
About Sanbolic, Inc.

Sanbolic, Inc is a Watertown, Massachusetts-based company that provides software for sharing and

simplifying shared SAN storage environments. Sanbolic's shared data SAN solutions extend the capability of Windows Servers and Workstations. These solutions provide important economic and functional benefits for Windows datacenter applications as well as for video, imaging, and streaming applications. Sanbolic Software supports Windows XP, 2000, and Server 2003 platforms, including Server 2003 R2. For more information, please visit www.sanbolic.com.

KEY BENEFITS

- + Ability to move between domains without dedicated network connection
- + Securely use domains to control access
- + Simplicity of use for end users; machines are named the same name; path stays constant end users see a normal file share
- + Complete support for windows ACL and seamless integration with Active Directory



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