



## Using Melio FS and LaScala with Hyper-V 2008 R2 and System Center Virtual Machine Manager 2008 R2

### Overview

Sanbolic's Melio FS and LaScala can provide a high performance shared LUN for Hyper-V hosts, and can also provide a shared application data LUN for Hyper-V virtual machines. When configuring Hyper-V clusters within System Center Virtual Machine Manager 2008 R2, the use of a shared storage resource is selected by highlighting storage option: Clustered Shared Volumes. It is important to note, however, that Melio FS is a separate product from Clustered Shared Volumes and has no dependency on NTFS.

Melio FS is a 64bit cluster file system that provides multiple servers with simultaneous access to data stored on the same storage partition or Logical Unit Number (LUN) on a SAN. As a general-purpose cluster file system, Melio FS supports access to **all** data types stored on the LUN, not just VHDs, and can support LUNs as large as 18 million terabytes (TBs). Employing advanced transaction managers, a symmetrical architecture, full journaling, and dynamic clustering capabilities, Melio FS ensures the integrity of the data stored on the shared LUN by controlling read/write access by multiple servers at any given time.

LaScala is a host-based volume manager that incorporates advanced transaction management, locking, and clustering technology based on the Melio FS technology. Using LaScala, multiple hosts can share access to and administer storage volumes spanning multiple storage controllers and access to volumes for each host can be defined using native Window ACLs and Active Directory. Used in conjunction with Sanbolic's Melio FS, LaScala provides high performance shared access to data on volumes striped across many disks residing on multiple storage controllers.

### Key Benefits of Using Melio FS/LaScala as a Shared Resource for Hyper-V 2008 R2 and SCVMM 2008 R2 Deployments

- **Shared LUN solution for Hyper-V 2008 and Hyper-V 2008 R2 supports Quick and Live Migration, even for high I/O applications**
- **Concurrent shared access to application data on SAN storage from virtual machines improves flexibility and availability, as well as application scale-out**
- **Central configuration and dynamic assignment of storage using LaScala clustered volume manager**
- **Supports large host clusters—can provide a shared access to a LUN containing VHDs to more than 200 hosts**
- **No volume size limitations**

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- **Storage performance monitoring and quality of service assignment**
- **Distributed snapshot capability**
- **Installs easily using any SAN storage**
- **Designed for easy integration with Windows Server 2008, Windows Sever 2008 R2, and System Center Virtual Machine Manager 2008 R2**

### **Installation Requirements Hyper-V R2 Hosts**

OS requirements - Windows Server 2008 R2 Enterprise or Datacenter edition

Software requirements –Hyper-V role, Failover Clustering feature, Melio FS, and LaScala

Failover Clustering - fully functioning two-node cluster, configured with an appropriate quorum resource  
<http://technet2.microsoft.com/windowsserver2008/en/library/13c0a922-6097-4f34-ac64-18820094128b1033.msp?mfr=true>

Storage requirements – access to shared storage by Fibre Channel, SCSI or iSCSI or other qualified block level access

Network requirements – at least 1 network adapter per server dedicated to network communication

Hardware requirements – Two identical architecture server computers which have passed the Failover Clustering Hardware Validation <http://technet2.microsoft.com/windowsserver2008/en/library/13c0a922-6097-4f34-ac64-18820094128b1033.msp?mfr=true>

### **Installation Requirements Hyper-V R2 Virtual Machines**

OS requirements - Windows Server 2003, 2008, or 2008 R2 (any version)

Software requirements – Melio FS and LaScala

Storage requirements – access to shared storage by Fibre Channel, SCSI or iSCSI or other qualified block level access

Network requirements – at least 1 network adapter per server dedicated to network communication

Hardware requirements – Pentium II class CPU 256 MB RAM equivalent, 5 MB disk space

Evaluation software is available at [www.sanbolic.com](http://www.sanbolic.com)