

EMC NetWorker: Complete Protection for Microsoft Hyper-V

The Big Picture

- Provides flexible protection and recovery of virtual servers
- Ensures quick restore and off-host backup through instant low-impact snaps and clones
- Provides easy scheduling and management
- Reduces backup impact on shared physical resources through data deduplication
- Ensures valuable corporate data is safe and available
- Provides single-step recovery from disk or tape

Data protection for Microsoft virtualization

Microsoft[®] Hyper-V[™], available with Microsoft Windows[®] Server 2008, enables increased hardware utilization and accelerates server deployment and management. Virtualization also enables new options to store, protect, and optimize information. EMC delivers the first complete solution for backup and recovery of Hyper-V to help you effectively and efficiently protect virtual servers and realize the cost, service-level, and agility benefits that Microsoft virtualization technologies deliver.

Complete backup and recovery with EMC NetWorker

EMC[®] NetWorker[®] enterprise backup and recovery software centralizes, automates, and accelerates data protection across heterogeneous IT environments. To protect Hyper-V, NetWorker leverages the Microsoft Volume Shadow Copy Service (VSS) to deliver snapshot-based protection and recovery for the entire Hyper-V server environment, including parent and child partitions (guests).

The EMC NetWorker Module for Microsoft Applications provides a single, unified solution that not only protects Hyper-V and Windows Server 2008, but also enables non-disruptive backup of the applications running within virtual machines, including Microsoft Exchange Server, SQL Server[®], and Microsoft Office SharePoint[®] Server.

Off-host backup and deduplication

NetWorker takes advantage of hardware-based VSS snapshots to deliver off-host and LAN-free backup to disk, tape, or virtual tape. NetWorker also integrates with EMC Avamar[®] to deliver deduplication within and across virtual machines. Deduplication significantly reduces the volume of data moved and stored for backup, which dramatically lessens resource utilization on highly consolidated host servers. These options deliver significant benefits, including the following:

- Provides faster backups
- Eliminates traffic from your network
- Improves the performance of production virtual machines
- Helps you get the most value from server virtualization

Hyper-V parent partition backup

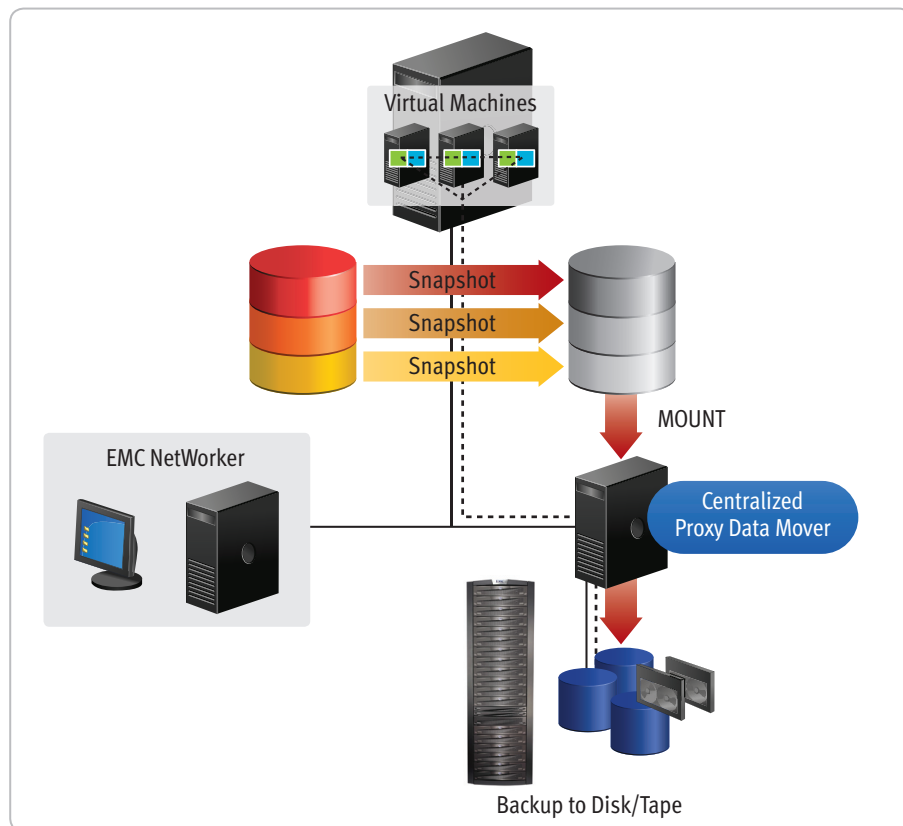
At the parent level, NetWorker simplifies full protection for the Hyper-V physical server. Users can easily back up and recover the server operating system, system state, data volumes, and Hyper-V configuration database. Leveraging the Hyper-V VSS Writer, NetWorker also executes full-image backups or snapshots of Hyper-V child partitions.

VSS quiesces the Microsoft Windows operating system, as well as the applications within the child partition (guest), for OS and application consistency. NetWorker supports all Hyper-V guest operating systems, including Microsoft Windows Server 2008, Windows Server 2003, Windows Vista[®], Windows XP, and SUSE Linux. Support for off-host backup eliminates performance impacts from production Hyper-V servers.

Hyper-V child partition backup

Within the child partition, NetWorker executes application-consistent backups of Microsoft Exchange, SQL, and SharePoint. Application-aware backups provide fine-grain recovery with application log management to ensure maximum flexibility in data recovery. Support for off-host backup of child partitions removes the impact of backup from production Hyper-V servers.

EMC NetWorker delivers quick off-host backup of entire Hyper-V environments



Flexible recovery to meet demanding service levels

The persistent snapshot management of NetWorker enables fast and efficient snapshot restore and rollback for quick Hyper-V recovery. Hyper-V data saved on secondary media such as disk, virtual tape, or tape is also quickly recovered in a single step when needed. To ensure recoverability in dynamic virtual environments, data can be directed to original or alternate locations.

Application support	VSS provider support
Microsoft Exchange Server 2007 (SP1) x64	Windows VSS System Provider
Microsoft Exchange Server 2003 (SP1/SP2) x86	EMC VSS Hardware Provider (EMC Symmetrix®, EMC CLARiiON®, EMC Celerra®)
Microsoft SQL Server 2005 (SP2) x64/x86	Dell EqualLogic VSS Hardware Provider
Microsoft SQL Server 2000 (SP4) x86	IBM System Storage DS6000 and DS8000 VSS Hardware Provider
Microsoft Office SharePoint Server 2007 (SP1) x64/x86	
Microsoft SharePoint Portal Server 2003 (SP1) x64/x86	
Microsoft Windows SharePoint Services 3.0 and 2.0	



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