



Enterprise Data Protection for Virtual Environments

While virtual environments enable IT to reduce costs by consolidating hardware and increase server utilization, the reduction in capital expenses can be easily offset by an increase in operating expenses. In particular, data protection becomes more complex for virtual environments. All layers of the virtualization must be protected, and files from any layer must be readily available for restoration. The right solution: dedicated support for virtual environments integrated into your enterprise data protection solution.

Intelligent Backup to Protect VM Data

Atempo Time Navigator offers dedicated modules for the most popular virtualization platforms from VMware, Microsoft and Citrix. These integrated modules allow you to back up the virtual environment alongside with your standard backups, to either disk or tape media. With Atempo Time Navigator, you won't be held back by the limitations of snapshot backups, but will have granular access to files at every layer of the virtualization. Atempo Time Navigator virtualization modules also simplify backup administration by automatically adding newly created virtual machines to the backup schedule, ensuring that all virtual machines are protected from the moment they're created.

Restore through Time Navigation

Atempo Time Navigator's unique "Time Navigation" capability provides an easy-to-use, detailed view into the backup of supported virtual environments. Time Navigation allows you to return to any point in time to restore specific versions of files, virtual machine disks, or entire virtual machines. To restore complete virtual

machines, you can simply view the tree structure and control all the virtual machine images directly through the Atempo GUI. For further granularity, you can view individual disks of the virtual machines, and navigate to individual directories and files just as you would on a non-virtual machine. No scripting is necessary to restore any of the virtual machines or their data.

Supported Virtual Environments

- VMware ESX 3.5, ESXi 3.5, ESX 3.0, ESX 2.5
- VMware VCB 1.5, VMware VCB 1.1, VMware VCB 1.0
- VMware vStorage API
- Microsoft HyperV 2008, 2008 R2
- Citrix XenServer 5.5, 5.6



Atempo Time Navigator for VMware

is adaptable to meet a variety of company data protection requirements and to fit in a wide array of virtual infrastructure configurations.

- Hot backups of entire virtual machines can be performed simply, without interrupting the virtual machines' operations.
- Can restore a complete virtual machine or individual disks.
- Install the standard Atempo Time Navigator backup agent on each guest OS for file-level restore.

Atempo Time Navigator for VMware with VCB takes advantage of VMware's advanced capabilities for consolidated backup to minimize I/O and bandwidth usage.

- Backs up snapshots directly from the SAN, reducing the impact of backups on the LAN and the ESX server.

Atempo Time Navigator Agent for Hyper-V

seamlessly integrates virtualization backups alongside regular data backups.

- Restores either the full VM or just an individual file.
- Uses VSS technology to take a snapshot of the VM, eliminating production downtime so users can continue with their work.
- Can cross restore on VM to another machine for cloning purposes.

Atempo Time Navigator Agent for Citrix

XenServer is installed on the proxy and has access to all VM's stored on that Xen Server.

- Uses Xen Snapshot technology to back up each VM on the Xen Server.
- Can redirect the snapshot to an alternative directory before backup.
- Deleted virtual machines are easily identified through the deleted files mechanism.

- Fast restore is available for SAN environments.
- New virtual machines are automatically populated in the backup selection.



About Atempo

Atempo enables organizations to protect, manage, archive, and recover digital information simply and effectively, across any infrastructure, on any platform, over any period of time. Atempo's portfolio of integrated software solutions simplifies the management of data throughout its entire lifecycle. Atempo serves thousands of customers around the world through a sales and support network of over 200 resellers and partners.

[Learn more at www.atempo.com](http://www.atempo.com)

Key Features & Benefits

Features	Benefits	VMware	MS Hyper-V	Citrix XenServer
All tasks managed through the intuitive GUI with Time Navigation capability	Provides a simple and intuitive process for backup and recovery of files, disks and virtual machines. Enables the granularity of a folder and file hierarchy display for individual virtual machines and drives; tree control enables administrators to navigate to specific virtual machines within an ESX server. Quick, streamlined recovery process of any instance from any point in time. No scripts are necessary.	✓	✓	✓
Backup and restore of one or more virtual machine disks or virtual machines	Flexible to a wide variety of environments, enabling solutions for end-to-end backup and disaster recovery.	✓	✓	✓
Hot backups of virtual machines	Snapshot-based backup of VM images, including configuration files, nvram, and virtual machine disk files. Backup operations do not need to shutdown virtual machines; therefore there is no impact on productivity.	✓	✓	✓
Backup proxy used for backup	Backup workload is transferred to the proxy server, saving CPU resources and LAN bandwidth. Backup has a minimal impact on user activity and production.	✓	N/A	✓
Full support for virtualization	Provides data protection solutions for SAN and non-SAN virtual infrastructures.	✓	✓	✓
File-level restores for virtual machines	Provides granularity for point in time restores to the file level in case of file deletion or corruption.	✓	✓	
Cross restoration of VM on another machine	Allows restore to an alternative destination.	✓	✓	✓