

# Backup and Recovery for VMware Environments

## The Big Picture

### Server Consolidation is Only Half the Job

- VMware is a top IT strategy for simplified management and cost efficiencies
- Backup bottlenecks tax network and storage resources
- EMC provides an integrated, VMware-certified portfolio of backup solutions

### Redesign Your Backup to Complete the Job

- Consolidate server backup and archive data to a single storage system for fully-optimized virtualization
- Deduplication enables massive data reduction for longer retention and tape-free disaster recovery
- Accelerate VMware backups by 90 percent
- Slash VMware backup storage capacity requirements
- Advanced virtual machine and application-level consistent backup
- Simplify data management
- Recover data reliably with advanced levels of data integrity

**“EMC is the clear leader in disk-based backup systems and software.”**

Brian Babineau  
Sr. Consulting Analyst, Enterprise Strategy Group  
January 2010



## Next-generation virtual machine backup and restore for VMware environments

### Server consolidation is only half the job.

Virtualization is a top IT strategy for one simple reason: business value. A fully virtualized data center brings simplicity and cost efficiencies to new heights. And it positions your IT infrastructure to quickly support the capabilities and scalability you need to keep your business agile and competitive.

VMware servers consolidate production workloads well, but backups create bottlenecks that tax network and storage resources. The benefits of virtualization cannot be fully realized without disk- and network-optimized backup and replication methods. Maximizing ROI for virtualized environments requires a redesign of the entire IT stack — including and perhaps most importantly — backup.

EMC’s integrated, VMware-certified portfolio of backup solutions helps you speed VMware server backups, improve production environment performance, and enhance information protection for your critical VMware application environments.

### Redesign your backup to complete the job.

EMC® backup and recovery solutions for VMware consolidate server backup and archive data as well as disaster recovery processes to a single storage system for fully-optimized server and storage virtualization.

VMware backup images are highly redundant and are therefore a “sweet spot” for data deduplication. High-speed, inline deduplication removes redundant data at a granular, variable-length level — before it is saved to disk — resulting in a backup dataset that requires 40-60x less disk storage. You can save backups on disk and on site longer, and send the data offsite faster with minimal bandwidth usage, without the costs and risks associated with tapes and trucks.

With EMC backup and recovery solutions for VMware, you can address the unique backup challenges that come with virtualization:

- Improve backup speeds by up to 90 percent
- Increase server consolidation ratios by up to 50 percent
- Retain backups onsite longer with 40-60x less disk for fast operational recoveries
- Replicate data offsite faster with 99 percent bandwidth efficiency for tape-free disaster recovery
- Recover data reliably with advanced levels of disk and data integrity

### Accelerate VMware backups by 90 percent

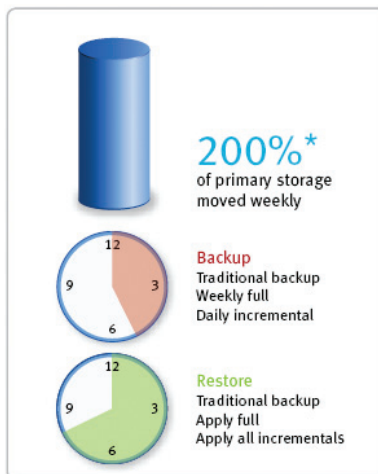
Improve VMware backup and restore performance and efficiency by eliminating redundant data with deduplication software to drive a 200 percent reduction in the amount of primary storage moved weekly. Replace your weekly full and daily incremental backups with daily full backups of VMware servers. Integration with vCenter simplifies and consolidates the management of vSphere 4 backup policies.

## Traditional Backup vs EMC Backup for VMware

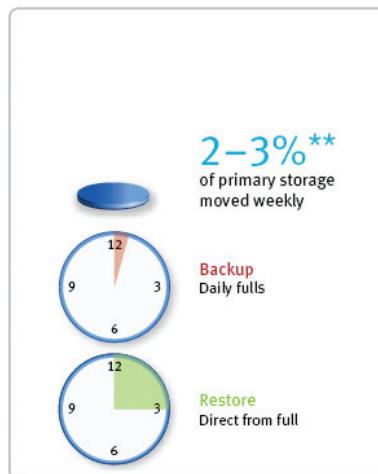
With traditional backup solutions, all virtual machines must move weekly full and incremental backups (as much as 200 percent of the primary data).

With EMC backup and recovery solutions for VMware using Avamar® deduplication software, the traditional backup load can be reduced to as little as 5 percent weekly.

## Traditional Backup



## EMC Backup



### Slash VMware backup storage capacity requirements

Server virtualization creates significant storage requirements and replication challenges for image-level VMDK backups. EMC deduplication storage systems provide high-speed inline deduplication that reduce backup data sets by 40-60x and more. EMC systems easily integrate into your existing infrastructure and leverage the consolidation benefits of deduplication across the distributed enterprise.

### Advanced virtual machine and application-level consistent backup

Automate and centralize backup processes with an easy-to-use central management console for efficient script-less management of EMC array-based replicas for your VMware infrastructure. You can also assign ideal mount options to any available VMware ESX® Server.

### Recover data reliably with advanced levels of data integrity

Restore data when you need it most. Continuous verification, fault detection, and system self-healing ensure that your data is stored and recoverable so you can meet strict service-level agreements. Fast, single-step recovery retrieves data immediately without the need to restore the last good full and incremental backups.

### Simplify data management

EMC backup and recovery solutions provide advanced management across both physical and virtual infrastructures with comprehensive monitoring and alerting, optimization, capacity planning, troubleshooting, and reporting functionalities.

### Take the next step now

Server consolidation is half the job. Take the next step and redesign your VMware backup with EMC backup and recovery solutions for fully-optimized virtualization. For more information, contact your EMC or partner representative.

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### Take the next step now

To learn how EMC backup and recovery solutions can reduce costs and simplify data management, contact your local EMC sales representative or authorized value added reseller, call us at 1-866-WE-DDUPE or visit our website at [www.EMC.com](http://www.EMC.com).