

# VMware Data Recovery

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Frequently Asked Questions (FAQ), July 2009

## Product Overview

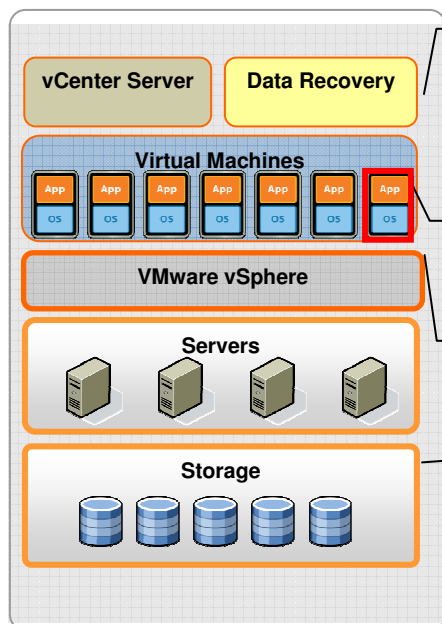
### What is VMware Data Recovery?

VMware Data Recovery is a new backup and recovery product for VMware vSphere 4 environments that provides quick, easy, and complete data protection for virtual machines.

- It's a disk-based solution that's easy to use and fast to backup and restore.
- It's built on the VMware vStorage APIs for Data Protection (previously known as VCB) and is fully integrated with vCenter Server to enable centralized and efficient scheduling of backup jobs using an intuitive workflow.

### What are the VMware Data Recovery components?

The main components are a VMware vSphere client plug-in and a backup/recovery virtual appliance. The illustration below summarizes the various components.



**Management Interface** With vSphere Client plug-in, allows configuration and management of backup/recovery appliance via vCenter Server. Wizard driven backup and restore job creation plus awareness of HA/VMotion/DRS.

**Backup and Recovery Appliance** OVF appliance to discover, manage backup and restore virtual appliances

**VMware vSphere** Provides VSS support and changed block tracking functionality allows incremental backups to be more efficient

**Storage** Virtual disk on direct attached storage, NFS, iSCSI or Fibre Channel plus CIFS file shares as destinations. All backed up virtual machines are stored on target disk in a deduplicated store



### **Can I protect virtual machines resident on VMware ESX 3.5 or earlier hosts?**

No, VMware Data Recovery is not backward compatible with ESX 3.5 or earlier hosts. This also means that when a vCenter Server 4 is managing both ESX 4 and ESX3.5 hosts, VMware Data Recovery can only protect virtual machines that are resident on ESX 4 hosts.

### **Can I protect virtual machines resident on VMware ESXi 4 hosts?**

Yes, VMware Data Recovery can protect virtual machines on ESXi 4 and ESX 4 hosts.

### **Can I use VMware Data Recovery without a VMware vCenter Server?**

VMware Data Recovery is designed to leverage vCenter Server. VMware Data Recovery requires the presence of a VMware vCenter Server 4 when performing automated tasks such as scheduled backups and scheduled integrity checks. However, for certain manual operations (such as restoring virtual machines when there is a site loss), VMware Data Recovery does not require the presence of a vCenter Server 4.

### **Is VMware Data Recovery compatible vCenter Server Linked Mode?**

No, VMware Data Recovery is not compatible with vCenter Server 4 Linked Mode.

### **How do I migrate my backups from disk to tape using VMware Data Recovery?**

VMware Data Recovery natively supports backups to disk and currently there is no officially supported method to migrate these backups to other media.

### **Can the backup job continue when a virtual machine is being VMotion or Storage VMotion?**

Yes, the backup job will continue when a virtual machine is being VMotion or Storage VMotion. However, it is recommended that VMware Data Recovery version 1.0.1 or later be used for these scenarios.

### **Is VMware Data Recovery the replacement for VMware Consolidated Backup (VCB)?**

VMware Data Recovery is not the replacement product for VCB.

### **Does a virtual machine need to be powered on in order for VMware Data Recovery to backup it up?**

No, the virtual machine does not need to be powered on in order to be backed up by VMware Data Recovery.



## Who should be using VMware Data Recovery?

VMware Data Recovery is designed for the VMware vSphere administrator that is also tasked with backing up and restoring virtual machines in their environment. The user interface is familiar and straightforward to allow the administrator to quickly backup and restore their environment.

## How does VMware Data Recovery complement my existing backup and recovery solution?

VMware Data Recovery is designed for the VMware vSphere administrator who uses VMware vCenter server as their single pane of glass management and is also tasked with backing up and restoring virtual machines. For environments that

have mixed VMware ESX versions

or where there are physical and virtual machines to protect

or have a broader range of backup media options to support

or have the need for more aggressive recovery point objectives (RPO) for certain business critical application (that may require a specialized agent),

VMware Data Recovery would complement an existing backup and recovery solution.

## What are the factors that contribute to the performance of a backup or restore?

In general, it will be

- The amount of data to be backed up (full or incremental backup) – less data will provide faster performance
- Change rate of the VM – if the VM can quiesced, then the snapshot can be completed faster
- Off-LAN backup – backups using shared storage will be faster than LAN based backups. Note that in order to utilize off-LAN backup, the vSphere edition needs to be licensed for hot add.

## Features

### What are some of the features of VMware Data Recovery?

- Setup
  - Initial Setup Wizard
- Backup
  - Define jobs: select sources, destination, backup window and retention policy
  - Disk target – Virtual disks and CIFS share



- Proactive scheduling of backups using the backup window
- Full and incremental backups VM. (Note that after the initial full backups, all other backups are incremental)
- Show events/history
- Quiescing of VM using either Volume Shadow Copy Service or freeze and thaw scripts
- Restore
  - Full VM restore; create or overwrite entire VM
  - Overwrite single disk
  - Power on VM after restore
  - File level restore for Windows VMs (experimental support and requires the file level restore client utility)
- Storage
  - Support for all HCL storage plus CIFS based network shares for targets
  - All backups are deduplicated
  - Manage destinations: Prepare, Mount, Unmount, Extend
  - Deleting restore points (applying the retention policy as well as manual deletion)

### **Can I perform file level backups?**

No, VMware Data Recovery does not allow for file level backups. It only allows VM level backups.

### **What is the maximum number of concurrent backup and restore jobs that can occur?**

The product is capable of a maximum of eight concurrent backup jobs and a maximum of eight concurrent restore jobs. The maximum number of jobs is not user configurable.

### **Can I perform a backup of only specific virtual disks on virtual machines?**

Yes, VMware Data Recovery provides the capability to back up specific virtual disks on one or more virtual machines.

### **Can I perform backups from raw device mappings (RDM)?**

Since VMware Data Recovery requires virtual disk snapshots to initiate the backup process, backups from RDMs can only be performed when the RDM is running in virtual compatibility mode.

### **Does the backup process leave a snapshot entry on the virtual machine after it has completed?**

Once the backup is complete, VMware Data Recovery will dismount any snapshots used to perform the backup, so the virtual machine will be left in its pre-backup configuration.

### **Can I perform file level restores?**

File level restore will be an experimentally supported feature. Currently, this capability is available for Windows XP, Vista, Server 2003 and Windows 2008 virtual machines. File level restore requires that a



file restore utility be installed in the virtual machine and that the file restore be initiated via the guest OS console.

### **Can I restore a VM when a backup job is being executed?**

Yes, a restore can be initiated and complete even when a backup job is being run.

### **Can I perform a backup when an integrity check is being performed on the destination disk?**

Yes, this is possible with VMware Data Recovery version 1.0.1 or later. This was not possible with VMware Data Recovery version 1.0.

### **What the maximum number of virtual machines that can be backed up using VMware Data Recovery?**

The number of virtual machines that can be backed up using each VMware Data Recovery appliance is 100 virtual machines.

### **Are snapshots resident in the VMs copied as part of the backup?**

No, snapshots are excluded from the backups. VMware Data Recovery will only copy the state of the VM at the time of the backup.

### **Deduplication**

#### **Did VMware develop the deduplication technology used in VMware Data Recovery?**

Yes, the deduplication technology used was developed by VMware. VMware Data Recovery implements block based in-line destination deduplication.

#### **What are the maximum number of dedupe destinations and size of each destination?**

It is recommended that each VMware Data Recovery appliance have no more than two dedupe destinations and that each dedupe destination be no more than 1 TB in size.

#### **Is the deduplication performed inline with the backup or on a pre-determined schedule?**

The deduplication is done inline as the backups are being stored in the dedupe store.

#### **Is it file level deduplication?**

No, it is block level deduplication.

#### **Can I disable deduplication?**

No, deduplication is always enabled and all backups using VMware Data Recovery is deduplicated.



### **What factors will increase my deduplication rates?**

Having VMs that have commonality in the backup destination (across multiple backup jobs) will increase the deduplication rate. For example, back up all Windows Server 2003 VMs to the same destination disk. In addition, using one destination disk for all backup should increase dedupe rates.

### **Are there any best practice recommendations around the destination storage to be used with VMware Data Recovery?**

Yes, recommendations can be found here:

<http://viops.vmware.com/home/docs/DOC-1551>

### **Can VMware Data Recovery use 3<sup>rd</sup> party deduplicated storage as a destination?**

Yes, as long as these storage devices are listed on the VMware storage compatibility matrix. However, VMware Data Recovery was designed to primarily use traditional storage devices as the backup destination.

### **Miscellaneous**

#### **Is VMware Data Recovery compatible with IPv6?**

VMware Data Recovery requires an IPv4 address to communicate.

#### **Can I use an NFS share as the destination for the deduplicated store?**

VMware Data Recovery cannot natively use NFS storage as a destination. However, VMware Data Recovery can write to a *virtual disk* that resides on a NFS storage that is on the VMware storage compatibility list.

#### **What is Volume Shadow Copy Service (VSS)?**

The Volume Shadow Copy Service provides the backup infrastructure for the Microsoft Windows XP and Microsoft Windows Server 2003 and 2008 operating systems, as well as a mechanism for creating consistent point-in-time copies of data known as shadow copies. With respect to VMware Data Recovery, support for VSS allows creating snapshots that ensure “application consistency” and more accuracy in backup data.