



What's New in VMware® Data Recovery 2.0

TECHNICAL MARKETING DOCUMENTATION
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Introduction

VMware® Data Recovery 2.0 is the premier tool to enable quick and simple backup, storage, and recovery of virtual machines and files within the virtual environment.

With the release of version 2.0, VMware has expanded the capabilities of VMware Data Recovery in the virtual environment to attain quicker and more reliable backups with better levels of integration with VMware vCenter™ Server and new manageability options.

This paper presents an overview of the new capabilities of VMware Data Recovery 2.0.

Technology Changes and New Features

Email Reports

VMware Data Recovery 2.0 makes it possible to generate and email reports, in a fully automated fashion, to an administrator following the completion of a backup.

This gives virtual infrastructure administrators the ability to rapidly parse and scan a report, outlining the success, and thereby the protection, of the VMware vSphere virtual environment without needing to open the VMware vCenter Server client to do the review.¹

```

VMware Data Recovery 2.0.0.1506
Appliance IP:
192.168.9.35;fe80::250:56ff:feb3:21bf;192.168.9.143;fe80::250:56ff:feb3:21c0
Appliance Name: vdrc
Appliance Time: 1/17/2011 8:00:00 AM
Engine Start Time: 1/16/2011 3:34:57 PM

For more information, please check Reports and Configuration in VMware Data Recovery
Client plug-in UI.

Backup Jobs: 1
Virtual Machines Selected for Backup: 5
Virtual Machines Failed to Back Up: 0
Virtual Machines Not Backed Up: 0
Virtual Machines Backup In Progress: 0
Virtual Machines Successfully Backed Up: 5
Non-Backup Related Warnings and Errors: 6

Destination,                Capacity, Used,      Status
/terrapin.thewhites.ca/library/,  1,383.4 GB,37.5 GB,  Ready

Virtual Machines Successfully Backed Up:

Backup Job,                Virtual Machine,      Duration
Local Apps,                sql2,                 00:05:51
Local Apps,                hanbury,              00:13:55
Local Apps,                logan,                00:36:26
Local Apps,                mail,                 00:27:10
Local Apps,                srma,                 00:25:00

Non-Backup Related Warnings and Errors:

1/16/2011 3:34:57 PM  Starting VMware Data Recovery, version 2.0.0.1506
1/16/2011 3:12:40 PM  Starting VMware Data Recovery, version 2.0.0.1506
1/16/2011 11:46:59 AM Starting VMware Data Recovery, version 2.0.0.1506
1/15/2011 2:04:52 PM  Starting VMware Data Recovery, version 2.0.0.1506
1/15/2011 2:04:50 PM  Task terminated unexpectedly, possibly due to a power failure or
system crash.
1/15/2011 1:24:23 PM  Starting VMware Data Recovery, version 2.0.0.1506

```

Figure 1. VMware Data Recovery–Generated Report Following Backup

1. Please note vCenter Data Recovery 2.0 is supported with vSphere 4.0 Update 3, vSphere 4.1 Update 1, and vSphere 5.0.

Reports can be scheduled for mailout at a specified time, with delivery to as many as 10 email addresses.

Email reports include:

- Application summary
- Job summary
- Destination summary
- Virtual machines that failed backup
- Virtual machines not backed up
- Virtual machines successfully backed up
- Nonbackup-related warnings and errors

Destination Maintenance Window

VMware Data Recovery enables users to specify a time in which backups will not run. This ensures that the destination for backups will be in a quiescent state, during which daily integrity checks (to ensure data consistency) and reclaim operations (to recover unused space) can safely be run.

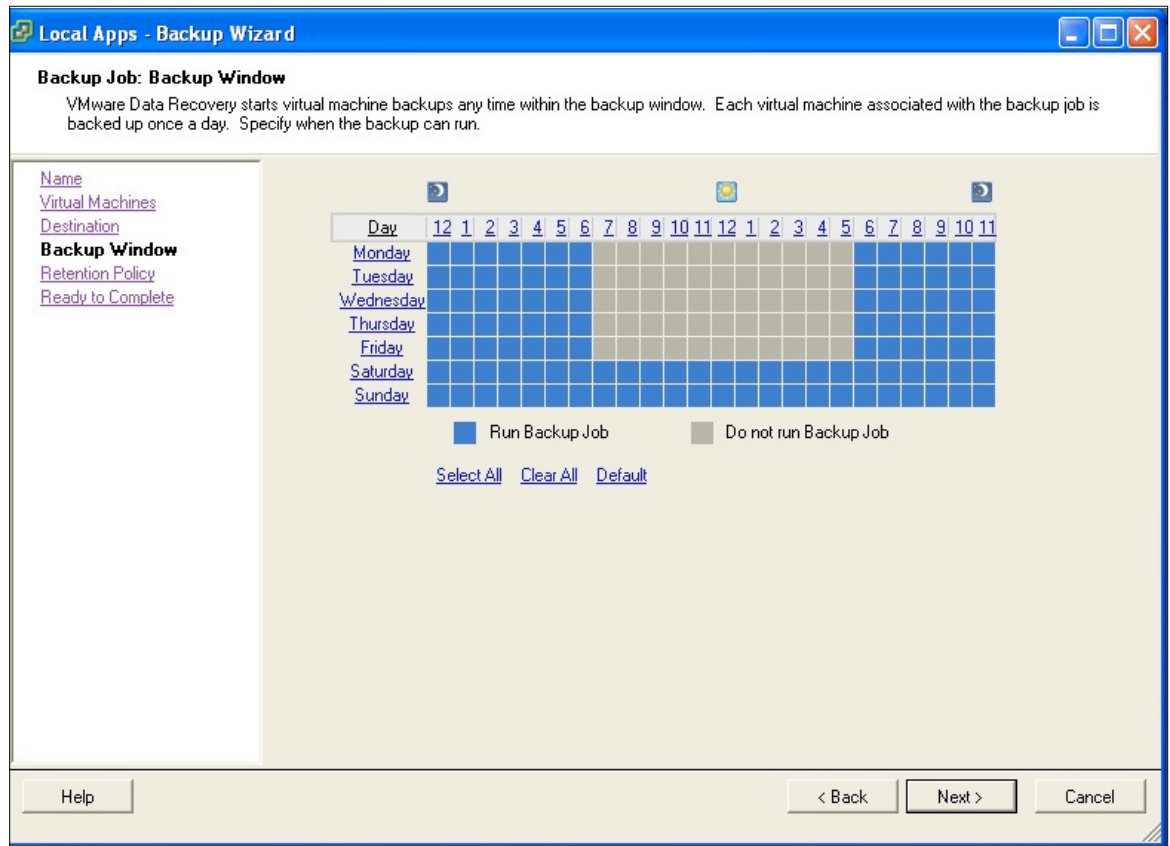


Figure 2. Destination Maintenance Window

The destination maintenance window can be configured on a per-destination basis, to enable rolling maintenance on destination disks throughout a time period. If integrity checks and reclaim operations are run automatically, they will execute only within the specified maintenance window.

By default, maintenance windows are scheduled all weekends and weekdays, from 9 a.m. to 5 p.m.

Job Suspension

VMware Data Recovery enables users to suspend individual jobs from continuing to run by right-clicking on the backup job and selecting "Suspend Future Tasks." Currently running backup jobs are not affected, but future scheduled jobs of that individual backup will be suspended. This gives an administrator the ability to temporarily halt backups in case of planned maintenance, periods of high activity, or for any other reason.

Advanced Options

New advanced options are now made available by editing the configuration file to enable more specific choices in backup administration. New options enable the administrator to accomplish the following tasks:

- Change the number of days between automated integrity checks.
- Specify the day of the week on which the automated integrity check is run.
- Exclude or include backup of swap partitions or page data.

Performance and Technical Improvements

Deduplication Performance

VMware Data Recovery 2.0 introduces changes to both the general deduplication process and compression of backup data, as well as introducing some improvements to the integrity checks.

Overall improvements include the following:

- A new compression algorithm improves the commit speed of compressed data.
- A new utilization of the I/O path improves efficiency when accessing the deduplicated backup data.
- Better layout of data on the backup target disk reduces time to create and restore from backups.

Improvements to the integrity check process include the following:

- Periodic checkpoints are written out during integrity checking of the datastore, enabling safe suspension and resumption of integrity checks.
- Bulk processing of similar jobs improves performance.

Other Miscellaneous Enhancements

Multiple enhancements have been added to operations of VMware Data Recovery 2.0, as follows:

- VMware Data Recovery 2.0 is now a fully 64-bit virtual appliance. This will help aid future scalability, though the current release retains the scalability limits of VMware Data Recovery 1.2.
- Windows pagefile and Linux swap partitions are automatically excluded from backup by default.
- If the maintenance window closes before an integrity check or reclaim operation is completed, the datastore is not locked as it was in prior releases. This enables backups to continue working even if maintenance is not completed. If, however, damaged restore points are detected, the deduplication datastore *will* be locked until the damaged restore points are deleted.

Top Resolved Issues

Several fixes have been included that rectify issues found in VMware Data Recovery 1.2.1. Issues that have been resolved include:

- CIFS target handling and resilience
- Incremental RDM backup
- Backups failing with “not enough disk space” errors
- Backups failing with “disk full” error despite free space being available

Conclusion

With VMware Data Recovery 2.0, VMware has extended the ability to quickly and simply protect and restore virtual machines. Fully integrated with VMware vCenter Server, VMware Data Recovery gives central management of backup and restore operations, and the inherent deduplication of data saves significant disk space and provides flexible options for storage.

VMware Data Recovery 2.0 has introduced a number of improvements including performance enhancements, speed, and reliability improvements, as well as capabilities to enhance management with the ability to email reports and schedule maintenance windows.

