Veeam
Modern Data Protection

Modern Data Protection | **#1 VM Backup**
Built for Virtualization

Veeam Backup & Replication
What's New in v7

Taking Modern Data Protection to the next level

Veeam Backup & Replication v7 delivers new features and enhancements that make it easier than ever to protect your virtual environment. Here's what a few customers and industry experts have to say about Veeam Backup & Replication:

"Veeam Backup & Replication works brilliantly. We backup our VMs in one third the time it took to backup our physical servers, and we're able to recover items like Microsoft Exchange mailboxes so much quicker than before."

John Chase
IT Manager
The Pinewood Studios Group

"We use Veeam Backup & Replication as part of our hosting and managed service offerings. The new capabilities for offsite backups will make it easier to ensure our clients are protected in the event of a disaster."

Christian Kelly
Director of Operations
Xantrion

"With continued innovations like optimized WAN transmission and its approach in leveraging hardware snapshots, Veeam continues to find new areas of evolution for their data protection solution. Couple those with tape support and granular/self-service restore capabilities, and it is easy to see why Veeam continues to dominate mindshare in its segment by providing impressive recovery options for their customers."

Jason Buffington
Senior Analyst for Data Protection
Enterprise Strategy Group

"Protecting the ever-increasing data volumes in virtual data centers is a high priority for any IT organization. Veeam Backup & Replication v7 provides IT professionals a comprehensive set of new tools to safeguard their data in VMware and Hyper-V environments."

Robert Amatruda
Research Director Data Protection
and Recovery
IDC

Veeam® Backup & Replication™ leverages the capabilities and benefits of virtualization to deliver a powerful, easy-to-use and affordable solution for protecting your most critical asset—your data.

In v7, we're taking Modern Data Protection™ to the next level. With innovations that disrupt the market for backup and new features that significantly enhance your data protection strategy, you get a leading solution that is reliable, robust and helps you get even more from the investment you're making in virtualization.

2 disruptive innovations

At Veeam, we take things like WAN acceleration, deduplication, replication, and Microsoft Exchange and Microsoft SharePoint recovery that many consider add-ons or standalone products, and we deliver them as integrated features. We remove limitations other vendors have accepted, like unrecoverable backups, long restore times, and backup and recovery agents. We do all this to eliminate barriers and offer technology that is powerful, easy-to-use and affordable.

Built-in WAN Acceleration

Offsite storage of backups is a critical component of a good data protection strategy, and in v7, Veeam makes offsite storage easy with Built-in WAN Acceleration. Caching, variable block length data fingerprinting and TCP/IP protocol optimizations result in up to 50 times faster transfers of Veeam backups across the WAN while eliminating the need for additional backup jobs, copy scripts and capabilities like storage-based replication. Best of all, there are no VM- or host-based agents to install and no special network setup required.

Requires the Enterprise Plus edition of Veeam Backup & Replication

High performance Backup from Storage Snapshots

Continuing what we started with the introduction of Veeam Explorer™ for Storage Snapshots in version 6.5, Veeam Backup & Replication v7 takes advantage of SAN snapshots again to offer new capabilities for powerful data protection. Exclusive innovations, including direct VMFS access and the ability to leverage VMware Changed Block Tracking, enable instant VMware snapshot commit and let you create backups and replicas from storage snapshots as often as you like and whenever you like. The result is dramatically improved RPOs for near-CDP that doesn't impact your production environment or running VMs.

This VMware-only feature currently supports HP StoreVirtual VSA, HP StoreVirtual and HP StoreServ storage product lines.

Requires the Enterprise Plus edition of Veeam Backup & Replication

7 market-leading features

Native tape support

Many organizations have invested in tape and are subject to policies requiring tape. Veeam Backup & Replication v7 offers you an easy way to copy files and backups on tape, with support for virtual tape libraries (VTLs), tape libraries and standalone drives. Files, VMs and restore points are tracked on tape, enabling you to easily locate items and making restores easy.

Tracking of VMs and restore points requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

Virtual Lab for replicas

Reduce risk and put your replicas to work with Virtual Lab for replicas. With new SureReplica, you can automatically verify every restore point in every replica. You can also turn your standby replicas and DR infrastructure into valuable resources for item-level recovery with U-AIR® (Universal Application-Item Recovery) and isolated environments for testing, training and troubleshooting with On-Demand Sandbox™.

VMware only
Requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

Enhanced backup and recovery for vCloud Director

Support for vCloud Director (vCD) goes deep with integrated visibility of the vCD infrastructure in the backup console and backups that include the metadata and attributes associated with vApps and VMs. Recovery enables restore of vApps and VMs directly back to vCD, and even includes support for fast provisioning.

Scheduled incremental backup jobs of vCD VMs require the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

vSphere Web Client plug-in

Monitor your backup infrastructure directly from the vSphere Web Client, VMware's next-generation administrative interface for vSphere. The plug-in delivers at-a-glance and detailed views of job status and backup resources, alerts you of potential backup issues, and also simplifies capacity planning and identification of unprotected VMs.

Requires VMware vSphere 5.1

Virtual Lab for Hyper-V

Veeam Backup & Replication v7 brings SureBackup®, U-AIR and On-Demand Sandbox to Hyper-V. SureBackup eliminates risk by automatically verifying the recoverability of your backups, while U-AIR enables quick, agentless recovery of objects from any virtualized application and On-Demand Sandbox creates isolated environments for testing, troubleshooting and training.

Requires Windows Server 2012 Hyper-V
Requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

Enhanced 1-Click Restore with self-service recovery

1-Click Restore in the Enterprise Manager web UI now offers the ability to restore entire VMs, and powerful new delegation options let you safely put restore tasks in the hands of business users. This results in faster recovery times and decreased burden on IT staff.

1-Click Restore of VMs requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication, and delegation options for self-service recovery require the Enterprise Plus edition

Veeam Explorer for Microsoft SharePoint

Offering instant visibility, advanced search capabilities and quick recovery of individual items in SharePoint databases, Veeam Explorer for Microsoft SharePoint saves you time and effort. With built-in e-discovery and agentless recovery, you now have an affordable tool for browsing, searching, and selectively recovering SharePoint items from Veeam backups and replicas.

Requires Microsoft SharePoint 2010
Restore to original location requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

75+ additional enhancements

As a result of ongoing research and development effort and in response to customer feedback, v7 includes an extensive range of additional features and enhancements, the most significant of which are listed below.

Backup Copy jobs

Veeam Backup & Replication v7 gives you the ability to efficiently create copies of backups in local and remote backup repositories, making it easy for you to satisfy the recommended best practice of keeping multiple copies of backups on different media. Backup Copy jobs also facilitate implementation of a cost-effective, tiered backup storage strategy.

Backup Copy jobs can be set up for selected VMs from one or more Veeam backups, and each job can be configured with its own independent retention policy. Additional optional capabilities include:

- **Grandfather-father-son (GFS) policy**. This data retention feature helps you meet data archival requirements by copying and storing full VM backups for specified intervals of time.

- **Automated backup health check and remediation**. Backup files are periodically scanned to identify storage issues, such as bit rot. Automatic healing fixes corrupt data blocks by retrieving correct data from the source backup file, increasing the reliability of forever-incremental backup copies and removing the need for periodic full backups.

- **Backup file compaction**. Decrease the size of your backup files by automatically recreating them based on current data, which lets you remove the data associated with deleted VMs without having to perform an active full backup. This prevents unnecessary growth over time of your full backup files as VMs are added to and removed from jobs.

Engine

- **Parallel processing of multiple VMs**. Enables better utilization and saturation of your storage infrastructure, eliminates dead time between backups and improves overall backup performance.

- **Parallel processing of virtual disks within VMs**. Significantly improves backup performance for VMs with multiple large disks and reduces the amount of time a VM runs off its snapshot, thus helping to reduce snapshot commit times.

- **Resume on disconnect**. Data movers are now capable of transparently resuming communication after a network connection drops completely for a short period of time. This capability dramatically improves the reliability of remote backup and replication.

- **Hardware-accelerated compression**. A new default compression level with a proprietary algorithm implementation leverages advanced CPU instruction sets (SSE extensions). This reduces backup proxy CPU usage up to 10 times when compared to the previous default compression level.

- **64-bit data movers**. Backup repositories can now support appreciably larger backups. Please note versions of Windows prior to Microsoft Windows 2012 have a 16TB limit for maximum NTFS file size. This limit roughly equates to a maximum of 25TB of source data per backup job.

- **Backup repository overload protection**. When a backup repository's storage is overloaded with regard to I/O capacity, new tasks are not assigned to that backup repository even if task slots are available.

- **Reduced memory consumption**. Memory consumption optimization allows 32-bit data movers to support larger backups.

- **Enhanced I/O pattern for data writes**. Decreased fragmentation within backups files results in improved backup and restore performance, as well as reduced degradation from full backup file transformations over time.

- **Automatic termination of deduplication**. When full backup files significantly exceed the maximum size recommended by Veeam Backup & Replication, deduplication is automatically disabled for those specific backup files. This measure is intended to increase the reliability of deployments that perhaps were not carefully planned or are not optimally configured.

- **Graceful job stop**. Attempt to cleanly shut down all jobs when the Veeam Backup & Replication service is stopped (either manually or as a result of a computer shutdown).

- **Decreased disruption from host activity**. Activities such as upgrading or reattaching hypervisor hosts are now less disruptive to Veeam Backup & Replication jobs.

Note for users upgrading to v7: By default, all behavior-modifying engine enhancements, such as parallel processing, Backup from Storage Snapshots and the new default compression level, are not enabled upon upgrade. This ensures your existing jobs do not change behavior when you upgrade to v7.

VMware vSphere

- **Intelligent disk-level load balancing**. Virtual disks are now assigned to the most suitable backup proxy, rather than assigning all disks for a given VM to the same backup proxy.

- **Transparent backup of vCenter Server VM**. The vCenter Server VM can now be backed up without having to resort to workarounds, such as adding the vCenter Server's host by IP address and then configuring a separate job for it.

- **Concurrent snapshots commit operations**. The maximum number of concurrent operations is now automatically limited to a preconfigured value (per standalone host or cluster). This reduces the impact of snapshot commits on your production environment. Maximum values are configured via updates to corresponding registry values.

- **Replica resume**. Rather than replicating restore point data for all virtual disks again, the retry cycle for a replication job now reuses restore point data for virtual disks that were fully replicated to the replica VM before the job interruption occurred.

- **Changed Block Tracking**. Changed Block Tracking can now be enabled for VMs that already have snapshots.

- **Enumerated infrastructure objects**. Performance is improved when enumerating infrastructure objects in large vSphere deployments.

- **VeeamZIP performance**. VeeamZIP™ performance is improved significantly for VMs with virtual disks containing large amounts of empty space.

Microsoft Hyper-V

- **Improved intelligent load-balancing**. When using a VSS Software Provider and CSV 2.0 (Microsoft Windows Server 2012 or later), intelligent load balancing selects the backup proxy based on the CSV owner, resulting in significantly improved backup performance.

- **Clustered disks**. Volumes residing on clustered disks are supported by changed block tracking.

- **Instant File-Level Recovery for other file systems**. Wizard-driven file-level recovery for 15 file systems is now available for Hyper-V backups.

- **Maximum concurrent snapshots per volume**. This setting can now be configured separately in the Hyper-V host properties for each volume. Caution should be exercised because higher values may introduce intermittent backup failures due to Microsoft VSS behavior peculiarities.

- **Instant VM recovery initialization**. Instant VM Recovery™ is now up to 3 times quicker due to a faster disk preallocation process.

- **ODX-enabled storage**. ODX-enabled storage is now fully supported, and ODX is no longer disabled on hosts after installing Veeam Backup & Replication Hyper-V integration components.

- **Saved state avoidance**. For VSS-aware operating systems, VSS processing is now retried after timeout when Hyper-V Integration Tools report that a VM can be processed only via saved state. This occasionally happens on busy systems, and the retry significantly reduces the likelihood that backup activities will suspend the VM.

- **Hyper-V Integration Tools version monitoring**. Jobs now detect and log an information event when a VM's Hyper-V Integration Tools are out of date.

- **Updating Veeam Backup & Replication Hyper-V integration components**. A reboot of the Hyper-V host is no longer required after updating or patching Hyper-V integration components.

Windows file-level recovery

- **Length restriction removed for restore file path**. The restore file path is no longer limited to 240 characters.

- **Mount point drive preservation**. The drive letter for mount points is now preserved by the Veeam Backup Browser. This is particularly helpful when users running Veeam Explorer for Microsoft Exchange want to access Exchange mailbox databases stored on mount points.

- **Faster performance when restoring many small files**. Restores are now up to 50 times faster for network-less restore modes.

- **File-level recovery UI is no longer modal**. You may now access other Veeam Backup & Replication interfaces while concurrently performing file-level recovery operations.

Other OS file-level recovery

- **Faster performance when restoring many small files**. Restores are now up to 50 times faster for both network-based and network-less restore modes.

- **NSS (Novell Storage Services)**. File-level recovery for NSS is now supported from VMware backups.

Veeam Explorer for Microsoft Exchange

- **Microsoft Exchange 2013**. Support for Microsoft Exchange 2013 is now available.

- **Restore to original location**. Redesigned restores to original location are now faster and more reliable.

  Requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

- **Restore to Office 365**. Experimental support is available for restoring mailbox items to Microsoft Office 365.

  Requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

SureBackup

- **Backup file validation**. To detect storage-level issues, such as bit rot, a new option is available for validating all data blocks belonging to the backup files with restore points being tested by SureBackup.

- **Virtual Lab internet access configuration**. The Virtual Lab configuration settings for internet access are now available directly within the Virtual Lab wizard, removing the need to update registry values.

Windows UI

- **Credentials Manager.** All accounts used throughout Veeam Backup & Replication can be managed through one central dialog, allowing account passwords to be easily updated when they change.

- **1-Click job cloning**. Jobs can be cloned with a single click. New jobs are initially disabled, giving you the flexibility to activate them when you are ready.

  Requires the Enterprise or Enterprise Plus edition of Veeam Backup & Replication

- **Enhanced job grid view**. Real-time statistics are integrated into the job grid view for quicker access to particular job details.

- **Read and transferred graphs**. New graphs have been added to views of real-time statistics, and by simply clicking on the graphs, you can switch between views of the previous five minutes and the entire session.

- **VM console**. You can now open the VM console of VMs started by Instant VM Recovery directly from the Veeam Backup & Replication UI.

- **Add to job enhancements**. In addition to being available for VMs, the "Add to job" shortcut is now available for all objects in an infrastructure tree, as well as for files and folders being added to File Copy jobs.

- **Deduplication and compression ratio**. The backup properties UI now expresses the ratios in magnitude (i.e. "times") instead of potentially confusing percent values.

- **Additional license information**. The total count of protected VMs is displayed in the license information dialog, enabling Veeam Cloud Providers to easily audit compliance with per-VM licensing agreements.

- **Support expiration warnings**. Expiration warnings now appear throughout the product and in job email notifications, making users aware of expired support contracts. These warnings can be disabled, if desired.

- **Performance improvements**. The amount of interaction with the configuration database has been reduced, significantly improving UI responsiveness.

- **Support ID**. Your support ID is now displayed directly in the license information UI for assistance and convenience when opening support cases.

Enterprise Manager

- **RESTful API.** All Enterprise Manager functionality is now available through the RESTful API, enabling integration with existing web portals and other web applications.

  Requires the Enterprise Plus edition of Veeam Backup & Replication

- **1-Click Failover**. Enterprise Manager now provides an easy-to-use interface for performing failover of individual VMs.

- **1-Click Restore of VMs**. In addition to 1-Click Restore of individual guest files, you can now perform full restores of individual VMs.

- **1-Click Restore web page**. The user interface for restoring files is updated and streamlined for better usability.

- **Restore Operator restrictions**. File download and extension restrictions are no longer global settings and are now set instead on individual restore operators.

- **Credentials Manager**. The Credentials Manager can now be leveraged when editing jobs.

- **Automatic failover for Microsoft Search Server**. Built-in search capabilities are now available to transparently handle searches affected by integration failures with Microsoft Search Server.

- **Real-time data collection**. Instead of periodic data collection, Enterprise Manager subscribes to backup server notifications that let it retrieve new data as soon as it becomes available. This allows Enterprise Manager to display the most up-to-date job state at any time.

- **Session retention period**. The retention period is now set in weeks, instead of months, to allow for more granular retention.

- **Portal customization**. A special band image that appears at the top of Enterprise Manager pages can be customized with a company-specific logo and other items.

- **Enhanced UI**. New and improved page design and UI components enhance Enterprise Manager appearance.

Storage integration

- **HP StoreServ (3PAR)**. HP StoreServ is now supported by Veeam Explorer for Storage Snapshots (Fibre Channel connectivity only).

- **HP StoreVirtual VSA**. Versions 10 and 10.5 are now supported by Veeam Explorer for Storage Snapshots.

- **HP StoreVirtual registration**. The registration process has been revamped to avoid timeouts with large infrastructures.

- **Plug-in architecture**. A new storage plug-in architecture is now in place to simplify the process of adding support for other storage vendors and models in future releases. This architecture is not meant to be leveraged by storage vendors directly; rather, implementation will be performed by Veeam.

Setup

- **Silent setup**. Silent installation is now supported for the Veeam Backup & Replication server and Enterprise Manager.

- **ISO file**. Veeam Backup & Replication is now distributed as an ISO file, simplifying installation in virtual environments.

- **Prerequisites validation**. A wizard runs during setup to validate that all prerequisites are met before installing Veeam Backup & Replication.

Logging

- **Export logs wizard**. The wizard offers new filters that let you create smaller log packages targeted more specifically to problematic areas. This can substantially reduce upload time for logs when troubleshooting issues with Veeam support.

- **Job logs storage**. For additional convenience, job logs are now stored in per-job folders.

Other

- **Root passwords**. Root passwords can now be configured for helper appliances.

- **Extract utility UI**. The utility now offers a standalone Windows UI; the command line utility is still available for more experienced users.

- **New license key format**. The license key now includes your support ID. Also, the license information for multiple products can now be included within a single license file.

- **New PowerShell cmdlets**. Support has been added for new v7 functionality, and a number of enhancements have been made to the existing cmdlets. Backward compatibility has been maintained.

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