

Veeam Backup for Nutanix AHV 4.0 Release Notes

This document provides last-minute information about Veeam Backup for Nutanix AHV 4.0, including system requirements, installation procedure, as well as relevant information on technical support, documentation, and online resources.

For existing deployments, Veeam Backup for Nutanix AHV version 2.0, 2.1, 3.0 or 3a is automatically upgraded to version 4.0 together with the upgrade of Veeam Backup and Replication to version 12.

For new deployments, the release version of Veeam Backup for Nutanix AHV is available for download from the [Veeam downloads page](#) starting from February 14th, 2023.

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System Requirements

Platform

- Nutanix AOS versions 5.5.X or later
- CE 2019.11.22 or later for Community Edition

Virtual Hardware

During the deployment process, the Veeam Backup Nutanix AHV backup appliance is deployed as a dedicated Linux-based VM in a Nutanix AHV cluster you want to protect. The backup appliance configuration determines the maximum number of tasks (backup or restore sessions) that the backup appliance can handle in parallel. If this number is exceeded, the backup appliance will not start a new task until one of the current tasks finishes. By default, the backup appliance supports 4 concurrent tasks and runs on a VM with the following configuration:

- *CPU*: 4 vCPU
- *Memory*: 4 GB RAM
- *Disk Space*: 100 GB for product installation, backup appliance internal database files, logs, and other data

The maximum number of concurrent tasks can be increased; however, additional resources must be allocated: 1 vCPU and 1 GB RAM for each additional task. When configuring the maximum number of concurrent tasks, consider the network traffic throughput in your virtual infrastructure and resources allocated to the Nutanix Controller VMs.

Veeam Backup & Replication and Nutanix AHV Plug-in

Veeam Backup for Nutanix AHV includes Nutanix AHV Plug-in 12.0.4.1020 and Nutanix AHV backup appliance 4.0.0.1891.

The Nutanix AHV backup appliance requires the Nutanix AHV Plug-in installed on the Veeam Backup & Replication 12 (12.0.0.1420) server.

What's New in Version 4.0

New Features

- Backup Improvements
 - Backup jobs support creating Synthetic Full backups
 - Backup to an object storage as the primary target is supported
 - Backup Copy can use Nutanix AHV jobs as the source in both Immediate and Periodic modes
- Retention Improvements
 - GFS (Grandfather-father-son) retention is now supported for backup jobs
- Health Check
 - Storage-level corruption guard can be now enabled in Advanced job settings
 - Backups are automatically recovered during future backup operations in case of detected errors
- Instant Restore Improvements
 - Instant Restore is now available from backups that are stored in Cloud Connect repositories. That includes both native Nutanix AHV backups and backups from other platforms.
 - Instant Restore is now available for backups that are located on the Archive tier of a Scale-Out Backup Repository
- Restore Improvements
 - Improved parallelism in restore operations
 - Sparse areas are not restored
 - Restore operations have higher priority than backup operations
 - Entire VM Restore is now available for backups that are located on the Archive tier of a Scale-Out Backup Repository
 - Improved restore scenarios:
 - Advanced network settings are preserved on restore
 - Hardware virtualization parameters such as secure boot are preserved on restore
 - When restoring VM from backups of other platforms, CPU, RAM and disk bus parameters are preserved
- Scaling and performance improvements
- Management improvements
 - New comprehensive UI of the backup appliance web console
 - Improved dashboards, notifications, and navigation in the backup appliance web console
 - Improved centralized management from the Veeam Backup & Replication console
 - Configuration backup and restore is supported from the Veeam Backup & Replication console
 - Improved session state information in Veeam Backup & Replication console
- Backup appliance can be configured as a Linux Gateway
- Public REST API is now available for customers (not backward compatible with earlier versions of Veeam Backup for Nutanix AHV)

Upgrade & Deployment Considerations

Backup Appliance VM Specifications

- VM virtual disk size increased from 50 GB to 100 GB
- Ubuntu has been updated from 18.04 LTS to 20.04 LTS
- Appliance and Plug-in switched from .NET 3.1 to .NET 6.0
- Appliance database changed from SQLite3 to PostgreSQL
- Default "veeam" user has been removed from the backup appliance image
- TLS 1.0, TLS 1.1 support has been dropped

Backup Appliance Configuration

- The backup appliance does not work in standalone mode and cannot be deployed or upgraded manually onto a Nutanix AHV cluster. Deployments & upgrades should be done from the Veeam Backup & Replication V12 console.
- To simplify deployment and upgrade, connection from the backup appliance to the Veeam Backup & Replication server is done now by IP address, not by hostname.
- Port 8100 is no longer supported on the backup appliance. All communications should be done via standard HTTPS port (443).
- Administrator users on the Veeam Backup & Replication server are now automatically logged in to the backup appliance web console if an appliance link is opened using the **Open console** button in the Veeam Backup & Replication console.
- The backup appliance time zone is always equal to Veeam Backup & Replication server time zone and cannot be changed manually
- Since backup to object storage as primary target requires a gateway, the **Enable SSH** option has been introduced in the backup appliance configuration to allow adding the backup appliance as Linux gateway for object storage access.

Backup Appliance Upgrade and Update

- Major upgrades of the backup appliance from previous version are done via re-deployment. The previous backup appliance configuration will be backed up, a new appliance will be deployed, and the configuration will be restored to a new appliance. The old appliance will be removed after a successful upgrade.
- During minor backup appliance updates if installed from the Veeam Backup & Replication console, a VM snapshot will be automatically created before starting update. If something goes wrong, VM will be automatically reverted to the snapshot.

Backup Appliance Protection

- Auto-protection PD snapshot job on appliance is no longer created after backup appliance deployment or registration. This has been replaced with Configuration Backup from the Veeam Backup & Replication server jobs. Existing PD jobs will not be automatically removed during appliance updates and should be removed once Configuration Backup is set up.
- Veeam Backup & Replication configuration restore does not require re-adding the backup appliance to the backup server. This is handled by the configuration restore process.

Backup and Restore Functionality

- Use of new capabilities such as GFS, Synthetic full backups, health check require adjusting job settings after upgrade.
Note that Synthetic full backups cannot be scheduled if an object storage repository is selected as a target repository for creating backups. However, in this case, if you configure a GFS policy, synthetic backups will be automatically created according to the specified GFS schedule and marked with an appropriate GFS flag.
- Backing up VMs with same ID that originated from different clusters are now supported.
- Copying backups is now supported for Nutanix AHV backups from the Veeam Backup & Replication console.
- Restore operations have higher scheduling priority than backup operations.
- Sparse areas of disks are now skipped on restore.
- Multiple VMs can be selected in the VM restore wizard in the backup appliance web console.
- Multiple disks can be selected in the Disk restore wizard in the backup appliance web console.
- *vlan_mode* settings are restored for network adapters.
- *Hardware_virtualization* (Windows Defender Credential Guard) and *secure_boot* VM options are restored for Entire VM restore and Instant Recovery operations
- VMs from other platforms are now restored to Nutanix AHV with their original settings: bus type, CPU, RAM, etc.

Known Issues and Limitations

Backup Infrastructure

Nutanix AHV Cluster

- You can add only one Nutanix AHV backup appliance per Nutanix AHV cluster.
- You cannot use Prism Central IP addresses to add a Nutanix AHV cluster to the Veeam Backup and Replication server.
- Prism Central Flow networks are not saved during the backup process.

Backup Appliance

- Internet Explorer browser is no longer supported for accessing the backup appliance web console.
- The backup appliance does not support IPv6. Therefore, the backup infrastructure components the backup appliance communicates with (such as the backup server and the Nutanix AHV cluster) must be reachable using IPv4 addresses.
- The backup appliance VM is configured with a single network interface. The interface is used for management, backup and recovery operations. The interface needs network access to both Nutanix AHV cluster IP addresses, and to Veeam Backup & Replication servers and repositories.
- The backup appliance runs daily reports and performs all data protection and disaster recovery operations according to the time zone set on the backup server.
- The backup appliance does not allow you to add inactive protection domains to any jobs.
- The backup appliance does not require any additional settings for Nutanix AHV VM High Availability. For details, see the [Nutanix KB](#).
- After you enable SSH access in the backup appliance web console, you can establish an SSH connection and then disable the access. The current connection will be not terminated. However, new SSH connections will be not established.

Configuration Backup and Restore

- Configuration backup of backup appliances will be created automatically with Veeam Backup & Replication configuration backup if configuration backup encryption is turned on. Configuration backup and restore is no longer available in web UI.
- Configuration backup cannot be restored onto multiple backup appliances to avoid job collision. If you want to restore configuration on another backup appliance, remove the original backup appliance first.

Veeam Backup & Replication Repository

- Veeam Backup for Nutanix AHV does not support storing backups in Veeam Cloud Connect repositories. However, you can use Veeam Cloud Connect repositories for storing copies of backups created with Veeam Backup for Nutanix AHV.

Nutanix CVM

- Nutanix CVM cannot be backed up with Veeam Backup for Nutanix AHV.
- If you raise the number of concurrent backup tasks, backup jobs may fail due to CVM resource limitations. The CVM on each node of the cluster may need additional resources.

Data Protection

Backup Jobs

- Veeam Backup for Nutanix AHV creates forward incremental per-VM backup chains (one backup chain contains data for one VM). When you add several VMs to a backup job, Veeam Backup for Nutanix AHV creates individual backup chains on the Veeam backup repository, one for each VM processed by the job. Note that for forward incremental backup chains, you can create active or synthetic full backups. For more information, see the [Backup Methods](#) section of the Veeam Backup & Replication User Guide.
- Veeam Backup for Nutanix AHV can create application-consistent backups of a VM only if it meets the requirements listed in the [Nutanix Documentation](#). Application-consistent backups allow you to perform application Items restore. Alternatively, to create application-consistent backups, you can use Veeam Agent for Linux or Veeam Agent for Windows.
- By default, Veeam Backup for Nutanix AHV applies the following deduplication and compression settings to backed-up data:
 - Deduplication: *Enabled*
 - Data compression level: *Optimal*
 - Storage optimization: *1MB*

Due to technical limitations, you cannot change these settings while configuring backup jobs.

- By default, backup encryption is disabled for backed-up data. However, you can enable encryption at the repository level. For more information, see the [Access Permissions](#) section of the Veeam Backup & Replication User Guide.
- Veeam Backup for Nutanix AHV does not use the Changed Block Tracking (CBT) mechanism for backup jobs which include a protection domain with consistency groups that contain two or more entities. If CBT cannot be used, Veeam Backup for Nutanix AHV reads the whole content of processed disks and compares it with backed-up data that already exists in the backup repository. In this case, the completion time of incremental backups may occur to grow.
- Since Veeam Backup & Replication does not allow you to assign [information about locations](#) to Nutanix AHV clusters and backup appliances, job statistics do not include information on the Nutanix AHV VM data migration between different geographic regions.
- Manual *Move backup* functionality is not supported for Nutanix AHV backups.

Limitations for Backing Up Volume Groups

- If you specify a VM as the source for a backup job, Veeam Backup for Nutanix AHV processes volume groups attached to the VM. However, if you back up the VM with the attached volume groups, Veeam Backup for Nutanix AHV will create a not crash-consistent backup. To create a crash-consistent backup, you must add the VM and the volume group to the same consistency group and back up a protection domain which includes this group. For more information on consistency groups, see [Nutanix documentation](#).
- If you specify a protection domain as the source for a backup job, Veeam Backup for Nutanix AHV processes volume groups only if they are attached to VMs that belong to the domain. For more information on consistency groups, see [Nutanix documentation](#).
- Veeam Backup for Nutanix AHV does not process volume groups if CHAP authentication is enabled. For more information, see [Nutanix documentation](#).

PD Snapshot Jobs

- You cannot create snapshots of a protection domain if it contains multiple VMs with the same name.
- You cannot create snapshots of a protection domain if it contains VMs with attached volume groups that are not included into the protection domain.
- You cannot create snapshots of instantly recovered VMs since the VM disks have not completed migration to the Nutanix AHV cluster yet, which may cause the snapshots to become incomplete in case the mount server is disconnected.
- You cannot create snapshots of a protection domain in the Inactive state (for example, after having been replicated to a remote site).

Snapshot Jobs

- You cannot use snapshot-only jobs to create PD snapshots. If you add a protection domain to a snapshot job, Veeam Backup for Nutanix AHV will create snapshots of individual VMs included into the protection domain.
- You cannot create snapshots of instantly recovered VMs since the VM disks have not completed migration to the Nutanix AHV cluster yet, which may cause the snapshots to become incomplete in case the mount server is disconnected.

Health Check

- Second Health Check of same data corrupt returns green session (disk is skipped from processing)

Backup Import Operations

- Backups cannot be imported from unsupported repository types. This can affect importing from backup copy jobs.

Backup Copy

- Backup Copy exclusions does not accept Nutanix AHV jobs and objects.

VeeamZIP

- VeeamZIP retention is not supported.
- An SMB share that requires authentication cannot be specified as a local or shared folder. However, it can be added to the backup infrastructure and then set as backup repository.

Backup Files and Jobs in Veeam Backup & Replication Console

- Backup files and jobs created by the backup appliance are visible in the Veeam Backup & Replication console. However, some of the Veeam Backup & Replication functionality is not available for these backups and jobs.

- In the Veeam Backup & Replication console, when you try to create or edit a backup job, you will be redirected to the backup appliance web console where you can perform these operations.
- In Veeam Backup & Replication console, you can:
 - Enable and disable backup jobs.
 - Use backup jobs as a source for *backup copy* or *backup to tape* jobs.
 - Create VeeamZIP backups.
 - Delete backup jobs.
 - Delete backups manually.
 - View statistics of backup jobs.
 - Start and stop backup jobs.
 - Launch the backup appliance web console.
 - Back up and restore backup appliance configuration.

Data Restore

- If you restore the VM from a snapshot of any type, you cannot change the storage container.
- If you restore the VM with an affinity policy not to the original cluster, you must manually configure the affinity policy manually before starting the recovered VM. For more information on affinity policies, see [Nutanix documentation](#).

Restore Using Backup Appliance Web Console

- If you restore the VM from a backup, you can select a storage container only for all VM disks, not separately for each VM disk.
- If you restore the VM from a user snapshot or PD snapshot, you cannot change VM network settings. However, after the VM is restored, you can configure them using the Nutanix Prism console as described in [Nutanix documentation](#).
- You can restore volume groups only as part of VMs to which the volume groups are attached. If you restore to original location, the backup appliance overwrites the original VM and volume group. If you restore to different location, the backup appliance creates a new VM and volume group.

Restore in Veeam Backup & Replication Console

- If you restore the VM from a user snapshot or PD snapshot, you cannot change VM network settings. However, after the VM is restored, you can configure them using the Nutanix Prism console as described in [Nutanix documentation](#). If you choose to restore to different location and choose to disconnect from all networks, the new VM will be created without networks.
- If you restore the VM from a backup stored in the archive tier of the scale-out backup repository, you must first retrieve backup data as described in the Veeam Backup & Replication User Guide, section [Retrieving Backup Files](#). Note that you cannot perform Entire VM restore from backups stored in the archive tier that consists of the Amazon S3 Glacier Instant Retrieval extent. For those backups, you can perform Instant Recovery.
- If you restore the VM from a backup of a VMware, Hyper-V VM or from a backup created by Veeam Agent, a restored VM may have network connection problems. To resolve the issue, install Nutanix Guest Tools on the restored VM as described in [Nutanix documentation](#).
- You cannot perform Entire VM Restore to Nutanix AHV from a Veeam Cloud Connect repository or an external repository. However, you can use Instant Recovery to restore VMs to Nutanix AHV from Veeam Cloud Connect or external repositories.
- You cannot perform VM restore from a tape to Nutanix AHV. A tape backup needs to be returned to a supported repository to complete the restore operation.

File-Level Restore

- If you want to perform file-level restore from VG disks, you should run FLR from backups of the VM that have the required VG attached to them.
- You can use [Veeam Backup Enterprise Manager](#) to file-level restore guest OS files of Nutanix AHV VMs and manage Nutanix AHV VM backup copy jobs. All other operations are not supported.

Instant Recovery

- You can perform instant recovery to VMware and Hyper-V hosts from backups created by Veeam Backup for Nutanix AHV. VMware vSphere or Hyper-V hosts must be added to the Veeam Backup & Replication backup infrastructure.
- It is recommended to deploy a dedicated host as a mount server and allocate minimum 512 MB of additional RAM for each VM disk that you want to recover at the same time. For example, if you restore a VM with 4 disks, you need additional 2 GB of RAM on the mount server.
- Instant Recovery to Nutanix AHV is not supported for Nutanix AOS versions earlier than 6.0 nor in Community Edition.
- A Nutanix AHV cluster must be added to the Veeam Backup & Replication backup infrastructure. No backup appliance is required for Instant Recovery.
- Veeam Backup for Nutanix AHV requires 64 MB of RAM for a VM to perform Instant Recovery. For VMs with less than 64 MB of RAM, Veeam Backup for Nutanix AHV increases the amount of RAM to 64 MB the restore process.
- If you perform Instant Recovery using a VM backup stored in the archive tier of the scale-out backup repository, you must first retrieve backup data as described in the Veeam Backup & Replication User Guide, section [Retrieving Backup Files](#). Note that this requirement is not applicable to backups stored in the archive tier that consists of the Amazon S3 Glacier Instant Retrieval extent.
- If you restore a Nutanix AHV VM that has an attached volume group, the disks from the volume group will not be restored.
- Instant Recovery is not supported:
 - From backups created by Veeam Availability for Nutanix AHV (Veeam Backup for Nutanix AHV version 1.0). For those backups, you can perform only entire VM restore.
 - From backups of VMs with the ARM architecture.
 - From file-level backups created by the Kasten platform, Veeam Agent for Linux, Veeam Agent for Microsoft Windows, Veeam Agent for Unix, Veeam Agent for Mac.
- All required drivers should be installed initially before the instant recovery process. You cannot add or modify drives in the VM during Instant Recovery launch.

Recovery Verification

- [SureBackup](#) is not supported for backups created by Veeam Backup for Nutanix AHV.

Public REST API Limitations

- You cannot specify VM and disk exclusions for backup jobs.
- You cannot change network settings of the backup appliance.
- You cannot change credentials of the account used to access the backup appliance.
- You cannot manage Veeam Backup for Nutanix AHV notification settings.
- You cannot enable or disable SSH on the backup appliance.

Veeam ONE

Veeam ONE 12 supports monitoring, alerting and reporting features for VMs protected by AHV Backup appliance. For the list of supported features, see the [What's New document for Veeam ONE 12](#).

Deploying Veeam Backup for Nutanix AHV

To deploy Veeam Backup for Nutanix AHV 4.0, do the following:

1. Install Veeam Backup & Replication 12 (12.0.0.1420) and configure a backup repository that will be used as a target for VM backups.
2. Download Nutanix AHV Plug-in for Veeam Backup & Replication from the [Veeam downloads page](#).
3. Install Nutanix AHV Plug-in.
4. In the Veeam Backup & Replication console, add a Nutanix AHV cluster to the backup infrastructure.
5. In the Veeam Backup & Replication console, complete a wizard to deploy a new backup appliance or connect an existing one.

For detailed instructions, see the [Deployment](#) section of the Veeam Backup for Nutanix AHV User Guide.

Upgrading Veeam Backup for Nutanix AHV

Veeam Backup for Nutanix AHV version 2.0, 2.1, 3.0 or 3a can be upgraded to version 4.0.

If you use Veeam Backup & Replication 10 or 11 and you want to upgrade Veeam Backup for Nutanix AHV version 2.0, 2.1, 3.0 or 3a to version 4.0, upgrade Veeam Backup & Replication to version 12:

1. Check the prerequisites and upgrade Veeam Backup & Replication to version 12 build 12.0.0.1420. For instructions on how to do it, see [Upgrading to Veeam Backup & Replication 12](#) section of the Veeam Backup & Replication User Guide.
2. During the process of upgrading to Veeam Backup & Replication 12, the wizard will automatically upgrade Nutanix AHV Plug-in.
3. Open the Veeam Backup & Replication console. The upgrade wizard will appear and prompt you to upgrade the product components. Follow the wizard to complete the upgrade process for AHV backup infrastructure components.

Note that Veeam Availability for Nutanix AHV 1.0 is no longer supported and cannot be upgraded to Veeam Backup for Nutanix AHV 4.0. First, you must upgrade it to Veeam Backup for Nutanix AHV 3a as described in the Veeam Backup for Nutanix AHV 3.0 User Guide, section [Appendix B. Upgrading Veeam Availability for Nutanix AHV 1.0](#).

Licensing

Veeam Backup for Nutanix AHV is licensed by the number of protected Nutanix AHV VMs. Each protected Nutanix AHV VM consumes one Veeam Universal License instance from the license scope. A Nutanix AHV VM is considered protected if it has a restore point created during the past 31 days. If a Nutanix AHV VM is protected with snapshots only, no license is consumed.

For more information, the [Licensing](#) section of the Veeam Backup for Nutanix AHV User Guide.

To renew your maintenance plan, please contact [Veeam Renewals](#).

Technical Documentation References

If you have any questions about Veeam Backup for Nutanix AHV, you may use the following resources:

- [Product web page](#)
- [Veeam Backup for Nutanix AHV documentation](#)
- [Veeam R&D Forums](#)

Technical Support

We offer email and phone technical support for customers on maintenance and during the official evaluation period. For better experience, please provide the following information when contacting Veeam Customer Support:

- Version information for the product and all infrastructure components
- Error message and/or accurate description of the problem you are having
- Log files

TIP

To export the log files, navigate to the **Configuration** page of the Nutanix AHV backup appliance web console and select **Support Information**. Switch to the **Download Logs** tab and click the **Download Logs** link.

To submit your support ticket or obtain additional information, please visit the [Veeam Customer Support Portal](#). Before contacting Veeam Customer Support, consider searching for a resolution on [Veeam R&D Forums](#).

Contacting Veeam Software

At Veeam Software, we pay close attention to comments from our customers – we make it our mission to listen to your input, and to build our products with your suggestions in mind. We encourage all customers to join [Veeam R&D Forums](#) and share their feedback directly with the R&D team.

Should you have a technical or licensing issue or question, please feel free to contact our Customer Support organization directly. We have qualified technical and customer support staff available 24/7 who will help you with any inquiry that you may have.

Customer Support

For the most up to date information about our support practices, business hours and contact details, please visit the [Veeam Customer Support Portal](#).

Company Contacts

For the most up to date information about company contacts and office locations, please visit the [Veeam Contacts Webpage](#).