



# Veeam ONE

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Version 10a

Reporter User Guide

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# Contacting Veeam Software

At Veeam Software we value feedback from our customers. It is important not only to help you quickly with your technical issues, but it is our mission to listen to your input and build products that incorporate your suggestions.

## Customer Support

Should you have a technical concern, suggestion or question, visit the Veeam Customer Support Portal at [www.veeam.com/support.html](http://www.veeam.com/support.html) to open a case, search our knowledge base, reference documentation, manage your license or obtain the latest product release.

## Company Contacts

For the most up-to-date information about company contacts and offices location, visit [www.veeam.com/contacts.html](http://www.veeam.com/contacts.html).

## Online Support

If you have any questions about Veeam products, you can use the following resources:

- Full documentation set: [www.veeam.com/documentation-guides-datasheets.html](http://www.veeam.com/documentation-guides-datasheets.html)
- Community forum at [forums.veeam.com](http://forums.veeam.com)

# About This Document

This guide contains detailed description of Veeam ONE Reporter. It has all information you need to access, configure and manage Veeam ONE Reporter. You will find all relevant data on how to customize dashboards and reports according to your requirements and learn how to use preconfigured reports and dashboards.

## Intended Audience

The guide is designed for anyone who plans to use the Veeam ONE solution. It is primarily aimed at administrators managing VMware vSphere or Microsoft Hyper-V environments, but can also be helpful for other current and perspective Veeam ONE users.

# About Veeam ONE Reporter

Veeam ONE Reporter – part of an integrated Veeam ONE solution – is designed for documenting and reporting on the Veeam Backup & Replication infrastructure, VMware vSphere, vCloud Director and Microsoft Hyper-V environments. Veeam ONE Reporter includes detailed reports and dashboards for documentation, analysis, decision-making, chargeback, change tracking, capacity planning and optimization of resource utilization.

# Accessing Veeam ONE Reporter

To start working with Veeam ONE Reporter:

1. Open the Veeam ONE Reporter website using one of the following options:
  - Access Veeam ONE Reporter from the Veeam ONE Monitor console. To do this, on the toolbar click **Report** and choose the necessary report in the list.
  - Access Veeam ONE Reporter locally, on the machine where the Veeam ONE Web UI component is installed. To do this, in Microsoft Windows Programs menu choose **Veeam ONE Reporter**.
  - Access Veeam ONE Reporter remotely using your web browser. To do this, browse to the URL of the Veeam ONE Reporter website. This website runs on the machine where the Veeam ONE Web UI component is installed. The URL must look similar to the following one (assuming you use the default website port 1239):

`https://webserver.domain.tld:1239`

Note that Veeam ONE Reporter is available over HTTPS.

2. Type credentials of a user account under which you want to connect to Veeam ONE Reporter.

The user account must either:

- Be a member of the *Veeam ONE Administrators* or *Veeam ONE Read-Only Users* group. For more information on user groups, see section [Security Groups](#) of the Veeam ONE Deployment Guide.

This prerequisite applies to VMware vSphere and Microsoft Hyper-V platforms.

- Have permissions assigned on objects in the vCenter Server or vCloud Director inventory hierarchy. For details, see [Veeam ONE Multi-Tenant Monitoring and Reporting](#).

This prerequisite applies to the VMware vSphere platform only.

[For Internet Explorer] To connect using credentials of a Windows user account under which you are logged on to the machine, select the **Use Windows session authentication** check box.

3. If you log in for the first time, configure your browser settings:

- Make sure that pop-up windows are allowed for the Veeam ONE Reporter website.
- [For Internet Explorer] Add the Veeam ONE Reporter website to the list of '*Trusted sites*'.

# Navigating Veeam ONE Reporter

Veeam ONE Reporter includes three working areas – **Dashboards**, **Workspace** and **Configuration**.

## Dashboards

In the **Dashboards** section, you can work with predefined and custom dashboards. Veeam ONE dashboards provide at-a-glance view on the state of the Veeam Backup & Replication infrastructure and virtual environment, and present information on the health state, performance, configuration and other aspects of the managed environment.

For details, see [Dashboards](#).

The screenshot shows the Veeam ONE Reporter interface with the following layout:

- Header:** Veeam ONE™ REPORTER Advanced monitoring, reporting and capacity planning. You logged in as: srv11\administrator | Sign out.
- Navigation:** DASHBOARDS (selected), WORKSPACE, CONFIGURATION. ADD NEW DASHBOARD...
- Grid:** A 4x3 grid of dashboard tiles. The first row contains:
  - VEEAM BACKUP AND REPLICATION (QR code icon)
  - VMWARE TRENDS (User with gear icon)
  - VMWARE ALARMS (Bell icon)
  - VMWARE HOSTS AND CLUSTERS (Document icon)
- Second Row:**
  - VMWARE DATASTORES (Disk icon)
  - VMWARE VMS (VM icon)
  - VMWARE INFRASTRUCTURE (Server icon)
  - VMWARE CAPACITY PLANNING (Bar chart icon)
- Third Row:**
  - HYPER-V TRENDS (User with gear icon)
  - HYPER-V INFRASTRUCTURE (Server icon)
  - HYPER-V ALARMS (Bell icon)
  - HYPER-V VMS (VM icon)
- Fourth Row:**
  - HYPER-V HOSTS AND CLUSTERS (Document icon)
  - HYPER-V DATASTORES (Disk icon)
  - HEATMAP (Heatmap icon)

## Workspace

In the **Workspace** section, you can work with reports and deployment projects.

- Reports provide an insight into performance, health state, configuration and efficiency aspects of the Veeam Backup & Replication infrastructure and virtual environment.
- Deployment projects allow you to predict future resource utilization and plan resource reservations in the virtual environment

For details, see [Reports](#) and [Deployment Projects](#).

The screenshot shows the Veeam ONE Reporter interface. The top navigation bar includes the Veeam ONE logo, a REPORTER link, and a sign-in message "You logged in as: srv11\administrator". Below the navigation is a menu bar with DASHBOARDS, WORKSPACE (selected), and CONFIGURATION. On the left, a sidebar lists report categories like All Folders, My Reports, Nutanix AHV Protection, Infrastructure Chargeback (which is selected and highlighted in blue), and others such as Veeam Cloud Connect, Veeam Backup Assessment, etc. The main content area is titled "INFRASTRUCTURE CHARGEBACK" and contains a table of reports. The table has columns for Name, Folder, and State. It lists four reports under the Infrastructure Chargeback folder:

Name	Folder	State
Host Configuration Chargeback This report helps to make infrastructure costs audit and identify the most and least expensive VMs ...	Infrastructure Chargeback	
Host Resource Usage Chargeback This report helps to make a VM audit and identify the most and least expensive VMs based on the ...	Infrastructure Chargeback	
VM Configuration Chargeback This report helps to make a VM audit and identify the most and least expensive VMs based on the ...	Infrastructure Chargeback	
VM Performance Chargeback This report helps to make a VM audit and identify the most and least expensive VMs.	Infrastructure Chargeback	

## Configuration

In the **Configuration** section, you can configure Veeam ONE settings and perform administrative tasks, such as scheduling data collection for reports and dashboards.

For details, see [Configuration](#).

The screenshot shows the Veeam ONE Reporter interface with the CONFIGURATION tab selected. The top navigation bar includes the Veeam ONE logo, a REPORTER link, and a sign-in message "You logged in as: srv11\administrator". Below the navigation is a menu bar with DASHBOARDS, WORKSPACE, and CONFIGURATION (selected). On the left, a sidebar lists configuration items: Summary (selected and highlighted in blue), Servers, Sessions, Extension modules, and About. The main content area is titled "SUMMARY". It displays two sections: "SERVER COLLECTION STATE" and "SERVER STATE".

**SERVER COLLECTION STATE**

Success:	5
Warning:	2
Error:	3

**SERVER STATE**

Scheduling service is running  
This server is responsible for virtual infrastructure data collection

# Configuring Veeam ONE Reporter

Veeam ONE Reporter does not require complex configuration and is ready for use right after the installation of Veeam ONE. However, before you start using Veeam ONE Reporter, you might need to check and adjust its default configuration.

1. [Review the configuration summary](#).
2. [Schedule data collection for connected servers](#).
3. [Check extension modules and other settings](#).

## Who Can Configure Veeam ONE Reporter

You can change Veeam ONE Reporter settings in the **Configuration** section.

To be able to access the **Configuration** section, a user must be a member of the *Veeam ONE Administrators* group on a machine where the Veeam ONE Web UI component is installed. For details on Veeam ONE security groups, see section [Security Groups](#) of the Veeam ONE Deployment Guide..

# Configuration Summary

Before you configure Veeam ONE Reporter settings, review the configuration summary:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Summary**.

The screenshot shows the Veeam ONE Reporter interface. At the top, there's a header bar with the title 'Veeam® ONE™ REPORTER Advanced monitoring, reporting and capacity planning'. On the right, it shows 'You logged in as: srv11\administrator' and a 'Sign out' link. Below the header, there's a navigation bar with tabs: 'DASHBOARDS' (selected), 'WORKSPACE', and 'CONFIGURATION' (selected). The main content area is titled 'SUMMARY'. It contains two sections: 'SERVER COLLECTION STATE' (indicated by a red cross icon) and 'SERVER STATE' (indicated by a green checkmark icon). The 'SERVER COLLECTION STATE' section shows statistics: Success: 5, Warning: 2, Error: 3. The 'SERVER STATE' section indicates that the scheduling service is running and notes that this server is responsible for virtual infrastructure data collection. A 'View details' link is present next to each section title.

The **Configuration** summary section gives you a quick overview of the current Veeam ONE Reporter configuration and helps reveal possible configuration problems. If Veeam ONE Reporter detects any configuration issues, it will open this section every time you switch to the **Configuration** view.

To view configuration summary details, expand the **Server Collection State** and **Server state**.

- **Server Collection State** section shows information about connected servers and results of the latest collection sessions. The figures show the number of servers for which the latest data collection completed successfully, or ended with warnings or errors.  
To switch to the list of connected servers, click the **View details** link. If you do not have any connected servers yet, connect them in the Veeam ONE Monitor console. For details, see section [Connecting Servers](#) of the Veeam ONE Deployment Guide.
- **Server State** section shows the state of the scheduling service that is responsible for data collection and scheduled report delivery. To view details on the server state and version, click the **View details** link.

For your convenience, Veeam ONE Reporter displays configuration status icons next to section titles. Status icons illustrate the configuration state of a corresponding component.

# Servers

To start working with dashboards and reports, you need to collect data from Veeam Backup & Replication and virtual infrastructure servers.

Server connections can be configured either during Veeam ONE installation or you can connect servers later, in the Veeam ONE Monitor console. In Veeam ONE Reporter, you can review configured connections, change the data collection schedule for Veeam ONE Reporter and Veeam ONE Business View, or run data collection manually.

## Viewing Server Connections

To view the list of server connections:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Servers**.

The screenshot shows the Veeam ONE Reporter web interface. At the top, there's a header bar with the Veeam ONE logo, the word 'REPORTER', and a sub-header 'Advanced monitoring, reporting and capacity planning'. On the right side of the header, it says 'You logged in as: srv11\administrator' and has a 'Sign out' link. Below the header, there are two main navigation tabs: 'DASHBOARDS' and 'WORKSPACE'. Under 'WORKSPACE', there are four items: 'Summary' (selected), 'Servers' (highlighted with a blue arrow), 'Sessions', and 'Extension modules'. To the right of these tabs is a 'CONFIGURATION' tab. The main content area is titled 'SERVERS'. It features a toolbar with three buttons: 'Run now', 'Stop', and 'Scheduling...'. To the right of the toolbar is a 'Refresh' button. Below the toolbar is a table with the following columns: Name, Status, Modified Date, Schedule, Last Run, Next Run, and Progress. The table contains five rows of data. The first row is an 'Object properties collection task' with a status of 'Success' and a progress bar at 100%. The next four rows are for virtual machines: 'vcenter01.tech.local', 'epsilon.tech.local', 'backup01.tech.local', and 'backup02.tech.local', all with a status of 'Success' and a progress bar at 100%.

Name	Status	Modified Date	Schedule	Last Run	Next Run	Progress
Object properties collection task	Success	07.12.2018 16:57	Daily	07.12.2018 17:26	10.12.2018 03:00	100%
vcenter01.tech.local	Success	07.12.2018 16:33	Manually	07.12.2018 17:26		100%
epsilon.tech.local	Success	07.12.2018 17:16	Manually	07.12.2018 17:26		100%
backup01.tech.local	Success	07.12.2018 17:20	Manually	07.12.2018 17:26		100%
backup02.tech.local	Success	07.12.2018 17:20	Manually	07.12.2018 17:26		100%

The **Servers** list displays Veeam Backup & Replication and virtual infrastructure servers from which data for Veeam ONE Reporter is collected. In addition to server connections, the list displays the *Object properties collection task* – an auxiliary task that starts data collection for all connected servers according to the specified schedule.

For each server in the list, the following details are available:

- Server name
- Status of the latest data collection (*Success, Warning, Error*)
- Date and time when connection settings were last modified
- Type of data collection schedule (*Daily, Periodic, Manually*)
- Date and time of the latest data collection session
- Date and time of the next data collection run according to the schedule

- Data collection progress of the latest started session

# Scheduling Data Collection

By default, data for Veeam ONE Reporter and Veeam ONE Business View is collected automatically, according to a predefined schedule. Data collection runs on weekdays at 3:00 a.m. This schedule applies to all Veeam Backup & Replication and virtual infrastructure servers that are managed by Veeam ONE.

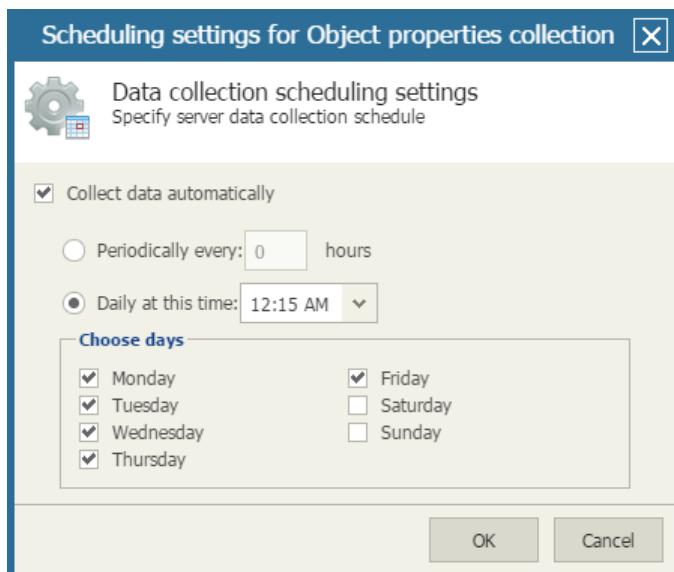
You can change the default data collection schedule or disable the schedule.

## Changing Data Collection Schedule

To change the schedule according to which data collection will start:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Servers**.
4. Click **Scheduling** on the toolbar.
5. Make sure the **Collect data automatically** check box is selected.
6. Set the schedule according to which data collection must start.
  - To run data collection with specific time intervals, select the **Periodically every... hours** option and specify the interval at which data collection must start. If you choose to run data collection periodically, make sure that the interval between data collection sessions is long enough to collect data from all connected servers.
  - To run data collection every day at specific time, select the **Daily at this time** option and specify the time of the day when data collection must start. In the **Choose days** section, select days of week on which data collection must run.
7. Click **OK**.

After you schedule automatic data collection, the schedule type for the *Object properties collection task* will be set to *Daily* or *Periodic*. The task will start data collection according to the specified schedule.



# Disabling Data Collection

You can disable automatic data collection for Veeam ONE Reporter, and perform data collection manually. To learn how to perform data collection manually, see [Running Data Collection Manually](#).

To disable automatic data collection:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Servers**.
4. Click **Scheduling** on the toolbar.
5. Clear the **Collect data automatically** check box.
6. Click **OK**.

# Running Data Collection Manually

You can run data collection for Veeam ONE Reporter manually. This can be required if you disabled automatic data collection, or if you want to collect data between scheduled collection sessions.

## Starting Data Collection

To manually start a data collection session. When you start data collection manually, Veeam ONE will collect data from all connected servers.

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Servers**.
4. Click the **Run now** button on the toolbar.

## Stopping Data Collection

You can stop a data collection session that was started either manually or by the schedule:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Servers**.
4. Click the **Stop** button on the toolbar.

# Viewing Data Collection Session Details

Every run of data collection initiates a new data collection session. Veeam ONE keeps record of tasks performed during data collection sessions and stores this information, so that you can view session details.

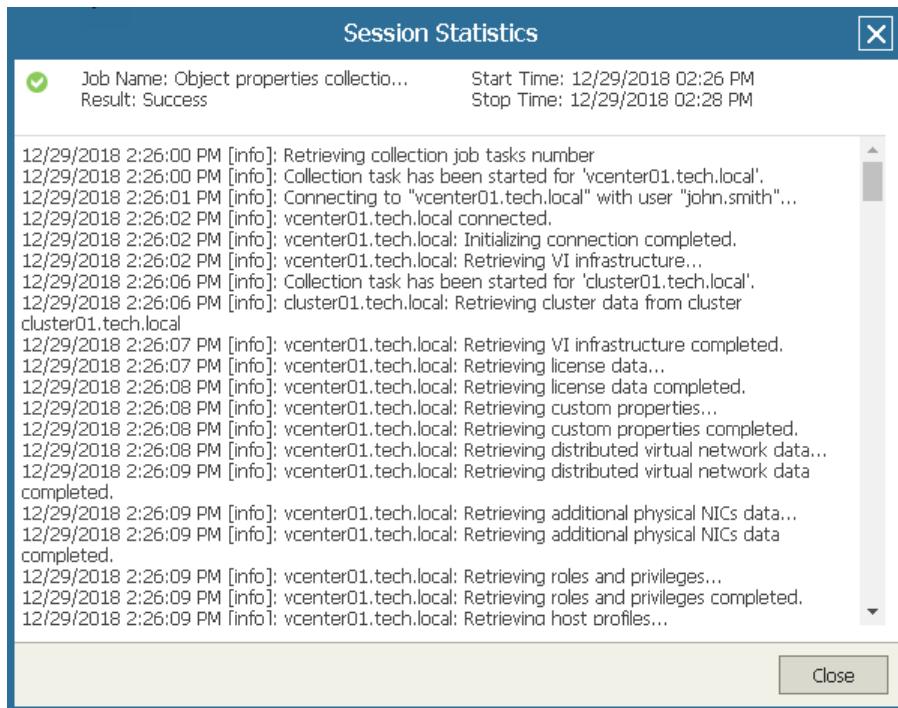
To view data collection session details:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Sessions**.
4. In the list of sessions, select the necessary *Object properties collection task*.

To easily find the necessary session, you can apply the following filters:

- **Job Type** – limit the list of sessions by data collection type
- **Start Date/End Date** – limit the list of sessions by the time when the session was performed

5. Click the necessary session in the list to view its details.



Every session is described with the following details:

- Session type
- Session result
- Session start and end date and time
- Details on operations performed during the session

## Data Administration Tasks

In addition to data collection, Veeam ONE periodically runs data administration tasks to delete data that must no longer be kept in the database according to the retention policy. Data administration tasks run every two weeks at 6:00 a.m.

Data administration task details are stored in the list of sessions. You can view details of data administration tasks similarly to viewing data collection session details.

# Extension Modules

In the **Extension Modules** section, you can customize miscellaneous settings of the Veeam ONE Reporter configuration. The settings are grouped into the following tabs:

- [Modules](#)  
On this tab, you can manage Veeam ONE Reporter extension modules.
- [Report Branding](#)  
On this tab, you can replace the default report header with a custom image.
- [SSRS Server](#)  
On this tab, you can specify settings of the Microsoft SQL Server Reporting Services server to be used for integration with Veeam ONE Reporter.
- [Report Management](#)  
On this tab, you can export and import report templates.

# Managing Extension Modules

Extension modules are add-on elements that can be deployed to enhance the Veeam ONE Reporter functionality. The following types of extension modules are available:

- **Widget pack** – a set of widgets for custom dashboards
- **Report pack** – a set of reports
- **Resource pack** – an archive with common components used for reports and dashboards (such as images, report parameters and so on)
- **Hotfix** – a hotfix for Veeam ONE

Extension modules are installed automatically, during the Veeam ONE installation process. On the **Modules** tab, you can manage already installed extension modules and install new modules.

The screenshot shows the Veeam ONE Reporter web interface. At the top, there's a navigation bar with 'Veeam® ONE™ REPORTER' and 'Advanced monitoring, reporting and capacity planning'. On the right, it says 'You logged in as: srv11\administrator' and 'Sign out'. Below the navigation bar, there are two main tabs: 'DASHBOARDS' and 'WORKSPACE'. Under 'WORKSPACE', there are several items: 'Summary', 'Servers', 'Sessions', 'Extension modules' (which is highlighted with a blue arrow), and 'About'. The main content area is titled 'CONFIGURATION' and 'EXTENSION MODULES'. It features a toolbar with 'Install...', 'Type text to find packs...', and buttons for 'Modules', 'Report branding', 'SSRS Server', and 'Report management'. A table lists installed modules, including 'VMware Infrastructure Assessment', 'Veeam Backup and Replication', 'VMware Alarms', 'Infrastructure Chargeback' (which is currently selected and highlighted in blue), 'Veeam Backup Agents', 'Veeam Cloud Connect', 'Veeam Backup Assessment', 'Veeam Backup Billing', 'Veeam Backup Capacity Planning', 'Veeam Backup Monitoring', 'Veeam Backup Overview', and 'Veeam Backup in Tanzu Rennit'. Each row in the table includes columns for 'Name', 'Version', 'Type', and 'Delete'. Below the table, there's a note about 'Available in Community edition: false' and a detailed description: 'This report pack allows to understand costs for virtual infrastructure users and do chargeback by analyzing VMs configuration and resource usage, including CPU, memory and storage.'

## Installing New Modules

If the machine where Veeam ONE Server runs is connected to Internet, Veeam ONE will periodically check for updates. When new report packs, widget packs or hotfixes are released, Veeam ONE Reporter will display a message notifying about available updates and details on how to download the archive with updates.

After you download the archive, you can install the new modules:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Extension Modules**.
4. Open the **Modules** tab.
5. Click **Install** on the toolbar and specify path to the archive with the updates.

# Deleting Modules

If you no longer need an extension module, you can delete it. You can only delete custom extension modules (modules that have been provided by Veeam for support purposes). Inbuilt extension modules cannot be deleted.

To delete an extension module:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** tab.
3. In the **Configuration** section menu, click **Extension Modules**.
4. Open the **Modules** tab.
5. Choose the necessary module in the list and click **Delete**.

# Customizing Report Branding

To customize appearance of reports according to your company branding, you can replace the default report header with a custom image, such as your company logo.

The screenshot shows a report interface with a toolbar at the top. Below the toolbar, there is a green header bar containing the placeholder text 'Your Company Logo'. The main title of the report is 'Datastore Performance Assessment'. Underneath the title, there is a section titled 'Description' with a brief summary of the report's purpose. Following the description is a section titled 'Report Parameters' which lists various configuration details. At the bottom of the report area is a table titled 'Assessment Results' with the heading 'Read Latency by Datastore'. The table contains data for several datastores, including their names, connected hosts, number of VMs, number of virtual disks, and average value.

Datastore	Connected Hosts	N. of VMs	N. of Virtual Disks	Average Value
elal.dev.amust.local\Datacenter1\ai_netapp(21.103)_lun_source_vol1	3	1	1	
elal.dev.amust.local\Datacenter1\ai_netapp(21.103)_nfs_source_vol1	1	1	1	
elal.dev.amust.local\Datacenter1\dr_nfs_netapp	1	1	2	
elal.dev.amust.local\Datacenter1\dr_vlun	3	1	1	0.12
elal.dev.amust.local\Datacenter1\HPE SV\vol1	3	13	30	
elal.dev.amust.local\Datacenter1\HPE SV\vol2	3	11	13	
elal.dev.amust.local\Datacenter1\local	1	48	69	

## Image Requirements

Before creating an image that will replace the default report header, check the following requirements:

- Format:** the image file must be saved in the PNG, JPEG, BMP, GIF or TIFF formats.
- Dimensions:** the maximum recommended height for the image file is 54px.

If the image is more than 54px height, it will be compressed proportionally. The width of the image is dictated by the greatest width that can be observed in Veeam ONE reports. If a report width is less than the image width, the right part of the image will be cropped to fit the report width. For this reason, it is recommended to place the corporate logo or other graphics closer to the left part of the image.

## Replacing Default Report Header

To replace the default report header with a custom image:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Extension Modules**.

4. Open the **Report branding** tab.
5. Click **Browse** and specify path to the custom report image file.
6. Click **Upload**.

The screenshot shows the Veeam ONE Reporter web interface. At the top, there's a header bar with the Veeam ONE logo, the word 'REPORTER', and the text 'Advanced monitoring, reporting and capacity planning'. On the right side of the header, it says 'You logged in as: srv11\administrator' and has a 'Sign out' link. Below the header is a navigation bar with tabs: 'DASHBOARDS', 'WORKSPACE', and 'CONFIGURATION'. The 'CONFIGURATION' tab is currently selected. Under 'CONFIGURATION', there's a sub-section titled 'EXTENSION MODULES'. This section contains four tabs: 'Modules' (selected), 'Report branding' (which is highlighted in green), 'SSRS Server', and 'Report management'. Below these tabs is a sub-section titled 'Upload custom report image' with the instruction 'The image should be in the PNG, JPEG, BMP, GIF or TIFF formats with the max height of 54 pixels'. There's a file input field containing 'reporter\_logo.png', a 'Browse...' button, an 'Upload' button (with a hand cursor icon indicating it's clickable), and a 'Reset to default' button.

## Restoring the Default Report Header

To restore the default report header:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Extension Modules**.
4. Open the **Report branding** tab.
5. Click the **Reset to default** button.

Veeam ONE Reporter will open a dialog box with the reset result.

6. In the dialog box, click **OK** to acknowledge the result.

# Configuring SSRS Server Settings

When you report on a large virtual infrastructure, you may experience slowdowns with generating reports. In this case, you can integrate an SSRS server with Veeam ONE Reporter and use this SSRS server as an alternative to the default Veeam ONE report viewer.

You can specify access settings to the Microsoft SQL Reporting Services server that will be used for integration with Veeam ONE Reporter:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Extension Modules**.
4. Open the **SSRS Settings** tab.
5. Select the **Use Microsoft SQL Server Reporting Services** check box.
6. In the **SSRS server URL** field, enter the address of the SSRS hosting server.

The URL must be specified in the following format: `http://servername:port/VirtualDirectory`.

To check if this URL is correct, launch the Reporting Services Configuration Manager and check the **Web Service URL** section.

7. Specify a user name and a password to connect to the SSRS server.  
The user name must be specified in the `DOMAIN\USERNAME` format.
8. To verify SSRS server settings, click the **Test Connection** button. Veeam ONE Reporter will display verification results on a summary screen.

The screenshot shows the Veeam ONE Reporter web interface. At the top, there's a header with the Veeam ONE logo, a sign-in message 'You logged in as: srv11\administrator', and a 'Sign out' link. Below the header, the main navigation bar has 'DASHBOARDS' and 'WORKSPACE' tabs, with 'WORKSPACE' being active. On the left, a sidebar menu lists 'Summary', 'Servers', 'Sessions', 'Extension modules' (which is highlighted in blue), and 'About'. The main content area is titled 'CONFIGURATION' and contains a 'EXTENSION MODULES' section. Under 'EXTENSION MODULES', there are four tabs: 'Modules', 'Report branding', 'SSRS Server' (which is selected and highlighted in grey), and 'Report management'. Under the 'SSRS Server' tab, there's a checkbox 'Use Microsoft SQL Server Reporting Services' which is checked. Below it, there are fields for 'SSRS server URL' containing 'http://ssrs.tech.local/virtualdirectory', 'User name' containing 'veeam\administrator', and 'Password' (represented by a series of yellow dots). At the bottom of this section are 'Test connection' and 'Apply' buttons, with the 'Apply' button having a hand cursor icon over it. The overall interface is light blue and white.

## NOTE:

If reports and folders are accidentally deleted, you can publish report packs back to Veeam ONE Reporter. To republish report packs, use the **Republish report packs** button.

# Exporting and Importing Reports

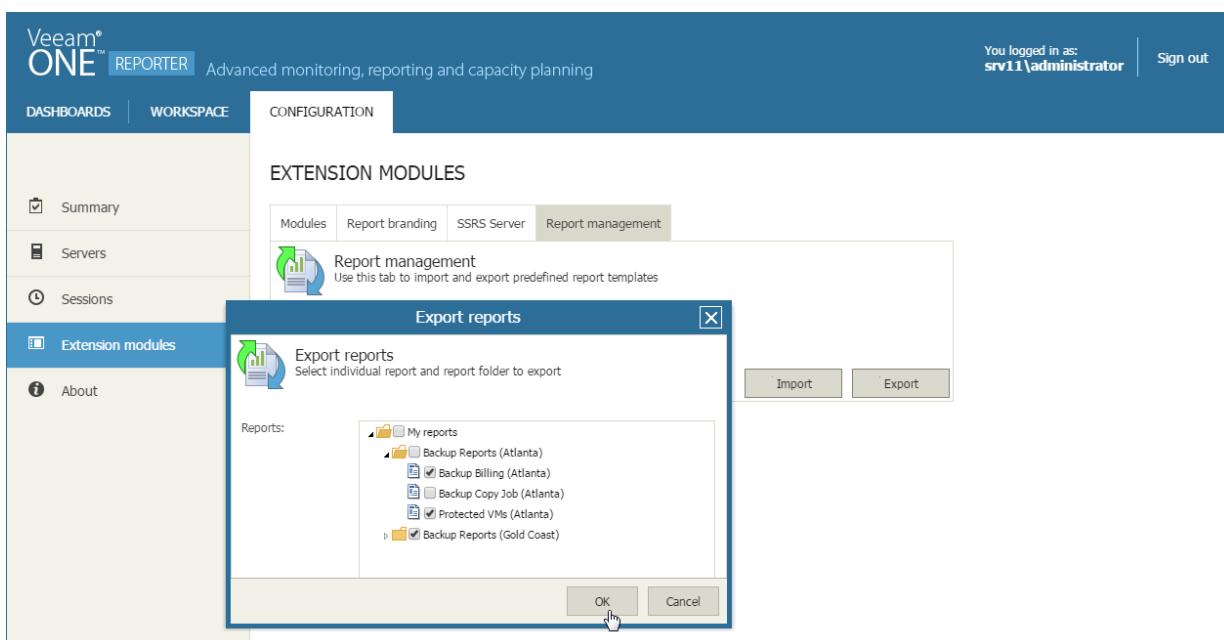
You can export saved user reports to an XML file and import reports from an XML file. Exporting and importing can be useful if you need to back up custom-designed reports, or if you want to copy saved reports from one Veeam ONE deployment to another.

## Exporting Reports

To export saved user reports to an XML file:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the Configuration section menu, click **Extension Modules**.
4. Open the **Report management** tab.
5. Click **Export**.
6. In the **Export reports** window, select reports that you want to export.
7. Click **OK**.

The selected reports will be exported to an XML file and saved to the download location on your machine.



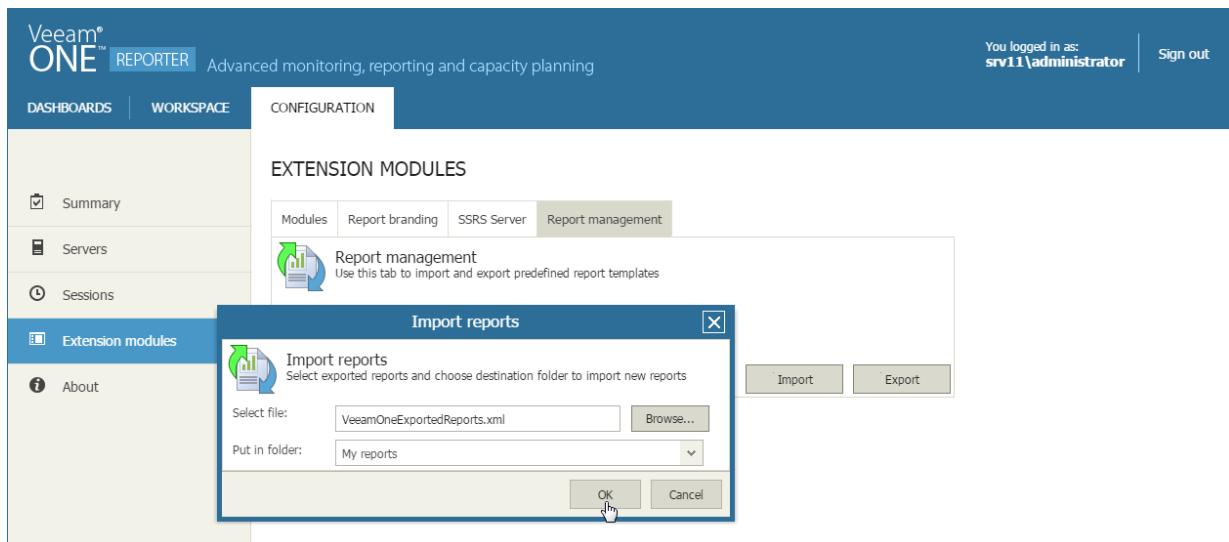
## Importing Reports

To import saved user reports from an XML file:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the Configuration section menu, click **Extension Modules**.
4. Open the **Report management** tab.

5. Click **Import**.
6. In the **Import reports** window, specify path to the XML file that describes saved user reports and choose a folder to which reports must be imported.
7. Click **OK**.

Reports from the XML file will be installed to the specified folder.



# General Configuration Details

To access Veeam ONE Reporter configuration details:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **About**.

In the **About** section, you can view the following product details:

- The **Website information** section displays the current version of the product and the location of the log files for the Veeam ONE Web UI.
- The **Server information** section displays Veeam ONE Server component details – the status of the Veeam ONE Reporter Server, Veeam ONE version, the machine where the Veeam ONE Server runs and the location of the log files.

The screenshot shows the Veeam ONE Reporter interface. The top navigation bar includes the Veeam ONE logo, 'REPORTER', and the tagline 'Advanced monitoring, reporting and capacity planning'. On the right, it shows 'You logged in as: srv11\administrator' and a 'Sign out' link. The main menu at the top has tabs for 'DASHBOARDS', 'WORKSPACE', and 'CONFIGURATION', with 'CONFIGURATION' being the active tab. A sidebar on the left lists 'Summary', 'Servers', 'Sessions', 'Extension modules', and 'About', with 'About' being the selected item. The main content area is titled 'ABOUT' and contains two sections: 'WEBSITE INFORMATION' and 'SERVER INFORMATION'. Under 'WEBSITE INFORMATION', it shows 'Version: 10.0.0.750' and 'Log path: C:\Program Files\Veeam\Veeam ONE\Veeam ONE Reporter Web\Veeam\Veeam ONE Reporter\log.txt'. Under 'SERVER INFORMATION', it shows 'Server status: Scheduling service is running', 'Name: Veeam ONE Reporter Server', 'Version: 10.0.0.750', 'Machine: SRV11', and 'Log path: C:\ProgramData\Veeam\Veeam ONE'.

# Dashboards

Veeam ONE Reporter dashboards provide at-a-glance view on the managed Veeam Backup & Replication infrastructure, VMware vSphere and Microsoft Hyper-V environments. You can view dashboards in the web browser, schedule automatic dashboard delivery or integrate dashboards into the intranet web portals, such as Microsoft SharePoint.

Every dashboard includes a set of visual components called *widgets*. Widgets are visual modules that portray various aspects of the managed environment in the form of charts, graphs or tables. By aggregating several widgets on a single screen, dashboards allow you to focus on critical areas of the managed environment, track dependencies and interrelated aspects.

Veeam ONE Reporter includes a set of predefined dashboards. For detailed description of predefined dashboards, see [Predefined Veeam ONE Dashboards](#).

In addition to predefined dashboards, you can create custom dashboards to meet your requirements. In custom dashboards, you can choose the necessary widgets and specify widget properties.

# Viewing Dashboards

Veeam ONE Reporter dashboards are available in the **Dashboards** section.

The **Dashboards** section displays preview images for available dashboards (dashboards for which data has been collected from connected servers). You can re-arrange the dashboards by dragging their preview images to the necessary position in the **Dashboards** section.

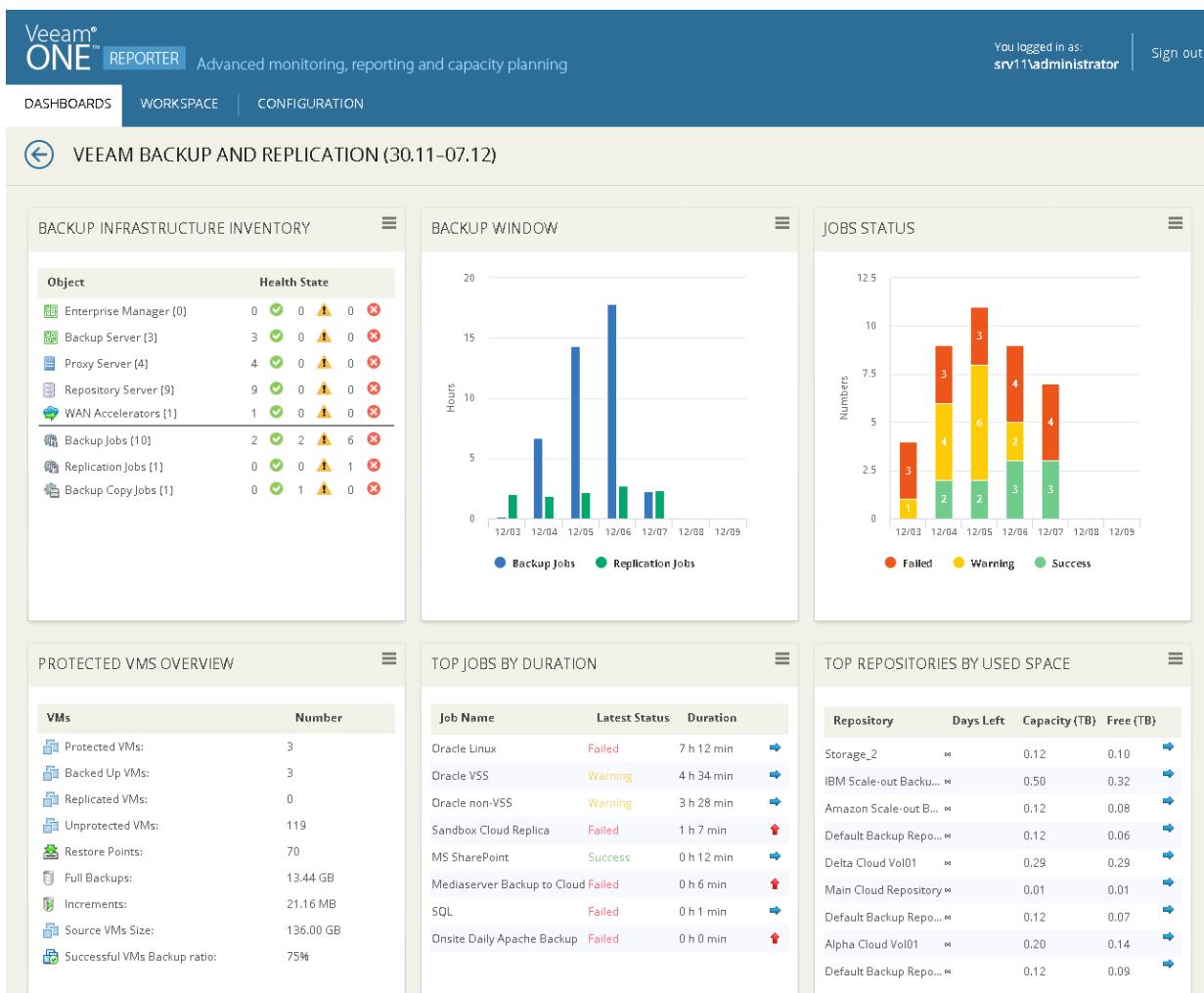
To view a dashboard:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. Do one of the following:
  - o Click the dashboard preview image.
  - o Open the menu at the top right corner of the dashboard and click **View dashboard**.

The screenshot shows the Veeam ONE Reporter interface with the 'Dashboards' tab selected. The main area displays a grid of dashboard preview cards. Each card includes a small icon, a title, and a context menu with options like 'View dashboard', 'Edit dashboard', 'Publish', etc. The cards are categorized into sections: VEEAM BACKUP AND RECOVERY, VMWARE TRENDS, VMWARE ALARMS, VMWARE HOSTS AND CLUSTERS, VMWARE DATA, VMWARE VMS, VMWARE INFRASTRUCTURE, VMWARE CAPACITY PLANNING, HYPER-V TRENDS, HYPER-V INFRASTRUCTURE, HYPER-V ALARMS, HYPER-V VMS, HYPER-V HOSTS AND CLUSTERS, HYPER-V DATASTORES, and HEATMAP. The 'VEEAM BACKUP AND RECOVERY' card is currently selected, as indicated by its highlighted background and open context menu.

# Dashboard Details

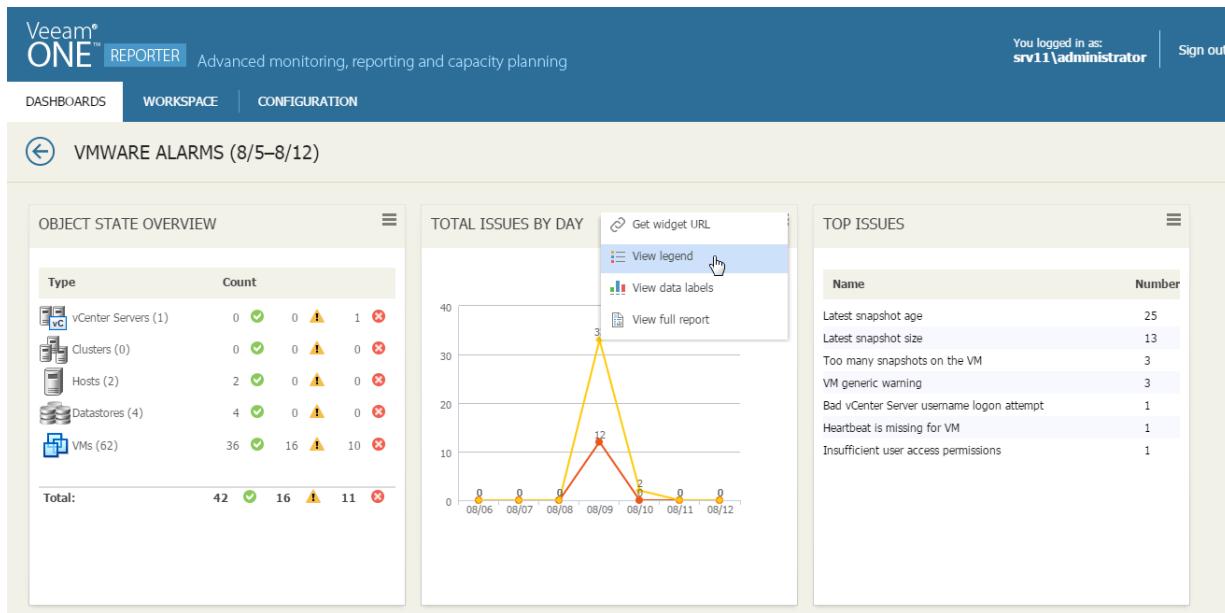
Dashboards are composed of widgets that display various aspects of the managed environment. Every widget is located in a separate cell, or entry, in the dashboard.



For some widgets, you can change display options. To do so, open the menu at the top right corner of the widget and select whether you want to display the legend below the chart or view data labels in the chart.

- To hide or show the chart legend, click **View legend**.

- To hide or view data labels on the chart, click **View data labels**. Note that this option is available for dashboards with 1 or 2 column layout.



To get back to the list of dashboards, click the **Dashboards** tab at the top of the page, click the **Back** button at the top left corner or use the browser **Back** button.

# Creating Custom Dashboards

In addition to predefined dashboards, you can create custom dashboards and add custom widgets to this dashboard. To create a custom dashboard, perform the following steps:

1. [Create a dashboard and specify its settings.](#)

Create a new dashboard, specify its name and description and choose the layout of dashboard widgets.

2. [Add widgets to the dashboard.](#)

Add custom widgets to the new dashboard and specify widget settings.

# Step 1. Create Dashboard

To create a new dashboard:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the **Dashboards** section, click **Add New Dashboard**.
4. In the **Add dashboard** window, specify dashboard settings:
  - In the **Name** field, specify the name that will be displayed at the top of the dashboard.
  - In the **Description** field, specify a brief dashboard description.
  - In the **Layout** section, select how many widget columns must be displayed on the dashboard.
5. Click **OK**.

A new empty dashboard will be created and added to the **Dashboards** section. Veeam ONE Reporter will automatically open the created dashboard so that you can add dashboard widgets to it.



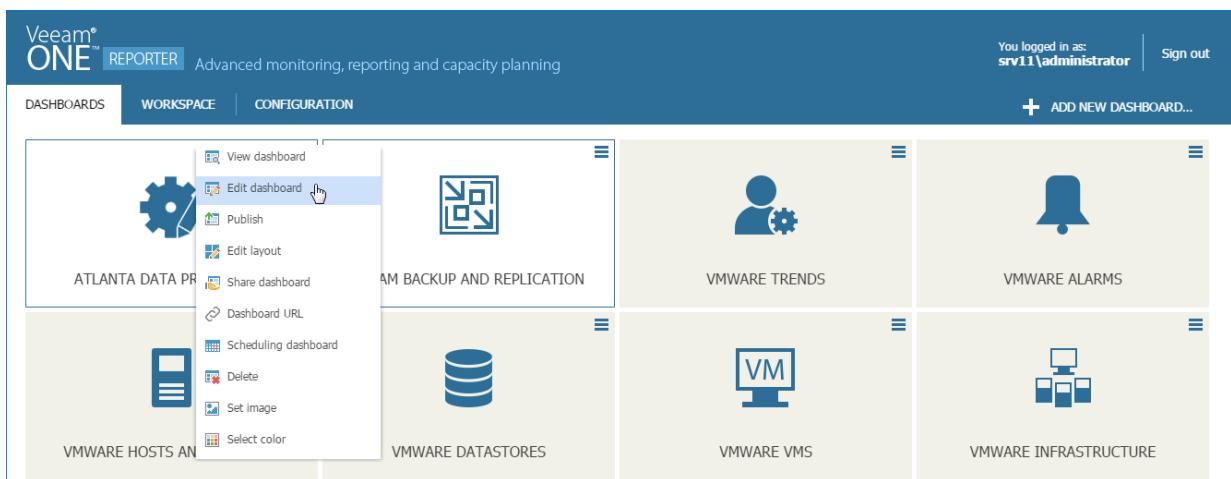
# Step 2. Add Widgets to Dashboard

After you create a new dashboard, you must add widgets to it.

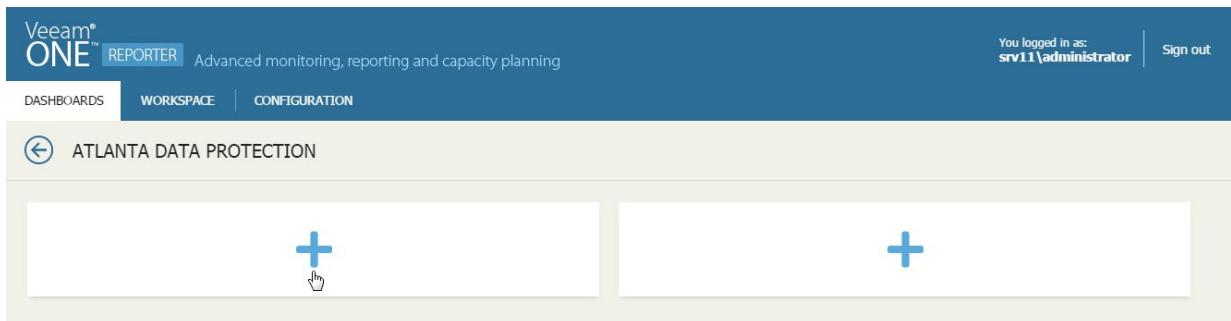
Veeam ONE Reporter comes with a set of widgets packs for Veeam Backup & Replication, VMware vSphere and Microsoft Hyper-V. Widget packs include ready-to-use widgets that portray various aspects of the managed environment. You can add widgets from widget packs to custom dashboards.

To add a widget to a dashboard:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Edit dashboard**.



4. Click the plus icon in one of the dashboard cells to launch the **Add widget** wizard.



5. At the **Widget pack** step of the wizard, specify the widget name and choose the widget pack:

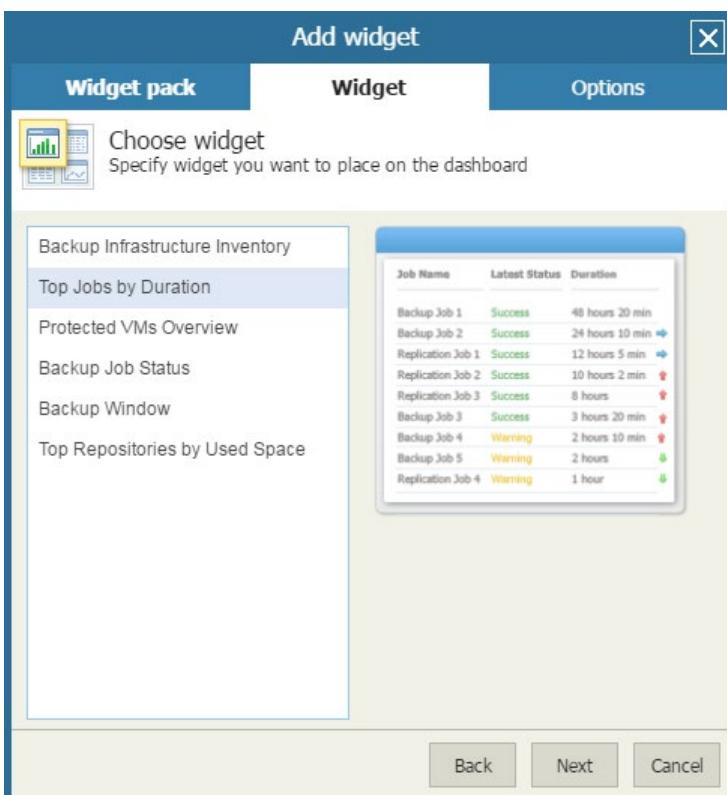
- a. In the **Caption** field, specify the widget name.

The widget name will be displayed at the top of the widget on the dashboard. You can leave the field empty if you do not want to display the widget caption.

- b. Choose the necessary widget pack. Double-click the necessary pack or select a pack and click **Next**.

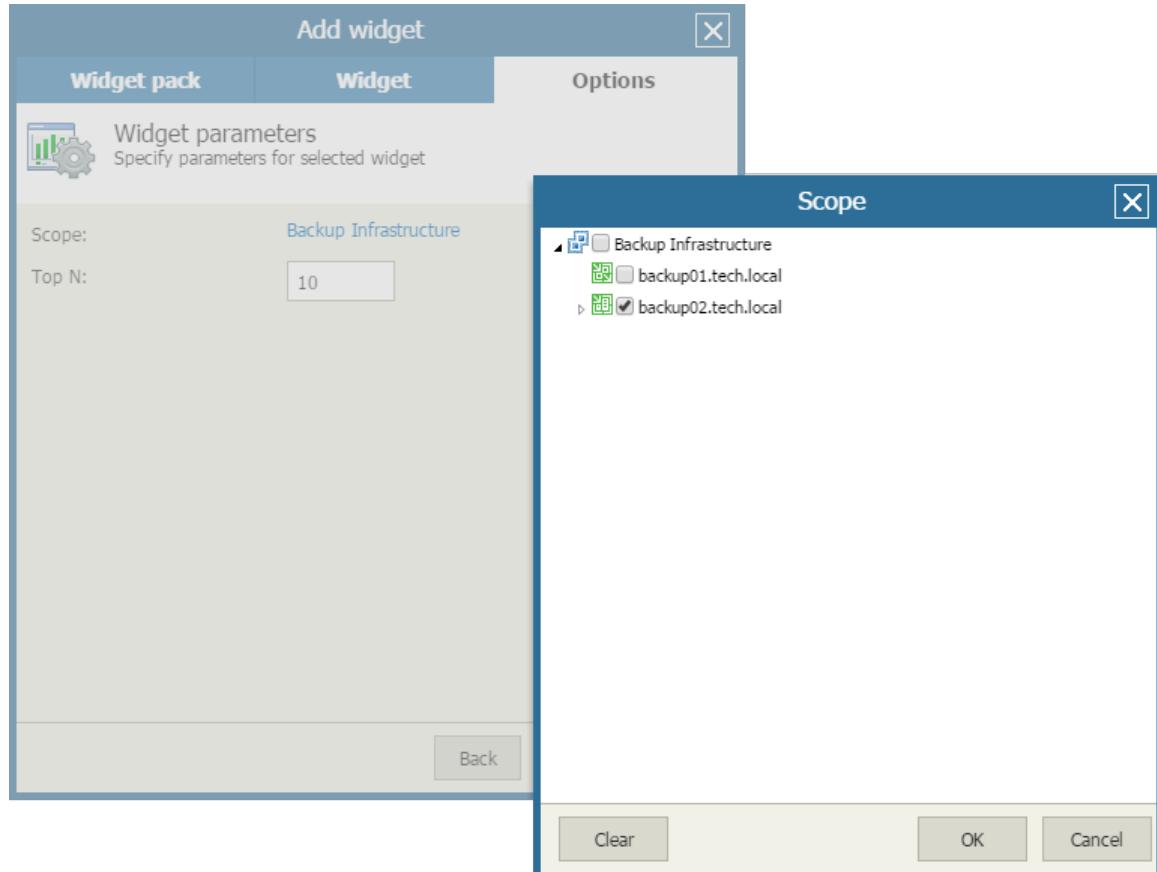


6. At the **Widget** step of the wizard, choose a widget to add on the dashboard. Double-click the necessary widget or select the widget in the list and click **Next**.



- At the **Options** step of the wizard, define widget options, such as the scope, time interval, number of objects to display in the widget and so on.

Availability of widget options depends on the type of the selected widget.



- Click **Finish** to add the widget to the dashboard.

Job Name	Latest Status	Duration
Mediaservers Daily Backup	Failed	0 h 9 min
CRM DB Weekly Backup	Successful	0 h 2 min
Apache Weekly Backup	Successful	0 h 2 min

- Repeat steps **3–8** for each new widget you want to add to the dashboard.

# Setting Dashboard Preview Image and Color

After you create a custom dashboard, you can select the preview image that will be used to depict the dashboard in the **Dashboards** section.

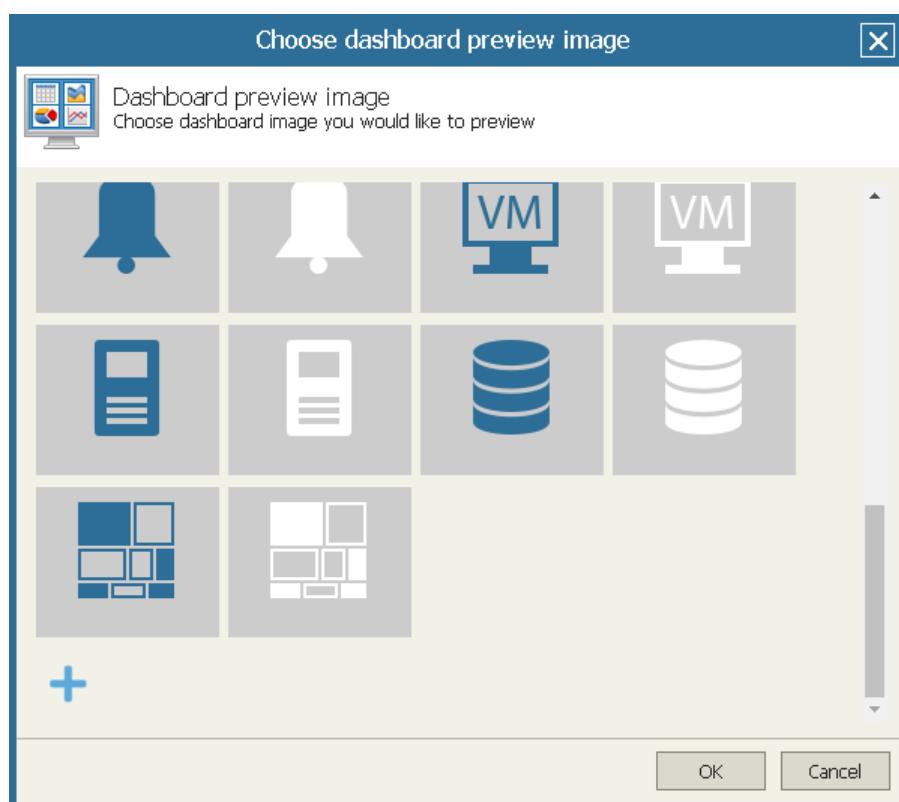
## Setting Preview Image

To set a preview image for a dashboard:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Set image**.
4. In the **Choose dashboard preview image** list, choose an image that must depict the dashboard.

You can select a custom image preview image. To do so, click the plus icon at the bottom of the list and select to the necessary image file.

5. Click **OK**.



## Changing Background Color

You can change the background color of the dashboard preview image:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Select color**.
4. In the **Choose dashboard color** palette, choose the necessary background color.
5. Click **OK**.

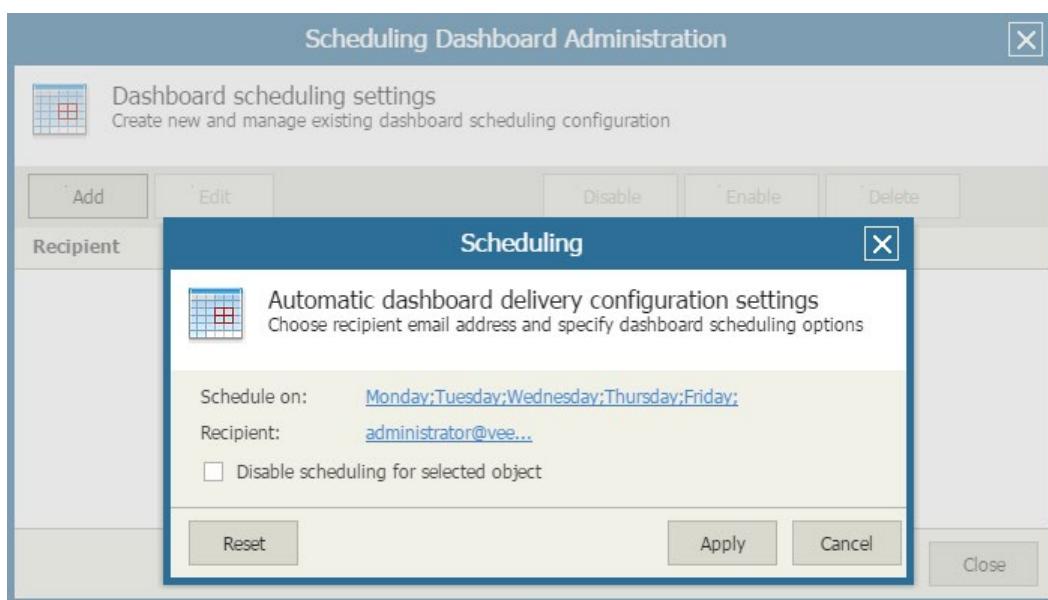


# Scheduling Dashboards

You can schedule automatic dashboard delivery. You can choose to receive dashboards by email, save dashboards to a disk or network share.

To schedule automatic dashboard delivery:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Scheduling dashboard**.
4. In the **Scheduling Dashboard Administration** window, click **Add**.
5. In the **Scheduling** window, configure scheduling options:
  - a. Click the **Schedule on** link and specify a schedule according to which the dashboard must be generated and delivered. For details, see [Specifying Delivery Schedule](#).
  - b. Click the **Recipient** link and choose the method used to deliver the dashboard. You can choose to send the dashboard by email, or save the dashboard to a disk or network share. For details, see [Specifying Delivery Method](#).
6. [Optional] To temporarily disable a schedule, select the **Disable scheduling for selected object** check box.
7. Click **Apply** to save the specified settings.
8. [Optional] You can configure multiple schedules for the same dashboard. Repeat steps 5-8 for each new schedule you want to add.
9. Click **Close**.

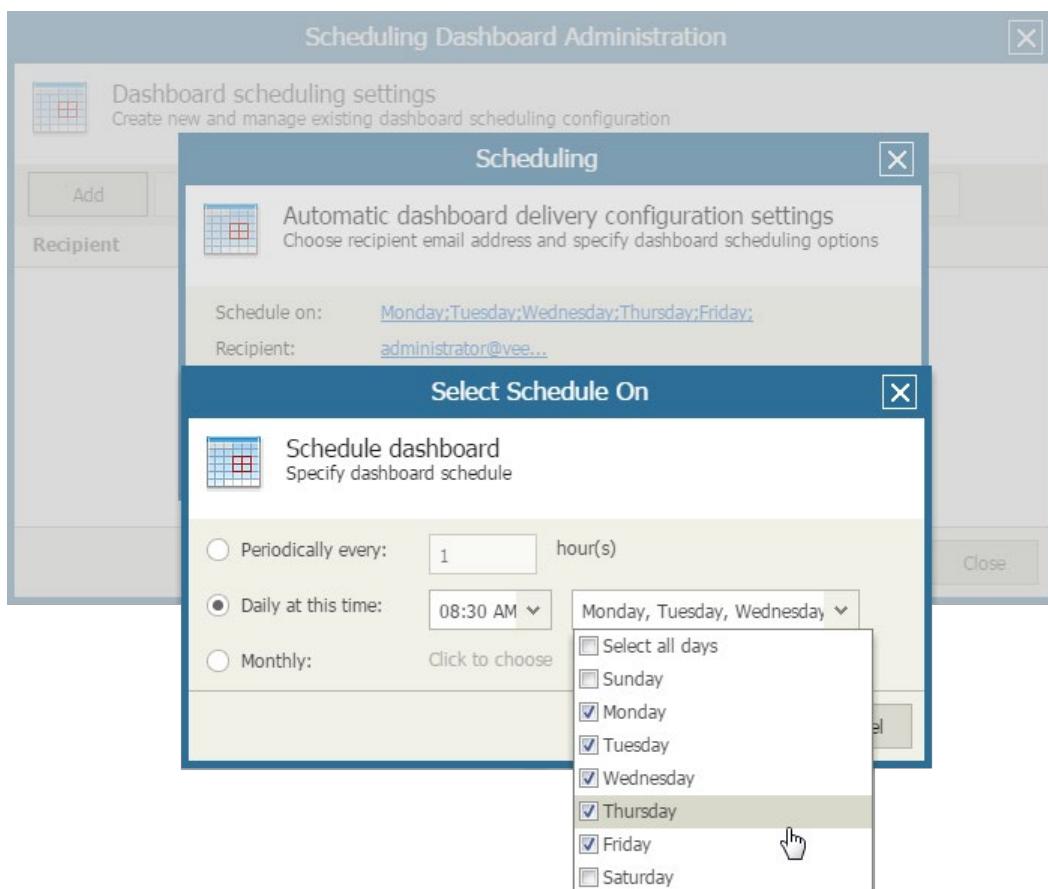


## Specifying Delivery Schedule

To configure automatic dashboard delivery, you must specify a schedule according to which Veeam ONE Reporter must generate and deliver the dashboard.

To configure the dashboard delivery schedule:

1. Open Veeam ONE Reporter.
2. Choose the necessary dashboard and open the **Scheduling** window, as described in the *Scheduling Dashboards* procedure.
3. In the **Scheduling** window, click the **Schedule on** link.
4. In the **Select Schedule On** window, define a schedule according to which the dashboard must be generated and delivered.
  - To generate and deliver a dashboard repeatedly, with a specific time interval, select the **Periodically every... hours** option and define the necessary interval.
  - To generate and deliver a dashboard at specific time of day, select the **Daily at this time** option and specify the time and days of week on which the dashboard must be delivered.
  - To generate and deliver a dashboard on a monthly basis, select the **Monthly** option and choose the necessary months, dates or weekdays.
5. Click **OK** to apply scheduling settings.



## Specifying Delivery Method

To configure automatic dashboard delivery, you must choose a method that Veeam ONE Reporter must use to deliver the dashboard. You can choose to receive dashboards by email, save dashboards to a folder on a disk or network share.

To configure dashboard delivery by email:

1. Make sure you specified SMTP settings in Veeam ONE Monitor.

For details, see section [Configure SMTP Server Settings](#) of the Veeam ONE Deployment Guide.

2. In Veeam ONE Reporter, choose the necessary dashboard and open the **Scheduling** window, as described in the *Scheduling Dashboards* procedure.
3. In the **Scheduling** window, click the **Recipient** link.
4. Specify the recipient's email address in the **To** field.

If you want to send generated dashboards to multiple recipients, separate email addresses with a semicolon (;) or comma (,).

5. In the **Select Recipient** window, specify email subject and choose dashboard format.

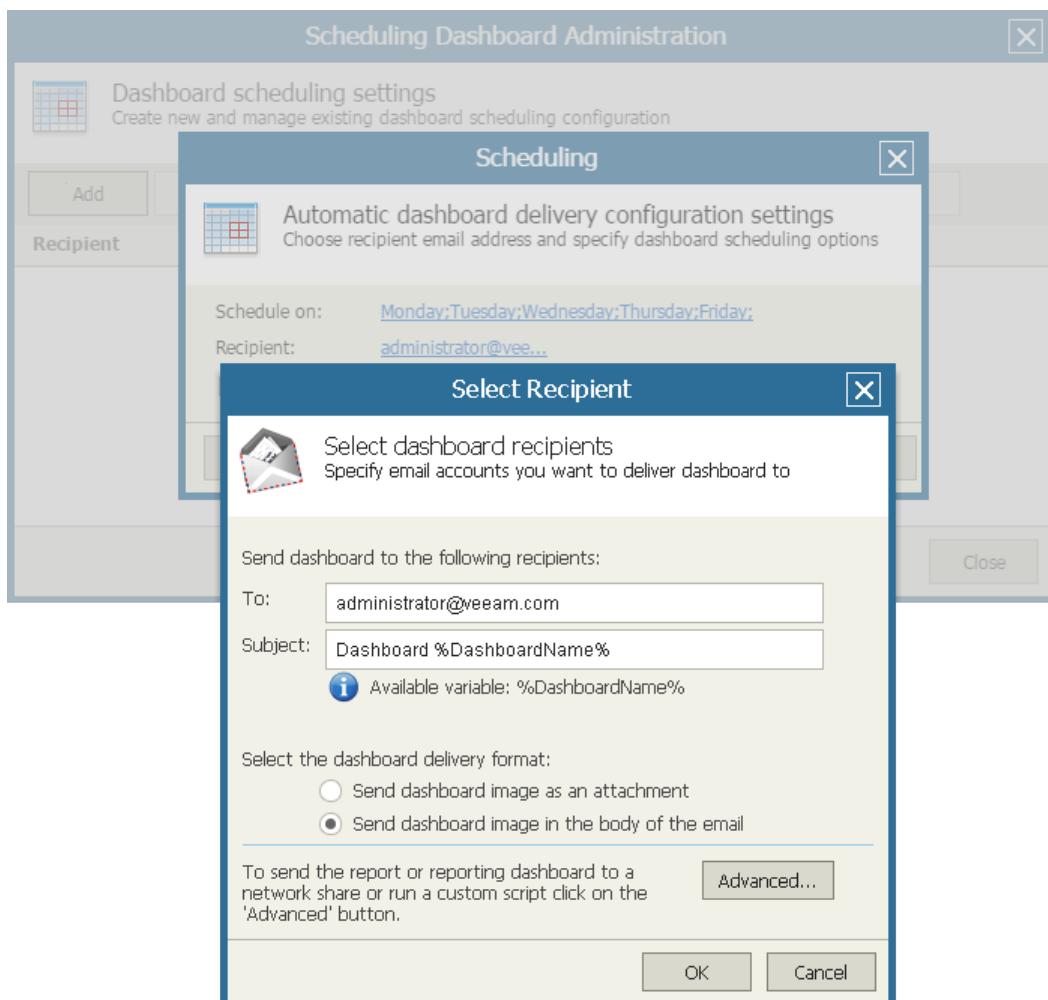
- o In the **Subject** field, specify an email subject title.

You can use the `%DashboardName%` variable in the subject line – Veeam ONE Reporter will substitute this variable with the name of a corresponding dashboard.

- o In the **Select the dashboard delivery format** section, select the format for the delivered dashboard.

You can choose to send the dashboard as an attached `PNG` image or send the dashboard in the email body.

6. Click **OK** to apply delivery settings.

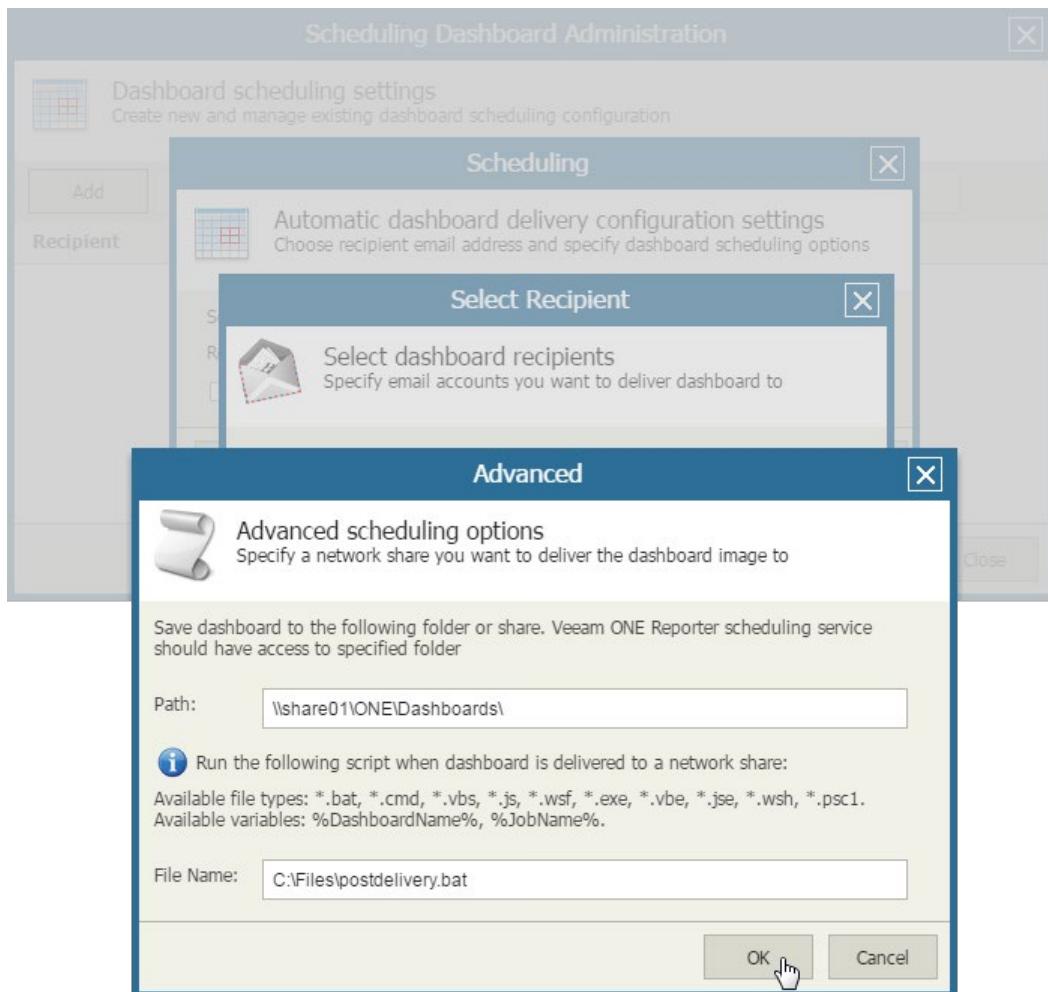


To configure automated dashboard delivery to a disk or a network share:

1. Choose the necessary dashboard and open the **Scheduling** window, as described in the *Scheduling Dashboards* procedure.
2. In the **Scheduling** window, click the **Recipient** link.
3. In the **Select Recipient** window, click the **Advanced** button.
4. In the **Path** field, specify a path to a local folder or network share.

The path must refer to an existing folder. Veeam ONE Reporter will check if the specified folder exists and if the account under which Veeam ONE Reporter Server runs has write permissions on the folder. If there are any problems accessing the folder, a warning will be displayed next to the **Path** field.

5. [Optional] To run a custom script after the dashboard is delivered to the target folder, in the **File Name** field, specify a path to the script file.  
Running a custom script allows you to perform further manipulations after the dashboard is generated. You can find simple script examples in [Appendix. Scheduling Script Examples](#).
6. Click **OK** to apply delivery settings.

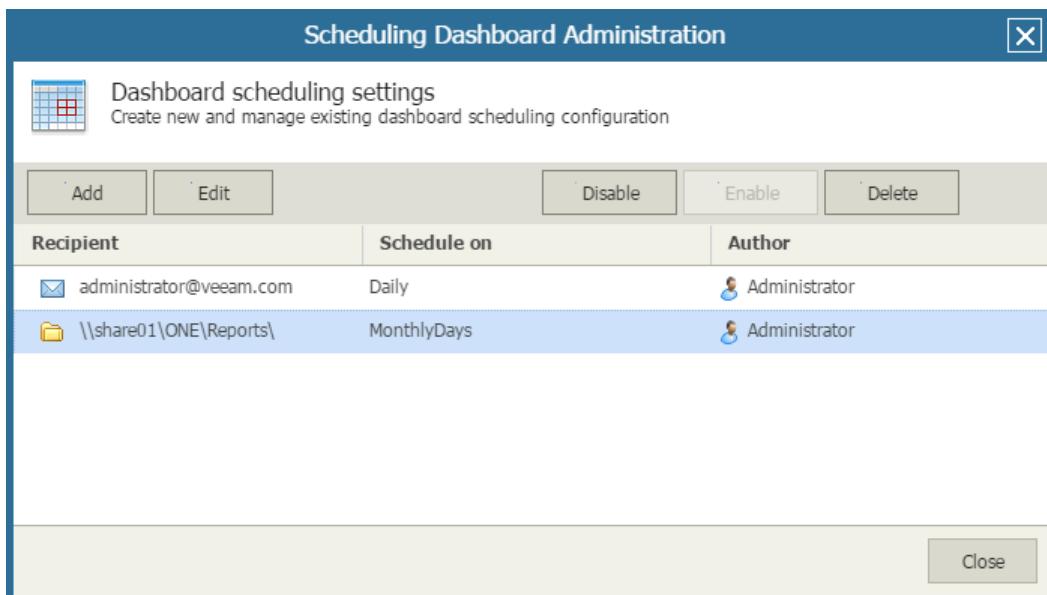


# Managing Dashboard Schedules

You can create multiple schedules for a dashboard. Maintaining multiple schedules allows you to set up complex scheduling and delivery method settings for the same dashboard.

To manage dashboard schedules:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Scheduling dashboard**.
4. Use buttons in the **Scheduling Dashboard Administration** window to manage the schedules that you added for the dashboard:
  - To create a new dashboard schedule, click **Add**.
  - To edit scheduling settings, select a schedule in the list and click **Edit**.
  - To delete a schedule from the list, select the schedule in the list and click **Delete**.
  - To temporarily disable a schedule, select the schedule in the list and click **Disable**.
  - To enable a previously disabled schedule, select the schedule in the list and click **Enable**.
5. To finish working with the schedules, click **Close**.

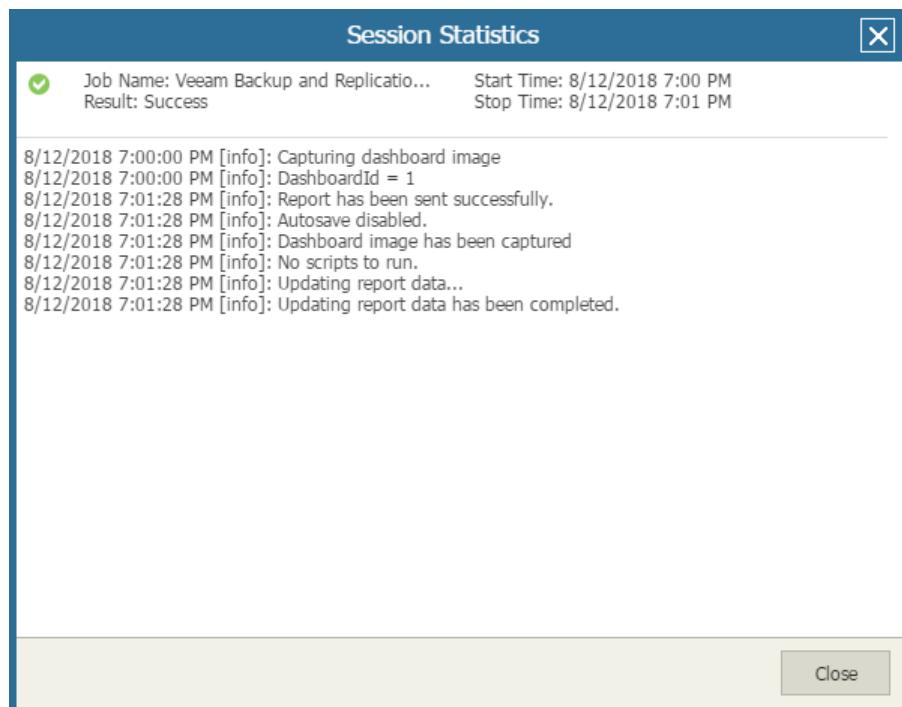


# Viewing Dashboard Delivery Results

Every dashboard delivery initiates a new delivery session.

To view details of dashboard delivery sessions:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Sessions**.
4. In the **Job Type** list, select *Report scheduling* and click **Apply Filters**.
5. Click the necessary session in the list to display detailed information about it.



# Publishing Dashboards

To share a custom dashboard with other users, or integrate the dashboard to a web portal, you must publish this dashboard first. Veeam ONE users, including VMware vSphere users who have permissions assigned on virtual infrastructure objects, can access published dashboards by direct dashboard URLs.

**NOTE:**

You can publish custom dashboards only. Predefined dashboards are available for public access by default.

To publish a custom dashboard:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Publish**.
4. In the displayed dialog box, click **Yes** to confirm publishing.

After you publish the dashboard, you can generate its direct URL to share it with other users or integrate it in a web portal. For details, see [Generating Direct Dashboard URL](#). You can also send the link to the dashboard to other users by email. For details, see [Sharing Dashboards](#).

To make a published custom dashboard inaccessible, you can unpublish it:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Unpublish**.
4. In the displayed dialog box, click **Yes** to remove the dashboard from public access.

# Generating Direct Dashboard URL

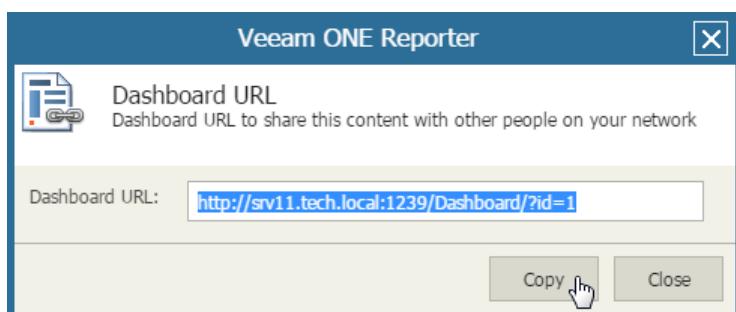
To share a dashboard with other users, or integrate a dashboard to a web portal, you can generate a direct dashboard URL.

**NOTE:**

Before you generate and share a URL for a custom dashboard, you must publish this dashboard first. For details, see [Publishing Dashboards](#).

To generate a direct dashboard URL:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Dashboard URL**.
4. Copy the URL and use it to share with other users or integrate to web portals.
5. Close the dialog box with the dashboard URL.



## Accessing Dashboard by Direct URL

To access a dashboard by a direct URL, a user must either:

- Be a member of the *Veeam ONE Administrators* or *Veeam ONE Read-Only Users* group. For more information on user groups, see section [Security Groups](#) of the Veeam ONE Deployment Guide.  
This prerequisite applies to VMware vSphere and Microsoft Hyper-V platforms.
- Have permissions assigned on objects in the vCenter Server or vCloud Director inventory hierarchy. For details, see [Veeam ONE Multi-Tenant Monitoring and Reporting](#).  
This prerequisite applies to the VMware vSphere platform only.

# Sharing Dashboards

To share a dashboard with other users, you can send a direct dashboard URL by email.

To send a direct dashboard URL by email:

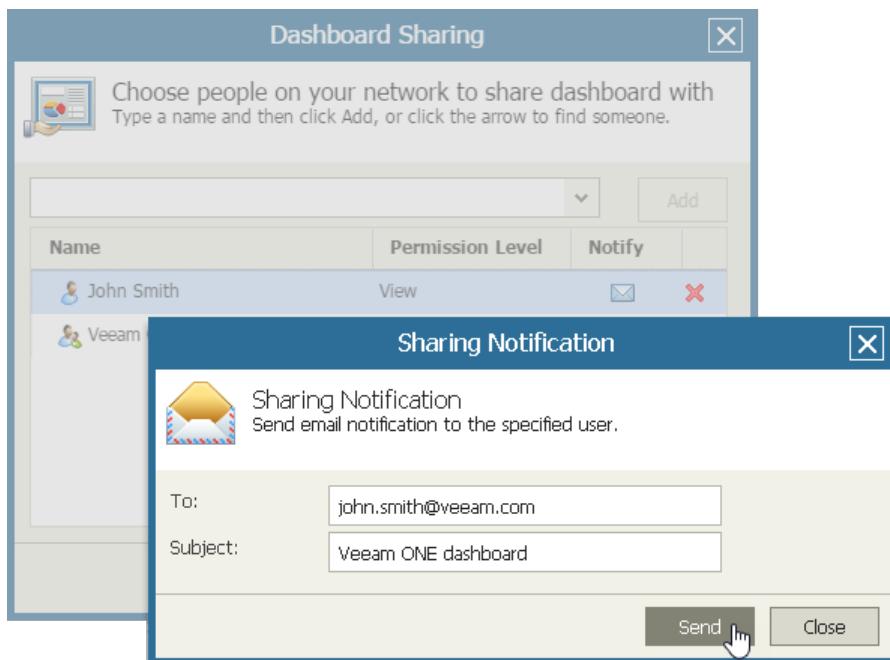
1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Share dashboard**.
4. In the **Dashboard Sharing** window, select a user or group of users with whom you want to share the dashboard.

**NOTE:**

Veeam ONE retrieves the list of users and user groups with whom you can share dashboards from the Active Directory. To be able to grant dashboard permissions to a user or user group in a domain, make sure that Veeam ONE service account is a member of a corresponding AD domain.

5. To send a direct dashboard URL by email, click the envelope icon next to a user or group, specify an email address and click **Send**.

To send the dashboard URL to multiple recipients, separate email addresses with a semicolon.



# Modifying Dashboards

You can modify the name, description, layout and widgets of custom dashboards.

## Changing Dashboard Name, Description and Layout

To modify the name, description or layout of a custom dashboard:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Edit layout**.
4. In the **Edit dashboard** window, change the dashboard name, description and the layout of dashboard widgets.
5. Click **OK** to save changes.

## Changing Dashboard Widgets

To modify widgets of a custom dashboard:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Edit dashboard**.
4. Change properties of dashboard widgets.  
For details, see [Managing Widgets](#).
5. Change the arrangement of widgets by dragging them to the necessary dashboard cells.

# Deleting Dashboards

You can delete custom dashboards if you no longer need them:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Delete**.
4. In the displayed dialog box, click **Yes** to confirm deletion.

# Managing Widgets

You can edit settings of dashboard widgets, share widgets with other users and remove widgets from dashboards.

# Changing Widget Properties

You can change the way your widgets look on custom dashboards:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Edit dashboard**.
4. On the dashboard, select the widget you want to modify.
5. At the top right corner of the widget, expand the menu and click **Edit Widget**.
6. In the **Add Widget** wizard, change the widget settings.

For details, see [Add Widgets to Dashboard](#).

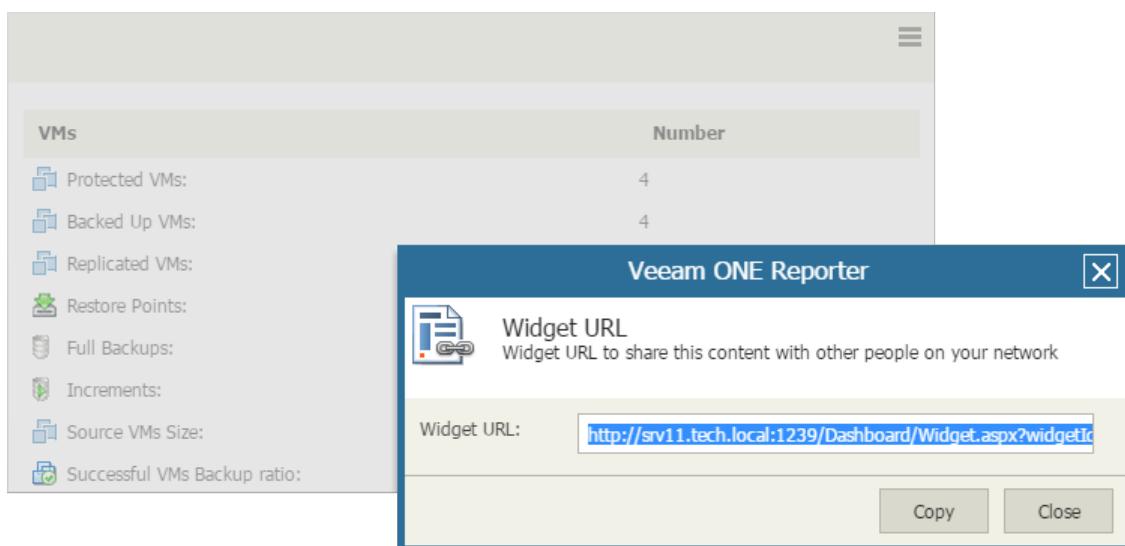
7. Save changes.

# Generating Direct Widget URL

To share a widget with other users, or integrate the widget to a web portal, you can generate a direct widget URL.

To generate a direct widget URL:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** view.
3. Select the necessary dashboard and do one of the following:
  - o Click the dashboard to open it.
  - o At the top right corner of the dashboard preview image, expand the menu and click **Edit dashboard**.
4. On the dashboard, select the widget you want to share.
5. At the top right corner of the widget, expand the menu and click **Get widget URL**.
6. Copy the URL and use it to share with other users or integrate to web portals.
7. Close the dialog box with the widget URL.



## Accessing Widget by Direct URL

To be able to access to access a widget by a direct URL, a user must either:

- Be a member of the *Veeam ONE Administrators* or *Veeam ONE Read-Only Users* group. For more information on user groups, see section [Security Groups](#) of the Veeam ONE Deployment Guide.  
This prerequisite applies to VMware vSphere and Microsoft Hyper-V platforms.
- Have permissions assigned on objects in the vCenter Server or vCloud Director inventory hierarchy. For details, see [Veeam ONE Multi-Tenant Monitoring and Reporting](#).  
This prerequisite applies to the VMware vSphere platform only.

# Creating a Widget Report

You can create reports associated with dashboard widgets:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** view.
3. Select the necessary dashboard and do one of the following:
  - Click the dashboard to open it.
  - At the top right corner of the dashboard preview image, expand the menu and click **Edit dashboard**.
4. Open the necessary dashboard and select the widget for which you want to create a report.
5. At the top right corner of the widget, expand the menu and click **View Full Report**.
6. In the **Drill Down Report** window, specify report parameters.
7. In the **Actions** pane, click **Create report**.

**Drill Down Report**

1 of 4 Find | Next

veeAM

## Protected VMs

Description

This report lists all protected and unprotected VMs including their last backup state.  
Note: VM replicas created by Veeam Backup & Replication jobs are not accounted in this report.

Report Parameters

Scope:	Virtual Infrastructure
RPO period:	1 week (1/12/2019 - 1/18/2019)
Exclusion mask:	
Job type:	Backup, Replication, Backup Copy
Business View objects:	
Include VM templates in this report:	No
Job Exclusion list:	All Jobs

Summary

**VMs Overview**

Total VMs:	612
Including Templates:	0
Protected VMs:	12
Backed Up VMs:	12
Replicated VMs:	1
Restore Points:	121
Unprotected VMs:	548
VM Replicas:	52

**Protected VMs**

A pie chart titled "Protected VMs" showing the distribution of VMs. The chart is almost entirely red, representing 531 Unprotected VMs. A small green slice represents 12 Protected VMs. The legend at the bottom indicates that green represents "Protected VM" and red represents "Unprotected VM".

Protected VM 12  
Unprotected VM 531

Protected VM Unprotected VM

# Deleting Widgets

You can delete widgets from custom dashboards if you no longer need them:

1. Open Veeam ONE Reporter.
2. Open the **Dashboards** section.
3. At the top right corner of the dashboard preview image, expand the menu and click **Edit dashboard**.
4. On the dashboard, select the widget you want to delete.
5. At the top right corner of the widget, expand the menu and click **Delete widget**.
6. In the displayed window, click **OK** to confirm deletion.

# Reports

Veeam ONE reports analyze data collected from VMware vSphere, Microsoft Hyper-V and Veeam Backup & Replication servers. Reports provide structured information to help you examine historical data for the managed backup infrastructure and virtual environment. You can view reports in the web browser, export them to various formats, or schedule automatic report delivery by email, to disk or a network share.

Veeam ONE Reporter includes a set of predefined reports that analyze the managed environment from various aspects. For detailed description of predefined reports, see [Predefined Veeam ONE Reports](#).

In addition to predefined reports, you can create custom reports, and save these reports for future use. In custom reports, you can choose the necessary report parameters, such as the scope of the backup and virtual infrastructure, reporting period and so on.

# Viewing Reports

Veeam ONE Reporter reports are available in the **Workspace** section.

The left pane of the **Workspace** section contains a hierarchy of report packs or folders organizing reports. The mid part of the **Workspace** section displays the list of reports in the selected report pack or folder.

## NOTE:

Veeam ONE reports are displayed in the browser pop-up windows. Before you create a report, make sure that pop-up windows are allowed from the Veeam ONE Reporter website.

To create a report:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select the necessary report pack or folder.
4. In the displayed list of reports, click the necessary report.
5. Specify report parameters, such as the virtual or backup infrastructure scope, reporting period and so on.
6. At the bottom of the report parameters, click the **Preview** button.

Alternatively, you can click the **Preview** link in the **Actions** pane on the right.

The report will open in a pop-up browser window.

The screenshot shows the Veeam ONE Reporter interface. The top navigation bar includes the Veeam ONE logo, a reporter icon, and the text "Advanced monitoring, reporting and capacity planning". It also shows the user is logged in as "srv11\administrator" and provides a "Sign out" option. The main menu has three tabs: "DASHBOARDS", "WORKSPACE" (which is currently selected), and "CONFIGURATION". On the left, there's a sidebar with a search bar and a tree view of report categories, including "All Folders", "My Reports", "Nutanix AHV Protection", "Infrastructure Chargeback", "Veeam Cloud Connect", "Veeam Backup Assessment", "Veeam Backup Billing", "Veeam Backup Capacity Planning", "Veeam Backup Monitoring", "Veeam Backup Overview", "Veeam Backup Tape Reports", "Veeam Backup Agents", "VMware Infrastructure Assessment", "VMware Overview", "VMware Monitoring", "VMware Optimization", "VMware Configuration Tracking", "VMware Capacity Planning", "Hyper-V Infrastructure Assessment", "Hyper-V Overview", "Hyper-V Monitoring", "Hyper-V Capacity Planning", "Hyper-V Optimization", "Custom Reports", "Offline Reports", "All Deployment Projects", and "User Reports". The main content area is titled "VM BACKUP STATUS". It contains a "PARAMETERS" section with several configuration options:

- "Scope (Backup)" is selected, with "Backup Infrastructure" listed under it.
- "Scope (VMware VM folders)" is an alternative option.
- "Business View object(s)" is another option with a "Click to choose" link.
- "Interval" is selected, with "Current week" chosen from a dropdown.
- "Interval period" is another option with a date range "10/24/2016 - 10/30/2016" and a calendar icon.
- "7 days from" is another option with a date "October 28, 2016" and a calendar icon.
- "Past N week(s)" is another option with a text input field.
- "Group by" is set to "Backup Job".
- A checkbox "Include VM templates in this report" is present.

At the bottom right of the content area are "Preview" and "Save as..." buttons. To the right of the content area is a vertical "ACTIONS" panel with "Preview" and "Save as..." links.

# Navigating Reports

Veeam ONE reports vary depending on the type and input parameters. They can be relatively short or span to several pages. Report data can be presented as graphs, charts, tables or text entries.

The screenshot shows the Veeam ONE Reporter interface with the following details:

- Navigation Bar:** Includes left/right arrow buttons, a page number field (1 of 2), fast forward/backward buttons, a refresh button, a zoom level field (100%), a search bar, and a print icon.
- Title:** VM Daily Protection Status
- Description:** This report provides daily backup status information for all protected VMs.
- Report Parameters:**
  - Scope: Backup Infrastructure
  - Interval period: 30.09.2019 - 06.10.2019
  - Job type: Backup, Replication, Backup Copy
  - Group by: Backup Job
  - Business View object(s):
  - Include VM templates in this report: No
- Summary:**
  - VM Backup Status:** A stacked bar chart titled "VM Backup Status" showing successful and failed backups from September 30 to October 6, 2019. The Y-axis ranges from 0 to 2.5. The legend indicates green for Successful Backups and red for Failed Backups.

Date	Successful Backups	Failed Backups
30.09.2019	1	1
01.10.2019	2	1
02.10.2019	2	1
03.10.2019	2	1
04.10.2019	2	1
05.10.2019	2	1
06.10.2019	2	1
- Report Footer:** Report created: 11 october 2019 at 3:28:32 (UTC-08:00) Pacific Time (US & Canada). Page: 1 of 2.

The navigation menu at the top of a report allows you to navigate the report:

- Left/right arrow buttons – switch between the report pages.
- Fast forward/fast backward buttons – go to the last/first page of the report.
- Go to page field – enter the necessary page number and press **Enter** on your keyboard to go to a specific page of the report.
- Refresh button – update the report content with the latest collected data.
- Back button – return to the parent report from a drill-down report.
- Zoom level field – zoom the report in/out.
- **Export** menu (diskette icon) – save your report in one of the following file formats: Excel, Word or PDF.

If Veeam ONE Reporter is integrated with the Microsoft SQL Reporting Services server, the following additional report formats are available: *CSV (comma delimited)*, *XML*, *MS PowerPoint*, *TIFF*, *MHTML*, *Data Feed*.

- Print button – print the report.
- Search box – search for specific text within the report.

# Viewing Offline Reports

In addition to regular reports that open in a web browser and can be automatically delivered, Veeam ONE offers offline reports that can be generated in Veeam Report Viewer. This is a convenient way to view report data off-site, outside the local infrastructure or its networks.

Offline reports are included in the **Offline reports** report pack.

## Installing Veeam Report Viewer

To view Veeam ONE offline reports, Veeam Report Viewer software is required.

**TIP:**

If you installed Veeam Report Viewer prior to version 10a, you must upgrade it to the latest available version.

To download and install Veeam Report Viewer:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **Offline reports**.
4. In the list of offline reports, click any report.
5. In the **Actions** pane, click the **Download Veeam Report Viewer** link.
6. Download the `VmReportViewerSetup.msi` installer file.
7. On the machine, where you want to install the Veeam Report Viewer, launch the installer file to start the **Veeam Report Viewer** setup wizard.

- Follow the steps of the setup wizard to install Veeam Report Viewer.

The screenshot shows the Veeam ONE Reporter web interface. At the top, it displays "Veeam ONE REPORTER Advanced monitoring, reporting and capacity planning". On the right, it shows "You logged in as: svr11\administrator" and "Sign out". Below the header, there are three tabs: "DASHBOARDS", "WORKSPACE" (which is selected), and "CONFIGURATION". The left sidebar contains a search bar and a list of report categories under "All Folders", including "My Reports", "Nutanix AHV Protection", "Infrastructure Chargeback", "Veeam Cloud Connect", "Veeam Backup Assessment", "Veeam Backup Billing", "Veeam Backup Capacity Planning", "Veeam Backup Monitoring", "Veeam Backup Overview", "Veeam Backup Tape Reports", "Veeam Backup Agents", "VMware Infrastructure Assessment", "VMware Overview", "VMware Monitoring", "VMware Optimization", "VMware Configuration Tracking", "VMware Capacity Planning", "Hyper-V Infrastructure Assessment", "Hyper-V Overview", "Hyper-V Monitoring", "Hyper-V Capacity Planning", "Hyper-V Optimization", "Custom Reports", "Offline Reports" (which is selected and highlighted in blue), "All Deployment Projects", and "User Reports". The main content area is titled "INFRASTRUCTURE OVERVIEW (VISIO)". It includes a "PARAMETERS" section with "Scope" set to "Virtual Infrastructure" and an "Include VMs" checkbox. At the bottom of this section are "Preview" and "Save as..." buttons. To the right, there is an "ACTIONS" column with links for "Preview", "Save as...", and "Download Veeam Report Viewer" (with a mouse cursor hovering over it).

## Viewing Offline Reports

To access and view offline reports:

- Open Veeam ONE Reporter.
- Open the **Workspace** section.
- In the hierarchy on the left, select **Offline reports**.
- In the list of offline reports, click the necessary report.
- Specify the report parameters.
- Click **Preview** to generate a report file.

Veeam ONE Reporter will generate a file with the **VMR** extension and save it to the download location.

- Open the downloaded file on the machine where Veeam Report Viewer is installed.

Veeam Report Viewer will process data in the **VMR** report and prepare the output. The output contains data viewable in Microsoft Office applications: Excel and Visio. Please ensure that you have Excel or Visio software to open report output files.

# Date and Time Format in Reports

Most Veeam ONE reports include date and time details. The format of date and time in reports depends on the browser you use to work with Veeam ONE Reporter.

- If you use Internet Explorer, the date and time format will be determined by the Windows OS regional settings.  
To change the date and time format for Internet Explorer, you must modify Windows OS regional settings.
- If you use Chrome or Firefox, the date and time format will be determined by language preferences (locale) set in the browser.  
To change the date and time format for Chrome or Firefox, you must modify the language preferences in browser settings. To learn how to change the language in Chrome, see [Change Chrome browser language settings](#). To learn how to change the language in Firefox, see [Settings for web content, pop-ups, fonts, and languages](#).

# Saving Reports

You can create reports with custom parameters and save them for future use:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select the necessary report pack.
4. In the displayed list of reports, click the necessary report.
5. Specify the report parameters, such as the virtual or backup infrastructure scope, reporting period and so on.
6. Click the **Save as** button at the bottom of the report parameters.

Alternatively, you can click the **Save as** link in the **Actions** pane on the right.

7. In the **Save Report** window, specify the report name and description and select a folder to which you want to place the report.

You can only select the *My reports* folder or another folder that you have previously created. You cannot save reports to folders that include predefined reports. For details on working with folders, see [Organizing Reports](#).

8. Select the **Open the report in the specified folder** check box if you want to open the report after saving.
9. Click **OK**.

## NOTE:

A saved report can become unavailable if you change the Veeam ONE license. For details on license types required for different report packs, see [Editions Comparison](#).

The screenshot shows the Veeam ONE Reporter interface. The top navigation bar includes 'REPORTER', 'Advanced monitoring, reporting and capacity planning', 'You logged in as: srv11\administrator', and 'Sign out'. Below the navigation is a menu bar with 'DASHBOARDS', 'WORKSPACE' (which is selected), and 'CONFIGURATION'. On the left, a sidebar lists various report categories under 'My Reports', with 'Infrastructure Chargeback' highlighted. The main content area displays the 'VM CONFIGURATION CHARGEBACK' configuration page. A 'Save Report' dialog box is overlaid on the page, containing fields for 'Name' (VM Configuration Chargeback), 'Put in folder' (My Reports/Backup Reports (Atlanta)), and 'Description' (Configuration chargeback for VMs in Atlanta). There is also a checked checkbox for 'Open this report in the specified folder'. At the bottom of the dialog are 'OK' and 'Cancel' buttons. The right side of the interface has an 'ACTIONS' panel with 'Preview' and 'Save as...' buttons.

# Modifying Reports

You can modify the name, description and parameters of reports that you have previously saved to *My reports*.

## Renaming Reports

To modify the name of a saved report:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report whose name you want to modify.
5. In the **Actions** pane on the right, click **Rename**.
6. In the **Name** field, specify a new report name.
7. Click **OK**.

## Modifying Report Description

To modify the description of a saved report:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report whose description you want to modify.
5. In the **Actions** pane on the right, click **Edit description**.
6. In the **Description** field, specify a new report description.
7. Click **OK**.

## Changing Report Parameters

To change parameters of a saved report:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report whose parameters you want to modify.
5. In the **Actions** pane on the right, click **Edit**.
6. Change the report parameters.
7. In the **Actions** pane on the right, click **Save**.

# Organizing Reports

You can organize your reports with the help of report folders. Similar to file system folders, Veeam ONE Reporter folders are used to group reports in a way that is convenient for you.

In addition to grouping reports, folders allow you to perform operations over a group of reports at once. For example, if you want to schedule automatic report delivery for a set of reports, you can place the necessary reports to the same folder and then specify delivery settings for the whole folder.

You can create custom folders under *My reports*. Custom folders are displayed in the left pane of the **Workspace** view, along with the predefined report pack folders.

**NOTE:**

All operations described in this section can be applied to custom folders only. You cannot modify or delete predefined report pack folders.

# Creating Folders

To create a new folder:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select *My reports*.

You can also choose any folder that you have previously created under the *My reports* node.

4. At the top of the report list, click **New folder**.
5. In the **Create Folder** window, specify the name of a new folder and click **Create**.

The new folder will be added to the *My Reports* hierarchy.

# Renaming Folders

To change a folder name:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** view.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. At the top of the report list, click **Rename folder**.
5. In the **Rename Folder** window, specify the name of a new folder and click **Rename**.

# Deleting Folders

If you no longer need a folder, you can delete it. When you delete a folder with content, such as reports and subfolders, you can move child items to another folder during the deletion procedure.

To delete a folder:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. At the top of the report list, click **Delete folder**.
5. If the folder you delete contains reports or subfolders, you can choose to move the folder content to another folder. To do so, select the **Move existing reports to selected folder** check box, choose the new destination folder from the list and click **OK**. If you leave the check box cleared, the folder will be deleted with its content.
6. Click **OK**.

# Moving Reports

You can move saved reports from one folder to another folder in *My Reports*.

To move a saved report:

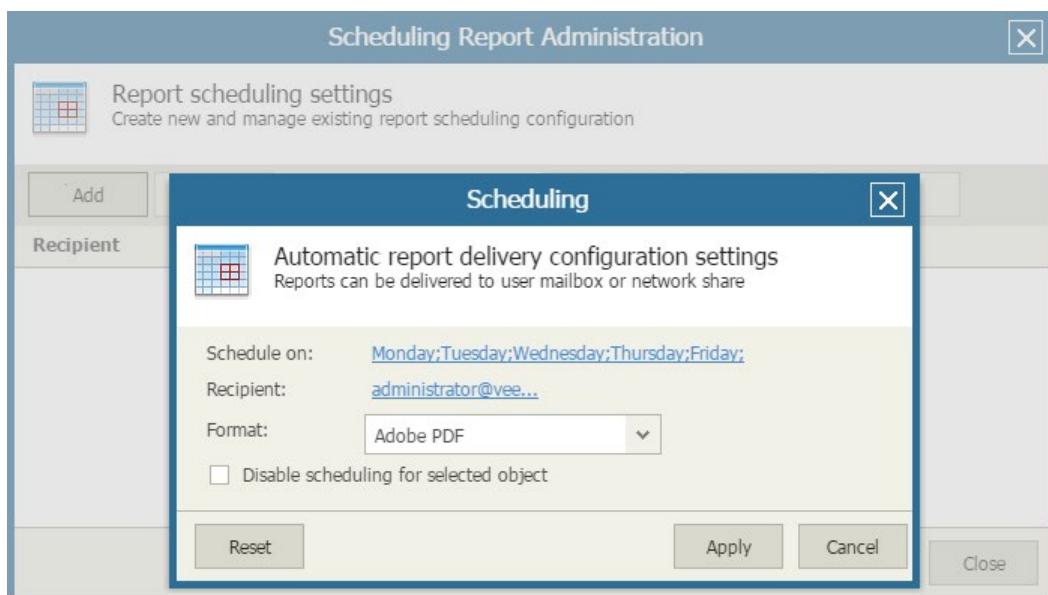
1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report that you want to move.
5. In the **Actions** pane on the right, click **Move**.
6. In the **Put in folder** list, choose a new target folder for the report.
7. Click **OK**.

# Scheduling Reports

You can schedule automatic report delivery for one report or for a number of reports included in a report folder. You can choose to receive reports by email, save reports to a disk or network share. Note that you can only schedule delivery for saved reports (that is, reports in the *My Reports* folder and its subfolders).

To schedule automatic report delivery:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report for which you want to enable scheduled delivery.
5. In the **Actions** pane on the right, click **Scheduling**.
6. In the **Scheduling Report Administration** window, click **Add**.
7. In the **Scheduling** window, configure scheduling options:
  - a. Click **Schedule on** and specify a schedule according to which the report must be generated and delivered. For details, see [Specifying Delivery Schedule](#).
  - b. Click **Recipient** and choose the method used to deliver the report. You can choose to send the report by email or save the report to a disk or network share. For details, see [Specifying Delivery Method](#).
  - c. In the **Format** list, choose the format in which the report must be saved. You can choose one of the following formats: *Adobe PDF*, *MS Word*, *MS Excel*, *CSV (comma delimited)*, *XML*. For details, see [Specifying Report Format](#).
8. [Optional] To temporarily disable a schedule, select the **Disable scheduling for selected object** check box.
9. Click **Apply** to save the specified settings.
10. [Optional] You can configure multiple schedules for the same report. Repeat steps 5-8 for each new schedule you want to add.
11. Click **Close**.

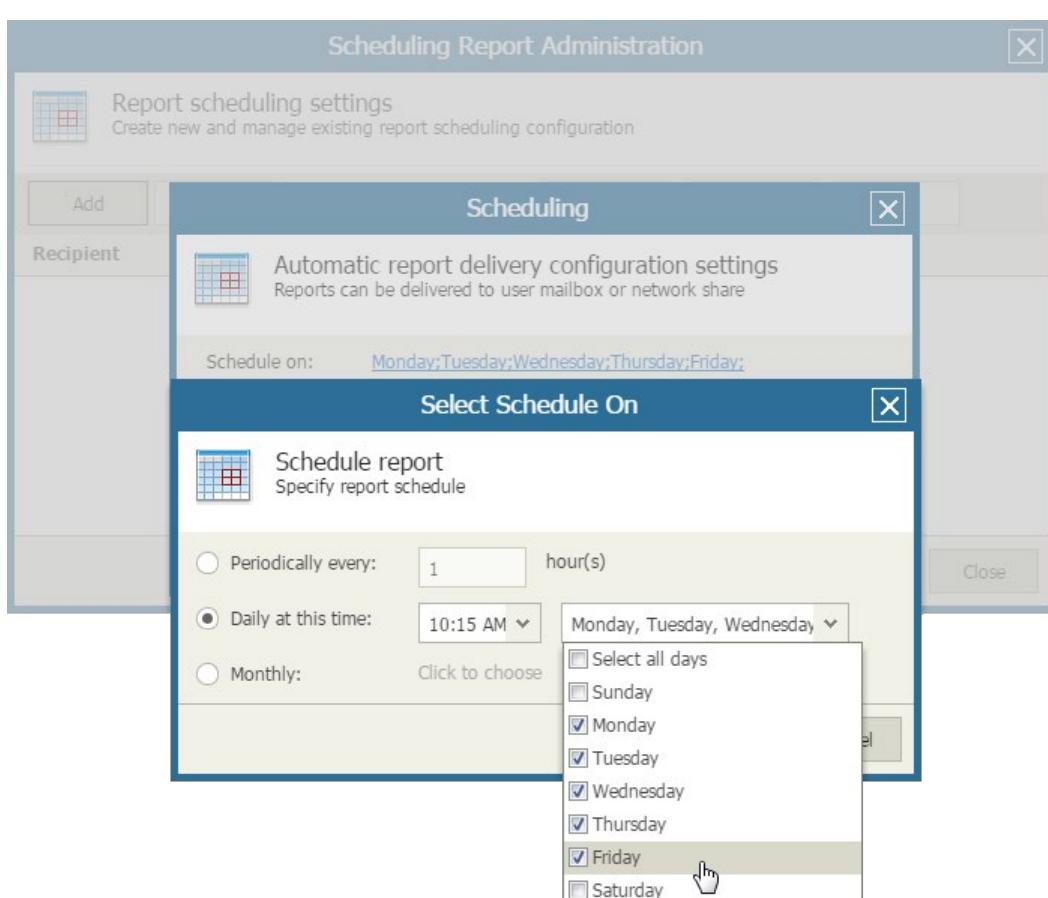


# Specifying Delivery Schedule

To configure automatic report delivery, you must specify the schedule according to which Veeam ONE Reporter must generate and deliver the report.

To configure the report delivery schedule:

1. Choose the necessary report and open the **Scheduling** window, as described in the *Scheduling Reports* procedure.
2. Click the link in the **Schedule on** section to define the schedule according to which the report must be generated.
  - o To generate and deliver reports repeatedly, with a specific time interval, select the **Periodically every... hours** option and define the necessary interval.
  - o To generate and deliver reports at specific time, select the **Daily at this time** option, enter the time and weekdays on which the reports will be created.
  - o To generate and deliver reports on a monthly basis, select the **Monthly** option and choose the necessary months and dates or weekdays.
3. Click **OK** to apply the scheduling settings.

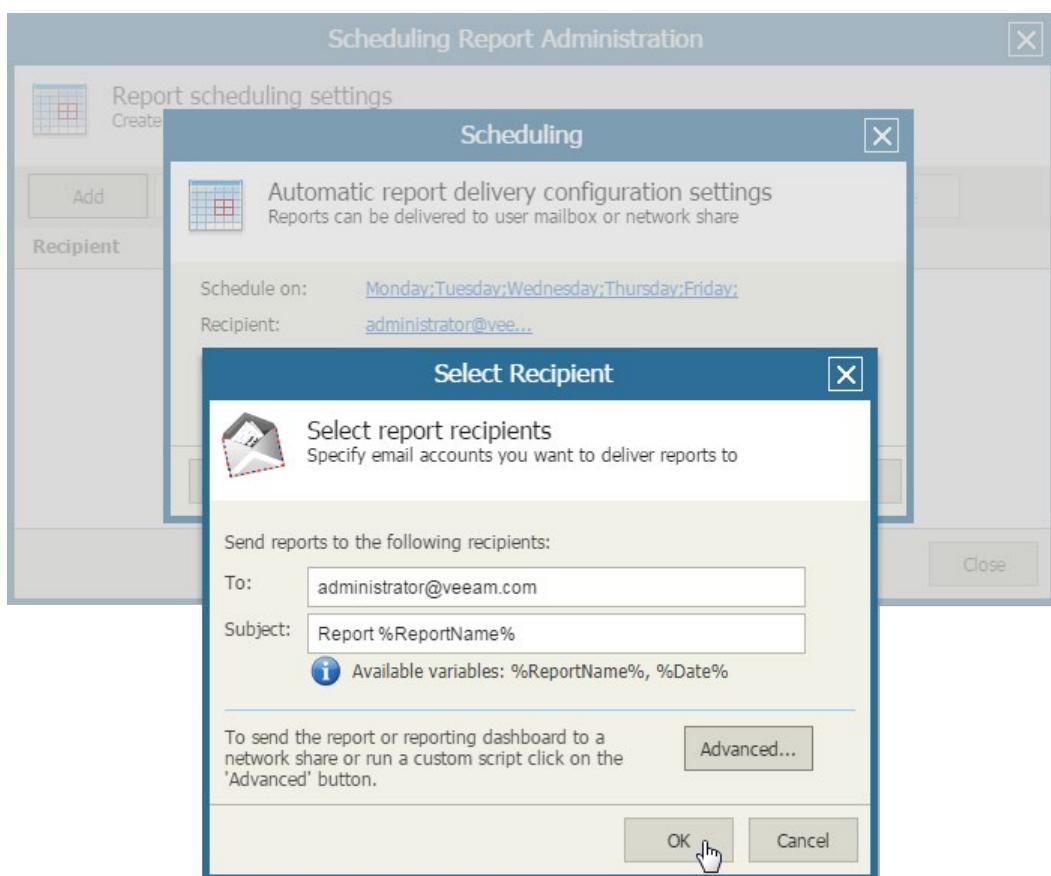


# Specifying Delivery Method

To configure automatic report delivery, you must specify the method that Veeam ONE Reporter must use to deliver the report. You can choose to receive ready reports by email, save reports to a disk or network share.

To configure report delivery by email:

1. Make sure you specified SMTP settings in Veeam ONE Monitor.  
For details, see section [Configure SMTP Server Settings](#) of the Veeam ONE Deployment Guide.
2. Choose the necessary report and open the **Scheduling** window, as described in the *Scheduling Reports* procedure.
3. Click the link in the **Recipient** section to define how the report must be delivered.
4. In the **To** field, specify recipient's email address.  
If you want to send reports to multiple recipients, separate email addresses with a semicolon (;) or comma (,).
5. In the **Subject** field, specify the email subject.  
You can use the **%ReportName%** and **%Date%** variables in the subject – Veeam ONE Reporter will substitute these variables with the name of a corresponding report and the corresponding date.
6. Click **OK** to apply the delivery method settings.



To configure automated delivery of reports to a disk or network share:

1. Choose the necessary report and open the **Scheduling** window, as described in the *Scheduling Reports* procedure.
2. Click the link in the **Recipient** section to define how the report must be delivered.
3. In the **Select Recipient** window, click the **Advanced** button.

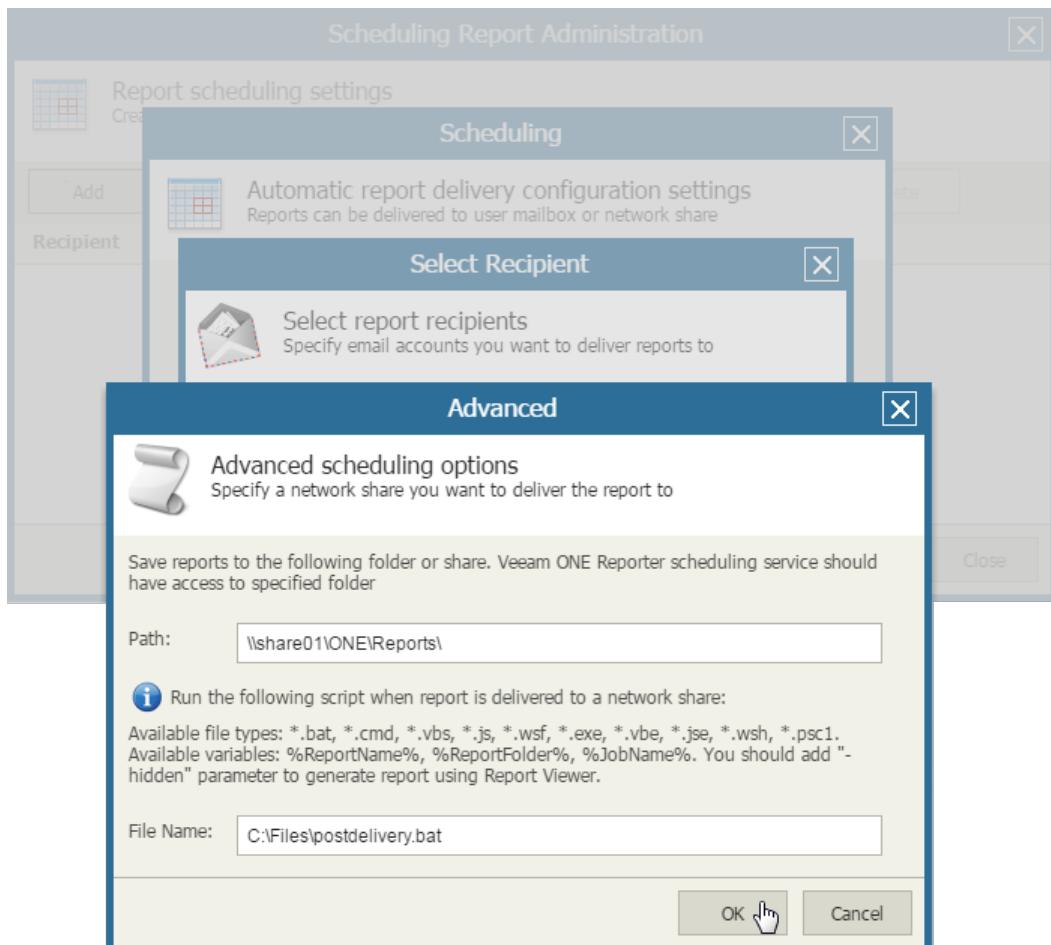
- In the **Path** field, specify the path to a local folder or provide a network path.

The path must refer to an existing folder and the account under which Veeam ONE Reporter Server runs must have write permissions on this folder.

- To run a custom script after reports are delivered to the target folder, in the **File Name** field, specify a path to the file with the script.

Running a custom script allows you to perform further manipulations after reports are generated. You can find simple script examples in [Appendix. Scheduling Script Examples](#).

- Click **OK** to apply the delivery method settings.



## Specifying Report Format

The following table describes file formats available for scheduled reports.

File Format	Report Scheduling
Adobe PDF	Yes
MS Word	Yes
MS Excel	Yes

File Format	Report Scheduling
CSV (comma delimited)	Requires integration with an SSRS server
XML	Requires integration with an SSRS server

To save reports in CSV or XML format, you must configure an SRSS server. For details, see [Configuring SSRS Server Settings](#).

# Scheduling Delivery for Multiple Reports

Instead of scheduling automatic report delivery for separate reports, you can configure scheduled delivery for a number of reports that are included in the same folder.

To schedule delivery for reports in the same folder:

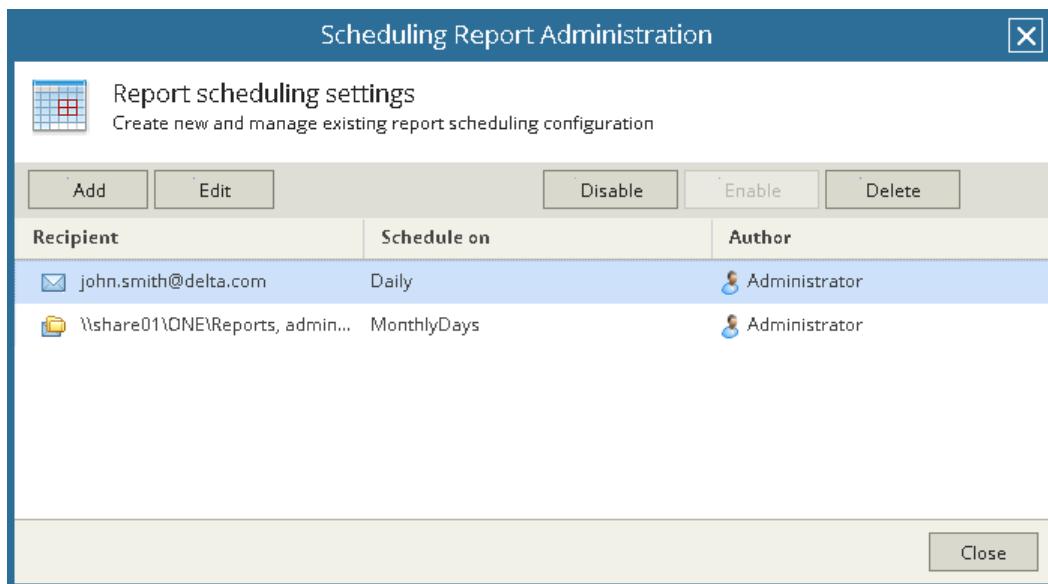
1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select a folder for which you want to schedule delivery.
4. At the top of the report list, click **Schedule folder**.
5. Configure the schedule and delivery method as described in section [Scheduling Reports](#).
6. [Optional] To temporarily disable a schedule, select the **Disable scheduling for selected object** check box.
7. Click **Apply** to save the specified settings.
8. Click **Close**.

# Managing Report Schedules

You can create multiple schedules for a report or a report folder. Maintaining multiple schedules allows you to set up complex scheduling and delivery method settings for the same report or folder.

To manage report or folder schedules:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder or click a saved report in the displayed list of reports.
4. In the **Actions** pane on the right, click **Scheduling**.
5. Use the buttons in the **Scheduling Report/Folder Administration** window to manage schedules that you configured for the report or folder:
  - To create a new schedule, click **Add**.
  - To modify scheduling settings, select a schedule in the list and click **Edit**.
  - To delete a schedule from the list, select the schedule in the list and click **Delete**.
  - To temporarily disable a schedule, select the schedule in the list and click **Disable**.
  - To enable a previously disabled schedule, select the schedule in the list and click **Enable**.
6. To finish working with the schedules, click **Close**.



# Excluding Reports from Scheduling

If you specified scheduling settings at the folder level, you can exclude specific reports or subfolders from scheduling. Veeam ONE Reporter will not generate and deliver reports excluded from automatic delivery.

To exclude a report from scheduling:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a report that you want to exclude from scheduled delivery.
5. In the **Actions** pane on the right, click **Scheduling**.
6. Select the **Disable scheduling for selected object** check box and save settings.

To exclude a folder with child reports from scheduling:

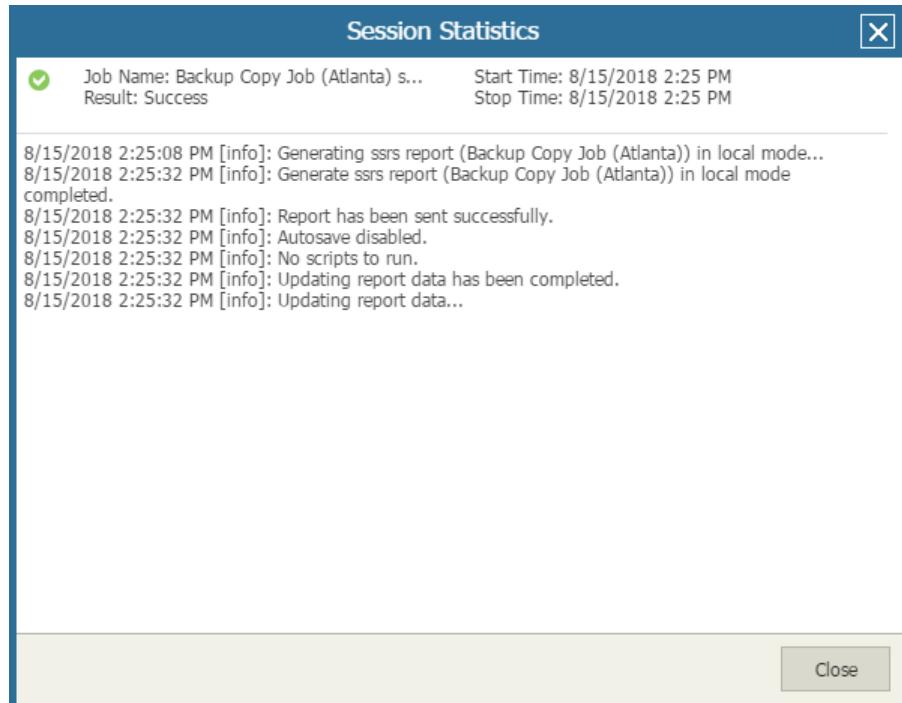
1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. At the top of the report list, click **Schedule folder**.
5. Select the **Disable scheduling for selected object** check box and save settings.

# Viewing Scheduled Report Delivery Results

Every run of a report scheduling job initiates a new scheduling session.

To view details on report scheduling sessions:

1. Open Veeam ONE Reporter.
2. Open the **Configuration** section.
3. In the **Configuration** section menu, click **Sessions**.
4. In the **Job Type** list, select *Report scheduling* and click **Apply Filters**.
5. Click the session in the list to display detailed information on it.



# Copying Reports

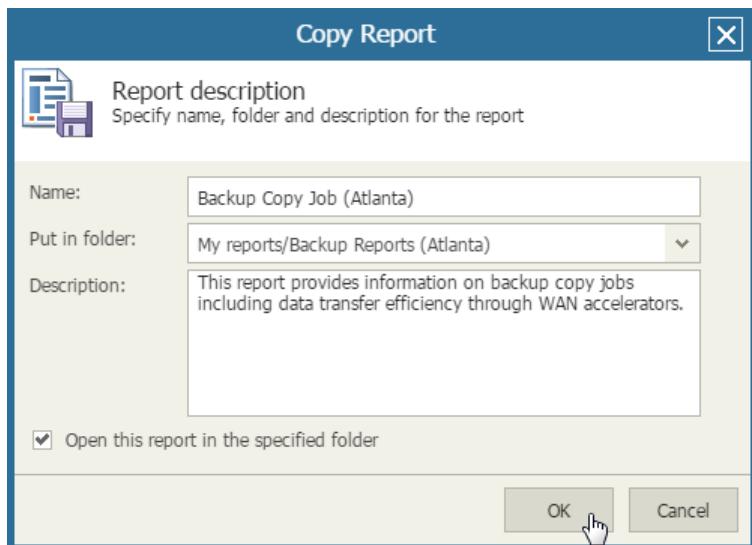
You can create copies of reports that you have previously saved to *My Reports*.

Copying may save time if you need to create multiple instances of the same report. For example, you have configured a report with complex parameters and need create a set of similar reports with minor changes. In this situation, you can create several copies of the saved report and change report parameters for each report copy.

To create a report copy:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report that you want to copy.
5. In the **Actions** pane on the right, click **Copy**.
6. In the **Copy Report** section, specify the name of the report, its description and select a folder to which the report copy should be saved. You can only choose a folder in the *My reports* hierarchy.
7. Select the **Open this report in the specified folder** check box if you want to open the report after copying. Use this option if you need to customize the report parameters after copying.
8. Click **OK**.

After you create a report copy, modify the report parameters as described in [Modifying Reports](#).



# Deleting Reports

If you no longer need a report, you can delete it. Note that you can only delete reports that you have previously saved to *My Reports*.

To delete a report:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report that you want to delete.
5. In the **Actions** pane on the right, click **Delete**.
6. In the displayed dialog box, click **Yes** to confirm report deletion.

# Publishing Reports

To share a saved report with other users or integrate the report to a web portal, you must publish the report. Veeam ONE users, including VMware vSphere users who have permissions assigned on a limited scope of the virtual infrastructure, can access published reports by direct report URLs.

To publish a report:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report that you want to publish.
5. In the **Actions** pane on the right, click **Publish**.

After you publish the report, generate its direct URL to share it with other users or integrate it in a web portal. For details, see [Generating Direct Report URL](#).

To make a published report inaccessible, you can unpublish it:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report that you want to unpublish.
5. In the **Actions** pane on the right, click **Unpublish**.

# Generating Direct Report URL

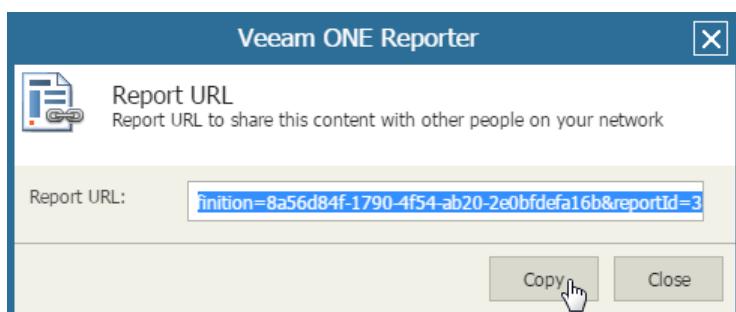
To share a report with other users or integrate the report to a web portal, you can generate a direct report URL.

Before you generate a direct report URL and share it with other users, check that:

- You have saved the report to *My Reports*. For details, see [Saving Reports](#).
- You have published the report. For details, see [Publishing Reports](#).

To generate a direct report URL:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, under *My reports*, select the necessary folder.
4. In the displayed list of reports, click a saved report for which you want to generate a URL.
5. In the **Actions** pane on the right, click the **Report URL** command.
6. Copy the URL and use it to share with other users or integrate to web portals.
7. Close the dialog box with the report URL.



## Accessing Report by Direct URL

To be access to access a report by a direct URL, a user must either:

- Be a member of the *Veeam ONE Administrators* or *Veeam ONE Read-Only Users* group. For more information on user groups, see section [Security Groups](#) of the Veeam ONE Deployment Guide.  
This prerequisite applies to VMware vSphere and Microsoft Hyper-V platforms.
- Have permissions assigned on objects in the vCenter Server or vCloud Director inventory hierarchy. For details, see [Veeam ONE Multi-Tenant Monitoring and Reporting](#).  
This prerequisite applies to the VMware vSphere platform only.

# Deployment Projects

Veeam ONE Reporter deployment projects allow you to predict future resource utilization and plan resource reservations in your virtual environment.

With deployment projects, you can run complex simulation tasks to predict the effects of:

- Adding or evicting hosts in a cluster
- Adding new VMs or decommissioning existing VMs

Deployment projects compare the projected resource capacities against the future resource demand, help identify potential resource shortages and provide practical recommendations that an administrator should undertake to succeed with the actual deployment.

For example, you can simulate how many VMs similar to an existing Microsoft SQL Server can be added in a cluster without the risk of causing resource contention or degraded cluster performance. Deployment projects can be helpful in assessing various hardware replacement scenarios or forecasting the amount of compute and storage resources that need to be provisioned.

**NOTE:**

Deployment projects are not available in Veeam ONE Community edition.

## Deployment Projects and Scenarios

Every deployment project includes a specific simulation scenario. A simulation scenario describes what amount of resources must be added to or evicted from the managed environment.

In simulation scenarios, you can:

- Select an existing host or a VM and use it as a baseline model to calculate the effects of adding or evicting resources
- Explicitly specify host or VM configuration

Simulation scenarios can be targeted at a host or cluster, termed *container* – a recipient node that will undergo the capacity changes and whose future performance and resource utilization will be assessed.

## Condition for Acceptance

The deployment project is considered successful if future resource utilization and performance metrics do not breach the designated thresholds that define the maximum tolerable resource load. The thresholds are preset and can be customized if necessary.

Tentatively successful projects (projects completed with warnings) will cause the metrics to breach the thresholds but stay beyond 100 percent of resource utilization (for example, memory usage exceeding a 90 percent threshold but being less than 100 percent).

## Calculation Background

Resource availability and performance modelling is based on comparing future demand for resources against the projected resource capacity. The following factors are used in the analysis:

- Current compute capacities

- Additional capacities introduced through adding new hosts or evicting VMs
- Withdrawn compute capacities through evicting hosts
- Extra capacities required to run new VMs

The following algorithms are employed to forecast workloads:

- When a new VM is added, it is assumed that the VM will use all its provisioned resources.
- When an existing VM is selected as a baseline model, Veeam ONE Reporter will use the average value of the VM resource consumption during the current week.
- When calculating the amount of free space, Veeam ONE Reporter verifies that there is sufficient storage capacity for all virtual disks of the VM.

## Deployment Project Interdependencies

You can create several simulation scenarios that describe complex conditions, such as introducing new and decommissioning existing hosts or VMs in the same container, at the same time. You can also create deployment scenarios with overlapping due dates.

When you create a new deployment project or make changes in the existing deployment project, Veeam ONE Reporter checks if there is any overlapping project. If there are changes that might affect the concurrent project, Veeam ONE Reporter will prompt you to recalculate the overlapping projects.

# Getting Started with Deployment Projects

A typical workflow for creating a deployment project includes the following steps:

1. [Check the effective thresholds and modify their values if necessary.](#)
2. [Create a new deployment project, specify its settings and add simulation scenarios.](#)
3. [Build the deployment project to run a simulation.](#)
4. [Create a report to examine results.](#)
5. [Complete the project after the actual resources have been added or evicted.](#)

# Creating Deployment Projects

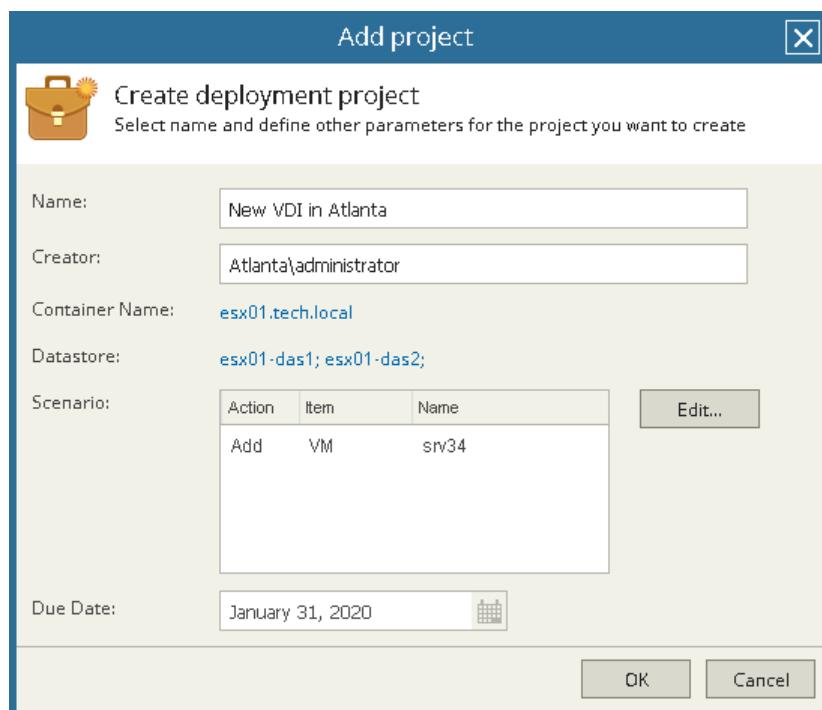
To create a new deployment project:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Click the **Add** button.
5. In the **Name** field, specify the name of the project.
6. In the **Creator** field, specify the name of a project creator.

By default, this field is populated with the name of the user who is currently logged in to Veeam ONE Reporter.

7. Click the **Container** link and select a host or cluster to which you want to add hosts or VMs, or from which you want to remove hosts or VMs.
8. [Optional] Click the **Datastore** link and select one or more datastores to which VMs will be placed. Select datastores if you need to calculate storage resource requirements for new VMs.  
The datastore selection scope includes all datastores accessible by the selected container.
9. Click **Edit** next to the **Scenario** field and add one or more simulation scenarios.  
For details, see [Defining Project Scenarios](#).

10. In the **Due Date** field, specify the date when the deployment project must be completed.
11. Click **OK**.



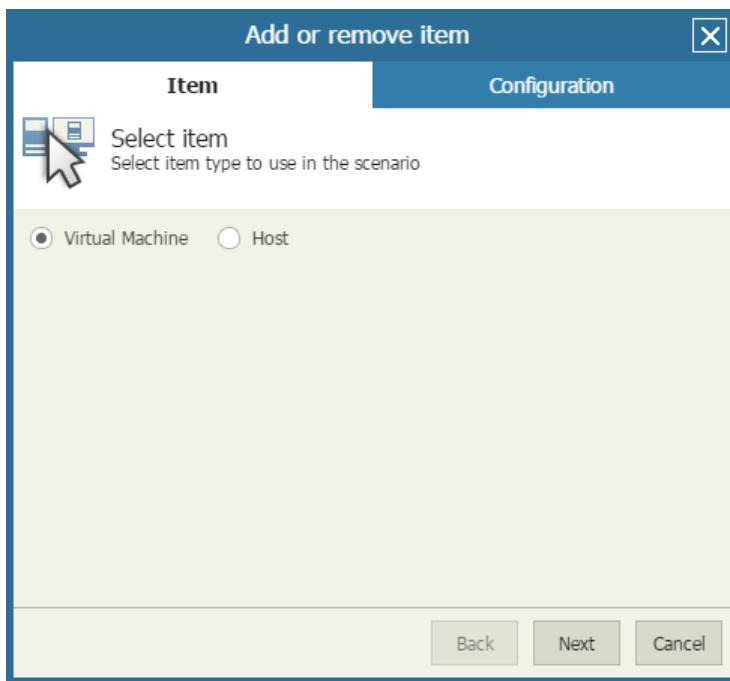
# Defining Project Scenarios

A deployment project scenario describes configuration of the hosts or VMs that must be added or evicted from the target container. One scenario can combine conditions for adding and evicting both hosts and VMs.

## Adding VMs

To simulate a situation of adding new VMs to a host or cluster:

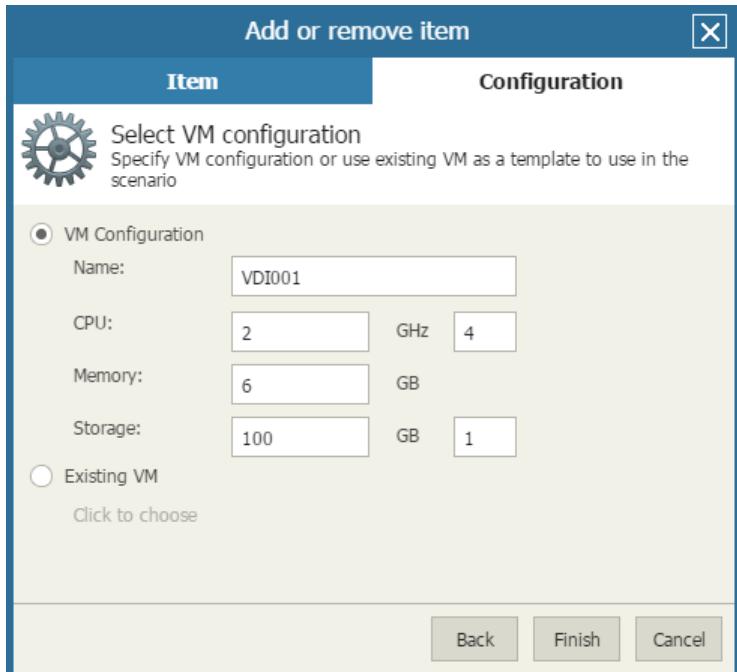
1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project and click **Edit**.
5. In the **Edit project** window, click the **Edit** button next to the **Scenario** field.
6. In the **Edit Scenario** window, click **Add** to launch the **Add or remove item** wizard.
7. At the **Item** step of the wizard, select *Virtual Machine*.



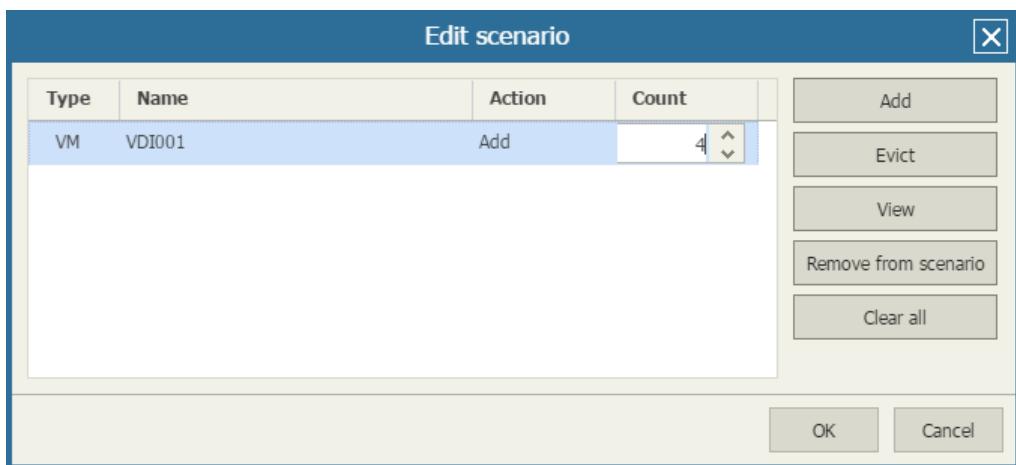
8. At the **Configuration** step of the wizard, describe VM configuration:
  - To explicitly define VM configuration, select the **VM Configuration** option and type the VM name, the number of CPU cores and CPU clock speed, the amount of memory resources, the amount of space allocated for a virtual disk and the number of disks.

- To choose an existing VM that will be used as a template in the scenario, select the **Existing VM** option and choose a VM from the list.

The VM selection scope includes all VMs in the selected container.



- Click **Finish** to complete the wizard.
- In the **Edit scenario** window, select the scenario entry, click the **Count** field and specify the number of VMs to be added.



- Click **OK**.

## Evicting VMs

To simulate a situation of evicting a VM from a host or cluster:

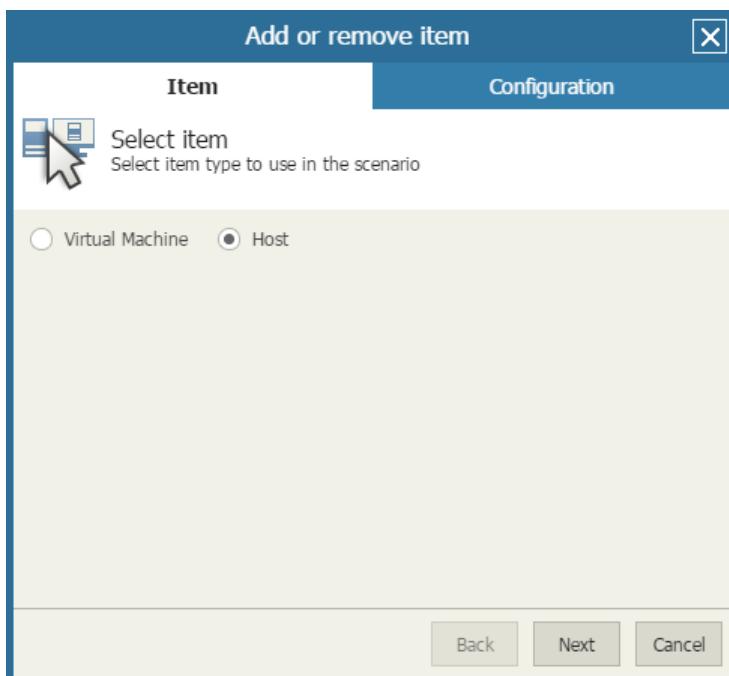
- Open Veeam ONE Reporter.
- Open the **Workspace** section.
- In the hierarchy on the left, select **All deployment projects**.

4. Select the necessary deployment project and click **Edit**.
5. In the **Edit project** windows, click the **Edit** button next to the **Scenario** field.
6. In the **Edit Scenario** window, click **Evict** to launch the **Add or remove item** wizard.
7. At the **Item** step of the wizard, select *Virtual Machine*.
8. At the **Configuration** step of the wizard, click the link next to the **Existing VM** option and choose a VM from the list.  
The VM selection scope includes all VMs in the selected container.
9. Click **Finish** to complete the wizard.
10. In the **Edit scenario** window, click **OK**.

## Adding Hosts

To simulate a situation of adding new hosts to a cluster:

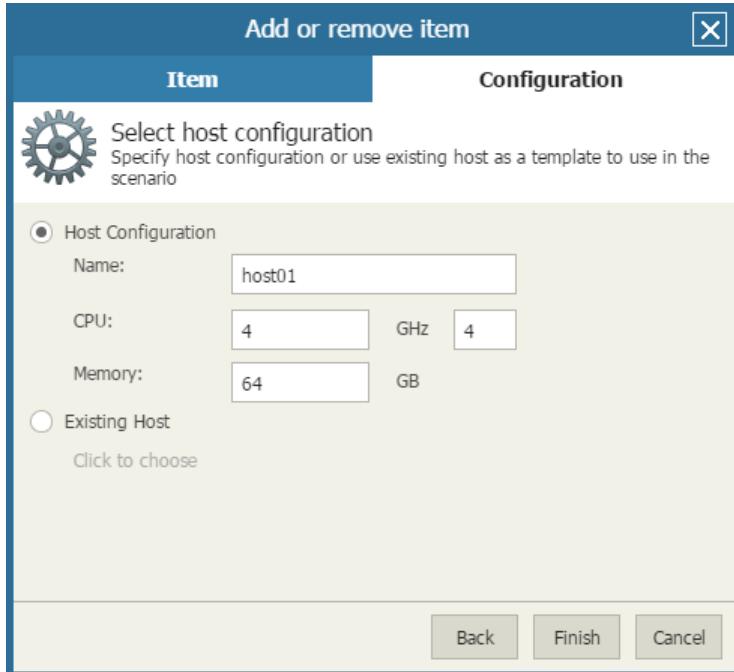
1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project and click **Edit**.
5. In the **Edit project** windows, click the **Edit** button next to the **Scenario** field.
6. In the **Edit Scenario** window, click **Add** to launch the **Add or remove item** wizard.
7. At the **Item** step of the wizard, select *Host*.



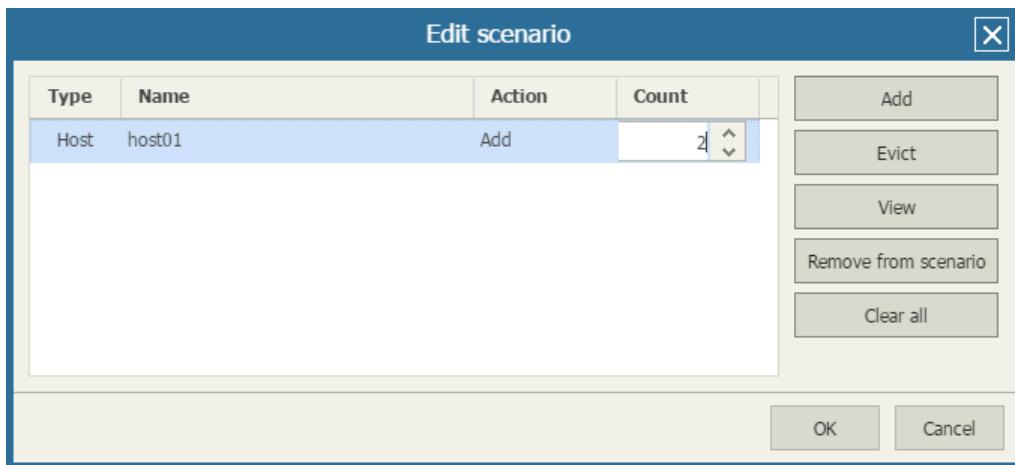
8. At the **Configuration** step of the wizard, describe host configuration:
  - o To explicitly specify configuration values, select the **Host Configuration** option and type the host name, the number of CPU cores and CPU clock speed and the amount of memory resources.

- To choose an existing host that will be used as a template in the scenario, select the **Existing Host** option and choose a host from the list.

The host selection scope includes all hosts in the selected cluster.



- Click **Finish** to complete the wizard.
- In the **Edit scenario** window, select the scenario entry, click the **Count** field and specify the number of hosts to be added.



- Click **OK**.

## Evicting Hosts

To simulate a situation of evicting a host from a cluster:

- Open Veeam ONE Reporter.
- Open the **Workspace** section.
- In the hierarchy on the left, select **All deployment projects**.

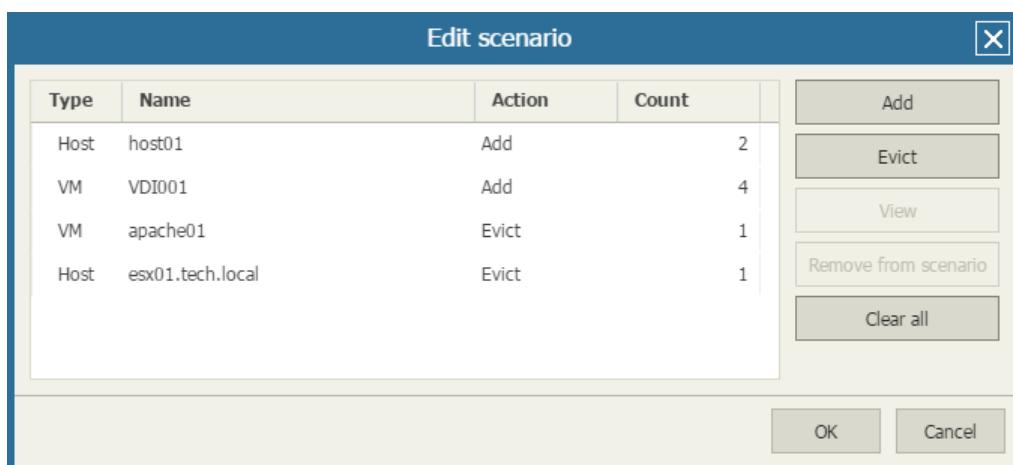
4. Select the necessary deployment project and click **Edit**.
5. In the **Edit project** windows, click the **Edit** button next to the **Scenario** field.
6. In the **Edit Scenario** window, click **Evict** to launch the **Add or remove** item wizard.
7. At the **Item** step of the wizard, select *Host*.
8. At the **Configuration** step of the wizard, click the link next to the **Existing Host** option and choose a host from the list.

The host selection scope includes all hosts in the selected container.
9. Click **Finish** to complete the wizard.
10. In the **Edit scenario window**, click **OK**.

# Modifying Scenario Parameters

You can change parameters of a deployment scenario:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project in the list and click **Edit**.
5. In the **Edit project** windows, click the **Edit** button next to the **Scenario** field.
6. In the **Edit Scenario** window, you can perform the following modifications:
  - Click **Add** to add a new host or VM to the selected container.
  - Click **Evict** to evict an existing host or VM from the selected container.
  - Click **View** to view configuration details for the selected scenario entry.
  - Click **Remove from scenario** to remove the selected scenario entry.
  - Click **Clear all** to remove all entries from the scenario.
  - In the **Count** field, change the number of host or VMs to add to the selected container.
7. Click **OK**.



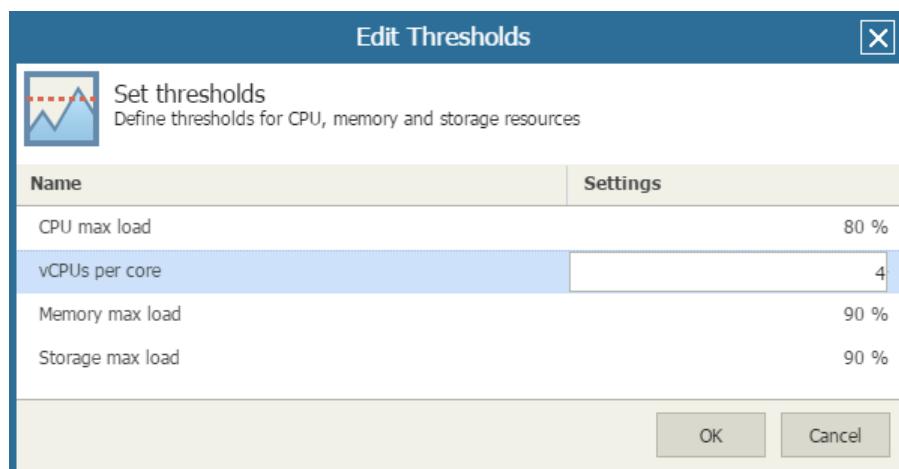
# Adjusting Performance Thresholds

Before you run a scenario simulation, you might need to examine the effective performance thresholds and change them if necessary. The thresholds describe the maximum allowable resource utilization level that must not be exceeded after the deployment project changes come into effect.

The default performance thresholds are designed to ensure conservative resource utilization and are therefore appropriate for the majority of typical capacity planning projects.

To view and change performance thresholds:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Click **Thresholds**.
5. Change threshold values if required:
  - **CPU max load** – maximum allowable processor utilization level on a physical host.
  - **vCPU per core** – maximum allowable CPU allocation ratio (the ratio of vCPU to pCPU). It is calculated as the total number of allocated virtual cores divided by the number of physical cores in the target container.
  - **Memory max load** – maximum allowable memory utilization level on the physical host.
  - **Storage max load** – maximum allowable amount of used space on the target datastores.
6. Click **OK**.



# Building Deployment Projects

After you create a deployment project, you need to build it to run the scenario modeling and make sure that your capacities meet the deployment conditions.

You must rebuild (recalculate) a deployment project each time its settings change, or when the project is affected by changes in concurrent projects.

To build a deployment project:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project in the list and click **Build**.

Veeam ONE Reporter will build the project and display the project result in the **State** field. For details on deployment project states, see [Deployment Project States](#).

# Viewing Deployment Project Report

After you build a project, you can view a report detailing the outcome of the simulated deployment:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project in the list and click **View report**.

The report is designed to assist an administrator in implementing the deployment. The report details a projected resource usage, identifies a list of constraints and provides mitigation guidance.

The first report page outlines the projected changes and gives a summary of the constraining resources.

**veeam**

## Deployment Scenarios Modelling

**Description**

This report helps you to model different VM deployment scenarios and estimate resource usage after adding or removing physical resources.

**Report Parameters**

Project Name:	New VDI in Atlanta
Modelling Result:	Passed with warnings

**Scope:** esx02.tech.local  
**Datastores:** esx02-ds1  
**Deployment Date:** 31.12.2018  
**CPU Usage Threshold:** 80,00%  
**vCPU Per Core:** 4  
**Memory Usage Threshold:** 90,00%  
**Storage Space Usage Threshold:** 90,00%

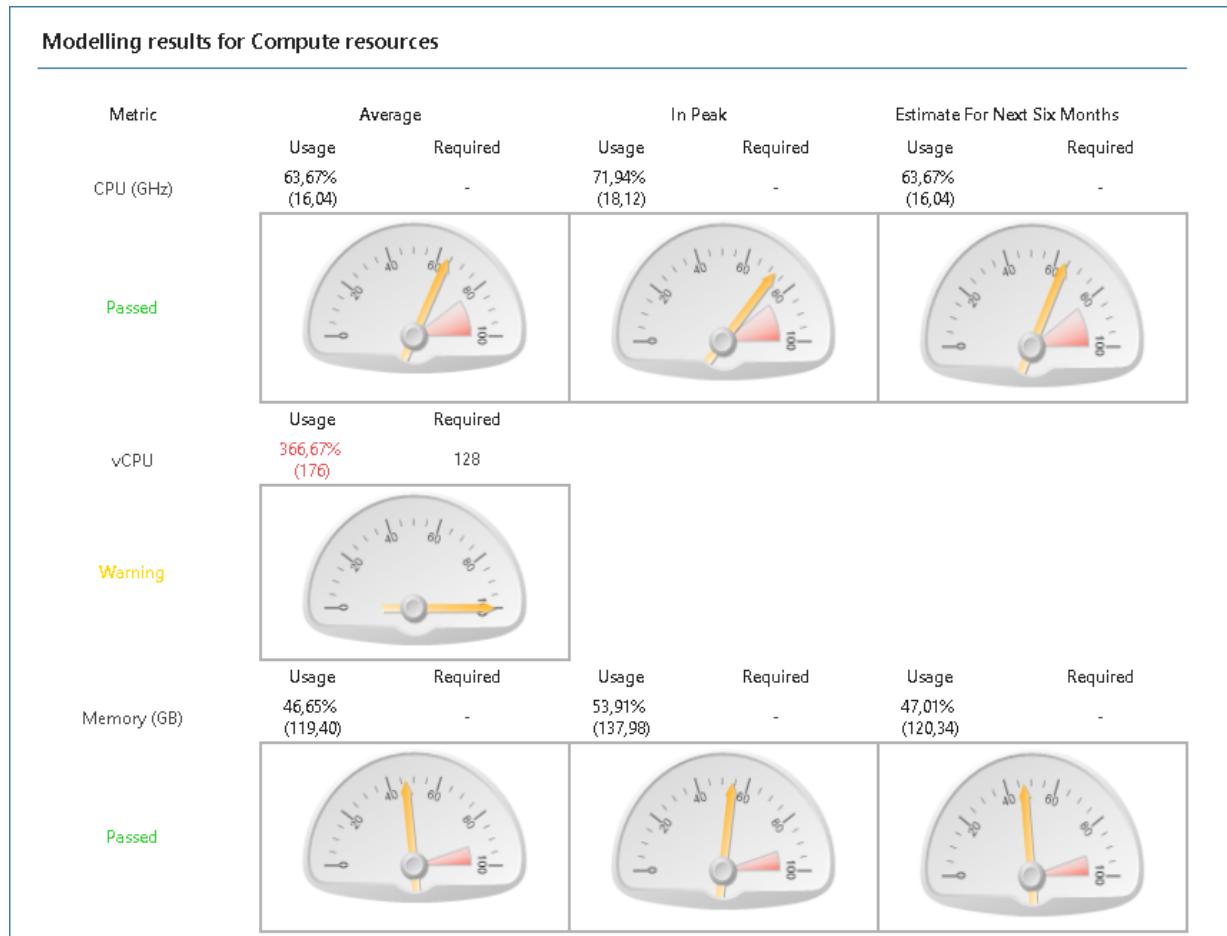
**Project Details**

Action	Object Type	Name	Number	CPU (GHz)	vCPU/Core Count	Memory Allocated/Used (GB)	Storage (GB)	Disk Count
Add	Virtual Machine	vdi001	1	0,00	2	4,00 / 2,12	120,00	1

Total Scope Power

Current		By Pending Projects (With Current Resource Usage)			
CPU (GHz)	Core Count	Memory (GB)	CPU (GHz)	Core Count	Memory (GB)
25,19	12	255,97	25,19	12	255,97

The subsequent pages show anticipated CPU, memory and storage usage levels and provide recommendations on capacity planning measures for maintaining robust and consistent performance in future.



# Completing Deployment Projects

After you run a simulation based on a deployment project, you can flag the project as *Completed*.

By completing a deployment project, you instruct Veeam ONE Reporter to assume that all resources tied up to the project can be released and made available for calculation of the concurrent projects.

To complete a deployment project:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project in the list and click **Complete**.
5. In the displayed dialog box, click **Yes** to confirm project completion.

After you complete a project, its state will be changed to *Completed*, and the project deployment date will be set to the current date.

# Modifying Deployment Projects

You can modify settings of a deployment project that you have not completed yet. For example, you may need to update deployment project settings if the project was built with the *Failed* state.

To modify deployment project settings:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project in the list and click **Edit**.
5. Change the deployment project settings as described in [Creating Deployment Projects](#).
6. Save changes.

After you change project settings, you need to build the project anew. You might also need to rebuild overlapping or dependent projects. For example, if you change the project due date to an earlier date, Veeam ONE Reporter will offer you to rebuild all projects whose dates overlap with the changed project.

# Deleting Deployment Projects

If you no longer need a deployment project, you can delete it:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select **All deployment projects**.
4. Select the necessary deployment project in the list and click **Delete**.
5. In the displayed dialog box, click **Yes** to confirm project deletion.

After you delete a deployment project, you might need to rebuild overlapping or dependent projects. For details, see [Building Deployment Projects](#).

# Deployment Project States

Veeam ONE deployment projects may have one of the following states.

- **Needs to be calculated**

The state indicates that project calculation is pending. Remediation action is to build the project. For details, see [Building Deployment Projects](#).

- **Needs to be recalculated**

The state is assigned if the project settings have changed, or changes in a concurrent project affect the project. Remediation action is to build the project. For details, see [Building Deployment Projects](#).

- **Failed**

The state indicates that the project simulation has completed but the deployment cannot be executed successfully due to anticipated resource constraints.

The deployment simulation analysis has concluded that it is impossible to place the desired number of hosts and/or VMs without causing the future resource utilization to exceed 100 percent on any of the performance metrics.

Remediation action is to view the project report and change the project settings in accordance with the report recommendations. For details, see [Viewing Deployment Project Report](#) and [Modifying Deployment Projects](#).

- **Passed with Warnings**

This state indicates that the deployment is feasible but will cause the resource utilization to breach the threshold values. However, the resource utilization will not reach 100 percent.

Remediation action is to view the project report and change the project settings in accordance with the report recommendations. For details, see [Viewing Deployment Project Report](#) and [Modifying Deployment Projects](#).

- **Passed**

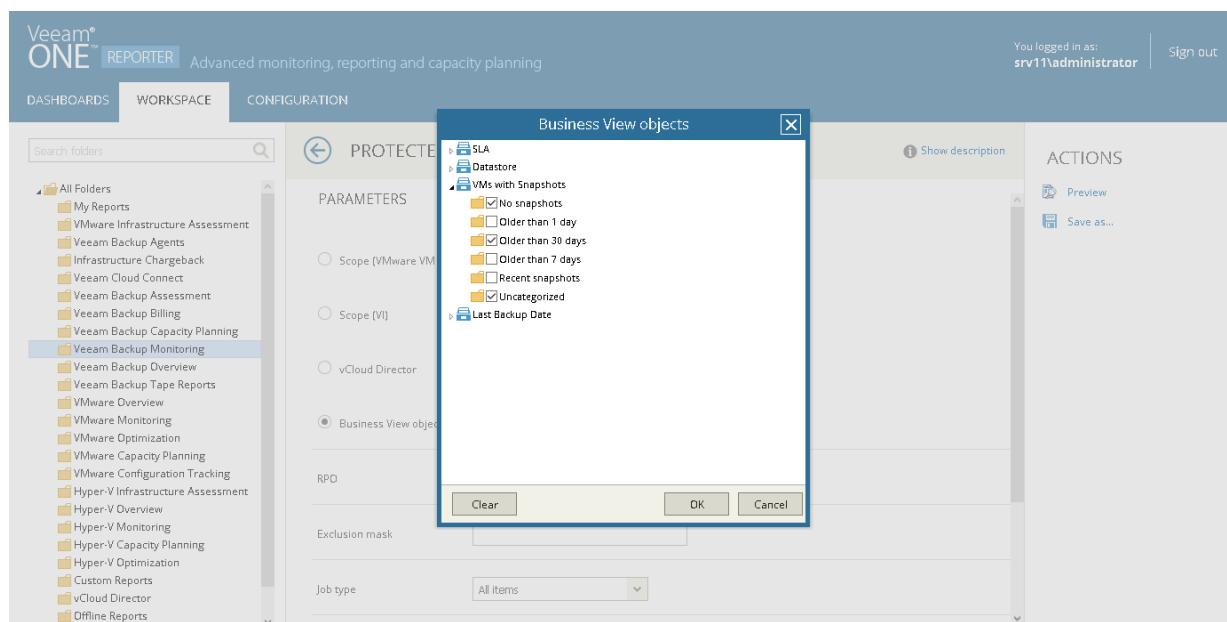
The state indicates that the project has completed successfully and its requirements are fully met. There are enough resources to accomplish the planned deployment and maintain an acceptable level of resource utilization.

# Veeam ONE Business View Reporting

Veeam ONE Reporter integrates with Veeam ONE Business View and allows you to create reports and dashboards for business view groups. For example, if you group VMs by department, you can create reports for a specific department in your organization.

The following example shows how you can create the Protected VMs report for specific business view groups:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. In the hierarchy on the left, select the **Veeam Backup Monitoring** folder.
4. In the displayed list of reports, click the **Protected VMs** report.
5. From the **Business view objects** list, select business groups for which you want to create a report.
6. Specify other report parameters and click **Preview**.



Veeam ONE Reporter will present data from the business point of view – that is, for the selected business groups.



## Protected VMs

### Description

This report lists all protected and unprotected VMs including their last backup state.  
Note: VM replicas created by Veeam Backup & Replication jobs are not accounted in this report.

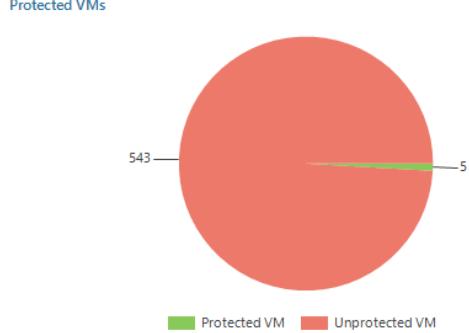
### Report Parameters

Scope:	Virtual Infrastructure
RPO period:	1 month (1/7/2019 - 2/6/2019)
Exclusion mask:	
Job type:	Backup, Replication, Backup Copy
Business View objects:	
Include VM templates in this report:	No
Job Exclusion list:	All Jobs

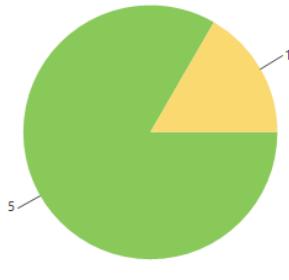
### Summary

#### VMs Overview

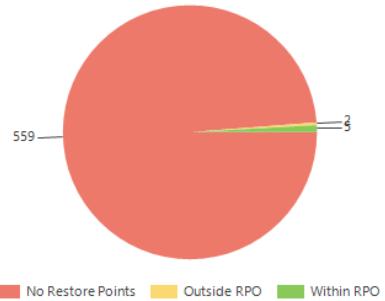
Total VMs:	615
Including Templates:	0
Protected VMs:	5
Backed Up VMs:	5
Replicated VMs:	0
Restore Points:	70
Unprotected VMs:	561
VM Replicas:	49



#### VM Last Backup State



#### VM Last Backup Age



# Predefined Dashboards and Reports

Veeam ONE Reporter features a set of preconfigured dashboards and reports for Veeam Backup & Replication, VMware vSphere and Microsoft Hyper-V.

**NOTE:**

Some predefined dashboards and reports can represent incomplete data, contain Veeam watermark, or be unavailable due to licensing limitations. For details on license types required for predefined report packs, see [Editions Comparison](#).

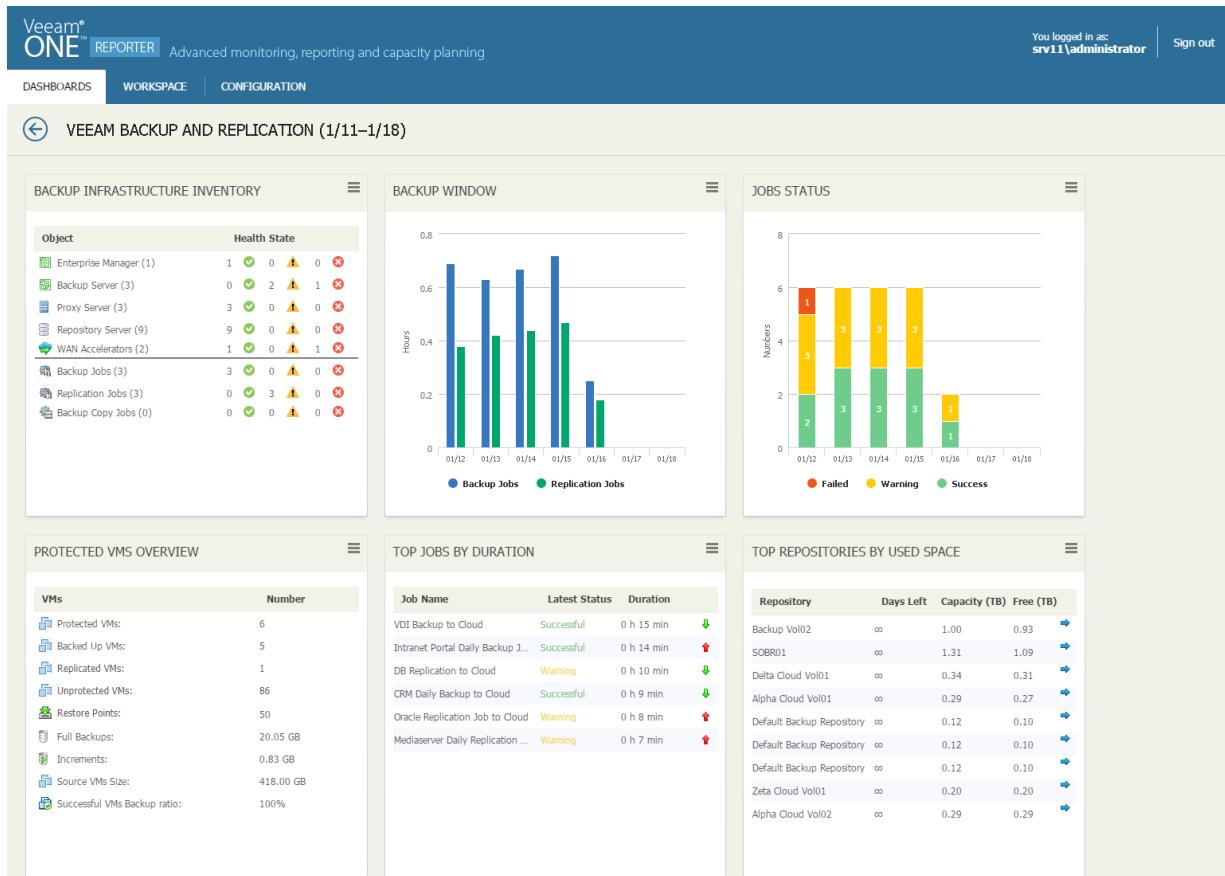
# Predefined Veeam ONE Dashboards

Veeam ONE Reporter includes the following predefined dashboards:

- [Veeam Backup & Replication Dashboard](#)
- [VMware Trends](#)
- [VMware Alarms](#)
- [VMware Hosts and Clusters](#)
- [VMware Datastores](#)
- [VMware VMs](#)
- [VMware Infrastructure](#)
- [VMware Capacity Planning](#)
- [Hyper-V Trends](#)
- [Hyper-V Alarms](#)
- [Hyper-V Hosts and Clusters](#)
- [Hyper-V Datastores](#)
- [Hyper-V VMs](#)
- [Hyper-V Infrastructure](#)
- [Heatmap](#)

# Veeam Backup & Replication Dashboard

The **Veeam Backup & Replication** dashboard provides information on the state of the key backup infrastructure components. The built-in widgets display a list of important events and help focus on the core efficiency indicators.



## Widgets Included

- **Backup Infrastructure Inventory**

This widget describes your backup infrastructure inventory and shows how many backup components of each type are deployed. The widget reflects the health state of backup infrastructure and displays healthy objects (green), objects with warnings (yellow), and objects with errors (red).

The widget also provides details on scheduled backup, backup copy and replication jobs, and the state of the latest job sessions.

- **Backup Window**

This widget shows the total duration of daily backup and replication job sessions. It allows you to track the efficiency of backup jobs, to detect issues occurred in the backup process and to check whether jobs completed within the prescribed backup window.

- **Jobs Status**

This widget provides information on the completion state of scheduled backup and replication jobs. It displays a daily summary of successfully completed jobs, and shows the number of jobs that completed with warnings and errors during the past week.

The widget helps you assess the efficiency of your data protection operations.

- **Protected VMs Overview**

This widget displays information on VMs protected with backup and replication jobs, specifically:

- *Protected VMs* – the total number of VMs protected with backups or replicas.
- *Backed Up VMs* – the total number of VMs for which backups are available.
- *Replicated VMs* – the total number of VMs for which replicas are available.
- *Unprotected VMs* – the total number of VMs not protected with backups or replicas.
- *Restore Points* – the total number of available restore points for protected VMs.
- *Full Backups* – the amount of storage space consumed by full backups.
- *Increments* – the amount of storage space consumed by incremental backups.
- *Source VMs Size* – the total size of storage space consumed by source VMs on production storage.
- *Successful VMs Backup ratio* – the percentage of latest backup and replication sessions that completed successfully over the previous week against the total number of latest sessions for protected VMs.

- **Top Jobs by Duration**

This widget displays top 10 jobs in terms of the longest duration, job completion status and the value of the average weekly duration. The widget helps you assess the backup infrastructure health and efficiency.

Arrows on the right show how job duration has changed over the previous week\*.

- **Top Repositories by Used Space**

This widget displays 10 repositories that will run out of free space sooner than other repositories, as well as total capacity and free space left on these repositories. The widget also forecasts how many days remain before the repositories will run out of free space.

Arrows on the right show how the repository free space value has changed over the previous week\*.

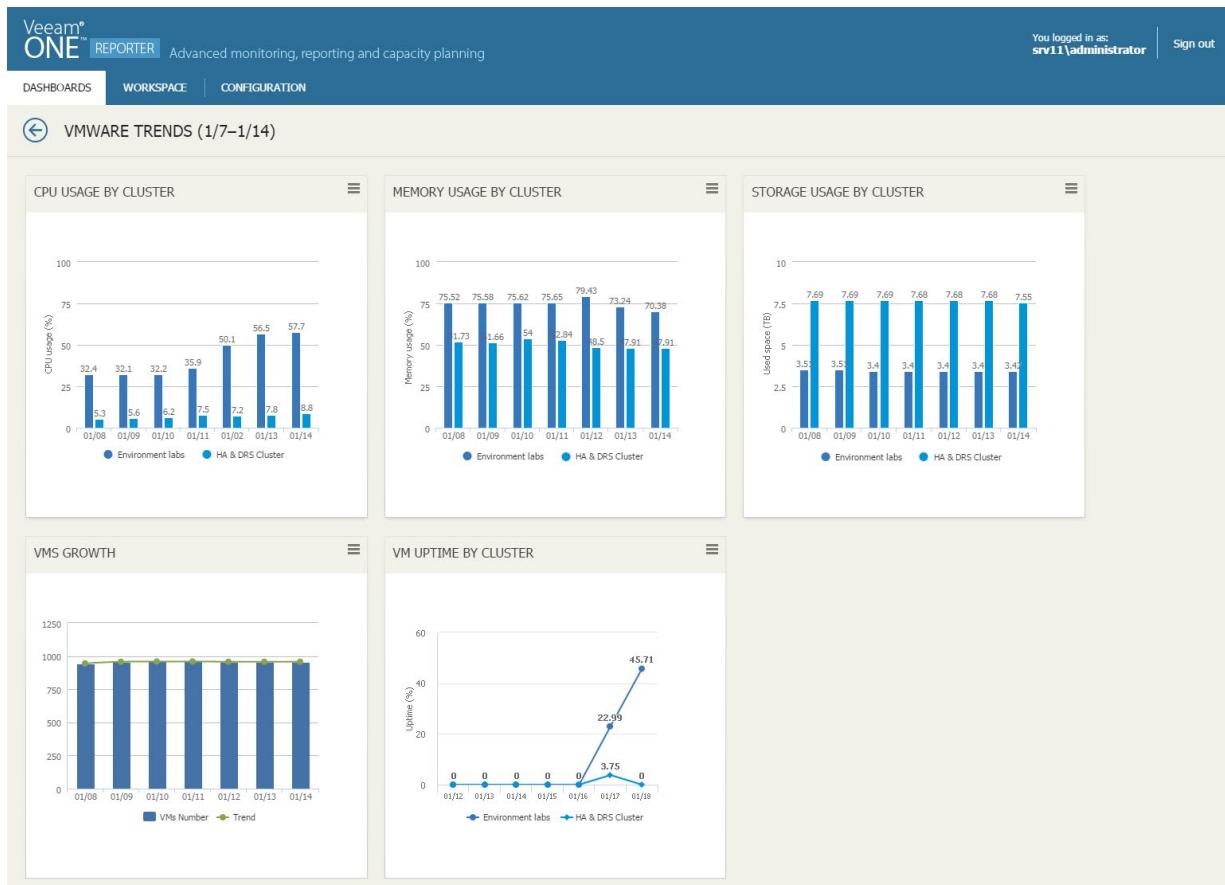
**NOTE:**

- Veeam ONE Reporter displays NAS Backup Copy jobs together with other Backup Copy jobs.
- Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Reporter might show invalid data for Veeam Backup & Replication reports and dashboards.

\*The arrows allow you to compare the results of this week to the results of the previous week and to track how the trend has evolved. For example, a blue arrow pointing right next to the Duration value means that duration of the job has not changed over the past week, a green arrow pointing down means that job duration has decreased, while a red arrow pointing up means that job duration has increased.

# VMware Trends

The **VMware Trends** dashboard helps you track resource utilization in your VMware vSphere infrastructure by displaying growth trends for the previous week.



## Widgets Included

- **CPU Usage by Cluster**

This widget shows how CPU utilization in a cluster has been changing during the week.

- **Memory Usage by Cluster**

This widget shows how memory utilization in a cluster has been changing during the week.

- **Storage Usage by Cluster**

This widget shows how storage utilization in a cluster has been changing during the week.

- **VMs Growth**

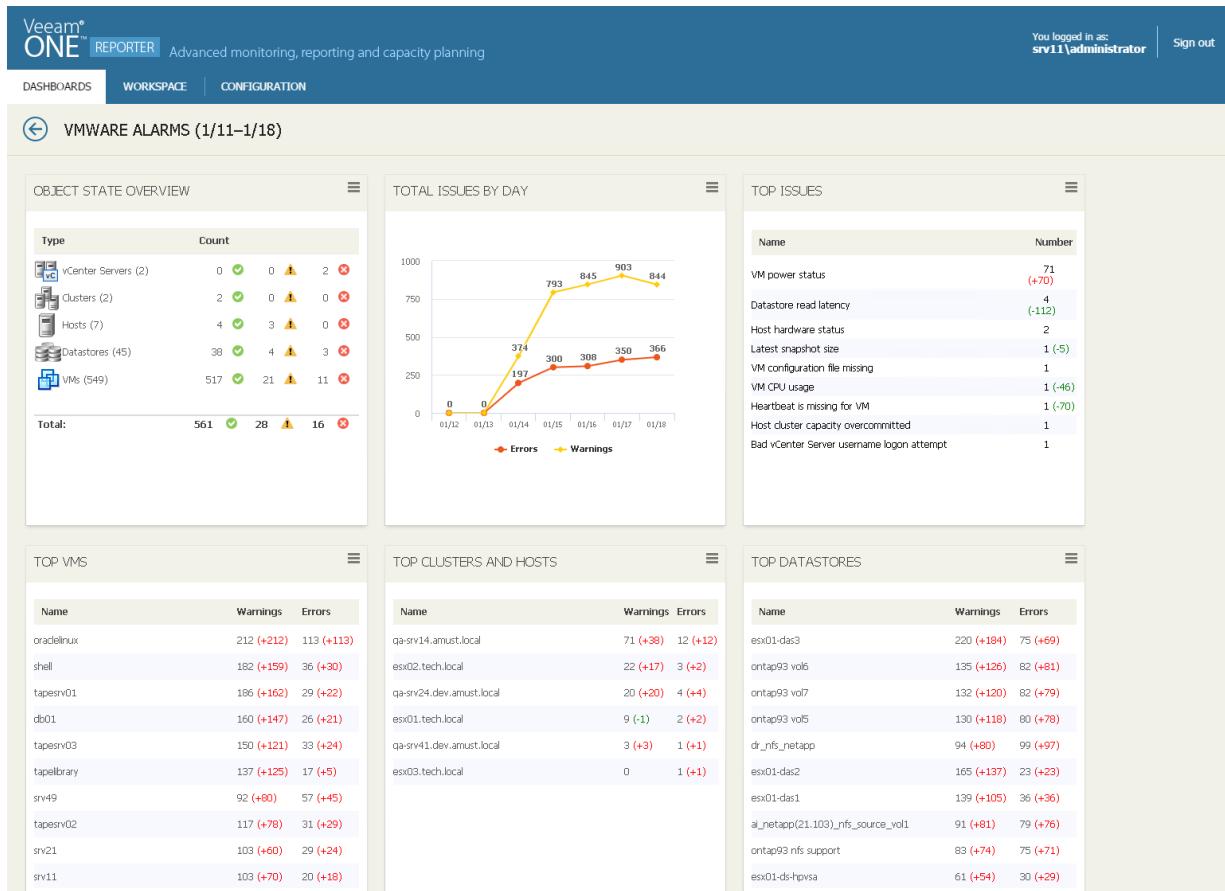
This widget shows how the number of VMs in your virtual infrastructure has been changing during the week.

- **VM Uptime by Cluster**

This widget shows how the average uptime value for VMs in a cluster has been changing during the week.

# VMware Alarms

The **VMware Alarms** dashboard provides an overview of alarms triggered by Veeam ONE Monitor during the past week. The dashboard allows you to identify the most typical issues that occur in your environment and to simplify troubleshooting.



## Widgets Included

- **Object State Overview**

This widget shows the number of healthy objects, objects with warnings and objects with errors for each infrastructure component type.

- **Total Issues by Day**

This widget displays the daily number of warnings and errors that were triggered during the week.

- **Top Issues**

This widget provides a list of 10 most typical alarms in your environment and shows the number of times each alarm was triggered.

Values in parentheses show how the alarm repeat count has changed over the previous week\*.

- **Top VMs**

This widget provides a list of VMs with the highest number of registered errors and warnings.

Values in parentheses show how the number of alarms has changed over the previous week\*.

- **Top Clusters and Hosts**

This widget provides a list of virtual infrastructure objects (clusters and hosts) with the highest number of registered errors and warnings.

Values in parentheses show how the number of alarms has changed over the previous week\*.

- **Top Datastores**

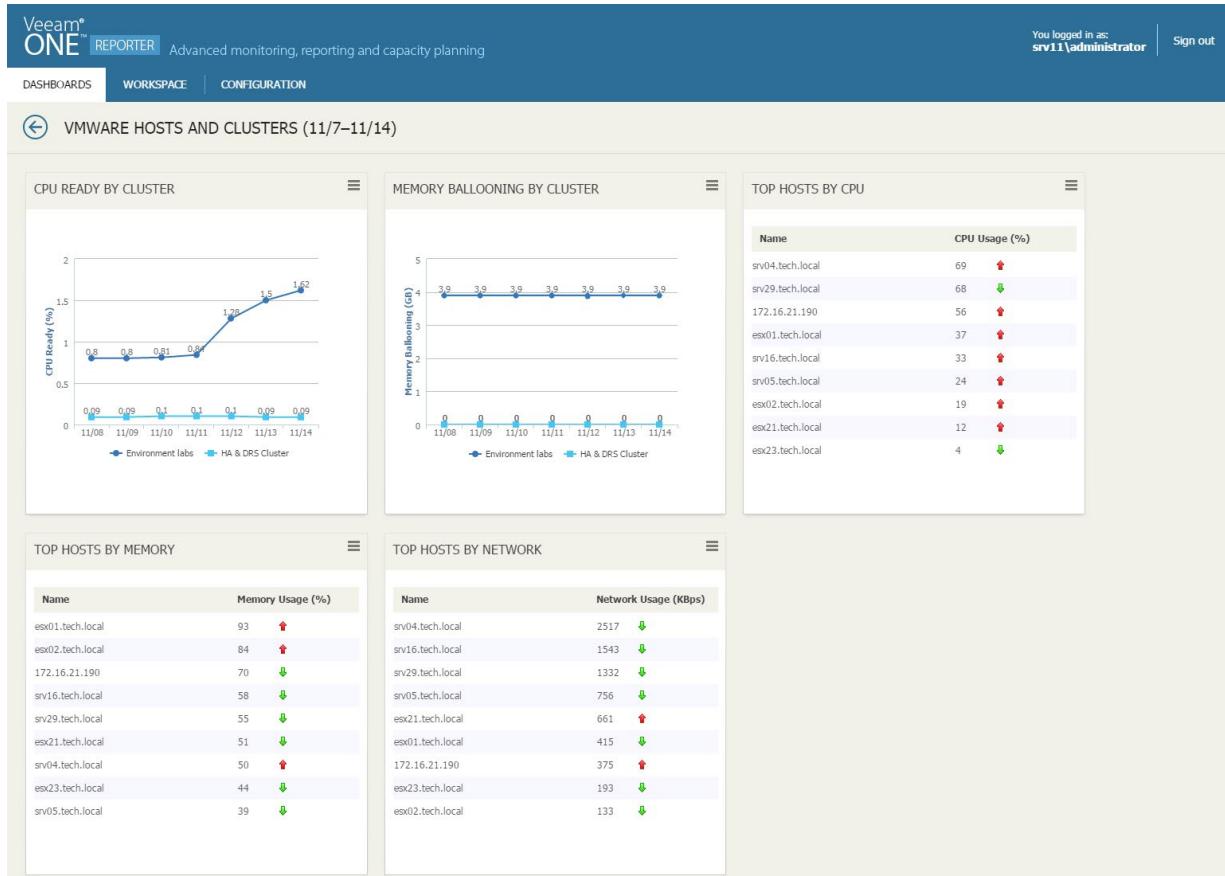
This widget provides a list of datastores with the highest number of registered errors and warnings.

Values in parentheses show how the number of alarms has changed over the previous week\*.

\*The value in parentheses stands for the amount by which the number of alarms has changed compared to the value of the previous week. For example, the 11 (+5) value means that the number of alarms has increased by 5 over the past week (while the previous value equaled 6), and the 11(-7) value means that the number of alarms has decreased by 7 (while the previous value equaled 18).

# VMware Hosts and Clusters

The **VMware Hosts and Clusters** dashboard helps you evaluate host and cluster performance in your VMware vSphere infrastructure. The dashboard displays statistics on CPU, memory and network utilization, and helps you identify hosts and clusters with performance issues.



## Widgets Included

- **CPU Ready by Cluster**

This widget shows how the average CPU ready time for all VMs on all hosts in the cluster has been changing during the week.

- **Memory Ballooning by Cluster**

This widget shows how the amount of memory processed by the VM memory control driver for all VMs on all hosts in the cluster has been changing during the week.

- **Top Hosts by CPU**

This widget displays weekly CPU utilization data for the top 10 most loaded hosts in your infrastructure. Arrows on the right show how the average CPU usage value has changed over the previous week\*.

- **Top Hosts by Memory**

This widget displays a list of hosts with the highest level of memory consumption.

Arrows on the right show how the average memory usage value has changed over the previous week\*.

- **Top Hosts by Network**

This widget displays a list of hosts with the highest level of network usage.

Arrows on the right show how the average network throughput value has changed over the previous week\*.

\*The arrows allow you to compare the results of this week to the results of the previous week, and to track how the trend has evolved. For example, a blue arrow pointing right next to the CPU Usage value means that CPU utilization has not changed over the past week, a green arrow pointing down means that CPU utilization has decreased, while a red arrow pointing up means that CPU utilization has increased.

# VMware Datastores

The **VMware Datastores** dashboard is designed to provide at-a-glance view on resource usage and performance of datastores in the VMware vSphere environment. The dashboard helps you assess disk capacities and prevent potential performance bottlenecks.

The screenshot shows the Veeam ONE Reporter interface with the 'VMWARE DATASTORES' workspace selected. The dashboard is divided into six main sections:

- TOP DATASTORE UTILIZATION:** Lists datastores by capacity and free space. A table with columns: Name, Capacity (GB), Free Space (GB). Examples include HA & DRS Cluster/ Storage... (89 GB), HA & DRS Cluster/ esx23:st... (1858 GB), and Environment labs/ datastore1 (3716 GB).
- TOP GROWING GUEST DISKS:** Lists VMs by drive capacity and free space. A table with columns: VM Name, Drive, Capacity (GB), Free Space (GB). Examples include db001 (G:\ 0 GB), websrv03 (H:\ 0 GB), and db001 (I:\ 0 GB).
- TOP DATASTORE READ LATENCY:** Lists datastores by average read latency. A table with columns: Name, Read Latency (ms). Examples include Atlanta/ svr29\_store (22 ms) and Atlanta/ svr05\_store (13 ms).
- TOP DATASTORE IOPS:** Lists datastores by IOPS number. A table with columns: Name, VMs on Datastore, IOPS Number. Examples include OneClu01/ Srv29\_store (983 IOPS) and OneClu01/ svr16\_store (785 IOPS).
- TOP ACTIVE VMs WITH SNAPSHOTS:** Lists VMs with snapshots. A table with columns: VM Name, Snapshot Size (GB), Datastore Name. Examples include mssql2014 (251 GB) and win2012 (189 GB).
- TOP DATASTORE WRITE LATENCY:** Lists datastores by average write latency. A table with columns: Name, Write Latency (ms). Examples include Atlanta/ svr05\_store (9 ms) and Atlanta/ Store01 (0 ms).

## Widgets Included

- **Top Datastore Utilization**

This widget displays a list of datastores that will run out of free space sooner than other datastores.

A datastore is highlighted with red if the amount of free space is less than 50% of the capacity value.

Values in parentheses show free space values for the previous week.

Arrows on the right show how the amount of free space has changed over the previous week\*.

- **Top Growing Guest Disks**

This widget displays a list of VMs with the least amount of free guest disk space. For each VM in the list, the widget provides information on the logical disk volume and total capacity.

A disk is highlighted with red if the amount of free space is less than 50% of the capacity value.

Values in parentheses show free space values for the previous week.

Arrows on the right show how the amount of free space has changed over the previous week\*.

- **Top Datastore Read Latency**

This widget displays a list of datastores with the highest average *Read Latency* metric values.

Arrows on the right show how the average read latency value has changed over the previous week\*.

- **Top Datastore IOPS**

This widget displays a list of datastores with the highest number of IOPS. For each datastore in the list, the widget provides the total number of VMs residing on the datastore.

Arrows on the right show how the number of IOPS has changed over the previous week\*.

- **Top Active VMs with Snapshots**

This widget displays a list of VMs with the largest snapshots. For each VM in the list, the widget provides the name of the datastore where the VM snapshots are located.

A VM is highlighted with red if the total size of all VM snapshots is greater than 20% of the VM size.

- **Top Datastore Write Latency**

This widget displays a list of datastores with the highest *Write Latency* metric values.

Arrows on the right show how the average write latency value has changed over the previous week\*.

\*The arrows allow you to compare the results of this week to the results of the previous week, and to track how the trend has evolved. For example, a blue arrow pointing right next to the Write Latency value means that the average latency has not changed over the past week, a green arrow pointing down means that the average latency has decreased, while a red arrow pointing up means that the average latency has increased.

# VMware VMs

The **VMware VMs** dashboard provides information about health and performance of VMs in the VMware vSphere infrastructure, and shows general VM statistics on CPU, memory and network usage for the past week.

Veeam® ONE™ REPORTER Advanced monitoring, reporting and capacity planning

You logged in as: **srv11\administrator** | Sign out

DASHBOARDS WORKSPACE CONFIGURATION

VMWARE VMs (11/2-11/9)

Name	CPU Usage (%)	Change
srv11	59.63	↑
win01	23.92	↑
svr40	10.33	↑
vcenter01	8.06	↑
svr38	5.99	↑
svr04	5.86	↑
svr02	5.29	↑
backup01	5.27	↑
svr08	5.15	↑
backup03	4.98	↑

Name	Memory Usage (%)	Change
srv11	42.02	↑
win01	25.53	↑
vcenter01	24.34	↑
tapelibrary	20.17	↑
svr12	19.48	↑
svr15	17.12	↑
win04	15.42	↓
svr38	15.21	↓
svr13	14.43	↓
svr06	13.69	↑

Name	Network rate(KBps)	Change
srv11	257	↓
win01	217	↓
vcenter01	94	↑
svr08	26	↑
backup01	11	↑
backup02	10	↑
backup03	9	↑
svr12	4	↑
dcl01	3	↓
desktop02	3	↓

Name	Read Latency(ms)	Change
svr04	475	↑
svr01	104	↑
win02	5	↑
svr06	3	↑
svr08	2	↓
tech01	2	↑
svr02	2	↓
svr12	2	↑
winrep	1	↓
backup03	1	↑

Name	Write Latency (ms)	Change
svr04	1	↑
svr11	0	↓
svr01	0	↓
tech01	0	↓
svr07	0	↓
svr34	0	↑
tapelibrary	0	↓
win02	0	↑
svr02	0	↓
shell	0	↓

Name	Number	Change
svr11	146	↓
svr08	15	↑
vcenter01	13	↓
backup01	5	↑
svr36	5	↑
svr04	4	↑
winrep	4	↑
backup03	3	↑
win04	3	↑
db01	3	↓

## Widgets Included

- **Top VMs by CPU**

This widget displays a list of VMs with the highest average level of CPU utilization.

Arrows on the right show how the CPU usage value has changed over the previous week\*.

- **Top VMs by Memory**

This widget displays a list of VMs with the highest average level of memory utilization. The memory utilization value is calculated as a percentage of total memory allocated for the VM.

Arrows on the right show how the memory utilization value has changed over the previous week\*.

- **Top VMs by Network I/O**

This widget displays a list of VMs with the highest average network throughput values.

Arrows on the right show how the throughput value has changed over the previous week\*.

- **Top VMs by Read Latency**

This widget displays a list of VMs with the highest average *Read Latency* metric values.

Arrows on the right show how the average read latency value has changed over the previous week\*.

- **Top VMs by Write Latency**

This widget displays a list of VMs with the highest average *Write Latency* metric values.

Arrows on the right show how the average write latency value has changed over the previous week\*.

- **Top VMs by IOPS**

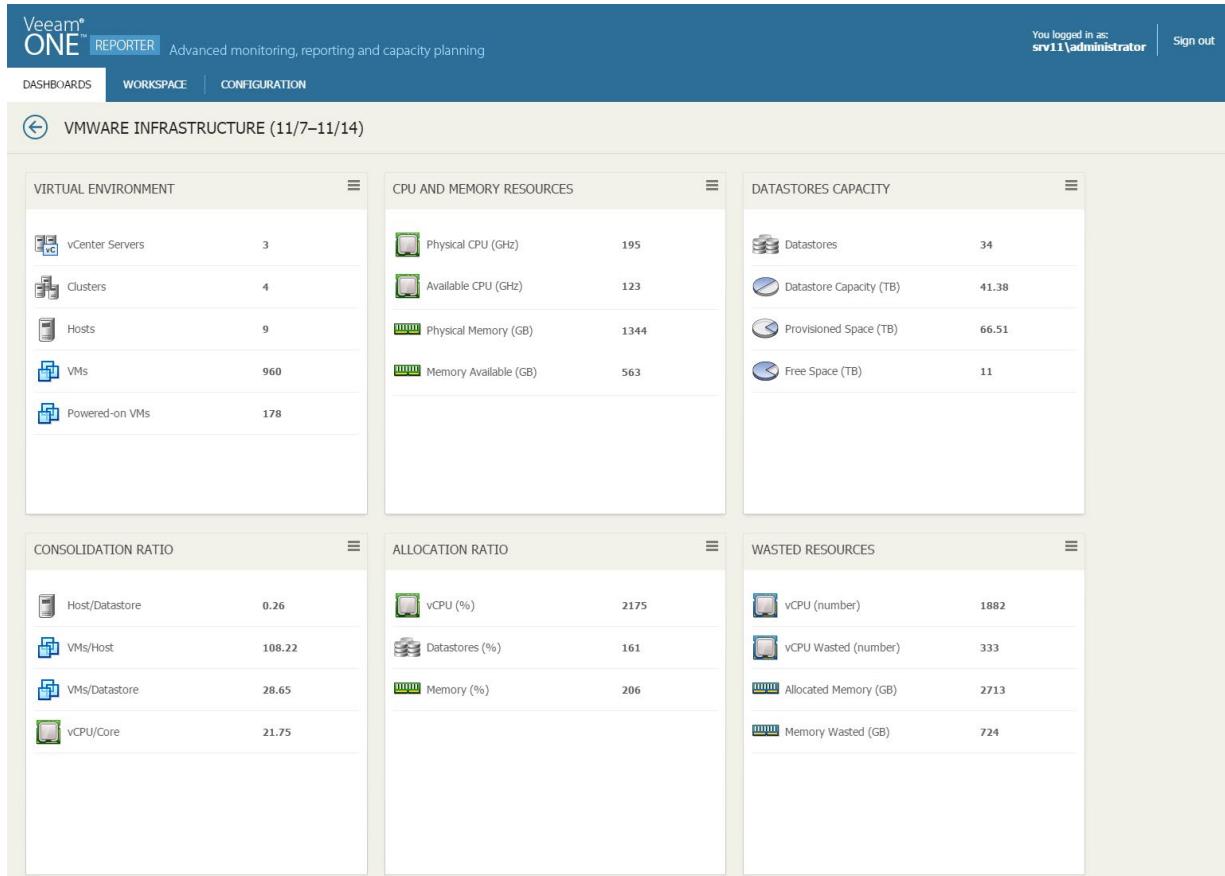
This widget displays a list of VMs with the highest average number of IOPS.

Arrows on the right show how the number of IOPS has changed over the previous week\*.

\*The arrows allow you to compare the results of this week to the results of the previous week, and to track how the trend has evolved. For example, a blue arrow pointing right next to the CPU Usage value means that CPU utilization has not changed over the past week, a green arrow pointing down means that CPU utilization has decreased, while a red arrow pointing up means that CPU utilization has increased.

# VMware Infrastructure

The **VMware Infrastructure** dashboard is designed to provide at-a-glance view of configuration of the VMware vSphere infrastructure and to help you assess the overall performance and resource usage efficiency.



## Widgets Included

- **Virtual Environment**

This widget shows the total number of vCenter servers, clusters, ESXi hosts and VMs in your environment, as well as the number of currently running VMs.

- **CPU and Memory Resources**

This widget assesses physical CPU and memory resources installed on ESXi hosts and shows the amount of available resources allocated to VMs.

- **Datastores Capacity**

This widget provides information on the number of datastores in your environment, their total capacity, the amount of provisioned and free space left on the datastores.

- **Consolidation Ratio**

The widget tracks the amount of virtual hardware placed on physical hardware:

- *Host/Datastore ratio* shows the average number of hosts connected to a single datastore.
- *VMs/Host ratio* shows the average number of VMs running on a single physical host.
- *VMs/Datastore ratio* shows the average number of VMs that store data on a single datastore.

- *vCPU/Core* ratio shows the average number of virtual processors operating on a single physical CPU core.
- **Allocation Ratio**  
The widget tracks the amount of physical resources allocated to VMs:
  - *vCPU* allocation ratio shows the amount of physical CPU resources allocated to VMs (in percentage).
  - *Datastores* allocation ratio shows the amount of datastore space allocated to VMs (in percentage).
  - *Memory* allocation ratio shows the amount of physical RAM allocated to VMs (in percentage).

- **Wasted Resources**

The widget tracks the amount of over-provisioned resources in your environment, based on data gathered by the [Oversized Virtual Machines](#) report:

- *vCPU* value shows the total number of provisioned vCPUs.
- *vCPU Wasted* value shows the total number of over-provisioned vCPUs. Use this value as a measure of compute resources that you can reclaim and allocate to other VMs.
- *Allocated Memory* value shows the total amount of provisioned virtual memory.
- *Memory Wasted* value shows the amount of over-provisioned virtual memory. Use this value as a measure of compute resources that you can reclaim and allocate to other VMs.

# VMware Capacity Planning

The **VMware Capacity Planning** dashboard helps you analyze performance of virtual infrastructure objects, forecast resource shortages, optimize resource provisioning and maintain high availability for VMware clusters.

The screenshot shows the Veeam ONE Reporter interface with the 'WORKSPACE' tab selected. The main title is 'VMWARE CAPACITY PLANNING (11/7-11/14)'. The dashboard is divided into six sections:

- HOSTS AND CLUSTERS**: Shows hosts and clusters with their names and days left until resource shortage. All values are 0.
- DATASTORES**: Shows datastores with their names and days left until shortage. Most values are 0, except for 'cluster store' which is infinity (indicated by a green infinity symbol).
- WHAT IF I LOSE 1 HOST IN A CLUSTER**: Simulates losing one host and shows how many days remain. 'HA & DRS Cluster' has 0 days left, while 'Demo Cluster' has 327 days left.
- AVAILABLE RESOURCES**: Shows available resources: CPU (134 GHz, 68%), Memory (551 GB, 41%), and Free Space (10.6 TB, 72%).
- HOW MANY MORE VMs CAN BE ADDED**: Shows how many more VMs can be added to each host. Values are 0 for all hosts except 'HA & DRS Cluster' which is 4.

## Widgets Included

To estimate future resource utilization and forecast resource shortages, the dashboard analyzes historical performance data for the previous 90 days and calculates the performance utilization trend.

- **Hosts and Clusters**

The widget forecasts how many days remain before hosts and clusters start experiencing resource shortages, given the performance utilization trend. The widget analyzes CPU, memory, storage space and storage I/O performance data.

The days left value is highlighted with red if the number of remaining days is less than 30. The infinity sign implies that a host or a cluster will not run out of CPU and memory resources in the foreseeable future.

- **Datastores**

The widget forecasts how many days remain before datastores will run out of free space, given the performance utilization trend.

The days left value is highlighted with red if the number of remaining days is less than 30. The infinity sign implies that a datastore will not run out of free space in the foreseeable future.

- **What if I Lose 1 Host in a Cluster**

A host may unexpectedly go down or enter a maintenance mode, which will increase workloads across failover hosts in a cluster. The widget simulates a failure of one host in a HA cluster and forecasts how many days remain before the cluster starts experiencing resource shortages.

The days left value is highlighted with red if the number of remaining days is less than 30. The infinity sign implies that a cluster will not run out of CPU and memory resources in the foreseeable future.

- **Available Resources**

The widget shows the amount of available CPU, memory and storage resources for the previous week.

The number in parentheses represents available resources as a percentage of total physical resources.

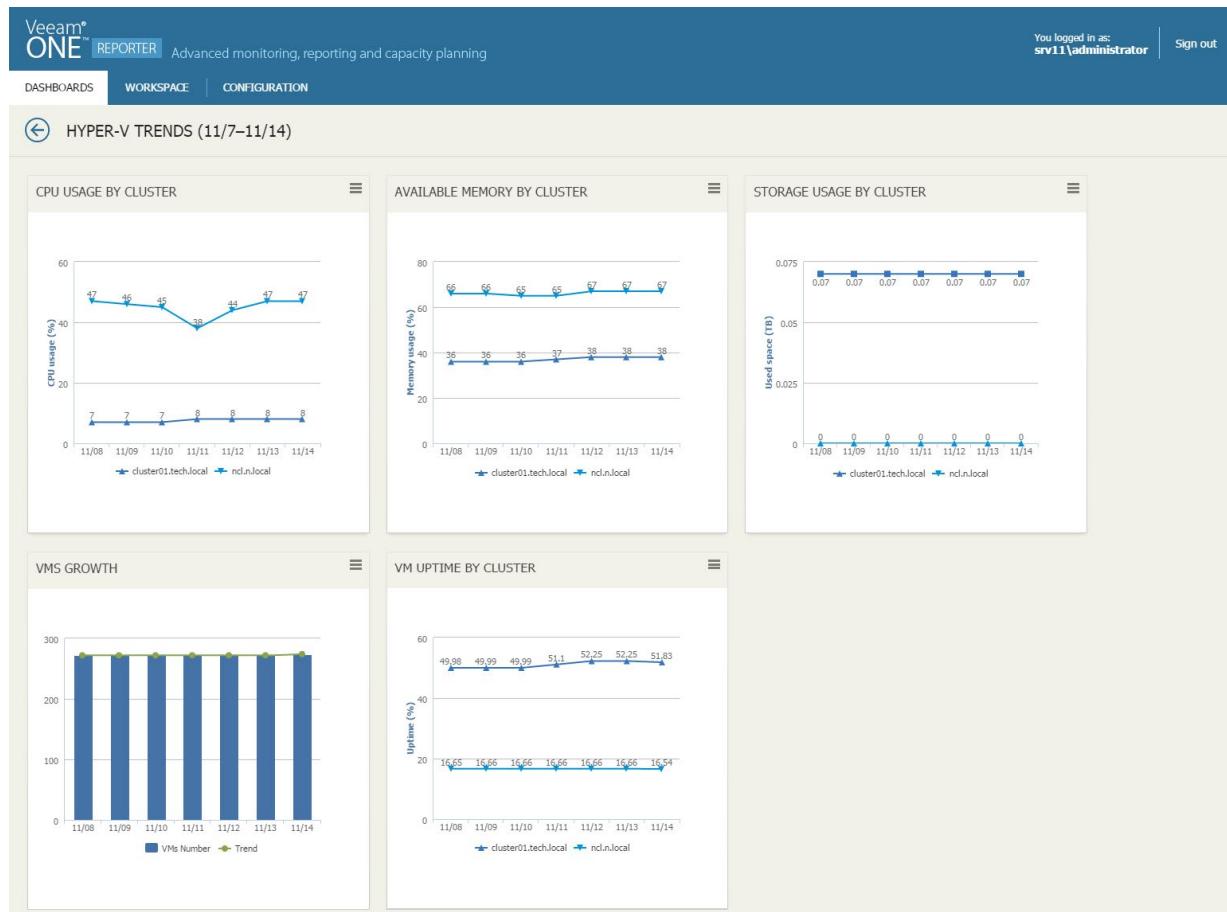
Arrows on the right show whether the amount of CPU, memory and free space has changed since the previous day. For example, a green arrow pointing up next to the *Free Space* value means that the available storage space has increased since yesterday, while a red arrow pointing down next to the *CPU* value means that the amount of available CPU resources has decreased since yesterday.

- **How Many More VMs Can Be Added**

The widget analyzes the current workload, assesses average VM configuration in your clusters and hosts, and calculates the number of additional VMs with the average configuration that your existing infrastructure can support without experiencing significant resource shortages.

# Hyper-V Trends

The **Hyper-V Trends** dashboard helps you track resource utilization in the Microsoft Hyper-V infrastructure by displaying growth trends for the previous week.



## Widgets Included

- **CPU Usage by Cluster**

This widget shows how CPU utilization in a cluster has been changing during the week.

- **Available Memory by Cluster**

This widget shows how memory utilization in a cluster has been changing during the week.

- **Storage Usage by Cluster**

This widget shows how storage utilization in a cluster has been changing during the week.

- **VMs Growth**

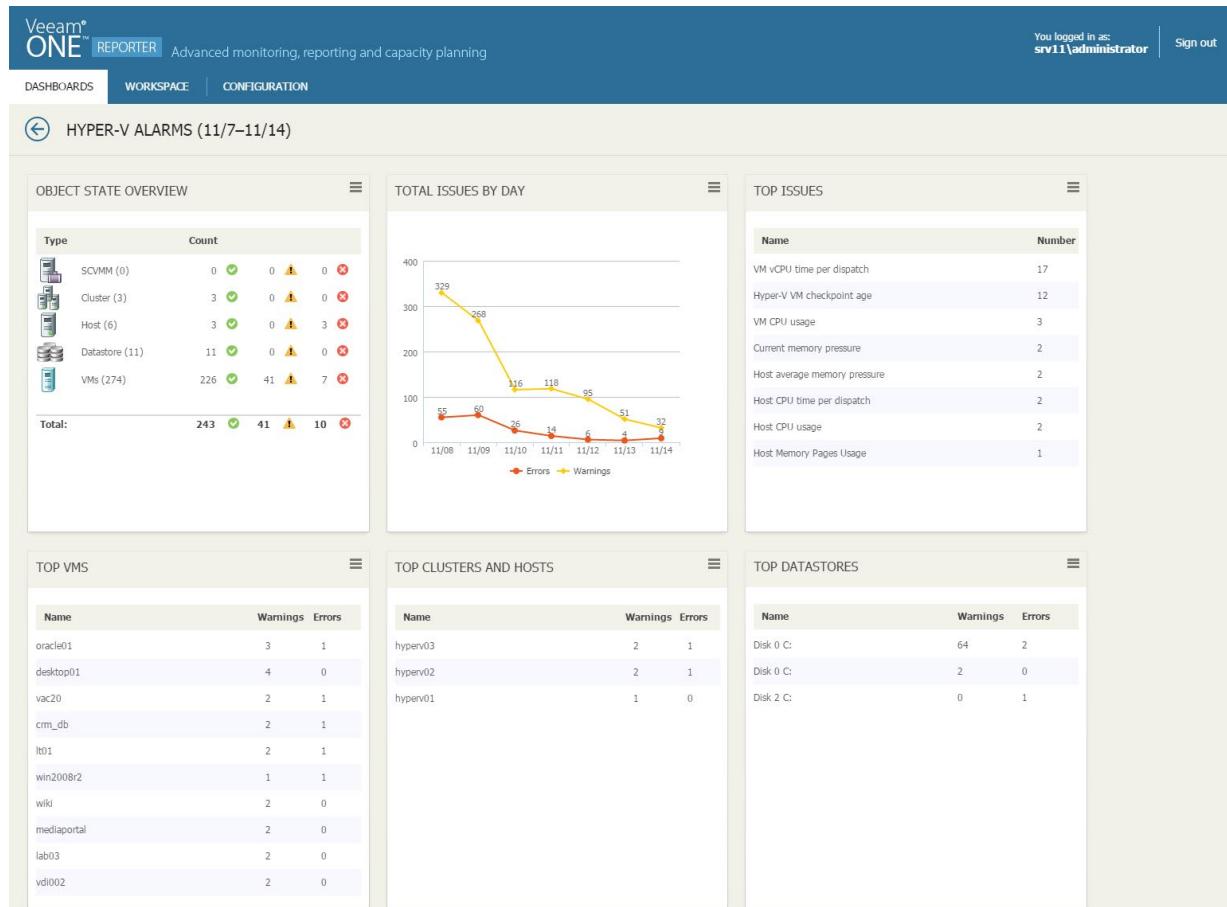
This widget shows how the number of VMs in your virtual infrastructure has been changing during the week.

- **VM Uptime by Cluster**

This widget shows how the average uptime value for VMs in a cluster has been changing during the week.

# Hyper-V Alarms

The **Hyper-V Alarms** dashboard provides an overview of alarms triggered for Microsoft Hyper-V infrastructure objects by Veeam ONE Monitor during the past week. The dashboard allows you to identify the most typical issues that occur in your environment and to simplify troubleshooting.



## Widgets Included

- **Object State Overview**

This widget shows the number of healthy objects, objects with warnings and objects with errors for each infrastructure component type.

- **Total Issues by Day**

This widget displays the daily number of warnings and errors that were triggered during the week.

- **Top Issues**

This widget provides a list of 10 most typical alarms in your environment and shows the number of times each alarm was triggered.

Values in parentheses show how the alarm repeat count has changed over the previous week\*.

- **Top VMs**

This widget provides a list of VMs with the highest number of registered errors and warnings.

Values in parentheses show how the number of alarms has changed over the previous week\*.

- **Top Clusters and Hosts**

This widget provides a list of virtual infrastructure objects (clusters and hosts) with the highest number of registered errors and warnings.

Values in parentheses show how the number of alarms has changed over the previous week\*.

- **Top Datastores**

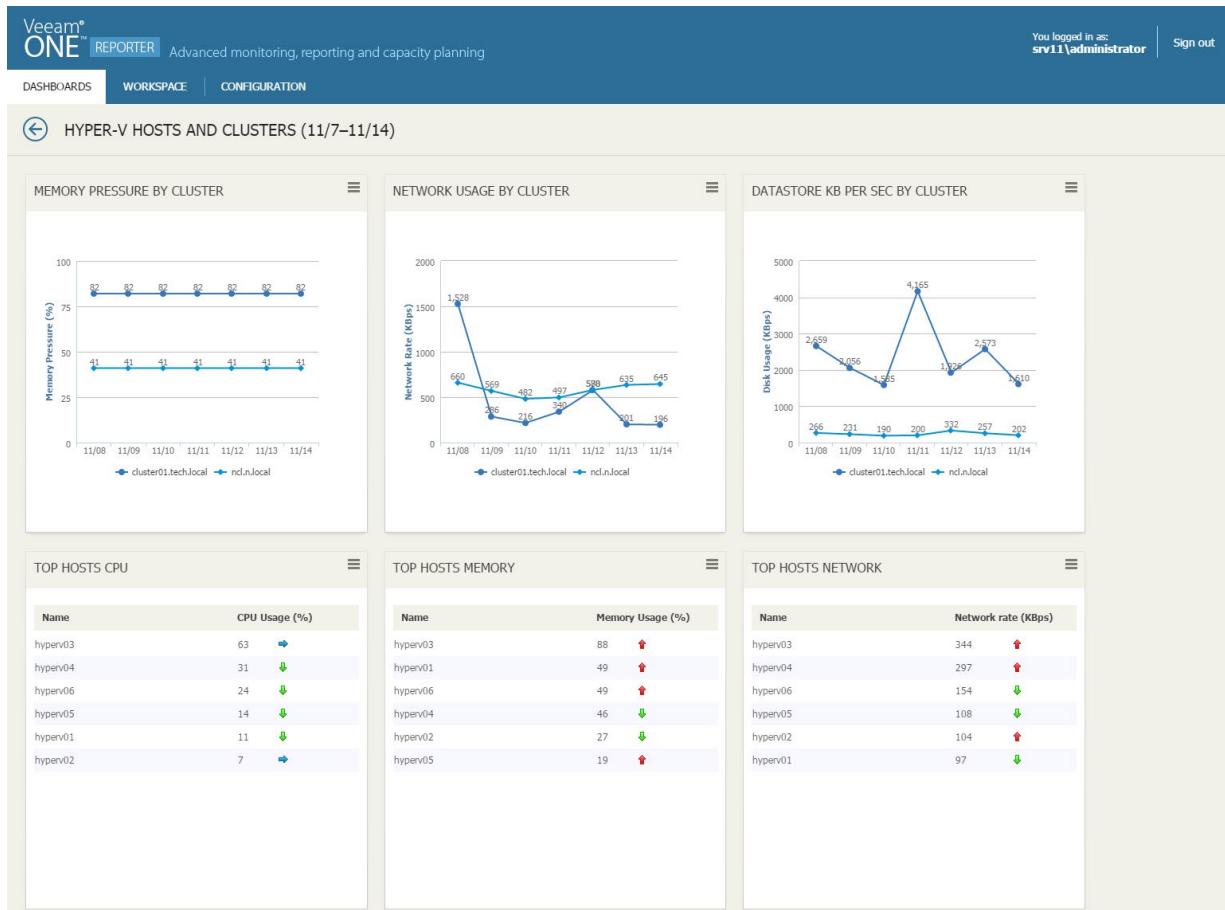
This widget provides a list of volumes with the highest number of registered errors and warnings.

Values in parentheses show how the number of alarms has changed over the previous week\*.

\*The value in parentheses stands for the amount by which the number of alarms has changed compared to the value of the previous week. For example, the 11 (+5) value means that the number of alarms has increased by 5 over the past week (while the previous value equaled 6), and the 11(-7) value means that the number of alarms has decreased by 7 (while the previous value equaled 18).

# Hyper-V Hosts and Clusters

The **Hyper-V Hosts and Clusters** dashboard helps you evaluate host and cluster performance in the Microsoft Hyper-V infrastructure. The dashboard displays statistics on CPU, memory, disk and network utilization, and helps you identify hosts and clusters with performance issues.



## Widgets Included

- **Memory Pressure by Cluster**

This widget shows how the average memory pressure for all VMs on all hosts in the cluster has been changing during the week.

- **Network Usage by Cluster**

This widget shows how the average rate at which bytes are transferred to and from the cluster disk during I/O operations has been changing during the week.

- **Datastore KB per Sec by Cluster**

This widget shows how the average rate at which data is read from and written to the cluster disk has been changing during the week.

- **Top Hosts CPU**

This widget displays weekly CPU utilization data for the top 10 most loaded hosts in your infrastructure.

Arrows on the right show whether the average CPU usage value has changed over the previous week\*.

- **Top Hosts Memory**

This widget displays a list of hosts with the highest level of memory consumption.

Arrows on the right show whether the average memory usage value has changed over the previous week\*.

- **Top Hosts Network**

This widget displays a list of hosts with the highest level of network usage.

Arrows on the right show whether the average network throughput value has changed over the previous week\*.

\*The arrows allow you to compare the results of this week to the results of the previous week, and to track how the trend has evolved. For example, a blue arrow pointing right next to the CPU Usage value means that CPU utilization has not changed over the past week, a green arrow pointing down means that CPU utilization has decreased, while a red arrow pointing up means that CPU utilization has increased.

# Hyper-V Datastores

The **Hyper-V Datastores** dashboard provides at-a-glance view on resource usage and performance of disks and Cluster Shared Volumes in the Microsoft Hyper-V environment. The dashboard helps you assess disk capacities and prevent potential performance bottlenecks.

The screenshot shows the Veeam ONE Reporter interface with the 'HYPER-V DATASTORES' workspace selected. The dashboard is divided into eight cards:

- TOP DATASTORE UTILIZATION**: Shows disk utilization by capacity and free space percentage. One entry (hyperv05/ Disk 0 C:) has a red warning icon.
- TOP CSVs BY DIRECT IOPS**: Shows Cluster Shared Volumes with the highest direct IOPS. One entry (cluster02.n.local/ C:\CSV\Volume1) has a red warning icon.
- TOP CSVs BY REDIRECT IOPS**: Shows Cluster Shared Volumes with the highest redirect IOPS. All entries have green status icons.
- TOP CSVs BY DIRECT KB PER SEC**: Shows Cluster Shared Volumes with the highest direct KB per second. One entry (cluster02.n.local/ C:\CSV\Volume1) has a red warning icon.
- TOP CSVs BY REDIRECT KB PER SEC**: Shows Cluster Shared Volumes with the highest redirect KB per second. All entries have green status icons.
- TOP CSVs BY TOTAL BYTES**: Shows Cluster Shared Volumes with the highest total bytes. One entry (C:\ClusterStorage\Volume1) has a red warning icon.
- TOP CSVs BY IOPS**: Shows Cluster Shared Volumes with the highest IOPS. One entry (C:\ClusterStorage\Volume1) has a red warning icon.
- TOP CSVs BY LATENCY**: Shows Cluster Shared Volumes with the highest latency. One entry (C:\ClusterStorage\Volume2) has a red warning icon.

## Widgets Included

- **Top Datastore Utilization**

This widget displays a list of disks that will run out of free space sooner than other disks.

A datastore is highlighted with red if the amount of free space is less than 5% of the capacity value.

Values in parentheses show free space values for the previous week.

- **Top CSVs Direct IOPS**

This widget displays a list of Cluster Shared Volumes with the highest number of I/O operations performed in the direct access mode.

Arrows on the right show how the number of IOPS has changed over the previous week\*.

- **Top CSVs Redirected IOPS**

This widget displays a list of Cluster Shared Volumes with the highest number of I/O operations performed in the redirected access mode.

Arrows on the right show how the number of IOPS has changed over the previous week\*.

- **Top CSVs Direct KB per Sec**

This widget displays a list of Cluster Shared Volumes with the highest rate at which bytes were transferred to/from the CSV during write/read operations in the direct access mode.

Arrows on the right show how the *Direct Bytes/sec* metric value has changed over the previous week\*.

- **Top CSVs Redirected KB per Sec**

This widget displays a list of Cluster Shared Volumes with the highest rate at which bytes were transferred to/from the CSV during write/read operations in the redirected access mode.

Arrows on the right show how the *Redirected Bytes/sec* metric value has changed over the previous week\*.

- **Top CSVs 2012 by Total Bytes\*\***

This widget displays a list of Cluster Shared Volumes with the highest rate at which data was read from and written to the volume in the direct and redirected access modes.

Arrows on the right show how the *Total Bytes/sec* metric value has changed over the previous week\*.

- **Top CSVs 2012 by IOPS\*\***

This widget displays a list of Cluster Shared Volumes with the highest rate at which reads and writes were performed directly on the volume.

Arrows on the right show how the *IOPS* metric value has changed over the previous week\*.

- **Top CSVs 2012 by Latency\*\***

This widget displays a list of Cluster Shared Volumes with the highest average latency for completing read and write requests on the volume.

Arrows on the right show how the *Latency* metric value has changed over the previous week\*.

\*The arrow allows you to compare the results of the current week to the results of the previous week, and to track how the trend has evolved. For example, a blue arrow pointing right next to the IOPS value means that the average number of IOPS has not changed over the past week, a green arrow pointing down means that the average number of IOPS has decreased, while a red arrow pointing up means that the average number of IOPS has increased.

\*\* CSVs 2012 widgets display counters collected for Cluster Shared Volumes 2012 and later.

# Hyper-V VMs

The **Hyper-V VMs** dashboard provides information about health and performance of VMs in the Microsoft Hyper-V infrastructure, and shows general VM statistics on CPU, memory and network usage for the past week.

The screenshot shows the Veeam ONE Reporter interface with the 'HYPER-V VMs (11/7-11/14)' workspace selected. The dashboard is divided into six sections:

- TOP VMS BY CPU**: Lists VMs ordered by CPU Usage (%). The top VMs are win7, vac, lt01, win7x86, sqlsrv14, srv31, desktop01, whale, pearl, and win2008r2. Each entry includes a red arrow indicating a decrease in CPU usage over the previous week.
- TOP VMS BY MEMORY**: Lists VMs ordered by Memory Usage (%). The top VMs are whale, starfish, sqlsrv14, win2008r2, wan001, oracle01, vdi002, crm\_db, sqlsrv03, and svr31. Each entry includes a blue arrow indicating an increase in memory usage over the previous week.
- TOP VMS BY NETWORK INPUT OUTPUT RATE**: Lists VMs ordered by Network rate (Kbps). The top VMs are wiki, mediaportal, lt11, win7, win2008r2, vdi001, vac20, win8, sqlsrv14, and fileserver01. Each entry includes a green arrow indicating a decrease in network throughput over the previous week.
- TOP VMS BY READ KB PER SEC**: Lists VMs ordered by Read (Mbps). The top VMs are lt01, fileserver04, fileserver03, desktop01, sqlsrv03, server03, svr31, om2012r2, ms2012r2, and win2008r2. Each entry includes a red arrow indicating an increase in average read latency over the previous week.
- TOP VMS BY WRITE KB PER SEC**: Lists VMs ordered by Write (Mbps). The top VMs are lt01, om2012r2, vac, svr31, fileserver04, sr32, fileserver03, sqlsrv14, desktop01, and svr05. Each entry includes a green arrow indicating a decrease in average write latency over the previous week.
- TOP VMS BY IOPS**: Lists VMs ordered by Number. The top VMs are lt01, om2012r2, fileserver04, vac, svr32, svr31, whale, fileserver03, sqlsrv14, desktop01, and wiki. Each entry includes a blue arrow indicating an increase in average IOPS over the previous week.

## Widgets Included

- **Top VMs CPU**

This widget displays a list of VMs with the highest average level of CPU utilization.

Arrows on the right show whether the CPU usage value has changed over the previous week\*.

- **Top VMs Memory**

This widget displays a list of VMs with the highest average level of memory utilization. The memory utilization value is calculated as a percentage of total memory allocated for the VM.

Arrows on the right show whether the memory utilization value has changed over the previous week\*.

- **Top VMs Network Input Output Rate**

This widget displays a list of VMs with the highest average *Network Input Output Rate* values.

Arrows on the right show whether the throughput value has changed over the previous week\*.

- **Top VMs Read KB per Sec**

This widget displays a list of VMs with the highest average *Read* metric values.

Arrows on the right show whether the average read latency value has changed over the previous week\*.

- **Top VMs Write KB per Sec**

This widget displays a list of VMs with the highest average *Write* metric values.

Arrows on the right show whether the average write latency value has changed over the previous week\*.

- **Top VMs by IOPs**

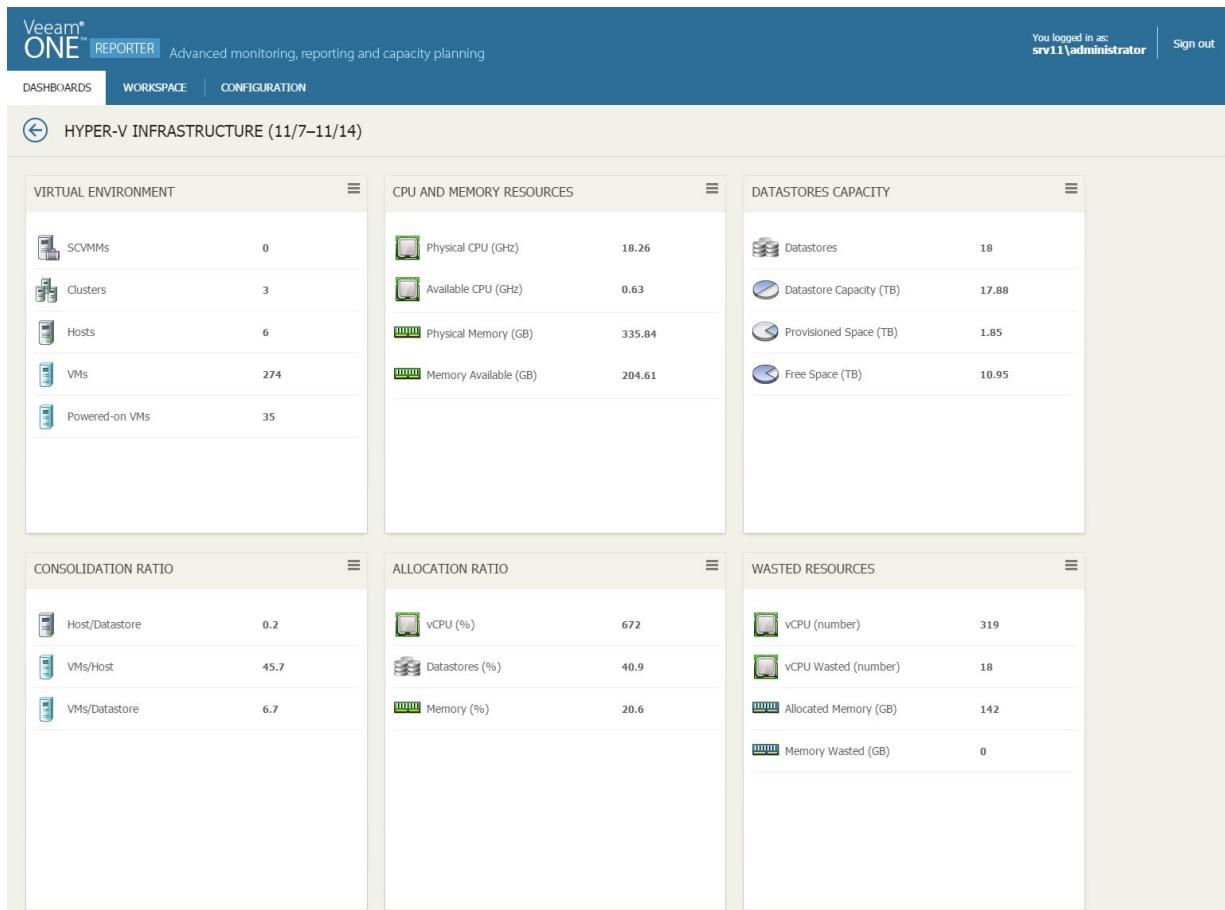
This widget displays a list of VMs with the highest average number of IOPS.

Arrows on the right show whether the number of IOPS has changed over the previous week\*.

\*The arrows allow you to compare the results of this week to the results of the previous week, and to track how the trend has evolved. For example, a blue arrow pointing right next to the CPU Usage value means that CPU utilization has not changed over the past week, a green arrow pointing down means that CPU utilization has decreased, while a red arrow pointing up means that CPU utilization has increased.

# Hyper-V Infrastructure

The **Hyper-V Infrastructure** dashboard provides at-a-glance view of configuration of the Microsoft Hyper-V infrastructure and helps you assess the overall performance and resource usage efficiency.



## Widgets Included

- **Virtual Environment**

This widget shows the total number of SCVMM servers, clusters, Hyper-V hosts and VMs in your environment, as well as the number of currently running VMs.

- **CPU and Memory Resources**

This widget assesses physical compute resources deployed across Hyper-V hosts and shows the amount of available resources.

- **Datastores Capacity**

This widget provides information on the number of volumes in the virtual environment, their total capacity, the amount of provisioned and free space left.

- **Consolidation Ratio**

The widget tracks the amount of virtual hardware placed on physical hardware:

- *Host/Datastore* ratio shows the average number of hosts connected to a single volume.
- *VMs/Host* ratio shows the average number of VMs running on a single physical host.

- *VMs/Datastore* ratio shows the average number of VMs that store data on a single volume.
- **Allocation Ratio**  
The widget tracks the amount of resources allocated to VMs (allocated resources against physical resources, in percent):
  - *vCPU* allocation ration shows the amount of CPU resources allocated to VMs.
  - *Datastores* allocation ratio shows the amount of volume space allocated to VMs.
  - *Memory* allocation ratio shows the amount of RAM allocated to VMs.

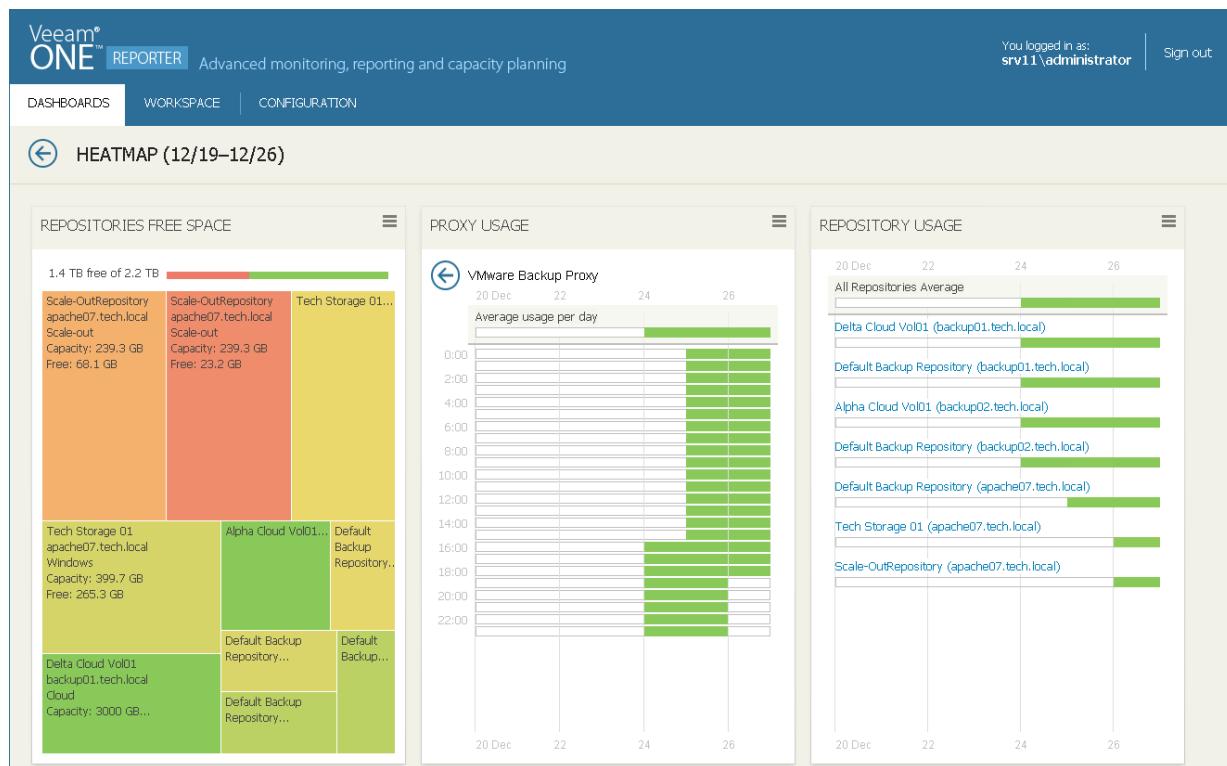
- **Wasted Resources**

The widget tracks the amount of available and wasted resources:

- *vCPU value* shows the number of vCPUs configured for VMs.
- *vCPU Wasted* value shows the number of vCPUs that can be reclaimed from oversized VMs.
- *Allocated Memory* shows the amount of memory allocated to VMs.
- *Memory Wasted* value shows the amount of memory that can be reclaimed from oversized VMs.

# Heatmap

The **Heatmap** dashboard visually represents key resource utilization in your backup infrastructure. The dashboard allows real-time monitoring of free space on repositories as well as repository and proxy usage.



## Widgets Included

- **Repository Free Space**

This widget shows the amount of total and free disk space on each of your backup repositories in a form of a treemap.

Each section of the treemap contains information about a single repository. To see detailed information, hover the pointer over a section. Color of a section is determined by the amount of free space relative to the total space: green color means repository disk space is mostly free while red color means repository disk space is mostly used.

Click on a section associated with a scale-out repository to see detailed information about its extents.

- **Proxy Usage**

This widget shows concurrent tasks that backup proxy servers processed during the week.

Each row of the diagram contains information about a single proxy server.

To see details on hourly proxy server usage, click on a row. In the section dedicated to a specific proxy server, each cell represents server activity during 1-hour time periods.

To open the section with detailed information about proxy server settings and activity during specific hour, click on the cell. This section includes the following elements:

- **Backup server** – host name of the backup server.
- **CPU count** – number of CPU cores.

- **Task capacity** – number of maximum concurrent tasks.
- **Tasks taken** – configured number of concurrent tasks processed.
- **CPU usage** – CPU resources consumed, in percent.
- **Memory usage** – memory resources consumed, in percent.
- **Related jobs** – list of the concurrent jobs.

Color of a cell is determined by number of processed concurrent tasks relative to maximum number of concurrent tasks: green color means none or few concurrent tasks were processed while red color means number of concurrent tasks is close to or reaches maximum.

- **Repository Usage**

This widget shows concurrent tasks that backup repositories processed during the week.

Each row of the diagram contains information about a single repository.

To see details on hourly repository usage, click on a row. In the section dedicated to a specific repository, each cell represents server activity during 1-hour time periods.

To open the section with detailed information about repository settings and activity during specific hour, click on the cell. This section includes the following elements:

- **Repository type** – type of the repository.
- **Backup server** – host name of the backup server.
- **Task capacity** – configured number of maximum concurrent tasks.
- **Tasks taken** – number of concurrent tasks processed.
- **Disk Bytes/sec** – operation speed of the repository disk.
- **Related jobs** – list of the concurrent jobs.

Color of the section is determined by the number of processed concurrent tasks relative to the maximum number of concurrent tasks: green color means none or few concurrent tasks were processed while red color means the number of concurrent tasks is close to or reaches maximum.

# Predefined Veeam ONE Reports

Veeam ONE Reporter includes a set of predefined reports grouped in the following report packs:

- [Nutanix AHV Protection](#)
- [Infrastructure Chargeback](#)
- [Veeam Cloud Connect](#)
- [Veeam Backup Assessment](#)
- [Veeam Backup Billing](#)
- [Veeam Backup Capacity Planning](#)
- [Veeam Backup Monitoring](#)
- [Veeam Backup Overview](#)
- [Veeam Backup Tape Reports](#)
- [Veeam Backup Agents](#)
- [Public Cloud Data Protection](#)
- [VMware Infrastructure Assessment](#)
- [VMware Overview](#)
- [VMware Monitoring](#)
- [VMware Optimization](#)
- [VMware Capacity Planning](#)
- [VMware Configuration Tracking](#)
- [Hyper-V Infrastructure Assessment](#)
- [Hyper-V Overview](#)
- [Hyper-V Monitoring](#)
- [Hyper-V Optimization](#)
- [Hyper-V Capacity Planning](#)
- [Custom Reports](#)
- [vCloud Director](#)
- [Offline Reports](#)

# Nutanix AHV Protection

This report pack helps you evaluate backup protection of Nutanix AHV VMs.

**Number of reports:** 1

**Current version:** 1

**Reports included:**

- [Protected VMs](#)

## Protected VMs

This report analyzes backup protection of Nutanix AHV VMs in your backup environment.

A VM is considered to be *Protected* if there is at least one valid backup restore point that meets the designated RPO for it. A VM is considered to be *Unprotected* if it has an outdated or missing backup restore points.

The **Summary** section includes the following elements:

- The **Protected VMs** chart shows the number of protected and unprotected VMs.
- The **Last Backup State** chart shows status of the latest job session for discovered/protected VMs.
- The **Unprotection Reason** chart shows reasons for non-compliance with the specified RPO requirements.

The **Details** section provides information on all protected and unprotected VMs including name of a Nutanix AHV cluster, protection domain to which the VM is added, job name, backup target, number of available restore points and date and time of the latest backup.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **RPO (Recovery Point Objective):** defines the maximum amount of data that you may accept to lose, expressed in time. RPO defines the age of the latest backup files required to resume normal operation if system failure occurs. For example, to compile a list of VMs protected on a daily basis, you need to set the RPO value to 1 day.
- **Exclusion mask:** defines a list of VMs that should be excluded from the report scope. You can enter VM names explicitly or create a wildcard mask by using the asterisk (\*) to replace any number of characters. Multiple entries are separated by semicolon. Usage example: the following string will exclude machines with the \_R&D suffix from appearing in the report: "\*\_R&D".

- **Backup Jobs:** defines a list of backup jobs to evaluate in the report.

## VEEAM

### Protected VMs

#### Description

This report lists protected and unprotected Nutanix AHV VMs including their latest backup status.

#### Report Parameters

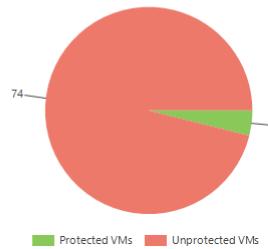
Scope:	Backup Infrastructure
RPO period:	1 month (12/25/2019 - 01/25/2020)
Exclusion mask:	
Backup Jobs:	All jobs

#### Summary

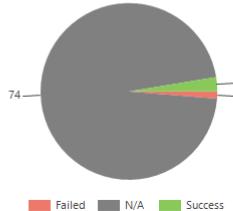
##### VMs Overview

Total VMs:	77
Backed Up VMs:	3
Protected VMs:	3
Unprotected VMs:	74

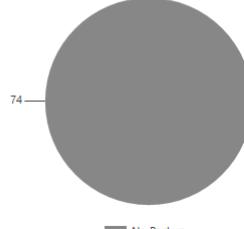
##### Protected VMs



##### Last Backup State



##### Unprotection Reason



#### Details

##### Protected VMs

###### Backup Server: nz2019vbrv10v2.n.local

VM Name	Cluster Name	Protection Domain	Job Name	Backup Target	Available Restore Points	Last Backup Date
SQL_main	172.17.44.52	NZDomain	SQL_main Job	Default Backup Repository	2	1/20/2020 6:20:14 AM
winserver01	172.17.44.52	NZDomain	Daily backup	Default Backup Repository	2	1/20/2020 6:20:08 AM
winserver02	172.17.44.52	NZDomain	Weekly backup	Default Backup Repository	2	1/20/2020 6:20:14 AM

##### Unprotected VMs

###### Backup Server: winsrv02.tech.local

VM Name	Cluster Name	Protection Domain	Job Name	Backup Target	Available Restore Points	Last Backup Date
<i>Last Backup: No backup</i>						
atsvetkov_ahvProxy_11_10	172.24.16.223	VeeamBackupProtection			-	-
BEV-VAN-v1-820	172.24.16.223	niko-pd-1			-	-
khilproxy	172.24.16.223	VeeamBackupProtection			-	-
luke-oct16spb	172.24.16.223	VeeamBackupProtection			-	-
niko-van-10.0.0.618	172.24.16.223	VeeamBackupProtection			-	-

## Use Case

When you set up your backup and backup copy jobs based on protection domains or employ complex exclusion parameters in job properties, some VMs may turn out to be excluded from the protection domains and therefore will lack proper protection.

This report displays a list of VMs protected by up-to-date backups, as well as a list of unprotected VMs which have outdated or missing backup. This information helps you validate the state of backup protection in your organization.

# Infrastructure Chargeback

This report pack allows you to understand costs for virtual infrastructure users and do chargeback by analyzing VMs configuration and resource usage, including CPU, memory and storage.

**Number of reports:** 4

**Current version:** 1

**Reports included:**

- [Host Configuration Chargeback](#)
- [Host Resource Usage Chargeback](#)
- [VM Configuration Chargeback](#)
- [VM Performance Chargeback](#)

## Host Configuration Chargeback

This report helps to make infrastructure costs audit and identify the most and least expensive VMs based on the hardware price and VM configuration.

The report analyzes hardware CPU, memory, storage capacities and their cost to calculate the cost of resources allocated to VMs. The cost of resources allocated to a VM is calculated based on VM configuration: the amount of vCPU, vRAM and storage resources provisioned to a VM.

The **Summary** section includes the following elements:

- Number of hosts, datastores and VMs, average costs of physical and virtual resources (processor core, virtual CPU, memory GB, storage TB), and total hardware cost.
- The **Cost Distribution** chart shows the cost of hardware CPU, memory and storage resources.
- The **VM Power Status** chart shows the number of running and powered-off VMs.

The **Details** tables provide information on physical CPU, memory and storage capacities, amount of provisioned vCPU, vRAM and storage resources, and the cost of these resources. If you choose to calculate VM cost in the report parameters, the report also provides analysis of VM configuration cost in terms of vCPU, vRAM, storage and the total VM cost.

## Report Parameters

You can specify the following report parameters:

- **Currency:** defines a payment currency.
- **Hosts:** defines the list of hosts to analyze in the report.
- **Calculate based on the total hosts cost:** defines the total cost of CPU and memory hardware resources for all hosts included in the report, in the selected currency.

If you do not select the **Calculate based on the total hosts cost** check box, you must specify the hardware cost of each host separately. To do this, in the **Actions** pane on the right click **Hosts**. In the **Set hardware costs** window, specify the hardware cost for each separate host in the selected currency.

- **CPU:** defines the percentage of cost, or cost share of CPU hardware resources for all hosts included in the report. For example, if the cost of CPU hardware resources make a quarter of the total cost, specify **25** as the parameter value.
- **RAM:** defines the percentage of cost, or cost share of memory hardware resources for all hosts included in the report. For example, if the cost of memory hardware resources make three quarters of the total cost, specify **75** as the parameter value.

**NOTE:**

The sum of CPU and RAM percentage values must be equal to 100.

- **Include datastores cost:** defines whether the report must include datastores cost details.
- **Calculate based on the total datastore cost:** defines the total cost of storage resources in the selected currency.

If you do not select the **Calculate based on the total datastore cost** check box, you must specify the cost of each datastore separately. To do this, in the **Actions** pane on the right click **Datastores**. In the **Set hardware costs** window, specify the cost of each separate datastore in the selected currency.
- **Count powered-off VMs:** defines whether powered-off VMs must be analyzed in the report.
- **Calculate VMs costs:** defines whether the report must include VM cost details.

If this option is enabled, the report will include the **Top 10 Most Expensive VMs** section and a table that details VMs cost based on VM configuration.

**NOTE:**

Building the report may take some time if the chosen reporting period is significant, or if you choose to calculate VM cost for a large virtual infrastructure.

## Host Configuration Chargeback

### Description

This report helps to make infrastructure costs audit and identify the most and least expensive VMs based on the hardware price and current VMs configuration.

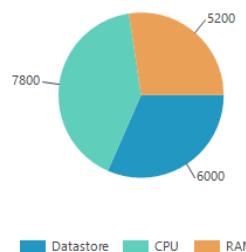
### Report Parameters

Hosts:	9 Hosts
Datastores:	51 Datastores
Hosts cost:	13000.00 USD
Host expenses distribution:	CPU: 60% RAM: 40%
Datastores cost:	6000.00 USD
Count powered-off VMs:	True
Calculate VMs costs:	True

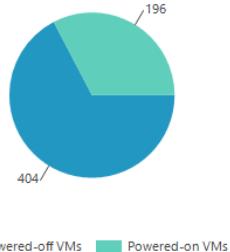
### Summary

Hosts:	9	Processor core avg. cost:	78.24	Virtual CPU avg. cost:	5.32
Datastores:	51	Physical memory, GB avg. cost:	4.35	Virtual Memory, GB avg. cost:	0.18
Virtual Machines:	615	Datastore, TB avg. cost:	60.61	Virtual Storage, TB avg. cost:	68.81
Average VM cost:	30.89				
Total hardware cost, USD:	19,000.00				

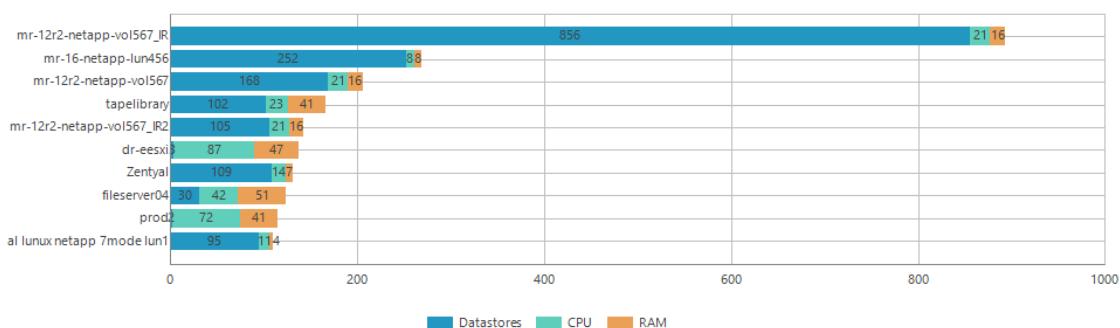
Cost Distribution



VM Power Status



Top 10 Most Expensive VMs



## Details

### VMware

#### CPU

Cluster	Host	CPUs Cost, USD	VMs	Physical Processors		Virtual Processors	
				# of Cores	Core Cost, USD	# of vCPUs	vCPU Cost, USD
Cluster1		1,733.33	269	20.00	86.67	592.00	2.93
	qa-srv14.amust.local	866.67	196	12.00	72.22	430.00	2.02
	qa-srv24.dev.amust.local	866.67	73	8.00	108.33	162.00	5.35
Cluster2		1,733.33	132	24.00	72.22	481.00	3.60
	qa-srv41.dev.amust.local	866.67	60	12.00	72.22	238.00	3.64
	qa-srv56.dev.amust.local	866.67	72	12.00	72.22	243.00	3.57
Standalone hosts		2,600.00	150	36.00	72.22	303.00	8.58
	esx01.tech.local	866.67	35	8.00	108.33	75.00	11.56
	esx02.tech.local	866.67	92	12.00	72.22	188.00	4.61
	esx03.tech.local	866.67	23	16.00	54.17	40.00	21.67

#### Memory

Cluster	Host	Memory Cost, USD	VMs	Physical Memory		Virtual Memory	
				Capacity, GB	GB Cost, USD	# of vRAM, GB	GB Cost, USD
Cluster1		1,155.56	269	447.91	2.58	901.55	1.28
	qa-srv14.amust.local	577.78	196	255.97	2.26	608.98	0.95
	qa-srv24.dev.amust.local	577.78	73	191.94	3.01	292.57	1.97
Cluster2		1,155.56	132	255.94	4.52	609.06	1.90
	qa-srv41.dev.amust.local	577.78	60	127.97	4.52	293.56	1.97
	qa-srv56.dev.amust.local	577.78	72	127.97	4.52	315.50	1.83
Standalone hosts		1,733.33	150	447.80	3.87	623.80	2.78
	esx01.tech.local	577.78	35	63.94	9.04	119.30	4.84
	esx02.tech.local	577.78	92	255.97	2.26	434.50	1.33
	esx03.tech.local	577.78	23	127.89	4.52	70.00	8.25

#### Datastores

Datastore Owner	Datastore Name	Datastore Cost, USD	VMs	Physical Storage		Virtual Storage	
				Capacity, TB	TB Cost, USD	Provisioned, TB	vTB Cost, USD
Cluster1		2,117.65	88	2.88	735.70	2.72	777.22
	ai_netapp(21.103)_lun_source_vol1	117.65	1	0.00	25,362.23	0.00	24,669.31
	dr_SAN_app_120	117.65	4	0.12	1,006.02	0.08	1,385.19
	dr_SAN_app_80	117.65	3	0.08	1,510.60	0.03	3,897.17
	HPE SV vol1	117.65	13	0.54	219.14	1.01	116.87
	HPE SV/vol2	117.65	11	0.39	301.36	0.69	169.71
Datastore: elal.dev.amust.local		netapp lun aqavrilov	117.65	1	0.01	13,768.07	0.01
							23,168.20

EvCenter Server: [elal.dev.amust.local](#)

Host	Virtual Machine	Power Status	vCPUs		RAM		Datastore		Total Price, USD
			Count	Cost, USD	Quantity, GB	Cost, USD	Quantity, GB	Cost, USD	
Cluster: Cluster1	269		592	1,735.30	901.55	1,154.88	26,385.84	3,266.24	6,156.42
Cluster: qa-srv14.amust.local	196		430	868.60	608.99	578.54	19,355.34	1,634.92	3,082.06
	mr-16-netapp-lun456	On	4	8.08	8.00	7.60	111.00	252.46	268.14
	al-centos-ontap95rc1-vol3	Off	2	4.04	2.00	1.90	11.00	98.26	104.20
	al-centos-ontap95rc1-vol4	Off	2	4.04	2.00	1.90	11.00	98.20	104.14
	knv-centos	Off	4	8.08	4.00	3.80	16.00	90.82	102.70
	al-centos-ontap95rc1-lun12	Off	2	4.04	2.00	1.90	11.00	92.16	98.10
	al linux netapp 7mode vol2	Off	2	4.04	2.00	1.90	85.00	87.28	93.22
	al-centos-ontap95rc1-lun2	Off	2	4.04	2.00	1.90	11.00	85.62	91.56
	SA2_VM2_Win7x64	Off	4	8.08	2.00	1.90	32.00	78.19	88.17

## Use Case

IT departments can use the report as a showback instrument to raise awareness within organization and demonstrate costs associated with provisioning VMs. The report helps calculate a budget share of allocated virtual infrastructure resources for each application owner, department or business unit within an organization, justify IT budget and assess the amount of future funding requests.

In combination with Veeam ONE optimization reports, this report can be used to encourage application owners to right size their VMs, prevent VM proliferation and reclaim wasted resources.

Service providers that do not have flat fees on virtual infrastructure resources can use this report as a chargeback instrument to calculate the cost of virtual infrastructure resources allocated to their clients.

## Notes

When analyzing report data, note the following:

- For VMs with thin-provisioned or dynamic disks, the report takes into account the amount of provisioned disk space, not actually used disk space.
- For VMs with dynamic memory, the report takes into account the amount of allocated memory.

## Host Resource Usage Chargeback

This report helps to make infrastructure costs audit and identify the most and least expensive VMs based on the hardware price and VM performance.

The report analyzes hardware CPU, memory, storage capacities and total cost of these resources to calculate the cost of resources consumed by VMs. The cost of consumed resources is calculated based on average CPU, memory and storage usage for a specified period.

The **Summary** section includes the following elements:

- Details on the number of hosts, datastores and VMs, average cost of physical resources (processor GHz, memory GB, storage TB), average VM cost and total hardware cost.
- The **Cost Distribution** chart shows the cost of hardware CPU, memory and storage resources.
- The **Top 5 Hosts with Expensive CPU/Memory Resources** tables show 5 most expensive hosts in terms of consumed CPU and memory resources.
- The **Top 5 Datastores with Expensive Resources** table shows 5 most expensive datastores in terms of consumed storage resources.
- The **Top 10 Most Expensive VMs** section shows 10 most expensive VMs in terms of consumed resources, and provides cost of average CPU, memory and storage resources used by each VM.

The **Details** tables provide information on physical CPU, memory and storage capacities, cost of physical and virtual resources. If you choose to calculate per-VM cost in the report parameters, the report also provides detailed analysis of VM cost based on the average usage of CPU, RAM and storage resources within the reporting period.

## Report Parameters

You can specify the following report parameters:

- **Currency:** defines a payment currency.
- **Hosts:** defines the list of hosts to analyze in the report.

- **Calculate based on the total hosts cost:** defines the total cost of CPU and memory hardware resources for all hosts included in the report, in the selected currency. If you do not select the **Calculate based on the total hosts cost** check box, you must specify the hardware cost of each host separately. To do this, in the **Actions** pane on the right click **Hosts**. In the **Set hardware costs** window, specify the cost of hardware for each separate host in the selected currency.
- **CPU:** defines the percentage of cost, or cost share of CPU hardware resources for all hosts included in the report. For example, if the cost of CPU hardware resources make a quarter of the total cost, specify **25**.
- **RAM:** defines the percentage of cost, or cost share of memory hardware resources for all hosts included in the report. For example, if the cost of memory hardware resources make three quarters of the total cost, specify **75**.

**NOTE:**

The sum of CPU and RAM percentage values must be equal to 100.

- **Include datastores cost:** defines whether the report must include datastores cost details.
- **Calculate based on the total datastore cost:** defines the total cost of storage resources in the selected currency. If you do not select the **Calculate based on the total hosts cost** check box, you must specify the cost of each datastore separately. To do this, in the **Actions** pane on the right click **Datastores**. In the **Set hardware costs** window, specify the cost of each separate datastore in the selected currency.
- **Interval/Start Date - End Date** defines a period in the past for which historical performance data must be analyzed in the report. For example, if you specify the previous week as the reporting period, the report will calculate the VM cost based on the average VM CPU, memory and storage utilization values for the previous week.  
Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Business hours from - to:** defines time of a day for which historical performance data must be used to calculate the VM cost. Data outside this interval will be excluded from the baseline used for data analysis.

- **Calculate VMs costs:** defines whether the report must include VM cost details.  
If this option is disabled, the report will not display the most expensive VMs, and will not provide VM cost in terms of utilized CPU, RAM and storage resources

## Host Resource Usage Chargeback

### Description

This report helps to make a VM audit and identify the most and least expensive VMs based on the current configuration.

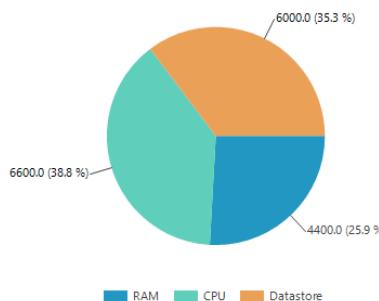
### Report Parameters

Hosts:	vcenter01.tech.local
Hosts cost:	11000.00 USD
Host expenses distribution:	CPU: 60% / RAM: 40%
Datastores cost:	6000.00 USD
Interval:	2 Month (11/11/2019 - 1/10/2020)
Calculate VMs costs:	True

### Summary

Hosts:	3	CPU, GHz average cost:	89.24 USD
VMs:	153	RAM, GB average cost:	13.38 USD
Datastores:	8	Datastore, TB average cost:	2868.20 USD
Average VM price:	47.76 USD		
Total hardware cost:	17,000.00 USD		

#### Cost Distribution



#### Top 5 Hosts with Expensive CPU Resources

Host Name	CPU GHz Cost, USD	Average VM Price, USD
esx01.tech.local	114.87	101.85
esx02.tech.local	87.34	37.80
esx03.tech.local	65.51	146.67

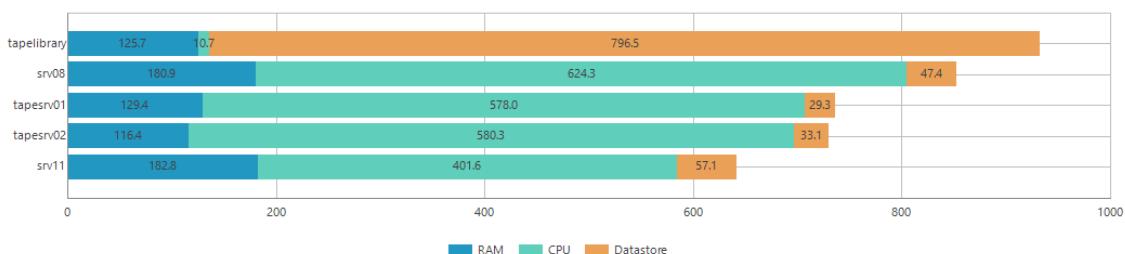
#### Top 5 Hosts with Expensive Memory Resources

Host Name	GB RAM Cost, USD	Average VM Price, USD
esx01.tech.local	22.94	101.85
esx03.tech.local	11.47	146.67
esx02.tech.local	5.73	37.80

#### Top 5 Datastores with Expensive Resources

Datastore Name	Store TB Cost, USD	Average VM Price, USD
vmfs_lez	12853.56	134.74
nfs_lez	6418.39	146.70
esx01-ds-hpvs	1536.77	44.51
esx01-das2	625.03	179.34
esx01-das3	625.03	21.98

#### Top 10 Most Expensive VMs



## Details (VMware)

### CPU

#### vCenter Server: vcenter01.tech.local

Host	VMs	CPU Cost, USD	# of Cores	Clock Speed, GHz	CPU Capacity, GHz	Cost per GHz, USD
Cluster: Standalone hosts	158	6600.01	36	2.39	77.92	267.72
esx01.tech.local	36	2200.00	8	2.39	19.15	114.87
esx02.tech.local	97	2200.00	12	2.10	25.19	87.34
esx03.tech.local	25	2200.00	16	2.10	33.58	65.51

### Memory

#### vCenter Server: vcenter01.tech.local

Host	VMs	Memory Cost, USD	RAM Capacity, GB	RAM GB Cost, USD
Cluster: Standalone hosts	158	4400.00	447.80	40.14
esx01.tech.local	36	1466.67	63.94	22.94
esx02.tech.local	97	1466.67	255.97	5.73
esx03.tech.local	25	1466.67	127.89	11.47

### Datastores

Datastore Name	Type	Owner	VMs	Cost, USD	Capacity, TB	TB Cost, USD
<b>vCenter Server: vcenter01.tech.local</b>						
esx01-das1	VMFS	esx01.tech.local	15	750.00	1.23	611.46
esx01-das2	VMFS	esx01.tech.local	3	750.00	1.20	625.03
esx01-das3	VMFS	esx01.tech.local	15	750.00	1.20	625.03
esx01-ds-hpvs	VMFS	esx01.tech.local	2	750.00	0.49	1536.77
nfs_lez	NFS	esx01.tech.local	2	750.00	0.12	6418.39
vmfs_lez	VMFS	esx01.tech.local	1	750.00	0.06	12851.56
esx02-ds1	VMFS	esx02.tech.local	94	750.00	10.91	68.76
datastore1	VMFS	esx03.tech.local	25	750.00	3.63	206.56

### VM Cost (VMware)

#### vCenter Server: vcenter01.tech.local

Host	Virtual Machine	VM Uptime	CPU		Memory		Datastore		Total VM Cost,USD
			Avg. Usage, GHz	Cost, USD	Avg. Usage, GB	Cost, USD	Avg. Usage, GB	Cost, USD	
Cluster: Standalone hosts	153			5402.74		4405.13		4473.12	14280.98
esx01.tech.local	35			2473.54		2178.76		2771.72	7424.01
	tapelibrary	99.96 %	0.05	5.37	2.74	62.84	652.46	398.25	466.45
	tapelibrary	99.96 %	0.05	5.37	2.74	62.84	652.46	398.25	466.45
	srv08	99.96 %	2.72	312.15	3.95	90.46	39.25	23.70	426.31
	srv08	99.96 %	2.72	312.15	3.95	90.46	39.25	23.70	426.31
	tapesrv01	99.96 %	2.52	289.01	2.82	64.70	24.53	14.65	368.36
	tapesrv01	99.96 %	2.52	289.01	2.82	64.70	24.53	14.65	368.36
	tapesrv02	99.96 %	2.53	290.13	2.54	58.20	27.74	16.57	364.89
	tapesrv02	99.96 %	2.53	290.13	2.54	58.20	27.74	16.57	364.89
	srv11	99.96 %	1.75	200.82	3.99	91.41	47.80	28.54	320.78
	srv11	99.96 %	1.75	200.82	3.99	91.41	47.80	28.54	320.78
	shell	99.96 %	0.24	28.01	4.00	91.70	127.64	77.91	197.62
	shell	99.96 %	0.24	28.01	4.00	91.70	127.64	77.91	197.62
	tech01	99.96 %	0.38	43.93	3.82	87.69	73.35	44.77	176.39
	tech01	99.96 %	0.38	43.93	3.82	87.69	73.35	44.77	176.39

## Use Case

IT departments can use the report as a showback instrument to raise awareness within organization and demonstrate costs associated with the amount of compute and storage resources utilized by VMs. The report helps calculate a budget share of used virtual infrastructure resources for each application owner, department or business unit within an organization, justify IT budget, and assess the amount of future funding requests.

The report can also be used to prevent excessive resource consumption and ensure that virtual infrastructure resources are utilized in line with the business needs.

Service providers that do not have flat fees on virtual infrastructure resources, can use this report as a chargeback instrument to calculate the cost of resources their clients have utilized during the billing period, and charge for provided services based on the actual resource consumption.

# VM Configuration Chargeback

This report helps to make VM cost audit and identify the most and least expensive VMs based on the VM configuration.

The report analyzes VM cost based on flat fees for vCPU, vRAM and storage resources provisioned for a VM.

The **Summary** section includes the following elements:

- Details on the number of VMs, average VM cost and total cost of VMs.
- The **Top 10 Most Expensive VMs** section shows 10 most expensive VMs in terms of allocated resources, and provides cost of vCPU, vRAM and storage resources configured for each VM.
- The **Cost Distribution** chart shows the cost of hardware CPU, memory and storage resources.
- The **VM Power Status** chart shows the number of running and powered-off VMs. This chart is available if you choose to include powered-off VMs in the report.
- The **Business View Groups Cost** chart shows the cost of VMs included in Veeam ONE Business View groups. This chart is available if you include Veeam ONE Business View groups in the report scope.

The **Details** table provides analysis of VM configuration cost in terms of vCPU, vRAM, storage and total cost.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components (hosts) to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View object:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the *Virtual Machine* type.
- **Currency:** defines a payment currency.
- **vCPU cost:** defines the cost of one vCPU configured for a VM, in the selected currency.
- **RAM, GB cost:** defines the cost of a memory GB allocated for a VM, in the selected currency.
- **Storage, GB cost:** defines the cost of a storage GB allocated for a VM, in the selected currency.

- **Display powered-off VMs:** defines whether powered-off VMs must be analyzed in the report.

## VM Configuration Chargeback

### Description

This report helps to make a VM audit and identify the most and least expensive VMs based on the current configuration.

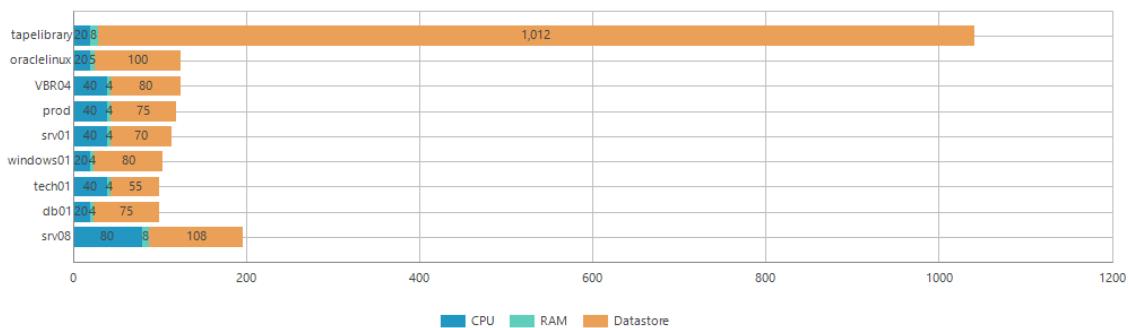
### Report Parameters

Business View:	Datastore: esx01-das1, esx01-das2, esx01-das3
vCPU cost:	10 USD
RAM, GB cost:	1 USD
Storage, GB cost:	0.5 USD
Display powered-off VMs:	Yes

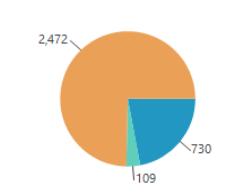
### Summary

Number of VMs:	31
Business view groups:	3
Average VM price, USD:	103.49
Total cost of VMs, USD:	3,312

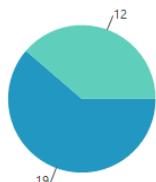
#### Top 10 Most Expensive VMs



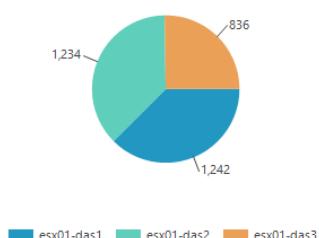
#### Cost Distribution



#### VM Power Status



#### Business View Cost



## Details

VMware

Category: Datastore

Group	Virtual Machine	Power Status	vCPUs		RAM		Datastore		Total Price, USD
			Count	Cost, USD	Quantity, GB	Cost, USD	Quantity, GB	Cost, USD	
✉ esx01-das1	15		36	360.00	55.00	55.00	1,654.00	827.00	1,242.00
✉ esx01-das2	3		10	100.00	16.42	16.42	2,234.47	1,117.24	1,233.66
	tapelibrary	On	2	20.00	8.42	8.42	2,024.47	1,012.24	1,040.66
	tech01	On	4	40.00	4.00	4.00	110.00	55.00	99.00
	srv34	Off	4	40.00	4.00	4.00	100.00	50.00	94.00
✉ esx01-das3	14		27	270.00	37.88	37.88	1,056.00	528.00	835.88
	oraclelinux	Off	2	20.00	5.00	5.00	200.00	100.00	125.00
	prod	Off	4	40.00	4.00	4.00	150.00	75.00	119.00
	windows01	Off	2	20.00	4.00	4.00	160.00	80.00	104.00
	srv08	On	4	40.00	4.00	4.00	108.00	54.00	98.00
	shell	On	4	40.00	4.00	4.00	100.00	50.00	94.00
	srv07	Off	2	20.00	4.00	4.00	120.00	60.00	84.00
	windows02	Off	2	20.00	4.00	4.00	120.00	60.00	84.00
	webserver02@atlanta	Off	1	10.00	1.00	1.00	50.00	25.00	36.00
	websrv02	Off	1	10.00	4.00	4.00	40.00	20.00	34.00
	apache02	Off	1	10.00	0.38	0.38	8.00	4.00	14.38
	Exchange_vLab	Off	1	10.00	1.00	1.00	0.00	0.00	11.00
	Network Extension Appliance Epsilon(esx01)	Off	1	10.00	1.00	1.00	0.00	0.00	11.00
	Network Extension Appliance Theta(esx01)	Off	1	10.00	1.00	1.00	0.00	0.00	11.00
	sandbox	Off	1	10.00	0.50	0.50	0.00	0.00	10.50

## Use Case

The report is intended for service providers that have flat fees on allocated virtual infrastructure resources. The report helps calculate the cost of resources that were allocated to each client or application owner, and bill tenants, clients and application owners accordingly.

IT departments can use this report to calculate the cost of provisioned VMs for application owners and business units, provided that the VM cost model in the organization is based on VM configuration.

## Notes

When analyzing report data, note the following:

- For VMs with thin-provisioned or dynamic disks, the report takes into account the amount of provisioned disk space, not actually used disk space.
- For VMs with dynamic memory, the report takes into account the amount of allocated memory.

## VM Performance Chargeback

This report helps to make VM cost audit and identify the most and least expensive VMs based on the VM performance.

The report analyzes VM cost based on hourly, daily or weekly fees for consumed vCPU, vRAM and storage resources. The cost of VM resources is calculated based on VM uptime multiplied by the cost of average CPU, memory and storage usage observed during a specified period.

The **Summary** section includes the following elements:

- Details on the number of VMs and Business View groups, average VM cost and total cost of VMs.

- The **Top 10 Most Expensive VMs** section shows 10 most expensive VMs in terms of consumed resources, and provides cost of vCPU, vRAM and storage resources utilized by each VM.
- The **Cost Distribution** chart shows the cost of vCPU, vRAM and storage resources for all VMs included in the report.
- The **Business View Groups Cost** chart shows the cost of VMs for Veeam ONE Business View groups included in the report. This chart is available if you include Business View groups in the report scope.

The **Details** table provides information on the VM uptime during the reporting period, average vCPU, vRAM and storage usage values, cost of consumed resources, and cost of VMs for the reporting period. Click a VM name to drill down to detailed VM uptime, resource usage and cost statistics for the reporting period.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components (hosts) to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View object:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the *Virtual Machine* type.
- **Currency:** defines a payment currency.
- **Charge for each:** defines a time measurement unit for which prices are set.
- **CPU, GHz cost:** defines a cost for each consumed CPU GHz.
- **RAM, GB cost:** defines a cost for each consumed memory GB.
- **Storage, GB cost:** defines a cost of each consumed storage GB.
- **Interval/Start Date - End Date** defines a billing period that must be analyzed in the report. This is a period in the past for which historical performance data (CPU, memory and storage utilization metrics) must be analyzed in the report.

Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.

- **Business hours from – to:** defines time of a day for which historical performance data must be used to calculate the VM cost. Data outside this interval will be excluded from the baseline used for data analysis.

## VM Performance Chargeback

### Description

This report helps to make a VM audit and identify the most and least expensive VMs.

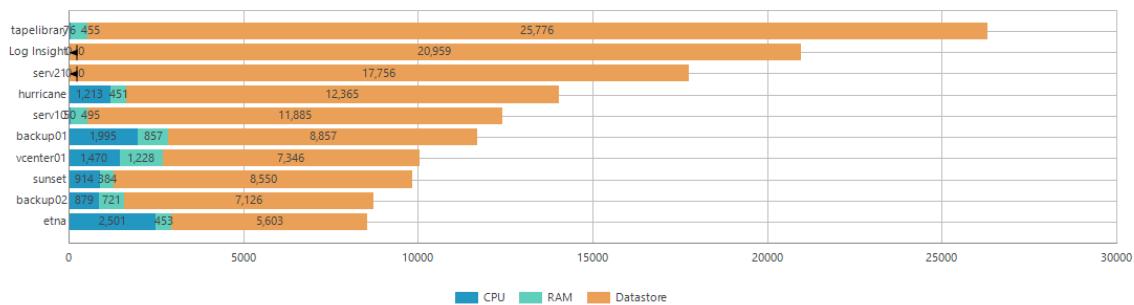
### Report Parameters

Business View Groups: Datastore: esx01-das1, esx01-das2, esx01-das3, esx01-ds-hpvs, esx02-ds1  
 CPU, GHz cost: 10 USD per hour  
 RAM, GB cost: 1 USD per hour  
 Storage, GB cost: 0.1 USD per hour  
 Interval: 1 month (12/11/2019 - 1/10/2020)

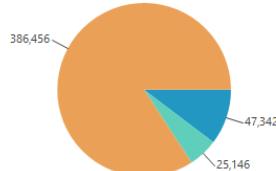
### Summary

Number of VMs	118
Business View groups	5
Average VM price, USD	3,856.68
Total cost of VMs, USD	458,944.98

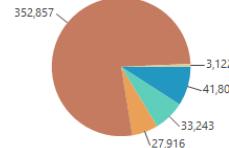
#### Top 10 Most Expensive VMs



### Cost Distribution



### Business View Groups Cost



### Details

#### VMware

##### Category: Datastore

Group	Virtual Machine	VM Uptime		CPU		Memory		Datastore		VM Cost, USD
		Time	%	Avg. Usage, GHz	Cost, USD	Avg. Usage, GB	Cost, USD	Avg. Usage, GB	Cost, USD	
esx01-das1	7			10.00	16,591.67	32.95	5,467.45	499.86	19,748.22	41,807.35
	srv08	6d 21h 56m	99.96%	2.72	4,510.07	3.95	654.67	78.51	3,101.58	8,266.32
	tapesrv02	6d 21h 56m	99.96%	2.53	4,191.48	2.54	421.20	27.74	1,096.08	5,708.75
	tapesrv01	6d 21h 56m	99.96%	2.52	4,174.88	2.82	468.26	24.53	969.10	5,450.62
	srv11	6d 21h 56m	99.96%	1.75	2,900.51	3.99	661.58	47.80	1,888.53	5,450.62
	tapesrv03	6d 21h 56m	99.96%	0.09	149.34	3.98	660.71	33.67	1,330.27	2,140.32
	srv21	6d 21h 56m	99.96%	0.08	129.43	3.83	635.90	31.98	1,263.59	2,028.92
esx01-das2	db01	6d 21h 56m	99.96%	0.14	238.94	4.00	663.25	24.32	960.82	1,863.02
	tapelibrary	6d 21h 56m	99.96%	0.43	710.19	6.57	1,089.44	795.89	31,443.19	33,242.82
	tech01	6d 21h 56m	99.96%	0.38	633.87	3.82	634.64	73.35	2,897.98	4,166.48

Hyper-V

SCVMM: N/A

Host	Virtual Machine	VM Uptime		CPU		Memory		Datastore		
		Time	%	Avg. Usage, GHz	Cost, USD	Avg. Usage, GB	Cost, USD	Avg. Usage, GB	Cost, USD	VM Cost, USD
Cluster: cluster01.tech.local	64			7.24	26,893.81	153.06	46,171.88	5,078.18	517,396.58	590,462.27
hyperv01	28			6.19	22,980.47	81.57	30,352.11	2,369.97	241,466.99	294,799.57
	<a href="#">fileserver04</a>	15d 12h 5m	98.44%	0.07	275.35	3.09	1,150.07	729.59	74,335.61	75,761.03
	<a href="#">delta</a>		0.00%	0.00		0.00		222.74	22,694.32	22,694.32
	<a href="#">desktop01</a>	15d 12h 5m	98.44%	0.10	364.65	2.28	849.20	191.66	19,527.26	20,741.11
	<a href="#">gamma</a>	15d 12h 5m	98.44%	0.68	2,530.23	4.00	1,488.37	138.01	14,061.08	18,079.68
	<a href="#">dr</a>	15d 12h 5m	98.44%	1.59	5,912.56	12.37	4,603.56	72.23	7,359.68	17,675.80
	<a href="#">BETA</a>	15d 12h 5m	98.44%	0.18	669.77	4.00	1,488.37	149.63	15,245.61	17,403.75
	<a href="#">om2012r2</a>	15d 12h 5m	98.44%	0.55	2,035.35	19.50	7,254.72	74.06	7,546.14	16,836.21
	<a href="#">VBR954</a>	15d 12h 5m	98.44%	0.85	3,177.67	4.00	1,488.37	80.21	8,171.80	12,837.85
	<a href="#">starfish</a>		0.00%	0.00		0.00		115.73	11,790.94	11,790.94
	<a href="#">VBR01Repository</a>	15d 12h 5m	98.44%	0.05	171.16	6.00	2,232.56	81.49	8,302.24	10,705.96
	<a href="#">VBR953</a>	15d 12h 5m	98.44%	0.11	394.42	4.00	1,488.37	64.13	6,533.84	8,416.63
	<a href="#">VBR01</a>	15d 12h 5m	98.44%	0.17	640.00	4.00	1,488.37	54.51	5,554.19	7,682.57

## Use Case

The report is intended for service providers that have flat fees on consumed virtual infrastructure resources. The report helps calculate the cost of resources that were utilized by each client or application owner for each hour, day or week, and bill the client or application owner accordingly.

IT departments can use this report to calculate the cost of provisioned VMs for application owners and business units, provided that the VM cost model in the organization is based on the amount of resources that a VM consumes.

### NOTE:

The cost of storage resources is calculated based on the amount of space occupied by VM files. Business hours do not affect the cost of storage resources. For example, if a VM consumes 100 GB space, and storage price is 0.1 USD per week, the total cost of storage resources for the VM will be 10 USD.

Note that the VM files growth factor can influence the cost of storage resources. The report calculates an average value of consumed storage space on each day of the specified interval. For example, if a VM occupied 50 GB at the beginning of the week, and grew up to 100 GB in the middle of the week, the average amount of occupied space will be 75 GB, and the total cost for the week will be 7.5 USD.

# Veeam Cloud Connect

This report pack provides information about Veeam Cloud Connect infrastructure, including user quota usage, capacity planning for cloud repositories and configuration data for cloud gateways and repositories.

**Number of reports:** 5

**Current version:** 2

**Reports included:**

- [Cloud Connect Inventory](#)
- [Cloud Connect Replication Provisioning](#)
- [Cloud Connect User Report \(Backup\)](#)
- [Cloud Connect User Report \(Replication\)](#)
- [Over-provisioned Backup Repositories](#)

## Cloud Connect Inventory

This report provides inventory information on the Veeam Backup & Replication and Veeam Cloud Connect infrastructures.

- The **License Information** section shows product license details, including the total number of instances consumed by physical computers (workstations and servers) backup, number of instances consumed by VM cloud backup and replication, the breakdown of total and used instances for licensed objects, and license expiration date. The **Licenses with Rental Instances** subsection shows number of rental instances consumed by tenants' physical computers (workstations and servers) and VM cloud backup, as well as total and used instances.
- The **Veeam B&R Infrastructure** section provides information about backup servers, including the version of Veeam Backup & Replication installed, the number and type of backup proxies and backup repositories managed by backup servers.
- The **Backup Proxies** section provides information about backup proxy servers, including the server type (file proxy or VM proxy), the type of transport mode chosen for proxy servers, the number of maximum allowable concurrent tasks, connected datastores, and shows whether throttling is enabled for these servers.
- The **Tape Servers** section provides information about tape servers and tape libraries connected to the servers, and shows whether throttling is enabled for these servers.
- The **Backup Repositories** section shows a list of backup repositories and provides additional details including the repository capacity and free space, the amount of space used by full and incremental backups, the number of backup jobs utilizing a repository and the number of VMs and computers residing in backups stored on a repository.
- The **Scale-Out Backup Repositories** section shows a list of scale-out backup repositories and provides additional details including the repository regular extents and capacity tiers, their capacities and free space, the amount of used space, the number of backup jobs utilizing a repository and the number of VMs and computers residing in backups stored on a repository.
- The **WAN Accelerators** section provides information about WAN accelerators and their configuration, including a port number, the number of allowed concurrent connections, cache size, the amount of free space in cache, and cache location.

- The **Cloud Repositories** section provides information about cloud repositories including underlying backup repositories, quotas, the amount of free space left, the number of VMs and computers residing in backups stored on the repositories, and quota expiration dates.
- The **Cloud Gateway Servers** section provides information about configuration of cloud gateways including guest OSes, IP addresses, ports numbers and corresponding gateway pools.
- The **Cloud Gateway Pools** section provides information about number of gateways in each gateway pool.
- The **Hardware Plans** section shows the amount of virtual computing, memory and storage resources allocated to a hardware plan and the number of users subscribed to each plan.
- The **Clusters/Hosts** section provides information about hosts and clusters unitized in cloud hardware plans, their CPU and memory resources, and the number of VM replicas on a host/cluster.
- The **Storage** section shows total capacity of cloud storage, amount of free space and the number of VM replicas located on each storage.

## Report Parameters

**Scope:** defines a list of Veeam Backup & Replication servers to include in the report.

**NOTE:**

To analyze data about replicated VMs in the report, you must connect the target virtual infrastructure servers to Veeam ONE. For details, see [Connecting Servers](#).

## Cloud Connect Inventory

### Description

This report provides general inventory information about your Cloud Connect infrastructure.

### Report Parameters

Scope: Backup Infrastructure

### License Information

Backup Server	Instances Licensed	VM Cloud Backup Instances		Workstations Backup Instances		Physical Server Backup Instances		VM Cloud Replica Instances		Total Instances Used	License Expiration
		Managed	Instances	Managed	Instances	Managed	Instances	Managed	Instances		
backup01.tech.local	1000	0	0	0	0	0	0	0	0	0	9/9/2020
backup02.tech.local	1000	0	0	0	0	0	0	0	0	0	9/9/2020
etna.tech.local	1000	0	0	0	0	0	0	0	0	0	9/9/2020
apache07.tech.local	1000	0	0	0	0	0	0	0	0	0	9/9/2020
srv13.tech.local	1000	8	2.31	0	0	3	0.33	2	1.32	3.96	9/9/2020

### Licenses with Rental Instances

Backup Server	Instances Licensed	VM Cloud Backup Instances		Workstations Backup Instances		Physical Server Backup Instances		Total Instances	
		Used	Rental	Used	Rental	Used	Rental	Used	Rental
srv13.tech.local	1000	2.31	0	0	0	0.33	0.33	2.64	0.33

### Veeam B&R Infrastructure

Backup Server	Backup Server Version	Proxy Servers	CIFS Repositories	Windows Repositories	Linux Repositories	Scale-out Repositories
backup01.tech.local	10.0.0.4359	1	0	1	0	0
backup02.tech.local	10.0.0.4389	1	0	1	0	0
etna.tech.local	10.0.0.4359	2	0	1	0	0
apache07.tech.local	10.0.0.4389	2	0	2	0	1
srv13.tech.local	10.0.0.4359	2	0	1	0	0

### Backup Proxies

Type	Proxy Server	Transport Mode	Host Type	Max. Concurrent Tasks	Connected Datastores	Throttling
File Backup		2				
	172.16.11.123\File Backup Proxy	Network	Windows	2	Automatic	Disabled
	srv2049.tech.local\File Backup Proxy	Network	Windows	2	Automatic	Disabled
VM Backup		3				
	172.16.11.123\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	172.16.11.123\172.17.46.17	On-Host	Windows	4	Automatic	Disabled

### Tape Servers

Backup Server	Tape Server Name	Type	Connected Tape Library	Throttling
apache07.tech.local	tapesrv03.tech.local	VMware (VM)	STK L80 0200	Disabled
etna.tech.local	ETNA	VMware (VM)		Disabled
	tapesrv01	VMware (VM)	HP MSL G3 Series 5.30, HP MSL G3 Series 3.00	Disabled
srv13.tech.local	tapesrv02.tech.local	VMware (VM)	HP EML E-Series 1022	Disabled

### Backup Repositories

Type	Repository	Capacity (GB)	Free Space (GB)	Full Backup Size (GB)	Increments Size (GB)	Backup Jobs	VMs and Computers
Amazon S3	1						
	apache07.tech.local\Object storage repository	N/A	N/A	0.00	0.00	0	0
Amazon S3 External	1						
	Apache07.tech.local\External repository	N/A	N/A	0.00	0.00	N/A	0
Cloud	2						
	backup01.tech.local\Alpha Cloud Vol01	200.00	4.13	67.63	47.24	2	4
	backup02.tech.local\Delta Cloud Vol01	300.00	299.82	0.04	0.14	1	1
Scale-out	1						
	apache07.tech.local\Scale-Out Repository	239.31	139.83	43.43	13.24	3	3
Windows	6						
	backup01.tech.local\Default Backup Repository	119.66	1.59	67.02	20.93	2	2
	etna.tech.local\Atlanta Backup Repository	119.66	69.79	22.47	0.02	3	3
	backup02.tech.local\Default Backup Repository	119.66	88.53	0.06	0.35	1	1
	srv13.tech.local\Default Backup Repository	250.00	132.25	101.90	14.71	9	11
	apache07.tech.local\Default Backup Repository	119.66	92.71	0.00	0.00	0	0
	apache07.tech.local\Tech Storage 01	399.66	313.00	54.34	10.70	3	5

## Scale-Out Backup Repositories

Repository	Regular Extents				Capacity Tiers				Backup Jobs	VMs and Computers
	Count	Capacity (GB)	Free Space (GB)	Used Space (GB)	Count	Capacity (GB)	Free Space (GB)	Used Space (GB)		
apache07.tech.local\Scale-OutRepository	2	239.31	141.79	97.52	0	N/A	N/A	N/A	8	3

## WAN Accelerators

Name	Port	Max. Connections	Max. Cache Size (GB)	Cache Free Space (GB)	Cache Location
backup01.tech.local\BACKUP01	6164	5	50.00	50.00	c:\WAN
backup02.tech.local\BACKUP02	6164	5	75.00	75.00	c:\WAN
srv13.tech.local\172.24.30.179	6165	5	10.00	10.00	C:\Veeam\WAN

## Cloud Repositories

Name	Physical Repository	Quota (GB)	Used Quota (GB)	Free Space (GB)	VMs and Computers	Expiration
Omega Cloud Repository	Default Backup Repository	10.00	0.04	9.96	3	Never
ABC Company Cloud Repository	Default Backup Repository	200.00	116.51	83.49	9	Never
TechCompany Cloud Vol	Default Backup Repository	100.00	0.10	99.90	2	Never
ABCD Cloud Repository	Default Backup Repository	100.00	0.00	100.00	0	Never

## Cloud Gateway Servers

Name	OS	IP Address/DNS Name	Port	Gateway Pool
172.24.30.120	Windows Server 2012 R2	172.24.30.120	6180	Cloud Gateway Pool 01
172.24.30.114	Windows Server 2012 R2	172.24.30.114	6180	N/A
172.24.30.116	Windows Server 2012 R2	172.24.30.116	6180	Cloud Gateway Pool 01

## Cloud Gateway Pools

Name	Gateway Count
Cloud Gateway Pool 01	2

## Hardware Plans

Name	Platform	Cluster/Host	CPU (GHz)	Memory (GB)	Storage (TB)	Networks with Internet Access	Networks without Internet Access	N. of Subscriptions
Hyper-V Bronze	Hyper-V		5.04	12.28		0	1	0
VMware Bronze	VMware		8.00	8.00		0	1	0
VMware Gold	VMware		10.00	16.00		1	1	0
VMware Silver	VMware		10.00	16.00		1	1	1

# Use Case

This report displays inventory information for the Veeam Backup & Replication and Veeam Cloud Connect infrastructure components including licensing details.

## Cloud Connect Replication Provisioning

This report allows you to identify cloud hosts, clusters and datastores that are over-provisioned and under-provisioned with resources and make sure CPU, memory and storage resources are allocated efficiently.

The **Summary** section includes the following elements:

- The **Top 5 Over-provisioned Hosts/Clusters (by CPU), GHz** chart displays 5 most over-provisioned cloud hosts and clusters by CPU and displays their total CPU capacity and the amount of computing resources provisioned for them.
- The **Top 5 Over-provisioned Hosts/Clusters (by Memory), GB** chart displays 5 most over-provisioned cloud hosts and clusters by memory and displays their total memory capacity and the amount of memory resources provisioned for them.
- The **Top 5 Over-provisioned Datastores, GB** chart displays 5 most over-provisioned cloud datastores by memory and displays their total memory capacity and the amount of memory resources provisioned for them.

The **Details** section shows cloud hosts and clusters that are over-provisioned and under-provisioned with CPU, memory and storage resources and provides information about resource allocation on these hosts.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of virtual infrastructure objects to include in the report.
- **CPU Utilization Threshold:** defines minimum and maximum CPU utilization thresholds in percent.
- **Memory Utilization Threshold:** defines minimum and maximum memory utilization thresholds in percent.
- **Datastore Utilization Threshold:** defines minimum and maximum storage utilization thresholds in percent.

**NOTE:**

To analyze data about replicated VMs in the report, you must connect the target virtual infrastructure servers to Veeam ONE. For details, see [Connecting Servers](#).

## Notes

When specifying threshold intervals, note the following:

- If the amount of provisioned CPU, memory or storage resources is higher than the specified maximum threshold, an object (such as a host, cluster or datastore) is considered over-provisioned.
- If the amount of provisioned CPU, memory or storage resources is less than the specified minimum threshold, an object (such as a host, cluster or datastore) is considered under-provisioned.

- If the amount of provisioned CPU, memory or storage resources is between the minimum and maximum thresholds, an object (such as a host, cluster or datastore) will not be included in the report charts or tables as the provisioning value is considered normal.

## VEEAM

### Cloud Connect Replication Provisioning

#### Description

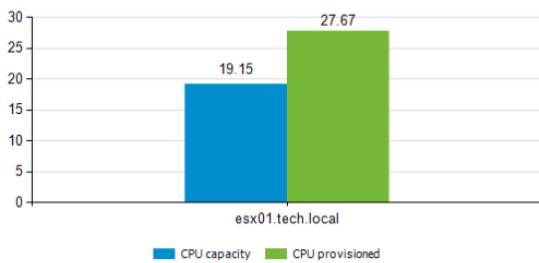
This report helps to identify potential impact of excessive over-provisioning of hosts and datastores using for cloud replication.

#### Report Parameters

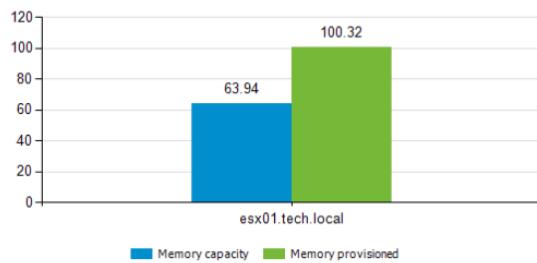
Scope:	Virtual Infrastructure
CPU Utilization Thresholds:	min 30 % max 100 %
Memory Utilization Thresholds:	min 30 % max 100 %
Datastore Utilization Thresholds:	min 30 % max 100 %

#### Summary

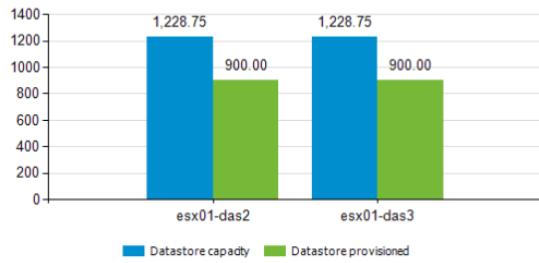
Top 5 Over-provisioned Hosts/Clusters (by CPU), GHz



Top 5 Over-provisioned Hosts/Clusters (by Memory), GB



Top 5 Over-provisioned Datastores, GB



## Use Case

The report helps define whether existing hardware plans match hosts and datastores capabilities. Use this data to avoid potential issues that may be caused by excessive over-provisioning of cloud replication hosts.

## Cloud Connect User Report (Backup)

This report gathers information on storage quota usage and activity of users that consume Veeam Cloud Connect repository resources. The report forecasts the date when cloud repositories will run out of available storage quota and helps you ensure there is enough space for backup data at any point in time.

The **Summary** section includes the following elements:

- Details on the total number of users, the number of users who were active/inactive during past 30 days, the number of users who will run out of quota in the next 30 days, the total number of cloud repositories, the total storage quota, total amount of space used and left on repositories, and number of VMs and computers.

- The **Top Users By Days Left to Reach Quota** and **Top Users By Quota Utilization (%)** charts display 5 users that will run out of space sooner than other users and 5 users with the highest level of space utilization.

The **Details** table shows information about user activity on each day of the reporting period, the number of VMs and computers in backups stored on the repository, cloud repository quota assigned to the user, the amount of used and free space on the repository, amount of data transferred to the cloud, space usage trend, the date the user contract expires and the last time and date when the user was active. The report also forecasts the number of days left before the user runs out of quota.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers and Veeam Cloud Connect tenants to include in the report.
- **Interval/Interval Type:** defines the time period to analyze in the report.

**NOTE:**

The number of VMs and computers in backups on cloud repositories may differ from the number of VMs and computers specified in Veeam Backup & Replication. Veeam Backup & Replication shows the number of licensed VMs and computers only, while Veeam ONE shows the total for licensed and stored VMs and computers.

## Cloud Connect User Report (Backup)

### Description

This report provides data about Cloud Connect users, their quota usage over the past period, also it estimates the date when cloud repositories will run out of available storage capacity.

### Report Parameters

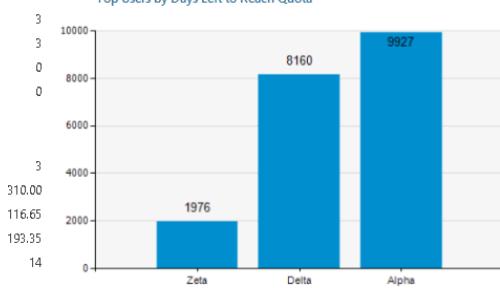
Scope: Backup Infrastructure  
 Reporting Interval: 1 week (1/4/2020 - 1/10/2020)

### Summary

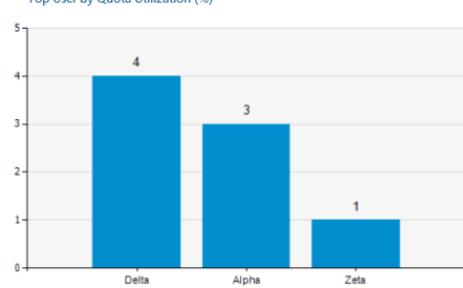
#### Users Overview

N. of Users  
 Active Users  
 Inactive for past 30 days  
 Users to expire in next 30 days

Top Users by Days Left to Reach Quota



Top User by Quota Utilization (%)



#### Repositories Overview

N. of Repositories  
 Total Quota (GB)  
 Used Quota (GB)  
 Available Space (GB)  
 VMs and Computers

#### ▀ Tenant Zeta

User Contract Expiration Date: Never

▀ Repository: [ABC Company Cloud Repository](#)

Space Usage Trend: Not changed

Days Left to Reach Quota: ∞

Last Active: 1/16/2019 2:37 AM

Date	VMs and Computers	Quota (GB)	Used Space (GB)	Free Space (GB)	Data Transferred (GB)
1/15/2019	9	200.00	116.51	83.49	1.00

#### ▀ Tenant Alpha

User Contract Expiration Date: Never

▀ Repository: [Omega Cloud Repository](#)

Space Usage Trend: Not changed

Days Left to Reach Quota: ∞

Last Active: 12/22/2018 1:58 AM

Date	VMs and Computers	Quota (GB)	Used Space (GB)	Free Space (GB)	Data Transferred (GB)
1/15/2019	3	10.00	0.04	9.96	0

#### ▀ Tenant Delta

User Contract Expiration Date: 12/31/2022

▀ Repository: [TechCompany Cloud Vol](#)

Space Usage Trend: Not changed

Days Left to Reach Quota: ∞

Last Active: 1/1/2019 11:35 PM

Date	VMs and Computers	Quota (GB)	Used Space (GB)	Free Space (GB)	Data Transferred (GB)
1/15/2019	2	100.00	0.10	99.90	0

## Use Case

This report allows Veeam Cloud Providers (VCPs) to analyze configuration and quota usage on cloud repositories. The report helps VCPs define which repositories are running out of free space, keep an eye on user activity and decide whether to increase quota for the users.

## Cloud Connect User Report (Replication)

This report analyzes Veeam Cloud Connect users' replication activity, and provides information on cloud host and storage quota usage over the specified period. The report reveals Veeam Cloud Connect users with the greatest amount of provisioned CPU, memory and storage resources, as well as users with the greatest number of replicated VMs.

The **Summary** section includes the following elements:

- Details on the number of Veeam Cloud Connect replication users, configured hardware plans and total VMs replicated. It also includes information about cloud compute and storage resources, their capacity, amount of provisioned and used resources.

- The **Top Users By VMs Replicated** chart displays 5 users with the greatest number of VMs replicated to cloud.
- The **Top Users By CPU/Memory/Storage Provisioned** charts display 5 users with the greatest amount of provisioned CPU, memory and storage resources, and visualize the amount of used cloud resources.

**Details** table shows information about Veeam Cloud Connect users, their virtualization platform, hardware plan, number of VMs replicated to cloud on each day of the reporting period, amount of provisioned and used CPU, memory and storage resources.

In details table, you can track users exceeding resource quotas. If the resource usage value is approaching the quota limit, the value is highlighted with yellow in the table. If the quota is exceeded, the resource usage value is highlighted with red.

Click the link in the **N. of VMs** column to drill down to the list of VMs replicated to cloud on a specific day of the reporting period.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers and Veeam Cloud Connect tenants to include in the report.
- **Interval/Interval Type:** defines a time period to analyze in the report.

## NOTE:

To analyze data about replicated VMs in the report, you must connect the target virtual infrastructure servers to Veeam ONE. For details, see [Connecting Servers](#).



## Cloud Connect User Report (Replication)

### Description

This report provides data about Cloud Connect users replication activity, their quota usage over the past period.

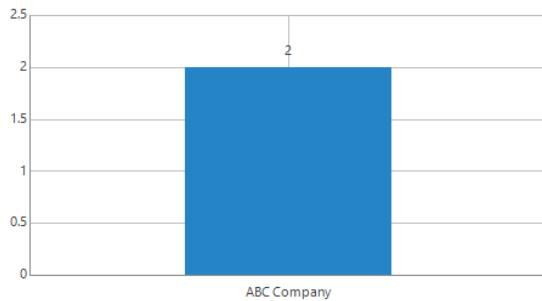
### Report Parameters

Scope: Backup Infrastructure  
Interval: 1 week (1/4/2020 - 1/10/2020)

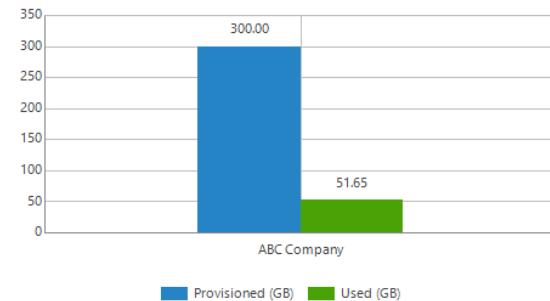
### Summary

Users Overview		Cloud Hosts Overview		Storage Overview	
Users:	3	Hosts:	1	Storages:	1
Hardware plans:	1	Total CPU capacity (GHz):	0.00	Total capacity (GB):	3,718.00
VMs replicated:	2	CPU provisioned (GHz):	10.00	Total quota (GB):	300.00
		Total memory capacity (GB):	0.00	Used quota (GB):	51.45
		Memory provisioned (GB):	16.00		

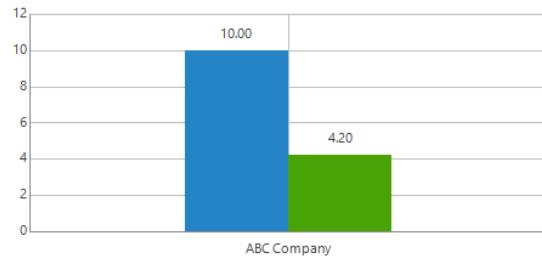
Top Users by VMs Replicated



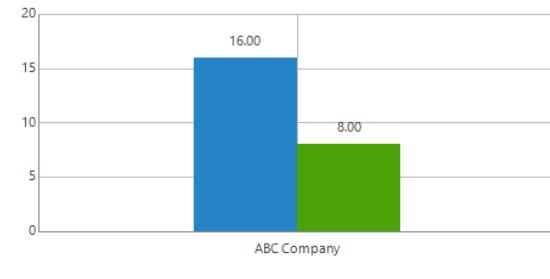
Top Users by Storage Provisioned



Top Users by CPU Provisioned



Top Users by Memory Provisioned



### Details

#### Tenant: ABC Company

Hardware Plan: VMware Silver

Platform: VMware

Date	N. of VMs	CPU (GHz)		Memory (GB)		Storage (GB)	
		Quota	Quota Usage	Quota	Quota Usage	Quota	Usage
1/15/2019	2	10.00	4.20	16.00	8.00	300.00	51.45
1/16/2019	2	10.00	4.20	16.00	8.00	300.00	51.45

# Use Case

This report allows Veeam Cloud Providers (VCPs) to analyze cloud host and storage configuration and quota usage. The report helps VCPs reveal whether cloud compute and storage resources are approaching their limits, keep an eye on users replicating their workloads to cloud, and decide whether it is necessary to increase users' quotas.

## Over-provisioned Backup Repositories

When configuring cloud repositories, cloud administrators can allocate more storage space than there is available on the underlying backup repository. This report helps you assess the potential impact of excessive over-provisioning for cloud repositories.

The **Summary** section includes the following elements:

- The **Top 5 Over-provisioned Repositories** chart shows 5 repositories whose amount of provisioned storage space exceeds the total capacity.
- The **Top 5 Under-provisioned Repositories** chart shows 5 repositories whose amount of provisioned storage space is way below the total capacity.
- The **Top Repositories with Least Amount of Free Space** table displays top 5 repositories that will run out of free space sooner than other repositories.

The **Details** section includes tables and chart that provide information on the repository capacity, amount of free space, amount of space provisioned to Veeam Cloud Connect tenants, provisioning ratio and the number of VMs and computers stored on the repository. Arrows in the **Out of Free Space in ... (Days)** column show whether the amount of free space on the repository has increased (green arrow), decreased (red arrow) or stayed the same (grey arrow) in comparison with the previous week.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers and repositories to include in the report.
- **Repository Space utilization limit (%):** defines the threshold for the amount of space in use on repositories.
- **Repository free space (GB):** defines the threshold for the amount of free space left on repositories.

- **Show graphics:** defines whether to include charts in the report output.

## Over-provisioned Backup Repositories

### Description

This report helps to identify potential impact of excessive over-provisioning of repositories in your backup environment.

### Report Parameters

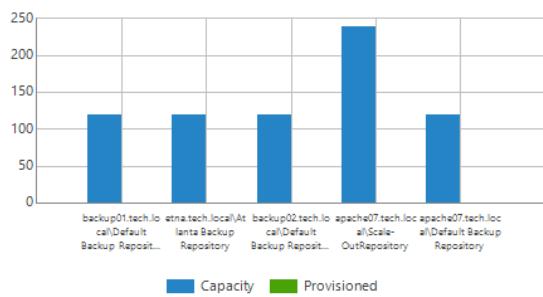
Scope: Backup Infrastructure  
Space utilization: 90.00 %

### Summary

**Top 5 Over-provisioned Repositories (GB)**



**Top 5 Under-provisioned Repositories (GB)**



**Top Repositories with Least Amount of Free Space**

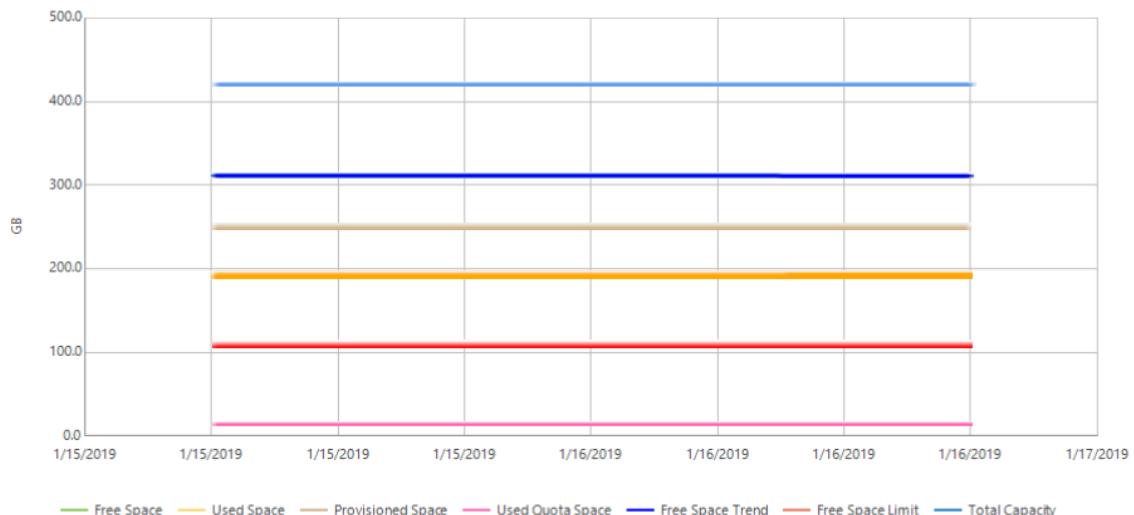
Repository	N. of Cloud Repositories	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VMs and Computers
backup01.tech.local\Default Backup Repository	0	1.6	119.7	0.0	0.00	0
etna.tech.local\Atlanta Backup Repository	0	69.8	119.7	0.0	0.00	0
backup02.tech.local\Default Backup Repository	0	88.5	119.7	0.0	0.00	0
apache07.tech.local\Default Backup Repository	0	92.7	119.7	0.0	0.00	0
srv13.tech.local\Default Backup Repository	4	132.3	250.0	410.0	164.00	14

## Details

### Over-provisioned Repositories

Repository	Cloud Repository	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VMs and Computers	Out of Free Space in... (Days)
srv13.tech.local\Default Backup Repository		132.3	250.0	410.0	164.00	14	∞ →
Omega Cloud Repository		10.0	10.0			3	∞ →
ABC Company Cloud Repository		83.5	200.0			9	∞ →
TechCompany Cloud Vol		99.9	100.0			2	∞ →
ABCD Cloud Repository		100.0	100.0			0	∞ →

### Repository Space Usage



## Use Case

The report analyzes repository space utilization trend and calculates the number of days left before storage utilization will breach the specified threshold.

# Veeam Backup Assessment

This report pack helps analyze configuration and performance of your backup environment against a set of recommended baseline settings and implementations, verify problem areas and help mitigate the issues.

**Number of reports:** 10

**Current version:** 2

**Reports included:**

- [Backup Infrastructure Assessment](#)
- [Data Sovereignty Overview](#)
- [Data Sovereignty Violations](#)
- [Job Configuration Change Tracking](#)
- [Orphaned VMs](#)
- [Restore Operator Activity](#)
- [Unmapped Datastore LUNs](#)
- [VM Backup Compliance Overview](#)
- [VMs Backed Up by Multiple Jobs](#)
- [VMs with no Archive Copy](#)

## Backup Infrastructure Assessment

This report evaluates how optimally your backup infrastructure is configured and suggests actions aimed at boosting its efficiency.

**NOTE:**

This report is available for VMware vSphere environments only.

The report analyzes configuration of your virtual environment against a set of recommended baseline settings and implementations, identifies VMs that cannot be properly backed up due to configuration limitations, verifies problem areas and helps mitigate the issues.

The **Summary** section contains the **Verification Results** chart that displays how many verification tests failed/passed/completed with warnings and how many criteria do not apply to your backup infrastructure (in percentage).

The **Details** table shows whether verification tests for each criteria failed/passed/completed with warnings and marks criteria that does not apply to the infrastructure as *Not required*.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **1-Click file level restores:** defines whether the report will analyze the 1-click file level restore capabilities.

- **Required Backup Window:** defines an interval for daily backup sessions that should be assessed.

## VEEAM

### Backup Infrastructure Assessment

#### Description

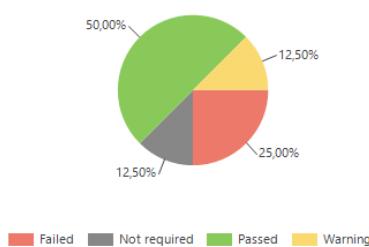
This report helps you to assess your backup configuration and identify potential configuration improvements.

#### Report Parameters

Scope: Backup Infrastructure  
1-Click file level restores: False

#### Summary

##### Verification Results



Criteria	Verification Results
Criteria Group: VM configuration and application-aware VM processing	
<a href="#">Application-aware image processing for Windows Servers</a>	Failed
<a href="#">VMware tools quiescence for Linux/Unix VMs</a>	Warning
<a href="#">VM VMware tools status</a>	Failed
<a href="#">VMs verification</a>	Warning
Criteria Group: Job performance optimization	
<a href="#">Parallel virtual disk processing</a>	Passed
<a href="#">Virtual stand-by proxy server</a>	Passed
<a href="#">Proxy server on the remote site</a>	Not required
<a href="#">Direct SAN access iSCSI performance tweaks</a>	Not required
<a href="#">Backup job processing mode optimizations</a>	Passed
Criteria Group: Backup infrastructure configuration	
<a href="#">VMs failed over to network processing mode</a>	Passed
<a href="#">Backup server protection</a>	Passed
<a href="#">SQL Server optimization</a>	Passed
<a href="#">Repository free space</a>	Failed
<a href="#">Storage latency control</a>	Passed
<a href="#">Proxy Server Configuration</a>	Failed

#### Application-Aware Image Processing for Windows Servers

Recommendation: Enable application-aware image processing to perform application-level quiescence to ensure that each application state is transactionally consistent.

Backup Job	Job Session	VM Name	Backup Status
Backup Server: apache07.tech.local			
Backup Job 5	12/29/2018 12:52 PM	dev01	Success
Columbus Virtual Storage	12/30/2018 1:00 AM	hpvs01	Success
Exchange Backup Job	12/29/2018 11:00 PM	dns01 dc03 exch01	Success Success Success

The report takes into account the following criteria when analyzing infrastructure configuration:

# VM Configuration and Application-aware VM Processing

Criterion	Description
Application-aware image processing for Windows Servers	<p>The report searches for jobs that do not have the <b>Enable application-aware image processing</b> option enabled.</p> <p>To create a transactionally consistent backup of a VM running VSS-aware applications (such as Active Directory, Microsoft SQL, Microsoft Exchange, Sharepoint) without shutting them down, Veeam Backup &amp; Replication uses application-aware image processing. It is a proprietary technology that ensures successful VM recovery, as well as proper recovery of all applications installed on the VM without any data loss.</p>
VMware tools quiescence for Linux/Unix VMs	<p>The report searches for jobs that do not have the <b>Enable VMware Tools quiescence</b> option enabled.</p> <p>When taking snapshots of a running VM, VMware Tools will quiesce the VM file systems to ensure integrity of on-disk data. However, under heavy I/O load, this delay in I/O could become too long.</p>
VM VMware tools status	<p>The report analyzes your virtual infrastructure to find VMs that do not have VMware Tools installed, running or up-to-date.</p> <p>To enable backup with application-aware image processing, it is required that guest OS running inside your VMs have VMware Tools installed and running.</p>
VMs verification	<p>The report analyzes your virtual infrastructure to find VMs for which SureBackup jobs are not configured.</p> <p>SureBackup and SureReplica are technologies developed to automate and simplify the recovery verification process – one of the most crucial parts of data management and protection. SureBackup and SureReplica let users verify the recoverability of every VM backup and replica, without additional hardware or administrative time and effort.</p>

# Job Performance Optimization

Criterion	Description
Parallel virtual disk processing	<p>The report searches for Veeam Backup servers that do not have the <b>Enable parallel VM and virtual disk processing</b> option enabled.</p> <p>Multiple VMs and VM disks can be processed in parallel, optimizing your backup infrastructure performance and increasing the efficiency of resource usage.</p> <p>For Veeam Backup &amp; Replication 10a or later, this parameter is enabled by default.</p>
Virtual stand-by proxy server	<p>The report analyzes your virtual infrastructure to find virtual backup proxy servers.</p> <p>For data retrieval, Veeam Backup &amp; Replication offers the Virtual Appliance mode. The mode can only be used if the backup proxy is deployed on a VM.</p> <p>The Virtual Appliance mode uses the SCSI hot-add capability of ESXi hosts to attach disks of the backed up VM to the backup proxy VM. In this mode, VM data is retrieved directly from storage through the ESXi I/O stack, instead of going through the network stack, which improves performance.</p>
Proxy server on the remote site	<p>The report analyzes your virtual infrastructure to find backup proxy servers on the remote site.</p> <p>Storing backups offsite always involves moving large volumes of data between remote sites. To solve the problem of insufficient network bandwidth to support VM data traffic and optimize data transfer over the WAN, it is recommended to deploy a proxy server on the remote site.</p>
Direct SAN access iSCSI performance tweaks	<p>The report analyzes your infrastructure to find backup proxies configured to use the Direct SAN Access mode working with iSCSI storage.</p> <p>The Direct SAN Access mode is recommended if the ESXi host uses shared storage. The backup proxy leverages VADP to retrieve VM data directly from FC or iSCSI storage in the Storage Area Network (SAN). To retrieve data blocks from SAN LUN, the backup proxy uses metadata about the layout of VM disks on the SAN. Since data blocks are not retrieved over the Local Area Network (LAN), this mode minimizes disruptions to your production network during backup.</p>
Meeting Backup Window	<p>The report analyzes job sessions to find jobs whose duration exceeds the defined backup window.</p> <p>If job duration exceeds the backup window and the bottleneck is a proxy, the report will provide recommendations to deploy more proxies.</p> <p>This criterion is available only if you specified the <b>Required Backup Window</b> parameter.</p>

Criterion	Description
Backup job processing mode optimizations	<p>The report analyzes job statistics to find bottlenecks in the data flow.</p> <p>As any backup application handles a great amount of data, it is important to make sure the data flow is efficient and all resources engaged in the backup process are optimally used. To identify a bottleneck in the data path, Veeam Backup &amp; Replication detects the component with the maximum workload: that is, the component that works for the most time of the job.</p> <p>In case the report discovers that a backup proxy is the weakest component in the data flow, it is recommended to deploy additional proxy servers.</p>

## Backup Infrastructure Configuration

Criterion	Description
VMs failed over to network processing mode	<p>The report analyzes your virtual infrastructure to find VMs that failed over to the Network Processing mode.</p> <p>The Network Processing mode can be used with any infrastructure configuration. However, when an alternative transport mode is applicable, the Network mode is not recommended because of the lowest data retrieval speed.</p>
Backup server protection	<p>The report analyzes your virtual infrastructure to find backup servers that do not run configuration backups on their database.</p> <p>If a Veeam backup server fails, you can re-deploy the Veeam backup server, restore configuration data for the Veeam backup server from the backup and apply it to the re-built server. Alternatively, you can apply configuration data to any other Veeam backup server in your backup infrastructure. In terms of configuration, you get a replica of the Veeam backup server you had, without additional adjustments and fine-tuning.</p>
SQL Server optimization	<p>The report analyzes Veeam Backup &amp; Replication databases hosted on SQL Server Express instances to check whether these instances need to be upgraded to the full version of SQL Server.</p> <p>If the amount of data stored in Veeam Backup &amp; Replication databases exceeds SQL Server Express capabilities, it may cause slow operation of the Veeam Backup &amp; Replication console.</p>
Repository free space	<p>The report analyzes your virtual infrastructure to find repositories that have run out of free space.</p>

Criterion	Description
Storage latency control	<p>The report searches for jobs that do not have the <b>Enable storage latency control</b> option enabled.</p> <p>Storage latency control should be enabled in the Veeam Backup &amp; Replication console to ensure that running jobs do not impact storage availability to production workloads.</p>
Proxy Server Configuration	<p>The report analyzes your virtual infrastructure to find backup proxy servers for which the number of concurrent tasks is greater than the number of CPU cores.</p>

## File level restores

Criterion	Description
Indexing of Guest OS files (optional)	<p>The report searches for jobs that do not have the <b>Enable guest file system indexing</b> option enabled.</p> <p>This criterion is available only if you selected the <b>1-Click file level restores</b> parameter.</p>

### TIP:

Click a criterion in the output table to drill down to recommendations for resolving the issue.

## Use Case

The size and complexity of modern geographically disperse backup infrastructures makes it difficult to manage and optimize them.

Following the report recommendations, backup administrators can improve job configuration and implement the necessary hardware and software optimizations. This will help you attain better efficiency, lower resource consumption and expedite backup time.

## Data Sovereignty Overview

This report lists all protected objects, backups and replicas grouped by location.

The **Summary** section contains charts that display geographical locations of production data, and their copies and replicas.

The **Backup Infrastructure Objects** table lists all objects of a backup infrastructure and their locations.

The **Data Location** table shows details on the location of backups, backup copies and replicas for data sources grouped by production data location.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Source locations:** defines a list of locations configured on monitored Veeam Backup & Replication servers.
- **Show Backup Objects Location:** defines whether the report will include the list of backup infrastructure objects and their locations.

- **Group Objects by:** defines whether objects in the **Backup Infrastructure Objects** table will be grouped by location or backup server.

## Data Sovereignty Overview

### Description

This report lists all protected objects, backups and replicas grouped by location.

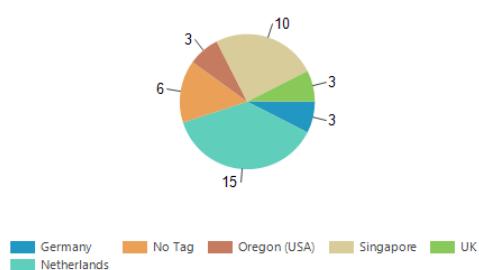
### Report Parameters

Scope: Backup Infrastructure  
Source locations: All locations

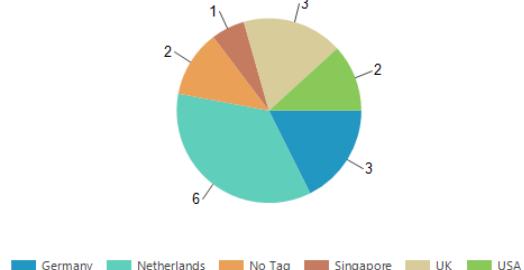
### Summary

Discovered data sources: 107

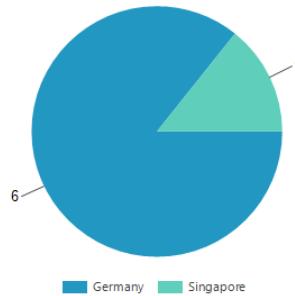
VM & Computer Locations



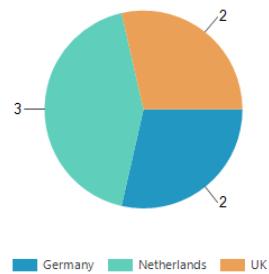
Backup Locations



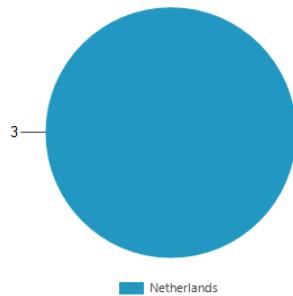
Backup Copy Locations



Replica VMs Locations



Tape Backups Locations



## Data location

Veeam Backup Server: 172.17.53.76

Production data location: Netherlands

Data Source	Backup Location	Backup Copy Location	Replication Location	Tape Location
vdi002	-	-	N/A	-
vdi001	-	-	N/A	-
fileserver04	-	-	N/A	-
apache02	Netherlands, Netherlands	Germany, Germany	-	Netherlands, Netherlands
websrv02	-	-	Netherlands, Netherlands	-
apache04	Netherlands, Netherlands	Germany, Germany	-	Netherlands, Netherlands
webserver02@atlanta	-	-	Netherlands, Netherlands	-
apache03	Netherlands, Netherlands	Germany, Germany	-	Netherlands, Netherlands
webserver03	-	-	Netherlands, Netherlands	-

Production data location: Singapore

Data Source	Backup Location	Backup Copy Location	Replication Location	Tape Location
backup02	Germany, Germany	-	N/A	-
apache02	Netherlands, Netherlands	Germany, Germany	-	Netherlands, Netherlands
websrv02	-	-	Netherlands, Netherlands	-
apache04	Netherlands, Netherlands	Germany, Germany	-	Netherlands, Netherlands
webserver02@atlanta	-	-	Netherlands, Netherlands	-
apache03	Netherlands, Netherlands	Germany, Germany	-	Netherlands, Netherlands
webserver03	-	-	Netherlands, Netherlands	-

Production data location: No Tag

Data Source	Backup Location	Backup Copy Location	Replication Location	Tape Location
backup02	Germany, Germany	-	N/A	-
windows02.tech.local	Netherlands, Netherlands	Germany, Germany	N/A	-

Production data location: Oregon (USA)

Data Source	Backup Location	Backup Copy Location	Replication Location	Tape Location
windows01.tech.local	Netherlands	Germany	N/A	-
windows03.tech.local	Netherlands	Germany	N/A	-
windows02.tech.local	Netherlands, Netherlands	Germany, Germany	N/A	-

## Use Case

Veeam Backup & Replication supports a notion of location which you can assign to virtual infrastructure, backup infrastructure and agent management objects. Location settings helps to monitor where production data and their copies and replicas reside geographically.

The report analyzes the location of backups, backup copies and replicas for a data source and displays it as pie charts. This visual representation will help you monitor your data in a geographically disperse infrastructure.

## Data Sovereignty Violations

This report shows potential data sovereignty violations by listing all protected objects with backups or replicas residing in a different location.

**Summary** section contains charts that display the sovereignty violations of production data and their copies and replicas.

**Data Sovereignty Violations** table shows details on the location mismatch of backups, backup copies and replicas for a data source grouped by Veeam Backup & Replication server name.

**Objects with no Location Tag** table displays all objects in the infrastructure that have no location tag grouped by the type of object.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Job Type:** defines a list of Veeam Backup & Replication jobs to include in the report.

- **Computer Type:** defines whether physical computers or virtual machines are included in the report.

## Data Sovereignty Violations

### Description

This report shows potential data sovereignty violations by listing all protected objects with backups or replicas residing in a different location.

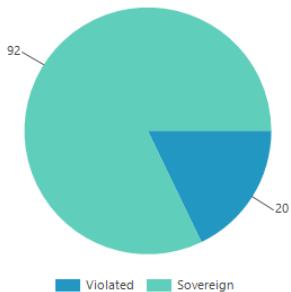
### Report Parameters

Scope:	Backup Infrastructure
Computer type:	All types
Job type:	All job types

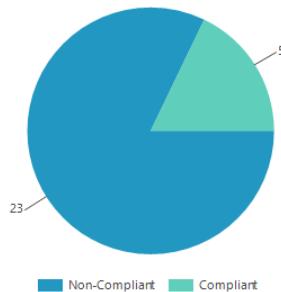
### Summary

Discovered data sources	107
Target replication hosts	3
Repositories	8
Tape vaults	0

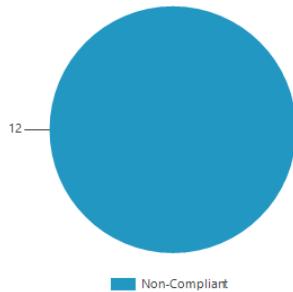
Data Sovereignty



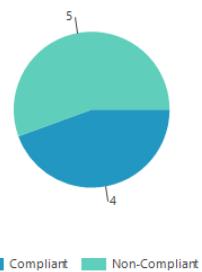
Backup Job Compliance



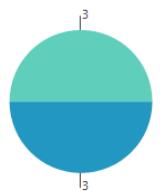
Backup Copy Compliance



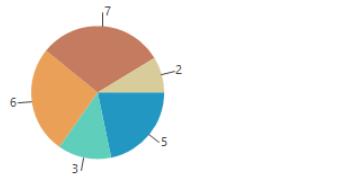
Replication Compliance



Tape Backup Compliance



Objects with no Location Tag



Hosts      Repositories      Tape Libraries      Media Vaults  
Protection groups

## Data Sovereignty Violations

Veeam Backup Server: 172.17.53.76

Backup Location Mismatch				
Name	Location	Backup File Location	Backup Repository	Job Name
apache02	Singapore	Netherlands	Default Backup Repository	Webservers Onsite Backup
apache03	Singapore	Netherlands	Default Backup Repository	Webservers Onsite Backup
apache04	Singapore	Netherlands	Default Backup Repository	Webservers Onsite Backup
backup02	Undefined	Germany	Backup Vol01	Infrastructure Servers Backup
backup02	Singapore	Germany	Backup Vol01	Infrastructure Servers Backup
windows01.tech.local	Oregon (USA)	Netherlands	Default Backup Repository	Daily Servers Backup to VBR Repository
windows02.tech.local	Oregon (USA)	Netherlands	Default Backup Repository	Daily Servers Backup to VBR Repository
windows02.tech.local	Undefined	Netherlands	Default Backup Repository	Daily Servers Backup to VBR Repository
windows03.tech.local	Oregon (USA)	Netherlands	Default Backup Repository	Daily Servers Backup to VBR Repository
Backup Copy Location Mismatch				
Name	Location	Backup Copy Location	Backup Repository	Job Name
apache02	Netherlands	Germany	Backup Vol01	Webservers Backup Copy to DR Site
apache02	Singapore	Germany	Backup Vol01	Webservers Backup Copy to DR Site
apache03	Netherlands	Germany	Backup Vol01	Webservers Backup Copy to DR Site
apache03	Singapore	Germany	Backup Vol01	Webservers Backup Copy to DR Site
apache04	Netherlands	Germany	Backup Vol01	Webservers Backup Copy to DR Site
apache04	Singapore	Germany	Backup Vol01	Webservers Backup Copy to DR Site
windows01.tech.local	Oregon (USA)	Germany	Backup Vol01	Main Office Servers Backup Copy to DR
windows02.tech.local	Oregon (USA)	Germany	Backup Vol01	Main Office Servers Backup Copy to DR
windows02.tech.local	Undefined	Germany	Backup Vol01	Main Office Servers Backup Copy to DR
windows03.tech.local	Oregon (USA)	Germany	Backup Vol01	Main Office Servers Backup Copy to DR
Replica Location Mismatch				
Name	Location	Replica Location	Target Host	Job Name
webserver02@atlanta	Singapore	Netherlands	esx02.tech.local	Mediaservers Replication to DR
webserver03	Singapore	Netherlands	esx02.tech.local	Mediaservers Replication to DR
websrv02	Singapore	Netherlands	esx02.tech.local	Mediaservers Replication to DR
Tape Backup Location Mismatch				
Name	Location	Tape Backup Location	Library / Media Vault	Job Name
apache02	Singapore	Netherlands	HP MSL G3 Series 3.00	Webservers Backup to Tape
apache03	Singapore	Netherlands	HP MSL G3 Series 3.00	Webservers Backup to Tape
apache04	Singapore	Netherlands	HP MSL G3 Series 3.00	Webservers Backup to Tape

## Objects with no Location Tag

Virtual Machines				
ESXi Host	vCenter Server	VM Count		
esx01.tech.local	vcenter01.tech.local	55		
esx02.tech.local	vcenter01.tech.local	69		
qa-srv14.amust.local	elal.dev.amust.local	186		
qa-srv24.dev.amust.local	elal.dev.amust.local	68		
Hyper-V Host				
Hyper-V Host	SCVMM Server	VM Count		
hyperv01.tech.local		34		
Computers				
Protection Group	Backup Server	Computers Count		
Manually Added	172.17.53.76	2		
Manually Added	saturn.tech.local	2		
Protection Group 1	saturn.tech.local	0		

## Use Case

Veeam Backup & Replication supports a notion of location which you can assign to virtual infrastructure, backup infrastructure and agent management objects. Location settings helps to monitor where production data and their copies and replicas reside geographically.

The report analyzes whether any backups, backup copies and replicas reside in a location different from a data source and displays results as pie charts. This visual representation will help you identify which jobs and objects violate data protection regulations accepted in your organization.

# Job Configuration Change Tracking

This report allows you to keep an eye on backup job configuration changes that occurred during a specified period.

The **Summary** section includes the **Job Modifications by User** and **Modifications by Day** charts. The charts display the number of job configuration changes performed by each authorized user and the daily number of changes.

The **Details** table provides information about every change performed within the reporting period. They include information about the backup server where the change was made, job changed, wizard page, property changed, previous and new setting values, modification date and time, and name of the user who made the change.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Interval/Start Date – End Date:** defines the time period to analyze in the report.
- **User:** defines users whose activity must be analyzed.

- **Job Type:** defines a job type to evaluate in the report (*Backup, Replication, File to Tape, Backup to Tape, Backup Copy, Failover Plan, SQL Log Backup, SureBackup, All items*).

## veeAM

### Job Configuration Change Tracking

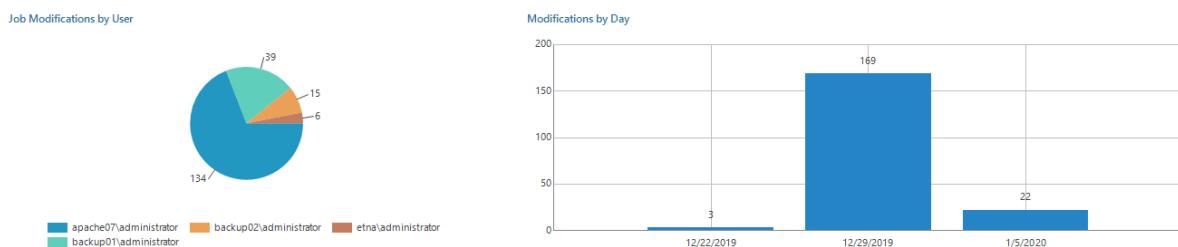
#### Description

This report provides detailed information on job configuration changes performed within the reporting period including the exact time and the user account name who did the change.

#### Report Parameters

Scope: Backup Infrastructure  
 Interval: 12/22/2019 - 1/10/2020  
 User: All  
 Job Type: Backup, Replication, File to Tape, Backup to Tape, Backup Copy, Failover Plan, SQL Log Backup, SureBackup

#### Summary



#### Details

Backup Server	Job	Type	Wizard Page	Property	Previous Setting	New Setting	Modification Time	Modified By
<b>backup01.tech.local</b>								
	Backup Copy Job Onsite	Backup Copy		▪ Name	Copy every interval	1 day starting at 12:00 AM	2 day starting at 12:00 AM	1/7/2019 9:44 PM
				▪ Undefined	'1' objects has been created for 'Backup Copy Job Onsite'			1/4/2019 5:03 PM
<b>Weekly VDI Backup</b>								
		Backup		▪ Guest processing	Auto detect guest interaction proxies	True		1/7/2019 9:43 PM
					Enable application-aware processing enabled	False	True	backup01\administrator
					Vmname application-aware processing > SQL > Backup log frequency (min)	0	15	1/7/2019 9:43 PM
					Vmname application-aware processing > SQL > Use backup log retention		True	backup01\administrator
					Vmname application-aware processing > SQL log grouping > Proxy autoselection		True	1/7/2019 9:43 PM
					Vmname application-aware processing > SQL transaction logs	TruncateOnlyOnSuccess/Job	Backup	1/7/2019 9:43 PM
					Windows credentials	tech/john.smith		backup01\administrator
				▪ Schedule	Automatic retry is enabled	True		1/7/2019 9:43 PM
					Backup window	False		backup01\administrator
					Days to run the job	Monday,Tuesday,Wednesday,Thursday,Friday		1/7/2019 9:43 PM
					Retry failed items processing, times	0	3	1/7/2019 9:43 PM

## Use Case

Since jobs can be configured from the Veeam Backup & Replication console, Veeam Backup Enterprise Manager console, using PowerShell scripts or through REST API, in large environments with multiple backup administrators it is often hard to tell who, when and what changed.

The report helps you review user activity, track job modifications and simplifying troubleshooting.

## Orphaned VMs

This report discovers VMs that are present in existing backup files, but are missing in backup, replication or backup to tape jobs.

The report examines the content of backups on disk and tape and compares this data to the configuration properties of scheduled jobs, listing VMs that are not included in the jobs. It enumerates all found VMs and provides details on the type of VM protection, the number of restore points for the VM, the backup location and the date of the most recent backup session. Additionally, it states when the backup will be deleted according to the current file retention policy.

## VEEAM

### Orphaned VMs

#### Description

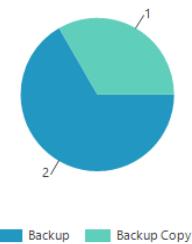
This report lists all VMs that are stored in the backup files, but are not present in the backup, replication and backup to tape jobs.

#### Report Parameters

Scope: Backup Infrastructure  
Group by: Type of Protection  
Protection type: All

#### Summary

##### VMs without Backup Jobs



#### Details

##### Type of Protection: Backup

VMs	Restore Points	Backup Location	Last Backup Date	Backup Will Be Deleted at...
sandbox		srv13.tech.local\Default Backup Repository	12/27/2018 12:01 AM	Never
websrv02		srv13.tech.local\Default Backup Repository	12/27/2018 12:01 AM	Never

##### Type of Protection: Backup Copy

VMs	Restore Points	Backup Location	Last Backup Date	Backup Will Be Deleted at...
backup4.tech.local		backup02.tech.local\Secondary Backup Repository	1/17/2019 5:38 PM	Never

## Use Case

A VM may become orphaned due to an error or oversight, job misconfiguration or a lack of coordination between several backup administrators, for example, when someone changed the configuration of the job and by mistake forgot to include the VM in that job.

A VM may also become orphaned due to some automatic procedures, for example, when the VM migrated to an unprotected host through vMotion or as a result of DRS activating.

This report helps decide whether to modify the backup job settings for the VM if it is a mission critical one, or to delete the VM from the backup if it is no longer necessary.

## Report Based on

Backup job data aggregated by Veeam Backup & Replication compared to the existing backup files content.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Group by:** defines whether data in the report output will be grouped by (*Type of protection, Backup target*).
- **Protection type:** defines a job type to include in the report (*Backup, Replication, Archive, All*).

## Restore Operator Activity

This report allows you to keep an eye on all types of restore actions performed across the selected Veeam Backup & Replication servers.

The report analyzes all guest file, application-level and full VM restore activities performed by any authorized user and arranges this information by the type of performed restore action. Restore details show the initiating user, name of the recovered item or VM, the intended restore destination and the success status of the completed job.

## VEEAM

### Restore Operator Activity

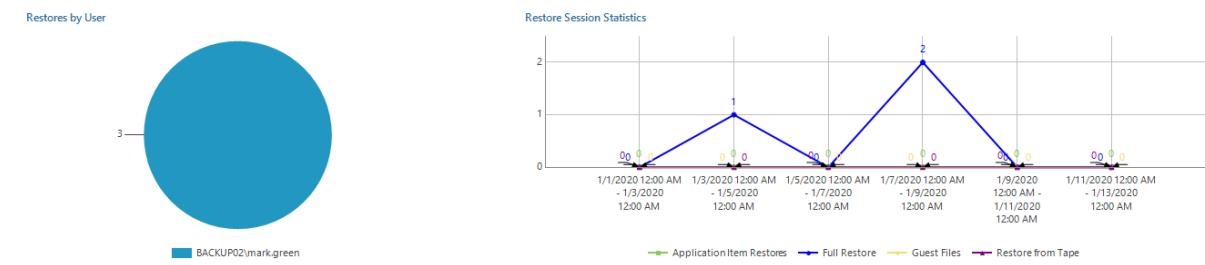
#### Description

This report provides audit information on all types of restores performed by a Veeam Backup & Replication server.

#### Report Parameters

Scope: Backup Infrastructure  
 Interval: Custom Date Range (1/1/2020 - 1/12/2020)  
 Users: All  
 Restore Type: All

#### Summary



#### Details

##### Backup Server: backup02.tech.local

Restore Type: Full Restore

Initiator	Restore Point	Restored Item	Destination	Start Time	Status	Antivirus	AV Check Result	RTBF Script Result
BACKUP02\mark.green	sandbox	[Backup Job Cloud 1/4/2019 2:57:48 PM] sandbox	[esx01.tech.local]Original location	1/4/2019 3:00 PM	Successful	N/A	0	N/A
Restore Reason: Restore operator's request from Enterprise Manager.								
apache02	1/7/2019 12:01 AM	[Onsite Daily Apache Backup 1/7/2019 12:01:34 AM] apache02	[esx01.tech.local]Original location	1/7/2019 9:49 PM	Successful	N/A	0	N/A
Restore Reason: Restore operator's request from Enterprise Manager.								
sandbox	1/6/2019 7:01 PM	[Backup Job Cloud 1/6/2019 7:01:34 PM] sandbox	[esx01.tech.local]Original location	1/7/2019 9:50 PM	Successful	N/A	0	N/A
Restore Reason: Restore operator's request from Enterprise Manager.								

## Use Case

Since files can be restored from the Veeam Backup & Replication console, Veeam Backup Enterprise Manager and Veeam Self Service File Restore portals, using PowerShell scripts or through REST API, in large environments with multiple backup administrators it is often hard to track all performed restore actions.

The report helps you track the initiator of each restore attempt, find out the most popular recovery items and establish historical trends.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- Users:** defines backup administrators and restore operators whose restore activity must be analyzed.
- Restore Type:** defines a restore type to evaluate in the report (*Full VM Restore\**, *Guest Files Restore*, *Application Item Restores*, *Restore from Tape*, *All*).

- **Interval/Start Date – End Date:** defines the time period to analyze in the report.

\*This entry includes the following components: full VM restores, Instant VM Recovery, restore of virtual disks, VM files, Replica Failover.

## Unmapped Datastore LUNs

This report provides information about all detected shared datastores that are not mapped to any existing backup proxy. If you are going to use the Direct SAN Access mode, datastore LUNs must be mapped to a proxy server.

The **Unmapped Datastores** and **Mapped Datastores** sections display detailed datastore information, such as capacity the amount of free and used space, and the number of stored VMs.



### Unmapped Datastore LUNs

#### Description

This report lists all shared datastores that are not mapped to any existing backup proxy.

#### Report Parameters

Scope: Virtual Infrastructure

#### Summary

N. of Datastores:	16
N. of Unmapped Datastores:	16
Unmapped Capacity:	2768.00 GB
VMs on unmapped datastores:	80

#### Unmapped Datastores

Cluster	Datastore	Capacity (GB)	Free Space (GB)	Used Space (GB)	N. of VMs
Cluster1, Cluster2	16				
	ai_netapp(21.103)_lun_source_vol1	4.75	4.05	0.70	1
	dr_vlun	29.75	27.81	1.94	1
	HPE SV vol1	549.75	161.16	388.59	13
	HPE SV vol2	399.75	219.72	180.03	11
	netapp lun agavrilov	8.75	7.69	1.06	1
	ontap93 lun1	149.75	22.95	126.80	9
	ontap93 lun2	149.75	141.16	8.59	4
	ontap93 lun3	149.75	126.54	23.21	5
	ontap93 lun4	149.75	98.54	51.21	7
	ontap93 lun5	149.75	142.05	7.70	4
	ontap93 lun6	149.75	134.77	14.98	5
	ontap93 lun7 qtree	149.75	146.98	2.77	1
	ontap93 lun89	299.50	297.61	1.89	2
	ontap93 vol5	142.50	112.23	30.27	5
	ontap93 vol6	142.50	139.78	2.72	5
	ontap93 vol7	142.50	142.41	0.09	6

## Use Case

The Direct SAN Access mode is recommended if the ESXi host uses shared storage. In the Direct SAN mode, proxy servers will not be able to read data from LUNs if they are not mapped. This report allows you to detect datastore LUNs that are not mapped to any proxy server in your backup infrastructure.

## Report Parameters

**Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

# VM Backup Compliance Overview

This report returns a list of VMs that do not meet the requirement to have a minimal number of backup copies available at any time.

The report displays a pie chart that shows the proportion of backup-compliant VMs to the rest of VMs across the selected virtual infrastructure scope.

The **Details** table provides information on non-compliant VMs properties, simplifying analysis and remediation of such VMs.

**veeam**

## VM Backup Compliance Overview

### Description

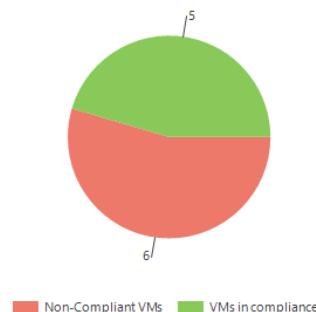
This report lists all VMs that do not have enough number of backup copies.

### Report Parameters

Scope: Virtual Infrastructure  
Exclusion mask:  
Required Number of Copies: 2

### Summary

VM Compliance Status



### Non-Compliant VMs

Location	VMs	Actual Number of Copies	Backup Type	Last Backup Date
vcenter01.tech.local	6			
	apache07	1	Backup	1/13/2019
	dc03	1	Backup	12/29/2018
	dev01	1	Backup	12/29/2018
	dns01	1	Backup	12/29/2018
	hpvs01	1	Backup	12/29/2018
	sandbox	1	Backup	1/13/2019

## Use Case

This report allows you to make sure that all mission critical VMs have sufficient amount of backup copies in distinct locations within the organization, as requested by the 3-2-1 backup strategy. This information may help you modify job settings or dynamically adjust your backup file retention policies.

To learn more about the 3-2-1 backup strategy, see the Veeam Blog article [How to follow the 3-2-1 backup rule with Veeam Backup & Replication](#).

# Report Parameters

You can specify the following report parameters:

- **Scope (VMware VM folders):** defines a list of VMware folders to include in the report (applies to VMware vSphere environments only). VM folders is an alternate way to present the virtual infrastructure. If VMs in your infrastructure are grouped into folders according to their profile, you can limit the report scope by specifying the necessary folders only.
- **Scope (VI):** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Scope (Business View objects):** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Required Number of Copies:** defines the minimum number of backup copies/replicas a virtual machine must have in order to meet the compliance requirements.
- **Exclusion mask:** defines a list of VMs that should be excluded from the report scope. You can enter VM names explicitly or create a wildcard mask by using the asterisk (\*) to replace any number of characters. Multiple entries are separated by semicolon. Usage example: the following string will exclude machines with the \_R&D suffix from appearing in the report: "\*\_R&D".

## VMs Backed Up by Multiple Jobs

This report analyzes configuration of backup jobs to find VMs that are simultaneously included in several jobs. This helps you reduce backup windows and optimize backup infrastructure operation.

- The **VMs with Largest Avg. Transferred Data (GB)** and **VMs with Largest Processing Time (Minutes)** charts show top 5 VMs with the largest amount of transferred backup data and the longest time interval required to produce a VM backup.

- The **Details** table provides information on the list of backup jobs in which the VM is included, target repository names, the average processing time, the number of restore points created for the VM, the size of backup files and the last time the jobs ran.

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### VMs Backed Up by Multiple Jobs

#### Description

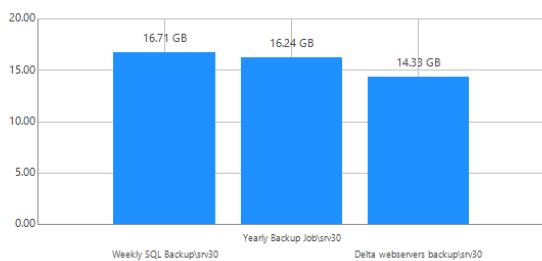
This report detects VMs that are backed up by more than one job at the same time. This will allow you to identify wasted storage space and wasted backup windows.

#### Report Parameters

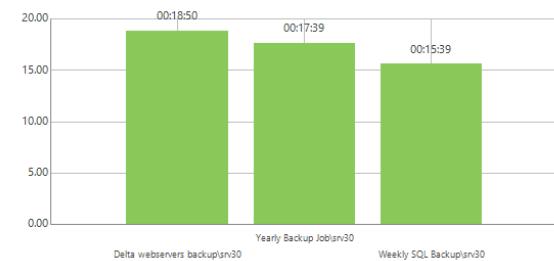
Scope:	Backup Infrastructure
Job Type:	All
Job Exclusion list:	All Jobs
Business View objects:	

#### Summary

VMs with Largest Avg. Transferred Data (GB)



VMs with Largest Processing Time (Minutes)



#### Details

Backup Server: **etna.tech.local**

##### Backup Jobs

Virtual Machine	Backup Job	Job Schedule	Target Repository	Average VM Processing Time	Average VM Transfer Rate (GB)	Restore Points	Full Backups	Latest Job Run
<b>sv30</b>								
	Delta webservers backup	Daily	Atlanta Backup Repository	00:18:50	14.33	1	1	1/15/2019 11:52 AM
	Yearly Backup Job	Yearly	Atlanta Backup Repository	00:17:39	16.24	1	1	1/17/2019 11:43 AM
	Weekly SQL Backup	Weekly	Atlanta Backup Repository	00:15:39	16.71	1	1	1/17/2019 10:56 AM

## Use Case

The reason why some VMs may appear to be backed up by several jobs at a time can be a lack of coordination between several backup operators or the capability to include logical containers (vApps, resource pools, folders) in backup jobs. Both issues can cause repositories to run out of free space due to excessive duplicated backup files.

The report allows you to assess efficiency of the backup process and decide whether to reconfigure existing backup jobs so that they utilize fewer resources and complete in narrower intervals. This report ensures that all critical VMs are reliably protected while no redundant jobs exist across the backup environment.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

- **Job Type:** defines a job type to evaluate in the report (*Backup, Replica, All*).
- **Exclusion Job List:** defines a list of backup and replication jobs to exclude from the report.

## VMs with no Archive Copy

The main backup purpose is to protect your data against disasters and VM failures. Having only one copy of a backup file does not provide the necessary level of safety. To build a successful data protection and disaster recovery plan, you must have at least three copies of your data, for example, production data, backup and its copy, and two different types of media to store copies of your data, for example, disk storage and tape.

To learn more about the 3-2-1 backup strategy, see the Veeam Blog article [How to follow the 3-2-1 backup rule with Veeam Backup & Replication](#).

This report analyzes your backup infrastructure to find VMs that do not have backup copies archived to tapes.

- The **VMs by Archive Status** and **VMs per Backup Location** charts display the number of VMs with 1 or 2 archived copies and the repositories where backups are stored.

- The **Details** table shows properties of each protected VMs and provides details on the location of a primary and secondary VM copy, availability of tape backups for the listed VMs and the date of the most recent VM backup.

## VMs with no Archive Copy

### Description

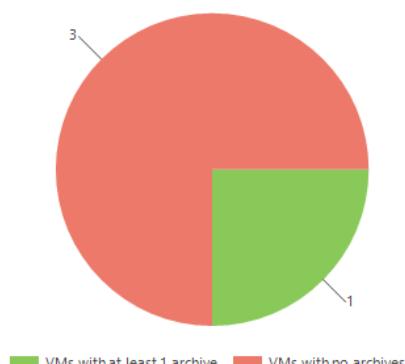
This report highlights all VMs that do not have archive copy.

### Report Parameters

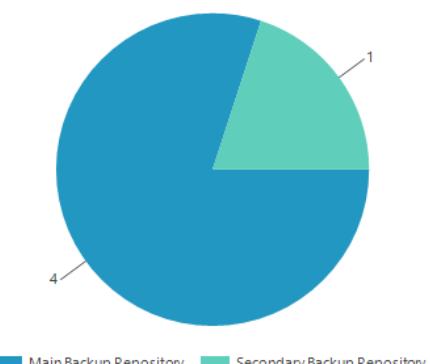
Scope: Virtual Infrastructure  
 Excluded VMs:  
 Interval: Current month

### Summary

VMs by Archive Status



VMs per Backup Location



### Details

#### Location: vcenter01.tech.local

Virtual Machine	Main Backup Repository	Secondary Backup Repository	Tape Media Set	Last Backup Date
apache02	Alpha Cloud Vol01			1/14/2019 2:09 AM
apache02	Default Backup Repository			1/14/2019 2:09 AM
apache07	Alpha Cloud Vol01			1/14/2019 2:02 AM
sandbox	Delta Cloud Vol01			1/13/2019 7:01 PM
vdi001	Default Backup Repository	Alpha Cloud Vol01		1/12/2019 10:01 PM

## Use Case

This report helps backup administrators check whether mission critical VMs are protected with backup copies stored on secondary backup repositories and on tape.

## Report Parameters

You can specify the following report parameters:

- Scope (VMware VM folders):** defines a list of VMware folders to include in the report (applies to VMware vSphere environments only). VM folders is an alternate way to present the virtual infrastructure. If VMs in your infrastructure are grouped into folders according to their profile, you can limit the report scope by specifying the necessary folders only.

- **Scope (VI):** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Scope (Business View objects):** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Exclusion mask:** defines a list of VMs that should be excluded from the report scope. You can enter VM names explicitly or create a wildcard mask by using the asterisk (\*) to replace any number of characters. Multiple entries are separated by semicolon. Usage example: the following string will exclude machines with the \_R&D suffix from appearing in the report: "\*\_R&D".
- **Interval:** defines the time period to analyze in the report.

# Veeam Backup Billing

This report pack provides chargeback capabilities for Veeam Backup & Replication, and helps you assess storage management costs for backup and replication operations. Information provided in reports can be used for financial analysis and billing.

**Number of reports:** 2

**Current version:** 2

**Reports included:**

- [Backup Billing](#)
- [Replica Billing](#)

## Backup Billing

This report allows you to assess storage costs for the backup infrastructure and to track the consumption of storage by backup files.

The report estimates storage resources required to store backups. The cost can be calculated based on the price of 1 GB or TB of consumed storage space or on the price of a single VM. If there is a repository that is more expensive than other ones, an administrator can also specify the price adjustment factor (or the multiplier) that characterizes the premium charged for access to the repository.

The report provides details on every backup job included into the report scope – the number of backed up VMs and computers, size of a restore point and total amount of gigabytes transferred to the storage.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of backup repositories to analyze in the report.
- **Business View objects:** defines a list of Veeam ONE Business View objects to analyze in the report.
- **Interval/Start Date - End Date:** defines the interval for which the billing statement is required.
- **Job Type:** defines a job type to evaluate in the report (*VM Backup*, *Backup Copy*, *Computer Backup Policy (self-managed)*, *Computer Backup (managed by VBR)*, *All Types*).
- **Backup Job:** defines a list of backup and backup copy jobs to include in the report.
- **Price:** defines a storage price for accommodating 1 GB/TB of backup files or a price for a single VM included in backup.
- **Customer:** defines customer name to display in the report output.
- **Show days with no backup activity:** defines whether the report will include days without backup activity.

- **Billing Parameters - Repositories:** defines the price adjustment factor that characterizes the benefit (and the expense) of using the preferred repository storage. The resulting cost is calculated by multiplying the basic rate by the repository multiplier.

This parameter is located in the **Actions** pane under the **Billing Parameters** section.

## Backup Billing

### Description

---

This report provides chargeback capabilities for the backup infrastructure.

### Report Parameters

---

Scope: Backup Infrastructure

Job Type: All Types

Backup Job: All Jobs

Customer: Delta Inc.

Price per GB: 2 US Dollar

Interval: 1/6/2020 - 1/12/2020

Business View objects:

Show days with no backup activity: True

### Summary

---

Jobs Number:	5	Total Backups Size:	0.39 GB
Repositories Count:	4	Backed up VMs & Computers:	2
		Total Cost, USD:	0.78

## Details

Backup Server: qa08.tech.local

Repository	Backed up VMs & Computers	Backups Size (GB)	Price Multiplier	Total Cost
Backup Repository 03	1	103,37	x1,00	1033,70

### Repository Name: Backup Repository 03

Backup Server: qa08.tech.local

Price Multiplier: x1,00

### Virtual Machines Backups

#### QA02 Backup

# of VMs & Computers	Date	Restore Points Size (GB)	Total Space Used (GB)
0	30.09.2019	0,82	6,22
0	06.10.2019	0,00	6,22

VM\Computer Name	Date	Restore Points Size (GB)	Total Space Used (GB)
qa02	06.10.2019	0,00	72,63

Backup Size of all VMs & Computers (GB): 78,86  
Backed up VMs & Computers: 1

#### Backup for QA02

VM\Computer Name	Date	Restore Points Size (GB)	Total Space Used (GB)
qa02	01.10.2019	24,51	24,51
	06.10.2019	0,00	24,51

Backup Size of all VMs & Computers (GB): 24,51  
Backed up VMs & Computers: 1

Repository Total:

Backup Size (GB): 103,37  
Backed up VMs & Computers: 1  
Backups Cost, USD: 1033,70

## Use Case

This report allows managed storage providers (MSP) to generate billing statements for customers and to charge them for the used storage.

The report can help administrators evaluate efficiency of the storage resources utilization.

## Replica Billing

This report helps you assess storage management costs for the backup infrastructure and tracks the consumption of storage by VM replicas.

The report estimates storage resources required to store replicas. The cost can be calculated based on the price of 1 GB or TB of consumed storage space or on the price of a single VM replica. If there is a datastore or volume that is more expensive than other ones, an administrator can also specify the price adjustment factor (or the multiplier) that characterizes the premium charged for access to the datastore/volume.

The report provides details on every replication job included into the report scope – the number of replicated VMs and total amount of gigabytes transferred to the storage – and estimates the total cost of the VMs.

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## Replica Billing

### Description

This report provides chargeback capabilities for the backup infrastructure.

### Report Parameters

Scope:	Backup Infrastructure
Replication Job:	All Jobs
Customer:	Delta Inc.
Price per VM:	10.00
Interval:	1/14/2020 - 1/20/2020
Datastores:	All

### Details

Backup Server: [apache07.tech.local](#)

Repository	VMs & Computers	Transferred Size (GB)	Price Multiplier	Total Cost
Tech Storage 01	1	18.55	x1.00	185.50

#### Repository Name: Tech Storage 01

Backup Server: [apache07.tech.local](#)

Price Multiplier: x1.00

Job Name	Job Runs	N. of VMs	Transferred Size (GB)
Webserver Weekly Replication			
	1/15/2020 3:00 AM	2	18.19
	1/16/2020 6:00 AM	2	18.55
Total Size of all VMs & Computers (GB):			18.55
Total Size (GB):	18.55		
VMs & Computers:	2		
Total Cost:	185.50		

## Use Case

This report allows managed storage providers (MSP) to generate billing statements for customers and charge them for the used storage.

The report can help administrators to evaluate efficiency of the storage resources utilization.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a backup infrastructure subset to analyze in the report.
- **Replication Job:** defines a list of replication jobs to include in the report.
- **Interval/Start date - End date:** defines the interval for which the billing statement is required.
- **Price:** defines a storage price for accommodating 1 GB/TB of replica files or a price for a VM replica.
- **Datastores:** defines a list of datastores and volumes that will be analyzed in the report.
- **Customer:** defines customer name to be displayed in the report output.
- **Billing Parameters - Datastores:** defines the price adjustment factor that characterizes the benefit (and the expense) of using the preferred datastore/volume storage capabilities. The resulting cost is calculated by multiplying the basic rate by the multiplier.

This parameter is located in the **Actions** pane under the **Billing Parameters** section. Select the target datastore and supply the desired price adjustment multiplier.

# Veeam Backup Capacity Planning

This report pack helps you estimate the amount of space required to store backup files on Veeam Backup & Replication repositories, forecast when the amount of available space will reach its limits, and plan repository capacities in advance.

**Number of reports:** 2

**Current version:** 2

**Reports included:**

- [Capacity Planning for Backup Repositories](#)
- [Veeam Backup Files Growth](#)

## Capacity Planning for Backup Repositories

This report estimates the amount of free space available on backup repository(ies) and forecasts how many days remain before the repository will run out of available storage capacity.

Backup repositories tend to run out of free space when outdated restore points overload the datastore. This report helps you ensure there is enough space for your backup data at any point in time. The report also provides recommendations on how to adjust the allocated storage resources in order to meet the future demand for backup storage. Furthermore, it calculates the amount of additional space that needs to be provisioned to accommodate the necessary restore points.

To calculate future repository performance, the report analyzes historical performance data for the previous 90 days, calculates the performance utilization trend and applies this trend to the safety interval (that is, the selected number of days during which the specified threshold should not be breached). This helps you rationally plan your resources.

- The **Top 5 Utilized Repositories (GB)** and **Top 5 Repositories by Days Left** charts display 5 repositories that will run out of free space sooner than other repositories and the number of days left before space usage level on these repositories breaches the specified threshold.

- The **Details** table provides information on the total repository capacity, number of VMs, computers and file shares in backups stored on the repository and the number of days left before the repository runs out of free space.

Click a repository name to drill down to the list of jobs that utilize the backup repository storage capacity.

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### Capacity Planning for Backup Repositories

#### Description

This report shows the dynamics of backup repository free space usage and identifies the date when the repository will run out of free space.

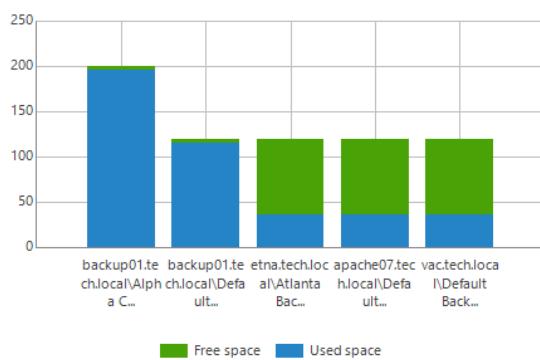
#### Report Parameters

Scope:	Backup Infrastructure
Space utilization limit:	90.0 %
Ensure there is enough capacity for selected number of days:	30 days
Analyze performance data for 6 months	

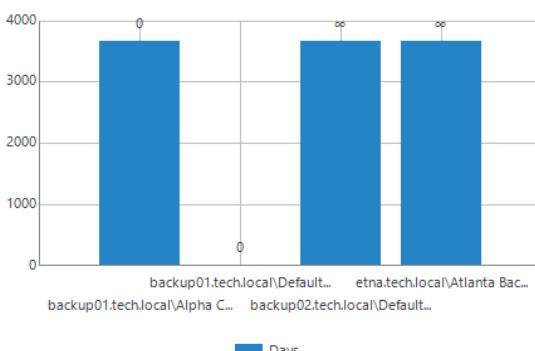
#### Summary

Backup Infrastructure	Physical Resources	Capacity Planning
Number of repositories:	7	Total capacity:
Number of jobs:	10	Total free space:
Stored VMs and Computers:	12	Utilization ratio:
Stored file shares:	0	40.93 %

Top 5 Utilized Repositories (GB)



Top 5 Repositories by Days Left



#### Details

Repository	Backup Server	Type	Capacity (GB)	Free Space (GB)	VMs and Computers	File Shares	Days Left	Space to Add (GB)
Default Backup Repository	backup01.tech.local	Windows	119.66	4.36	2	0	0	0.00
Alpha Cloud Vol01	backup01.tech.local	Cloud	200.00	4.13	4	0	0	0.00
Default Backup Repository	apache07.tech.local	Windows	119.66	84.02	1	0	∞	0.00
Default Backup Repository	vac.tech.local	Windows	119.66	84.02	1	0	∞	0.00
Default Backup Repository	backup02.tech.local	Windows	119.66	88.61	1	0	∞	0.00
Atlanta Backup Repository	etna.tech.local	Windows	119.66	83.86	2	0	∞	0.00
Delta Cloud Vol01	backup02.tech.local	Cloud	300.00	299.82	1	0	∞	0.00

## Use Case

The report allows you to analyze configuration and space usage on backup repositories and to forecast how many days remain before the repository reaches its full capacity. You can use the report to assess the required amount of additional space that needs to be allocated to support the uninterrupted backup operations for a specified number of days into the future.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of backup repositories to analyze in the report.
- **Space utilization limit (%):** defines the maximum amount of used space measured as a percentage of total capacity on the available repositories.
- **Free space reservation (GB):** defines the minimum total amount of free space on the repositories.
- **Ensure there is enough capacity for selected number of days:** defines the safety interval (that is, the required minimum number of days during which the specified space threshold should not be breached).
- **Analyze performance data for:** defines the time period to analyze in the report.

## Veeam Backup Files Growth

This report allows you to track how the size of backup files was changing during the specified time period, and identify jobs that consume the greatest amount of space on repositories.

The report provides detailed information on backup files stored on repositories.

- The **Top 10 Jobs by Largest Backup File Size** table shows 10 jobs that produced the greatest amount of backup data during the reporting period.

- The **Details** section displays information on repository space usage. For each repository, the report provides a chart that illustrates the repository capacity and the amount of free space left, as well as information about restore points that were created during the reporting period, including VMs and computers in the backup, backup file type, date and time when the file was created, restore point size and total space used.



## Veeam Backup Files Growth

### Description

This report provides information about backup files size growth over the selected period of time.

## Report Parameters

Scope: Backup Infrastructure  
Backup Job: All Jobs  
Reporting Period: Past month (12/1/2019 - 12/31/2019)

## Summary

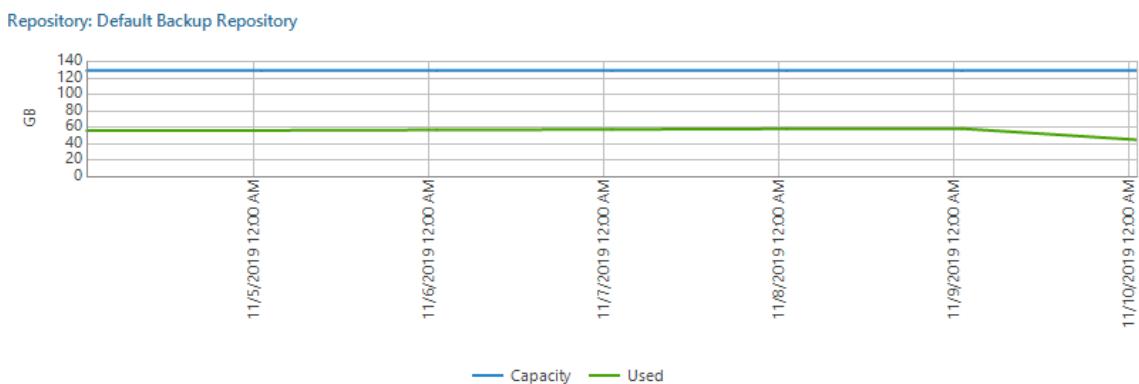
General Overview		Jobs Overview	
Repository Capacity	3.01 TB	Backup Jobs	8
Repository Free Space	2.04 TB	N. of Job Runs	86
Full Backup Files	2.09 GB	Stored VMs and Computers	7
Inc. Restore Points	0.90 GB		

## Top 10 Jobs by Largest Backup File Size

Job Name	VMS and Computers	Date	Total Backup Size (GB)
QA02 Daily Backup	1	12/27/2019 6:39 PM	2.80
Servers Backup to Cloud	2	12/31/2019 9:01 AM	0.07
Windows Server Backup	1	12/27/2019 3:43 PM	0.03
AD Backup Job	1	12/16/2019 5:29 PM	0.02
vCD Backup Cloud	2	12/27/2019 11:01 AM	0.02
QWE Server Backup	1	12/19/2019 7:39 PM	0.02
MySQL DB Backup	1	12/18/2019 4:36 PM	0.02
QWE Webserver Backup	1	11/10/2019 4:00 AM	0.12

## Details

### Selected Object - qa08.tech.local\Default Backup Repository



### QA02 Daily Backup

#### Per-Job Backup Files

VMs and Computers	Backup File Type	Date	Restore Points Size (GB)	Deduplication Rate	Compression Rate	Total Space Used (GB)
-	Incremental	11/10/2019 7:00:29 AM	0.84	1.00	1.00	0.84

#### Per-VM Backup Files

VM/Computer	Backup File Type	Date	Restore Points Size (GB)	Deduplication Rate	Compression Rate	Total Space Used (GB)
qa02	Incremental	11/4/2019 7:00:29 AM	0.82	1.00	2.00	0.82
qa02	Incremental	11/5/2019 7:00:21 AM	1.19	1.00	2.00	2.01
qa02	Incremental	11/6/2019 7:00:34 AM	1.12	1.00	2.00	3.13
qa02	Incremental	11/7/2019 7:00:28 AM	1.46	1.00	2.00	4.58
qa02	Incremental	11/8/2019 7:00:20 AM	1.07	1.00	2.00	5.65
qa02	Incremental	11/9/2019 7:00:39 AM	0.96	1.00	2.00	6.61
qa02	Full	11/10/2019 7:00:29 AM	23.01	3.00	2.00	29.63

Total Size for All VMs and Computers (GB): 29.63

## Use Case

This report is useful for capacity planning purposes. The report allows you to assess historical growth of backup files and – in case backup files grow too fast – to decide whether to change job configuration to point it to another repository with larger capacity.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of backup repositories to analyze in the report.
- Job Name:** defines a list of backup jobs to include in the report.
- Interval/Period - Period Type:** defines the time period to analyze in the report.

# Veeam Backup Monitoring

This report pack provides information about Veeam Backup & Replication infrastructure, including the list of protected and verified VMs. It helps you monitor the status of Veeam Backup & Replication jobs and ensure that VM data is properly protected.

## Prerequisite Requirements

You must use the same unique address to connect virtual infrastructure servers (VMware vSphere, vCloud Director or Microsoft Hyper-V) to both the Veeam ONE Reporter and Veeam Backup & Replication.

**Number of reports:** 12

**Current version:** 2

**Reports included:**

- [Backup Copy Job](#)
- [Backup Infrastructure Audit](#)
- [Backup Objects Change Tracking](#)
- [GFS Backup Files](#)
- [Job History](#)
- [Latest Job Status](#)
- [Protected VMs](#)
- [Recovery Verification Overview](#)
- [SQL Backup Job Historical Information](#)
- [Verified VMs](#)
- [VM Change Rate History](#)
- [VM Daily Protection Status](#)

## Backup Copy Job

The main backup purpose is to protect your data against disasters and VM failures. Having only one copy of a backup file does not provide the necessary level of safety. To build a successful data protection and disaster recovery plan, you must have at least one independent copy of a backup file offsite, for example, in the remote site. To optimize data transfer between remote sites over the WAN, Veeam Backup & Replication offers the WAN acceleration technology.

To learn more about the 3-2-1 backup strategy and WAN acceleration, see this [Veeam Blog article](#).

This report analyzes amount of traffic transmitted to target repository by backup copy jobs, evaluates the efficiency of backup data transfer through WAN accelerators and estimates the amount of network traffic savings.

The report output includes three charts and provides details on traffic usage:

- **The Traffic Efficiency (GB)** chart shows the actual amount of traffic read from the source datastore and the amount of traffic transmitted over the network to the target repository.

- **The Traffic Savings by Day (GB)** chart shows the amount of traffic saved on each day of the reporting interval (that is, the difference between the amount of read traffic and the amount of transferred traffic).
- **The Savings Ratio by Day** chart shows daily fluctuations in the raw data to traffic savings ratio.
- **The Accelerators Details** table provides details for each pair of WAN accelerators used by backup copy jobs: number of restore points transferred, amount of data read from the source repository, actual amount of data transferred to the target repository and amount of saved traffic.

Click a backup copy job name to drill down to details for the job.

- **The Job Details** table provides detailed information on job mode, job sessions, restore points transferred by the pair of WAN accelerators, original backup file sizes, actual amount of data transferred, amount of saved traffic and savings ratio.

## Backup Copy Job

### Description

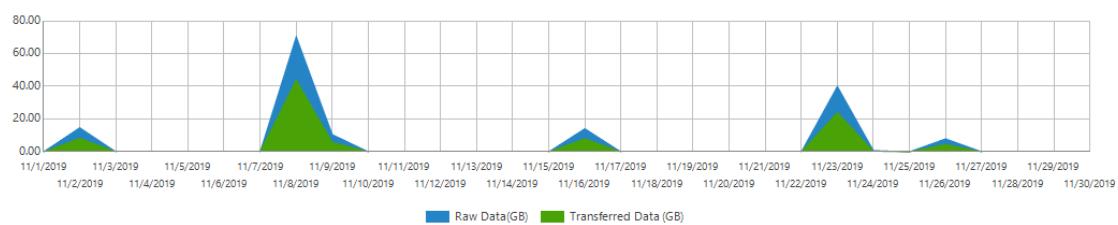
This report provides information on backup copy jobs including data transfer efficiency through WAN accelerators.

### Report Parameters

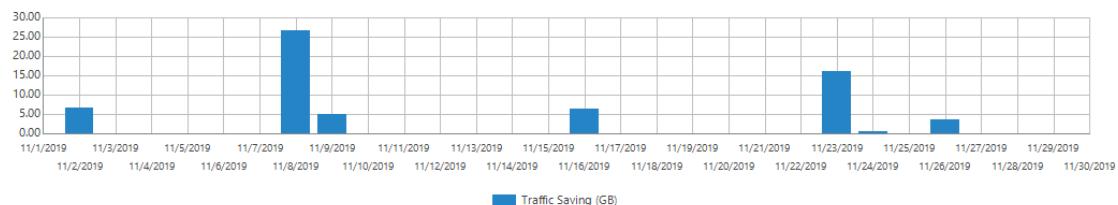
Scope:	Backup Infrastructure
Accelerators:	All Accelerators
Backup Copy Jobs:	All Jobs
Interval:	Past month (11/1/2019 - 11/30/2019)

### Summary

Traffic Efficiency (GB)



Traffic Savings by Day (GB)



Savings Ratio by Day



#### Accelerators Details

Source WAN Accelerator	Target WAN Accelerator	Backup Copy Job	Processed Data (GB)	Transferred Data (GB)	Traffic Savings (GB)	Savings Ratio
		5				
		<a href="#">BCTestSecondary1</a>	0.00	0.00	0.00	1.00x
		<a href="#">BCAgentWorkstation23</a>	0.00	0.00	0.00	1.00x
		<a href="#">BCVMDuration</a>	23.05	14.55	8.50	1.02x
		<a href="#">BCAgentDuration</a>	16.19	9.04	7.14	1.35x
		<a href="#">BCTestSecondary2</a>	0.00	0.00	0.00	1.00x

#### Job Details

##### Periodic copy (pruning) mode

Backup Server:	nz2019vbrv10v9.n.local							
Name	Session Start Time	Status	Source Size (GB)	Transferred Data (GB)	Traffic Savings (GB)	Savings Ratio	Backup Size (GB)	WAN Accelerator Enabled
BCVMwaretest24	7	Success	0.00	0.00	0.00	1.00x	21.65	Disabled
	11/1/2019 8:27 AM	Success	14.12	8.00	6.12	1.76x	29.65	
	11/3/2019 8:28 AM	Warning	0.00	0.00	0.00	1.00x	29.65	
	11/4/2019 8:29 AM	Warning	0.00	0.00	0.00	1.00x	29.65	
	11/20/2019 8:32 PM	Warning	0.00	0.00	0.00	1.00x	70.83	
	11/21/2019 9:33 PM	Warning	0.00	0.00	0.00	1.00x	70.83	
	11/22/2019 10:34 PM	Warning	0.00	0.00	0.00	1.00x	70.83	
BCLinuxAgent2	8	Warning	0.00	0.00	0.00	1.00x	14.58	Disabled
	11/13/2019 8:02 PM	Warning	0.00	0.00	0.00	1.00x	0.02	
	11/23/2019 8:14 PM	Success	0.00	0.00	0.00	1.00x	0.02	
	11/24/2019 8:15 PM	Success	0.00	0.00	0.00	1.00x	0.02	
	11/23/2019 8:46 PM	Failed	0.00	0.00	0.00	1.00x	13.72	
	11/23/2019 7:12 PM	Failed	0.00	0.00	0.00	1.00x	13.72	
	11/23/2019 7:37 PM	Failed	0.00	0.00	0.00	1.00x	13.72	
	11/23/2019 8:04 PM	Warning	1.81	0.85	0.96	2.13x	14.58	
	11/23/2019 8:29 PM	Warning	0.00	0.00	0.00	1.00x		

## Use Case

WAN accelerators allow reducing the amount of network traffic transmitted to remote DR sites by leveraging the deduplication techniques.

This report helps you analyze traffic savings and raise the efficiency of your backup copy jobs.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- Accelerators:** defines pairs of source-to-target WAN accelerators to include in the report.
- Backup Copy Jobs:** defines a list of backup copy jobs to include in the report.
- Interval/Start Date – End Date:** defines the time period to analyze in the report.

## Backup Infrastructure Audit

This report tracks configuration changes in your backup environment, providing detailed information about every change for each object.

The **Summary** section includes the following elements:

- The **Modifications by Object Types** pie chart illustrates types of changed objects and shows the share of particular object type changes.

- The **Modifications per User** pie chart illustrates which users made changes and shows the share of changes made by each user.

The **Change Details** table lists descriptions of changes made to particular objects.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report.
- **Object Type:** defines a list of backup infrastructure objects to include in the report (*Backup Server, Backup Proxy, Backup Repository, Cloud Gateway, WAN Accelerator, Cloud Repository, All items*).
- **User:** defines a list of backup users, changes from whom to include in the report.

- **Group by:** defines the way data will be grouped in the report (by *Object*, *User* or *Occurrence Time*).

## Backup Infrastructure Audit

### Description

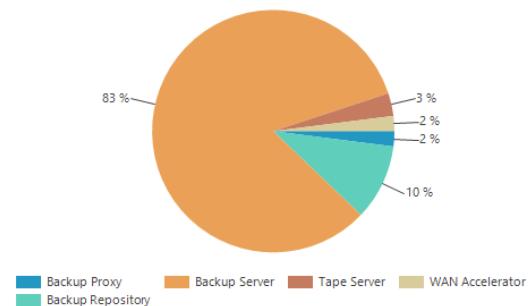
This report tracks configuration changes in your backup environment, providing detailed information about every change for each object.

### Report Parameters

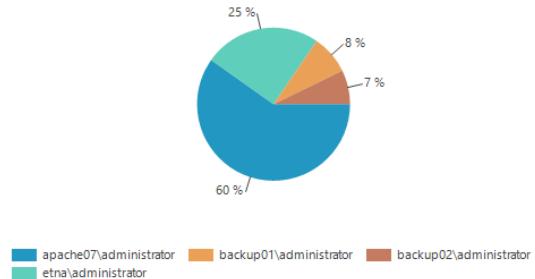
Scope: Backup Infrastructure  
 Report Period: 1 month (12/15/2019 - 1/14/2020)  
 Object Types: Any Object Types  
 Users: All  
 Group by: Object

### Summary

Modifications by Object Types



Modifications per User



### Change Details

**Backup Server:** apache07.tech.local

**Object Type:** Backup Proxy

**Object:** proxy01.tech.local

Event Description	Time	Initiator
Backup proxy proxy01.tech.local (Vi) has been created.	12/29/2018 2:54:55 AM	apache07\administrator

**Object Type:** Backup Repository

**Object:** Scale-OutRepository

Event Description	Time	Initiator
Scale-out backup repository Scale-OutRepository has been created.	12/29/2018 2:52:04 AM	apache07\administrator

**Object:** Tech Backup Repository 01

Event Description	Time	Initiator
Backup repository Tech Backup Repository 01 (WinLocal) has been created.	12/29/2018 2:51:53 AM	apache07\administrator

**Object:** Tech Backup Repository 02

Event Description	Time	Initiator
Backup repository Tech Backup Repository 02 (WinLocal) has been created.	12/29/2018 2:51:58 AM	apache07\administrator

Backup Server: **backup02.tech.local**

Object Type: **Backup Server**

Object: **backup02.tech.local**

Event Description	Time	Initiator
Credentials Delta have been added	10/30/2018 7:08:31 PM	backup02\administrator
Credentials tech\john.smith have been added	10/30/2018 7:08:35 PM	backup02\administrator
Host 'vcenter01.tech.local' of type 'VC' has been created.	10/30/2018 7:08:44 PM	backup02\administrator
Subscription License key for Veeam Backup and Replication EnterprisePlus has been installed.	11/6/2018 5:05:05 PM	backup02\administrator

Object Type: **WAN Accelerator**

Object: **BACKUP02**

Event Description	Time	Initiator
Accelerator 'BACKUP02' has been created.	10/30/2018 7:09:38 PM	backup02\administrator

## Use Case

The report allows backup administrators to get details on recent infrastructure changes made by authorized users so that any unwanted action can be quickly rolled back.

## Backup Objects Change Tracking

This report provides detailed information on backup infrastructure configuration changes performed within the reporting period. It includes the exact time of change and the name of the user who did the change.

The **Summary** section includes the following elements:

- The **Modifications by Object Types** pie chart illustrates types of changed objects and shows the share of particular object type changes.
- The **Modifications per Initiator** pie chart illustrates which users made changes and shows the share of changes made by each user.
- The **Modifications per Day** chart displays distribution of changes performed during report period.

The **Change Details** table lists descriptions of changes made to particular objects.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report.
- **Object Type:** defines a list of backup infrastructure objects to include in the report (*Backup Server, Backup Proxy, Backup Repository, All Items*).
- **Object Name:** defines names of objects to include in the report.

- **User:** defines a list of backup users, changes from whom to include in the report.

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### Backup Objects Change Tracking

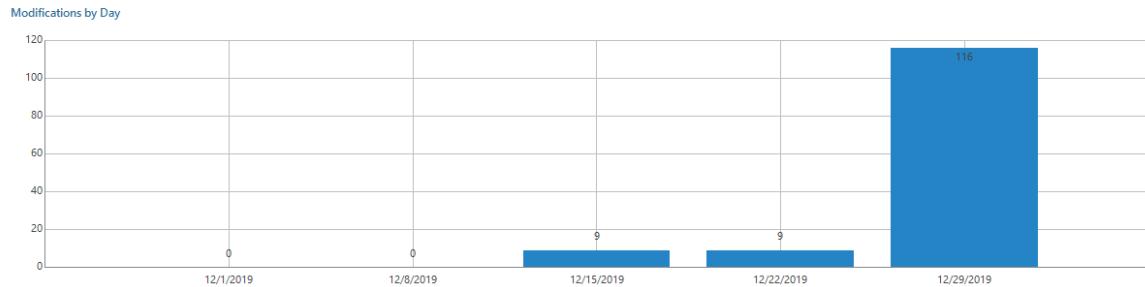
#### Description

Report provides detailed information on Backup Infrastructure configuration changes performed within the reporting period including the exact time and the user account name who did the change.

#### Report Parameters

Scope:	Backup Infrastructure
Interval:	12/1/2019 - 12/31/2019
Object Type:	All objects
Object Name:	
User:	All

#### Summary



#### Change Details

Backup Server: apache07.tech.local

Object type: Backup Server

Property Name	Previous Setting	New Setting	Modification Time	Initiator
Object: apache07.tech.local			12/29/2018 2:46 AM	apache07\administrator
Credentials john.smith have been added			12/29/2018 2:47 AM	apache07\administrator
Host vcenter01.tech.local (VC) has been created.			12/29/2018 2:47 AM	apache07\administrator
Credentials Administrator have been added			12/29/2018 2:47 AM	apache07\administrator
Host 172.16.21.179 (VcdSystem) has been created.			12/29/2018 2:47 AM	apache07\administrator
Credentials extent02\administrator have been added			12/29/2018 2:48 AM	apache07\administrator
Component [Transport] on the host [extent02.tech.local] has been updated			12/29/2018 2:49 AM	n/a
Credentials extent03\administrator have been added			12/29/2018 2:49 AM	apache07\administrator
Host extent02.tech.local (Windows) has been created.			12/29/2018 2:49 AM	apache07\administrator
Component [Transport] on the host [extent03.tech.local] has been updated			12/29/2018 2:51 AM	n/a
Host extent03.tech.local (Windows) has been created.			12/29/2018 2:51 AM	apache07\administrator
Credentials Administrator have been added			12/29/2018 2:52 AM	apache07\administrator
Component [Transport] on the host [extent01.tech.local] has been updated			12/29/2018 2:53 AM	n/a

## Use Case

The report allows backup administrators to get details on recent infrastructure modifications made to target objects so that any unwanted action can be quickly rolled back.

# GFS Backup Files

This report provides historical information about restore points for Veeam Backup & Replication backup copy jobs with the Grandfather-Father-Son (GFS) retention policy.

- **The Summary** section provides information about backup copy jobs configured with the GFS retention policy, the number of historical backup files, restore points in these files and the amount of space occupied by historical backup files.
- **The Restore Points Age** chart shows the share of weekly, monthly, quarterly and yearly restore points.
- **The Top 5 Jobs by Number of Restore Points** chart displays 5 jobs with the greatest number of GFS restore points.
- **The Next Restore Points to Be Deleted by Retention** table shows restore points that will soon be deleted according to the retention policy, their size, type and objects they contain.  
Click a job name to drill down to the copy job details section.
- **The Details** section displays information about backup copy jobs with GFS retention policy: job retention configuration, a list of existing restore points and their details. You can also view distribution of GFS restore points of all types for the current calendar year.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Job Type:** defines a job type to evaluate in the report (*Backup, Backup Copy, All items*).
- **Job Name:** defines a list of backup copy jobs to analyze in the report.

- **Sort restore points by:** defines how data will be sorted in the report (*Creation date, Removal date, Restore point type, Size*).

## VEEAM

### GFS Backup Files

#### Description

This report provides information about historical backups for jobs with GFS retention policy.

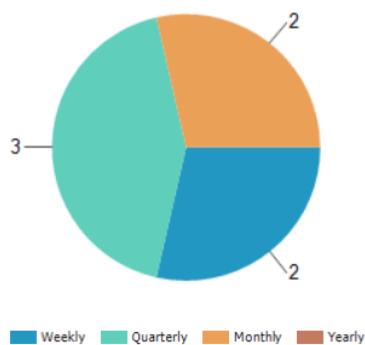
#### Report Parameters

Scope: Backup Infrastructure  
 Backup Copy Job: All Jobs  
 Sort restore points by: Creation date

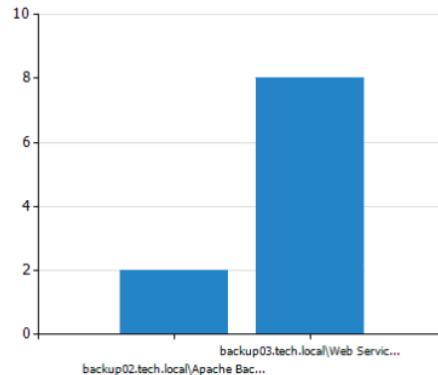
#### Summary

Jobs with GFS retention policy: 2  
 Total number of historical backup files: 4  
 Total number of restore points: 10  
 Used space: 0.00 TB

Restore Points Age



Top 5 Jobs by Number of Restore Points



#### Next Restore Points to Be Deleted by Retention

Job Name	Restore Point Name	VMs/Computers	Type	Size, GB	Removal Date
<a href="#">backup02.tech.local\Apache Backup Copy</a>	Apache Backup CopyD2016-10-23T000000_Q	1	Weekly/ Quarterly	0.03	1/23/2020
<a href="#">backup03.tech.local\Web Services Backup Copy Onsite</a>	Web Services Backup Copy OnsiteD2016-10-21T000000_M	4	Monthly	0.03	11/21/2020

## Use Case

If you have a large backup infrastructure with a great number of restore points with GFS retention policy, you may find it difficult to track these points. The report allows you to inventory restore points created with the GFS retention policy, and check what restore points will soon be removed by retention.

## Job History

This report provides advanced information on completed backup and replication job sessions, and helps you identify possible performance bottlenecks.

- The **Top 5 Jobs by Average Duration (Hours)** and **Top 5 Jobs by Transferred Data (GB)** charts display top 5 jobs in terms of the longest backup duration and the largest amount of transferred data. This information allows you to keep an eye on the most intense backup operations and make a decision whether to perform additional configuration of the jobs.
- The **Successful Backup Ratio by Day (%)** chart displays the percentage of backup and replication job sessions that completed successfully during the reporting period.
- The **Details** table provides information on each performed backup and replication job: session start time and job duration, the amount of transferred data, the completion status.

Click the **Job Name** link or a link in the **Protected VMs** column to drill down to the list of VMs included in the job and their individual backup success properties.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Job Type:** defines a job type to evaluate in the report (*VM Backup, Replication, File to Tape, Backup to Tape, VM Copy, File Copy, NAS Backup, Nutanix Backup, All*).
- **Job Name:** defines a list of backup and replication jobs to include in the report.

- **Interval/Start Date – End Date:** defines the time period to analyze in the report.

## Job History

### Description

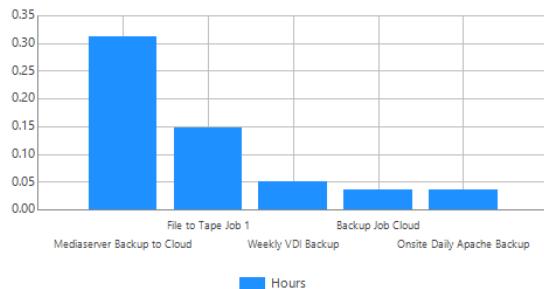
This report provides historical information for all Veeam Backup & Replication jobs.

### Report Parameters

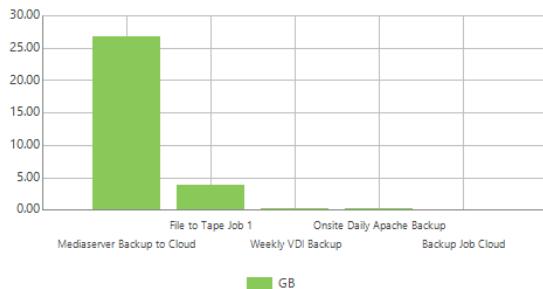
Scope: Backup Infrastructure  
 Job Type: All  
 Job Name: All Jobs  
 Interval: Past week (1/7/2019 - 1/13/2019)

### Summary

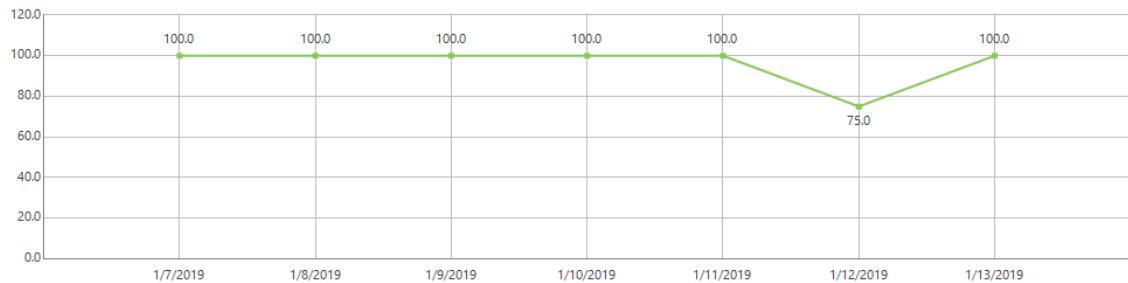
Top 5 Jobs by Average Duration (Hours)



Top 5 Jobs by Transferred Data (GB)



Successful Backup Ratio by Day (%)



### Details

#### Job Type: Backup

Status	Protected VMs	Backup Type	Start Time	Duration	Processing Rate (MB/Sec)	Data Size (GB)	Transferred (GB)	Total Backup Size (GB)
<b>Job Name: Backup Job QA02</b>								
Success	1	Full	12.09.2019 8:24	00:08:12	128,50	122,00	24,06	24,07
Success	1	Incremental	12.09.2019 23:00	00:04:34	211,12	122,00	0,80	24,89
Failed	0 of 1	Unknown	13.09.2019 4:54	00:00:16	0,00	0,00	0,00	24,89
Success	1	Incremental	13.09.2019 4:56	00:03:29	322,92	122,00	0,66	26,26
Failed	0 of 1	Incremental	20.09.2019 0:59	1 days 01:36:57	18,45	244,00	2,55	27,68

Job Name: QA02 Backup

Status	Protected VMs	Backup Type	Start Time	Duration	Processing Rate (MB/Sec)	Data Size (GB)	Transferred (GB)	Total Backup Size (GB)
<b>Job Name: QA02 Backup</b>								
Success	1	Full	17.09.2019 23:00	00:18:11	140,86	122,00	23,52	23,53
Success	1	Synthetic Full	18.09.2019 23:00	00:19:10	256,00	122,00	1,04	47,25
Warning	1 of 1	Synthetic Full	19.09.2019 23:00	00:15:56	273,23	122,00	0,96	70,95
Failed	1 of 1	Synthetic Full	20.09.2019 23:00	00:31:18	69,16	122,00	0,78	71,75
Failed	1 of 1	Synthetic Full	21.09.2019 23:00	00:26:12	67,64	122,00	0,67	72,63
Failed	0 of 1	Synthetic Full	23.09.2019 23:00	00:29:44	128,11	34,57	1,85	72,63
Failed	0 of 1	Synthetic Full	24.09.2019 23:00	00:37:42	181,95	45,68	2,71	73,60
Failed	0 of 1	Synthetic Full	25.09.2019 23:00	00:29:48	119,63	27,37	1,45	73,37
Failed	0 of 1	Synthetic Full	26.09.2019 23:00	00:37:15	190,30	39,36	2,17	73,47
Failed	0 of 1	Synthetic Full	27.09.2019 23:00	00:37:55	168,21	33,32	1,80	73,54
Failed	0 of 1	Synthetic Full	28.09.2019 23:00	00:31:00	116,26	20,76	1,09	73,30
Failed	0 of 1	Synthetic Full	29.09.2019 23:00	01:25:08	68,38	24,08	1,57	72,63

Job Type: NAS Backup

Status	Sources	Source Files	Files Processed (Changed)[TBD]	Files Backed Up	Start Time	Duration	Processing Rate (MB/Sec)	Data Size (GB)	Transferred (GB)
<b>Job Name: QA04 File Backup Job</b>									
Failed	0	0	0	0	27.09.2019 23:00	00:03:41	0,00	0,00	0,00
Failed	0	0	0	0	28.09.2019 23:00	00:03:48	0,00	0,00	0,00
Failed	0	0	0	0	29.09.2019 23:00	00:02:57	0,00	0,00	0,00

# Use Case

This report shows exhaustive information on the state of recent job sessions and reveals key statistics demanded by backup operators.

You can change the default report parameters to focus on particular jobs that include critical VMs; this will allow you to regularly receive information on vital job sessions via email or through a shared portal.

## Latest Job Status

This report evaluates the success status of recently performed backup, replication and backup copy jobs. The report shows whether they triggered any errors, warnings or completed successfully on the last session.

- The **B&R Job Status** pie chart represents overall efficiency of VM protection operations by displaying the total number of idle jobs and jobs whose last session completed successfully/with warnings.
- The **Top 10 Jobs by Duration** table provides a summary of the top 10 jobs with the longest backup duration.

- The **Details** section displays information on all jobs performed during the reporting period: job duration and status, the number of processed VMs, the amount of transferred data. For failed jobs, the report also shows error text.

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### Latest Job Status

#### Description

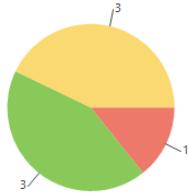
This report provides information about Veeam Backup & Replication jobs status.

#### Report Parameters

Scope:	Backup Infrastructure
Job Type:	Backup, Replication, File to Tape, Backup to Tape, Backup Copy
Latest Run Status:	All
Interval:	Current month (1/1/2020 - 1/31/2020)
Expand details:	Yes

#### Summary

##### B&R Job Status



##### Top 10 Jobs by Duration

Job Name	Duration (Last Run)	Transferred (GB)	Avg. Duration	Status
backup01.tech.local\Backup Copy Job Onsite	02 days 00:00:04	0.00	-	Warning
etna.tech.local\File to Tape Job 1	00:32:29	0.00	00:06:10	Success
backup01.tech.local\Mediaserver Backup to Cloud	00:12:11	4.58	00:16:35	Failed
backup01.tech.local\Weekly VDI Backup	00:07:57	0.00	00:03:02	Warning
backup01.tech.local\VDI Backup Copy to Cloud	00:02:36	0.00	-	Warning
backup02.tech.local\Backup Job Cloud	00:02:26	0.00	00:02:22	Success
backup02.tech.local\Onsite Daily Apache Backup	00:01:52	0.00	00:02:23	Success

Legend: Failed (Red), Success (Green), Warning (Yellow)

#### Details

##### Backup Server: backup01.tech.local

###### Failed Jobs

Job	Last Run	VMs & Computers Failed / Total	Transferred (GB)	Retry Count	Duration	Avg. Duration	Details
Mediaserver Backup to Cloud	1/14/2019	0 of 3	4.58	4	00:12:11	00:16:35	<b>Warnings:</b> Backup location [\alpha] is getting low on free disk space (4.1 GB free of 200.0 GB). Nothing to process. All machines were excluded from task list. <b>Errors:</b> Virtual Machine apache01 is unavailable and will be skipped from processing. Job finished with error at 1/14/2019 2:42:17 AM

###### Jobs with Warnings

Job	Last Run	VMs & Computers Warning / Total	Transferred (GB)	Retry Count	Duration	Avg. Duration	Details
Backup Copy Job Onsite	1/12/2019	1 of 1	0.00	0	02 days 00:00:04	-	<b>Warnings:</b> Some VMs were not processed during the copy interval Backup location [C:\Backup] is getting low on free disk space (4.4 GB free of 119.7 GB). Job finished with warning at 1/14/2019 12:00:56 AM
VDI Backup Copy to Cloud	1/13/2019	0 of 1	0.00	0	00:02:36	-	<b>Warnings:</b> Backup location [\alpha] is getting low on free disk space (8.2 GB free of 200.0 GB). Job finished with warning at 1/13/2019 12:02:55 AM
Weekly VDI Backup	1/12/2019	1 of 1	0.00	0	00:07:57	00:03:02	<b>Warnings:</b> Job finished with warning at 1/12/2019 10:08:17 PM

## Use Case

This report helps backup administrators track the recent VM protection operations and identify root causes of failed jobs.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Interval:** defines the time period to analyze in the report.
- **Job Type:** defines a job type to evaluate in the report (*Backup*, *Replication*, *File to tape*, *Backup to tape*, *Backup Copy*).
- **Latest Run Status:** defines a job run status to include in the report (*Success*, *Warning*, *Failed*).
- **Expand details:** defines whether details of backup job sessions must be included in the report.

# Protected VMs

This report analyzes backup protection of VMs in your virtual environment.

A VM is considered to be *Protected* if there is at least one valid backup or replica restore point that meets the designated RPO for it. A VM is considered to be *Unprotected* if it has an outdated or missing backup or replica restore points.

The report examines whether VMs have valid backup and replica restore points created within the specified time range (RPO period), shows the total number of restore points available for each protected VM, and provides information on the completion status of recent backup and replication job sessions.

The report helps you identify which VMs in your environment function without proper protection and make sure the existing backups and replicas meet established RPO requirements.

**NOTE:**

- VM replicas protected by any Veeam Backup & Replication job are not accounted in this report. For example, if you protect a VM replica with a backup job, this replica will not be considered a backed up VM in the report.
- Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Reporter might show invalid data for Veeam Backup & Replication reports and dashboards.

## Protected VMs

### Description

This report lists all protected and unprotected VMs including their last backup state.  
Note: VM replicas created by Veeam Backup & Replication jobs are not accounted in this report.

### Report Parameters

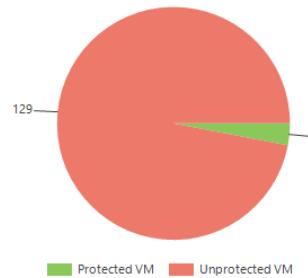
Scope:	vcenter01.tech.local
RPO period:	1 week (1/8/2020 - 1/14/2020)
Exclusion mask:	
Job type:	Backup, Replication, Backup Copy
Business View objects:	
Include VM templates in this report:	Yes
Job Exclusion list:	All Jobs

### Summary

#### VMs Overview

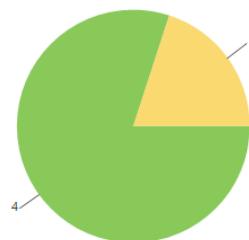
Total VMs:	158
Including Templates:	5
Protected VMs:	4
Backed Up VMs:	4
Replicated VMs:	0
Restore Points:	69
Unprotected VMs:	130
VM Replicas:	24

#### Protected VMs



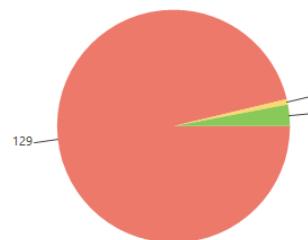
Protected VM Unprotected VM

#### VM Last Backup State



Success Warning

#### VM Last Backup Age



No Restore Points Within RPO

### Details

#### Protected VMs (VMware)

##### Location: vcenter01.tech.local>esx01.tech.local

VM Name	Protection Type	Job Name	Oldest Restore Point	Available Restore Points	Last Backup (Replica) Date
<b>Status: Success</b>					
sandbox	Backup	Backup Job Cloud	1/5/2019	9	1/13/2019 7:01:42 PM
apache02	Backup	Onsite Daily Apache Backup	12/29/2018	17	1/14/2019 12:01:15 AM
apache02	Backup	Mediaserver Backup to Cloud	12/29/2018	14	1/14/2019 2:09:11 AM

##### Location: vcenter01.tech.local>esx02.tech.local

VM Name	Protection Type	Job Name	Oldest Restore Point	Available Restore Points	Last Backup (Replica) Date
<b>Status: Success</b>					
vdi001	Backup Copy	VDI Backup Copy to Cloud	1/7/2019	7	1/12/2019 10:01:06 PM
apache07	Backup	Mediaserver Backup to Cloud	12/29/2018	14	1/14/2019 2:02:45 AM
<b>Status: Warning</b>					
vdi001	Backup	Weekly VDI Backup	12/29/2018	8	1/12/2019 10:01:06 PM

Unprotected VMs (VMware)					
Location: vcenter01.tech.local>esx01.tech.local	VM Name	VM Creation Date	Creator	VM Size (GB)	Available Restore Points
Unprotected Time: Last backup more than 2 weeks ago					
websrv02		Not defined	Not defined	40	2
Unprotected Time: No Backup					
tapesrv02		Not defined	Not defined	15	-
VBR03		Not defined	Not defined	40	-
srv49		Not defined	Not defined	41	-
srv06		Not defined	Not defined	50	-
srv21		Not defined	Not defined	20	-
tapesrv03		Not defined	Not defined	27	-
ova-template-veeampn		Not defined	Not defined	2	-
srv08		Not defined	Not defined	41	-

## Use Case

When you set up your backup, replication and backup copy jobs based on VI containers (such as folders, hosts or datastores) or employ complex exclusion parameters in job properties, some VMs may turn out to be excluded from the containers and therefore will lack proper protection.

This report displays a list of VMs protected by up-to-date backups and replicas, as well as a list of unprotected VMs which have outdated or missing backup or replicas. This information helps you validate the state of backup protection in your organization.

## Report Based on

To create the report, Veeam ONE Reporter retrieves and analyses data from the following sources:

- Historical data on backup, backup copy job, and replication sessions for the specified RPO period (gathered from Veeam Backup & Replication servers)
- List of VMs in virtual inventory (gathered from VMware vSphere, Microsoft Hyper-V management servers and vCloud Director)

## Report Parameters

You can specify the following report parameters:

- Scope (VMware VM folders):** defines a list of VMware folders to include in the report (applies to VMware vSphere environments only). VM folders view is an alternate way to present the virtual infrastructure. If VMs in your infrastructure are grouped into folders according to their profile, you can limit the report scope by specifying the necessary folders only.
- Scope (VI):** defines a virtual infrastructure level and its sub-components to analyze in the report.
- vCloud Director:** defines vCloud Director components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- RPO (Recovery Point Objective):** defines the maximum amount of data that you may accept to lose, expressed in time. RPO defines the age of the latest backup or replica files required to resume normal operation if system failure occurs. For example, to compile a list of VMs protected on a daily basis, you need to set the RPO value to 1 day.

- **Exclusion mask:** defines a list of VMs that should be excluded from the report scope. You can enter VM names explicitly or create a wildcard mask by using the asterisk (\*) to replace any number of characters. Multiple entries are separated by semicolon. Usage example: the following string will exclude machines with the \_R&D suffix from appearing in the report: “\*\_R&D”.
- **Job type:** defines a job type to evaluate in the report (*Backup jobs*, *Replication jobs*, *Backup Copy jobs*, *All items*).
- **Include VM templates in this report:** defines whether VM templates should be included in the report.
- **Exclude Jobs:** defines a list of backup and replication jobs to exclude from the report.

## Recovery Verification Overview

This report validates the completion status of SureBackup jobs and displays the results of recovery verification tests. The report helps you reveal the list of operational VMs that can be restored from the produced backup or replicas.

The **SureBackup Job Status** and **Verified VMs Status** charts provide the following details:

- The latest state of SureBackup job sessions.
- The total number of VMs for which the latest SureBackup job session completed successfully, the total number of VMs for which the latest SureBackup job session completed with warnings, total number of VMs for which the latest SureBackup job session failed and total number of VMs for which SureBackup jobs have not been run at all.

The **Antivirus Check** chart displays the results of the last antivirus check run.

The **Details** table shows the results of completed SureBackup job sessions and provides the following information: the name and status of the evaluated SureBackup job, the list of VMs included in the job, the application type of the verification model used to test each VM, the verification date and the date when backup or replica was created, the results of *ping*, *heartbeat* and *script execution* commands executed to verify recoverability of created copies, the version of the antivirus installed on a VM and the last antivirus check result.

## VeeAM

### Recovery Verification Overview

#### Description

This report provides information about Veeam Backup & Replication SureBackup job and verified VMs latest status.

#### Report Parameters

Scope: Backup Infrastructure  
Job Type: All  
Group By: Verification Status

#### Summary



#### Details

##### Backup Server: apache07.tech.local

Status	Duration	Virtual Machine	Application Type	Verification Date	Verified Backup	Ping	Heartbeat	Script	SureBackup Job	Antivirus	AV Check Result
Success	1		-	12/29/2018 3:09 AM	1/1/1900 11:00 AM	Success	Success	Disabled	Exchange Verification Job	-	N/A
	00:18:37	tech_srv01	-	12/29/2018 3:09 AM	1/1/1900 11:00 AM	Success	Success	Disabled	Exchange Verification Job	-	N/A
	00:18:37	tech_srv01	-	12/29/2018 3:09 AM	1/1/1900 11:00 AM	Success	Success	Disabled	Exchange Verification Job	-	N/A

##### Backup Server: vac.tech.local

Status	Duration	Virtual Machine	Application Type	Verification Date	Verified Backup	Ping	Heartbeat	Script	SureBackup Job	Antivirus	AV Check Result
Success	1		-	12/29/2018 3:09 AM	1/1/1900 11:00 AM	Success	Success	Disabled	Exchange Verification Job	-	N/A
	00:18:37	tech_srv01	-	12/29/2018 3:09 AM	1/1/1900 11:00 AM	Success	Success	Disabled	Exchange Verification Job	-	N/A
	00:18:37	tech_srv01	-	12/29/2018 3:09 AM	1/1/1900 11:00 AM	Success	Success	Disabled	Exchange Verification Job	-	N/A

## Use Case

SureBackup is a unique Veeam technology that ensures that the VM being backed up or replicated is safely recoverable from the media. SureBackup allows you to validate backups and replicas of your VMs without impacting the production infrastructure. You can automatically verify every created restore point of every VM and ensure that they will function as expected in case a disaster strikes.

The report helps you discover issues that occur in operation of your backup infrastructure. It provides details on the state of SureBackup jobs so that you can reconfigure current job settings or include mission critical VMs in SureBackup jobs.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Job Type:** defines a SureBackup job type to evaluate in the report (Backup, Replica, All).
- **Group by:** defines how objects will be grouped in the report (by *Verification Status* or *Job Name*)

## SQL Backup Job Historical Information

This report tracks results of Veeam Backup & Replication jobs that protect virtualized Microsoft SQL Servers. The report helps you ensure that critical databases are properly protected and that transaction logs for these databases have been successfully backed up. For details on protecting virtualized Microsoft SQL Servers, see [Microsoft SQL Server Logs Backup and Restore](#).

The report includes the following information:

- The **Jobs Overview** section shows the number of configured SQL backup jobs, the total number of VMs included in these jobs, and the total number of hosted databases.
- The **Databases Overview** section shows the number of databases that were backed up at least once during the last session (that is, *Protected* databases), number of databases that were not backed up during the last session (that is, *Unprotected* databases), and databases excluded from processing.
- The **SLA** chart shows how many log backup intervals within the specified RPO period completed with successful log shipment (in percentage).
- The **Job Sessions by Status** chart shows results of job sessions.

- The **Details** table provides additional information on the efficiency of executed jobs, number of protected, unprotected and excluded VMs, number of missed intervals, and actual difference between configured log backup interval and time actually required for log backup.

Click a VM name in the details table to drill down to the detailed view of the backed up database instances.

## VEEAM

### SQL Backup Job Historical Information

#### Description

This report gives historical overview of all SQL backup jobs including the list of protected and unprotected databases for each VM.

#### Report Parameters

Scope: Backup Infrastructure  
 Interval: 1/14/2020 - 1/20/2020  
 Backup Job: All Jobs

#### Summary

##### Jobs Overview

N. of Jobs: 2  
 N. of VMs: 2  
 N. of databases: 11



##### Job Sessions by Status



#### Details

Backup Job	VMs	Protected	Databases Unprotected	Excluded	SLA	RPO Misses	Max Delay	Success	Sessions Warning	Errors
CRM DB Backup SQL Server Transaction Log Backup	1	4	0	3	100.00	0	00:00:00	2	0	1
	crm_db	4	0	3	100.00	0	00:00:00	2	0	1
Intranet Portal Backup SQL Server Transaction Log Backup	1	0	0	4	100.00	0	00:00:00	5	0	0
	pearl	0	0	4	100.00	0	00:00:00	5	0	0

## Use Case

SQL server is a software component that is mission critical for a modern enterprise. The role of database management is constantly expanding, that is why you need to be sure that your SQL databases are safely protected.

The report allows you to track historical statistics for SQL backup jobs, ensure that the configured jobs allow you to meet the desired SLA requirements.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- Backup Job:** defines a list of SQL backup jobs to include in the report.
- Interval:** defines the time period to analyze in the report.

## Verified VMs

This report provides information on SureBackup jobs performed by Veeam Backup & Replication and displays the summary of verified VMs.

SureBackup and SureReplica technologies allow virtualization administrators to validate the recoverability of created backups and replicas in an isolated test environment by examining their key viability indicators. This ensures that your backups and replicas are fully reliable and minimizes the risk of data loss in case a VM fails.

The report reveals how many protected VMs were tested and verified with SureBackup and SureReplica, displays the status of SureBackup jobs completion and details the results of VM verification tests (ping commands, scripts execution and heartbeat messages).

#### NOTE:

Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Reporter might show invalid data for Veeam Backup & Replication reports and dashboards.

## veeam

### Verified VMs

#### Description

This report provides information about Veeam Backup & Replication recovery verification jobs and VMs verification statuses.

#### Report Parameters

Scope:	Backup Infrastructure
Interval:	1 month (12/15/2019 - 1/14/2020)
Report type:	All
Business View objects:	
Job type:	Backup and replication jobs

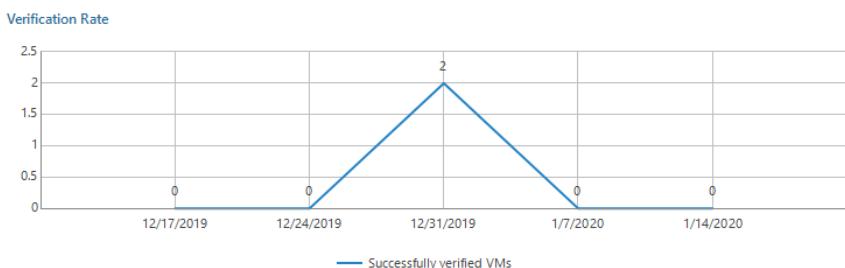
#### Summary

##### VMs Overview

Protected VMs:	11
Verified VMs:	2

##### Verified VMs Status History

Passed:	48
Passed with warnings:	0
Failed:	48



#### Details

Virtual Machines	Failed/Total Verifications	Last Verified Restore Point	Last Verification Status
VM Role: No Role Specified			
dc03	2/6	12/29/2018 11:02:00 PM	FAILED
dns01	4/6	12/29/2018 3:03:06 AM	FAILED

1 - ping failure, 2 - ping warning  
3 - script failure, 4 - script warning  
5 - heartbeat failure, 6 - heartbeat warning

## Use Case

This report helps administrators to quickly review the results of completed SureBackup jobs and confirm that the created backups and replicas are recoverable and error-free. This ensures that production VMs are reliably protected against failures and data corruption.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type:** defines the time period to analyze in the report.
- **Report type:** defines whether to analyze VMware vSphere or Microsoft Hyper-V infrastructure.
- **Job type:** defines a job type to evaluate in the report (*Backup and replication jobs, Backup jobs only, Replication jobs only*).

## VM Change Rate History

This report allows you to track backup and replication jobs whose backup files and replica VMs grow too fast and may quickly consume storage space on the target repository or target datastore.

- The **VMs with Largest Change Rate (GB)** and **VMs with Least Change Rate (GB)** charts displays the most and least active VMs in terms of the amount of data changes that occurred on their virtual disks.
- The **Details** table provides information on the list of VMs included in the backup and replication jobs, the average and aggregate amount of data changes that took place during the specified reporting interval and the size of the current full backup file\*.

## NOTE:

Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Reporter might show invalid data for Veeam Backup & Replication reports and dashboards.

## veeam

### VM Change Rate History

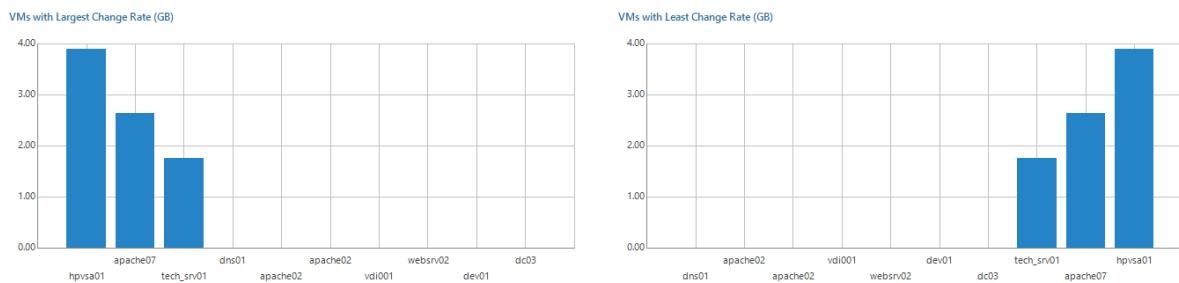
#### Description

This report shows jobs whose backup files and replica VMs grow fast and may quickly consume space on the target repository or datastore.

#### Report Parameters

Scope: vcenter01.tech.local  
Interval: Past month (12/1/2019 - 12/31/2019)  
Job type: All jobs  
Job Exclusion list: All Jobs

#### Summary



#### Details

Job Name	VM Name	Average VM Change Rate Per Day (GB)	Total Incremental Changes (GB)	Total Active Full Backups Data (GB)	Actual Increments File Size (GB)	Actual Full Backup File Size (GB)	Total Backup File Size (GB)	Actual N. of Increments	Actual N. of Full Backups
Apache07.tech.local\Apache Backup	1	7.13	1.75	19.63	1.16	9.83	10.99	7	1
Apache07.tech.local\Backup Job 5	tech_svr01	7.13	1.75	19.63	0.00	9.19	9.19	0	1
Apache07.tech.local\Columbus Virtual Storage	dev01	3.06	0.00	9.17	0.00	9.17	9.17	0	1
Apache07.tech.local\Exchange Backup Job	1	5.72	3.90	13.25	3.57	26.41	29.98	11	2
Apache07.tech.local\hpvs01	hpvs01	5.72	3.90	13.25	0.00	26.41	29.98	11	2
Apache07.tech.local\Exchange Backup Job	2	6.19	0.00	18.57	0.76	20.63	21.40	4	2
Backup01.tech.local\Mediaserver Backup to Cloud	dc03	3.09	0.00	9.28	0.00	9.28	9.28	0	1
Backup01.tech.local\Mediaserver Backup to Cloud	dnx01	3.09	0.00	9.28	0.00	9.28	9.28	0	1
Backup01.tech.local\Weekly VDI Backup	2	9.74	2.64	26.57	47.12	50.21	97.32	12	2
Backup01.tech.local\Weekly VDI Backup	apache02	0.00	0.00	0.00	0.00	0.00	0.00	0	1
Backup01.tech.local\Weekly VDI Backup	apache07	9.74	2.64	26.57	0.00	0.00	0.00	0	1
Backup01.tech.local\Weekly VDI Backup	1	5.80	0.00	17.41	0.14	34.84	34.98	7	2
Backup02.tech.local\Onsite Daily Apache Backup	vdi001	5.80	0.00	17.41	0.00	0.00	0.00	0	1
Backup02.tech.local\Onsite Daily Apache Backup	1	0.00	0.00	0.00	0.29	0.06	0.35	14	3
etna.tech.local\Atlanta Application Server Backup	apache02	0.00	0.00	0.00	0.00	0.00	0.04	0	2
etna.tech.local\Atlanta Application Server Backup	websrv02	0.00	0.00	0.00	0.00	0.00	0.04	0	2

## Use Case

To perform incremental backup, Veeam Backup & Replication needs to know which data blocks have changed since the previous job run. For VMware VMs with hardware version 7 or later, Veeam Backup & Replication employs VMware vSphere Changed Block Tracking (CBT) – a native VMware feature that backs up only the list of VM blocks that have changed since the last run of this particular job. Use of CBT reduces backup session duration, and increases the speed and efficiency of block-level incremental backups.

The report analyzes changes occurred on VM disks and estimates the amount of changed data. This can help you decide whether to allocate more space on the target repository or datastore in case VM files grow too fast.

The report is also handy for people planning to do replication as a way to figure out if their bandwidth can handle the replication.

# Report Parameters

You can specify the following report parameters:

- **Scope (VI):** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Scope (VMware VM folders):** defines a list of VMware folders to include in the report (applies to VMware vSphere environments only). VM folders is an alternate way to present the virtual infrastructure. If VMs in your infrastructure are grouped into folders according to their profile, you can limit the report scope by specifying the necessary folders only.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval:** defines the time period to analyze in the report (*Current week, Past week, Past month*).
- **Job type:** defines a job type to evaluate in the report (*Backup jobs only, Replication jobs only, All jobs*).
- **Exclude Jobs:** defines a list of backup and replication jobs to exclude from the report.

\*Note that no data will be available for synthetic or reversed backup, as well as for replicas.

## VM Daily Protection Status

This report provides information on the daily backup status for all protected VMs.

The report complements the [Protected VMs](#) report and shows job completion results for backup, backup copy and replication tasks for protected VMs.

- The **VM Backup Status** chart represents overall efficiency of daily protection operations by displaying the number of VM tasks completed successfully, the number of VM tasks completed with warnings and the number of VM tasks failed. If you have launched a VM job several times a day, the report will show the best VM task status.
- The **Details** table provides a list of protected VMs and displays daily job completion results.

## NOTE:

Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Reporter might show invalid data for Veeam Backup & Replication reports and dashboards.



### VM Daily Protection Status

#### Description

This report provides daily backup status information for all protected VMs.

#### Report Parameters

Scope:	Backup Infrastructure
Interval period:	1/7/2020 - 1/13/2020
Job type:	Backup, Replication, Backup Copy
Group by:	Backup Job
Business View object(s):	
Include VM templates in this report:	No

#### Summary



#### Details

Backup Server: backup01.tech.local

VM Name	Monday (1/7/2019)	Tuesday (1/8/2019)	Wednesday (1/9/2019)	Thursday (1/10/2019)	Friday (1/11/2019)	Saturday (1/12/2019)	Sunday (1/13/2019)
vdi001	-	Warning	Warning	-	Warning	-	Warning

Job Name: Backup Copy Job Onsite

vdi001	-	Warning	Warning	-	Warning	-	Warning
--------	---	---------	---------	---	---------	---	---------

Job Name: Mediaserver Backup to Cloud

Job Name: VDI Backup Copy to Cloud

vdi001	Success						
--------	---------	---------	---------	---------	---------	---------	---------

Job Name: Weekly VDI Backup

vdi001	-	Warning	Warning	Warning	Warning	Warning	Warning
--------	---	---------	---------	---------	---------	---------	---------

Backup Server: backup02.tech.local

VM Name	Monday (1/7/2019)	Tuesday (1/8/2019)	Wednesday (1/9/2019)	Thursday (1/10/2019)	Friday (1/11/2019)	Saturday (1/12/2019)	Sunday (1/13/2019)
vdi001	-	Warning	Warning	Warning	Warning	Warning	Warning

Job Name: Backup Job Cloud

Job Name: Onsite Daily Apache Backup

Backup Server: etna.tech.local

VM Name	Monday (1/7/2019)	Tuesday (1/8/2019)	Wednesday (1/9/2019)	Thursday (1/10/2019)	Friday (1/11/2019)	Saturday (1/12/2019)	Sunday (1/13/2019)
vdi001	-	Warning	Warning	Warning	Warning	Warning	Warning

Job Name: Atlanta Application Servers Backup

Job Name: Atlanta Sharepoint Servers Job

## Use Case

The report helps you discover issues with created backups and replicas: detect failed jobs, identify jobs that triggered warnings and ensure that critical machines can be easily recovered in case of a disaster.

# Report Based on

To create the report, Veeam ONE Reporter retrieves and analyses data from the following sources:

- Historical data on restore points created during the specified reporting period (gathered from Veeam Backup & Replication servers)
- List of VMs in virtual inventory (gathered from Veeam Backup & Replication servers)

# Report Parameters

You can specify the following report parameters:

- **Scope (Backup):** defines a list of Veeam Backup & Replication servers and protected VI servers to include in the report.
- **Scope (VMware VM folders):** defines a list of VMware folders to include in the report (applies to VMware vSphere environments only). VM folders is an alternate way to present the virtual infrastructure. If VMs in your infrastructure are grouped into folders according to their profile, you can limit the report scope by choosing the necessary folders only.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval:** defines a time period to analyze in the report (*Current week, Past week, Past 7 days*).
- **Interval period:** defines a time period (a week) to analyze in the report.
- **7 days from:** defines a start date of the reporting period. The report will analyze a 7-day period starting from the selected date.
- **Past N weeks:** defines the number of weeks in the past (starting from today) to analyze in the report.
- **Job Type:** defines a job type to evaluate in the report (*Backup, Replication, Backup Copy, All*).
- **Group by:** defines whether data in the report output will be grouped by *Backup Job* or *Location*.
- **Include VM templates in this report:** defines whether VM templates should be included in the report.

# Veeam Backup Overview

This report pack provides an overview of Veeam Backup & Replication configuration, including details on job configuration and backup schedule, as well as configuration of failover plans. It also includes reports analyzing backup alarms to help you detect the most common problems in the Veeam Backup & Replication infrastructure.

**Number of reports:** 11

**Current version:** 3

**Reports included:**

- [Backup Alarms Overview](#)
- [Backup Inventory](#)
- [Backups on Repository](#)
- [Current Backup Alarms State Overview](#)
- [Delegated Restore Permissions Overview](#)
- [Job Configuration Dump](#)
- [Job Data Exclusions](#)
- [Protected VMs Job Schedule](#)
- [Scale-out Backup Repository Configuration](#)
- [VM and Computer Protection History](#)
- [VM Failover Plan Overview](#)

## Backup Alarms Overview

This report provides an overview of the data protection health state. It allows you to track Veeam Backup & Replication alarms triggered by Veeam ONE Monitor, and see most affected Veeam Backup and Replication jobs and components.

- The **Total Job Issues** chart displays the total number of warnings and errors for each day within a reporting period.
- The **Top 5 Job Issues** chart displays top 5 jobs that caused more alarms than other jobs.
- The **Top 10 VMs Troublemakers** table lists 10 most affected VMs and the number of alarms triggered for each machine.
- The **Top 10 Issues** table shows 10 the most frequent alarms and how many times each alarm was triggered.
- The **Details** table provides information on affected backup infrastructure objects and displays how many alarms were triggered.

The report also calculates a trend for each object. It compares information on alarms triggered over the reporting period (day/week/month/year) with the number of alarms triggered during the day/week/month/year previous to the reporting period. For example, if the selected reporting period is one month, the trend will use the month previous to the reporting period to calculate the trend. By comparing two equal periods, the report shows whether the number of triggered alarms increased or reduced. Therefore, you can track data protection health state changes.

Click a number in the **Alarms** column to drill down to alarm details.

## Backup Alarms Overview

### Description

This report provides an overview of your data protection health state that includes backup infrastructure alarms and most affected jobs.

### Report Parameters

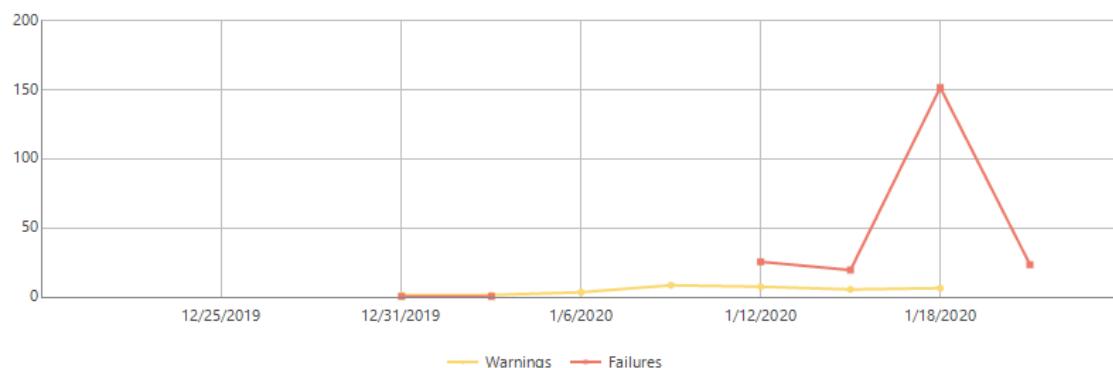
Scope:	Backup Infrastructure
Interval:	1 month (12/19/2019 - 1/18/2020)
Sorting by:	Issue type
Alarm Types:	All items
Alarms List:	All items

### Summary

Backup Infrastructure Alarms		Job Issues	
Total Errors:	172	Total Job Failures:	224
Total Warnings:	18	Total Job Warnings:	38

### Top Objects And Issues

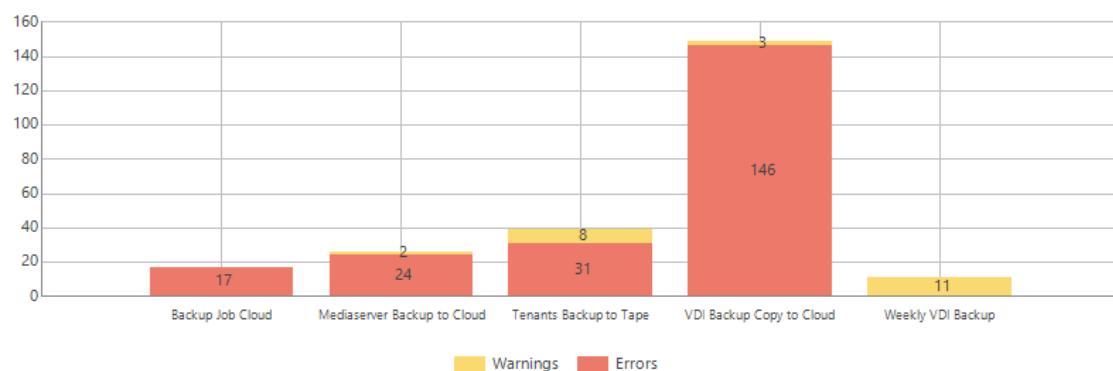
#### Total Job Issues



#### Top 10 VMs Troublemakers

VM Name	Job	Warnings	Failures	Total Issues
vdi001	Backup Copy Job Onsite	22	0	22
vdi001	VDI Backup Copy to Cloud	22	0	22
vdi001	Weekly VDI Backup	22	0	22
vsa	Atlanta Sharepoint Servers Job	1	1	2

#### Top 5 Job Issues



#### Top 10 Issues

Name	Total Triggered	Total Objects
Backup Copy job state	143	3
Backup job state	18	3

## Details

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### Issue Type: Errors

Object Type	Object Name	Alarms	Trend
Backup Server	4	<a href="#">172</a>	
	etna.tech.local	<a href="#">9</a>	Increasing
	backup01.tech.local	<a href="#">150</a>	Increasing
	apache07.tech.local	<a href="#">6</a>	Increasing
	backup02.tech.local	<a href="#">7</a>	Increasing

### Issue Type: Warnings

Object Type	Object Name	Alarms	Trend
Backup Server	3	<a href="#">18</a>	
	etna.tech.local	<a href="#">4</a>	Increasing
	backup02.tech.local	<a href="#">1</a>	Increasing
	backup01.tech.local	<a href="#">13</a>	Increasing

## Use Case

The report provides an overview of the data protection health state, shows the list of the frequently triggered alarms and displays the most affected backup infrastructure objects.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines backup infrastructure objects to analyze in the report.
- **Interval - Interval Type/Start Date - End Date:** defines the time period to analyze in the report.
- **Group By:** defines the way data will be grouped in the report (by *Issue type* or *Object type*).
- **Alarm Type:** defines a list of data protection object types to analyze and include in the report.
- **Alarms List:** defines a list of alarms to analyze in the report. The options in the list depend on the selected *Alarm Type* parameter.

## Backup Inventory

This report provides inventory information on configuration of your Veeam Backup & Replication infrastructure.

- The **License Information** section shows product license details. The **Installed Licenses** subsection includes the license type, the number of licensed and used sockets and instances, support expiration and license expiration dates, the overall and used capacity. The **Instances Usage** subsection shows groups of managed objects, number of objects in each group, and number of instances consumed by each group.
- The **Veeam B&R Infrastructure** section provides information about backup servers, including the version of Veeam Backup & Replication installed, the number and type of backup proxies and backup repositories managed by backup servers.
- The **Backup Proxies** section provides information about backup proxy servers, including the type of transport mode chosen for proxy servers, the number of maximum allowable concurrent tasks, connected datastores, and shows whether throttling is enabled for these servers.
- The **Tape Servers** section provides information about tape servers and tape libraries connected to the servers, and shows whether throttling is enabled for these servers.

- The **Backup Repositories** section shows a list of backup repositories and provides additional details including the repository capacity and free space, the amount of space used by full and incremental backups, the number of backup jobs utilizing a repository and the number of VMs and computers residing in backups stored on a repository.
- The **Scale-Out Backup Repositories** section shows a list of scale-out backup repositories and provides additional details including the repository regular extents and capacity tiers, their capacities and free space, the amount of used space, the number of backup jobs utilizing a repository and the number of VMs and computers residing in backups stored on a repository.
- The **WAN Accelerators** section provides information about WAN accelerators and their configuration, including a port number, the number of allowed concurrent connections, cache size, the amount of free space in cache, and cache location.
- The **Cloud Repositories** section provides information about cloud repositories available for cloud tenants, including physical repositories on which cloud storage is allocated, storage quota, free space remaining on the repositories, the number of VMs and computers residing in backups stored on a repository, repository expiration date.
- The **Cloud Gateway Servers** section provides information about cloud gateways configured on Veeam Cloud Connect servers, including OS of a machine that performs the role of a cloud gateway, IP address or DNS name of this machine, and a port that a cloud gateway uses to transport data.

- The **Jobs** section displays all backup jobs, their types and the number of VMs and computers in each job.

## Backup Inventory

## Description

This report provides general inventory information about your Veeam Backup & Replication infrastructure.

## Report Parameters

Scope: Backup Infrastructure

## License Information

## Installed Licenses

Backup Servers	Edition	Type	Package	Cloud Connect	Licensed Sockets	Used Sockets	Licensed Instances	Used Instances	Support Expiration	License Expiration	Capacity (TB)	Used Capacity (TB)
backup01.tech.local	EnterprisePlus	Subscription	Suite Backup	Yes	0	1000	0	5	9/9/2020	9/9/2020	10	0
backup02.tech.local	EnterprisePlus	Subscription	Suite Backup	Yes	0	1000	0	2	9/9/2020	9/9/2020	20	5
etna.tech.local	EnterprisePlus	Subscription	Suite Backup	Yes	0	1000	0	2	9/9/2020	9/9/2020	0	0

## Instances Usage

Backup Servers	VMs	Cloud Machines	Managed Objects				Used Instances					
			Workstations	Physical Servers	File Shares (250GB)	Plugin Servers	VMs	Cloud Machines	Workstations	Physical Servers	File Shares (250GB)	Plugin Servers
backup01.tech.local	0	0	0	0	1	0	0	0	0	0	1	0
backup02.tech.local	10	0	0	0	0	0	25	0	0	0	0	0
etna.tech.local	0	0	0	0	0	0	0	0	0	0	0	0

## Veeam B&amp;R Infrastructure

Backup Server	Backup Server Version	Proxy Servers	CIFS Repositories	Windows Repositories	Linux Repositories	Scale-out Repositories
backup01.tech.local	10.0.0.4359	1	0	1	0	0
backup02.tech.local	10.0.0.4389	1	0	1	0	0
etna.tech.local	10.0.0.4359	2	0	1	0	0

## Backup Proxies

Type	Proxy Server	Transport Mode	Host Type	Max. Concurrent Tasks	Connected Datastores	Throttling
File Backup		3				
	backup01.tech.local\VMware Backup Proxy	Network	Windows	2	Automatic	Disabled
	backup02.tech.local\VMware Backup Proxy	Network	Windows	2	Automatic	Disabled
	etna.tech.local\VMware Backup Proxy	Network	Windows	2	Automatic	Disabled
VM Backup		3				
	hypers01.tech.local\Hyper-V Backup Proxy	Automatic	Windows	2	Automatic	Disabled

## Tape Servers

Backup Servers	Tape Server Name	Type	Connected Tape Library	Throttling
apache07.tech.local				
	tapesrv03.tech.local	VMware (VHD)	STK L80 0200	Disabled
etna.tech.local	tapesrv01	VMware (VHD)	HP MSL G3 Series 5.30, HP MSL G3 Series 3.00	Disabled

## Backup Repositories

Type	Repository	Capacity (GB)	Free Space (GB)	Full Backup Size (GB)	Increments Size (GB)	Backup Jobs	VMs and Computers
Cloud		2					
	backup01.tech.local\Alpha Cloud Vol01	200.00	4.13	67.63	47.24	2	4
	backup02.tech.local\Delta Cloud Vol01	300.00	299.82	0.04	0.14	1	1
Windows		5					
	apache07.tech.local\Tech Storage 01	399.66	316.06	56.88	5.50	3	5
	backup01.tech.local\Default Backup Repository	119.66	4.36	67.02	18.22	2	2
	etna.tech.local\Atlanta Backup Repository	119.66	89.95	8.12	0.00	2	2
	apache07.tech.local\Default Backup Repository	119.66	84.02	9.19	0.00	1	1
	backup02.tech.local\Default Backup Repository	119.66	88.61	0.06	0.29	1	1

## Scale-Out Backup Repositories

Repository	Count	Capacity (GB)	Free Space (GB)	Used Space (GB)	Count	Capacity (GB)	Free Space (GB)	Used Space (GB)	Backup Jobs	VMs and Computers
backup01.tech.local\Scale-OutRepository	1	320.00	213.69	106.31	1	1024.00	996.86	27.14	3	4

## WAN Accelerators

Name	Port	Max. Connections	Max. Cache Size (GB)	Cache Free Space (GB)	Cache Location
backup01.tech.local\BACKUP01	6164	5	50.00	50.00	c:\WAN
backup02.tech.local\BACKUP02	6164	5	75.00	75.00	c:\WAN

## Jobs

Backup Server	Job Name	Job Type	Objects
backup01.tech.local	Agent Backup Job Atlanta	Windows Agent Backup	1
	Backup Copy Job Onsite	Backup Copy	1
	Mediaserver Backup to Cloud	Backup	3
	VDI Backup Copy to Cloud	Backup Copy	1
	Weekly VDI Backup	Backup	1
etna.tech.local		5	7
	Atlanta Application Servers Backup	Backup	1
	Atlanta Servers Backup to Tape	VM Tape Backup	2
	Atlanta Sharepoint Servers Job	Backup	1
	File to Tape Job 1	File Tape Backup	0
apache07.tech.local	Payroll Reports to Tape (Q1-Q2)	File Tape Backup	0
		10	16
	Apache Backup	Backup	1
	Apache Replication Job	Replication	0
	Backup Job 5	Backup	1
	Columbus Monthly Backup Job	Backup	0
	Columbus Virtual Storage	Backup	1
	Dev Daily Backup Job	Windows Agent Backup	2
	Exchange Backup Job	Backup	3
	Exchange Verification Job	SureBackup	4
backup02.tech.local	SureBackup Job 1	SureBackup	3
	Tech Backup Copy Job	Backup Copy	1
		2	2
	Backup Job Cloud	Backup	1
	Onsite Daily Apache Backup	Backup	1

## Use Case

This report displays information on the state of backup infrastructure components and provides product licensing details.

## Report Parameters

**Scope:** defines a list of Veeam Backup & Replication servers to include in the report.

## Backups on Repository

This report provides detailed information about files stored on backup repositories.

The **Summary** section includes the following elements:

- The **Top Repositories by Used Space** chart displays top 5 repositories in terms of the greatest amount of used space of restore points and the largest amount of backed up data.
- The **Top Repositories by VMs Stored**, **Top Repositories by Computers Stored** and **Top Repositories by File Sources Stored** charts display top repositories in terms of the greatest number of VMs, computers and file sources stored on the repository.

The **Details** section provides information on repository type, capacity, free and used space as well as detailed information about backups stored on the repository.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Backup Repository:** defines a list of backup repositories to include in the report.

- **Backup Type:** defines types of objects to include in the report (*VMs, Computers, Files, All Items*).

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### Backups on Repository

#### Description

This report provides information about VM, computer and file backups stored on backup repositories.

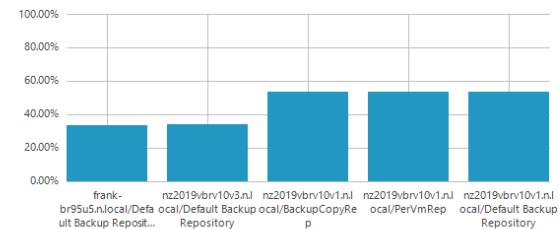
#### Report Parameters

Scope: Backup Infrastructure  
 Backup Repository: All repositories  
 Backup Type: All types

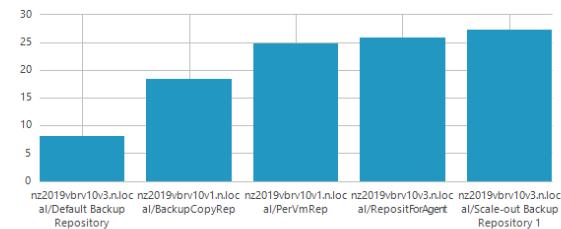
#### Summary

Repositories number: 6  
 Scale-out repositories: 0  
 Used space: 337,63 GB  
 File sources stored: 1  
 Computer backups stored: 9  
 VM backups stored: 1

Top Repositories by Used Space, %



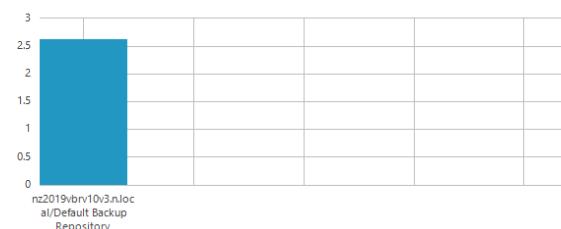
Top Repositories by VMs Stored, GB



Top Repositories by Computers Stored, GB



Top Repositories by File Sources Stored, GB



#### qa08.tech.local\Archive Backup Repository

Repository type: Windows  
 Capacity: 119,66 GB  
 Free space: 98,09 GB  
 Used space: 21,56 GB  
 VM Backups size: 0 B  
 Computer Backups size: 0 B  
 File Backups size: 0 B

#### srwwin14.tech.local\Default Backup Repository

Repository type: Windows  
 Capacity: 119,66 GB  
 Free space: 1,34 GB  
 Used space: 118,32 GB  
 VM Backups size: 0 B  
 Computer Backups size: 62,71 GB  
 File Backups size: 0 B

#### Computer Backups

Computer Name	Full Backups #	Increments #	Restore Points #	Full Backups Size, GB	Increments Size, GB	Total Backups Size, GB	Parent Jobs	Latest backup date
backup2208 Backup to VBR	4	8	12	19,28	1,75	21,03	backup2208 Backup to VBR	10.09.2019 20:00
backup2208 MySQL Backup to VBR	1	10	11	4,77	3,18	7,95	backup2208 MySQL Backup to VBR	11.09.2019 20:00

## Use Case

This report helps you monitor space usage on backup repositories and the amount of VMs, computers and file sources stored on repositories.

## Current Backup Alarms State Overview

This report shows all unresolved alarms that Veeam ONE Monitor triggered for the Veeam Backup & Replication infrastructure.

- The **Total issues number** chart shows the total number of alarms specified in the *Alarm Status* parameter.
- The **Top 10 Issues** table displays 10 most frequent unresolved alarms, their status, and how many times they were triggered.

- The **Details** table displays names of triggered alarms, their status, triggering events and time, and affected backup infrastructure objects.

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### Current Backup Alarms State Overview

#### Description

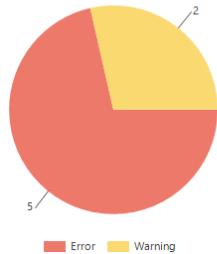
This report shows all currently unresolved alarms for the backup infrastructure.

#### Report Parameters

Scope: Backup Infrastructure  
 Alarms status: Errors, Warnings, Acknowledged

#### Summary

Total Issues Number



Top 10 Issues

Alarm Name	Warnings	Errors	Total Issues
Backup repository free space	0	2	2
Agent backup job state	0	1	1
Backup Copy job state	1	0	1
SureBackup job state	0	1	1
Backup job state	1	0	1
Backup proxy connection failure	0	1	1

#### Details

##### Backup Server: apache07.tech.local

Object Type	Object Name	Alarm Name	Type	Repeat Count	Trigger	Time
Backup Server		1				
	apache07.tech.local	SureBackup job state	Error	2	Fired by event: VeeamBpSbSessionErrorEvent Event description: SureBackup job "SureBackup Job 1" finished with error Initiated by: Veeam ONE Monitor (SRV11)	12/30/2018 1:31:45 AM

##### Backup Server: backup01.tech.local

Object Type	Object Name	Alarm Name	Type	Repeat Count	Trigger	Time
Repository		2				
	Alpha Cloud Vol01	Backup repository free space	Error	2	Amount of free space (4.5%) is below a defined threshold (5.0%). Current free space is: 9.00 GB.	2/7/2019 2:14:19 AM
	Default Backup Repository	Backup repository free space	Error	3	Amount of free space (3.7%) is below a defined threshold (5.0%). Current free space is: 4.39 GB.	2/8/2019 10:16:08 PM
Backup Server		2				
	backup01.tech.local	Backup job state	Warning	2	Fired by event: VeeamBpBackupSessionWarningEvent Event description: Job "Weekly VDI Backup" finished with warning. Job finished with warning at 1/7/2019 10:02:28 PM  vdi001 - Guest processing skipped (check VMware Tools status) Initiated by: Veeam ONE Monitor (SRV11)	1/7/2019 10:09:32 PM
	backup01.tech.local	Backup Copy job state	Warning	4	Fired by event: VeeamBpBackupSyncSessionWarningEvent Event description: Job "Backup Copy Job Onsite" finished with warning. Job finished with warning at 1/7/2019 9:44:45 PM  vdi001 - Operation was canceled by user BACKUP01\Administrator Initiated by: Veeam ONE Monitor (SRV11)	1/7/2019 9:50:41 PM

## Use Case

You can use this report to detect and resolve current and the most pressing issues with Veeam Backup & Replication.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines backup infrastructure objects to analyze in the report.
- **Alarms Status:** defines statuses of alarms to display in the report (*Errors and Warnings; Errors only; Errors, Warnings, Acknowledged; Acknowledged only*).

## Delegated Restore Permissions Overview

This report analyzes restore permissions configured in Veeam Backup Enterprise Manager. The report returns the list of users who can restore entire VMs, guest OS files and application items via the Veeam Backup Enterprise Manager or Veeam Self Service File Restore portal, and shows what type of data these users can restore according to the effective policies.



### Delegated Restore Permissions Overview

#### Description

This report provides information on the assigned restore permissions for all protected virtual machines (Requires Veeam Backup Enterprise Manager).

#### Report Parameters

Scope: All  
Group By: User

#### Details

##### Enterprise Manager: backup02.tech.local

Account	Type	Role	Allowed Restore Type	Restore Scope
BACKUP02\Administrator	User	Portal Administrator	Guest Files VMs Exchange Items SQL Server Items	Any Host  All VMs
BACKUP02\mark.green	User	Restore Operator	Guest Files VMs Exchange Items SQL Server Items	Any Host  All VMs
BUILTIN\Administrators	Group	Portal Administrator	Guest Files VMs Exchange Items SQL Server Items	Any Host  All VMs
LOCAL	User	Restore Operator	Guest Files VMs Exchange Items SQL Server Items	Any Host  All VMs

# Use Case

Auditing of restore permissions manually can be quite a challenge, especially for large environments with dozens of restore operators. This may cause inefficient resource usage and unwarranted or uncoordinated restores.

This report allows backup administrators and senior IT management staff to review and adjust restore policies to better address the demands of a dynamic multi-user backup environment.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Group by:** defines whether data in the report output will be grouped by *User* or *Object*.

# Job Configuration Dump

The report provides configuration details for Veeam Backup & Replication jobs.

VEEAM

## Job Configuration Dump

### Description

This report provides complete information on current job configuration parameters.

### Report Parameters

Scope:	Backup Infrastructure
Job Type:	Backup, Replication, File to Tape, Backup to Tape, Backup Copy, SureBackup
Job Name:	All Jobs
Options to Show:	All items

### Details

#### Job Name: Apache Backup (Backup - apache07.tech.local)

Wizard Page	Property	Setting
Advanced	Backup > Backup mode	Increment
	Backup > Create synthetic full backups on	Saturday
	Backup > Create synthetic full periodically	True
	Backup > Enable active full backup	False
	Backup > Transform previous backup chains into rollbacks	False
	Integration > Failover to primary storage snapshot	False
	Integration > Failover to standard backup	False
	Integration > Limit processed VM count per storage snapshot to count	False
	Integration > Use storage snapshots	True
	Maintenance > Defragment and compact full backup file	False
	Maintenance > Deleted VMs data removal enabled	False
	Maintenance > Perform backup files health check (detects and auto-heals corruption)	False
	Notification > Send email notification to additional addresses	False
	Notification > Set successful backup details to the VM attribute	False
	Notification > SNMP notifications for this job enabled	False
	Notification > VM Attribute Name	Notes
	Scripts > Post-script enabled	False
	Scripts > Pre-script enabled	False
	Storage > Compression level	5
	Storage > Enable backup file encryption	False
	Storage > Enable inline data deduplication	True
	Storage > Exclude deleted file blocks	True
	Storage > Exclude swap file blocks	True
	vSphere > CBT for all protected VMs automatically	True
	vSphere > Use change block tracking data	True
	vSphere > VMware Tools quiescence	False
Guest processing	Auto detect guest interaction proxies	True
	Enable application-aware processing enabled	True
	Guest file system indexing	False
	Windows credentials	Administrator
Name		
Schedule		
Secondary target		
Storage		
Virtual machines		

# Use Case

The report helps you review settings of Veeam Backup & Replication jobs to ensure that the jobs are properly configured.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Job Type:** defines types of Veeam Backup & Replication jobs to include in the report (*All items, Backup, Replication, Backup Copy, SureBackup, File to Tape Backup, Backup to Tape*).
- **Job Name:** defines Veeam Backup & Replication jobs to analyze in the report.
- **Options to Show:** defines job configuration options to include in the report.

## Job Data Exclusions

The report provides information about objects, such as VMs, disks, folders and templates, excluded from backup, backup copy and replication jobs in Veeam Backup & Replication.

- The **Summary** section includes three pie charts that display the share of jobs with excluded objects, disks and file system objects and jobs without exclusions.

- The **Details** tables show exclusion settings and objects excluded from processing in Veeam Backup & Replication.

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### Job Data Exclusions

#### Description

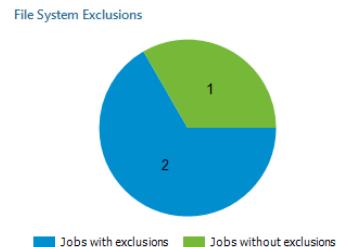
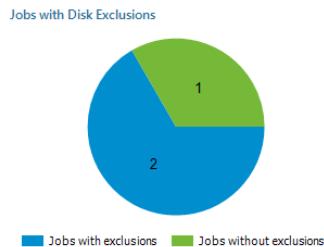
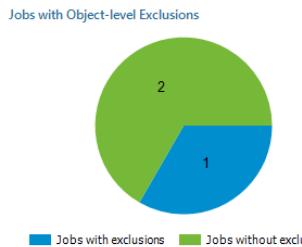
This report provides information about excluded objects from backup jobs, including VMs, disks and folders.

#### Report Parameters

Scope:	Backup Infrastructure
Job Type:	All types
Job Name:	All Jobs
Exclusion Type:	All types
Hide Jobs without Exclusions:	Yes

#### Summary

Total number of jobs:	18
Jobs with Object-level exclusions:	1
Jobs with disk exclusions:	0
Jobs with File system exclusions:	0



#### Object-level Exclusions

Job Name	Included Objects		Excluded Objects	
	Name	Type	Name	Type
Atlanta Sharepoint Servers Job	vsa	VM		
Columbus Monthly Backup Job	websrv02 webserver02@atlanta	VM		
Daily Backup Job Omega	Backup	ResourcePool	backup01 backup02 backup03 Log Insight	VM

## Use Case

The report allows you to review exclusion settings configured in jobs and check objects excluded from backups and replicas. For more information in exclude types available in Veeam Backup & Replication, see section [Data Exclusion](#) of the Veeam Backup & Replication User Guide.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- Job Type:** defines types of Veeam Backup & Replication jobs to analyze in the report (*Backup, Replication, Backup Copy, All types*).

- **Backup Job:** defines Veeam Backup & Replication jobs to analyze in the report.
- **Exclusion Type:** defines type of excluded objects to show in the report (*All items, Object-level, Disk, File System, Default exclusions*).
- **Hide Jobs without Exclusions:** defines whether jobs without exclusions must be included in the report.

## Protected VMs Job Schedule

This report publishes the timetable for scheduled backup, replication and backup copy jobs.

The report analyzes all recurrent jobs in the selected scope and reveals advanced details:

- **The Jobs Schedule** chart displays the total number of jobs running according to the specified schedules.
- **The Protected VMs** chart displays the total number of VMs protected by backup, replication and backup copy jobs.

- The **Details** table shows VMs included in the jobs, scheduled run time and date, recurrence intervals, weekly full backup schedule for backup jobs and the effective backup file retention policy.

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### Protected VMs Job Schedule

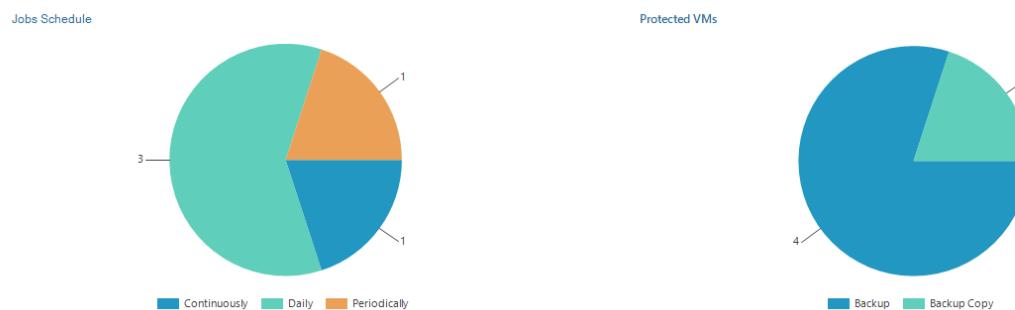
#### Description

This report provides information about job schedule for protected VMs.

#### Report Parameters

Scope:	Virtual Infrastructure
Exclusion mask:	
Group by:	Location
Business View objects:	
Job Type:	Backup, Replication, Backup Copy
Include VM templates in this report:	No

#### Summary



#### Details

##### VM Location: esx01.tech.local

VMs	Schedule	Time	Runs On	Full Backup	Backup Job	Job Type	Retention Policy	
							Value	Type
apache02	Daily	at 4:00:00	Everyday		QWE Webserver Backup	Backup	14	Restore points
qa02	Daily	at 22:00:00	Everyday	Saturday	QA02 Daily Backup	Backup	7	Restore points

##### VM Location: esx02.tech.local

VMs	Schedule	Time	Runs On	Full Backup	Backup Job	Job Type	Retention Policy	
							Value	Type
qa01	Daily	at 22:00:00	Everyday	Saturday	QA01 Backup Job	Backup	14	Restore points
apache07	Continuously	-	Continuously	-	Backup Copy Job Cloud	Backup Copy	7	Restore points
vdi008	Daily	at 10:00:00	Everyday	Saturday	Daily VDI Backup	Backup	14	Restore points

## Use Case

This report helps you ensure that applied data protection job schedules are configured in accordance to the backup policies and allow you to meet the desired RPO requirements.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- vCloud Director:** defines vCloud Director components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- Job Type:** defines a job type to evaluate in the report (*Backup, Replication, Backup Copy, All items*).

- **Exclusion mask:** defines a list of VMs that should be excluded from the report scope. You can enter VM names explicitly or create a wildcard mask by using the asterisk (\*) to replace any number of characters. Multiple entries are separated by semicolon. Usage example: the following string will exclude machines with the \_R&D suffix from appearing in the report: “\*\_R&D”.
- **Group by:** defines whether data in the report output will be grouped by *Location*, *Schedule* or *Job type*.
- **Include VM templates in this report:** defines whether VM templates should be included in the report.

## Scale-out Backup Repository Configuration

The report provides configuration and resource utilization details for scale-out backup repositories in Veeam Backup & Replication.

The **Summary** section provides an overview of configured scale-out repositories, such as the total number of the connected repositories, their capacity and utilization ratio, number of extents, their types, and a policy used for each repository.

The **Top N Utilized Scale-Out Repositories (GB)** and **Top N Utilized Extents (GB)** charts show most utilized scale-out repositories and their extents, total capacity, used space.

The **Details** section provides information on each connected scale-out repository included into the report:

- The **Overview** table shows the list of extents in the repository, their type, type of stored backup files and maximum number of concurrent tasks.
- The **Dynamics of SOBR free space usage** chart shows scale-out repository space usage dynamics over the past month.

- The **Details** table provides information about extent capacity and free space in GB, size of full and incremental backups, and the number of VMs and computers stored on each extent.

## Scale-out Backup Repository Configuration

### Description

This report shows the configuration and statistics of Scale-out Backup Repositories.

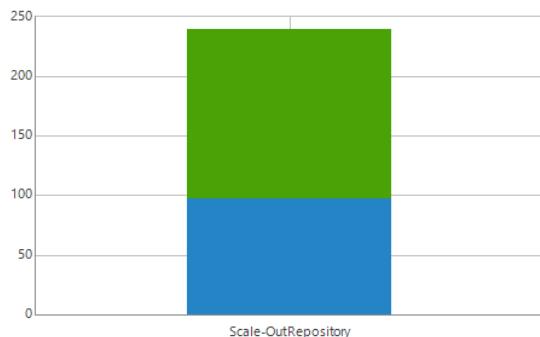
### Report Parameters

Scope: Backup Infrastructure  
Top N: 5

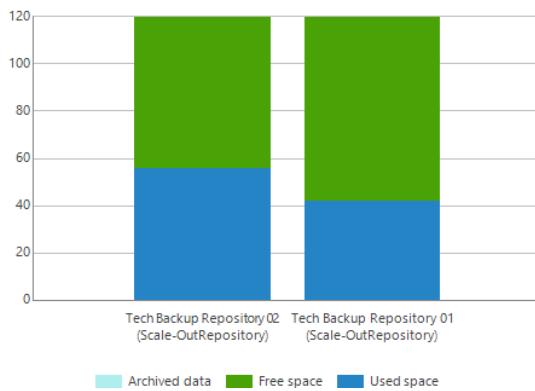
### Summary

Backup Infrastructure	Physical Resources	Extent Type	Policy Used
Number of scale-out repositories:	1	Total capacity:	0.23 TB
Number of included extents:	2	Total free space:	0.14 TB
Capacity Tiers:	0	Archived data:	0.00 TB
Number of jobs:	3	Utilization ratio:	40.75%
Stored VMs and computers:	3	Dedupe Appliance:	0
		Capacity:	0

Top 5 Utilized Scale-out Repositories (GB)



Top 5 Utilized Extents (GB)

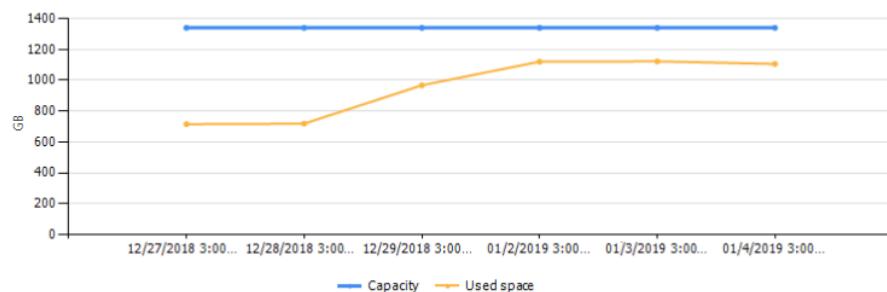


### Scale-OutRepository Configuration

Policy: Performance

Extent	Type	Backup Files to Store	Max Concurrent Tasks
Tech Backup Repository 01	Windows	Full and Increment	4
Tech Backup Repository 02	Windows	Full and Increment	4

Dynamics of SOBR Free Space Usage



Extent	Capacity (GB)	Free Space (GB)	Full Backups		Increments		VMs / Computers
			Files	Size (GB)	Files	Size (GB)	
Tech Backup Repository 01	119.66	77.90	1	13.91	8	6.91	2
Tech Backup Repository 02	119.66	63.89	2	29.52	7	6.33	3
Total:	239.31	141.79	3	43.43	15	13.24	3

# Use Case

The report shows configuration and utilization data for scale-out backup repositories and their extents.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Top N:** defines the maximum number of scale-out repositories to display in the report.

## VM and Computer Protection History

This report provides historical information on VMs and computers data protection.

The **Details** table provides information on each backup job: backed up VM or computer name and platform, job name, job type, backup server, start and finish time, proxy server, backup mode, job schedule type, target name and type, restore point size, the number of restore points created, the status of the latest backup session and the number of restore point copies.

**NOTE:**

Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Reporter might show invalid data for Veeam Backup & Replication reports and dashboards.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Business View:** defines a list of Veeam ONE Business View objects to include in the report.
- **Object Type:** defines a list of backup infrastructure objects to include in the report (*VMs, Computers, VMs and Computers*).
- **Job Type:** defines a list of job types to evaluate in the report (*Backup, Replication, Backup to Tape, Backup Copy, Agent Backup Policy, Agent Backup Job, All items*).
- **Backup Status:** defines a backup job status to analyze in the report (*Success, Failed, Warning, Running, All items*).
- **Job Name Mask:** defines a job to include in the report.
- **Interval/Period - Period Type/Start Date - End Date:** defines the time period to analyze in the report.

- **Sort by:** defines the way data will be grouped in the report (by *VM/Computer Name, Job Name, Job Start Time, Job Finish Time, Backup Status*).

## VEEAM

### VM and Computer Protection History

#### Description

This report provides history of VMs and computers data protection.

#### Report Parameters

Scope:	Backup Infrastructure
Object Type:	VMs and Computers
Job Type:	Backup, Replication, Backup to Tape, Backup Copy, Agent Backup Policy, Agent Backup Job
Backup Status:	All
Job Name Mask:	
Sort by:	VM/Computer Name
Interval:	Past week (1/6/2020 - 1/12/2020)

#### Details

VM/Computer Name	Platform	Job Name	Job Type	Backup Server	Start Time	Finish Time	Proxy	Backup Mode	Schedule Type	Target Name	Target Type	Tape ID	Restore Point Size, GB	Restore Points Number	Backup Status	# of Restore Point Copies
SQL MainDB	vSphere	BCVM	Backup Copy	nz2019vbn10\3.n.lo	1/9/2020 12:32 PM	1/10/2020 12:32 PM	N/A	Forward Incremental	Continuously	ReportForB ackupCopy	Repository	N/A	4.45	2	Success	2
SQL MainDB	vSphere	BCVM	Backup Copy	nz2019vbn10\3.n.lo	1/10/2020 12:32 PM	1/11/2020 12:32 PM	N/A	Forward Incremental	Continuously	ReportForB ackupCopy	Repository	N/A	0.00	2	Success	0
SQL MainDB	vSphere	BCVM	Backup Copy	nz2019vbn10\3.n.lo	1/11/2020 12:32 PM	1/12/2020 12:32 PM	N/A	Forward Incremental	Continuously	ReportForB ackupCopy	Repository	N/A	0.15	2	Success	0
SQL MainDB	vSphere	BCVM	Backup Copy	nz2019vbn10\3.n.lo	1/12/2020 12:33 PM	1/13/2020 12:33 PM	N/A	Forward Incremental	Continuously	ReportForB ackupCopy	Repository	N/A	0.20	2	Success	0
VM2 VeeamONE	vSphere	one_copy job	Backup Copy	frank-br95u5.n.local	1/12/2020 9:44 PM	1/13/2020 9:45 PM	N/A	Forward Incremental	Continuously	ReportForB ackupCopy	Main Backup Repository	N/A	0.00	2	Success	0
backup01	vSphere	Daily Backup Job	Backup	frank-br95u5.n.local	1/10/2020 9:01 AM	1/10/2020 9:02 AM	VMware Backup Proxy	Forward Incremental	Daily	ReportForB ackupCopy	Main Backup Repository	N/A	5.14	9	Success	9

## Use Case

This report provides historical information on backup sessions for VMs and computers in your backup infrastructure.

## VM Failover Plan Overview

This report analyzes configuration of regular and cloud failover plans, provides information on the number of VMs included in a failover plan and estimates the amount of data consumed by replica VMs on the target datastore.

- The **Failover Plan by State** and **VMs per Failover Plan** charts display statuses of existing failover plans and the number of VMs comprised in each plan.
- The **Details** table shows VMs included in the failover plans, consumed storage capacity, the specified delay in a VM failover queue and the current plan state.

## NOTE:

Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Reporter might show invalid data for Veeam Backup & Replication reports and dashboards.



## VM Failover Plan Overview

### Description

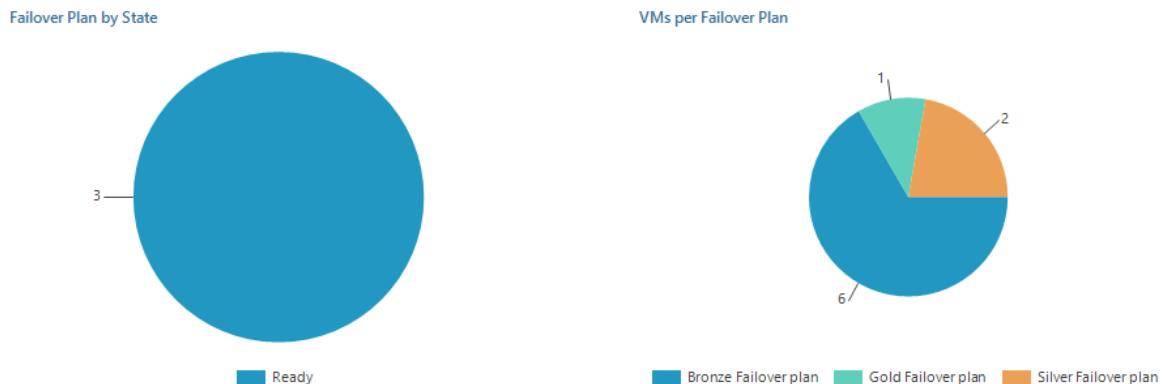
This report lists all created failover plans with their configuration and added VMs.

### Report Parameters

Scope: Backup Infrastructure  
Failover Plans: All Jobs

### Summary

N. of Failover Plans: 3  
Total VMs: 9  
Total Data Size: 342.33 GB



### Details

Backup Server: [etna.tech.local](#)

Platform: [VMware](#)

Failover Plan	VMs	Size (GB)	Delay (sec)	Created by	Status
Gold Failover plan	srv03 (Replica VM not found)	0.00	60	ETNA\Administrator	Ready
Bronze Failover plan	filesrv01 (Replica VM not found) filesrv02 (Replica VM not found) filesrv02_replica (Replica VM not found) filesrv03 (Replica VM not found) filesrv04 (Replica VM not found) filesrv04_replica (Replica VM not found)	187.50 33.94 13.00 40.25 22.74 14.81	60 60 60 60 60 60	ETNA\Administrator	Ready
Silver Failover plan	Tiny (Replica VM not found) ub_lez (Replica VM not found)	9.78 20.31	60 60	ETNA\Administrator	Ready

## Use Case

The report allows you to keep records of your failover plans for auditing purposes and compliance tests.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Failover Plans:** defines a list of failover plans to include in the report.

# Veeam Backup Tape Reports

This report pack provides information about backup to tape in Veeam Backup & Replication, including tape infrastructure configuration, jobs, backups and GFS retention of tape backups.

**Number of reports:** 7

**Current version:** 3

**Reports included:**

- [Backups on Tape](#)
- [Tape Backup Jobs](#)
- [Tape Exportation](#)
- [Tape GFS Backup Files](#)
- [Tape GFS Configuration](#)
- [Tape Media Retention Period](#)
- [Tape Vaults Overview](#)

## Backups on Tape

This report provides detailed information about backup files stored on tapes.

The **Details** section provides information on each tape: the amount of used space and remaining free space, size of stored backups, the date until which the tape is protected, and detailed information on backups stored on the tape.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Media Pool:** defines a list of media pools to include in the report.

- **Tape Barcode:** defines a list of tapes to include in the report.

## VEEAM

### Backups on Tape

#### Description

This report provides information about VM, computer and file share backups stored on particular tapes.

#### Report Parameters

Scope: Backup Infrastructure  
 Media Pool: All  
 Tape Barcode: All

#### Details

Tape ID: SW8RH002  
 Used Space: 21,13 GB  
 VM Backups size: 0,02 GB  
 Computers Backup size: 20,13 GB  
 Free space: 8,87 GB  
 Expires in: Never

#### VM Backups

Virtual Machine	Full Backups #	Increments #	Restore Points #	Full Backups Size, GB	Increments Size, GB	Total Backups Size, GB	Parent Jobs	Latest backup date
SQL Main	1	0	1	0,02	0	0,02	Agent&VMToTape	11/22/2019 12:32 PM

#### Computer Backups

Computer Name	Full Backups #	Increments #	Restore Points #	Full Backups Size, GB	Increments Size, GB	Total Backups Size, GB	Parent Jobs	Latest backup date
srv1523	5	0	5	20,13	0	20,13	Agent&VMToTape	11/09/2019 10:32 AM

#### Backed up File Sources

File Share / Server	Last Written to Tape
filesrv082	11/22/2019 12:32 PM

## Use Case

This report helps you monitor tape space usage and the amount of VMs, computers and file shares stored on tapes.

## Tape Backup Jobs

The main backup purpose is to protect your data against disasters and failures. Having only one copy of a backup file does not provide the necessary level of safety. To build a successful data protection and disaster recovery plan, you must have two different types of media to store copies of your data, for example, disk storage and tape.

To learn more about the 3-2-1 backup strategy, see the Veeam Blog article [How to follow the 3-2-1 backup rule with Veeam Backup & Replication](#).

This report maintains a record of VMs and computers archived to tapes.

- The **Summary** section provides information on the number of VMs and computers in backups stored on disk and archived to tapes, consumed tape capacity, and the total number of used tapes.

- The **Details** table shows properties of each backup to tape job: the total number of available restore points, restore point creation date, number of VMs and computers in the backup file and backup type (full or incremental).

Click a number in the **VMs/Computers** column to drill down to the list of VMs and computers archived to the tape.



## Tape Backups

### Description

This report provides information on tape backup jobs including the list of VMs offloaded to tapes.

### Report Parameters

Scope: Backup Infrastructure

### Summary

VMs and computers with disk backups:	17
VMs and computers on tapes:	2
Tape data size:	8.10 GB
Tapes used:	11

### Details

Backup to Tape Job	Restore Point	VMs/Computers	Tape ID	Type
etna.tech.local\Atlanta Application Servers Backup on Tape	1	<a href="#">1</a>	00170010	Full
etna.tech.local\Atlanta Sharepoint Servers Job on Tape	1	<a href="#">1</a>	0017001P, 0017001Q, 0017001R, 0017001S, 0017001T, 0017001W, 0017001X, 00170027, 00170028, 0017002E	Full

## Use Case

The report provides a summary of all backup to tape operations that took place on the managed backup server. The report displays an inventory list of items archived to the tape media. This allows you to make sure that mission critical VMs and computers have backups on tapes and are safely protected.

## Report Parameters

**Scope:** defines a list of Veeam Backup & Replication servers to include in the report.

## Tape Exportation

The report provides inventory information on tapes exported from tape libraries connected to Veeam Backup & Replication servers.

- The **Summary Information** section shows the total number of exported tapes. The pie chart displays how many tapes were exported from connected libraries.

- The **Details** section contains a table for each tape library with a list of all exported tapes, their IDs, media sets and media pools, backup job and exportation time.

## veeAM

### Tape Exportation

#### Description

This report provides information about exported tapes.

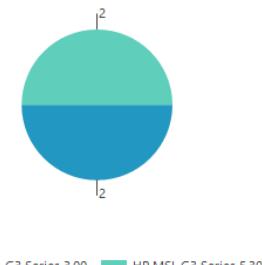
#### Report Parameters

Scope:	Backup Infrastructure
Library:	All libraries
Tape Job:	All Jobs
Sort by:	Exportation date

#### Summary

Number of exported tapes: 4

Number of Exported Tapes in Libraries



#### Details

##### Library: HP MSL G3 Series 3.00

Tape ID	Media Set	Media Pool	Written by Job	Tape Exportation Date
0014003B		Free		1/15/2019 10:51 AM
00140033		Atlanta Web Servers GFS Backup		1/15/2019 11:44 AM

##### Library: HP MSL G3 Series 5.30

Tape ID	Media Set	Media Pool	Written by Job	Tape Exportation Date
00170023		Atlanta Web Servers GFS Backup		1/15/2019 10:52 AM
00170024		Atlanta Web Servers GFS Backup		1/15/2019 11:44 AM

## Use Case

The report allows you to trace tapes exported from tape libraries. You can use this report to find the necessary backup files on tape.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- Library:** defines tape libraries to include in the report.
- Tape Job:** defines a list of tape jobs to analyze in the report.
- Sort by:** defines how data will be sorted in the report (*Exportation date* or *Job name*).

# Tape GFS Backup Files

This report provides information about historical backups for Veeam Backup & Replication backup to tape with GFS retention policy.

- The **Summary** section provides information on the number of GFS media pools, number of historical backup files, number of restore points in these files, and the amount of space consumed by historical backup files on tape.
- The **Historical Restore Points Count** chart shows the number of weekly, monthly, quarterly and yearly restore points in historical backup files.

- The **Details** table provides information about historical restore points in GFS media pools, including the media set, number of VMs and computers, date when restore point was created, name of a tape job that created the restore point, and ID of tapes on which the restore point resides.

Click the **Backed up VMs/Computers** link or **Restore Point Date** link to drill down to the list of VMs and computers in the restore point, restore point date and IDs of tapes on which the restore point resides.

## VEEAM

### Tape GFS Backup Files

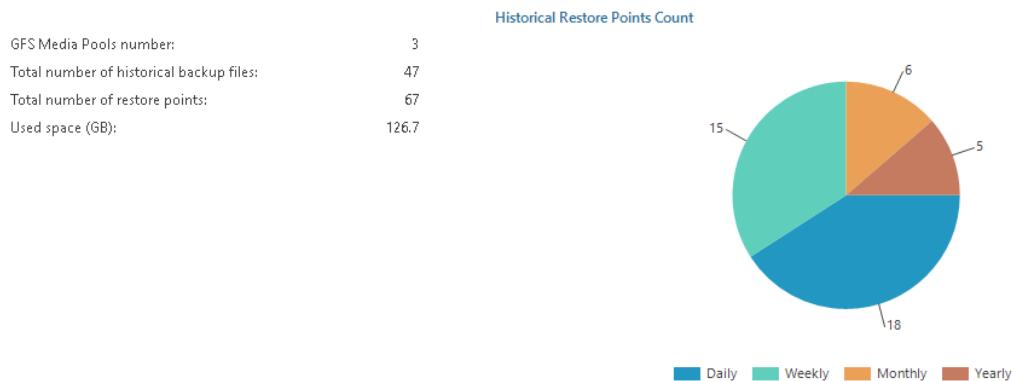
#### Description

This report provides information about historical backups stored on GFS Tape Media Pools.

#### Report Parameters

Scope: Backup Infrastructure  
Media Pool: All

#### Summary



#### Details

##### Media Pool: etna.tech.local/GFS Media Pool 1

Libraries assigned: HP MSL G3 Series 3.00

###### Existing Restore Points

Backed Up Object (Type)	Backed Up VMs/Computers	Backup File Size, GB	Restore Point Date	Tape Job Name	Tape ID
<b>Media Set: Daily</b>					
Atlanta Backup Repository (Repository)	2	14.37	<a href="#">Several dates... Check drill-down</a>	Repository weekly backup	0014003A, 0014003D
Atlanta Application Servers Backup (Job), Atlanta Sharepoint Servers Job (Job)	1	14.35	1/15/2019	Delta Daily Backup to Tape	0014003D, 0014003E, 0014003F

## Use Case

The report allows you to inventory historical backups on tape created in accordance with the GFS retention scheme. You can track historical restore points on tape and make sure that you have backups archived for long-term retention.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- Media Pool:** defines a list of Veeam Backup & Replication GFS media pools to analyze in the report.

# Tape GFS Configuration

The report provides information about GFS Media Pools configuration and backup to tape jobs that write restore points to the Media Pools.

- The **GFS Media Pool** section displays media pool configuration – how many tapes and tape libraries are assigned to the pool, and the number of free tapes.
- The **Media Pool Configuration** table provides details on media sets, such as GFS retention period for every backup restore point, how many tapes are assigned to each media set, and where tapes must be exported when a job is finished.

Click a number of assigned tapes to drill down to the list of tapes assigned to specific media sets.
- The **Job Writings to Media Pool** section shows information about backup to tape jobs that write restore points to media pools and their backup schedule. If a job closes restore point creation from a media set highlighted with green, tape with this media set will be exported.

Click a number of assigned tapes to drill down to the list of tapes assigned to specific media sets.

## veeam

### Tape GFS Configuration

#### Description

This report provides configuration information about GFS Media Pools and backup to tape jobs writing restore points to the Media Pools.

#### Report Parameters

Scope: Backup Infrastructure  
Media Pool: All

#### Details

##### Media Pool: etna.tech.local/GFS Media Pool 1

Libraries assigned: HP MSL G3 Series 3.00

Add tapes from Free media pool: Enabled

Tapes: 2

Free Tapes: 4

##### Media Pool Configuration

Media Set	Protection Period	Number of Assigned Tapes	Append Files to Tape	Move Offline Tapes
Daily	14 days	1	TRUE	FALSE
Weekly	4 weeks	Any available	FALSE	FALSE
Monthly	12 months	Any available	FALSE	FALSE
Quarterly	3 quarters	Any available	FALSE	FALSE
Yearly	1 year	Any available	FALSE	FALSE

##### Jobs Writing to The Media Pool

Tape Job Name	Restore Point Creation Schedule				
	Daily	Weekly	Monthly	Quarterly	Yearly
Repository weekly backup	00:00:00	Saturday	First Sunday of the month	First Sunday of the quarter	First Sunday of the year
Media sets to export are marked with green color.					

## Use Case

The report allows you to review configuration of media pools and GFS backup to tape jobs. You can trace tapes assigned to each media set, when media sets must be exported and where the exported tapes are stored.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Media Pool:** defines a list of Veeam Backup & Replication GFS media pools to analyze in the report.

## Tape Media Retention Period

This report provides information on retention policy settings configured for tape media pools in Veeam Backup & Replication.

- The **Tapes By Expiration Status** chart displays the number of protected tapes, the number of tapes with no expiration date, the number of tapes without defined expiration date and the number of tapes which can expire any time.
- The **Expired tapes status** chart displays the share of online and offline expired tapes.

- The **Expired Media**, **Protected Media**, **No expiration** and **Other Media** tables provide information on tape media, including media pool to which the tape medium belongs, tape ID, tape state, tape location, last date and time when data was archived to tape, total capacity and amount of free space left on tape, and protection period applied to the tape.

## VEEAM

### Tape Media Retention Period

#### Description

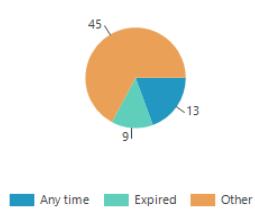
This report lists all tapes registered in the backup console including their configured retention policy and protection status.

#### Report Parameters

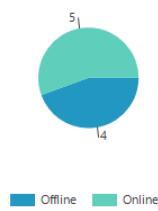
Scope: Backup Infrastructure  
Tape Status: All

#### Summary

Tapes By Expiration Status



Expired Tapes Status



#### Expired Media

Library: [HP EML E-Series 1022](#)

Media Pool: [GFS Media Pool 1](#)

Protection period: GFS specific

Media Set	Tape	Tape State	Tape Location	Last Write Time	Capacity (GB)	Free Space (GB)
Daily media set #1 11/26/2018 8:20 PM						
	00230005	Online	Slot 4	12/18/2018 8:51:53 PM	10.00	0.83
	0023000A	Online	Slot 9	12/18/2018 8:00:50 PM	10.00	1.00
Weekly media set #5 12/8/2018 10:12 PM						
	0023000I	Online	Slot 17	12/9/2018 2:18:06 AM	10.00	0.96
	00230001	Online	Slot 2	12/9/2018 2:19:33 AM	10.00	9.65
Weekly media set #6 12/15/2018 10:12 PM						
	00230004	Online	Slot 3	12/16/2018 12:14:23 AM	10.00	9.96

Library: [HP MSL G3 Series 3.00](#)

Media Pool: [GFS Media Pool 1](#)

Protection period: GFS specific

Media Set	Tape	Tape State	Tape Location	Last Write Time	Capacity (GB)	Free Space (GB)
Daily media set #1 1/14/2019 11:59 PM						
	0014003F	Offline	Atlanta Veeam Media Vault	1/15/2019 10:45:59 PM	10.00	8.40
	0014003E	Offline	Delta Veeam Media Vault	1/15/2019 10:42:50 PM	10.00	1.00
	0014003D	Offline	Delta Veeam Media Vault	1/15/2019 10:28:21 PM	10.00	0.90
	0014003A	Offline	Delta Veeam Media Vault	1/15/2019 1:27:22 PM	10.00	0.98

## Use Case

This report allows you to review retention policies applied to tapes and estimate available tape resources.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Tape Status:** defines whether the status of tapes to include in the report (*Expired, Protected, Never to Expire, Other, All*).

## Tape Vaults Overview

This report provides information on tape vaults created in Veeam Backup & Replication, lists all tapes archived in these vaults and previous tape location.

- The **Tapes By Expiration Date** chart shows how soon data in tape vaults will expire and how many tapes will expire within the specified period.

- The **Details** table provides information on tape vaults created with Veeam Backup & Replication. For each vault, the table shows Veeam Backup & Replication server where the vault was created, and lists all stored offline tapes. You can also see previous location of each tape and learn how soon media sets will expire.

Click a tape ID in the details table to drill down to the list of VMs and computers archived to the tape.

## veeam

### Tape Vaults Overview

#### Description

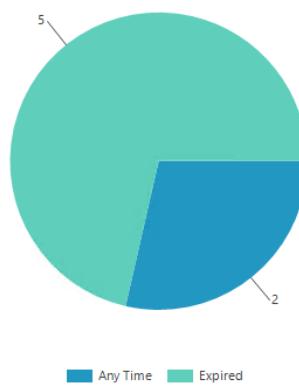
This report shows all tape vaults created and lists all tapes stored in these vaults.

#### Report Parameters

Scope: Backup Infrastructure  
Vaults: All

#### Summary

Tapes by Expiration Date



#### Details

##### Backup Server: etna.tech.local

Vault Name	Tape	Tape Library	Media Pool	Media Set	Retention	Expires in...
Atlanta Veeam Media Vault	1	1	1	1		
	<a href="#">0014003F</a>	HP MSL G3 Series 3.00	GFS Media Pool 1	Daily media set #1 1/14/2019 11:59 PM	Not defined	Expired
Delta Veeam Media Vault	3	1	1	1		
	<a href="#">0014003E</a>	HP MSL G3 Series 3.00	GFS Media Pool 1	Daily media set #1 1/14/2019 11:59 PM	Not defined	Expired
	<a href="#">0014003D</a>	HP MSL G3 Series 3.00	GFS Media Pool 1	Daily media set #1 1/14/2019 11:59 PM	Not defined	Expired
	<a href="#">0014003A</a>	HP MSL G3 Series 3.00	GFS Media Pool 1	Daily media set #1 1/14/2019 11:59 PM	Not defined	Expired

## Use Case

This report allows you to track offline tapes stored in vaults that were created by Veeam Backup & Replication servers. Since vaults keep information about original location of tapes, such as library and media pool, data written to tapes and retention policy, you can also use the information provided in the report to facilitate offline tape management and track VMs and computers stored on these tapes.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Vaults:** defines a list of vaults to include in the report.

# Veeam Backup Agents

This report pack helps you evaluate backup protection of computers in your environment. The report accounts computers with installed Veeam Agents for Windows and Veeam Agents for Linux (Veeam backup agents) that are managed by Veeam Backup & Replication servers.

**Number of reports:** 4

**Current version:** 1

**Reports included:**

- [Agent Backup Job and Policy History](#)
- [Computer Backup Status](#)
- [Computers with no Archive Copy](#)
- [Protected Computers](#)

## Agent Backup Job and Policy History

This report provides historical information for Veeam agent backup policies and job sessions results.

The **Summary** section includes the following elements:

- The **Top 5 Jobs and Policies by Restore Points Created** and **Top 5 Jobs and Policies by Backed up Data (GB)** charts display top 5 jobs and policies in terms of the greatest number of restore points and the largest amount of backed up data.
- The **Agent Backup Jobs and Policies Result** chart shows the number of jobs and policies whose sessions completed successfully, the number of jobs and policies whose sessions completed with warnings and the number of jobs and policies whose sessions failed.

The **Details** table provides information on each performed agent backup job: session date, number of backed up agents and created restore points, the completion state and total backup size.

Click on the backup job date in the **Date** column to drill down to details on backup job type, start time, duration, amount of processed data and final status.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Backup Job/Policy:** defines a list of backup jobs and policies to include in the report.

- **Interval/Start Date - End Date:** defines the time period to analyze in the report.

## VEEAM

### Agent Backup Job and Policy History

#### Description

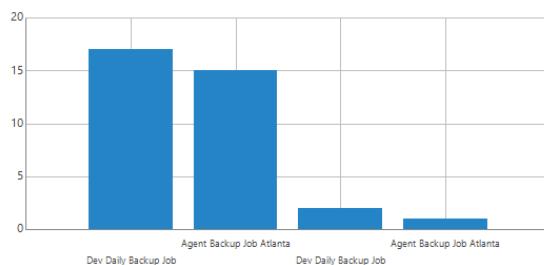
This report provides historical information for Veeam agent backup policies and jobs.

#### Report Parameters

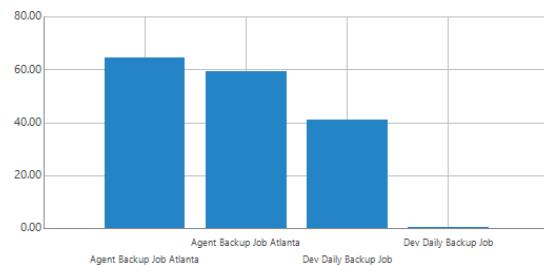
Scope: Backup Infrastructure  
 Backup Job/Policy: All Jobs and Policies  
 Interval: 1/1/2020 - 1/31/2020

#### Summary

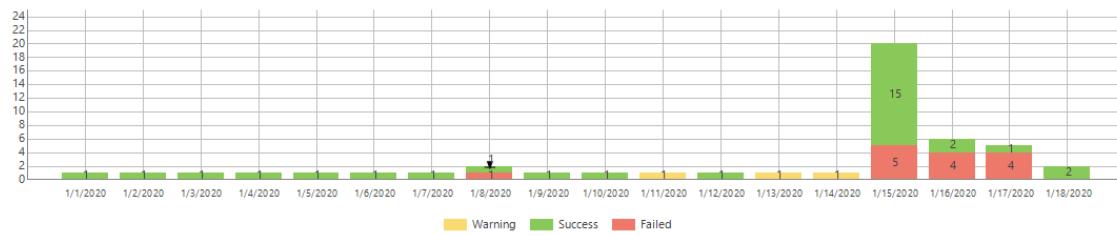
Top 5 Jobs and Policies by Restore Points Created



Top 5 Jobs and Policies by Backed up Data (GB)



Agent Backup Jobs and Policies Result



#### Details

##### Job/Policy name: "Agent Backup Job Atlanta"

Date	Backed Up Agents	Restore Points Created	Agent Backup Run Status			Total Backup Size (GB)
			Success	Warning	Failed	
1/1/2020	1	1	1	0	0	2.16
1/2/2020	1	1	1	0	0	1.95
1/3/2020	1	1	1	0	0	2.14
1/4/2020	1	1	1	0	0	2.38
1/5/2020	1	2	1	0	0	18.34
1/6/2020	1	1	1	0	0	2.46
1/7/2020	1	1	1	0	0	2.75
1/8/2020	1	2	1	0	1	6.16
1/9/2020	1	1	1	0	0	2.34
1/10/2020	1	1	1	0	0	2.31
1/11/2020	1	1	0	1	0	2.76
1/12/2020	1	2	1	0	0	18.70
1/13/2020	1	1	0	1	0	2.37
1/14/2020	1	1	0	1	0	2.69
1/15/2020	0	1	0	0	4	1.59
1/16/2020	0	1	0	0	4	1.58
1/17/2020	0	1	0	0	4	1.55

## Use Case

This report allows you to track historical statistics, amount of transferred data and created restore points for all agent backup jobs and policies.

# Computer Backup Status

This report provides information on daily backup status for all protected computers.

The **Summary** section contains the **Agents Backup Status** chart that displays the number of jobs whose sessions completed successfully, the number of jobs whose sessions completed with warnings and the number of jobs whose sessions failed. If a job has been launched several times a day, the report will show the best job status.

The **Details** table provides a list of protected agents and displays daily job completion results.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the *Computer* type.
- **Backup Job/Policy:** defines a list of agent backup jobs to include in the report.
- **License Type:** defines type(s) of Veeam backup agents to include in the report.
- **Computer Name Filter:** defines names of computers to include in the report.
- **Interval:** defines a time period to analyze in the report (number of weeks from 1 to 10).
- **Group by:** defines how data will be grouped in the report output (by *Backup Job/Policy* or *License Type*).

### Computer Backup Status

#### Description

This report provides daily backup status information for all computers protected with Veeam Agents.

#### Report Parameters

Scope:	Backup Infrastructure
Interval period:	1 week (1/10/2020 - 1/16/2020)
Backup Job/Policy:	All Jobs and Policies
License Type:	All Types
Computer Name Filter:	
Group by:	Backup Job/Policy

#### Summary



#### Details

Computer Name	1/9/2020	1/10/2020	1/11/2020	1/12/2020	1/13/2020	1/14/2020	1/15/2020
Backup Job/Policy: Agent Backup Job Atlanta srv11.tech.local	Success	Warning	Success	Warning	Warning	Failed	-

## Use Case

The report helps you detect failed agent backup jobs, identify jobs that triggered warnings and ensure that protected computers can be easily recovered in case of a disaster.

# Computers with no Archive Copy

The main purpose of backup is to protect your data against disasters and agents failures. Having only one copy of a backup file does not provide the necessary level of safety. To build a successful data protection and disaster recovery plan, you must have at least three copies of your data, for example, production data, backup and its copy, and two different types of media to store copies of your data, for example, disk storage and tape.

To learn more about the 3-2-1 backup strategy, see the Veeam Blog article [How to follow the 3-2-1 backup rule with Veeam Backup & Replication](#).

This report highlights all agents that do not have backup copies archived to tapes.

**NOTE:**

This report does not consider backups stored on cloud backup repositories.

The **Summary** section includes the following elements:

- The **Computers Archive Status** pie chart displays the number of agents with and without archive copy.
- The **Backup Location Type** chart displays the types of backup target locations.

The **Details** table provides information on computers with and without archive copy, name of a backup job or policy, backup source, backup target and the date of the latest backup.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the *Computer* type.
- **Backup Job/Policy:** defines a list of agent backup jobs to include in the report.
- **License Type:** defines types of Veeam backup agents to include in the report.
- **Computer Name Filter:** defines names of computers to include in the report.
- **RPO (Recovery Point Objective):** defines the maximum amount of data that you may accept to lose, expressed in time. RPO defines the age of the latest backup files required to resume normal operation if system failure occurs. For example, to compile a list of computers protected on a daily basis, you need to set the RPO value to 1 day.

- **Show agents with no primary backup within RPO:** defines whether to include in the report agents without primary backup that is valid within the defined RPO value.

## VEEAM

### Computers with no Archive Copy

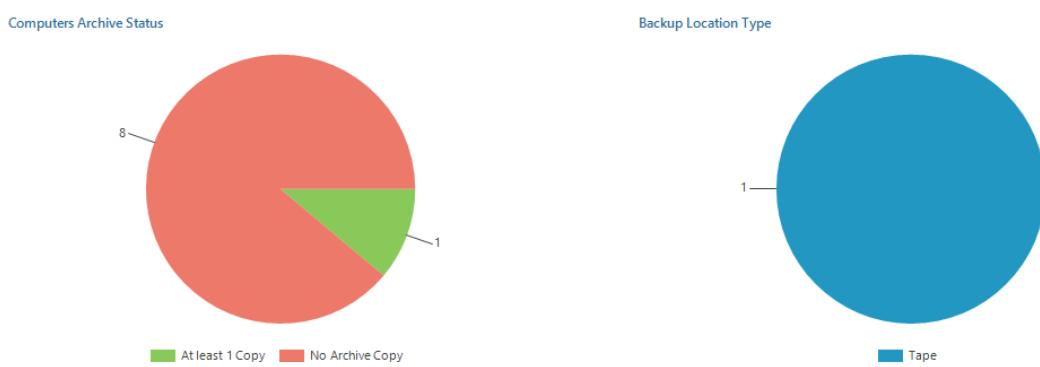
#### Description

This report highlights all computers protected with Veeam Agents that do not have an archive copy. Note that direct cloud backups are not considered in the report.

#### Report Parameters

Scope:	Backup Infrastructure
Backup Job/Policy:	All Jobs and Policies
License Type:	All Types
Computer Name Filter:	
Interval:	1 month (12/19/2019 - 1/18/2020)

#### Summary



#### Details

##### Computers with Archive Copy

Computer Name	Primary Job/Policy		Secondary Job		Last Backup Date	
	Name	Source	Target	Name		
backup4.tech.local	Agent Backup Job Atlanta	Entire Computer	Atlanta Backup Repository	Atlanta Servers Backup to Tape	Atlanta Web Servers Backups	1/17/2020 7:04 PM

##### Computers without Archive Copy

Computer Name	Backup Job/Policy	Backup Source	Backup Target	Last Backup Date
dev01.tech.local	-	-	-	-
dev02.tech.local	-	-	-	-
dev03.tech.local	-	-	-	-
dev04.tech.local	Dev Daily Backup Job	Entire Computer	Scale-OutRepository	1/18/2020 2:01 AM
dev04.tech.local	Dev Daily Backup Job	Entire Computer	Scale-OutRepository	1/16/2020 2:01 AM
dev05.tech.local	Dev Daily Backup Job	Entire Computer	Scale-OutRepository	1/16/2020 2:01 AM
dev05.tech.local	Dev Daily Backup Job	Entire Computer	Scale-OutRepository	1/18/2020 2:01 AM
srv11.tech.local	Agent Backup Job Atlanta	Entire Computer	Default Backup Repository	1/14/2020 10:01 PM

## Use Case

This report helps backup administrators check whether agents are protected with backup copies stored on secondary backup repositories and on tape.

## Protected Computers

This report provides information on all protected and unprotected computers including their last backup state.

A computer is considered to be *Protected* if there is at least one valid backup restore point that meets the designated RPO for it. A computer is considered to be *Unprotected* if it has an outdated or missing backup restore point.

The report examines whether computers have valid backup restore points created within the specified time range (RPO period), shows the total number of restore points available for each protected computer, and provides information on the completion status of recent backup job sessions.

The **Summary** section provides information on number of discovered, backed up and protected computers and contains the following charts:

- **Protected Computers** chart shows the number of protected and unprotected computers.
- **Computer Type** chart shows types of protected computers: Windows or Linux workstations and servers.
- **Computer Last Backup State** chart shows status of the latest job session for a discovered/protected computer.
- **Unprotection Reason** chart shows reasons for non-compliance with the specified RPO requirements.

The **Details** section provides information on all protected and unprotected computers including IP address, protection group, backup job or policy name, backup source and target, number of available restore points and date and time of the latest backup.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers and protection groups to include in the report.
- **Business View Objects:** defines a list of business groups to include in the report. The parameter options are limited to objects of the *Computer* type.
- **Backup Job/Policy:** defines a list of backup jobs and policies to include in the report.
- **License Type:** defines types of Veeam backup agents to include in the report.
- **Computer Name Filter:** defines names of computers that must be included in the report.

In the **Computer Name Filter** field, you can specify a mask for names of computers that must be included in the report scope. The mask can contain the asterisk (\*) that stands for zero or more characters. You can specify multiple masks or computer names separated with commas.

- **RPO (Recovery Point Objective):** defines the maximum amount of data that you may accept to lose, expressed in time. RPO defines the age of the latest backup files required to resume normal operation if system failure occurs. For example, to compile a list of computers protected on a daily basis, you need to set the RPO value to 1 day.

## Protected Computers

### Description

This report lists all protected and unprotected computers including their last backup state.

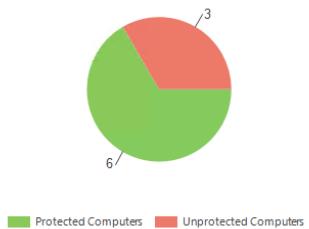
### Report Parameters

Scope: Backup Infrastructure  
 RPO: 1 week (1/9/2020 - 1/15/2020)  
 Backup Job/Policy: All Jobs and Policies  
 License Type: All Types  
 Computer Name Filter:

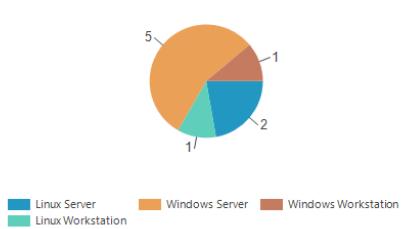
### Summary

Discovered Computers: 9  
 Backed Up Computers: 7  
 Protected Computers: 6

Protected Computers



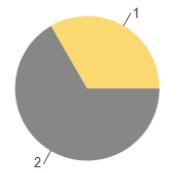
Computer Type



Computer Last Backup State



Unprotection Reason



### Details

#### Protected Computers

Computer Name	IP Address	Protection Group	Backup Job/Policy	Backup Source	Backup Target	Available Restore Points	Last Backup Date
Ape-agent-6.n.local	172.17.46.106	PG2_AD	Agent Backup Policy 10	Personal files	Default Backup Repository	1	1/10/2020 1:58 PM
Ape-agent-2	172.17.47.122	PG3_csv	Agent Backup Policy 3	/home/administrator/SOURCE/	/home/administrator/TARGET	2	1/10/2020 11:00 PM
Ape-agent-6.n.local	172.17.46.106	PG2_AD	Agent Backup Policy 12	Operating system	C:\TARGET	1	1/12/2020 9:00 AM
Ape-agent-4.n.local	172.17.47.123	PG3_csv, PG2_AD	Agent Backup Job 2	Operating system, C:\	Default Backup Repository	2	1/12/2020 9:00 AM
Ape-agent-1	172.17.46.168	PG1_ind	Agent Backup Job 1	Entire Computer	Default Backup Repository	3	1/13/2020 3:21 PM
APE-agent-5	172.17.46.154	PG1_ind	Agent Backup Policy 8	Operating system	\\\APE-VBR1\Shared	4	1/14/2020 1:04 PM
Ape-agent-3	172.17.46.166	PG3_csv	Agent Backup Policy 4	Entire Computer	Default Backup Repository	3	1/14/2020 11:00 PM

#### Unprotected Computers

Computer Name	IP Address	Protection Group	Backup Job/Policy	Backup Source	Backup Target	Available Restore Points	Last Backup Date
<b>Last Backup: Last backup more than 1 month ago</b>							
dev05.tech.local	172.17.53.85	Dev Servers, Dev Servers	Dev Daily Backup Job	Entire Computer	Scale-Out Repository	9	12/30/2018 2:02 AM
<b>Last Backup: No backup</b>							
dev03.tech.local	172.17.53.79	Dev Laptops, Dev Laptops	-	-	-	0	-
dev02.tech.local	172.17.53.76	Dev Laptops, Dev Laptops	-	-	-	0	-

## Use Case

When you set up your agent backup jobs based on protection groups or employ complex exclusion parameters in job properties, some computers may turn out to be excluded from protection groups and therefore will lack proper protection.

This report displays a list of computers protected by up-to-date backups as well as a list of unprotected computers which have outdated or missing backups. This information helps you identify which computers in your environment function without proper protection and make sure the existing backups meet established RPO requirements.

# Public Cloud Data Protection

This report pack helps you evaluate backup, snapshot and remote snapshot protection of VMs in Microsoft Azure and Amazon Web Services cloud infrastructures.

**Number of reports:** 1

**Current version:** 1

**Reports included:**

- [Protected VMs](#)

## Protected VMs

This report analyzes backup, snapshot and remote snapshot protection of VMs in your Microsoft Azure and Amazon Web Services cloud infrastructures.

A VM is considered to be *Protected* if there is at least one valid backup, snapshot or remote snapshot restore point that meets the designated RPO for it. A VM is considered to be *Unprotected* if it has outdated or missing restore points.

The **Summary** section includes the following elements:

- The **VM Protection** chart shows the number of protected and unprotected VMs.
- The **VM Last Session State** chart shows status of the latest job session for discovered VMs.
- The **Unprotection Reason** chart shows reasons for non-compliance with the specified RPO requirements.

The **Details** section provides information on all protected and unprotected VMs including resource ID, protection type, policy name, backup target, number of available restore points and date and time of the latest backup, snapshot or remote snapshot.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Protection Type:** defines a type of protection to include in the report (*Backup, Snapshot, Remote Snapshot, All Items*).
- **RPO (Recovery Point Objective):** defines the maximum amount of data that you may accept to lose, expressed in time. RPO defines the age of the latest backup or snapshot files required to resume normal operation if system failure occurs. For example, to compile a list of VMs protected on a daily basis, you need to set the RPO value to 1 day.

- **Exclusion mask:** defines a list of VMs that should be excluded from the report scope. You can enter VM names explicitly or create a wildcard mask by using the asterisk (\*) to replace any number of characters. Multiple entries are separated by semicolon. Usage example: the following string will exclude machines with the \_R&D suffix from appearing in the report: “\*\_R&D”.

## Protected VMs

### Description

This report lists protected and unprotected VMs in Microsoft Azure and Amazon AWS cloud infrastructures.

### Report Parameters

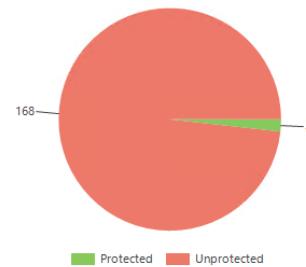
Scope:	Backup Infrastructure
RPO period:	24 hours (5/28/2020 1:00:00 PM)
Protection type:	All types
Exclusion mask:	

### Summary

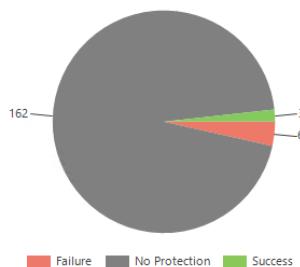
#### VMs Overview

Total VMs:	171
Including AWS Instances:	27
Including Azure VMs:	144
Protected VMs:	3
With backup:	1
With remote snapshot:	1
With snapshot:	3
Unprotected VMs:	168

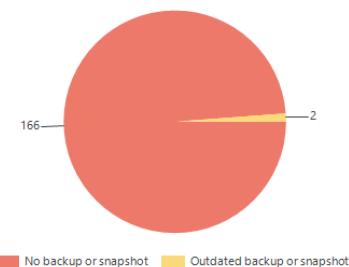
#### VM Protection



#### VM Last Session State



#### Unprotection Reason



### Details

#### Protected VMs (AWS)

##### Region: EU (Frankfurt) (eu-central-1)

VM Name	Resource ID	Protection Type	Policy	Target	Restore Points	Last Protection Date
EU_AWS_01	i-014dc34d4d95c2221	Backup	PG_POLICY_SNAP_BACKUP	Main EU Repository	2	5/26/2020 8:55 PM
		Snapshot	PG_POLICY_SNAP_BACKUP	-	7	5/31/2020 3:00 PM
EU_AWS_02	i-0172e80cf57c3b308	Backup	PG_POLICY_SNAP_BACKUP	Main EU Repository	2	5/26/2020 8:55 PM
		Snapshot	PG_POLICY_SNAP_BACKUP	-	7	5/31/2020 3:00 PM
EU_AWS_Main	i-037d8bcb9d18008fe	Backup	PG_POLICY2_ALLTYPES	Main EU Repository	1	5/28/2020 2:07 PM
		Remote Snapshot	PG_POLICY2_ALLTYPES	EU (Paris)	1	5/28/2020 2:08 PM
		Snapshot	PG_POLICY2_ALLTYPES	-	1	5/28/2020 2:07 PM

#### Unprotected VMs (AWS)

##### Region: EU (Frankfurt) (eu-central-1)

VM Name	Resource ID	Protection Type	Policy	Restore Points	Last Protection Date
<b>Last Protection: No Protection</b>					
AWS_cloud_vm_01	i-00fd22e0cfea38020	-	-	-	-
AWS_cloud_vm_02	i-04f442475bac7c0e3	-	-	-	-
AWS_Linux_01	i-07638caa9560ff64	-	-	-	-
AWS_Linux_02	i-08d82625e18af8a1c	-	-	-	-
AWS_VM_01	i-036536b4bd9822d7c	Backup	PG_POLICY_CLOUD	-	-
		Snapshot	PG_POLICY_CLOUD	-	-

## Use Case

When you set up your backup and backup copy jobs based on Veeam Backup policies or employ complex exclusion parameters in job properties, some VMs may turn out to be excluded from the Veeam Backup policies and therefore will lack proper protection.

This report displays a list of VMs protected by up-to-date backups and snapshots, as well as a list of unprotected VMs which have outdated or missing restore points. This information helps you validate the state of data protection in your organization.

# VMware Infrastructure Assessment

This report pack helps you ensure that VMs in the managed environment can be properly protected with Veeam Backup & Replication. Infrastructure assessment reports analyze the environment for incompatibilities, configuration errors and datastore performance issues that can potentially prevent or complicate future backup operations.

**Number of reports:** 3

**Current version:** 4

**Reports included:**

- [Datastore Performance Assessment](#)
- [VM Change Rate Estimation](#)
- [VM Configuration Assessment](#)

## Datastore Performance Assessment

This report analyzes datastore performance and detects whether your datastores can sustain the current workload.

The **Summary** section contains the following elements:

- The **Assessment Results** table shows the number of hosts connected to each datastore included in the report scope, the number of VMs that store data on the datastores, the number of virtual disks, and the average latency/IOPS values for each datastore. The report also provides recommendations on how to meet the defined parameters.
- The **TOP Datastores by Latency**, **TOP Datastores by IOPS**, **BOTTOM Datastores by Latency** and **BOTTOM Datastores by IOPS** charts show 5 most and least loaded datastores in terms of the highest and the lowest IOPS and latency values.

**Details** sections show performance charts with IOPS and latency statistics for each datastore, and details tables with latency and IOPS values for every host connected to the datastore.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Datastores:** defines the datastore to analyze in the report.
- **Reporting Interval:** defines the time period to analyze in the report.
- **Max. allowed read latency:** defines a threshold for the highest latency value for read operations. If the average read latency value for a datastore breaches the threshold, the datastore will be highlighted with red.
- **Max. allowed write latency:** defines a threshold for the highest latency value for write operations. If the average write latency value for a datastore breaches the threshold, the datastore will be highlighted with red.
- **Max. allowed reads:** defines a threshold for the maximum number of read operations. If the number of read operations for a datastore breaches the threshold, the datastore will be highlighted with red.

- **Max. allowed writes:** defines a threshold for the maximum number of write operations. If the number of write operations for a datastore breaches the threshold, the datastore will be highlighted with red.

## Datastore Performance Assessment

### Description

This report provides information on datastore performance that can show potential issues that can be met during the backup process.

### Report Parameters

Scope:	\Virtual Infrastructure
Datastores:	All Datastores
Reporting Period:	Current week (1/13/2020 - 1/19/2020)
Max. allowed read latency:	50 ms
Max. allowed write latency:	50 ms

### Assessment Results

#### Read Latency by Datastore

Datastore	Connected Hosts	N. of VMs	N. of Virtual Disks	Average Value
vcenter01.tech.local\Atlanta\esx01-das1	1	15	19	14.24
vcenter01.tech.local\Atlanta\esx01-das2	1	3	14	19.54
vcenter01.tech.local\Atlanta\esx01-das3	1	15	12	26.39
vcenter01.tech.local\Atlanta\esx01-ds-hpvs	1	2	2	2.31
vcenter01.tech.local\Atlanta\esx02-ds1	1	93	98	7.84
vcenter01.tech.local\Atlanta\nfs_lez	1	2	1	1.50
vcenter01.tech.local\Atlanta\vmfs_lez	1	1	1	1.69
vcenter01.tech.local\Prague\datastore1	1	25	27	1.81

#### Write Latency by Datastore

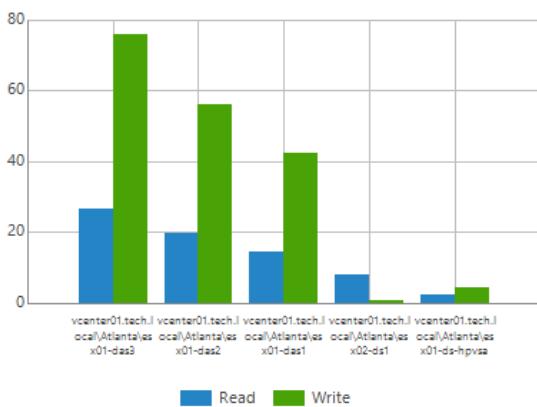
Datastore	Connected Hosts	N. of VMs	N. of Virtual Disks	Average Value
vcenter01.tech.local\Atlanta\esx01-das1	1	15	19	42.29
vcenter01.tech.local\Atlanta\esx01-das2	1	3	14	56.11
vcenter01.tech.local\Atlanta\esx01-das3	1	15	12	75.80
vcenter01.tech.local\Atlanta\esx01-ds-hpvs	1	2	2	4.32
vcenter01.tech.local\Atlanta\esx02-ds1	1	93	98	0.00
vcenter01.tech.local\Atlanta\nfs_lez	1	2	1	3.96
vcenter01.tech.local\Atlanta\vmfs_lez	1	1	1	1.43
vcenter01.tech.local\Prague\datastore1	1	25	27	0.00

#### IOPs by Datastore

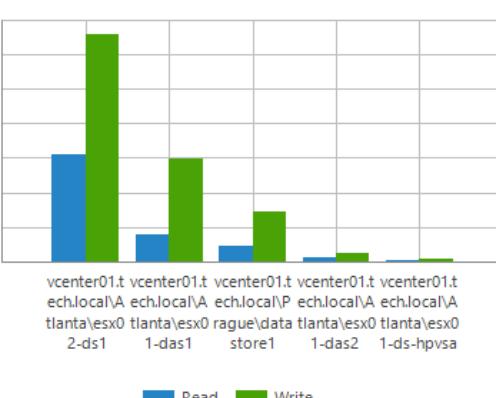
Datastore	Connected Hosts	N. of VMs	N. of Virtual Disks	Average Value
vcenter01.tech.local\Atlanta\esx01-das1	1	15	19	75.36
vcenter01.tech.local\Atlanta\esx01-das2	1	3	14	7.53
vcenter01.tech.local\Atlanta\esx01-das3	1	15	12	0.90
vcenter01.tech.local\Atlanta\esx01-ds-hpvs	1	2	2	1.97
vcenter01.tech.local\Atlanta\esx02-ds1	1	93	98	193.21
vcenter01.tech.local\Atlanta\nfs_lez	1	2	1	0.00
vcenter01.tech.local\Atlanta\vmfs_lez	1	1	1	0.00
vcenter01.tech.local\Prague\datastore1	1	25	27	37.92

## Top Datastores

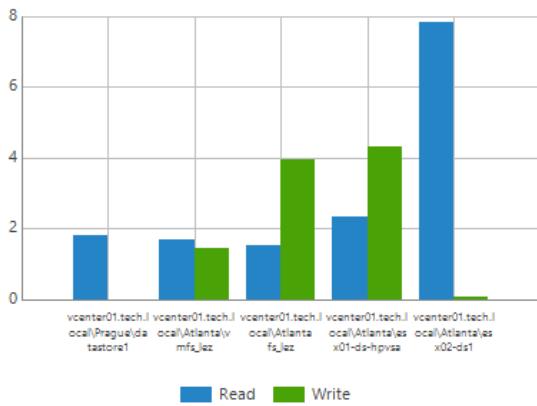
Top Datastores by Latency



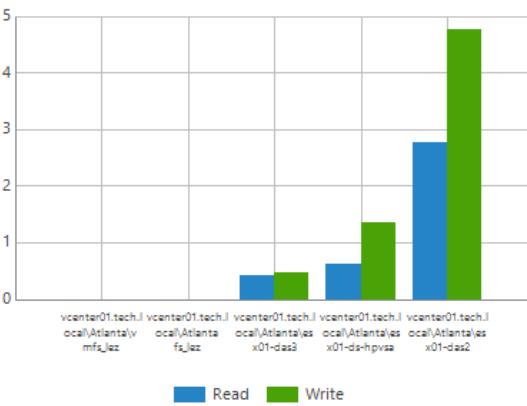
Top Datastores by IOPS



Bottom Datastores by Latency



Bottom Datastores by IOPS



## Use Case

Veeam Backup & Replication provides Backup I/O Control, a capability that allows you to define latency and IOPS thresholds for any datastore:

- **The Stop assigning new tasks to datastore at** option means that when the backup server is assigning a proxy for the virtual disk, it will take latency (IOPS) into consideration, and the backup job will wait for the datastore to become free before starting the backup.
- **The Throttle I/O existing tasks at** option is designed for situations when a backup job is already running and latency becomes an issue due to an external load. For example, if a SQL maintenance process were to start running in a VM using the same datastore as the backup job, then the backup job will automatically throttle its read I/O from the datastore so that latency drops below the specified threshold.

The report helps you assess current load on your datastores and make sure that by specifying the certain thresholds in Veeam Backup & Replication you maximize possible backup performance while minimizing the impact on production workloads.

## VM Change Rate Estimation

This report predicts the number of changed blocks (measured in GB) for virtual disks based on virtual machines write rate. The report analyzes rates at which data was written to virtual disks during the selected reporting interval, and displays top N VMs that grew faster and slower than other VMs.

The **Summary** section contains the following charts:

- The **Top VMs with Largest Change Rate (GB)** chart shows VMs with the greatest amount of changed blocks within the reporting period.
- The **Top VMs with Least Change Rate (GB)** chart shows VMs with the least amount of changed blocks within the reporting period.

The **Details** table provides information on the total change rate and the hourly, daily or weekly change rate (depending on the reporting interval).

Click a VM name to drill down to change rate statistics for each VM disk.

## Report Parameters

You can specify the following report parameters:

- **Scope (VMware VM folders):** defines a list of VMware vSphere folders to include in the report (applies to VMware vSphere environments only). VM folders view is an alternate way to present the virtual infrastructure. If VMs in your infrastructure are grouped into folders according to their profile, you can limit the report scope by specifying the necessary folders only.
- **Scope (VI):** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report.
- **Top N:** defines the number of top VMs that will be included in the report.

- **Show VMs with no changes:** defines whether VMs with no detected changes must be included in the report.

## Veeam

### VM Change Rate Estimation

#### Description

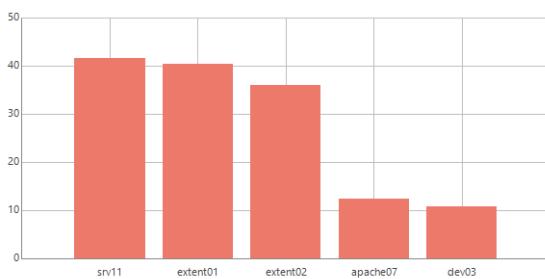
This report predicts the number of changed blocks (measured in GB) for virtual disks based on virtual machines write rate.

#### Report Parameters

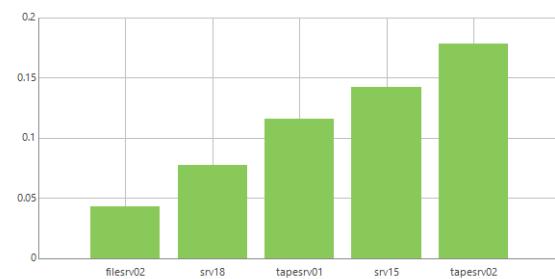
Scope:	vcenter01.tech.local
Interval:	Current day (12/27/2019 - 12/27/2019)
Top N:	5
Show VMs with no changes:	False

#### Summary

Top 5 VMs with Largest Change Rate (GB)



Top 5 VMs with Least Change Rate (GB)



#### Details

Scope	VM	12:00 AM 2:59 AM	3:00 AM 5:59 AM	6:00 AM 8:59 AM	9:00 AM 11:59 AM	12:00 PM 2:59 PM	3:00 PM 5:59 PM	6:00 PM 8:59 PM	9:00 PM 12:00 AM	Total
cluster01.tech.local	12	5.6 GB	12.6 GB	17.4 GB	5.43 GB	55.1 GB	19 GB	25.5 GB	16.99 GB	157.62 GB
	<a href="#">srv11</a>	<1 GB	<1 GB	<1 GB	<1 GB	22.56 GB	<1 GB	20.25 GB	<1 GB	42.81 GB
	<a href="#">extent01</a>	<1 GB	<1 GB	11.84 GB	<1 GB	30.06 GB	<1 GB	<1 GB	<1 GB	41.90 GB
	<a href="#">extent02</a>	5.4 GB	<1 GB	5.5 GB	<1 GB	<1 GB	15.08 GB	<1 GB	10.5 GB	36.48 GB
	<a href="#">apache07</a>	<1 GB	12.6 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	12.6 GB
	<a href="#">dev03</a>	<1 GB	<1 GB	<1 GB	5.36 GB	<1 GB	<1 GB	<1 GB	6.41 GB	11.77 GB
	<a href="#">websq02</a>	<1 GB	<1 GB	<1 GB	<1 GB	2.4 GB	<1 GB	5.2 GB	<1 GB	7.6 GB
	<a href="#">tapesrv06</a>	<1 GB	<1 GB	<1 GB	<1 GB	3.8 GB	<1 GB	<1 GB	<1 GB	3.8 GB
	<a href="#">tapesrv02</a>	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB
	<a href="#">srv15</a>	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB
	<a href="#">tapesrv01</a>	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB
	<a href="#">srv18</a>	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB
	<a href="#">filesrv02</a>	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB	<1 GB
Total:		5.6 GB	12.6 GB	17.4 GB	5.43 GB	55.1 GB	19 GB	25.5 GB	16.99 GB	157.62 GB

## Use Case

To perform incremental backup, Veeam Backup & Replication needs to know which data blocks have changed since the previous job run. The number of changed blocks reflects the amount of data written to the virtual disk.

Veeam Backup & Replication gathers this information to calculate the amount of new data that needs to be backed up. The more changes occur on the virtual disk, the larger amount of space is required to store data in backup. By estimating the change rate, the report helps you assess future needs for repository space.

## VM Configuration Assessment

This report helps you to assess VMs readiness for performing backup with Veeam Backup & Replication.

The report analyzes configuration of VMs in your virtual environment, and shows potential issues and possible limitations that could cause backup process to fail or prevent VMs from being properly backed up.

## NOTE:

This report is available for VMware vSphere environments only.

The report takes into account the following criteria when analyzing VM configuration:

## Summary

The **Summary** section contains the following charts:

- **Virtual Machines Overview** shows VMs with potential issues and ready to backup VMs.
- **Potential Issues** shows number of VMs with potential issues.

## Details

### VMware CBT

Criterion	Description
Existing Snapshots	<p>The report analyzes your virtual infrastructure to find VMs with existing snapshots.</p> <p>To use VMware Changed Block Tracking for incremental backup, all existing snapshots must be removed.</p>
Hardware Version 4 or earlier	<p>The report analyzes your virtual infrastructure to find VMs with hardware version 4 or earlier.</p> <p>To use VMware Changed Block Tracking for incremental backup, hardware version of VMs must be 7 or later.</p>

### Virtual Disks

Criterion	Description
VMs with Independent Disks	<p>The report analyzes your virtual infrastructure to find VMs with independent virtual disks.</p> <p>Veeam Backup &amp; Replication does not support independent disks; these disks are skipped from processing automatically.</p>

Criterion	Description
Virtual Machines with 2 TB virtual disks that are not running in vSphere 5.5 cannot be snapshotted and backed up	<p>The report analyzes your virtual infrastructure to find VMs with 2 TB virtual disk size.</p> <p>For ESXi 5.0, 5.1 and 5.5, the maximum virtual disk (VMDK) size for snapshot operations is limited to 1.984492366201720 TB. For more information, see the <a href="#">VMware KB article</a>.</p>
VMs with disks engaged in SCSI bus sharing	<p>The report analyzes your virtual infrastructure to find VMs that use SCSI bus-sharing.</p> <p>VMware does not support taking snapshots of Microsoft Clustering Services (MSCS) VMs. For more information, see the <a href="#">VMware KB article</a>.</p>
Virtual disk size is not a multiple of 1 KB	<p>The report analyzes your virtual infrastructure to find VMs with unaligned virtual disks.</p> <p>Veeam Backup &amp; Replication does not support backup copy jobs and restore jobs for VMs with unaligned disks. For details, see the <a href="#">Veeam KB article</a>.</p>
VMs with pRDMS	<p>The report analyzes your virtual infrastructure to find VMs with RDMS used in physical compatibility mode.</p> <p>Veeam Backup &amp; Replication will automatically exclude RDMS used in physical compatibility mode from the backup job. For details, see the <a href="#">VMware KB article</a>.</p>

## Application-Aware Image Processing

Criterion	Description
VMs with Windows Server 2000 Guest OS	<p>The report analyzes your virtual infrastructure to find Windows Server 2000 VMs.</p> <p>To enable backup with application-aware image processing, upgrade guest OS to Windows Server 2003 or later.</p>
VMware Tools Not Running	<p>The report analyzes your virtual infrastructure to find VMs that do not have VMware Tools installed or running.</p> <p>To enable backup with application-aware image processing, it is required that guest OS running inside your VMs has VMware Tools installed and running.</p>

## Datastore Free Space

Criterion	Description
VMs on datastores with 10% of free space	<p>The report analyzes your virtual infrastructure to find datastores that have less than 10% of free space.</p> <p>When Veeam Backup &amp; Replication backs up a VM, it triggers a VMware snapshot that is normally stored next to VM files on the source datastore. To eliminate the problem of datastores running low on free space during backup, it is required that the free space is more than 10%.</p>

## Others

Criterion	Description
Unsupported VM names	<p>The report analyzes your virtual infrastructure to find VMs with names that contain the following symbols: @ / \ &lt; &gt;.</p> <p>Veeam Backup &amp; Replication does not process VMs with names that contain mentioned symbols. If you want to back up these virtual machines, you must rename them.</p>

## Report Parameters

You can specify the following report parameters:

- **Scope (VI):** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Issues:** defines VM assessment criteria to include in the report.

- **Skip backup replicas:** defines whether to include in the report VM replicas created with Veeam Backup & Replication.



## VM Configuration Assessment

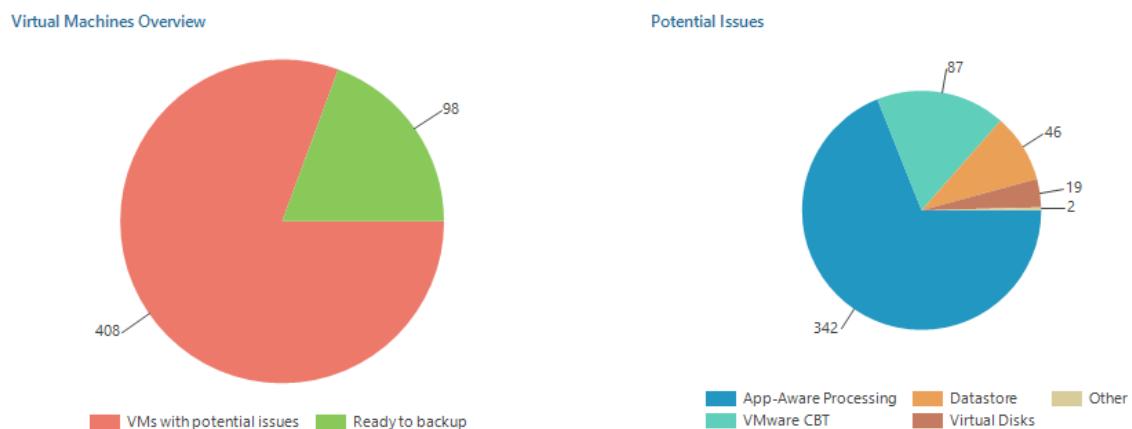
### Description

This report analyzes VMs configuration, and shows potential issues and possible limitations that can be met during the backup process (VMware only).

### Report Parameters

Scope:	Virtual Infrastructure
Skip Backup Replicas:	True
Business View objects:	
Issues:	All

### Summary



### Details

#### Category: VMware CBT

Potential Issue: Existing Snapshots

Virtual Machine	Host	Datastore
srv06	esx01.tech.local	Atlanta\esx01-das1
srv08	esx01.tech.local	Atlanta\esx01-das1
srv11	esx01.tech.local	Atlanta\esx01-das1
tapesrv02	esx01.tech.local	Atlanta\esx01-das1
oraclelinux	esx01.tech.local	Atlanta\esx01-das3
agent	esx02.tech.local	Atlanta\esx02-ds1

#### Category: App-Aware Processing

Potential Issue: VMs with Windows Server 2000 Guest OS

Virtual Machine	Host	Datastore
apache02	esx01.tech.local	Atlanta\esx01-das3

Recommendation: Upgrade Guest OS to at least Windows Server 2003 to use Veeam AAP.

## Use Case

This report allows you to obtain a list of VMs in your virtual environment that could experience potential issues with backups, and to get guidance on how to resolve these issues.

# VMware Overview

This report pack provides general configuration overview for vCenter Servers, datastores, clusters, hosts and VMs.

**Number of reports:** 10

**Current version:** 3

**Reports included:**

- [Cluster Configuration](#)
- [Datastore Capacity](#)
- [Datastore Configuration](#)
- [Datastore Space Usage History](#)
- [Guest Disk Free Space](#)
- [Host Configuration](#)
- [Hypervisor Version](#)
- [Infrastructure Overview](#)
- [VMs Configuration](#)
- [VMs Growth](#)

## Cluster Configuration

This report documents the current configuration of clusters in your infrastructure.

The report provides an overview of cluster resources in terms of memory, CPU and storage utilization. The report also shows additional information on statuses of HA (High Availability) and DRS (Distributed Resource Scheduler) features for each cluster.

## veeam

### Cluster Configuration

#### Description

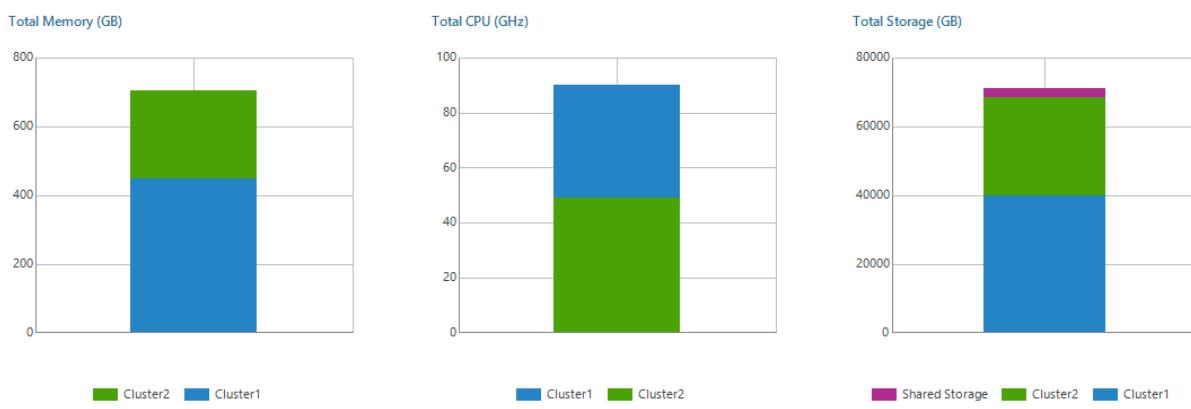
This report provides a quick overview of all clusters and datacenters resources in terms of aggregated memory, CPU and disk resources as well as the HA and DRS settings from cluster configuration.

#### Report Parameters

Scope: \\Virtual Infrastructure

Business View objects:

#### Summary



#### Details

Name	Total Hosts	Parent VI Object	Total Memory	Total CPU Cores	Total CPU	Total Storage	DRS Status	DRS Automation Level	HA Status
Cluster2	2	Datacenter1	255.94 GB	24	49.19 GHz	27.93 TB	enabled	fullyAutomated	disabled
Cluster1	2	Datacenter1	447.91 GB	20	41.02 GHz	38.80 TB	enabled	fullyAutomated	disabled

## Use Case

The report allows you to keep an eye on the state of hardware resources provisioned to your clusters, and to verify configuration settings applied to these clusters. This may help you balance workloads and right-size the environment to attain higher performance.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Cluster type.

# Datastore Capacity

This report helps administrators evaluate available datastore capacities across the infrastructure. The report shows charts that display information on the amount of used and free space on datastores, virtual disks and logical disks.

- The **Storage Overview (Top N)** chart shows top datastores with the greatest amount of used disk space.  
Click the **Details** link at the bottom of the chart to drill down to the list of datastores that includes details on total storage capacity, the amount of free and used space, and the number of VMs that reside on these datastores.
- The **Virtual Disks Capacity (Top N)** chart shows top VMs with the greatest virtual disk size.  
Click the **Details** link at the bottom of the chart to drill down to the full list of VMs that includes details on total virtual disk size, snapshot size, and the power state of these VMs.

- The **Logical Disks (Top N)** chart shows top VMs with greatest logical disk size.

Click the **Details** link at the bottom of the chart to drill down to the full list of VMs that includes details on total logical disk capacity, the amount of free and used space, and the power state of these VMs.

# Datastore Capacity

## Description

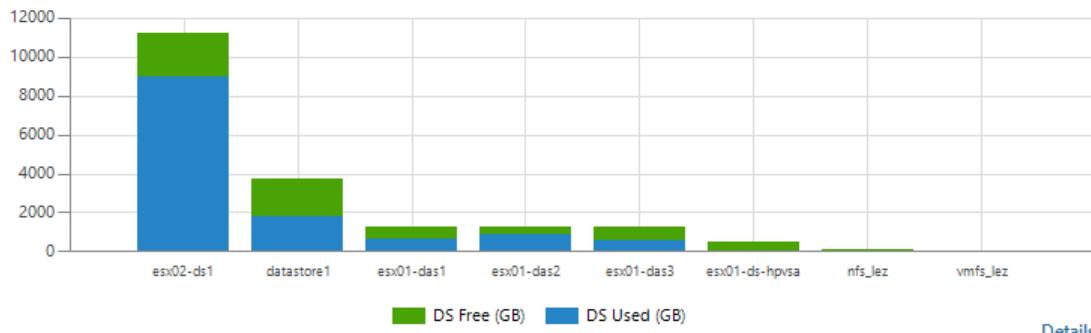
This report shows storage capacity information for datastores, virtual and logical disks.

## Report Parameters

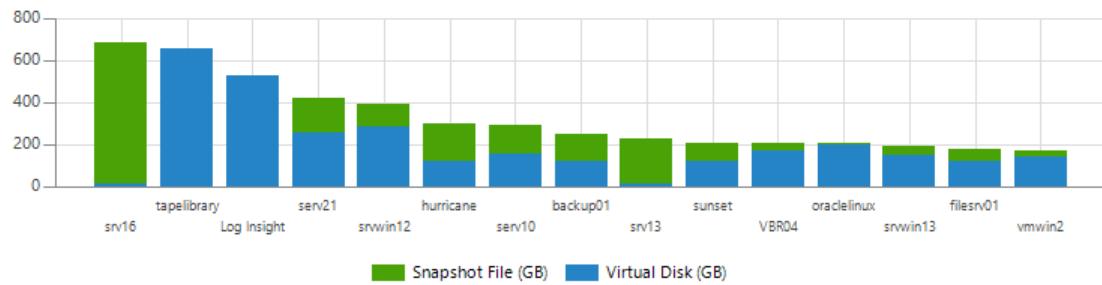
Scope: Virtual Infrastructure  
 Session Date: 1/15/2020 3:18 AM  
 Num. of items: 15  
 Business View objects:

## Summary

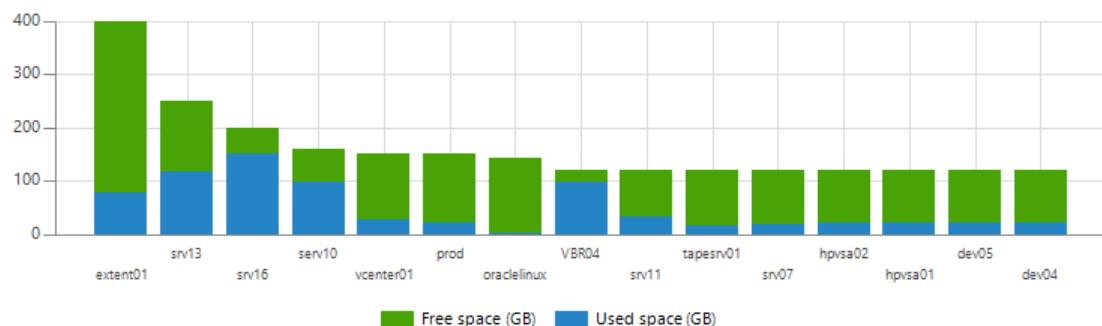
### Storage Overview (Top 15)


[Details](#)

### Virtual Disks Capacity (Top 15)


[Details](#)

### Logical Disks (Top 15)


[Details](#)

## Datastores

### Description

This report shows storage capacity information for datastores.

### Report Parameters

Scope: Virtual Infrastructure  
 Session Date: 1/15/2020 3:18 AM  
 Business View objects:

### Details

Datastore	Capacity (GB)	Free Space (GB)	Used Space	FS Type	VM Count
datastore1	3718.00	1928.86	<div style="width: 48%; background-color: #0070C0;"></div>	48 % VMFS	24
esx01-das1	1256.00	594.32	<div style="width: 53%; background-color: #0070C0;"></div>	53 % VMFS	15
esx01-das2	1228.75	346.51	<div style="width: 72%; background-color: #0070C0;"></div>	72 % VMFS	3
esx01-ds-hpvs	499.75	439.02	<div style="width: 12%; background-color: #0070C0;"></div>	12 % VMFS	2
esx02-ds1	11169.00	2224.83	<div style="width: 80%; background-color: #E63333;"></div>	80 % VMFS	91
nfs_lez	119.66	71.88	<div style="width: 40%; background-color: #0070C0;"></div>	40 % NFS	2
vmfs_lez	59.75	49.01	<div style="width: 18%; background-color: #0070C0;"></div>	18 % VMFS	1
Total	19279.66	6334.60		12945.06	152

## Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

## Report Parameters

You can specify the following report parameters:

- Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.
- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Business View groups to analyze in the report. The parameter options are limited to objects of the "Storage" type.
- Num. of items:** defines the number of top datastores, virtual and logical disks that will be displayed in the report charts.

# Datastore Configuration

This report documents the current configuration of datastores in your infrastructure.

- The **Utilization** chart shows the amount of free and used space on datastores.
- The **Provisioned Space** chart shows datastores capacity and the amount of space provisioned to VMs.
- The **Summary** table provides configuration details for each datastore, including the datastore capacity, amount of free space, amount of provisioned space, provisioning ratio (datastore capacity against provisioned space) and free space usage trend.

Click a hyperlink in the **Free Space Usage Trend** column table to drill down to daily information on total capacity, the amount of used and provisioned space, and the number of VMs residing on the datastore.

- The **Top 3 Largest VMs** section shows VMs that consume more storage space than other VMs.

- The **General Information** table provides information about the datastore owner, datastore type, file system, block size, and the number of VMs residing on the datastore.

## Datastore Configuration

### Description

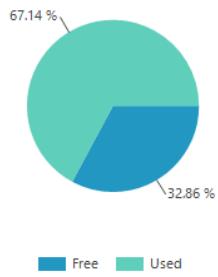
This report provides information about datastore type and other general information including total capacity, free and provisioned space.

### Report Parameters

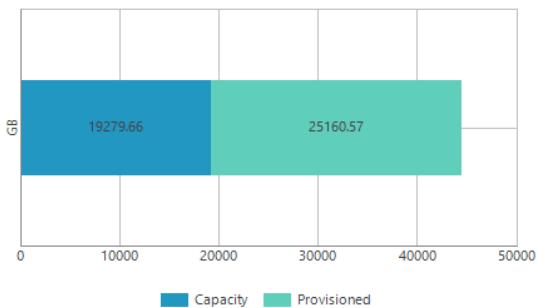
Scope: Virtual Infrastructure  
 Reporting date: 1/15/2020 3:18 AM  
 Business View objects:

### Summary

Utilization (%)



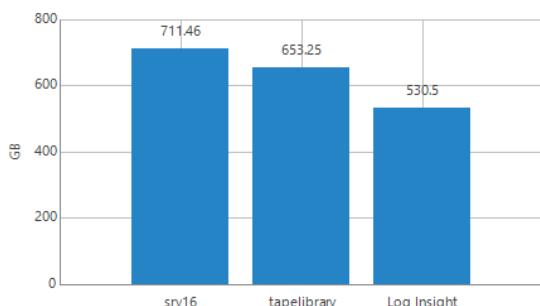
Provisioned Space (GB)



Name	Capacity (GB)	Free Space (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	Free Space Usage Trend
datastore1	3,718	1928.86	3162.90	85.07	<span style="color: green;">Increasing</span>
esx01-das1	1,256	594.32	1844.12	146.82	<span style="color: green;">Increasing</span>
esx01-das2	1,229	346.51	2329.42	189.58	<span style="color: green;">Increasing</span>
esx01-das3	1,229	680.15	1525.43	124.14	<span style="color: green;">Increasing</span>
esx01-ds-hpvs	500	439.02	249.30	49.89	<span style="color: green;">Increasing</span>
esx02-ds1	11,169	2224.83	15934.89	142.67	<span style="color: green;">Increasing</span>
nfs_lez	120	71.88	71.62	59.85	<span style="color: green;">Increasing</span>
vrmfs_lez	60	49.01	42.89	71.79	<span style="color: green;">Increasing</span>

### Top 3 VMs

Top 3 Largest VMs



Object Name Number of Disks Space Used (GB)

srv16	3	711.46
tapelibrary	11	653.25
Log Insight	3	530.50

## General Information

Name	Hosts/Clusters	Datastore Type	File System	Block Size (MB)	Total VMs and Templates
datastore1	esx03.tech.local	Local	VMFS	1	25
esx01-das1	esx01.tech.local	Local	VMFS	1	15
esx01-das2	esx01.tech.local	Local	VMFS	1	3
esx01-das3	esx01.tech.local	Local	VMFS	1	15
esx01-ds-hpvs	esx01.tech.local	Local	VMFS	1	2
esx02-ds1	esx02.tech.local	Local	VMFS	1	94
nfs_lez	esx01.tech.local	Local	NFS	n/a	2
vmfs_lez	esx01.tech.local	Local	VMFS	1	1

## Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Storage type.
- Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.

## Datastore Space Usage History

This report analyzes the amount of space consumed by files of VMs on datastores and helps evaluate available datastore resources in the infrastructure.

- The **Datastores with Most Free Space** and **Datastores with Least Free Space** charts display top datastores with the smallest and the largest amount of used space.
- The **Most Growing Datastores** and **Least Growing Datastores** charts display top datastores with smallest and largest decrease in free space during the specified time period.

- The **Details** table shows datastore space usage statistics and the total number of VMs residing on datastores.

Click a datastore name to drill down to the **Datastore Usage History** chart that shows how the amount of free, used and provisioned space has been changing during the reporting period.

## Datastore Space Usage History

### Description

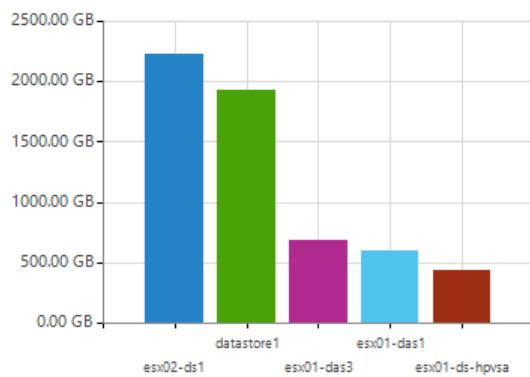
This report shows dynamics of datastore usage metrics, including space usage (free/used) and disk provisioning rates.

### Report Parameters

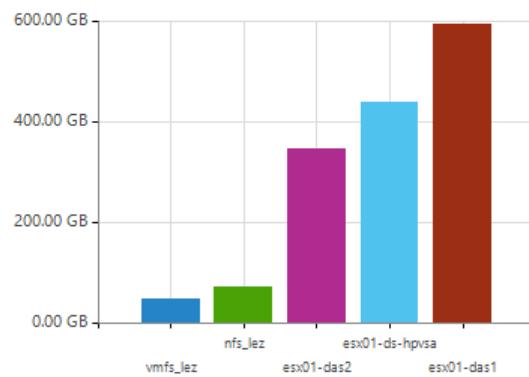
Scope: Virtual Infrastructure  
 Interval: 1 month (12/16/2018 - 1/15/2019)  
 Grouping: Virtual Server  
 Business View objects:

### Summary

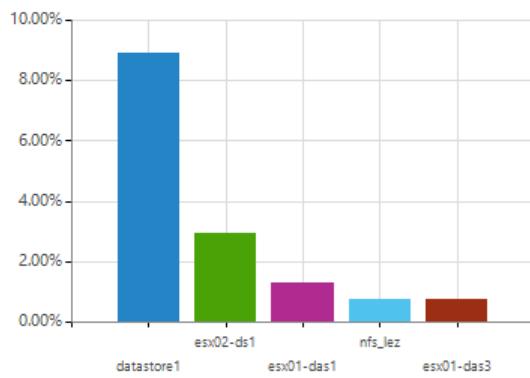
**Datastores with Most Free Space**



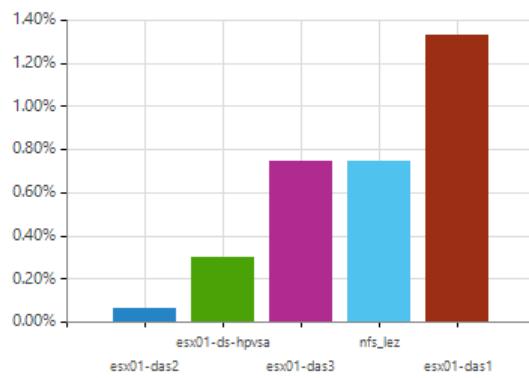
**Datastores with Least Free Space**



**Most Growing Datastores**



**Least Growing Datastores**



## Details

Datastore	Date	Total Space (GB)	Used Space (GB)	Provisioned Space (GB)	Total VMs
Virtual Server: <a href="#">vcenter01.tech.local</a>					
<a href="#">esx01-das1</a>					
	12/29/2018 1:09 PM	1256.00	642.69	1843.56	15
	12/29/2018 1:52 PM	1256.00	642.88	1843.74	15
	12/29/2018 2:27 PM	1256.00	642.99	1843.85	15
	12/29/2018 2:39 PM	1256.00	643.26	1844.12	15
	12/29/2018 3:14 PM	1256.00	644.10	1843.52	15
	12/29/2018 1:03 PM	1256.00	645.01	1847.78	15
	12/31/2018 3:04 AM	1256.00	647.44	1842.70	15
	1/1/2019 3:04 AM	1256.00	649.00	1842.70	15
	1/2/2019 3:04 AM	1256.00	649.85	1842.84	15
	1/3/2019 3:02 AM	1256.00	650.73	1842.74	15
	1/4/2019 3:05 AM	1256.00	651.73	1842.70	15
	1/7/2019 3:05 AM	1256.00	655.12	1842.70	15
	1/14/2019 1:29 PM	1256.00	661.68	1844.12	15
<a href="#">esx01-das2</a>					
	12/29/2018 1:03 PM	1228.75	881.44	2329.42	3
	1/2/2019 3:04 AM	1228.75	881.44	2329.42	3
	1/14/2019 1:29 PM	1228.75	882.24	2329.42	3
<a href="#">esx01-das3</a>					
	12/31/2018 3:04 AM	1228.75	538.93	1525.43	14
	1/2/2019 3:04 AM	1228.75	539.00	1525.43	14
	1/3/2019 3:02 AM	1228.75	539.45	1525.43	14
	12/29/2018 1:03 PM	1228.75	539.45	1525.43	14
	1/4/2019 3:05 AM	1228.75	541.07	1525.43	14
	1/14/2019 1:29 PM	1228.75	548.60	1525.43	14

## Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Storage type.
- Interval/Period Start - Period End:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- Group By:** defines how data will be grouped in the report output (by *vCenter Server* or *Datacenter*).

## Guest Disk Free Space

The report provides information on the amount of free disk space for VM guest OS.

The report analyzes VM guest disks and displays their capacity, the amount of guest disk free space, shows disk space usage trends, and predicts how many days are left for a disk to reach the specified threshold.

- The **Summary** section provides an overview of analyzed VM guest disks, shows how many VMs will run out of disk resources sooner than other VMs, and shows average disk growth trends.
- The **Disks to reach threshold first** table displays a list of VMs that will run out of guest disk space sooner than other VMs. For each VM, the table shows guest disk capacity and the amount of free space left, daily disk growth trend and the number of days left before the occupied disk space will reach 90% and 100% of its capacity.

If a value in the **Days to reach 90%** or **Days to reach 100%** column is highlighted with red, a disk will reach the specified threshold in less than 180 days.

- The **Top 10 Partition by Relative Space Growth** chart shows 10 guest disks that used the greatest amount of space over the reporting period in relative terms (amount of occupied disk space against the disk capacity).
- The **Top 10 Partition by Absolute Space Growth** chart shows 10 guest disks that used more space over the reporting period in absolute terms (amount of occupied disk space in GB).

- The **Guest Disk Free Space (GB)** section displays a list of all VMs included into the report and their guest disks. The table details disk capacity, the amount of free and used space, trends for disk space usage growth, daily disk growth, and shows how many days are left until a disk reaches its limit.

## Guest Disk Free Space

### Description

This report provides information about free space for all VMs guest disks.

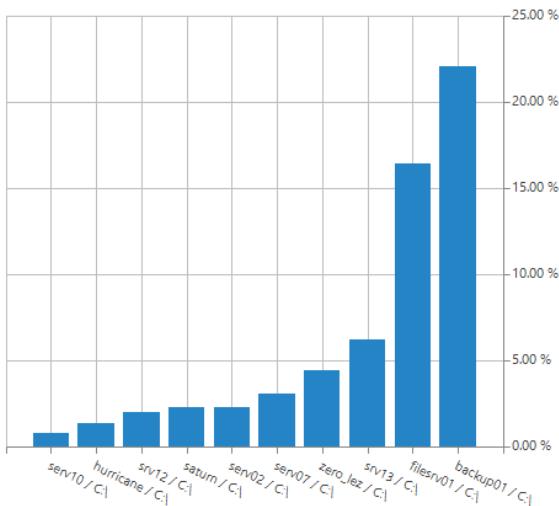
### Report Parameters

Scope:	Virtual Infrastructure
Business View objects:	
Interval:	1 week (1/9/2020 - 1/15/2020)
Disk size more than:	5 GB
Free space, less than:	50.00 %
Sort by:	Virtual machines
Do not show guest disks suppressed in Monitor Client:	True

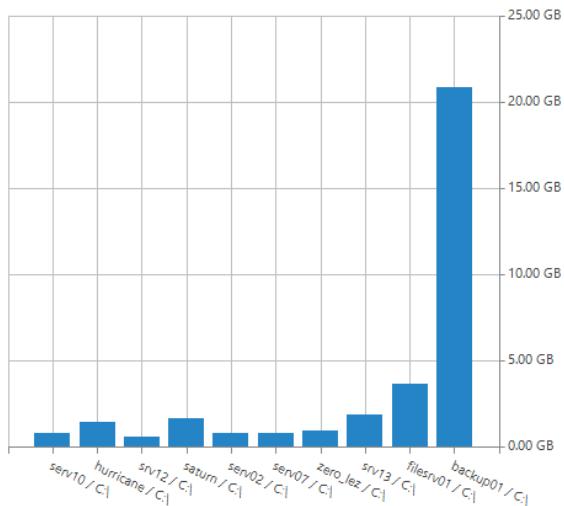
### Summary

Overview		Disks to Reach Threshold First						
VMs analyzed	30	Virtual Machine	Partition	Capacity (GB)	Free Space (GB)	Daily Growth (GB)	Days to Reach 90%	Days to Reach 100%
Virtual disks in the infrastructure	31							
Including								
Thick disks	12							
Thin disks	19							
Disks to reach 100% in less than 30 days	2	<a href="#">srwin12</a>	E:\	29.51	1.25	0.00	0	∞
Disks to reach 100% in less than 60 days	3	<a href="#">backup01</a>	C:\	119.66	4.37	3.48	1	6
Disks with less than 1 GB of free space	1	<a href="#">serv02</a>	C:\	39.66	4.04	0.14	5	51
Disks with less than 1% of free space	0	<a href="#">filesrv01</a>	C:\	29.66	3.70	0.61	6	14
Average disks' daily growth [GB]	-0.13	<a href="#">hurricane</a>	C:\	119.66	15.86	0.24	30	109
Average disks' daily growth [%]	-0.14 %	<a href="#">srv18</a>	/	9.04	0.98	0.00	34	407
		<a href="#">srv13</a>	C:\	49.66	17.61	0.31	67	92
		<a href="#">zero_lez</a>	C:\	32.47	10.12	0.16	71	103
		<a href="#">shell</a>	C:\	99.66	13.24	0.06	85	331
		<a href="#">serv07</a>	C:\	39.66	12.79	0.13	106	152

Top 10 Partitions by Relative Space Growth



Top 10 Partitions by Absolute Space Growth



## Guest Disk Free Space (GB)

Virtual Server: [vcenter01.tech.local](#)

Virtual Machine	Partition	Guest Disk Size (GB)	Guest Disk Used Space (%)	Guest Disk Used Space (GB)	Guest Disk Free Space (%)	Guest Disk Free Space (GB)	Disk's Used Space Growth (GB)	Daily Growth (GB)	Days to Reach 100%
<a href="#">serv21</a>	/	96.33	51.32	49.44	48.68	46.89	0.00	0.00	∞
<a href="#">sv18</a>	/	9.04	89.21	8.07	10.79	0.98	0.02	0.00	407
<a href="#">filesrv02</a>	/	17.50	53.56	9.37	46.44	8.13	0.00	0.00	∞
<a href="#">filesrv06</a>	/	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/snapshots	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/boot/grub2/i386-pc	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/boot/grub2/x86_64-efi	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/opt	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/root	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/srv	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/tmp	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/usr/local	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">filesrv06</a>	/var	10.60	62.15	6.59	37.85	4.01	0.00	0.00	∞
<a href="#">shell</a>	C:\	99.66	86.71	86.41	13.29	13.24	0.38	0.06	331

### TIP:

Click a VM in the **Virtual Machine** column to drill down to VM guest disk space usage details.

The **VM Guest Disks Space Usage** drill-down section includes a chart and a table that allow you to examine disk space usage in detail.

- The chart visualizes disks space usage for each day of the reporting period.
- The table provides disk space capacity and usage details.

Note that some values in the table may be highlighted with red to emphasize important information.

- **Guest disk used space (%)** value is highlighted with red if the amount of used disk space exceeds 90%.
- **Disk's used space change (%)** value is highlighted with red if the disk used space growth within the reporting period exceeds 10%.
- **Guest disk free space (%)** value is highlighted with red if the amount of disk free space is less than 10%.
- **Guest disk free space (GB)** value is highlighted with red if the amount of disk free space is less than 5 GB.
- **Days to reach 100%** value is highlighted with red if less than 180 days are left until a disk reaches its limit.

## Use Case

The report allows you to examine VM guest disk utilization and track disk usage growth. This helps you plan resource allocation and ensure your VMs have enough disk resources for stable operation.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type:** defines the time period to analyze in the report.

- **Disk size more than:** defines the minimum capacity threshold for a disk to analyze in the report. If disk capacity is less than the specified value, the report will not analyze this disk.
- **Free space, less than:** defines the maximum amount of free space for a disk to analyze in the report. If the amount of free space on a disk is more than the specified value, the report will not analyze this disk.
- **Sort By:** defines how data will be sorted in the report (*Virtual Machines, Relative Growth, Absolute Growth*).
- **Do not show guest disks suppressed in Monitor Client:** defines whether guest disks excluded in Veeam ONE Monitor to analyze in the report.

You can exclude certain VM guest disks from monitoring in Veeam ONE Monitor. To learn more, see section [Virtual Machine Summary](#) of the Veeam ONE Monitor User Guide.

## Host Configuration

This report documents the current configuration of hosts in the virtual infrastructure.

The report provides general information on host systems in the environment, displays statistics on memory, CPU and storage utilization, and shows network configuration for each host.

## Host Configuration

### Description

This report provides general host configuration information, including available resources and network configuration.

### Report Parameters

Scope:	Virtual Infrastructure
Session date:	1/15/2019 3:29:38 AM
Business View objects:	
Report on host network configuration:	True

### Summary

Total number of hosts	3
VMs per host	51.00
Hosts per datastore	0.38

### General Information

Name	Manufacturer	System Model	Hypervisor	Status
esx01.tech.local	Intel Corporation	S5520UR	VMware ESXi 6.0.0 build-3029758	Connected
esx02.tech.local	Supermicro	X9DR3-F	VMware ESXi 6.0.0 build-5050593	Connected
esx03.tech.local	Supermicro	X10DRi	VMware ESXi 6.0.0 build-7967664	Connected

### Available Resources

Name	Physical CPU (GHz)	Total Cores	Physical Memory (GB)	Allocated Memory (GB)	Local Storage (GB)	Shared Storage (GB)	Number of VMs
esx01.tech.local	19.15	8	63.94	119.00	4,392.66	0.00	35
esx02.tech.local	25.19	12	255.97	438.00	11,169.00	0.00	94
esx03.tech.local	33.58	16	127.89	72.00	3,718.00	0.00	24

### Network Configuration

Networks	Network Type	VMs	Adapter name	Observed IP Ranges
Host Name: esx01.tech.local		41		
Virtual Lab 1 VM Network	HostPortGroup	0	-	-
tenant.Tenant1.vlan7	HostPortGroup	0	vmnic0	172.17.53.4-172.17.53.4
tenant.Tenant1.vlan6	HostPortGroup	0	vmnic0	172.17.53.4-172.17.53.4
tenant.Tenant1.vlan5	HostPortGroup	0	vmnic0	172.17.53.4-172.17.53.4
tenant.Tenant1.vlan4	HostPortGroup	0	vmnic0	172.17.53.4-172.17.53.4
tenant.Tenant1.vlan3	HostPortGroup	0	vmnic0	172.17.53.4-172.17.53.4
tenant.Tenant1.vlan2	HostPortGroup	0	vmnic0	172.17.53.4-172.17.53.4
tenant.Tenant1.vlan1	HostPortGroup	0	vmnic0	172.17.53.4-172.17.53.4
VM Network	HostPortGroup	34	vmnic0	172.17.53.4-172.17.53.4
DR Test Lab VM Network	HostPortGroup	1	-	-
Host Name: esx02.tech.local		102		
Exchange Virtual Lab VM Network	HostPortGroup	6	-	-
VM Network	HostPortGroup	82	vmnic0	172.17.53.64-172.17.53.79
tenant.Delta.vlan506	HostPortGroup	12	vmnic0	172.17.53.64-172.17.53.79
Host Name: esx03.tech.local		26		
tenant.ABC Company.vlan711	HostPortGroup	0	vmnic0	172.24.30.1-172.24.30.254
tenant.ABC Company.vlan716	HostPortGroup	2	vmnic0	172.24.30.1-172.24.30.254

## Use Case

The report allows you to identify configuration issues, optimize resource provisioning and better handle current and future workloads.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Host type.
- **Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.
- **Report on host network configuration:** defines whether host network configuration details must be included in the report.

## Hypervisor Version

This report provides information on hypervisor versions used in your infrastructure.

The report shows the hypervisor version with the build number and the number of hosts on which the hypervisor runs.



## Hypervisor Version

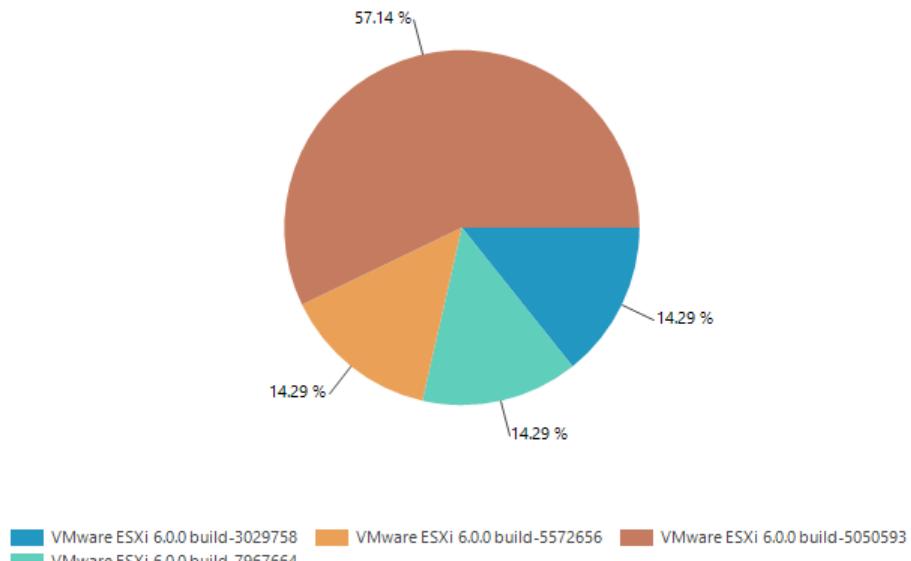
### Description

This report shows ESXi version (including build number) and patch levels to help you ensure all your hosts are up-to-date.

### Report Parameters

Scope: Virtual Infrastructure  
Session Date: 1/18/2019 9:30 AM

### Summary



### Details

Hypervisor Version	Host Name
VMware ESXi 6.0.0 build-3029758	esx01.tech.local
VMware ESXi 6.0.0 build-5050593	esx02.tech.local
	qa-srv24.dev.amust.local
	qa-srv14.amust.local
	qa-srv41.dev.amust.local
VMware ESXi 6.0.0 build-5572656	qa-srv56.dev.amust.local
VMware ESXi 6.0.0 build-7967664	esx03.tech.local

Total Hosts

7

# Use Case

To improve host performance, enhance compatibility and enable additional features across the environment, VMware recommends that you upgrade to the latest hypervisor version.

The report allows you to check hypervisor versions installed on your hosts, and make sure you run the latest available version.

## Report Parameters

You can specify the following report parameters:

- **Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.
- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

## Infrastructure Overview

This report provides VMware vSphere inventory configuration information, including all vCenter servers, clusters, hosts, VMs, datastores, and networks in the virtual environment.

The report shows configuration properties of virtual servers, clusters, datastores, host systems and networks. The report also includes charts that illustrate distribution of VM power state, VMware Tools status and Business View groups across the infrastructure.

## veeam

### Infrastructure Overview

#### Description

This report provides general inventory configuration information, including all vCenter servers, clusters, hosts, VMs, datastores, and networks in your virtual environment.

#### Summary

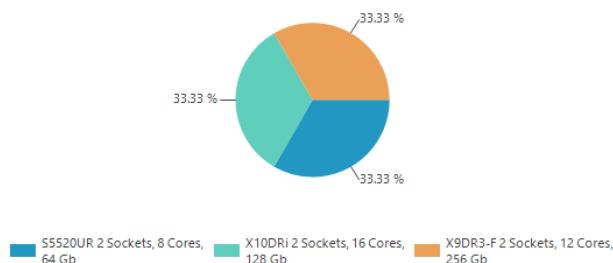
Scope:	Virtual Infrastructure
Hosts per Cluster:	
VMs per Host:	51.0
Datastores per Host:	2.7
VMs per Datastore:	19.0

#### vCenter Servers

vCenter Servers	Datacenters	Clusters	Shared Datastores	Virtual Machines	Hosts	Physical CPU(GHz)	Physical Memory(GB)	Datastore Capacity (TB)
<a href="#">vcenter01.tech.local</a>	3	0	1	153	3	77.92	447.8	18.83
Total:	3	0	1	153	3	77.92	447.8	18.83

#### Hosts

##### Top Hosts Configurations



[Details](#)

##### All Hosts Configurations

Model	Sockets	Cores	Memory (GB)	Host
S5520UR	2	8	63.94	1
	2	8	63.94	<a href="#">esx01.tech.local</a>
X10DRi	2	16	127.89	1
	2	16	127.89	<a href="#">esx03.tech.local</a>
X9DR3-F	2	12	255.97	1
	2	12	255.97	<a href="#">esx02.tech.local</a>
Total:	6	36	447.80	3

##### Hosts Allocation

vCenter Server	Host	Cores	VMs	vCPUs	vCPU/Core	vCPU/VM
<a href="#">vcenter01.tech.local</a>	3					
	<a href="#">esx01.tech.local</a>	8	35	75	9.38	2.14
	<a href="#">esx02.tech.local</a>	12	94	191	15.92	2.03
	<a href="#">esx03.tech.local</a>	16	24	42	2.63	1.75

**TIP:**

- Click a vCenter Server name in the **vCenter Servers** table to drill down to the list of hosts managed by the vCenter Server and details on hypervisor version installed on the hosts.
- Click the **Details** link below the **Power State** chart to drill down to the table that shows the list of VMs and their power state.
- Click the **Details** link below the **Tools Status** chart to drill down to the table that shows the list of VMs and status of VMware Tools running on these VMs.
- Click the **Details** link below the **BV Chart** to drill down to the table that shows the list of Veeam ONE Business View categories and groups, as well as VMs in these groups.

## Use Case

The report helps administrators track the state of the managed virtual infrastructure.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Choose VM category to include it to the report:** defines a Business View group that includes VMs to analyze in the report.

## VMs Configuration

This report documents the current configuration of VMs in the virtual infrastructure.

- The **Guest OS Distribution** chart illustrates what guest OSes are installed on VMs, and shows the share of a particular guest OS.  
Click the **Details** link at the bottom of the chart to drill down to the list of guest OSes present in the infrastructure and the list of VMs on which these guest OSes are installed.
- The **Tools Status** chart illustrates the status of VMware Tools on VMs.  
Click the **Details** link at the bottom of the chart to drill down to the list of VMs and statuses of VMware Tools running on these VMs.
- The **VM State Summary** chart illustrates the VM power state.  
Click the **Details** link at the bottom of the chart to drill down to the list of VMs and their power states.

- The **Details** table provides detailed information for every VM, including data on VM location, computer name, guest OS type, number of vCPUs, amount of allocated memory resources, amount of allocated and used storage resources.

## VEEAM

### VMs Configuration

#### Description

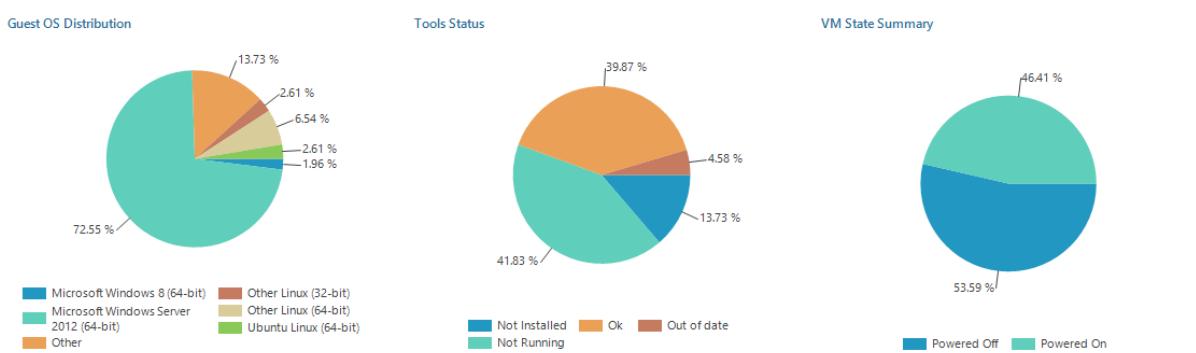
This report provides a quick overview of all configured resources for virtual machines in terms of memory, CPU and virtual disk resources as well as VM state and Guest OS distribution summary.

#### Report Parameters

Scope: Virtual Infrastructure

Business View objects:

#### Summary



#### Details

##### vCenter Server: vcenter01.tech.local

Host	Resource Pool/vApp	VM Name	Computer Name	Guest OS	vCPUs	Memory (GB)	Storage Allocated (GB)	Used Storage (GB)
Cluster: N/A		153			308	630.24	23,787.49	11,998.44
esx01.tech.local		35			75	119.30	5,629.37	1,874.85
	Webservices	apache02	Not set	Microsoft Windows 2000	1	0.38	8.54	8.54
	DB	db01	db01.tech.local	Microsoft Windows Server 2012 (64-bit)	2	4.00	154.18	24.94
	Data Lab	Exchange_vLab	Not set	Other Linux (64-bit)	1	1.00	1.78	0.00
	Management Group	hpvs01	test-vm	Microsoft Windows Server 2012 (64-bit)	2	4.00	124.16	31.62
	Management Group	hpvs02	hpvs02.tech.local	Microsoft Windows Server 2012 (64-bit)	2	4.00	124.16	28.13
	Evaluation	linux01	apache01	CentOS 4/5/6/7 (64-bit)	1	2.00	2.16	0.00
	VMware_Ruby_HP_Epsilon	Network Extension Appliance Epsilon(esx01)	Not set	Other Linux (64-bit)	1	1.00	1.78	0.00
	VMware_Diamond_HP_Theta	Network Extension Appliance Theta(esx01)	Not set	Other Linux (64-bit)	1	1.00	1.78	0.00
	DB	oraclelinux	oraclelinux	Oracle Linux 4/5/6/7 (64-bit)	2	5.00	410.16	215.18
	Production	ova-template-veeampn	veeampn	Ubuntu Linux (64-bit)	1	1.00	17.16	3.93

## Use Case

The report helps administrators assess configuration properties of VMs in the monitored virtual infrastructure.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

## VMs Growth

This report tracks how the number of VMs in your virtual environment has been changing during the reporting period. The report analyzes the amount of allocated resources, displays changes in the number of VMs, and shows how these changes influenced resource provisioning in the infrastructure.

For each added/removed VM, the report provides information on the configuration properties of the VM, the date and time when the VM was added/removed, and displays the name of the user who initiated the change.

## VEEAM

### VMs Growth

#### Description

This report shows how many VMs have been added to the virtual environment during the selected period of time.

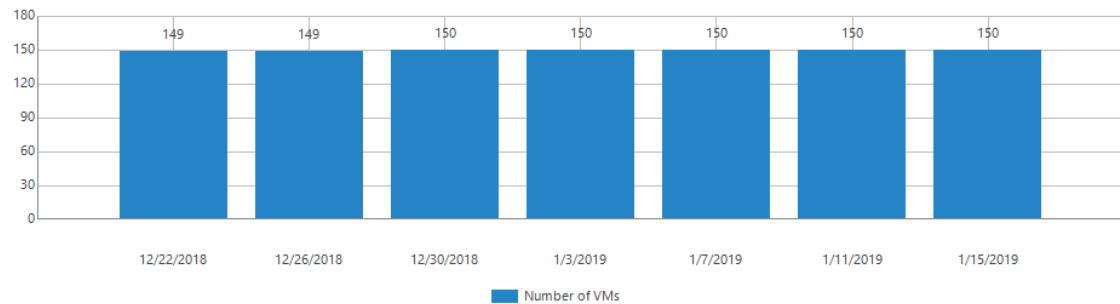
#### Report Parameters

Scope: Virtual Infrastructure  
 Interval: 1 month (12/16/2018 - 1/15/2019)  
 Business View objects:

#### Summary

Number of VMs	Allocated Resources	Ratios
Total number of VMs: 150	vCPU: 302	vCPU/Core: 25.17
VMs added: 4	Memory: 618.24 GB	VMs per host: 50.00
VMs removed: 3	Storage: 11897.02 GB	VMs per datastore: 18.75

#### VMs Growth



#### Added VMs Details

##### vCenter Server: vcenter01.tech.local

Cluster/Host: esx02.tech.local

Number of VMs: 91

Added VMs	vCPU	Memory (GB)	Storage (GB)	Initiator	Event Date
3	5	9.00	59.44		
fileserv03	2	4.00	27.46	tech\ryan.smith	12/30/2018 1:44 PM
vac	2	4.00	31.98	tech\john.smith	1/14/2019 5:02 PM
Sandbox01	1	1.00	0.00	tech\john.smith	1/15/2019 12:06 AM
Removed VMs	vCPU	Memory (GB)	Storage (GB)	Initiator	Event Date
3	4	6.00	145.23		
172.24.30.120_hx9sy0	1	1.00	0.00	vsphere.local\william.fox	12/29/2018 5:37 PM
vac	2	4.00	145.23	tech\john.smith	1/14/2019 4:54 PM
Sandbox01	1	1.00	0.00	tech\john.smith	1/15/2019 12:05 AM

##### Cluster/Host: esx03.tech.local

Number of VMs: 24

Added VMs	vCPU	Memory (GB)	Storage (GB)	Initiator	Event Date
1	1	1.00	0.00		
172.24.30.120_ua5p49	1	1.00	0.00	vsphere.local\william.fox	12/29/2018 6:57 PM

## Use Case

This report allows you to control virtual machine sprawl and to optimize resource utilization in your infrastructure.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.

# VMware Monitoring

This report pack displays performance statistics for clusters, hosts, resource pools, vApps and VMs. Additionally, it tracks VM uptime, provides an overview of triggered alarms and helps you perform health assessment of your Infrastructure to increase its efficiency.

**Number of reports:** 11

**Current version:** 4

**Reports included:**

- [Alarms Current State Overview](#)
- [Alarms Overview](#)
- [Cluster Hosts Performance](#)
- [Cluster Performance](#)
- [Datastore Performance](#)
- [Host Performance](#)
- [Host Uptime](#)
- [Multiple Clusters Performance](#)
- [Resource Pool and vApp Performance](#)
- [VM Performance](#)
- [VMs Uptime](#)

# Alarms Current State Overview

This report shows alarms triggered by Veeam ONE Monitor for the managed virtual infrastructure. For each alarm, the report provides information on the affected object, alarm severity, date and time when the alarm was triggered and alarm details.



## Alarms Current State Overview

### Description

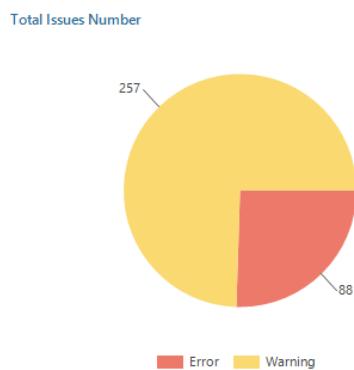
This report shows all currently unresolved alarms for the virtual infrastructure.

### Report Parameters

Scope: Virtual Infrastructure  
Business View objects:  
Alarms status: Errors and Warnings

### Summary

Total Warnings 257  
Total Errors 88  
Alarmed Objects: 345



### Top 10 Alarms

Alarm Name	Alarm Type	Repeat Count
Latest snapshot age	Warning	163
Latest snapshot size	Error	37
Latest snapshot size	Warning	26
VM configuration file missing	Warning	22
Datastore write latency	Warning	12
Too many snapshots on the VM	Warning	10
VM total disk latency	Warning	9
Orphaned VM backup snapshot	Error	7
Datastore write latency	Error	6
Too many snapshots on the VM	Error	5

### Details

Object	Location	Alarm Name	Type	Trigger	Time
<b>Object Type: Any Object</b>					
vccenter01.tech.local	\Virtual Infrastructure	VM instance UUID conflict	2 Warning	Fired by event: VmInstanceUuidConflictEvent Event description: The instance UUID (5011b93d-b141-308f-0035-3f818cb7d69d) of tech_srv01_a9b8416b73e44d4c854 8e894c1e109da conflicts with the instance UUID assigned to tech_srv01 Initiated by: Not Set	12/28/2018 3:32:32 AM
<b>Object Type: Datastore</b>					
ai_netapp(21.103)_lun_source_vol1	\Virtual Infrastructure\elal.dev.amust.local\Datacenter1	Datastore write latency	27 Warning	"Disk/Datastore: Datastore Write Latency" (128.0 Milliseconds) is above a defined threshold (100.0 Milliseconds)	12/28/2018 1:17:56 PM
ai_netapp(21.103)_nfs_source_vol1	\Virtual Infrastructure\elal.dev.amust.local\Datacenter1	Datastore write latency	Error	"Disk/Datastore: Datastore Write Latency" (656.0 Milliseconds) is above a defined threshold (250.0 Milliseconds)	12/28/2018 1:17:56 PM

## Use Case

This report evaluates the health state of the managed infrastructure and helps you simplify troubleshooting. You can use the report to export details of triggered alarms.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Status:** defines the status of alarms that must be included in the report (*Errors and Warnings; Errors only; Errors, Warning, Acknowledged; Acknowledges only*).

## Alarms Overview

Veeam ONE Monitor generates multiple alarms to inform you about important events in your environment. This report allows administrators to quickly review the health state of the environment and to track how the number of alarms has been changing during the reporting period.

The report analyzes alerting activity across a time range, provides information on virtual infrastructure objects that caused the greatest number of alerts, and displays top 10 most frequently occurred issues.

**TIP:**

Click a number in the **Alarms** column of the **Details** table to drill down to details for alarms raised for the infrastructure object.

## Alarms Overview

### Description

This report provides an overview of your virtual environment current health state that includes most common alarms and most affected VI objects.

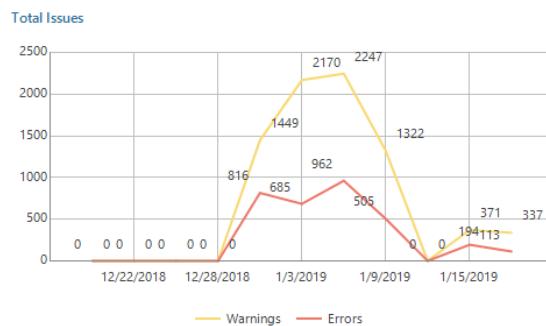
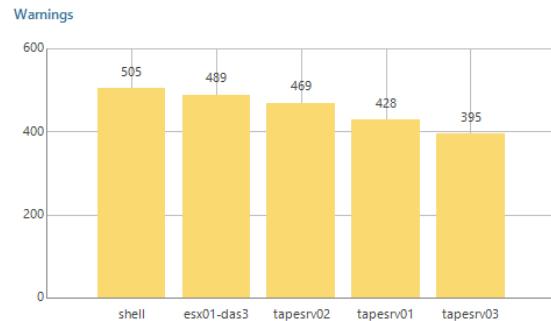
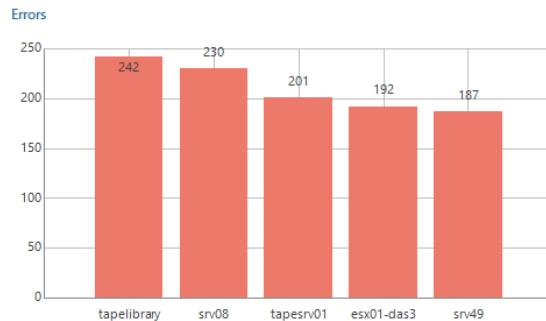
### Report Parameters

Scope:	Virtual Infrastructure
Date period:	1 month (12/16/2018 - 1/15/2019)
Sorting by:	Issue type
Business View objects:	
Object Types:	All items
Alarms List:	All items

### Summary

Total Errors:	3275
Total Warnings:	7896

### Top Objects and Issues



### Top 10 Issues

Name	Total Triggered	Total Objects
VM total disk latency	6017	40
Datastore write latency	3198	30
Datastore read latency	976	18
Host CPU usage	457	4
Latest snapshot age	166	165
Latest snapshot size	137	78
High memory usage	77	4
VM CPU ready	33	12
Too many snapshots on the VM	21	19

### Details

#### Issue Type: Errors

Location	Object	Alarms	Trend
Object Type: Datastore	28	411	
\Virtual Infrastructure\vcenter01.tech.local\Atlanta	esx01-das1	12	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Atlanta	esx01-das2	14	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Atlanta	esx01-das3	60	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Atlanta	esx01-ds-hvsa	21	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Atlanta	vmfs_lez	8	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Atlanta	nfs_lez	8	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Prague	datastore1	10	Increasing
\Virtual Infrastructure\elal.dev.amust.local\Datacenter1	ontap93 lun5	4	Increasing
\Virtual Infrastructure\elal.dev.amust.local\Datacenter1	ontap93 lun6	6	Increasing
\Virtual Infrastructure\elal.dev.amust.local\Datacenter1	PV NetApp Application	7	Increasing
\Virtual Infrastructure\elal.dev.amust.local\Datacenter1	ontap93 lun9	1	Increasing
\Virtual Infrastructure\elal.dev.amust.local\Datacenter1	ontap93 lun4	10	Increasing

# Use Case

The report provides an overview of the current health state of your virtual environment, shows the list of the most common alarms and identifies the most affected virtual infrastructure objects.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Interval - Interval Type/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Group By:** defines how data will be grouped in the report output (by *Issue type* or *Object type*).
- **Object Type:** defines a list of virtual infrastructure object types to analyze in the report.
- **Alarms List:** defines a list of alarms to analyze in the report.

## Cluster Hosts Performance

This report aggregates historical data and shows performance statistics for all hosts in selected clusters across a time range. The report features a predefined list of performance counters and allows you to report on memory, CPU, disk and network usage.

The report shows performance charts with resource usage statistics for hosts in each cluster included in the report scope, rates the hosts by the resource usage level, and analyzes the resource usage trend for each host.

**TIP:**

Click a host name in the **Summary** or in a resource usage table to drill down to performance charts with statistics on CPU, memory, disk and network usage for the host. The report will show a list of top resource consuming VMs. You can click a VM name in the list to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Cluster Hosts Performance

### Description

This report shows performance data for all hosts within the selected cluster that includes CPU, Memory, Disk and Network usage.

### Report Parameters

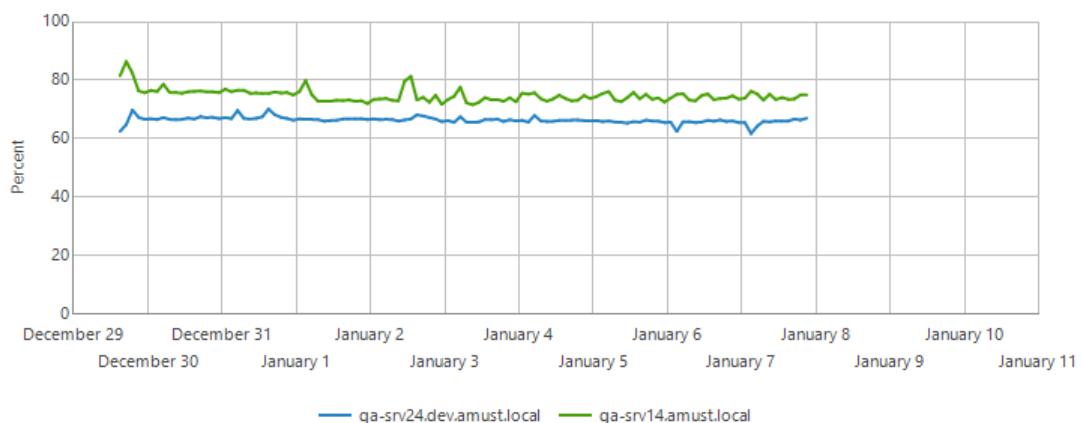
Scope: Virtual Infrastructure  
 Report Period: 12/29/2018 - 1/10/2019  
 Counters: All Items

### Details for: Cluster1

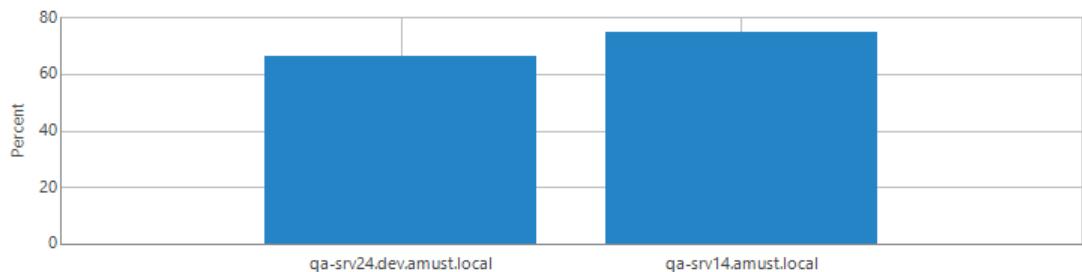
#### Summary

Host Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets
<a href="#">qa-srv14.amust.local</a>	255.97	23.99	12	2
<a href="#">qa-srv24.dev.amust.local</a>	191.94	17.02	8	2

#### CPU Usage



#### Hosts by CPU Usage



#### CPU Usage (Percent)

Host Name	Average	Minimum	Maximum	Std. Deviation	Trend
<a href="#">qa-srv14.amust.local</a>	74.88	71.64	86.46	2.24	Decreasing
<a href="#">qa-srv24.dev.amust.local</a>	66.44	61.80	70.22	1.10	Decreasing

# Use Case

The report provides an overview of hardware resource consumption across your hosts. This information may help you identify hosts with performance issues, balance workloads, right-size resource provisioning, redefine DRS settings and optimize cluster overall performance.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Counters:** defines a list of performance counters to analyze in the report.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Cluster Performance

This report aggregates historical data and shows performance statistics for a selected cluster across a time range. The report shows statistics on CPU, memory, disk and network usage for the cluster, lists top resource consuming hosts and calculates resource usage trends for them.

**TIP:**

- Click a host name in the **Summary** table or in the list of top resource consuming hosts to drill down to performance charts with statistics on CPU, memory, disk and network usage for the host.
- Click a VM name in the list to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Cluster Performance

### Description

This report shows cluster hosts performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

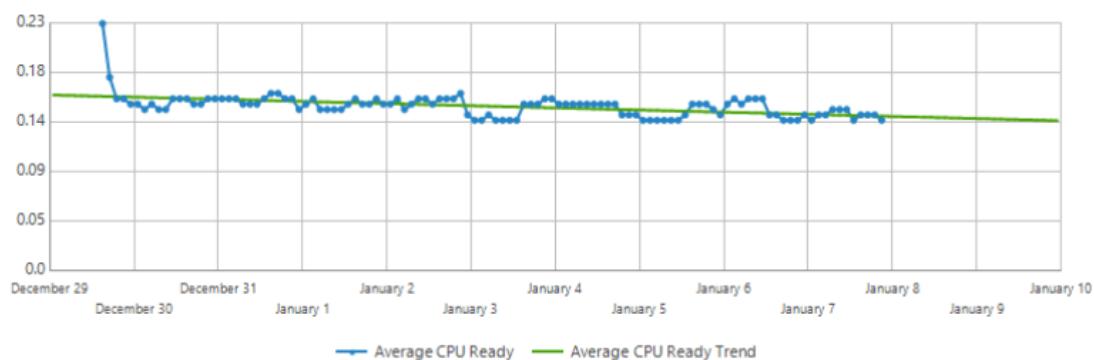
Selected Object: Cluster2  
 Selected Object Location: \\Virtual Infrastructure\\elal.dev.amust.local\\Datacenter1  
 Report Period: 12/29/2018 - 1/9/2019

### Summary

Host Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets
<a href="#">qa-srv56.dev.amust.local</a>	127.97	23.99	12	2
<a href="#">qa-srv41.dev.amust.local</a>	127.97	25.19	12	2
Total:	255.94	49.18	24	4

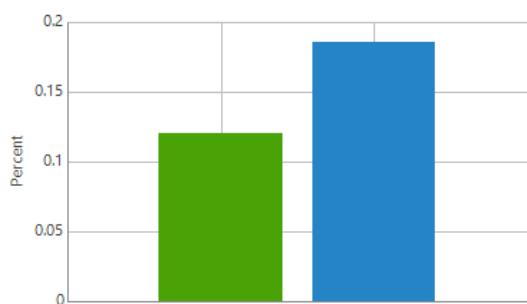
### CPU Performance

#### Average CPU Ready (Percent)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Cluster2	0.15	0.14	0.23	0.01	Decreasing

#### Top 3 Hosts by CPU Ready



Object Name	Avg	Trend
<a href="#">qa-srv56.dev.amust.local</a>	0.19	Decreasing
<a href="#">qa-srv41.dev.amust.local</a>	0.12	Decreasing

#### Top 3 VMs by CPU Ready



Object Name	Avg	Trend
infinibox	1.52	Decreasing
ONTAP 9.4	1.21	Decreasing
ONTAP 9.5 RC1	0.92	Increasing

# Use Case

The report provides an overview of hardware resource consumption for the selected cluster. This information may help you identify clusters with performance issues, balance workloads, right-size resource provisioning, redefine DRS settings and optimize cluster overall performance.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the cluster to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected cluster. Otherwise, the report will contain no data.
- **Top N:** defines the maximum number of hosts and VMs to display in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Datastore Performance

This report aggregates historical data and shows performance statistics for a selected datastore across a time range.

The report shows tables and performance charts with statistics on read/write rates, read/write latency, IOPS and errors for the datastore. The report also lists top 3 resource consuming VMs and calculates resource usage trends for them.

Click a VM name in the list of top 3 resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

# Datastore Performance

## Description

This report shows datastore performance history that includes Usage, Latency and IOPS counters.

## Report Parameters

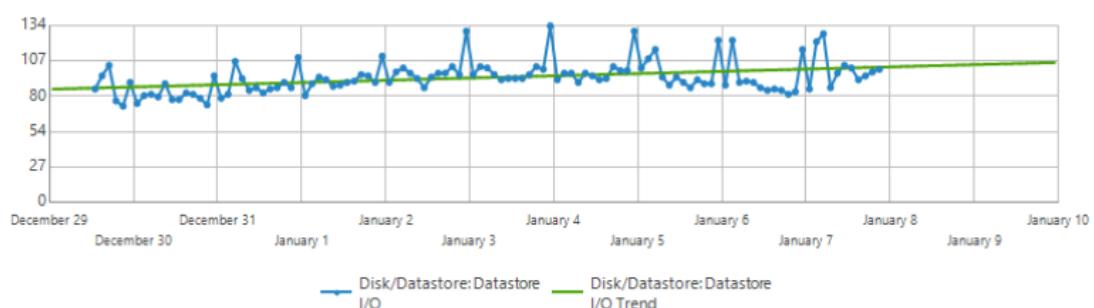
Selected Object: esx01-das1  
 Selected Object Location: \\Virtual Infrastructure\\vcenter01.tech.local\\Atlanta  
 Report Period: 12/29/2018 - 1/9/2019

## Summary

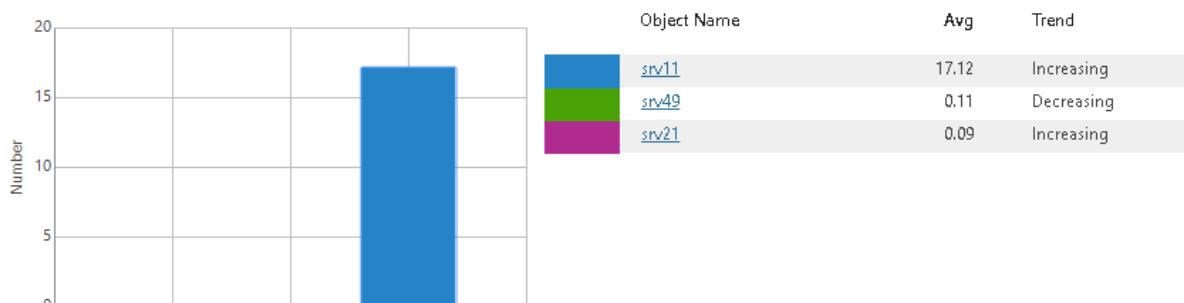
Name: esx01-das1  
 Type: local storage  
 Capacity: 1.2TB  
 Free Space: 594.3GB  
 Virtual Machines: 15

## Datastore IOPs

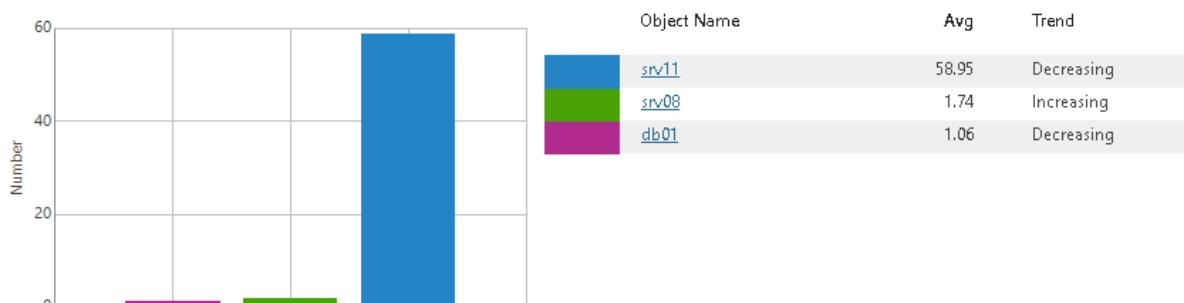
Disk/Datastore: Datastore I/O (Number)



Top 3 VMs by Read IOPs



Top 3 VMs by Write IOPs



# Use Case

The report helps you assess current load on your datastores and identify performance issues, such as excessive bus resets or high command aborts rates.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the datastore to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected datastore. Otherwise, the report will contain no data.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Host Performance

This report aggregates historical data and shows performance statistics for a selected host across a time range.

The report shows tables and performance charts with statistics on CPU, memory, disk and network usage for the host. The report also lists top resource consuming VMs and calculates resource usage trends for them.

**TIP:**

- Click a cluster name in the **Navigation** table to drill down to performance charts with statistics on CPU, memory, disk and network usage for the cluster.
- Click a VM name in the list of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Host Performance

### Description

This report shows host performance history that includes CPU, Memory, Disk and Network counters.

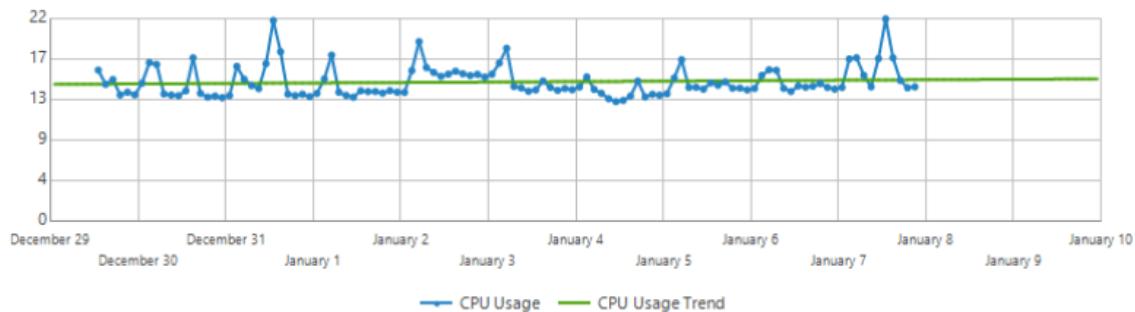
### Report Parameters

Selected Object:	esx02.tech.local
Selected Object Location:	\Virtual Infrastructure\vcenter01.tech.local\Atlanta
Report Period:	12/29/2018 - 1/9/2019
Top N:	3
Business hours:	From 12:00 AM to 11:00 PM

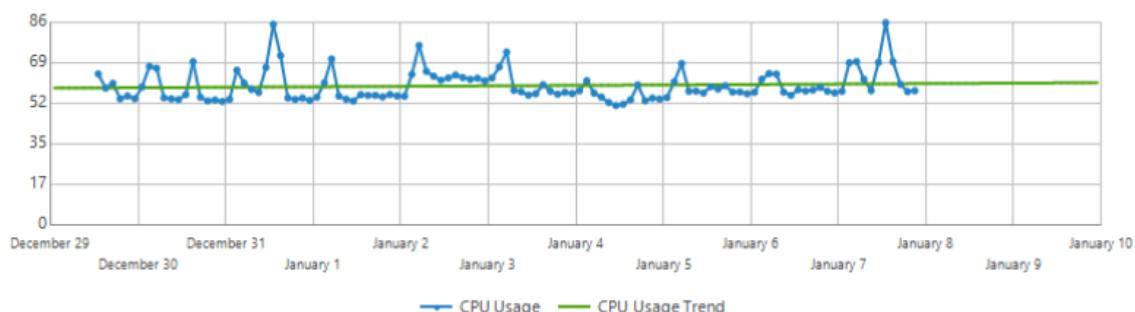
### Navigation

### CPU Performance

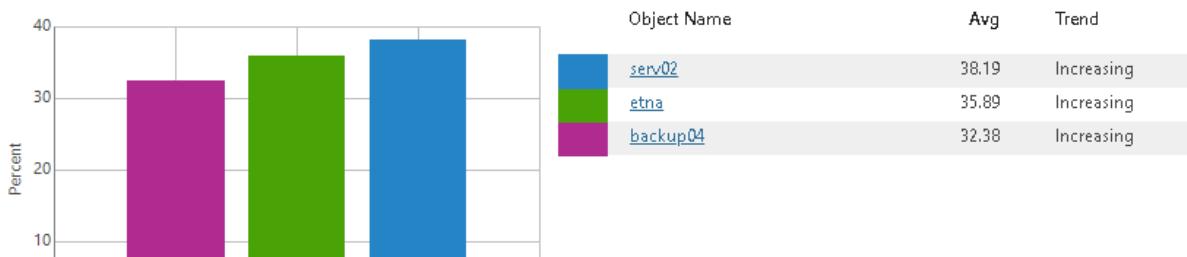
#### CPU Usage (GHz)



#### CPU Usage (Percent)



#### Top 3 VMs by CPU Usage



# Use Case

The report provides an overview of hardware resource consumption for the selected host. This information may help you identify hosts with performance issues, balance workloads, right-size resource provisioning and assure high availability/failover protection for VMs across the growing virtual environment.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the cluster to analyze in the report.
- **Interval/Period/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected cluster. Otherwise, the report will contain no data.
- **Top N:** defines the maximum number of hosts and VMs to display in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Host Uptime

This report analyzes host uptime statistics to track host availability.

- The **Top Uptime** and **Lowest Uptime** charts display top 5 hosts in terms of the highest and the lowest uptime values.

- The **Host Uptime** table provides the list of hosts whose uptime values are lower and greater than the specified thresholds.

Click a host in the **Host** column table to drill down to details on alarms triggered by Veeam ONE Monitor and host restarts.

## veeam

### Host Uptime

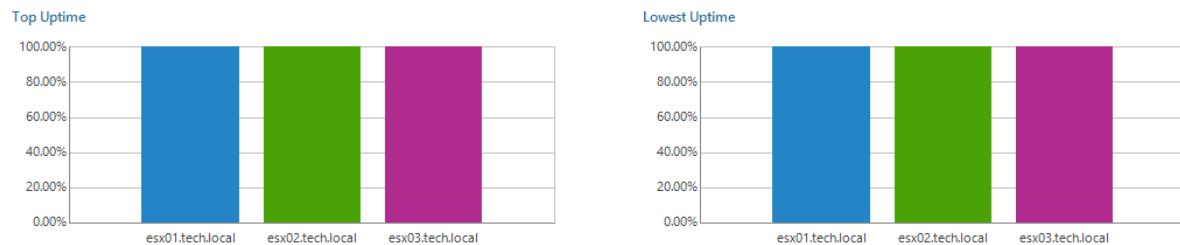
#### Description

This report provides an overview of hosts uptime including hosts with lowest and highest uptime values.

#### Report Parameters

Scope: Virtual Infrastructure  
 Reporting Period: Current month (1/1/2019 - 1/31/2019)  
 Uptime parameter: greater than 80.00% and lower than 100.00%  
 Grouping: Group by Uptime  
 Business View objects:

#### Summary



#### Host Uptime

Datacenter	Cluster	Host	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
Uptime: Uptime >= 90%						
Atlanta		<a href="#">esx01.tech.local</a>	0	2	00:04:00	99.96%
Atlanta		<a href="#">esx02.tech.local</a>	0	1	00:04:00	99.96%
Prague		<a href="#">esx03.tech.local</a>	0	1	00:04:00	99.96%

## Use Case

This report helps you discover the most and the least utilized hosts in the environment to restore their efficiency and improve target ROI.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Business View groups to analyze in the report. The parameter options are limited to objects of the "Host" type.
- Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- Uptime, greater than:** defines the desired minimum uptime value.

- **Uptime, lower than:** defines the desired maximum uptime value.
- **Group by:** defines how data will be grouped in the report output (by *Uptime*, *Datacenter* or *Cluster*).

## Multiple Clusters Performance

This report aggregates historical data and shows performance statistics for selected clusters across a time range. The report features a predefined list of performance counters and allows you to report on memory, CPU, disk and network usage.

The report shows tables and performance charts with resource usage statistics for each cluster included in the report scope, lists top resource consuming hosts and VMs, and calculates resource usage trends for them.

**TIP:**

- Click a cluster name in the **Summary** table to drill down to performance charts with statistics on CPU, memory, disk and network usage for the cluster.
- Click a host name in the list of top resource consuming hosts to drill down to performance charts with statistics on CPU, memory, disk and network usage for the host.
- Click a VM name in the list of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Multiple Clusters Performance

### Description

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This report shows performance data for multiple clusters that includes CPU, Memory, Disk and Network usage.

### Report Parameters

---

Scope: Virtual Infrastructure  
Report Period: 12/29/2018 - 1/8/2019  
Counters: CPU usage (%), Memory usage (%)  
Top N: 3  
Business hours: From 12:00 AM to 11:00 PM

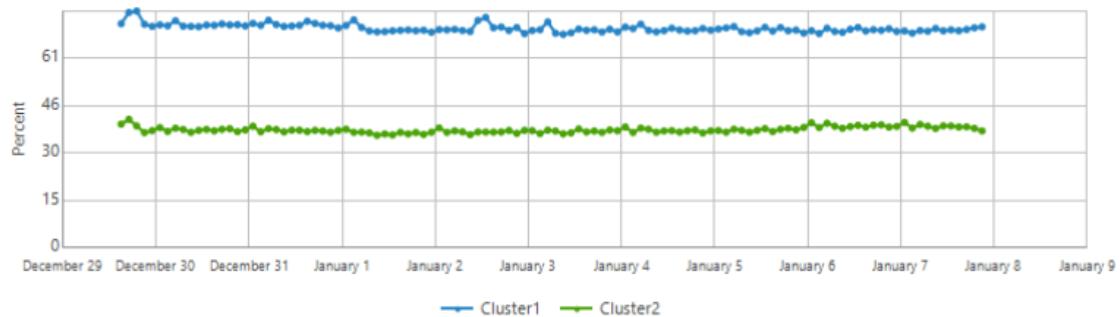
### Summary

---

Cluster Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets	CPU Usage %	Memory Usage %
<a href="#">Cluster1</a>	447.91	41.01	20	4	70.66	46.07
<a href="#">Cluster2</a>	255.94	49.18	24	4	37.93	80.93
Total:	703.84	90.19	44	8		

## CPU Performance

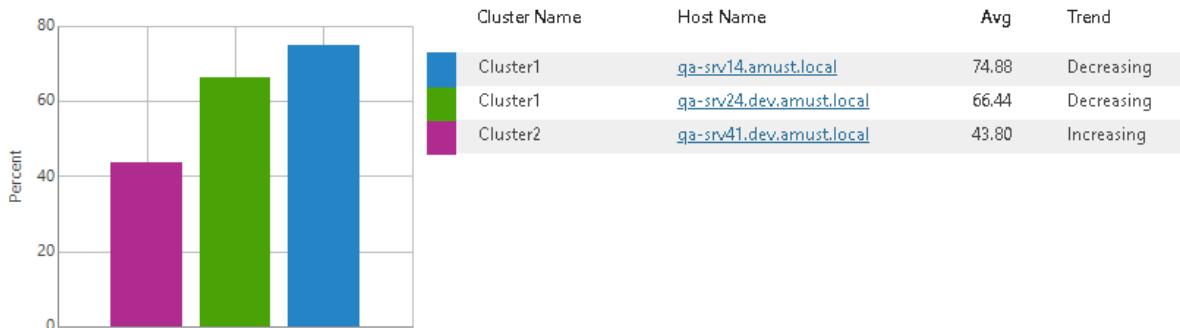
CPU Usage (Percent)



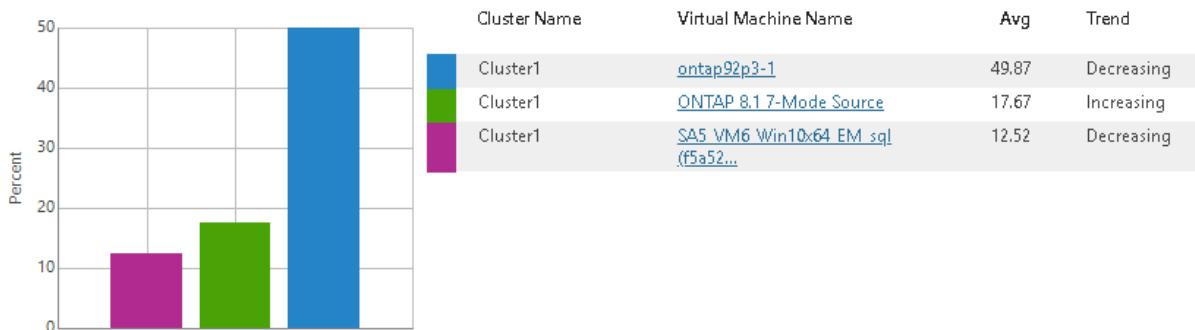
CPU Usage (Percent)

Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Cluster1	70.66	68.65	76.15	1.29	Decreasing
Cluster2	37.93	36.17	41.29	0.94	Increasing

Top 3 Hosts by CPU Usage



Top 3 VMs by CPU Usage



## Use Case

The report provides an overview of hardware resource consumption across your clusters. This information may help you identify clusters with performance issues, balance workloads, right-size resource provisioning, redefine DRS settings and optimize cluster overall performance.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Top N:** defines the maximum number of hosts and VMs to display in the report output.
- **Counters:** defines a list of performance counters to analyze in the report.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Resource Pool and vApp Performance

This report aggregates historical data and shows performance statistics for a selected resource pool/vApp across a time range.

The report shows tables and performance charts with statistics on CPU, memory, disk and network usage for the resource pool/vApp. The report also lists top resource consuming VMs and calculates resource usage trends for them.

**TIP:**

- Click a cluster name in the **Navigation** table to drill down to performance charts with statistics on CPU, memory, disk and network usage for the cluster.
- Click a VM name in the list of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Resource Pool and vApp Performance

### Description

This report shows resource pools and vApps performance history that includes CPU, Memory, Disk and Network counters.

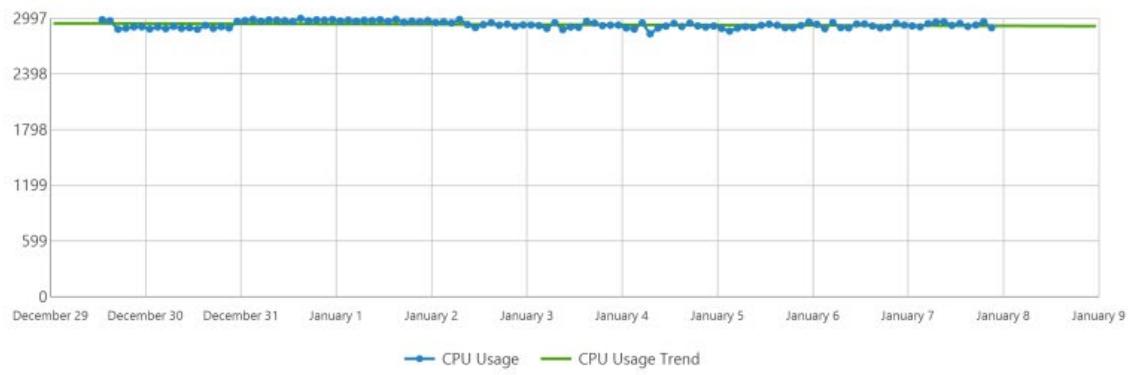
### Report Parameters

Selected Object: Fileservers  
 Selected Object Location: \\Virtual Infrastructure\\vcenter01.tech.local\\Atlanta\\esx01.tech.local  
 Report Period: 1/6/2020 - 1/12/2020

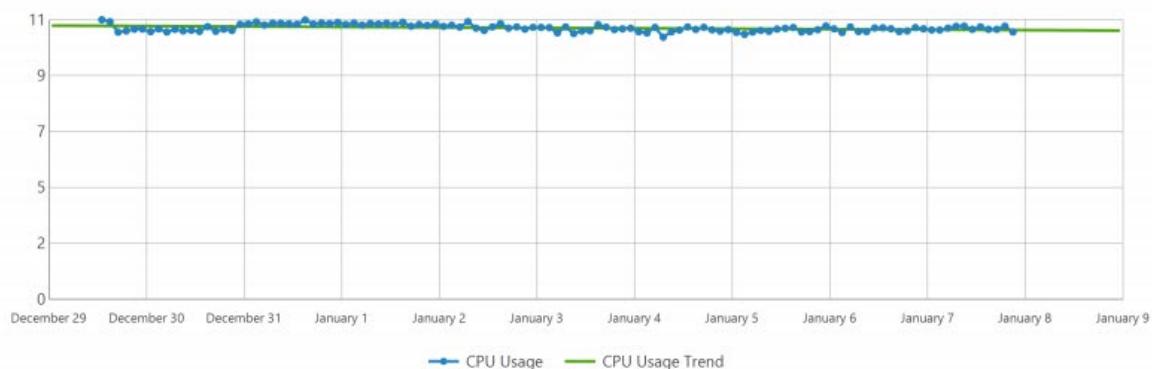
### Navigation

### CPU Performance

#### CPU Usage (MHz)

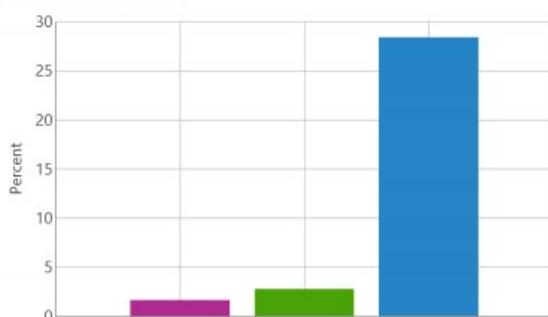


#### CPU Usage (Percent)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Fileservers	10.94	10.57	11.27	0.14	Decreasing

#### Top 3 VMs by CPU Usage



Object Name	Avg	Trend
srv08	28.39	Decreasing
srv49	2.78	Decreasing
srv21	1.65	Decreasing

## Use Case

The report helps you identify resource pools and vApps with performance issues, evaluate how efficiently your resource pools and vApps are performing, and decide whether additional right-sizing or reconfiguration actions are necessary.

## Report Parameters

You can specify the following report parameters:

- Object:** defines the resource pool or vApp to analyze in the report.
- Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected resource pool/vApp. Otherwise, the report will contain no data.
- Top N:** defines the maximum number of VMs to display in the report output.
- Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## VM Performance

This report aggregates historical data and shows performance statistics for a selected VM across a time range.

The report shows tables and performance charts with statistics on CPU, memory, disk and network usage for the VM and calculates resource usage trend for it.

## TIP:

Click a cluster/host/resource pool name in the **Navigation** table to drill down to performance charts with statistics on CPU, memory, disk and network usage.



## VM Performance

### Description

This report shows VMs performance history that includes CPU, Memory, Disk and Network counters.

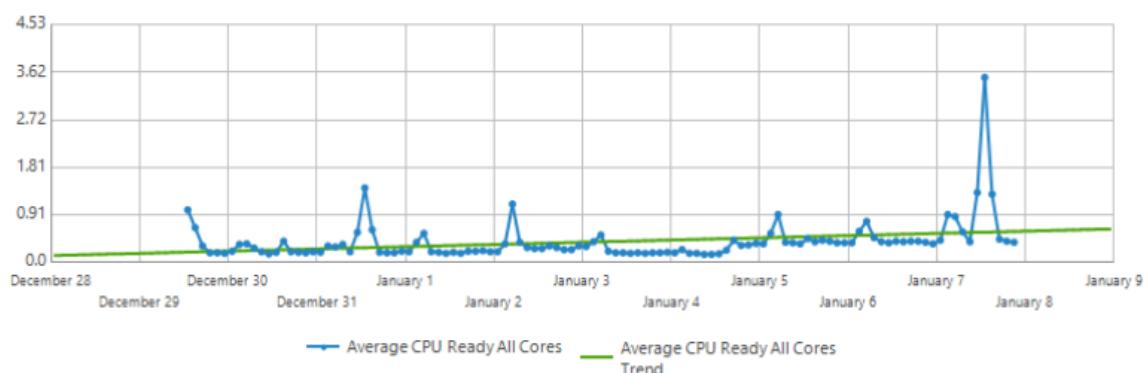
### Report Parameters

Selected Object: backup02  
Selected Object Location: \\Virtual Infrastructure\\vcenter01.tech.local\\Atlanta\\esx02.tech.local  
Report Period: 12/28/2018 - 1/8/2019  
Business hours: From 12:00 AM to 11:00 PM

### Navigation

#### CPU Performance

##### Average CPU Ready All Cores (Percent)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
backup02	0.39	0.15	3.53	0.39	Increasing

## Use Case

The report allows you to verify that you have provided enough resources to the virtual machine.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the VM to analyze in the report.

- **Interval/Period/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected VM. Otherwise, the report will contain no data.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## VMs Uptime

This report analyzes VM uptime statistics to track VM availability.

- The **Top Uptime** and **Lowest Uptime** charts display top 5 VMs in terms of the highest and the lowest uptime values.
- The **Uptime Distribution** chart displays the number of VMs with different uptime values.

- The **Virtual Machine Uptime** table provides the full list of VMs whose uptime values are lower and greater than the specified thresholds.

Click a VM name to drill down to detailed information on triggered alarms and virtual machine restart events over a specified reporting period.

## VEEAM

### VMs Uptime

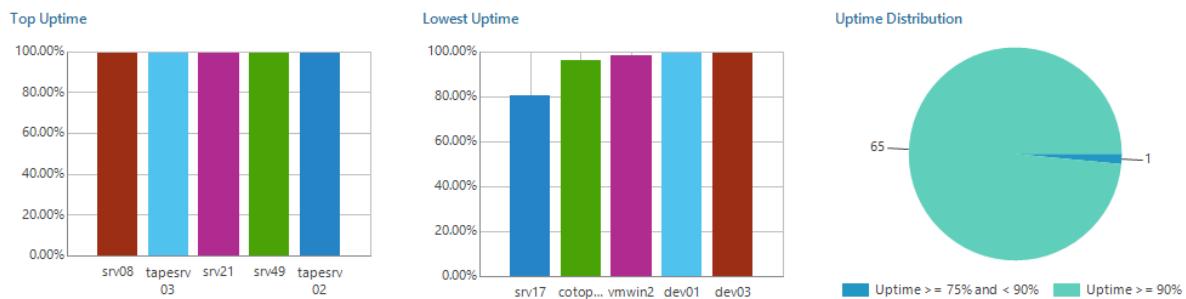
#### Description

This report provides an overview of VMs uptime including VMs with lowest and highest uptime values.

#### Report Parameters

Root Object: Virtual Infrastructure  
 Reporting Period: Custom Date Range (12/29/2018 - 1/8/2019)  
 Uptime Parameter: greater than or equal to 80.00% and lower than or equal to 100.00%  
 Grouping: Group by Uptime  
 Business View:

#### Summary



#### Virtual Machine Uptime

Cluster	Host	VM Name	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
Uptime: Uptime >= 90%						
	esx02.tech.local	<a href="#">cotopaxi</a>	0	2	08:39:00	96.17%
	esx02.tech.local	<a href="#">vmwin2</a>	3	3	04:03:00	98.21%
	esx02.tech.local	<a href="#">dev01</a>	0	2	02:04:00	99.09%
	esx02.tech.local	<a href="#">dev03</a>	0	2	02:01:00	99.11%
	esx02.tech.local	<a href="#">dev04</a>	0	2	01:59:00	99.12%
	esx02.tech.local	<a href="#">dev05</a>	0	2	01:58:00	99.13%
	esx03.tech.local	<a href="#">srv16</a>	0	5	01:57:00	99.14%
	esx02.tech.local	<a href="#">dev02</a>	0	3	01:56:00	99.14%
	esx03.tech.local	<a href="#">filesrv01</a>	0	3	01:53:00	99.17%
	esx03.tech.local	<a href="#">appsrv01</a>	0	3	01:52:00	99.17%
	esx02.tech.local	<a href="#">extent02</a>	0	2	01:51:00	99.18%
	esx02.tech.local	<a href="#">apache07</a>	0	5	01:51:00	99.18%

## Use Case

Uptime is a measure of time a VM has been up and actively running on a host. When a VM is not operating, storage space allocated to it is not being used productively. Used this report to track uptime of virtualized workloads.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Uptime, greater than:** defines the desired minimum uptime value.
- **Uptime, lower than:** defines the desired maximum uptime value.
- **Group by:** defines how data will be grouped in the report output (by *Uptime, Datacenter, Cluster or Host*).

# VMware Optimization

This report pack allows you to evaluate the efficiency of resource usage and to optimize VM resource provisioning. This will help you achieve a better output and increase ROI for your virtual environment.

**Number of reports:** 9

**Current version:** 3

**Reports included:**

- [Active Snapshots](#)
- [Garbage Files](#)
- [Idle Templates](#)
- [Idle VMs](#)
- [Inefficient Datastore Usage](#)
- [Orphaned VM Snapshots](#)
- [Oversized VMs](#)
- [Powered Off VMs](#)
- [Undersized VMs](#)

## Active Snapshots

This report shows a list of all VMs with snapshots, including the oldest and the largest snapshots in the virtual environment.

- The **Top Snapshot Size (GB)** and **Top Snapshot Age (Days)** charts display top 5 VMs with the oldest and the largest snapshots in the virtual environment.

- The **Details** table provides the list of VMs with snapshots and shows snapshot name, its location, date and time when the snapshot was created, snapshot size and state of the VM.

## VEEAM

### Active Snapshots

#### Description

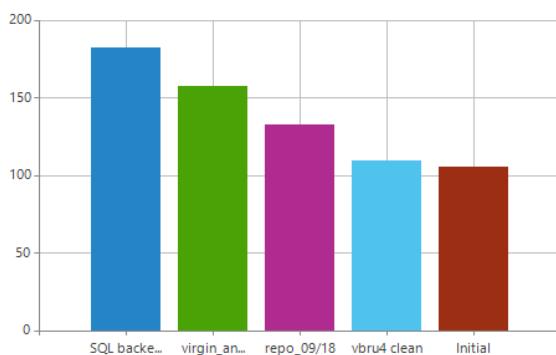
This report shows a list of all VMs with snapshots, including the oldest and the largest snapshots in your virtual environment.

#### Report Parameters

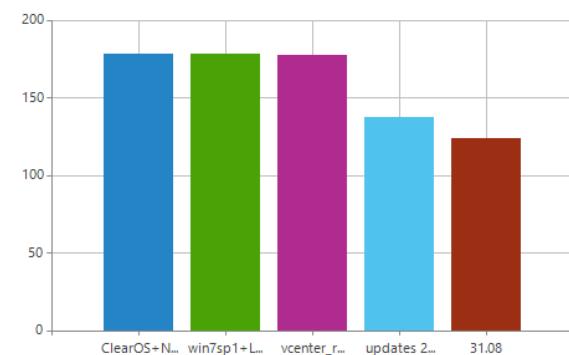
Scope:	Virtual Infrastructure
Snapshot age:	older than 1 week
Business View objects:	
Do not report on VMs created by Veeam replication jobs:	False

#### Summary

Top Snapshot Size (GB)



Top Snapshot Age (Weeks)



#### Details

Virtual Machine	Snapshot Name	Host	Snapshot Directory	Snapshot Create Time	Snapshot Size (GB)	VM State
hurricane	SQL backed up	esx02.tech.local	[esx02-ds1] hurricane/	10/11/2018 3:16:51 PM	182.38	Powered On
serv21	virgin_and_nice_hana	esx02.tech.local	[esx02-ds1] serv21_1/	12/3/2018 5:53:56 PM	157.52	Powered Off
serv10	repo_09/18	esx02.tech.local	[esx02-ds1] serv10/	9/20/2018 5:19:04 PM	132.67	Powered On
backup01	vbru4 clean	esx02.tech.local	[esx02-ds1] backup01/	12/29/2018 1:44:53 PM	109.47	Powered On
srwin12	Initial	esx02.tech.local	[esx02-ds1] srwin12/	11/6/2018 1:59:51 PM	105.69	Powered On
sunset	initial	esx02.tech.local	[esx02-ds1] sunset/	11/14/2018 7:36:59 PM	90.30	Powered On
mr-w16-VBR-95U4	95u3	qa-srv06.dev.vamust.local	[local ssd qa-srv55] mr-w16-VBR-95U4/	7/13/2018 9:44:39 AM	85.77	Powered On
neptune	Initial	esx02.tech.local	[esx02-ds1] neptune/	11/19/2018 2:10:53 PM	82.06	Powered Off
hr2562	Initial	esx02.tech.local	[esx02-ds1] hr2562/	11/15/2018 3:04:57 PM	62.55	Powered Off
extent01	Initial	esx02.tech.local	[esx02-ds1] extent01/	12/18/2018 2:02:42 AM	61.55	Powered On
filesrv01	clean	esx03.tech.local	[datastore1] filesrv01/	5/29/2018 11:23:27 PM	59.33	Powered On
mr-w16at	95u3a	qa-srv14.amust.local	[local qa-srv14] mr-w16at/	7/24/2018 4:36:10 PM	57.36	Powered On
saturn	Initial	esx02.tech.local	[esx02-ds1] saturn/	11/3/2018 3:43:51 PM	57.28	Powered On
mr-12r2fr	before-upg-95u4	qa-srv14.amust.local	[local qa-srv14] mr-12r2fr_replica/	12/19/2018 12:08:49 PM	52.97	Powered Off

## Use Case

Outdated snapshots consume valuable storage resources. Best practices for snapshots recommend that you delete snapshots older than 3 days, since they no longer reflect recent VM changes.

The report helps you detect outdated snapshots and better address the problem of wasted storage space.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Age older than - Age measured in:** defines snapshot age threshold. If a VM snapshot is older than the specified age, the VM will be included in the report.
- **Do not report on VMs created by Veeam replication jobs:** defines whether to include VM replicas created by Veeam Backup & Replication in the report.

Veeam Backup & Replication uses VM snapshots as replica restore points. Such snapshot restore points may be large in size and remain on the datastore for a long period of time. If you have VM replicas created with Veeam Backup & Replication, select this check box to exclude VM replicas with snapshot restore points from the report.

## Garbage Files

This report shows an overview of storage consumed by files that do not belong to VMs comprised in the infrastructure inventory.

- The **Summary** chart displays total amount of free space, amount of space consumed by non-garbage files and amount of space consumed by garbage files on datastores from the selected scope (in percentage).

- The **Details** table shows the full list of datastores with folders that contain garbage files.
- Click a folder name in the **Details** table to drill down to the list of garbage files in the folder.

## VEEAM

### Garbage Files

#### Description

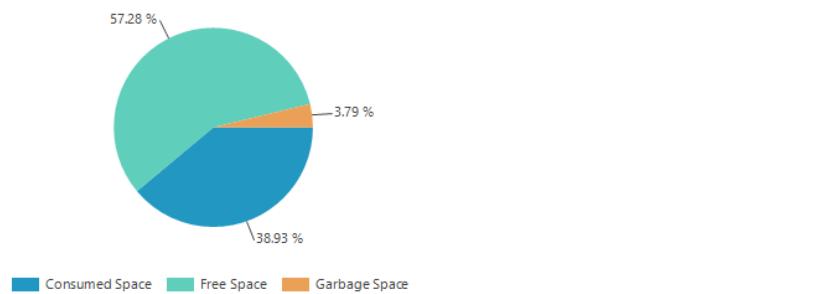
This report shows an overview of storage consumed by all files that do not belong to VMs registered in VI inventory.

#### Report Parameters

Scope: Virtual Infrastructure  
Business View objects:

#### Summary

Total garbage files size: 3.36 TB  
Total garbage files number: 1617



#### Details

##### Storage: esx01-das2

Location: vcenter01.tech.local

Garbage Files Folder	Number of Garbage Files	Garbage Files Size
apache03/	2	10.00 GB
Total:	2	10.00 GB

##### Storage: nfs\_lez

Location: vcenter01.tech.local

Garbage Files Folder	Number of Garbage Files	Garbage Files Size
L	4	5.61 GB
Total:	4	5.61 GB

## Use Case

If a VM was improperly deleted or relocated, or if a snapshot operation failed, some residual elements belonging to the VM may remain on the datastore.

This report allows you to check your infrastructure for garbage files that waste storage space and impact ROI.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Business View groups to analyze in the report. The parameter options are limited to objects of the "Storage" type.

## NOTE:

You can exclude specific datastores from this report. This can be useful when you are not interested in examining particular datastores for garbage files (for example, local datastores, datastores hosting ISO files or backups). In this case, you can exclude unnecessary datastores from the collection scope. For more information, see section [Choosing Datastores to Report On](#) of the Veeam ONE Deployment Guide.

# Idle Templates

Templates are preconfigured images of your VMs that help you to easily deploy multiple copies of the model VMs across the infrastructure.

This report provides information on VM templates that have not been used for the specified period. For each inactive template, the report shows its location, size and the last time the template was used.



## Idle Templates

### Description

This report shows an overview of storage consumed by inactive templates including their location and when they were last actively used.

### Report Parameters

Scope: Virtual Infrastructure  
Access Status: not active for 1 week

### Summary

Total templates: 20  
Idle templates: 20  
Wasted Storage: 406.29 GB

### Details

#### Location: vcenter01.tech.local

Datastore	Templates	Templates Folder	Template Size (GB)	Last Access Date
esx01-ds3	1	winsrv01/winsrv01/	27.65	11/1/2018 2:24 AM
esx02-ds1	3	empty/empty/	160.83	12/18/2018 1:00 AM
		databasevm/databasevm/	13.37	11/2/2018 12:14 AM
		techvm/_techvm_1/_techvm_1/	120.00	12/11/2018 7:51 PM
datastore1	1	machine/machine/	27.46	5/22/2018 8:19 PM
			13.48	

## Use Case

VM templates consume valuable storage resources. Use this report to review the list of your templates and identify templates that can be deleted or moved to less costly datastores to reclaim additional storage space.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Inactive Interval - Interval Type:** defines the amount of time that the template must be inactive to be included in the report.

**NOTE:**

You can exclude specific datastores from this report. This can be useful when you are not interested in examining particular datastores for garbage files (for example, local datastores, datastores hosting ISO files or backups). In this case, you can exclude unnecessary datastores from the collection scope. For more information, see section [Choosing Datastores to Report On](#) of the Veeam ONE Deployment Guide.

## Idle VMs

Idle VMs are virtual machines that remain running even though they are no longer used, for example the project or POC is complete – but the VMs were never decommissioned. These Idle VMs consume CPU, memory and storage resources that could be used by other active machines.

This report shows a list of idle VMs in terms of CPU, memory, disk and network utilization.

## Idle VMs

### Description

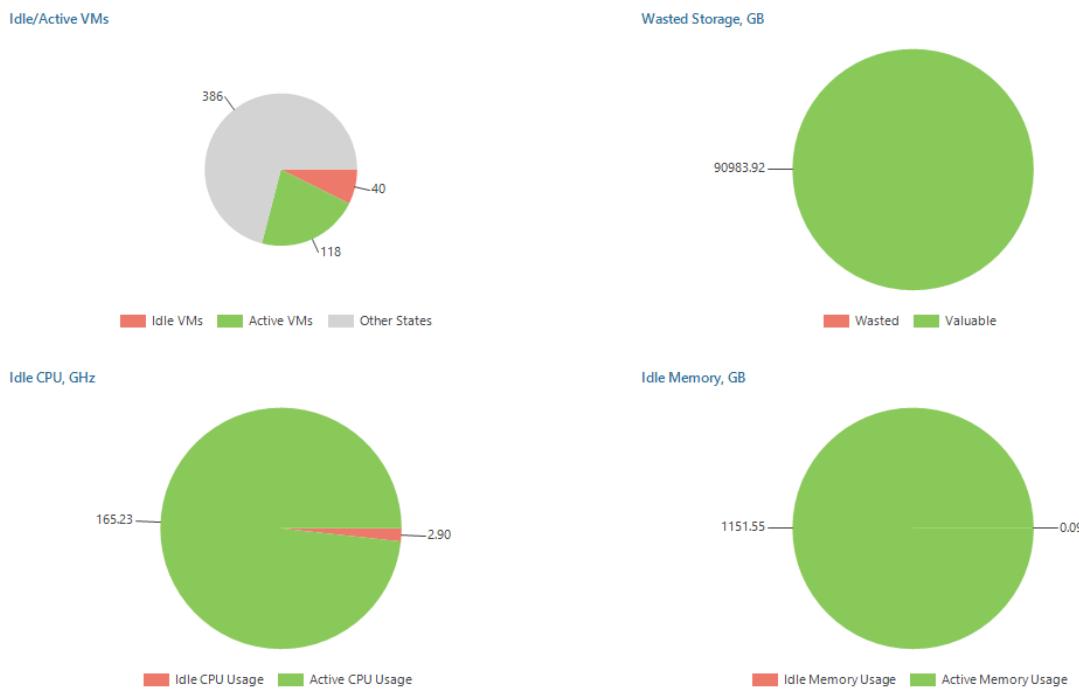
This report shows a list of idle VMs in terms of CPU, memory, disk and network utilization parameters.

### Report Parameters

Root Object:	Virtual Infrastructure
Interval:	1 month (12/16/2018 - 1/15/2019)
CPU usage:	1 GHz
Memory usage:	100 GB
Disk usage:	20 KBps
Network usage:	1 KBps
Time in the selected state:	for more than 10 % of the time
Business View objects:	

### Summary

Total VMs: 544  
Idle VMs: 40



### Details

#### vCenter Server: vcenter01.tech.local

Cluster/Host	Virtual Machine	CPU Usage (MHz)	Memory Usage (GB)	Disk Usage (KBps)	Network Usage (KBps)	Time in This State (Days)
esx01.tech.local	10	4.00	0.00	0.00	0.00	1
	apache02	46.61	2.74	0.00	0.00	9
	tapelibrary	31.03	4.00	2.32	0.00	8
	VBR04	77.70	3.84	2.17	0.00	7
	srv21	99.16	4.00	10.78	0.00	7
	db01	130.12	3.85	9.14	0.00	5
	srv49	77.89	4.00	2.98	0.00	5
	shell	76.86	4.00	9.53	0.00	3
	hpvs01	15.00	2.75	2.00	0.00	0
	oracelinux	197.06	3.75	18.50	0.00	1

# Use Case

Idle VMs waste valuable storage resources. Use this report to review performance of your VMs and identify VMs that can be shut down or reconfigured to reclaim additional storage resources.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **CPU usage, less than:** defines CPU usage threshold. If the average CPU usage for a VM is below the threshold during certain number of days (defined by Time in the selected state), the VM will be considered to be "Idle".
- **Memory usage, less than:** defines memory usage threshold. If the average memory usage for a VM is below the threshold during certain number of days (defined by Time in the selected state), the VM will be considered to be "Idle".
- **Disk usage, less than:** defines disk usage threshold. If the average disk usage for a VM is below the threshold during certain number of days (defined by Time in the selected state), the VM will be considered to be "Idle".
- **Network usage, less than:** defines network usage threshold. If the average network usage for a VM is below the threshold during certain number of days (defined by Time in the selected state), the VM will be considered to be "Idle".
- **Time in the selected state:** defines the percentage of days in the reporting period when the average resource usage (CPU, Memory, Disk and Network) of the VM was below the selected thresholds.

### NOTE:

Veeam ONE Reporter checks whether the **CPU usage**, **Memory usage**, **Disk usage** and **Network usage** conditions are true at the same time (in other words, the conditions are joined by "AND").

## Inefficient Datastore Usage

This report provides an overview of storage devices that accommodate inactive virtual machines.

The **Storage Consumed by Inactive VMs (GB)** chart displays the amount of storage space consumed by VMs that have been inactive for one month, six months and one week.

The **Details** table shows the full list of inactive VMs and rates the VMs by the amount of consumed storage.



## Inefficient Datastore Usage

### Description

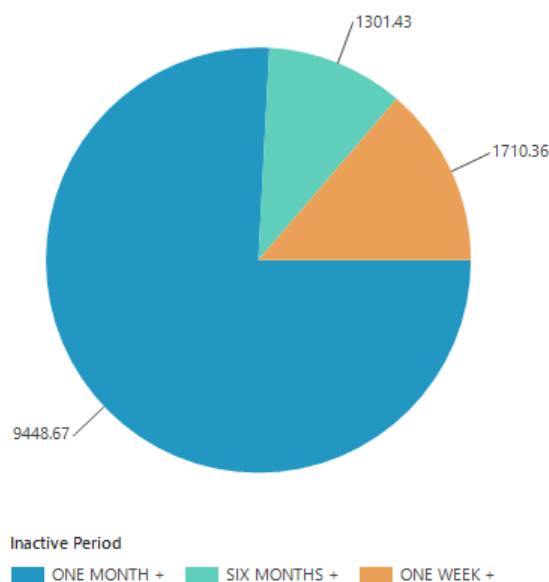
This report shows an overview of storage consumed by inactive virtual machines including their location and when they were last actively used.

### Report Parameters

Scope: Virtual Infrastructure  
Session Date: 1/14/2019 1:31 PM  
Business View objects:

### Summary

Storage Consumed by Inactive VMs (GB)



### Details

Virtual Machine	Location	Latest Activity	Storage Consumed (GB)
Inactive Period: SIX MONTHS +			
mr-12r2-VAW15	elal.dev.amust.local\Datacenter1\Cluster1\qa-srv14.amust.local	4/6/2018	119.01
tenant1_VeeamOne_replica	elal.dev.amust.local\Datacenter1\Cluster1\qa-srv14.amust.local	8/8/2017	104.58
al-w10	elal.dev.amust.local\Datacenter1\Cluster1\qa-srv24.dev.amust.local	5/26/2018	72.70
srv34	vcenter01.tech.local\Atlanta\esx01.tech.local	4/4/2018	70.09
el_exch13	elal.dev.amust.local\Datacenter1\Cluster1\qa-srv14.amust.local	10/27/2017	66.38
Ranch (RedHat x64, Oracle 11g x64)_r443	elal.dev.amust.local\Datacenter1\Cluster1\qa-srv14.amust.local	12/22/2017	58.22
mr-w16-VAWJ1	elal.dev.amust.local\Datacenter1\Cluster1\qa-srv14.amust.local	4/6/2018	50.90
rmc-appliance	elal.dev.amust.local\Datacenter1\Cluster1\qa-srv24.dev.amust.local	7/10/2018	50.00

# Use Case

Inactive VMs consume valuable storage space. Use this report to review performance of your VMs and identify VMs that can be deleted or relocated to less costly datastores to reclaim additional storage space.

## Report Parameters

You can specify the following report parameters:

- **Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.
- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the *Virtual Machine* type.

## Orphaned VM Snapshots

This report detects VM snapshots that reside on datastores but do not show up in the VMware Snapshot Manager.

The **Datastore Space Usage (GB)** chart displays the total amount of free space, amount of space consumed by files other than orphaned snapshots and amount of space consumed by orphaned snapshots on datastores from the selected scope.

The **Details** table provides the full list of datastores with folders that contain orphaned snapshots. The red color bar in the **Snapshot: File name** column shows how much datastore space is used by each folder with orphaned snapshots.

## VEEAM

### Orphaned VM Snapshots

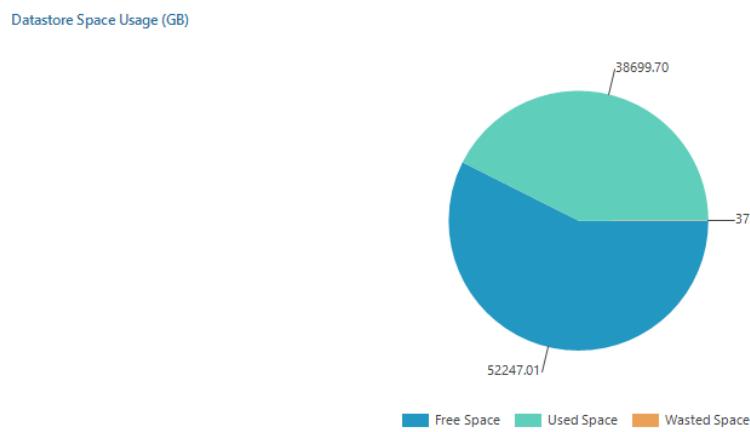
#### Description

This report provides information on VM snapshots that are located on the datastores and are not visible to the Snapshot Manager.

#### Report Parameters

Scope: Virtual Infrastructure  
Datastores: All Datastores

#### Summary



#### Details

##### vCenter: vcenter01.tech.local

Folder Name	Snapshot: File Name	Snapshot: File Size (GB)	VM Name
Datastore: esx01-das2 [esx01-das2] tech01/		15.50 GB	
	tech01-000003-delta.vmdk	15.50	tech01
	tech01-000001-delta.vmdk	0.23	tech01
	tech01-000006.vmdk	0.00	tech01
	tech01-000007.vmdk	0.00	tech01
	tech01-000008.vmdk	0.00	tech01
	tech01-000009.vmdk	0.00	tech01
	tech01-000003.vmdk	0.00	tech01
	tech01-0000090.vmdk	0.00	tech01
Datastore: esx01-das1 [esx01-das1] New Virtual Machine/		8.42 GB	
	New Virtual Machine-000001-delta.vmdk	8.42	VBR04
Datastore: nfs_lez [nfs_lez] ub_lez/		0.00 GB	
	ub_lez-000002-delta.vmdk	0.00	ub_lez
	ub_lez-000002.vmdk	0.00	ub_lez

### Use Case

Orphaned snapshots consume valuable storage resources. Use this report to discover locations of useless snapshots that can be deleted to reclaim additional storage space.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Datastores:** defines datastores to analyze for the presence of orphaned snapshots.

## Oversized VMs

This report helps you to detect VMs that have more allocated vRAM or vCPU resources than they require. The report analyzes historical performance and configured resource allocation to provide recommendations for an optimized VM configuration and allocation of resources.

- The **Summary** section provides details on the total number of VMs, number of oversized VMs by vCPU and vRAM, and amount of vCPU and vRAM resources that can be reclaimed.
- The **Oversized Virtual Machines by CPU** table provides a list of VMs from which you can reclaim vCPU resources. For each VM, the table details the number of configured vCPUs, average and peak CPU usage, and provides recommendations on vCPU configuration.

Click a VM name to drill down to VM performance charts that show how CPU usage was changing during the reporting period.

- The **Oversized Virtual Machines by Memory** table provides a list of VMs from which you can reclaim vRAM resources. For each VM, the table details the amount of allocated memory, average and peak memory usage, and provides recommendations on memory configuration.

Click a VM name to drill down to VM performance charts that show how memory usage was changing during the reporting period.

## VEEAM

### Oversized VMs

#### Description

This report helps you to discover VMs with under-utilized CPU and memory resources. It analyzes VMs historical performance and configuration data to provide recommendations on appropriate vCPU and vRAM allocation for VMs.

#### Report Parameters

Scope:	Virtual Infrastructure
Interval:	1 week (1/9/2019 - 1/15/2019)
Business View objects:	
Top N:	5
Memory counter:	Active

#### Summary

Total oversized VMs:	5
Total VMs:	544
CPU oversized VMs:	5
Memory oversized VMs:	5
CPU resources that can be reclaimed:	5 vCPUs
vRAM amount that can be reclaimed:	14.87 GB

#### Oversized Virtual Machines by CPU

##### Virtual Server: vcenter01.tech.local

Cluster/Host	Virtual Machine	vCPUs	CPU		Reclaimed CPU Resource	Recommendation
			Average Usage (%)	Peak Usage (%)		
esx01.tech.local	1				1	
	oraclelinux	2	1.00	8.00	1	Configure this VM with 1 vCPUs.
esx02.tech.local	3				3	
	filesrv05	2	2.00	2.00	1	Configure this VM with 1 vCPUs.
	dc03	2	1.00	3.00	1	Configure this VM with 1 vCPUs.
	console	2	3.00	3.00	1	Configure this VM with 1 vCPUs.
esx03.tech.local	1				1	
	filesrv06	2	3.00	3.00	1	Configure this VM with 1 vCPUs.

#### Oversized Virtual Machines by Memory

##### Virtual Server: vcenter01.tech.local

Cluster/Host	Virtual Machine	Capacity (GB)	Memory		Reclaimed Memory Resource	Recommendation
			Average Usage (GB)	Peak Usage (GB)		
esx01.tech.local	1				3.50	
	oraclelinux	5.00	0.25	1.16	3.50	Allocate 1.5 GBs of RAM.
esx02.tech.local	3				9.50	
	filesrv05	4.00	0.31	0.36	3.50	Allocate 0.5 GBs of RAM.
	dc03	4.00	0.27	0.69	3.10	Allocate 0.9 GBs of RAM.
	console	4.00	0.80	0.80	2.90	Allocate 1.1 GBs of RAM.
esx03.tech.local	1				1.87	
	filesrv06	2.07	0.10	0.12	1.87	Allocate 0.2 GBs of RAM.

## Use Case

This report helps you discover VMs with excessive hardware provisioning. You may consider decreasing hardware provisioning for the VM in vSphere configuration options, relocating the VM to less powerful hosts, or adding more VMs to a shared resource pool to optimize resource allocation and reclaim wasted resources.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Memory counter:** defines whether the *Memory Active* or *Memory Consumed* performance metric should be analyzed in the report.
- **Top N:** defines the maximum number of VMs to display in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Powered Off VMs

This report shows a list of VMs that were remaining in the powered off state during the specified period.

For each powered off VM, the report shows its location, size and the datastore where the VM files are stored.

## veeam

### Powered Off VMs

#### Description

This report shows a list of all VMs that were in Powered Off state for a defined period of time.

#### Report Parameters

Scope:	Virtual Infrastructure
Powered Off status:	more than 80% of the time
Business View objects:	
Interval:	1 week (1/9/2019 - 1/15/2019)

#### Summary

Total VMs:	150
Powered Off VMs:	150
Wasted Storage:	12,627.42 GB

#### Powered Off Virtual Machines

##### Location: vcenter01.tech.local

Datastore	Virtual Machine	Computer Name	VM Size (GB)	Power Off Status (%)
datastore1		24		
esx01-das1		14		
	tapesrv03	tapesrv03.tech.local	34.47	100.00
	VBR03	VBR03.tech.local	28.01	100.00
	db01	db01.tech.local	24.95	100.00
	srv21	test-vm	32.02	100.00
	ova-template-veeampn	veeampn	3.93	100.00
	tapesrv01	tapesrv01.tech.local	24.54	100.00
	srv01	srv01.tech.local	36.47	100.00
	srv30	srv30.tech.local	24.99	100.00
	srv49	srv49.tech.local	48.07	100.00
	srv06	srv06.tech.local	86.71	100.00
	tapesrv02	tapesrv02.tech.local	27.74	100.00
	VBR04	VBR04.tech.local	211.55	100.00
	srv11	srv11.tech.local	55.13	100.00
	linux01	apache01	N/A	100.00
esx01-das2		3		
	tapelibrary	tapelibrary	653.25	100.00
	srv34	srv34.tech.local	70.09	100.00
	tech01	tech01.tech.local	147.85	100.00

## Use Case

Powered off VMs do not consume CPU, memory or network resources, but they take up storage space required to accommodate their disk files, snapshots and configuration data.

The report helps you detect VMs that can be relocated to less costly datastores and identify neglected VMs that can be decommissioned.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- vCloud Director:** defines vCloud Director components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

- **Interval - Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Power Off Percent:** defines the amount of time when the VM was powered off against the amount of time in the reporting period (in percentage).

## Undersized VMs

This report helps you detect virtual machines that have less allocated vRAM or vCPU resources than they require. The report analyzes historical performance and configured resource allocation to provide recommendations for an optimized VM configuration and allocation of resources.

## TIP:

Click a VM name in the details table to drill down to VM performance charts that show how CPU and memory usage has been changing during the reporting period.



## Undersized VMs

### Description

This report helps you to discover VMs with over-utilized CPU and memory resources. It analyzes VMs historical performance and configuration data to provide recommendations on appropriate vCPU and vRAM allocation for VMs.

### Report Parameters

Scope:	Virtual Infrastructure
Interval:	1 month (12/16/2018 - 1/15/2019)
Business View objects:	
CPU ready, more than:	10 %
CPU usage, more than:	90 %
Swap out rate, more than:	0 Kbps
Memory usage, more than:	90 %
Memory counter:	Active

### Summary

Total undersized VMs:	5
Total VMs:	544
CPU undersized VMs:	1
Memory undersized VMs:	4
CPU resources to be assigned:	1 vCPUs
vRAM amount to be assigned:	5.40 GB

### Undersized Virtual Machines by CPU

#### Virtual Server: elal.dev.amust.local

Cluster/Host	Virtual Machine	vCPUs	CPU		Recommended Number of vCPUs
			Utilization (%)	CPU Ready (%)	
Cluster1	1 <a href="#">SA5 VM6 Win10x64_EM_sqL(f5a52a2a-a188-4b1c-b320-ed2deccb9b13)</a>	6	92.00	32.00	7

Note: Consider relocating VM to a different host, if present does not have enough CPU resources.

### Undersized Virtual Machines by Memory

#### Virtual Server: elal.dev.amust.local

Cluster/Host	Virtual Machine	Allocated (GB)	Memory		Recommended Amount of RAM
			Average Usage (%)	Swap out Rate (Kbps)	
Cluster1	2 <a href="#">2 SA VBR 10</a>	4.00	95.12	0.00	5.1 GB
	<a href="#">vCenter Appliance</a>	8.00	91.05	0.00	10.1 GB
Cluster2	1 <a href="#">SA_L2 VM1 Win10_1809</a>	4.00	38.81	0.00	5.1 GB

#### Virtual Server: vcenter01.tech.local

Cluster/Host	Virtual Machine	Allocated (GB)	Memory		Recommended Amount of RAM
			Average Usage (%)	Swap out Rate (Kbps)	
esx01.tech.local	1 <a href="#">sv11</a>	4.00	93.94	0.00	5.1 GB

Note: Consider relocating VM to a different host, if present does not have enough memory resources.

## Use Case

This report provides practical recommendations for restoring performance of VMs that have less resources than they need. You may consider adding the specified amount of resources for the VM, relocating the VM to a more powerful host, or committing increased resources to a resource pool shared by the undersized VM.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **vCloud Director:** defines vCloud Director components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **CPU ready, more than:** defines the threshold for the percentage of time during which CPU resources were in the ready state. If the CPU Ready Time value for a VM exceeds the specified threshold, the VM will be included in the report.
- **Swap out rate, more than:** defines the threshold for the percentage of the time which a VM spent waiting for memory to be swapped back in from disk. If the Swap Wait Time value for a VM exceeds the specified threshold, the VM will be included in the report.
- **CPU Usage:** defines the CPU utilization threshold. If the CPU usage value for a VM exceeds the specified threshold, the VM will be included in the report.
- **Memory Usage:** defines the memory utilization threshold. If the memory usage value for a VM exceeds the specified threshold, the VM will be included in the report.
- **Memory Counter:** defines whether the *Memory Active* or *Memory Consumed* performance metric should be analyzed in the report.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

### NOTE:

Veeam ONE Reporter checks whether the **CPU ready** and **CPU Usage** conditions are true at the same time, and then whether **Swap out rate** and **Memory Usage** conditions are true at the same time (in other words, the conditions in each pair are joined by Boolean "AND").

Then Veeam ONE Reporter checks whether a pair of these conditions is true, in other words, pairs of these conditions are joined by Boolean "OR".

# VMware Configuration Tracking

This report pack provides information about permissions assigned in your virtual environment and helps you keep an eye on performed configuration changes.

**Number of reports:** 4

**Current version:** 2

**Reports included:**

- [Infrastructure Changes Audit](#)
- [Infrastructure Changes by Object](#)
- [Permissions by Object](#)
- [Permissions by User](#)

# Infrastructure Changes Audit

This report analyzes virtual infrastructure configuration changes and provides information on users who performed these changes.

## Infrastructure Changes Audit

### Description

This report tracks configuration changes in your virtual environment, providing detailed information about every change for each user.

### Report Parameters

Scope: Virtual Infrastructure  
 Business View objects:  
 Report Period: 12/29/2018 - 1/8/2019  
 Objects: Any Object Types  
 Changed by: All  
 Sort by: Time of Occurrence

### Summary

#### Top 10 VMs with Changes

VM Name	Cluster/Host	# of Changes
apache07	esx02.tech.local	15197
hpvs01	esx01.tech.local	762
proxy01	esx02.tech.local	648
tech_srv01	esx02.tech.local	497
dc03	esx02.tech.local	240
dns01	esx02.tech.local	240
apache02	esx01.tech.local	108
backup01	esx02.tech.local	88
tapesrv03	esx01.tech.local	54
sandbox	esx01.tech.local	30

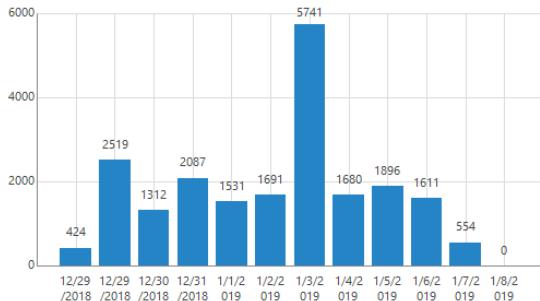
#### Top 10 Hosts with Changes

Host Name	# of Changes
esx02.tech.local	2564
esx03.tech.local	78
esx01.tech.local	78

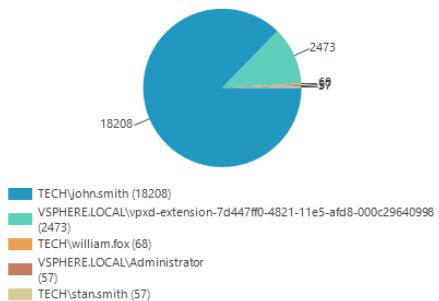
#### Top 10 Datastores with Changes

Datastore Name	# of Changes
esx02-ds1	3
datastore1	1

#### Number of Changes Made



#### Modifications per User (Top 5)



## Change Details

Initiator	Event Description	Time	Object	Location	Object Type
TECH\john.smith	Task: Revert snapshot	12/29/2018 12:05:10 PM	srv11	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx01.tech.local	Virtual Machine
TECH\john.smith	The execution state of the virtual machine srv11 on host esx01.tech.local, in compute resource esx01.tech.local, has been reverted to the state of snapshot ClearOS, with ID 44995	12/29/2018 12:05:49 PM	srv11	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx01.tech.local	Virtual Machine
TECH\john.smith	Task: Revert snapshot	12/29/2018 12:08:41 PM	backup01	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx02.tech.local	Virtual Machine
TECH\john.smith	The execution state of the virtual machine backup01 on host esx02.tech.local, in compute resource esx02.tech.local has been reverted to the state of snapshot ClearOS, with ID 8744	12/29/2018 12:08:48 PM	backup01	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx02.tech.local	Virtual Machine
TECH\john.smith	Task: Remove snapshot	12/29/2018 12:09:06 PM	backup02	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx02.tech.local	Virtual Machine
TECH\john.smith	Virtual machine backup02 disks consolidated successfully on esx02.tech.local in cluster esx02.tech.local in Atlanta.	12/29/2018 12:09:08 PM	backup02	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx02.tech.local	Virtual Machine
TECH\john.smith	Task: Revert snapshot	12/29/2018 12:09:13 PM	backup02	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx02.tech.local	Virtual Machine
TECH\john.smith	The execution state of the virtual machine backup02 on host esx02.tech.local, in compute resource esx02.tech.local has been reverted to the state of snapshot ClearOS, with ID 8746	12/29/2018 12:09:18 PM	backup02	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx02.tech.local	Virtual Machine
TECH\john.smith	Task: Create virtual machine snapshot	12/29/2018 12:16:13 PM	srv11	>Virtual Infrastructure>vcenter01.tech.local>Atlanta>esx01.tech.local	Virtual Machine

## Use Case

The report allows IT administrators to get details on recent infrastructure changes made by authorized users so that any unwanted action can be quickly rolled back.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- Interval - Interval Type/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least two data collection sessions for the selected scope. Otherwise, the report will contain no data.
- Objects:** defines types of virtual infrastructure objects to analyze in the report.
- Changed by:** defines users whose activity should be analyzed in the report.
- Sort by:** defines how data should be sorted in the report (by *Time of Occurrence, Initiator, Object Name*).

# Infrastructure Changes by Object

This report analyzes virtual infrastructure configuration changes and provides detailed information on changes performed for each object within the reporting period.

VEEAM

## Infrastructure Changes by Object

### Description

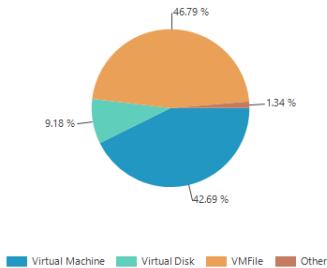
This report tracks configuration changes in your virtual environment, providing detailed information about every change for each object.

### Report Parameters

Scope:	Virtual Infrastructure
Report Period:	1 day (1/17/2019 - 1/17/2019)
Object Types:	Any Object Types
Properties:	All Properties
Business View objects:	
Include all historical changes to the object for the selected interval:	True

### Summary

Modified Objects Per Object Types



Object Type	Object Update Count	Object Deletion Count	Object Creation Count
Virtual Machine	52	12	1
VMFile	232	284	172
Resource Pool	5	0	0
Host System	2	0	0
Virtual Disk	32	32	2
Snapshot	2	2	5

### Details

#### Object Type: Host System

Object Name	Object Location	Property	New Value	Old Value
<b>Change Type: Updated</b>				
qa-srv24.dev.amust.local	>Virtual Infrastructure>elal.dev.amust.local>Datacenter1>Cluster1	Distributed Virtual Port	Not set	
qa-srv24.dev.amust.local	>Virtual Infrastructure>elal.dev.amust.local>Datacenter1>Cluster1	Distributed Virtual Port	Not set	
qa-srv24.dev.amust.local	>Virtual Infrastructure>elal.dev.amust.local>Datacenter1>Cluster1	Distributed Virtual Port	Not set	
qa-srv24.dev.amust.local	>Virtual Infrastructure>elal.dev.amust.local>Datacenter1>Cluster1	Distributed Virtual Port	Not set	
qa-srv14.amust.local	>Virtual Infrastructure>elal.dev.amust.local>Datacenter1>Cluster1	Distributed Virtual Port	Not set	
qa-srv14.amust.local	>Virtual Infrastructure>elal.dev.amust.local>Datacenter1>Cluster1	Distributed Virtual Port	Not set	

## Use Case

The report allows senior IT administrators to get details on recent infrastructure modifications made to target objects so that any unwanted action can be quickly rolled back.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Interval/Start Date-End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least two data collection sessions for the selected scope. Otherwise, the report will contain no data.
- **Object type:** defines a list of infrastructure objects to analyze in the report. To select multiple items, use the [CRTL] or [SHIFT] key.
- **Object properties:** defines configuration properties for which the report will track changes. The list of available properties will depend on the selected object type. Use the *Filter* field to search for the necessary properties by name.
- **Include all historical changes to the object for the selected interval:** defines whether to include in the report all historical changes for the specified time period.

# Permissions by Object

This report provides information about permissions assigned in your virtual environment, including individual permissions for every object. The report lists virtual infrastructure objects and shows permissions that each registered user has for these items.

VEEAM

## Permissions by Object

### Description

This report provides information about all assigned permissions in your virtual environment, including individual permissions for each object.

### Report Parameters

Scope:	Virtual Infrastructure
Object Name:	
Object Type:	*All OBJECT TYPES*
User/Group:	*All Users/Groups*
Role:	*All Roles*
Propagate:	*All*

### Datacenter Permissions

Datacenter Name	Location	User / Group	Role	Propagate
Atlanta	vcenter01.tech.local	TECH\chloe.lewis	Administrator	Yes
		TECH\stan.smith	Administrator	Yes
Gold Coast	vcenter01.tech.local	TECH\steven.wright	Virtual machine power user (sample)	Yes

### Resource Pool Permissions

Resource Pool Name	Location	User / Group	Role	Propagate
Resources	vcenter01.tech.local\Atlanta\esx02.tech.local	TECH\chloe.lewis	Administrator	Yes
		TECH\mark.scissor	Administrator	Yes
		TECH\stan.smith	Administrator	Yes
Evaluation	vcenter01.tech.local\Atlanta\esx01.tech.local	TECH\chloe.lewis	Administrator	Yes
		TECH\mark.scissor	Administrator	Yes
		TECH\stan.smith	Administrator	Yes
Fileservers	vcenter01.tech.local\Atlanta\esx01.tech.local	TECH\chloe.lewis	Administrator	Yes
		TECH\mark.scissor	Administrator	Yes
		TECH\stan.smith	Administrator	Yes

## Use Case

This report helps senior IT administrators review permissions for any given object (vCenter Server, cluster, storage, datacenter, resource pool, vApp, host system and/or VM).

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Object Name:** defines a name of the virtual infrastructure object for which permissions should be shown. You can specify either an exact object name or a part of the name.

- **Object Type:** defines a type of virtual infrastructure objects for which permissions should be shown.
- **User/Group:** defines a user or a user group for which permissions should be shown.
- **Role:** defines a user role that should be included in the report.
- **Propagate:** defines whether permissions that can be propagated to child/dependent objects should be included in the report.

## Permissions by User

This report provides information about permissions assigned in your virtual environment, including individual permissions for every user. The report lists registered users and shows permissions that each user has for different virtual infrastructure objects.

**VEEAM**

### Permissions by User

#### Description

This report provides information about all assigned permissions in your virtual environment, including individual permissions for each user.

#### Report Parameters

Scope:	Virtual Infrastructure
Object Name:	
Object Type:	*All OBJECT TYPES*
User/Group:	*All Users/Groups*
Role:	*All Roles*
Propagate:	*All*

#### Permissions of TECH\chloe.lewis

Location	Name	Role	Propagate
<b>Object Type: Datacenter</b>			
vcenter01.tech.local	Atlanta	Administrator	Yes
<b>Object Type: Datastore</b>			
vcenter01.tech.local\Atlanta	esx01-das1	Administrator	Yes
vcenter01.tech.local\Atlanta	esx01-das2	Administrator	Yes
vcenter01.tech.local\Atlanta	esx01-das3	Administrator	Yes
vcenter01.tech.local\Atlanta	esx01-ds-hpvs	Administrator	Yes

#### Permissions of TECH\dangray

Location	Name	Role	Propagate
<b>Object Type: Resource Pool</b>			
vcenter01.tech.local\Atlanta\esx01.tech.local	Webservices	Administrator	Yes

## Use Case

This report helps senior IT administrators review permissions assigned to any registered user.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **User/Group:** defines a user or a user group for which permissions should be shown.
- **Object Name:** defines a name of the virtual infrastructure object for which permissions should be shown. You can specify either an exact object name or a part of the name.

- **Object Type:** defines a type of virtual infrastructure objects for which permissions should be shown.
- **Role:** defines a user role that should be included in the report.
- **Propagate:** defines whether permissions that can be propagated to child/dependent objects should be included in the report.

# VMware Capacity Planning

This report pack is designed to forecast when the available virtual infrastructure resources will reach their minimum levels. The pack provides recommendations on resource allocation and load balancing to optimize performance and resource utilization in your environment and to avoid possible performance bottlenecks.

With this report pack, you can keep an eye on available storage capacities and be prepared to a planned or accidental host outage across a failover cluster. The pack will also help you estimate how many new VMs can be placed on a target host without affecting its performance.

**Number of reports:** 4

**Current version:** 1

**Reports included:**

- [Capacity Planning](#)
- [Host Failure Modelling](#)
- [How Many More VMs Can Be Provisioned](#)
- [Over-provisioned Datastores](#)

## Capacity Planning

This report forecasts how many days remain before the level of resource utilization reaches the specified threshold values. The report allows you to analyze the following resource utilization parameters: CPU, memory, datastore free space, read and write rates.

- The **Summary** section provides an overview of the current state of the infrastructure (the total number of hosts, datastores and VMs), shows the number of days left before specified thresholds will be reached, and the amount of resources required to sustain the current workloads without exceeding the specified thresholds.

The **Top 5 Utilized Clusters and Standalone Host** table displays objects that will run out of CPU or memory resources sooner than others. It shows the bottleneck parameter for each object and its average usage. This data is used to predict how many days are left before the object reaches the threshold.

Some values in this section may be highlighted with red. If a value in the **Average Usage** column is highlighted with red, the resource usage value has reached the specified threshold. The **Days Remaining** value is highlighted with red if the number of days left until the parameter reaches the threshold is less than 183 (6 months).

- The **Details** section displays host hardware configuration and resource usage, analyzes historical performance data for the specified period in the past to calculate the performance utilization trend, and provides recommendations on how to keep the resource utilization below the specified thresholds.

# Capacity Planning

## Description

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This report predicts when resource utilization for selected objects in the infrastructure will reach the configured threshold of total capacity.

## Report Parameters

---

Scope:	\Virtual Infrastructure
Analyze performance data for:	Past 6 Months
Make planning for:	Next 6 months
CPU utilization:	80.00 %
Memory utilization:	80.00 %
Datastore space utilization:	90.00 %
Datastore read/write rate:	50 MBps
Datastores:	All Datastores
Business hours:	From 12:00 AM To 11:00 PM

## Summary

---

Virtual Infrastructure	Days Remaining	Resources Required
Number of standalone hosts:	3	CPU: 19.39 GHz
Number of hosts:	7	Memory: 75.26 GB
Number of datastores:	41	Datastore capacity: 1.58 TB
Number of VMs:	564	Datastore read rate: ∞
Number of powered on VMs:	158	Datastore write rate: ∞

### Top 5 Utilized Clusters and Standalone Hosts

Object Name	Bottleneck	Average Usage	Days Remaining
Cluster1	CPU usage	70.64 %	∞
esx01.tech.local	CPU usage	68.85 %	12
esx02.tech.local	CPU usage	59.41 %	93
esx03.tech.local	Datastore space usage	43.06 %	155
Cluster2	Memory usage	80.93 %	0

## Details

Selected Object **esx01.tech.local**

### Physical Resources

CPU (GHz)	CPU Sockets	CPU Cores	Memory (GB)	Datastore Capacity (GB)
19.15	2	8	63.94	4392.66

### Resource Usage

Resources	Memory Usage	CPU Usage	Datastore Used Space	Read Rate	Write Rate
Current usage	78.91 %	68.34 %	49.96 %	0.42 MBps	0.90 MBps
Average usage	79.06 %	68.85 %	49.96 %	0.11 MBps	0.21 MBps
Days remaining	63	12	∞	∞	∞

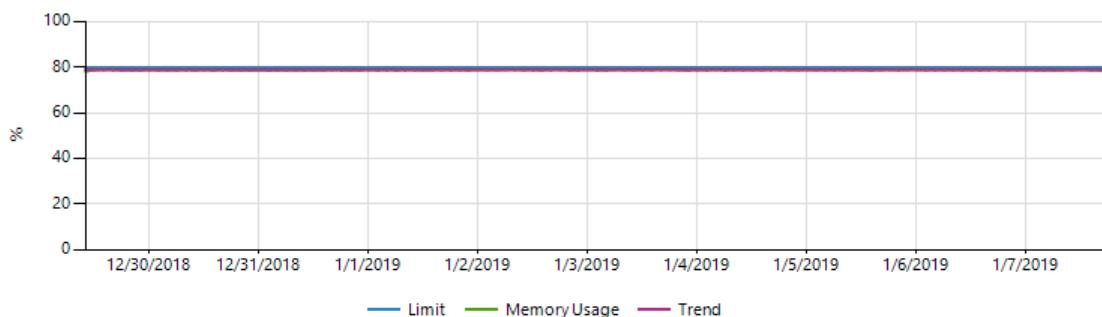
## Recommendations

To keep capacity under 80 % for the next 6 months for CPU: Increase available CPU resources by 16 GHz

To keep capacity under 80 % for the next 6 months for Memory: Increase available memory resources by 1 GB

## Performance Trends

### Memory Usage



### Memory Usage (%)

Object Name	Minimum	Maximum	Average	Std.Deviation	Days Left
esx01.tech.local	78.34	79.37	79.06	0.13	63

## Use Case

This report helps you plan workloads to avoid resource shortage. It analyzes historical performance to calculate typical resource utilization. The report extrapolates received data to the future to predict when you will run out of resources and provide recommendations on resources you need to add to maintain stable operation.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Datastores:** defines a list of datastores to analyze in the report.
- Analyze performance data for:** defines a time period in the past for which historical performance data will be used to calculate the performance trend.
- Make planning for:** defines a time period in the future for which performance data will be used to forecast resource usage trend.

- **CPU utilization limit (%)**: defines the CPU usage threshold as a percentage of total cluster CPU resources.
- **Memory utilization limit (%)**: defines the used memory threshold as a percentage of total cluster memory resources.
- **Max utilization per datastore (%)**: defines the maximum amount of space in use on a datastore.
- **Min free space per datastore (GB)**: defines the minimum amount of free space left on a datastore.
- **Max read/write rate per datastore (MBps)**: defines the maximum read and write rates per second for a datastore.
- **Business hours**: defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.
- **Show graphics**: defines whether the report must include charts that illustrate historical performance data for the specified period.

## Host Failure Modelling

This report allows you both to simulate a failure of one or more hosts, and forecast CPU and memory usage for clusters.

- The **Summary** section provides an overview of the current state of your infrastructure (the total number of clusters, hosts, datastores and VMs) and shows recommendations on resource allocation.
- The **Modelling Results** charts display the total amount of CPU and memory resources left and lost in clusters in case of a host failure. The **VMs Migration Count** chart shows the number of VMs that will need to be relocated to another host (*VMs to Migrate*) and the number of VMs that will operate as usual (*Unaffected VMs*) in case of a host failure.
- The **Details** table provides details on CPU and memory current and predicted utilization for all clusters included in the report.

Click a cluster name to drill down to details on current and predicted resource usage for the cluster. Click a number in the **Affected VMs** column to drill down to details for the VMs that need to be migrated.

- The **Recommendations** section provides recommendations for the resources whose utilization thresholds will be breached.

# Host Failure Modelling

## Description

This report predicts resource utilization in case of a host failure.

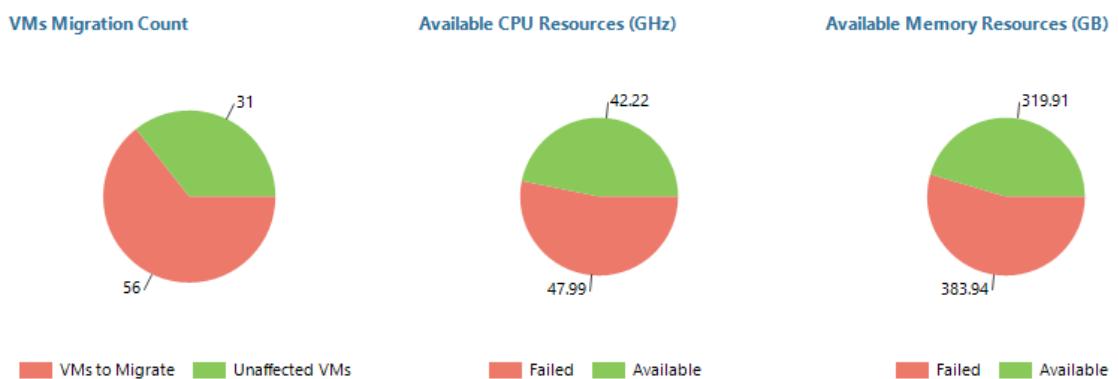
## Report Parameters

Scope:	VVirtual Infrastructure
Number of failed hosts:	1
CPU utilization limit:	90.00 %
Memory utilization limit:	80.00 %
Business View objects:	

## Summary

Virtual Infrastructure	Physical Resources	Resources Required
Number of clusters:	CPU: 90.21 GHz	CPU: 13.95 GHz
Number of hosts:	Memory: 703.84 GB	Memory: 163.55 GB
Number of datastores:	Physical Resources after 1 hosts failure	
Number of VMs:	CPU: 42.22 GHz	
Number of powered on VMs:	Memory: 319.91 GB	

## Modelling Results



## Details

Cluster	Average CPU Usage (%)	Average Memory Usage (%)	Predicted CPU Usage (%)	Predicted Memory Usage (%)	Failed Hosts	Affected VMs
Cluster1	70.64	46.07	171.95	110.63	1	38
Cluster2	37.92	80.93	74.29	161.86	qa-srv14.amust.local qa-srv56.dev.amust.local	18

## Recommendations

### Cluster1:

To ensure this Cluster remains functional after 1 hosts failure, add one host with (at least): Memory: 58.79 GB CPU: 13.95 GHz

### Cluster2:

To ensure this Cluster remains functional after 1 hosts failure, add one host with (at least): Memory: 104.76 GB

# Use Case

The report provides recommendations on appropriate resource allocation, which can help prevent possible CPU and memory resource shortfalls in future and maintain the optimal performance of your infrastructure.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Number of failed hosts:** defines the number of random hosts for which you want to simulate a failure.
- **List of failed hosts:** defines a list of hosts for which you want to simulate a failure.
- **Business View objects:** filters reporting scope objects that belong to the selected Veeam ONE Business View groups.
- **Maximum CPU utilization (%):** defines the CPU usage threshold as a percentage of total cluster CPU resources.
- **Maximum memory utilization (%):** defines the used memory threshold as a percentage of total cluster memory resources.

## How Many More VMs Can Be Provisioned

This report calculates the number of additional VMs that your existing infrastructure can support before the resource utilization reaches the specified threshold value.

The report evaluates total capacity of your infrastructure and provides estimation of how many sample VMs of a certain profile can be added without causing the specified resource utilization threshold to be breached. Calculation of additional VM sets is based on the predicted future performance of the sample VM and the predicted virtual infrastructure capacities.

For each host, cluster and datastore included in the report, the **Constraining Resource Per Each Object** table displays the constraining resource, that is the resource for which the specified threshold will be breached first.

**TIP:**

Click a host, cluster or datastore name in the **Details** table to drill down to in-depth forecast information for the host, cluster or datastore.

## How Many More VMs Can be Provisioned

### Description

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This report shows how many more VMs can be added to your virtual environment.

### Report Parameters

---

Scope:	\Virtual Infrastructure
Max vCPU per Host CPU core ratio:	4
CPU utilization limit:	80.00 %
Memory utilization limit:	90.00 %
Max utilization per datastore:	90.00 %
Datastore read rate:	10 MBps
Datastore write rate:	10 MBps
VM profile:	Average VM configuration
Use Reservations:	False
Put 1 host in maintenance mode for each cluster:	False
Datastores:	All Datastores

### Summary

---

Number of VMs that can be added:	18
Number of VMs at capacity:	544
Number of existing VMs in selected Scope:	562

VM Configuration		VM Average Performance	
vCPU:	4	CPU:	7.43 %
Memory:	4.00 GB	Memory:	11.21 %
Datastore committed space:	91.92 GB	Datastore read rate:	0.02 MBps
Datastore provisioned space:	237.37 GB	Datastore write rate:	0.07 MBps

### Constraining Resource Per Each Object

Object Name	Added VM's	Constraining Resource
Esx03.tech.local	18	vCPU per core
Esx01.tech.local	0	vCPU per core
Esx02.tech.local	0	vCPU per core
Cluster1	0	vCPU per core
Cluster2	0	vCPU per core

## Details

---

Object Name: [esx03.tech.local](#)

Added VMs: 18

Resource	Average Usage	Predicted Usage
CPU	7.28 %	14.94 %
Memory	39.09 %	44.65 %
vCPU per host CPU core ratio	1.75	4.00
Excluded Datastores		
Datastore used space	49.09 %	69.75 %
Datastore read rate	1.14 MBps	9.17 MBps
Datastore write rate	1.01 MBps	3.13 MBps
Datastore IOPs	65	194

## Use Case

This report helps administrators to discover how many additional VMs can be deployed without affecting infrastructure performance.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Host type.
- **Datastores:** defines a list of datastores to analyze in the report.
- **VM profile:** defines a VM profile that will be used as a sample for calculating the number of VM sets:
  - If you choose a specific VM, the report will calculate how many similar VMs can be added.
  - If you choose Average VM configuration, the report will assess average configuration across all your VMs, and calculate how many VM of this configuration can be added.

Note that VMs in the profile must be currently in the powered on state, and that performance data collection must be completed for the given VMs.

- **Account VM CPU and memory reservations:** defines whether CPU and memory reservations should be taken into account when calculating the number of VMs to be added.
- **CPU utilization limit (%):** defines the CPU usage threshold as a percentage of total cluster CPU resources.
- **Memory utilization limit (%):** defines the used memory threshold as a percentage of total cluster memory resources.
- **Max utilization per datastore (%):** defines the threshold for the maximum amount of space in use on a datastore.
- **Min free space per datastore (GB):** defines the threshold for the minimum amount of free space left on a datastore.
- **Datastore Read Rate (MBps):** defines the threshold for read rate per second for datastores.
- **Datastore Write Rate (MBps):** defines the threshold for write rate per second for datastores.

- **Max vCPU per host CPU core ratio:** defines the threshold for the maximum number of vCPU cores per a single instance of the physical CPU core.
- **Put 1 host into maintenance mode:** defines whether to simulate putting one host into maintenance mode when calculating the number of VMs to be added.

## Over-provisioned Datastores

Thin provisioning allows administrators to dedicate more datastore space to VMs than there is real physical capacity. This report helps you assess the potential impact of excessive over-provisioning of datastores on performance of your virtual environment.

- The **TOP 5 Over-provisioned Datastores** chart shows 5 datastores whose amount of provisioned storage space exceeds the total capacity.
- The **TOP 5 Under-provisioned Datastores** chart shows 5 datastores whose amount of provisioned storage space is way below the total capacity.
- The **TOP 5 Datastores with Least Amount of Free Space** table displays top 5 datastores that will run out of free space sooner than other datastores.
- The **Details** section shows tables and charts that provide information on storage space utilization and the number of days left before the specified space utilization/free space threshold will be breached. Arrows in the **Out of Free Space in ... (Days)** column show whether the amount of free space on the datastore has increased (green arrow), decreased (red arrow) or stayed the same (blue arrow) over the previous week.

**TIP:**

- Click a number in the **VM Count** column of the **TOP 5 Datastores with Least Amount of Free Space** table or of the **Details** table to get the list of VMs that store data on the datastore and to discover how much space is provisioned for these VMs.
- Click a number in the **Out of Free Space in ... (Days)** column of the **Details** table to drill down to performance details for the datastore.

## Over-provisioned Datastores

### Description

This report helps to identify potential impact of excessive over-provisioning of datastores on your virtual environment.

### Report Parameters

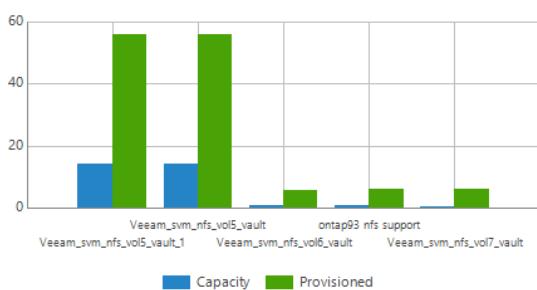
Scope: \\Virtual Infrastructure

Datastore space utilization: 80.00 %

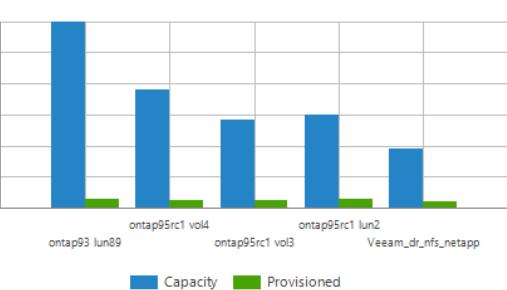
Business View objects:

### Summary

**TOP 5 Over-provisioned Datastores (GB)**



**TOP 5 Under-provisioned Datastores (GB)**



**TOP 5 Datastores with Least Amount of Free Space**

Datastore Name	vCenter Server	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VM Count
Veeam_svm_nfs_vol7_vault	elal.dev.amust.local	0.0	0.1	6.0	5064.84	1
Veeam_svm_nfs_vol6_vault	elal.dev.amust.local	0.2	1.0	5.8	554.18	1
ontap93 nfs support	elal.dev.amust.local	0.9	1.0	6.1	646.84	1
Veeam_svm_nfs_vol5_vault	elal.dev.amust.local	2.2	14.2	55.8	392.89	1

### Details

**Over-provisioned Datastores**

vCenter Server	Datastore Name	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VM Count	Out of Free Space in... (Days)
vcenter01.tech.local							
	esx01-das1	594.3	1256.0	1844.1	146.82	15	296 ↑



# Use Case

The report analyzes datastore space utilization trend and calculates the number of days left before storage utilization will breach the specified threshold.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Storage type.
- **Datastore space utilization (%):** defines the threshold for the amount of space in use on datastores.
- **Datastore free space (GB):** defines the threshold for the amount of free space left on datastores.
- **Show graphics:** defines whether to include charts in the report output.

# Hyper-V Infrastructure Assessment

This report pack helps ensure your Hyper-V infrastructure is configured according to all known best practices. Infrastructure assessment reports analyze performance and configuration of your virtual environment against a set of recommended baseline settings and implementations, verify problem areas and help mitigate the issues.

The report pack allows you to make sure that your infrastructure is ready for a backup with Veeam Backup & Replication.

**Number of reports:** 3

**Current version:** 1

**Reports included:**

- [Configuration Assessment](#)
- [Performance Assessment](#)
- [VM Change Rate Estimation](#)

## Configuration Assessment

The report analyzes configuration of the Hyper-V infrastructure against a set of recommended settings and best practices, identifies clusters, hosts and\or VMs that are configured inefficiently and verifies problem areas to help mitigate issues and prepare VMs for backup with Veeam Backup & Replication.

- The **Verification Results** chart displays the share of failed and passed verification tests, and tests that completed with warnings.
- The **Assessment Criteria** table lists criteria used in the report to assess the Hyper-V infrastructure, and shows the assessment results.

- The **Optimization**, tables show detailed assessment result for each criterion and provides recommendations on how to improve infrastructure configuration.

## Configuration Assessment

### Description

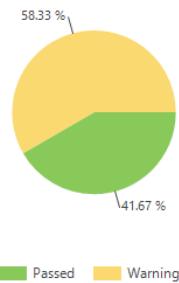
This report helps you to assess your Hyper-V configuration and identify potential configuration improvements.

### Report Parameters

Scope:	Virtual Infrastructure
Business View objects:	
Assessment type:	All items
Max vCPU per Host CPU core ratio:	8

### Summary

#### Verification Results



#### Assessment Criteria

#### Verification Results

Criteria Group: Cluster optimization	Warning
<a href="#">Hosts use same CPU vendors / models</a>	Passed
<a href="#">Hosts are updated equally</a>	Passed
<a href="#">Storage controllers are of the same vendor</a>	Warning
<a href="#">NICs compatibility</a>	Passed
Criteria Group: Host optimization	Warning
<a href="#">Host is not running on a balanced power plan</a>	Warning
<a href="#">No RDP printers mapped</a>	Warning
<a href="#">Virtual CPUs / Logical CPUs ratio</a>	Passed
Criteria Group: VM optimization	Warning
<a href="#">Integration Services state</a>	Warning
<a href="#">Hyper-V VSS Requestor state</a>	Warning
<a href="#">No Checkpoints used</a>	Warning
<a href="#">No VMs on datastores with less than 10% of free space</a>	Warning

## Cluster Optimization

### Hosts Use Same CPU Vendors / Models

Recommendation: Your Hyper-V infrastructure meets all known best practices.

Cluster	Host	CPU Type	CPU Frequency	Verification Result
cluster01.tech.local	hyperv01		2.05 GHz	
	hyperv02		2.05 GHz	Success

### Hosts Are Updated Equally

Recommendation: Your Hyper-V infrastructure meets all known best practices.

Cluster	Host	Hyper-V Build Number	Verification Result
cluster01.tech.local	hyperv01	6.3.9600	
	hyperv02	6.3.9600	Success

### Storage Controllers Are of The Same Vendor

Recommendation: Use storage controllers of the same vendor within a cluster.

Cluster	Host	Installed Storage Controllers	Verification Result
cluster01.tech.local	hyperv01		
	hyperv02	Intel(R) C600 Series Chipset SAS RAID (SATA mode), LSI MegaRAID SAS Adapter, Microsoft iSCSI Initiator, Microsoft iSCSI Target LocalMount Adapter, Microsoft Multi-Path Bus Driver, Microsoft Storage Spaces Controller, Microsoft VHD Loopback Controller	
	hyperv01	Intel(R) C600 Series Chipset SAS RAID (SATA mode), LSI MegaRAID SAS Adapter, Microsoft iSCSI Initiator, Microsoft Storage Spaces Controller, Microsoft VHD Loopback Controller	Warning

### NICs Compatibility

Recommendation: Your Hyper-V infrastructure meets all known best practices.

Cluster	Host	NIC Installed	Verification Result
cluster01.tech.local	hyperv01		
	hyperv01	Intel(R) I350 Gigabit Network Connection, Intel(R) I350 Gigabit Network Connection #2	
	hyperv02	Intel(R) I350 Gigabit Network Connection, Intel(R) I350 Gigabit Network Connection #2	Success

The report takes into account the following criteria when analyzing Hyper-V configuration:

## Cluster Optimization

Criterion	Description
<b>Hosts use same CPU vendors/models</b>	<p>The report analyzes cluster configuration to make sure clusters include hosts with CPUs of the same vendors.</p> <p>A cluster that includes hosts with CPUs from different vendors may not operate correctly when you perform some tasks in Veeam Backup &amp; Replication. For example, migration or restore of VMs to a host with a different processor may fail as some applications only run on processors of a specific vendor.</p>
<b>Hosts are updated equally</b>	<p>The report verifies that hosts in a cluster have the same Hyper-V version installed.</p> <p>When hosts in a cluster have different Hyper-V versions installed, it may cause compatibility issues and unexpected errors.</p>

Criterion	Description
<b>Storage controllers are of the same vendors</b>	<p>The report analyzes cluster configuration to verify that storage controllers installed on hosts are of the same vendor.</p> <p>If you have storage controllers of different vendors on hosts in a cluster, you may experience unexpected errors and failures.</p>
<b>NICs compatibility</b>	<p>The report analyzes cluster configuration to verify whether NIC cards within a cluster are of the same vendor.</p> <p>Incompatible NIC cards may cause issues during backup and restore operations in a cluster.</p>

## Host Optimization

Criterion	Description
<b>Host is not running on a balanced power plan</b>	<p>The report analyzes host configuration to verify whether hosts in the infrastructure are running on a balanced power plan.</p> <p>The <b>Balanced</b> power plan is the default power plan in Windows operating systems. However, to increase host efficiency, you are recommended using the <b>High Performance</b> power plan.</p>
<b>No RDP printers mapped</b>	<p>The report analyzes your infrastructure to verify that there are no RDP mapped printers on hosts.</p> <p>Printers mapped via RDP may not work efficiently and may cause unexpected errors and failures. You can disable RDP printer mapping through a group policy.</p>
<b>Virtual CPUs/Logical CPUs ratio</b>	<p>The report analyzes the infrastructure to verify that maximum vCPU per host CPU core ratio is below the specified value. The default ratio is 8.</p> <p>If CPU configuration is not balanced, VMs may not obtain enough processor resources. For information on how to measure processor performance, see this <a href="#">Microsoft article</a>.</p>

# VM Optimization

Criterion	Description
<b>Integration Services state</b>	<p>The report analyzes your infrastructure to verify that all Integration Services on VMs in the infrastructure are enabled.</p> <p>Integration Services participate in application-aware image processing during backup in Veeam Backup &amp; Replication. To use application-aware image processing efficiently, enable Integration Services.</p>
<b>Hyper-V VSS Requestor state</b>	<p>The report analyzes the infrastructure to identify the state of VSS Requestor on VMs.</p> <p>If VSS Requestor is not started on a VM, this may cause issues during backup as VSS services will not be able to create a shadow copy and prepare data for backup.</p> <p>If the state of VSS Requestor on a VM is <b>Started/Automatic</b> or <b>Started/Automatic (Delayed Start)</b>, the report will show the <b>Success</b> verification result. In other cases, the verification result will be <b>Warning</b>.</p>
<b>No Checkpoints used</b>	<p>The report analyzes the virtual infrastructure to find VMs with existing checkpoints.</p> <p>To use Veeam Changed Block Tracking for incremental backup, you must remove snapshots.</p>
<b>No VMs on datastores with less than 10% of free space</b>	<p>The report analyzes the Hyper-V infrastructure to find datastores that have less than 10% of free space.</p> <p>During backup Veeam Backup &amp; Replication triggers a checkpoint that is normally stored next to VM files on the source datastore. To eliminate the problem of datastores running low on free space during backup, it is required that the free space is more than 10%.</p>

## Use Case

This report shows a list of clusters, hosts and VMs in your virtual environment that could experience potential issues during backup, gets guidance on how to resolve these issues.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Cluster type.
- Assessment type:** defines types of objects to analyze in the report.

- **Max vCPU per Host CPU core ratio:** defines the threshold for the maximum number of vCPU cores per a single instance of the physical CPU core.

## Performance Assessment

This report evaluates whether the Hyper-V infrastructure is configured optimally, helps find potential issues and suggests actions aimed at boosting its efficiency.

- The **Verification Result** chart displays the share of failed and passed verification tests, test that are not applicable, and tests that completed with warnings.
- The **Assessment Criteria** table lists criteria used in the report to evaluate Hyper-V infrastructure performance, and shows the assessment results.

- The **Performance** tables show detailed assessment result for each criterion and provides recommendations on how to improve infrastructure performance.

## Performance Assessment

### Description

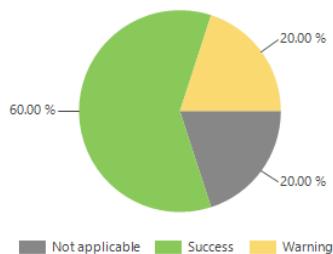
This report helps you to assess your Hyper-V performance and identify potential improvements. The report uses two-hour intervals.

### Report Parameters

Scope: Virtual Infrastructure  
 Business View:  
 Assessment type: All  
 Network bandwidth: 1 Gbps

### Summary

#### Verification Results



#### Assessment Criteria

#### Verification Results

Criteria Group: <a href="#">CPU Performance</a>	<a href="#">Success</a>
<a href="#">Hyper-V Hypervisor Logical Processor Total Run Time</a>	<a href="#">Success</a>
Criteria Group: <a href="#">Memory Performance</a>	<a href="#">Warning</a>
<a href="#">Available Memory</a>	<a href="#">Warning</a>
<a href="#">Memory Pages Rate</a>	<a href="#">Success</a>
<a href="#">Memory Pressure</a>	<a href="#">Success</a>
Criteria Group: <a href="#">Disk Performance</a>	<a href="#">Success</a>
<a href="#">Disk read latency</a>	<a href="#">Success</a>
<a href="#">Disk write latency</a>	<a href="#">Success</a>
<a href="#">Cluster Shared Volume 2012 read latency</a>	<a href="#">Not applicable</a>
<a href="#">Cluster Shared Volume 2012 write latency</a>	<a href="#">Not applicable</a>
Criteria Group: <a href="#">Network Performance</a>	<a href="#">Warning</a>
<a href="#">Network Output Queue Length</a>	<a href="#">Success</a>
<a href="#">Network Interface Transmission Rate</a>	<a href="#">Warning</a>

## Memory Performance

### Available Memory

Recommendation: Move one or several VMs to another host or upgrade the host. Review memory performance at Host Performance report.

Host	Host Memory (GB)	Cluster	Memory Usage, %			Alarms Triggered		Verification Result
			Avg.	Max.	Recommended	Warning	Error	
hyperv01	127.97	cluster01.tech.local	80.31	80.65	<80 (102.38 GB)	6	0	Warning
hyperv02	127.97	cluster01.tech.local	68.42	68.62	<80 (102.38 GB)	0	0	Success

### Memory Pages Rate

Recommendation: -

Host	Cluster	Memory, Pages/Sec			Alarms Triggered		Verification Result
		Avg.	Max.	Recommended	Warning	Error	
hyperv01	cluster01.tech.local	0.27	4.00	<500	0	0	Success
hyperv02	cluster01.tech.local	0.77	4.00	<500	0	0	Success

### Host Memory Pressure

Recommendation: -

Host	Cluster	Host Memory Pressure, %			Alarms Triggered		Verification Result
		Avg.	Max.	Recommended	Warning	Error	
hyperv01	cluster01.tech.local	82.57	83.00	<90	0	0	Success
hyperv02	cluster01.tech.local	82.03	83.00	<90	0	0	Success

For verification, the report analyzes data over the past 2 weeks and checks whether performance thresholds are exceeded or the number of times Veeam ONE Monitor triggered *Error* and *Warning* alarms. Performance thresholds are defined in alarm counters in Veeam ONE Monitor. If a threshold is exceeded, the report will deliver *Warning* or *Error* verification result depending on counter settings.

The report takes into account the following criteria when analyzing performance parameters:

## CPU Performance

Criterion	Description
Hyper-V Hypervisor Logical Processor Total Run Time	The criterion thresholds are specified in the <b>Total run time</b> counter settings of the <b>Host CPU Usage</b> alarm.

## Memory Performance

Criterion	Description
Available Memory	The criterion thresholds are specified in the <b>Hyper-V Services Memory Usage</b> counter settings of the <b>Host Available Memory</b> alarm.
Memory Pages Rate	The criterion thresholds are specified in the <b>Pages/sec</b> counter settings of the <b>Host Memory Pages Usage</b> alarm. For more information about memory page rate counters, see <a href="#">Microsoft TechNet article</a> .

Criterion	Description
Memory Pressure	The criterion thresholds are specified in the <b>Average Pressure</b> counter settings of the <b>Host Average Memory Pressure</b> alarm.

## Disk Performance

Criterion	Description
Disk read Latency	The criterion thresholds are specified in the <b>Disk/Physical Disk: Avg Disk sec/Read</b> counter settings of the <b>Datastore read latency</b> alarm.
Disk write Latency	The criterion thresholds are specified in the <b>Disk/Physical Disk: Avg Disk sec/Write</b> counter settings of the <b>Datastore write latency</b> alarm.
Cluster Shared Volume read latency	The criterion thresholds are specified in the <b>Disk/CSV2012: Read Latency</b> counter settings of the <b>Cluster shared volume 2012 read latency</b> alarm.
Cluster Shared Volume write latency	The criterion thresholds are specified in the <b>Disk/CSV2012: Write Latency</b> counter settings of the <b>Cluster shared volume 2012 write latency</b> alarm

## Network Performance

Criterion	Description
Network Output Queue Length	The criterion thresholds are specified in the <b>Network Output Queue Length</b> counter of the <b>Host network average output queue length</b> alarm.
Network Interface Transmission Rate	The criterion threshold is calculated the following way: <b>Network Bytes Total/sec</b> counter value divided by the <b>Network Bandwidth</b> value specified in the report parameters.

## Use Case

The report analyzes performance of the Hyper-V infrastructure and provides recommendations to improve its configuration. You can use report results to implement the necessary hardware and software optimizations.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Host type.
- **Network Bandwidth:** defines network bandwidth to analyze in the report.
- **Assessment Type:** defines a type of resources to analyze in the report (*All, CPU, Memory, Disk, Network*).

## VM Change Rate Estimation

This report predicts the number of changed blocks (measured in GB) for virtual disks based on virtual machines write rate. The report analyzes rates at which data was written to virtual disks during the selected reporting interval, and displays top N VMs that grew faster and slower than other VMs.

- The **Top 5 VMs with Largest Change Rate (GB)** chart shows 5 VMs with the greatest amount of changed blocks within the reporting period.
- The **Top 5 VMs with Least Change Rate (GB)** chart shows 5 VMs with the least amount of changed blocks within the reporting period.

- The **Details** table provides information on the total change rate and the hourly, daily or weekly change rate (depending on the reporting interval).

Click a VM name to drill down to change rate statistics for each VM disk.

## VEEAM

### VM Change Rate Estimation

#### Description

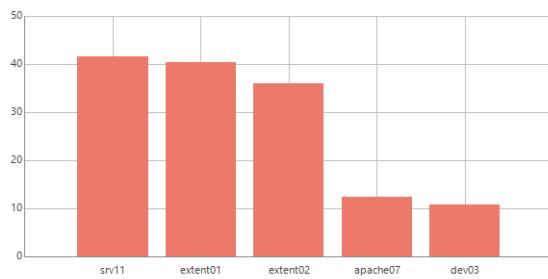
This report predicts the number of changed blocks (measured in GB) for virtual disks based on virtual machines write rate.

#### Report Parameters

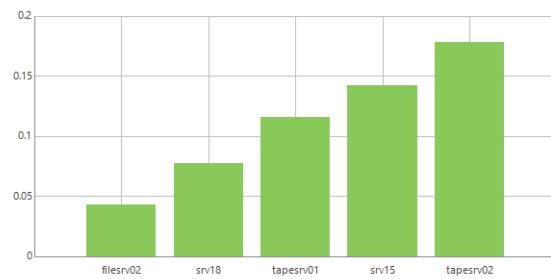
Scope:	vcenter01.tech.local
Interval:	Current day (12/27/2019 - 12/27/2019)
Top N:	5
Show VMs with no changes:	False

#### Summary

Top 5 VMs with Largest Change Rate (GB)



Top 5 VMs with Least Change Rate (GB)



#### Details

Scope	VM	12:00 AM 2:59 AM	3:00 AM 5:59 AM	6:00 AM 8:59 AM	9:00 AM 11:59 AM	12:00 PM 2:59 PM	3:00 PM 5:59 PM	6:00 PM 8:59 PM	9:00 PM 12:00 AM	Total
cluster01.tech.local	12	5.6 GB	12.6 GB	17.4 GB	5.43 GB	55.1 GB	19 GB	25.5 GB	16.99 GB	157.62 GB
	<a href="#">srv11</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	22.56 GB	< 1 GB	20.25 GB	< 1 GB	42.81 GB
	<a href="#">extent01</a>	< 1 GB	< 1 GB	11.84 GB	< 1 GB	30.06 GB	< 1 GB	< 1 GB	< 1 GB	41.90 GB
	<a href="#">extent02</a>	5.4 GB	< 1 GB	5.5 GB	< 1 GB	< 1 GB	15.08 GB	< 1 GB	10.5 GB	36.48 GB
	<a href="#">apache07</a>	< 1 GB	12.6 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	12.6 GB
	<a href="#">dev03</a>	< 1 GB	< 1 GB	< 1 GB	5.36 GB	< 1 GB	< 1 GB	< 1 GB	6.41 GB	11.77 GB
	<a href="#">websql02</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	2.4 GB	< 1 GB	5.2 GB	< 1 GB	7.6 GB
	<a href="#">tapesrv06</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	3.8 GB	< 1 GB	< 1 GB	< 1 GB	3.8 GB
	<a href="#">tapesrv02</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB
	<a href="#">srv15</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB
	<a href="#">tapesrv01</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB
	<a href="#">srv18</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB
	<a href="#">filesrv02</a>	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB	< 1 GB
Total:		5.6 GB	12.6 GB	17.4 GB	5.43 GB	55.1 GB	19 GB	25.55 GB	16.99 GB	157.62 GB

## Use Case

To perform incremental backup, Veeam Backup & Replication needs to know which data blocks have changed since the previous job run. The number of changed blocks reflects the amount of data written to the virtual disk.

Veeam Backup & Replication gathers this information to calculate the amount of new data that needs to be backed up. The more changes occur on the virtual disk, the larger amount of space is required to store data in backup. By estimating the change rate, the report helps you assess future needs for repository space.

## Report Parameters

You can specify the following report parameters:

- Scope (VI):** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

- **Interval/Start Date - End Date:** defines the time period to analyze in the report.
- **Top N:** defines the number of top VMs that will be included in the report.
- **Show VMs with no changes:** defines whether VMs with no detected changes must be included in the report.

# Hyper-V Overview

This report pack provides general configuration overview for SCVMMs, volumes, clusters, hosts and VMs, and displays information on the most common alarms raised for virtual infrastructure objects.

**Number of reports:** 7

**Current version:** 2

**Reports included:**

- [Cluster Configuration](#)
- [Datastore Configuration](#)
- [Guest Disk Free Space](#)
- [Host Configuration](#)
- [Infrastructure Overview](#)
- [VMs Configuration](#)
- [VMs Growth](#)

## Cluster Configuration

This report documents the current configuration of clusters in your infrastructure.

The report provides an overview of cluster resources in terms of memory, CPU and storage utilization.

For each cluster included in the report, the **Details** table displays information on total number of hosts and VMs in the cluster, total amount of available cluster resources and the name of the cluster host owner. The report also shows network configuration for each cluster.

## TIP:

- Click a number in the **Total hosts** column of the **Details** table to drill down to host configuration details.
- Click a number in the **HA VMs** column of the **Details** table to drill down to VM configuration details.

## veeam

### Cluster Configuration

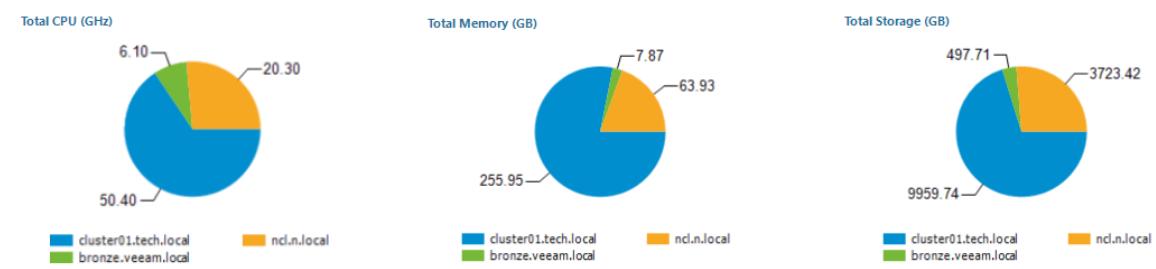
#### Description

This report provides a quick overview of all Hyper-V clusters resources in terms of aggregated memory, CPU and disk resources.

#### Report Parameters

Scope: Virtual Infrastructure  
Business View objects:  
Reporting date: 1/15/2019 2:59 PM

#### Summary



#### Details

Cluster	Total Hosts	HA VMs	Total CPU (GHz)	Total Memory (GB)	Total Local Storage (GB)	Total CSVs Capacity (GB)	Cluster Host Owner
cluster01.tech.local	2	0	50.40	255.95	9309.99	649.74	hyperv02
bronze.veeam.local	1	5	6.10	7.87	298.09	199.63	copper
ncl.n.local	2	6	20.30	63.93	3723.42	0.00	nhv1

#### Networking

Name	Subnets	Networks	Cluster Use	Status	VMs
bronze.veeam.local	172.176.0.0	Cluster Network 1	Both	Up	1
cluster01.tech.local	172.175.2.0	Cluster Network 1	Both	Up	62
ncl.n.local	172.16.0.0 10.0.0.0	Cluster Network 2 Cluster Network 1	Both Cluster	Up Partitioned	27 3

## Use Case

The report allows you to keep an eye on the state of hardware resources provisioned to your clusters, and to verify configuration settings applied to these clusters. This may help you balance workloads and right-size the environment to attain higher performance.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Cluster type.
- **Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.

## Datastore Configuration

This report documents the current configuration of CSVs, SMB shares and local disks in your infrastructure.

The report provides information on total capacity, used, free and provisioned space, and calculates space utilization trend for each volume. The report also includes the **Top N VMs** section that shows VMs that consume more storage space than other VMs.

**TIP:**

Click a hyperlink in the **Free Space Usage Trend** column in the **Summary** table to drill down to daily information on total capacity, the amount of used and provisioned space, and the number of VMs that store data on the CSV/SMB share/local disk.

## Datastore Configuration

### Description

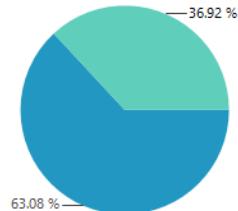
This report provides information about Hyper-V datastore type and other general information including total capacity, free and provisioned space.

### Report Parameters

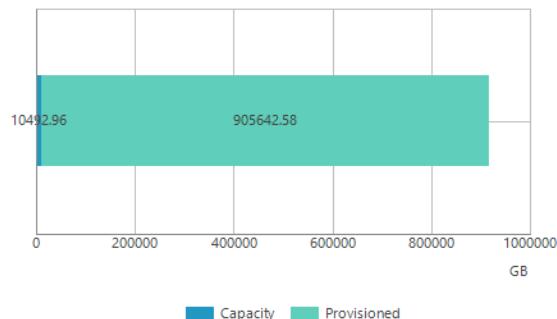
Scope: Virtual Infrastructure  
 Reporting date: 1/15/2019 12:15 PM  
 Business View objects:  
 Num. of items: 3

### Summary

Utilization (%)



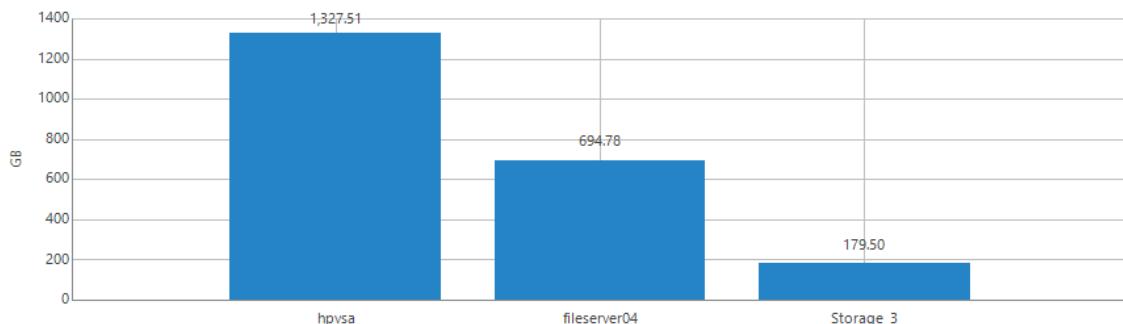
Provisioned Space (GB)



Name	Owner	Capacity (GB)	Free Space (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	Free Space Usage Trend
Disk 1 F: G:	hyperv01	200.00	19.94	0.00	0.00	<a href="#">Not changed</a>
Disk 3 J:	hyperv02	30.00	29.92	0.00	0.00	<a href="#">Not changed</a>
Disk 1 F: G:	hyperv02	127.00	115.77	0.00	0.00	<a href="#">Not changed</a>
Disk 2 H: I:	hyperv02	827.00	820.11	0.00	0.00	<a href="#">Not changed</a>
Disk 0 C: D: E:	hyperv01	4654.48	1401.34	343601.69	7382.17	<a href="#">Not changed</a>

### Top 3 VMs

Top 3 Largest VMs



VM Name	Number of Disks	Space Used (GB)
hpvs	2	1,327.51
fileserver04	1	694.78
Storage_3	1	179.50

# Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Storage type.
- **Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.
- **Num. of items:** defines the number of top datastores, virtual and logical disks that will be displayed in the report charts.

## Guest Disk Free Space

The report provides information on the amount of free disk space for VM guest OS.

**NOTE:**

1. To view the report, you must specify guest OS credentials for the guest OS of Microsoft Hyper-V VMs. For details, see section [Specify VM Guest OS Credentials](#) of the Veeam ONE Deployment Guide.
2. The report includes information only for VMs running Windows guest OSes.

The report analyzes VM guest disks and displays their capacity, the amount of guest disk free space, shows disk space usage trends, and predicts how many days are left for a disk to reach the specified threshold.

- The **Summary** section provides an overview of analyzed VM guest disks, shows how many VMs will run out of disk resources sooner than other VMs, and shows average disk growth trends.
- The **Disks to reach threshold first** table displays a list of VMs that will run out of guest disk space sooner than other VMs. For each VM, the table shows guest disk capacity and the amount of free space left, daily disk growth trend and the number of days left before the occupied disk space will reach 90% and 100% of its capacity.

If a value in the **Days to reach 90%** or **Days to reach 100%** column is highlighted with red, a disk will reach the specified threshold in less than 180 days.

- The **Top 10 partition by Relative space growth** chart shows 10 guest disks that used the greatest amount of space over the reporting period in relative terms (amount of occupied disk space against the disk capacity).
- The **Top 10 partition by Absolute space growth** chart shows 10 guest disks that used more space over the reporting period in absolute terms (amount of occupied disk space in GB).

- The **Guest Disk Free Space (GB)** section displays a list of all VMs included into the report and their guest disks. The table details disk capacity, the amount of free and used space, trends for disk space usage growth, daily disk growth, and shows how many days are left until a disk reaches its limit.

## Guest Disk Free Space

### Description

This report provides information about free space for all VMs guest disks.

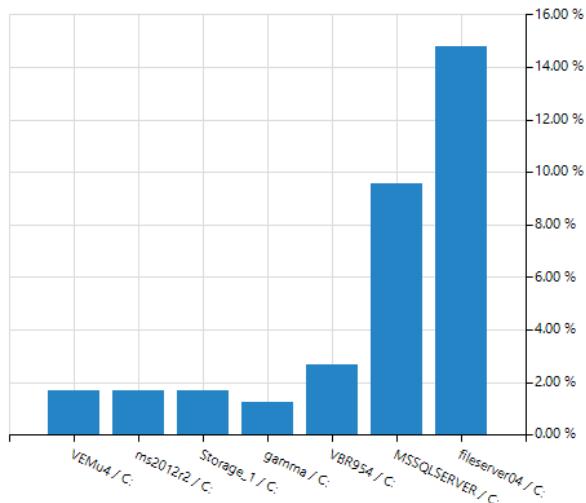
### Report Parameters

Scope:	\Virtual Infrastructure
Business View objects:	
Interval:	4 weeks (12/19/2018 - 1/15/2019)
Disk size more than:	5 GB
Free space, less than:	50.00%
Sort by:	Virtual machines
Do not show guest disks suppressed in Monitor Client:	True

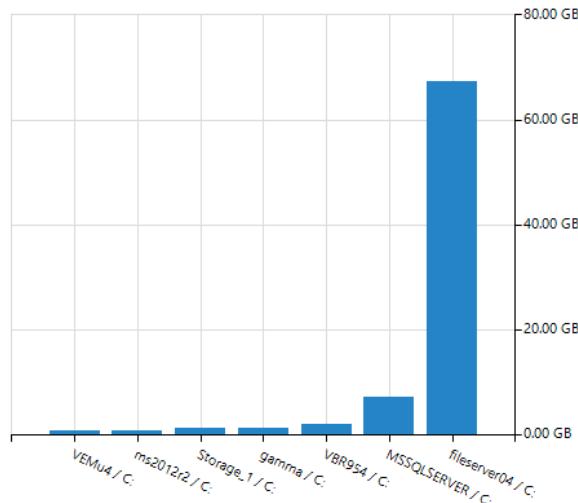
### Summary

Overview		Disks to reach threshold first						
VMs analyzed	7							
Virtual disks in the infrastructure	20		Virtual Machine	Partition	Capacity (GB)	Free Space (GB)	Daily Growth (GB)	Days to Reach 90%
Including								Days to Reach 100%
Fixed disks	0	MSSQLSERVER	C:	126.66	45.63	0.42	63	88
Dynamic disks	19	fileserver04	C:	1023.66	501.87	3.96	76	97
Differencing disks	1	gamma	C:	126.66	23.52	0.08	266	560
Disks to reach 100% in less than 30 days	0	VBR954	C:	126.48	47.25	0.12	529	∞
Disks to reach 100% in less than 60 days	0	Storage_1	C:	126.66	54.18	0.07	∞	∞
Disks with less than 1 GB of free space	0	ms2012r2	C:	59.48	17.56	0.04	∞	∞
Disks with less than 1% of free space	0	VEMu4	C:	59.48	17.56	0.04	∞	∞
Average disks' daily growth [GB]	0.67							
Average disks' daily growth [%]	0.15 %							

Top 10 Partitions by Relative Space Growth



Top 10 Partitions by Absolute Space Growth



## Guest Disk Free Space (GB)

Virtual Server	Virtual Machine	Partition	Guest Disk Size (GB)	Guest Disk Used Space (%)	Guest Disk Used Space (GB)	Guest Disk Free Space (%)	Guest Disk Free Space (GB)	Disk's Used Space Growth (GB)	Daily Growth (GB)	Days to Reach 100%
hyperv01	<a href="#">fileserver04</a>	C:	1023.66	50.97	521.78	49.03	501.87	67.30	3.96	97
	<a href="#">gamma</a>	C:	126.66	81.43	103.14	18.57	23.52	1.28	0.08	560
	<a href="#">ms2012r2</a>	C:	59.48	70.48	41.93	29.52	17.56	0.70	0.04	∞
	<a href="#">VBR954</a>	C:	126.48	62.64	79.23	37.36	47.25	2.05	0.12	∞
hyperv02	<a href="#">MSSQLSERVER</a>	C:	126.66	63.98	81.03	36.02	45.63	7.08	0.42	88
	<a href="#">Storage1</a>	C:	126.66	57.22	72.47	42.78	54.18	1.19	0.07	∞
	<a href="#">VEMu4</a>	C:	59.48	70.48	41.93	29.52	17.56	0.70	0.04	∞

### TIP:

Click a VM in the **Virtual Machine** column to drill down to VM guest disk space usage details.

The **VM Guest Disks Space Usage** drill-down section includes a chart and a table that allow you to examine disk space usage in detail.

- The chart visualizes disks space usage for each day of the reporting period.
- The table provides disk space capacity and usage details.

Note that some values in the table may be highlighted with red to emphasize important information.

- **Guest disk used space (%)** value is highlighted with red if the amount of used disk space exceeds 90%.
- **Disk's used space change (%)** value is highlighted with red if the disk used space growth within the reporting period exceeds 10%.
- **Guest disk free space (%)** value is highlighted with red if the amount of disk free space is less than 10%.
- **Guest disk free space (GB)** value is highlighted with red if the amount of disk free space is less than 5 GB.
- **Days to reach 100%** value is highlighted with red if less than 180 days are left until a disk reaches its limit.

## Use Case

The report allows you to examine VM guest disk utilization and track disk usage growth. This helps you plan resource allocation and ensure your VMs have enough disk resources for stable operation.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type:** defines the time period to analyze in the report.
- **Disk size more than:** defines the minimum capacity threshold for a disk to analyze in the report. If disk capacity is less than the specified value, the report will not analyze this disk.
- **Free space less than:** defines the maximum amount of free space for a disk to analyze in the report. If the amount of free space on a disk is more than the specified value, the report will not analyze this disk.
- **Sort By:** defines how data will be sorted in the report (*Virtual Machines, Relative Growth, Absolute Growth*).
- **Do not show guest disks suppressed in Monitor Client:** defines whether guest disks excluded in Veeam One Monitor to analyze in the report.

You can exclude certain VM guest disks from monitoring in Veeam ONE Monitor. To learn more, see section [Virtual Machine Summary](#) of the Veeam ONE Monitor User Guide.

## Host Configuration

This report documents the current configuration of hosts in your infrastructure.

The report provides general information on host systems in the environment, displays statistics on memory, CPU and storage utilization, and shows network configuration for each host.



## Host Configuration

### Description

This report provides general Hyper-V hosts configuration information, including available resources and network configuration.

### Report Parameters

Scope: Virtual Infrastructure  
Business View objects:  
Reporting date: 1/15/2019 12:15 PM

### Summary

Total number of hosts 2  
VMs per host 32.00  
Hosts per datastore 0.33

### General Information

Name	Manufacturer	System Model	OS Type	Update Version	Status
hyperv01	Supermicro	X9DR3-F	Microsoft Windows Server 2012 R2 Datacenter	6.3.9600	Up
hyperv02	Supermicro	X9DR3-F	Microsoft Windows Server 2012 R2 Datacenter	6.3.9600	Up

### Available Resources

Name	Physical CPU (GHz)	Total Cores	Physical Memory (GB)	Virtual Memory (GB)	Local Storage (GB)	Shared Storage (GB)	Number of VMs
hyperv01	25.20	12	128	160	4854	0	28
hyperv02	25.20	12	128	147	5638	0	36

### Network Configuration

Network	Network Type	VMs	Adapter	IP Address
Host Name: hyperv01	5	29		
Intel(R) I350 Gigabit Network Connection - Virtual Switch	External	27	Intel(R) I350 Gigabit Network Connection	172.17.52.13
Lab Isolated Network (Exchange Virtual Lab)	Private	0	-	-
Lab Isolated Network (hyperv vlab)	Private	0	-	-
Lab Isolated Network (SQL vLab)	Private	0	-	-
Lab Isolated Network (Virtual Lab 2)	Private	2	-	-
Host Name: hyperv02	6	49		
Lab Isolated Network (Microsoft Exchange Lab)	Private	0	-	-
Intel(R) I350 Gigabit Network Connection - Virtual Switch	External	41	Intel(R) I350 Gigabit Network Connection #2	172.17.52.35 172.17.52.14
Lab Isolated Network (AppleDream)	Private	2	-	-
Lab Isolated Network (MadTeaPot)	Private	2	-	-
Lab Isolated Network (MadTea)	Private	2	-	-
Lab Isolated Network (test)	Private	2	-	-

## Use Case

The report allows you to identify configuration issues, optimize resource provisioning and better handle current and future workloads.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Host type.
- **Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.

## Infrastructure Overview

This report reveals the necessary Hyper-V inventory configuration specifics and allows you to evaluate the current state of your virtual environment.

The report shows configuration properties of SCVMM servers, clusters, CSVs, SMB shares, local disks, host systems and networks. The report also includes charts that display percentage distribution of VM power states, Integration Services statuses and Veeam ONE Business View groups across the infrastructure.

**TIP:**

- Click a SCVMM server name in the **SCVMM Servers** table to drill down to details on hypervisor version installed on the server and the list of hosts that run on the server.
- Click the **Details** link below the **Power State** chart to drill down to the full list of VMs and their power states.
- Click the **Details** link below the **Integration Service Status** chart to drill down to the full list of VMs and statuses of Integration Services running in these VMs.
- Click the **Details** link below the **BV Chart** to drill down to the full list of Veeam ONE Business View categories and VMs that belong to these categories.

## Infrastructure Overview

### Description

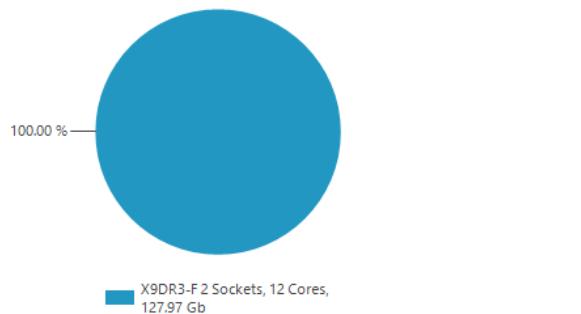
This report provides general Hyper-V inventory configuration information, including all SCVMMs, clusters, hosts, VMs, datastores, and networks in your virtual environment.

### Summary

Scope:	Virtual Infrastructure
Hosts per Cluster:	2.0
VMs per Host:	32.0
Datastores per Host:	3.0
---	--

### Hosts

#### Top Hosts Configurations



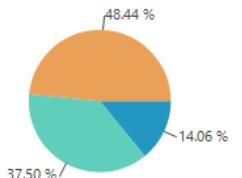
[Details](#)

#### All Hosts Configurations

SCVMM	Cluster	Cores	Memory (GB)	Host
N/A	cluster01.tech.local	24	255.95	2
		12	127.97	hyperv01
		12	127.97	hyperv02
Total:		24	255.95	2

## Virtual Machines

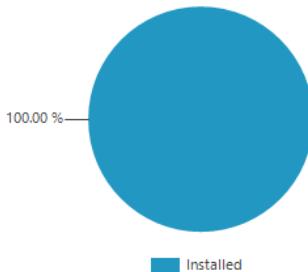
### Power State



■ Paused ■ Powered off ■ Running

[Details](#)

### Integration Service Status



■ Installed

[Details](#)

## Use Case

The report helps administrators track the state of monitored virtual infrastructure.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Choose VM category to include it to the report:** defines a Veeam ONE Business View group that includes VMs to analyze in the report.

## VMs Configuration

This report documents the current configuration of VMs in the virtual infrastructure.

- The **Integration Services Status** chart illustrates the status of Integration Services running on VMs.  
Click the **Details** link at the bottom of the chart to drill down to the list of VMs and statuses of Integration Services running on these VMs.
- The **VM State Summary** chart illustrates the VM power state.  
Click the **Details** link at the bottom of the chart to drill down to the list of VMs and their power states.

- The **Guest OS Distribution** chart illustrates what guest OSes are installed on VMs, and shows the share of a particular guest OS.

Click the **Details** link at the bottom of the chart to drill down to the list of guest OSes present in the infrastructure and the list of VMs on which these guest OSes are installed.

- The **Details** table provides detailed information for every VM, including data on VM location, computer name, guest OS type, number of vCPUs, memory type, amount of allocated memory resources, amount of allocated and used storage resources.

## VMs Configuration

### Description

This report provides a quick overview of all configured resources for virtual machines in terms of memory, CPU and virtual disk resources as well as VM state and Guest OS distribution summary.

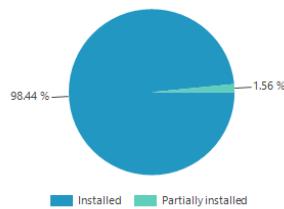
### Report Parameters

Scope: Virtual Infrastructure

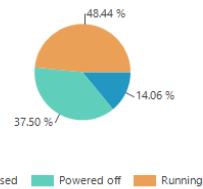
Business View objects:

### Summary

Integration Services Status



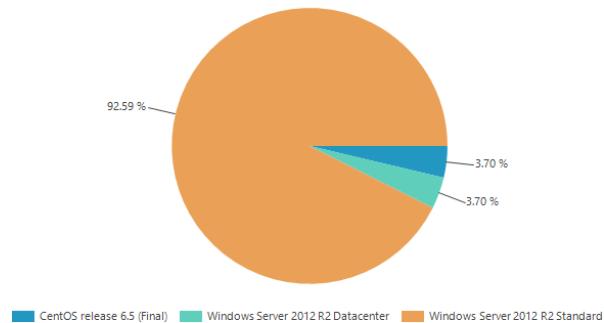
VM State Summary



[Details](#)

[Details](#)

Guest OS Distribution



[Details](#)

## Details

SCVMM: N/A

Host	VM Name	Computer Name	Guest OS	vCPU	Memory Type	Startup Memory (MB)	Maximum Memory (MB)	Storage Allocated (GB)	Storage Used (GB)
cluster01.tech.local				89		145,102	27,394,766	11,482.00	5,267.95
hyperv01				41		69,102	12,645,870	3,976.00	2,380.62
	alpha	alpha.tech.local	Windows Server 2012 R2 Standard	1	Static	4,096	4,096	127.00	36.04
	appsrv02			1	Dynamic	512	1,048,576	50.00	13.85
BETA	beta.tech.local		Windows Server 2012 R2 Standard	1	Static	4,096	4,096	127.00	150.86
db001	db001.tech.local		Windows Server 2012 R2 Standard	1	Static	4,096	4,096	127.00	24.04
dc				1	Dynamic	512	1,048,576	0.00	
delta				4	Static	4,096	4,096	200.00	222.74
desktop01	desktop01.tech.local		Windows Server 2012 R2 Standard	2	Dynamic	512	1,048,576	150.00	192.68
dns				1	Dynamic	512	1,048,576	0.00	
dr	dr.tech.local		Windows Server 2012 R2 Standard	2	Dynamic	512	1,048,576	127.00	74.00
fileserver04	fileserver04.tech.local		Windows Server 2012 R2 Standard	2	Dynamic	512	1,048,576	1,024.00	729.59
gamma	gamma.tech.local		Windows Server 2012 R2 Standard	1	Static	4,096	4,096	127.00	138.01
lt01				1	Static	5,120	5,120	120.00	60.15
ms2012r2	MS2012r2		Windows Server 2012 R2 Standard	2	Dynamic	512	1,048,576	60.00	34.24
om2012r2	OM2012r2.tech.local		Windows Server 2012 R2 Standard	2	Dynamic	512	1,048,576	120.00	74.06
oracle03_replica				1	Dynamic	512	1,048,576	120.00	9.89
sampledb	sampledb.tech.local		Windows Server 2012 R2 Standard	1	Static	1,566	1,566	100.00	40.07
serv12				1	Dynamic	512	1,048,576	127.00	59.91
srv507	WIN-AH72KLH18SC		Windows Server 2012 R2 Standard	1	Static	4,096	4,096	127.00	9.22
starfish				2	Dynamic	512	1,048,576	127.00	115.73
VBO30Server	VBO30Server.tech.local		Windows Server 2012 R2 Standard	1	Static	4,048	4,048	127.00	25.69
VBR01	VBR01.tech.local		Windows Server 2012 R2 Standard	4	Static	4,096	4,096	127.00	54.51
VBR01Repository	VBR01Repository.tech.local		Windows Server 2012 R2 Standard	1	Static	6,144	6,144	127.00	81.49
VBR02				1	Static	4,096	4,096	127.00	53.15
VBR953	VBR953.tech.local		Windows Server 2012 R2 Standard	1	Static	4,096	4,096	127.00	64.13
VBR954	VBR954.tech.local		Windows Server 2012 R2 Standard	2	Static	4,096	4,096	127.00	83.10
Virtual_Lab_2				1	Static	1,024	1,024	0.00	
vsa	vsa.tech.local		Windows Server 2012 R2 Standard	1	Dynamic	512	1,048,576	127.00	18.79
win7x86_replica				1	Static	4,096	4,096	127.00	14.68
hyperv02				48		76,000	14,748,896	7,506.00	2,887.33

## Use Case

The report helps administrators assess configuration properties of VMs in the monitored virtual infrastructure.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

## VMs Growth

This report tracks how the number of VMs in your virtual environment has been changing during the reporting period. The report analyzes the amount of allocated resources, displays changes in the number of VMs, and shows how these changes influenced resource provisioning in the infrastructure.

For each added/removed VM, the report provides information on the location of the VM and its configuration properties.



## VMs Growth

### Description

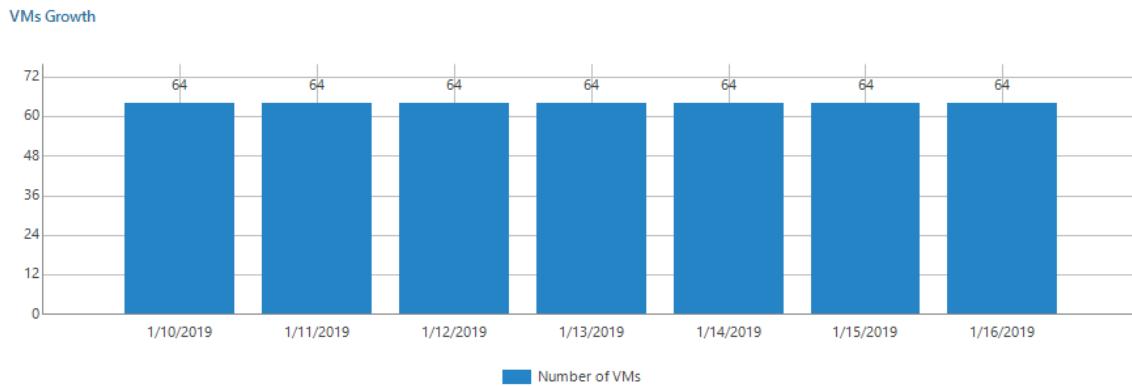
This report shows how many VMs have been added to the virtual environment during the selected period of time.

### Report Parameters

Scope: Virtual Infrastructure  
Interval: 1 week (1/10/2019 - 1/16/2019)  
Business View objects:

### Summary

Number of VMs	Allocated Resources	Ratios
Total number of VMs: 64	vCPU: 89	vCPU/Core: 3.71
VMs added: 2	Memory: 26,654.00 GB	VMs per host: 32.00
VMs removed: 0	Storage: 11,482.00 GB	VMs per datastore: 10.67



### Added VMs Details

#### SCVMM: N/A

Cluster/Host: cluster01.tech.local  
Number of VMs: 64

Added VMs	vCPU	Memory (GB)	Storage (GB)	Initiator	Event Date
2	3	5.00	35.72		
TM02	2	4.00	35.72	tech\john.smith	1/14/2019 5:02 PM
TM01	1	1.00	0.00	tech\john.smith	1/15/2019 12:06 AM

## Use Case

This report allows you to control virtual machine sprawl and to optimize resource utilization in your infrastructure.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.

# Hyper-V Monitoring

This report pack displays performance statistics for clusters, Cluster Shared Volumes, local disks, hosts and VMs. Additionally, the pack tracks VM uptime, provides an overview of triggered alarms and helps you perform health assessment of your Infrastructure to increase its efficiency.

**Number of reports:** 10

**Current version:** 2

**Reports included:**

- [Alarms Current State Overview](#)
- [Alarms Overview](#)
- [Failover Cluster Performance](#)
- [Host Performance](#)
- [Host Uptime](#)
- [Local Datastore Performance](#)
- [VM Performance](#)
- [VMs Uptime](#)
- [Windows 2008 Cluster Shared Volume Performance](#)
- [Windows Cluster Shared Volume Performance](#)

# Alarms Current State Overview

This report shows alarms triggered by Veeam ONE Monitor for the managed virtual infrastructure. For each alarm, the report provides information on the affected object, alarm severity, date and time when the alarm was triggered and alarm details.



## Alarms Current State Overview

### Description

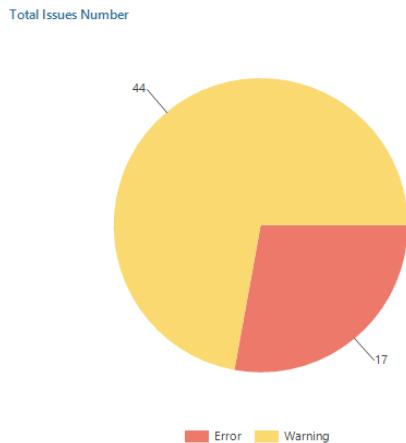
This report shows all currently unresolved alarms for the virtual infrastructure.

### Report Parameters

Scope: Virtual Infrastructure  
Business View objects:  
Alarms status: Errors, Warnings, Acknowledged

### Summary

Total Warnings: 44  
Total Errors: 17  
Alarmed Objects: 61



Top 10 Alarms			
Alarm Name	Alarm Type	Repeat Count	
Latest checkpoint age	Warning	36	
Latest checkpoint size	Error	15	
Latest checkpoint size	Warning	6	
Bad Hyper-V username logon attempt	Error	2	
Host available memory	Warning	1	
Local volume free space	Warning	1	

### Details

Object	Location	Alarm Name	Type	Trigger	Time
<b>Object Type: Host</b>					
hyperv01	\Virtual Infrastructure\cluster01.tech.local	Host available memory	Warning	"Hyper-V Services Memory Usage" (80.0%) is above a defined threshold (80.0%)	1/2/2019 8:59:27 PM
hyperv01	\Virtual Infrastructure\cluster01.tech.local	Bad Hyper-V username logon attempt	Error	Fired by event: 4625 Microsoft-Windows-Security-Auditing Event description: An account failed to log on. Failure Reason: Unknown user name or bad password. Account Name: Administrator Account Domain: TECH Initiated by: n/a	12/29/2018 1:27:17 PM
hyperv02	\Virtual Infrastructure\cluster01.tech.local	Bad Hyper-V username logon attempt	Error	Fired by event: 4625 Microsoft-Windows-Security-Auditing Event description: An account failed to log on. Failure Reason: Unknown user name or bad password. Account Name: mark.scissor Account Domain: TECH Initiated by: n/a	1/14/2019 1:47:25 PM
<b>Object Type: Local storage</b>					
Disk 1 F: G:	\Virtual Infrastructure\cluster01.tech.local\hyperv01	Local volume free space	Warning	Amount of free space (10.0%) is below a defined threshold (10.0%). Current free space is 19.94 GB.	12/29/2018 1:08:59 PM
<b>Object Type: Virtual Machine</b>					

# Use Case

This report evaluates the health state of the managed infrastructure and helps you simplify troubleshooting. You can use the report to export details of triggered alarms.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Status:** defines the status of alarms that must be included in the report (*Errors and Warnings; Errors only; Errors, Warning, Acknowledged; Acknowledged only*).

## Alarms Overview

Veeam ONE Monitor generates multiple alarms to inform you about important events in your environment. This report allows administrators to quickly review the health state of the environment and to track how the number of alarms has been changing during the reporting period.

The report analyzes alerting activity across a time range, provides information on virtual infrastructure objects that caused the greatest number of alerts, and displays top 10 most frequently occurred issues.

**TIP:**

Click a number in the **Alarms** column of the **Details** table to drill down to details for alarms raised for the infrastructure object.

## Alarms Overview

### Description

This report provides an overview of your virtual environment current health state that includes most common alarms and most affected VI objects.

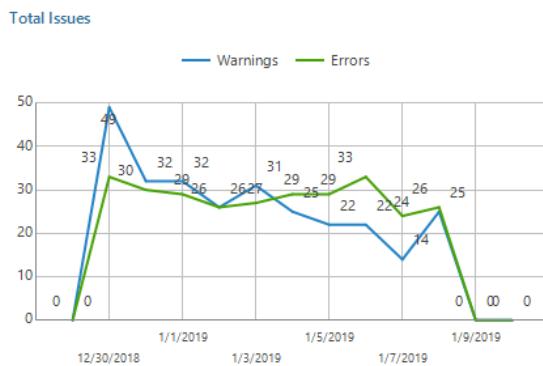
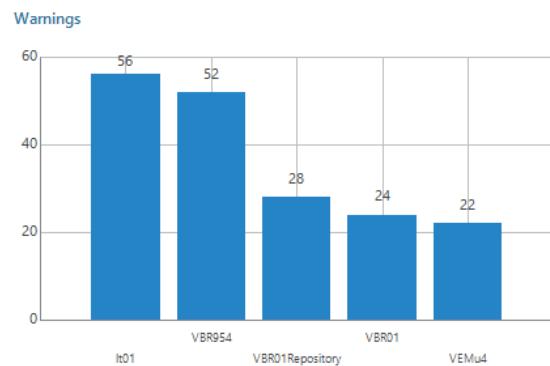
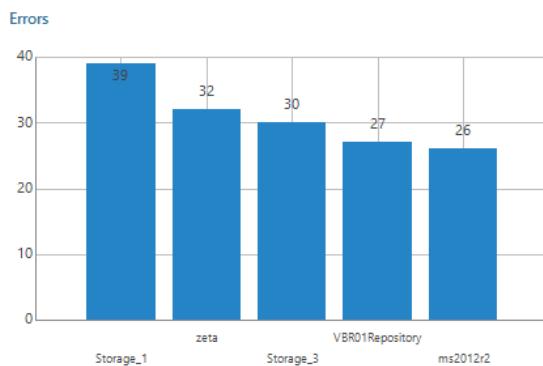
### Report Parameters

Scope: Virtual Infrastructure  
 Date period: 12/28/2018 - 1/9/2019  
 Sorting by: Issue type  
 Business View objects:  
 Alarm Types: All items  
 Alarms List: All items

### Summary

Total Errors: 286  
 Total Warnings: 278

### Top Objects and Issues



### Top 10 Issues

Name	Total Triggered	Total Objects
Latest checkpoint size	375	22
VM vCPU time per dispatch	120	9
Latest checkpoint age	36	36
VM CPU usage	20	3
Host available memory	6	1
Host Memory Pages Usage	3	1
Bad Hyper-V username logon attempt	3	2
Local volume free space	1	1

## Details

### Issue Type: Errors

Object Type	Location	Object	Alarms	Trend
Hyper-V Host		2	5	
	\Virtual Infrastructure\cluster01.tech.local	hyperv01	1	Increasing
	\Virtual Infrastructure\cluster01.tech.local	hyperv02	4	Increasing
Hyper-V Virtual Machine		17	281	

### Issue Type: Warnings

Object Type	Location	Object	Alarms	Trend
Hyper-V Host		2	7	
	\Virtual Infrastructure\cluster01.tech.local	hyperv01	6	Increasing
	\Virtual Infrastructure\cluster01.tech.local	hyperv02	1	Increasing
Hyper-V Storage		1	1	
	\Virtual Infrastructure\cluster01.tech.local\hyperv01	Disk 1 F: G:	1	Increasing
Hyper-V Virtual Machine		39	270	

## Use Case

The report provides an overview of the current health state of your virtual environment, shows the list of the most common alarms and identifies the most affected virtual infrastructure objects.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- Group By:** defines how data will be grouped in the report output (by *Issue type* or *Object type*).
- Alarm Type:** defines a list of virtual infrastructure object types to analyze in the report.
- Alarms List:** defines a list of alarms to analyze in the report.

## Failover Cluster Performance

The report analyzes performance history of the failover cluster hosts and delivers statistics on CPU, memory disk and network usage over the specified reporting period.

- The **Summary** section of the report describes configuration of each host in the cluster (amount of memory and CPU resources, the number of CPU cores and sockets).
- The report also shows CPU, memory, disk and network performance charts, provides resource usage information and calculates trends for the entire cluster as well as for top resource consuming hosts and VMs in the cluster.

**TIP:**

- Click a host name in the Summary table or in the list of top resource consuming hosts to drill down to performance charts with statistics on CPU, memory, disk and network usage for the host.
- Click a VM name in the list to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

# Failover Cluster Performance

## Description

This report shows cluster hosts performance history that includes CPU, Memory, Disk and Network counters.

## Report Parameters

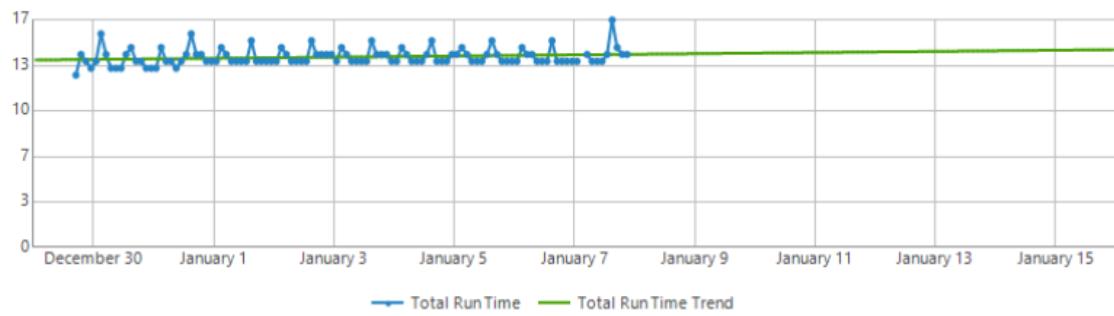
Selected Object:	cluster01.tech.local
Selected Object Location:	\Virtual Infrastructure
Report Period:	12/29/2018 - 1/15/2019
Top N:	3
Business hours:	From 12:00 AM to 11:00 PM

## Summary

Host Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets
<a href="#">hyperv01</a>	127.97	25.2	12	2
<a href="#">hyperv02</a>	127.97	25.2	12	2
Total:	255.95	50.4	24	4

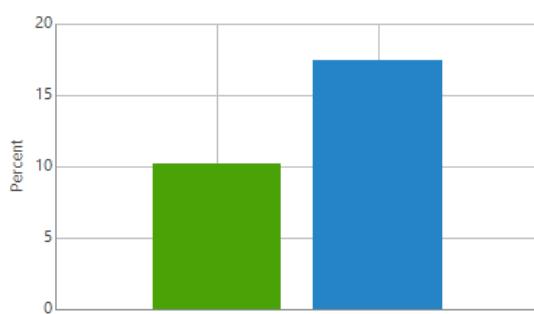
## CPU Performance

### Total Run Time (Percent)



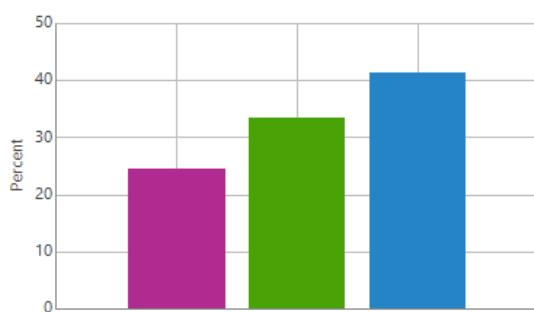
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
cluster01.tech.local	13.81	12.50	16.50	0.60	Increasing

#### Top 3 Hosts by Total Run Time



Object Name	Avg	Trend
hyperv01	17.43	Increasing
hyperv02	10.20	Increasing

#### Top 3 VMs by Total Run Time



Object Name	Avg	Trend
dr	41.38	Increasing
gamma	33.47	Decreasing
VBR954	24.40	Increasing

## Use Case

The report shows resource consumption data for the selected cluster within a specified reporting period. You can use this data to detect clusters with performance issues, review resource provisioning, adjust workloads and optimize cluster overall performance.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines a cluster to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected cluster. Otherwise, the report will contain no data.
- **Top N:** defines the maximum number of hosts and VMs to display in the report.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Host Performance

This report aggregates historical data and shows performance statistics for a selected host across a time range.

The report shows tables and performance charts with overall CPU, memory, disk and network performance statistics for the host. The report also lists top resource consuming VMs and calculates resource usage trends for them.

## TIP:

Click a VM name in the list of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.



## Host Performance

### Description

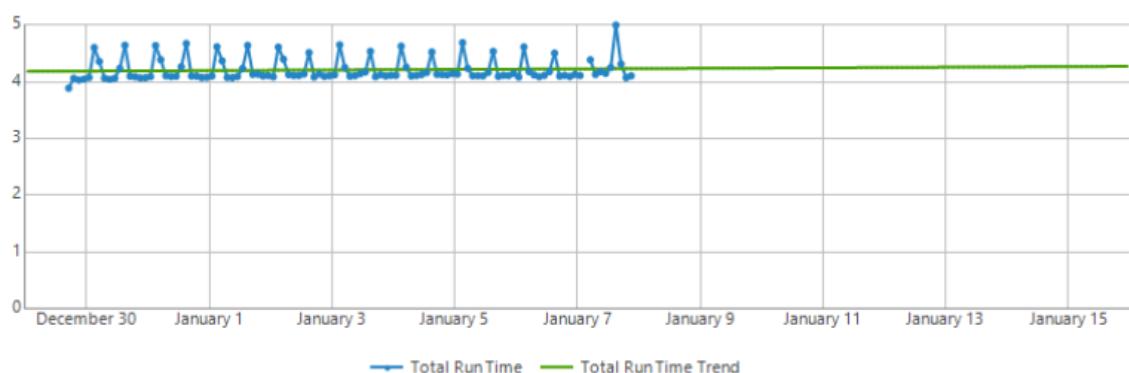
This report shows host performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

Selected Object:	hyperv01
Selected Object Location:	Virtual Infrastructure\cluster01.tech.local
Report Period:	12/29/2018 - 1/15/2019
Top N:	3
Business hours:	From 12:00 AM To 11:00 PM

### CPU Performance

Total Run Time (GHz)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
hyperv01	4.37	4.03	5.19	0.21	Increasing

## Use Case

The report provides an overview of hardware resource consumption for the selected host. This information may help you identify hosts with performance issues, balance workloads and right-size resource provisioning for VMs across the growing virtual environment.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the host to analyze in the report.

- **Interval/Period/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected host. Otherwise, the report will contain no data.
- **Top N:** defines the maximum number of VMs to display in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Host Uptime

This report analyzes host uptime statistics to track host availability.

The **Summary** section includes the following elements:

- The **Top Uptime** and **Lowest Uptime** charts display top 5 hosts in terms of the highest and the lowest uptime values.
- The **Uptime Distribution** pie chart shows uptime values of all available hosts.

The **Host Uptime** table provides the list of hosts whose uptime values are not within the specified thresholds.

Click a host name in the **Host** column to drill down to details on alarms triggered by Veeam ONE Monitor and host restarts.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Business View groups to analyze in the report. The parameter options are limited to objects of the *Host* type.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Uptime, greater than:** defines the desired minimum uptime value.
- **Uptime, lower than:** defines the desired maximum uptime value.

- **Group by:** defines how data will be grouped in the report output (by *Uptime*, *Datacenter* or *Cluster*).

## VEEAM

### Host Uptime

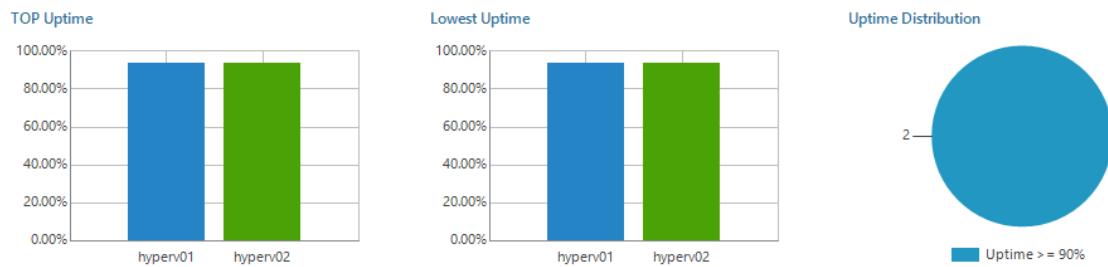
#### Description

This report provides an overview of hosts uptime including hosts with lowest and highest uptime values.

#### Report Parameters

Scope:	Virtual Infrastructure
Reporting Period:	Current week (1/7/2019 - 1/13/2019)
Uptime parameter:	greater than 80.00% and lower than 100.00%
Grouping:	Group by Uptime
Business View objects:	

#### Summary



#### Host Uptime

Cluster	Host	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
Uptime: <a href="#">Uptime &gt;= 90%</a>					
cluster01.tech.local	<a href="#">hyperv01</a>	0	0	01:34:00	93.47%
cluster01.tech.local	<a href="#">hyperv02</a>	0	0	01:34:00	93.47%

### Use Case

This report helps you discover the most and the least utilized hosts in the environment to restore their efficiency and improve target ROI.

### Local Datastore Performance

This report aggregates historical data and shows performance statistics for a selected local disk across a time range.

The report shows tables and performance charts with statistics on read/write rates, read/write latency and IOPS for the disk. The report also lists top 3 resource consuming VMs and calculates resource usage trends for them.

**TIP:**

Click a VM name in the list of top 3 resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Local Datastore Performance

### Description

This report shows datastore performance history that includes Usage, Latency and IOPS counters.

### Report Parameters

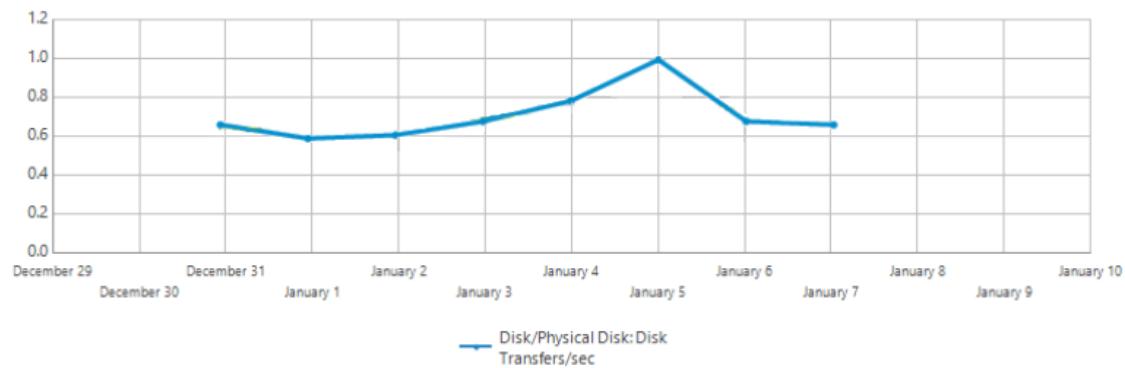
Selected Object: Disk 0 C: D: E:  
 Selected Object Location: Virtual Infrastructure\cluster01.tech.local\hyperv01  
 Report Period: 12/29/2018 - 1/9/2019

### Summary

Name: Disk 0 C: D: E:  
 Type: local storage  
 Capacity: 4.5TB  
 Free Space: 1.4TB  
 Virtual Machines: 25

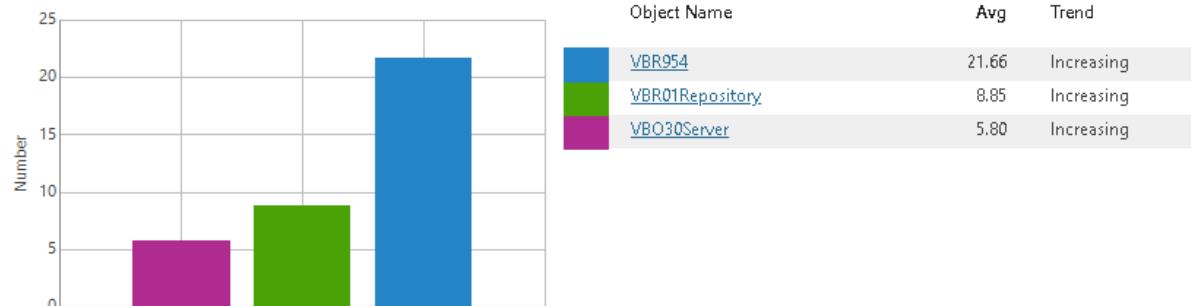
### Datastore IOPs

Disk/Physical Disk: Disk Transfers/sec (Number)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Disk 0 C: D: E:	0.8	0.5	1.1	0.08	Increasing

Top 3 VMs by Virtual Storage Reads/Sec



## Use Case

The report helps you identify local disks with performance issues.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the local disk to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected disk. Otherwise, the report will contain no data.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## VM Performance

This report aggregates historical data and shows performance statistics for a selected VM across a time range.

The report shows tables and performance charts with statistics on CPU, memory, disk and network usage for the VM and calculates resource usage trend for it.



## VM Performance

### Description

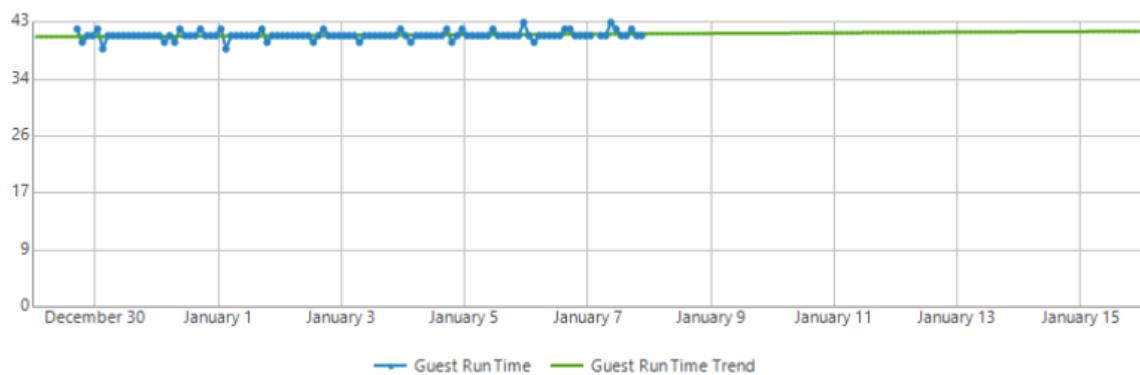
This report shows VMs performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

Selected Object: dr  
Selected Object Location: Virtual Infrastructure\cluster01.tech.local\hyperv01  
Report Period: 12/29/2018 - 1/15/2019  
Business hours: From 12:00 AM to 11:00 PM

### CPU Performance

Guest Run Time (Percent)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
dr	41.05	39.00	43.00	0.60	Increasing

## Use Case

The report allows you to verify that you have provided enough resources to the virtual machine.

## Report Parameters

You can specify the following report parameters:

- Object:** defines the VM to analyze in the report.
- Interval/Period/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected VM. Otherwise, the report will contain no data.
- Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

# VMs Uptime

This report analyzes VM uptime statistics to track VM uptime.

- The **Top Uptime** and **Lowest Uptime** charts display top 5 VMs in terms of the highest and the lowest uptime values.
- The **Uptime Distribution** chart displays the number of VMs with different uptime values.

- The **Virtual Machine Uptime** table provides the full list of VMs whose uptime values are lower and greater than the specified thresholds.

## VEEAM

### VMs Uptime

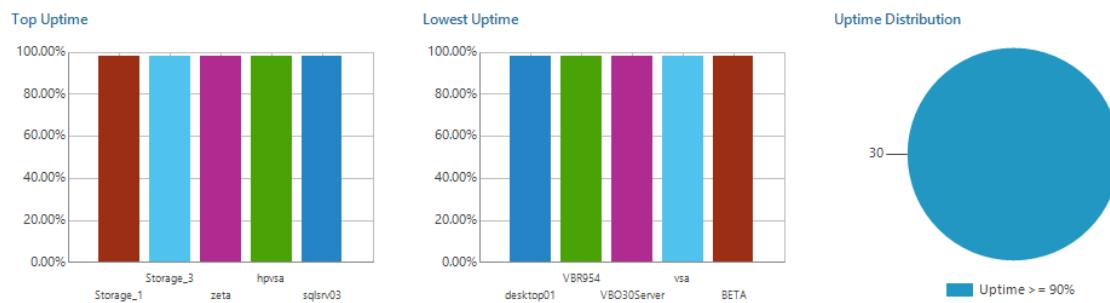
#### Description

This report provides an overview of VMs uptime including VMs with lowest and highest uptime values.

#### Report Parameters

Root Object: Virtual Infrastructure  
 Reporting Period: Custom Date Range (12/29/2018 - 1/15/2019)  
 Uptime Parameter: Greater than or equal to 80.00% and lower than or equal to 100.00%  
 Business View:

#### Summary



#### Virtual Machine Uptime

Cluster	Host	VM Name	Number of Restarts	Number of Alarms	Downtime	Uptime (%)
Uptime: Uptime >= 90%						
cluster01.tech.local	hyperv01	<a href="#">alpha</a>	0	1	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">appsrv02</a>	0	0	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">BETA</a>	0	1	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">db001</a>	0	1	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">desktop01</a>	0	1	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">dr</a>	0	2	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">fileserver04</a>	0	2	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">gamma</a>	0	3	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">ms2012r2</a>	0	2	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">om2012r2</a>	0	2	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">sampledb</a>	0	1	03:52:25	98.24%
cluster01.tech.local	hyperv01	<a href="#">srv507</a>	0	0	03:52:25	98.24%

## Use Case

Uptime is a measure of time a VM has been up and actively running on a host. When a VM is not operating, storage space allocated to it is not being used productively. Use this report to track uptime of virtualized workloads.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Uptime, greater than:** defines the desired minimum uptime value.
- **Uptime, lower than:** defines the desired maximum uptime value.

## Windows 2008 Cluster Shared Volume Performance

This report aggregates historical data and shows performance statistics for a selected Windows Server 2008 Cluster Shared Volume across a time range.

The report shows tables and performance charts with statistics on read/write rates and IOPS for the CSV. The report also lists top 3 resource consuming VMs and calculates resource usage trends for them.

**TIP:**

Click a VM name in the list of top 3 resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Windows 2008 Cluster Shared Volume Performance

### Description

This report shows datastore performance history that includes Usage, Latency and IOPS counters.

### Report Parameters

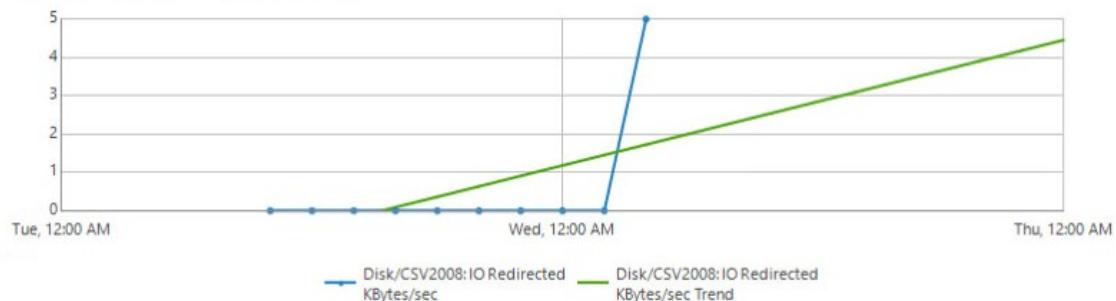
Selected Object: C:\ClusterStorage\Volume1  
 Selected Object Location: Virtual Infrastructure\scots.n.local  
 Report Period: 1/29/2019 - 1/30/2019

### Summary

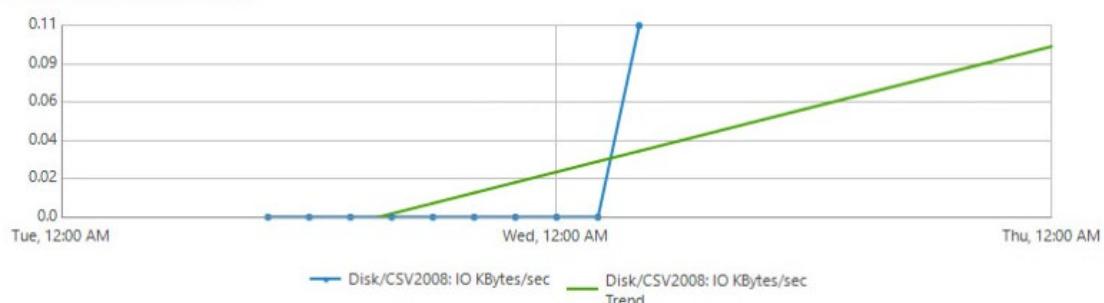
Name: C:\ClusterStorage\Volume1  
 Type: CSV  
 Capacity: 150.0GB  
 Free Space: 141.3GB  
 Virtual Machines: 1

### Datastore Usage

Disk/CSV2008: IO Redirected KBytes/sec (KBps)



Disk/CSV2008: IO KBytes/sec (KBps)



## Use Case

The report assesses latency and IOPS values to identify Windows Server 2008 Cluster Shared Volumes with performance issues.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the Windows Server 2008 CSV to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected CSV. Otherwise, the report will contain no data.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Windows Cluster Shared Volume Performance

This report aggregates historical data and shows performance statistics for a selected Windows 2012+ Server Cluster Shared Volume across a time range.

The report shows tables and performance charts with statistics on read/write rates, read/write operations completed in the direct/redirected access mode, read/write latency and IOPS for the CSV. The report also lists top 3 resource consuming VMs and calculates resource usage trends for them.

**TIP:**

Click a VM name in the list of top 3 resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Windows Cluster Shared Volume Performance

### Description

This report shows datastore performance history that includes Usage, Latency and IOPS counters.

## Report Parameters

Selected Object: C:\ClusterStorage\Volume1  
Selected Object Location: Virtual Infrastructure\midsummer.local  
Report Period: 1/29/2019 - 1/30/2019

## Summary

Name:	C:\ClusterStorage\Volume1
Type:	CSV
Capacity:	150.0GB
Free Space:	15.5GB

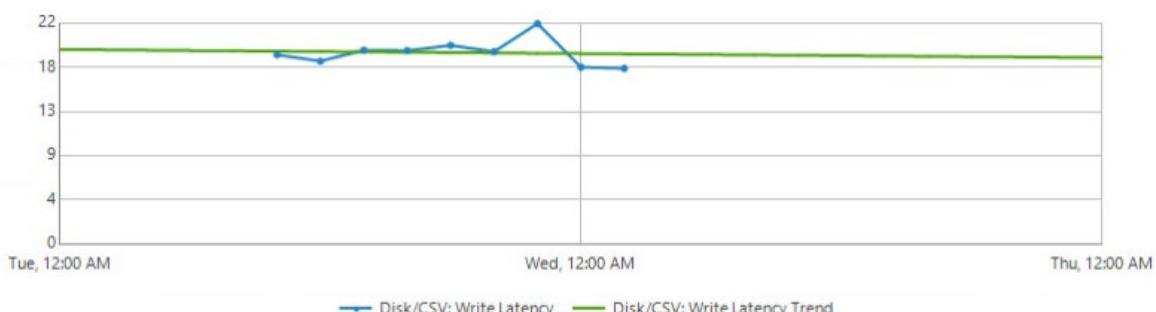
## Latency

### Disk/CSV: Read Latency (Millisecond)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
C:\ClusterStorage\Volume1	6.91	6.01	8.26	0.78	Decreasing

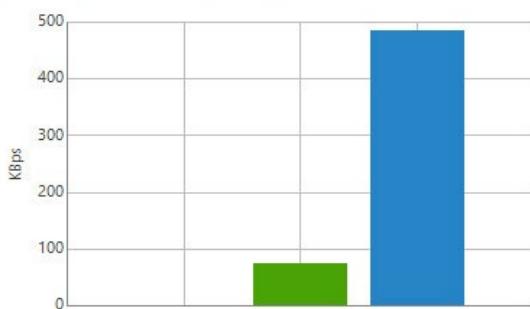
### Disk/CSV: Write Latency (Millisecond)



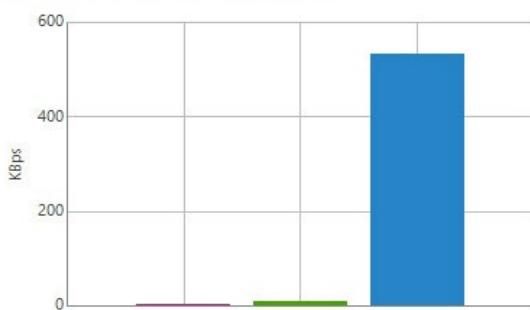
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
C:\ClusterStorage\Volume1	19.43	17.83	22.36	1.36	Decreasing

## Datastore Usage

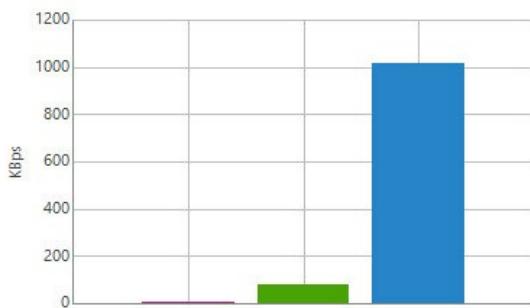
### Top 3 VMs by Virtual Storage Read KBytes/Sec



### Top 3 VMs by Virtual Storage Write KBytes/Sec



### Top 3 VMs by Virtual Storage Total KBytes/Sec



## Use Case

The report assesses latency and IOPS values to identify Windows 2012+ Server Cluster Shared Volumes with performance issues.

## Report Parameters

You can specify the following report parameters:

- **Object:** defines the Windows 2012+ Server CSV to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected CSV. Otherwise, the report will contain no data.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

# Hyper-V Capacity Planning

This report pack is designed to forecast when the available virtual infrastructure resources will reach their minimum levels. The pack provides recommendations on resource allocation and load balancing to optimize performance and resource utilization in your environment and to avoid possible performance bottlenecks. With this report pack, you can be prepared to a planned or accidental host outage across a failover cluster.

**Number of reports:** 3

**Current version:** 1

**Reports included:**

- [Capacity Planning](#)
- [Host Failure Modelling](#)
- [Over-provisioned Datastores](#)

## Capacity Planning

This report forecasts how many days remain before the level of resource utilization reaches the specified threshold values. The report allows you to analyze the following resource utilization parameters: CPU, memory, datastore free space, read and write rates.

- The **Summary** section provides an overview of the current state of the infrastructure (the total number of hosts, datastores and VMs), shows the number of days left before specified thresholds will be reached, and the amount of resources required to sustain the current workloads without exceeding the specified thresholds.

The **Top 5 Utilized Clusters and Standalone Host** table displays objects that will run out of CPU or memory resources sooner than others. It shows the bottleneck parameter for each object and its average usage. This data is used to predict how many days are left before the object reaches the threshold.

Some values in this section may be highlighted with red. If a value in the **Average Usage** column is highlighted with red, the resource usage value has reached the specified threshold. The **Days Remaining** value is highlighted with red if the number of days left until the parameter reaches the threshold is less than 183 (6 months).

- The **Details** section displays host hardware configuration and resource usage, analyzes historical performance data for the specified period in the past to calculate the performance utilization trend, and provides recommendations on how to keep the resource utilization below the specified thresholds.

# Capacity Planning

## Description

---

This report predicts when resource utilization for selected objects in the infrastructure will reach the configured threshold of total capacity.

## Report Parameters

---

Scope:	\Virtual Infrastructure
Analyze performance data for:	Past 6 Months
Make planning for:	Next 6 months
CPU utilization:	80.00 %
Memory utilization:	80.00 %
Datastore space utilization:	90.00 %
Datastore read/write rate:	50 MBps
Datastores:	All Datastores
Business hours:	From 12:00 AM To 11:00 PM

## Summary

---

Virtual Infrastructure	Days Remaining	Resources Required
Number of standalone hosts:	0	CPU: 0.00 GHz
Number of hosts:	2	Memory: 0.00 GB
Number of datastores:	13	Datastore capacity: 0.34 TB
Number of VMs:	64	
Number of powered on VMs:	31	

### Top 5 Utilized Clusters and Standalone Hosts

Object Name	Bottleneck	Average Usage	Days Remaining
cluster01.tech.local	Datastore space usage	91.26 %	0

## Details

Selected Object: [cluster01.tech.local](#)

### Physical Resources

CPU (GHz)	CPU Sockets	CPU Cores	Memory (GB)	Datastore Capacity (GB)
50.40	4	24	255.95	10492.95

### Resource Usage

Resources	Memory Usage	CPU Usage	Datastore Used Space	Read Rate	Write Rate
Current usage	73.08 %	14.50 %	91.26 %	MBps	-
Average usage	71.82 %	14.38 %	91.26 %	-	-
Days remaining	∞	∞	0	∞	∞

## Recommendations

To keep capacity under 90 % for the next 6 months for datastores:

Increase available free space for datastore D: by 234.0 GB

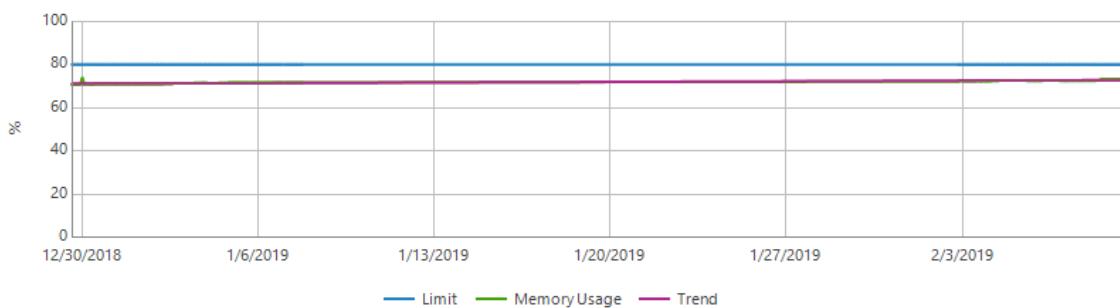
Increase available free space for datastore D: by 64.2 GB

Increase available free space for datastore E: by 45.4 GB

Increase available free space for datastore G: by 0.1 GB

## Performance Trends

### Memory Usage



### Memory Usage (%)

Object Name	Minimum	Maximum	Average	Std.Deviation	Days Left
cluster01.tech.local	70.61	73.14	71.79	0.72	∞

## Use Case

This report helps you plan workloads to avoid resource shortage. It analyzes historical performance to calculate typical resource utilization. The report extrapolates received data to the future to predict when you will run out of resources and provide recommendations on resources you need to add to maintain stable operation.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines virtual infrastructure objects and sub-components you want to analyze in the report.
- Datastores:** defines a list of datastores to analyze in the report.

- **Analyze performance data for:** defines a time period in the past the report will use to accumulate performance data in order to calculate the performance trend.
- **Make planning for:** defines a time period in the future for which performance data will be used to forecast resource usage trend.
- **CPU utilization limit (%)**: defines the CPU usage threshold as a percentage of total CPU resources of virtual infrastructure objects.
- **Memory utilization limit (%)**: defines the used memory threshold as a percentage of total memory resources of virtual infrastructure objects.
- **Max utilization per datastore (%)**: defines the maximum amount of space in use on a datastore.
- **Min free space per datastore (GB)**: defines the minimum amount of free space left on a datastore.
- **Max read/write rate per datastore (MBps)**: defines the maximum read and write rates per second for a datastore.
- **Business hours from - to**: defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.
- **Show graphics**: defines whether the report must include charts that illustrate historical performance data for the specified period.

## Host Failure Modelling

This report allows you to both simulate a failure of one or more hosts and forecast CPU and memory usage for Hyper-V clusters.

- The **Summary** section provides an overview of the current state of your infrastructure (the total number of clusters, hosts, datastores, and VMs) and shows recommendations on resource allocation.
- The **Modelling Results** charts display the amount of CPU and memory resources left and lost in case of a host failure.
- The **VMs Migration Count** chart shows the number of VMs that will need to be relocated to another host (*VMs to Migrate*) and the number of VMs that will operate as usual (*Unaffected VMs*) in case of a host failure.
- The **Details** table provides details on CPU and memory current and predicted utilization for all clusters included in the report.
- The **Recommendations** section provides recommendations for the resources whose utilization thresholds will be breached.

**TIP:**

- Click a cluster name in the **Details** table to drill down to details on current and predicted resource usage for the cluster.
- Click a number in the **Affected VMs** column of the **Details** table to drill down to details for the VM that needs to be migrated.

# Host Failure Modelling

## Description

This report predicts resource utilization in case of a host failure.

## Report Parameters

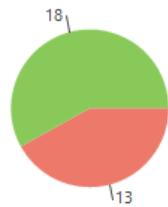
Scope:	\Virtual Infrastructure
Number of failed hosts:	1
CPU utilization limit:	90.00 %
Memory utilization limit:	80.00 %
Business View objects:	

## Summary

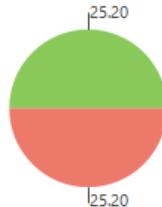
Virtual Infrastructure	Physical Resources	Resources Required
Number of clusters:	1 CPU: 50.40 GHz	CPU: 0.00 GHz
Number of hosts:	2 Memory: 255.95 GB	Memory: 80.05 GB
Number of datastores:	Physical Resources After 1 Hosts Failure	
Number of VMs:	64 CPU: 25.20 GHz	
Number of powered on VMs:	31 Memory: 127.97 GB	

## Modelling Results

VMs Migration Count



Available CPU Resources (GHz)



Available Memory Resources (GB)



## Details

Cluster	Average CPU Usage (%)	Average Memory Usage (%)	Predicted CPU Usage (%)	Predicted Memory Usage (%)	Failed Hosts	Affected VMs
cluster01.tech.local	13.75	71.28	27.51	142.55	1	13

## Recommendations

cluster01.tech.local:

To ensure this Cluster remains functional after 1 hosts failure, add one host with (at least): Memory: 80.05 GB

# Use Case

The report provides recommendations on appropriate resource allocation, which can help prevent possible CPU and memory resource shortfalls in future and maintain the optimal performance of your infrastructure.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Number of failed hosts:** defines the number of random hosts for which you want to simulate a failure.
- **List of failed hosts:** defines a list of hosts for which you want to simulate a failure.
- **Business View objects:** filters reporting scope objects that belong to the selected Veeam ONE Business View groups.
- **Maximum CPU utilization (%):** defines the CPU usage threshold as a percentage of total cluster CPU resources.
- **Maximum memory utilization (%):** defines the used memory threshold as a percentage of total cluster memory resources.

## Over-provisioned Datastores

Dynamic disk technology allows administrators to dedicate more storage space to VMs than there is real physical capacity. This report helps you assess the potential impact of excessive over-provisioning of disks on your virtual environment.

- The **Top 5 Over-provisioned Datastores** chart shows 5 disks whose amount of provisioned storage space exceeds the total capacity.
- The **Top 5 Under-provisioned Datastores** chart shows 5 disks whose amount of provisioned storage space is way below the total capacity.
- The **Top 5 Datastores with Least Amount of Free Space** table displays top 5 disks that will run out of free space sooner than other disks.
- The **Details** tables provide information on storage space utilization and the number of days left before the specified space utilization/free space threshold will be breached. Arrows in the **Out of Free Space in ... (Days)** column show whether the amount of free space on the disk has increased (green arrow), decreased (red arrow) or stayed the same (grey arrow) over the previous week.

**TIP:**

- Click a number in the **VM Count** column of the **Top 5 Datastores with Least Amount of Free Space** table or of the **Details** table to get the list of VMs that store data on the disk and to discover how much space is provisioned for these VMs.
- Click a number in the **Out of Free Space in ... (Days)** column of the **Details** table to drill down to details and recommendations for the disk.

## veeam

### Over-provisioned Datastores

#### Description

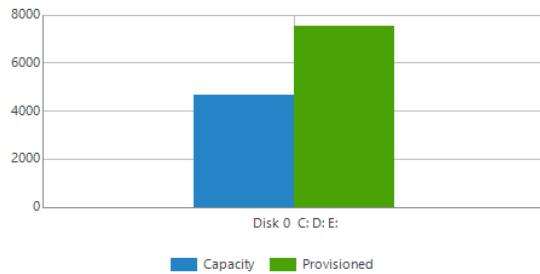
This report helps to identify potential impact of excessive over-provisioning of datastores on your virtual environment.

#### Report Parameters

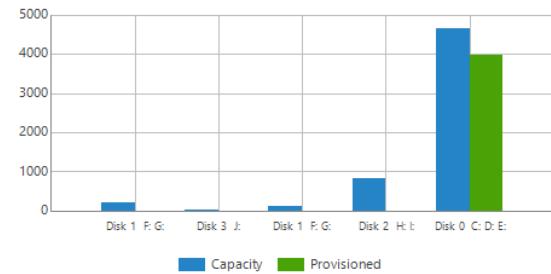
Scope: \\Virtual Infrastructure  
Datastore space utilization: 80.00 %  
Business View objects:

#### Summary

Top 5 Over-provisioned Datastores (GB)



Top 5 Under-provisioned Datastores (GB)



#### Top 5 Datastores with Least Amount of Free Space

Datastore Name	Parent Node	SCVMM	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VM Count
Disk 1 F: G:	hyperv01		19.9	200.0	0.0	0.00	0
Disk 3 J:	hyperv02		29.9	30.0	0.0	0.00	0
Disk 1 F: G:	hyperv02		115.8	127.0	0.0	0.00	0
Disk 2 H: I:	hyperv02		820.1	827.0	0.0	0.00	0
Disk 0 C: D: E:	hyperv01		1401.3	4654.5	3976.0	85.42	25

#### Details

##### Over-provisioned Datastores

Parent Node	Datastore Name	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VM Count	Out of Free Space in... (Days)
hyperv02	Disk 0 C: D: E:	1487.2	4654.5	7506.0	161.26	31	332 ↑

##### Under-provisioned Datastores

Parent Node	Datastore Name	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VM Count	Out of Free Space in... (Days)
hyperv01	Disk 0 C: D: E:	1401.3	4654.5	3976.0	85.42	25	1207 ↑
	Disk 1 F: G:	19.9	200.0	0.0	0.00	0	0 ↑
hyperv02	Disk 3 J:	29.9	30.0	0.0	0.00	0	... ↓
	Disk 1 F: G:	115.8	127.0	0.0	0.00	0	... ↓
	Disk 2 H: I:	820.1	827.0	0.0	0.00	0	... ↓

# Use Case

The report analyzes disk space utilization trend and calculates the number of days left before storage utilization will breach the specified threshold.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Storage type.
- **Datastore space utilization (%):** defines the threshold for the amount of space in use on the disks.
- **Datastore free space (GB):** defines the threshold for the amount of free space left on the disks.

# Hyper-V Optimization

This report pack delivers recommendations on resource allocation to optimize performance and resource utilization.

**Number of reports:** 5

**Current version:** 1

**Reports included:**

- [Active Checkpoints](#)
- [Idle VMs](#)
- [Oversized VMs](#)
- [Powered Off VMs](#)
- [Undersized VMs](#)

## Active Checkpoints

This report shows a list of all VMs with checkpoints, including the oldest and the largest checkpoints in the virtual environment.

- The **Top Checkpoints Size (GB)** and **Top Checkpoints Age (Weeks)** charts display top 5 VMs with the oldest and the largest checkpoints in the virtual environment.

- The **Details** table provides the list of VMs with checkpoints and shows checkpoint name, its location, date and time when the checkpoint was created, checkpoint size and state of the VM.

## veeam

### Active Checkpoints

#### Description

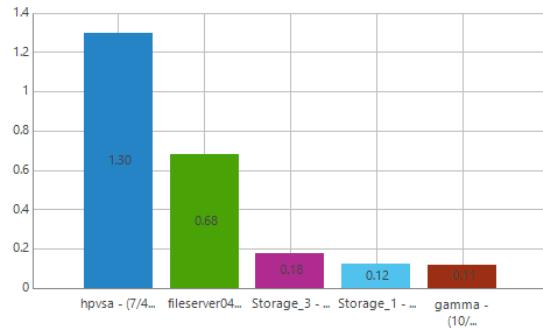
This report shows a list of all VMs with checkpoints, including the oldest and the largest checkpoints in your virtual environment.

#### Report Parameters

Scope: Virtual Infrastructure  
 Checkpoints age: older than 1 week  
 Business View objects:

#### Summary

**Top Checkpoints Size (TB)**



**Top Checkpoints Age (Weeks)**



#### Details

Virtual Machine	Checkpoint Name	Location	Checkpoint Directory	Checkpoint Create Time	Checkpoint Size (TB)	VM State
hpvs	hpvs - (7/4/2018 - 7:37:12 PM)	cluster01.tech.local	D:\Storage\HyperV	12/30/1899 3:00:00 AM	1.30	Powered on
fileserver04	fileserver04 - ClearOS+NET3.5+Agent	cluster01.tech.local	D:\Storage\HyperV\fileserve	12/30/1899 3:00:00 AM	0.68	Powered on
Storage_3	Storage_3 - (8/29/2018 - 2:26:15 PM)	cluster01.tech.local	D:\Storage\HyperV	8/29/2018 2:26:33 PM	0.18	Powered on
Storage_1	Storage_1 - (8/29/2018 - 2:23:48 PM)	cluster01.tech.local	D:\Storage\HyperV	8/29/2018 2:23:57 PM	0.12	Powered on
gamma	gamma - (10/10/2018 - 12:17:10 PM)	cluster01.tech.local	D:\Storage\HyperV	10/10/2018 12:17:14 PM	0.11	Powered on
epsilon	epsilon - (10/10/2018 - 4:35:38 PM)	cluster01.tech.local	E:\HyperV\Virtual Hard	10/10/2018 4:35:49 PM	0.11	Powered on
			Disks			
VBR01Repository	VBR01Repository - (11/8/2017 - 11:11:27 AM)	cluster01.tech.local	D:\Storage\HyperV	12/30/1899 3:00:00 AM	0.07	Powered on
Storage_2	Storage_2 - (8/29/2018 - 2:24:09 PM)	cluster01.tech.local	D:\Storage\HyperV	8/29/2018 2:24:24 PM	0.06	Powered on
zeta	Initial State	cluster01.tech.local	D:\Storage\HyperV	12/30/1899 3:00:00 AM	0.04	Powered on
dr	dr - (10/2/2017 - new checkpoint for domain	cluster01.tech.local	D:\Storage\HyperV\DR	12/30/1899 3:00:00 AM	0.03	Powered on
om2012r2	OM2012r2 - (8/19/2015 - 3:43:56 PM) - GES	cluster01.tech.local	D:\Storage\HyperV\OM201	12/30/1899 3:00:00 AM	0.03	Powered on
prod	prod - (10/2/2017 - renamed vm for vao installation	cluster01.tech.local	D:\Storage\HyperV\veeamc	12/30/1899 3:00:00 AM	0.03	Powered on
sqlsrv03	before_vow	cluster01.tech.local	D:\Storage\HyperV	12/30/1899 3:00:00 AM	0.02	Powered on
MSSQLSERVER	NEVER DELETE THIS! - (12/10/2018 - 12:53:50 PM)	cluster01.tech.local	D:\Storage\HyperV	12/10/2018 12:53:52 PM	0.02	Powered on
ms2012r2	MS2012r2 - (8/11/2015 - 3:32:42 PM) - added to the tech domain once again	cluster01.tech.local	D:\Storage\HyperV\MS2012	8/11/2015 3:32:42 PM	0.02	Powered on
			r2\Virtual Hard Disks			

## Use Case

Orphaned checkpoints consume valuable storage resources. Best practices for checkpoints recommend that you delete checkpoints older than 3 days, since they no longer reflect recent VM changes.

The report helps you detect orphaned checkpoints and better address the problem of wasted storage space.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Age older than - Age measured in:** defines checkpoint age threshold. If a VM checkpoint is older than the specified age, the VM will be included in the report.
- **Do not report on VMs created by Veeam replication jobs:** defines whether VM replicas created by Veeam Backup & Replication will be excluded from the report scope.

Veeam Backup & Replication uses VM checkpoint as replica restore points. Such restore points may be large in size and remain on disk for a long period of time. If you have VM replicas created with Veeam Backup & Replication, select this check box to exclude VM replicas with checkpoint restore points from the report.

## Idle VMs

Idle VMs are virtual machines that continue to operate even though they are no longer in use. These Idle VMs keep consuming resources and provide no value.

This report shows idle VMs in terms of CPU, memory, disk and network utilization.

## Idle VMs

### Description

This report shows a list of idle VMs in terms of CPU, memory, disk and network utilization parameters.

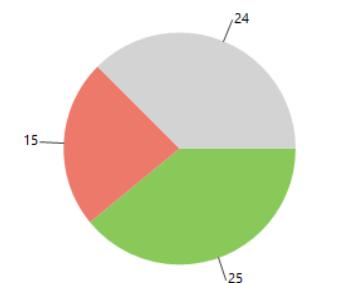
### Report Parameters

Scope:	Virtual Infrastructure
Interval:	1 month (12/16/2018 - 1/15/2019)
CPU usage:	1 GHz
Memory usage:	1 GB
Disk usage:	3 KBps
Network usage:	5 KBps
Time in the selected state:	for more than 10 % of the time
Business View objects:	

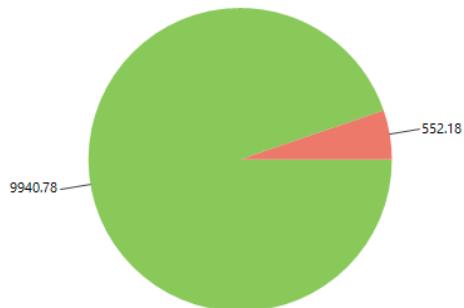
### Summary

Total VMs:	64
Idle VMs:	15
Powered-off VMs:	24

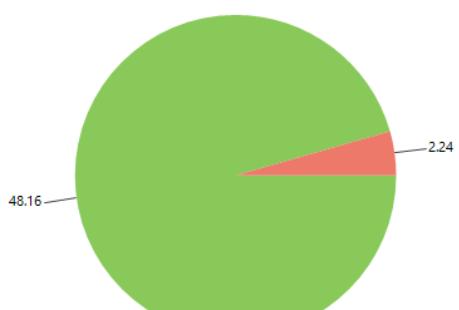
Idle/Active VMs



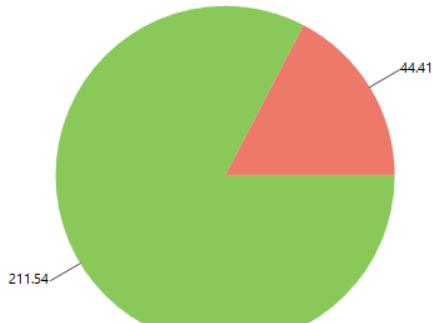
Wasted Storage, GB



Idle CPU, GHz



Idle Memory, GB



## Details

SCVMM: N/A

Cluster/Host	Virtual Machine	CPU Usage (MHz)	Memory Usage (GB)	Disk Usage (KBps)	Network Usage (Kbps)	Time in This State (days)
cluster01.tech.local	15					
	Lin13	0.00	0.50	0.00	1.10	9
	oracle03	0.00	0.00	0.00	1.10	9
	ORACLEDBLINUX	0.00	4.00	0.00	1.10	9
	VBR_REPOSITORY	0.00	4.00	0.00	1.10	9
	veearncl1	0.00	0.99	0.00	1.10	9
	VM2	0.00	3.91	0.00	1.10	9
	fileserv03	0.00	0.00	2.36	1.23	9
	wrk03	89.35	4.00	24.88	4.08	8
	zeta	0.00	4.00	3.11	1.19	7
	Storage_1	16.04	4.00	4.37	1.76	6
	db001	4.58	4.00	9.29	1.20	6
	VBR01Repository	586.47	6.00	55.12	1.79	6
	VBR01	756.00	4.00	9.15	1.32	4
	vsa	767.45	1.01	5.57	4.55	1
	Storage_3	18.33	4.00	5.42	2.07	1

## Use Case

This report can help you track Idle VMs that can be shut down or decommissioned to reclaim resources and improve performance of your virtual infrastructure.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam Backup & Replication groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- Interval - Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- CPU usage, less than:** defines a CPU usage threshold. If the average CPU usage for a VM is below the threshold during a certain number of days (specified with the Time in the selected state parameter), the VM will be considered "Idle".
- Memory usage, less than:** defines memory usage threshold. If the average memory usage for a VM is below the threshold during a certain number of days (specified with the Time in the selected state parameter), the VM will be considered "Idle".
- Disk usage, less than:** defines a disk usage threshold. If the average disk usage for a VM is below the threshold during a certain number of days (specified with the Time in the selected state parameter), the VM will be considered "Idle".
- Network usage, less than:** defines a network usage threshold. If the average network usage for a VM is below the threshold during a certain number of days (defined by Time in the selected state), the VM will be considered "Idle".
- Time in the selected state:** defines the percentage of days in the reporting period when the average resource usage (CPU, Memory, Disk and Network) of the VM was below the selected thresholds.

**NOTE:**

Veeam ONE Reporter checks whether the **CPU usage**, **Memory usage**, **Disk usage** and **Network usage** conditions are all true (in other words, the conditions are joined by Boolean "AND").

## Oversized VMs

This report allows you to identify VMs that have more allocated resources such as vRAM or vCPU than they require.

The report collects and analyzes historical performance and resource configuration over a specified time period.

- The **Oversized Virtual Machines by CPU** and **Oversized Virtual Machines by Memory** tables display VMs with excessive CPU and memory resources and deliver recommendations for their reconfiguration.  
Click a VM in the **Virtual Machine** column to drill down to VM performance charts that show how CPU and memory usage has been changing within the reporting period.

- The **Virtual Machines with Static Memory** table lists all discovered VMs with static memory, their location and the amount of provisioned memory resources. You can use this information to consider enabling dynamic memory for these VMs.

## veeam

### Oversized VMs

#### Description

This report helps you to discover VMs with under-utilized CPU and memory resources. It analyzes VMs historical performance and configuration data to provide recommendations on appropriate vCPU and vRAM allocation for VMs.

#### Report Parameters

Scope: Virtual Infrastructure  
 Reporting period: 1 month (12/16/2018 - 1/15/2019)  
 Business View objects:  
 Top N: 5  
 Working hours:

#### Summary

Total oversized VMs:	7
Total VMs:	64
CPU oversized VMs:	7
Memory oversized VMs:	0
CPU resources that can be reclaimed:	11 vCPUs
vRAM amount that can be reclaimed:	0 GB

#### Oversized Virtual Machines by CPU

SCVMM:						
Cluster/Host	Virtual Machine	vCPUs	CPU Average Usage (%)	Peak Usage (%)	Reclaimed CPU Resource	Recommended Number of vCPUs
<b>cluster01.tech.local</b>						9
	VBR01	4	3.00	3.00	3	1
	MSSQLSERVER	4	2.97	10.00	3	1
	desktop01	2	2.04	3.00	1	1
	ms2012r2	2	10.04	11.00	1	1
	fileserver04	2	2.02	4.00	1	1

#### Virtual Machines With Static Memory

Recommendation: Enable Dynamic Memory for these VMs.

SCVMM:		
Host	Virtual Machine	Assigned Memory (MB)
<b>Cluster: cluster01.tech.local</b>		
hyperv01	5	
	lt01	5,120.00
	srv507	4,096.00
	VBR01Repository	6,144.00
	VBR954	4,096.00
	Virtual_Lab_2	1,024.00

## Use Case

By analyzing historical performance, this report helps you identify VMs with excessive resource provisioning. You can use data in this report to change the current VM configuration and relocate VMs to other hosts.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval - Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Top N:** defines the maximum number of VMs the report will analyze.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Powered Off VMs

The report provides information on VMs powered off throughout a specified time period.

- The **Summary** section shows the total number of VMs in the selected scope, the number of powered off VMs and their total size on disk.

- The **Powered Off Virtual Machines** table lists powered off VMs, their location and disk size. The **Powered Off status (%)** column in the table displays the amount of time during which a VM was powered off against the time of the reporting period in percent.

## VEEAM

### Powered Off VMs

#### Description

This report shows a list of all VMs that were in Powered Off state for a defined period of time.

#### Report Parameters

Scope: Virtual Infrastructure  
 Powered Off status: more than 80% of the time  
 Business View objects:  
 Interval: 1 month (12/16/2018 - 1/15/2019)

#### Summary

Total VMs: 64  
 Powered Off VMs: 26  
 Wasted Storage: 369.93 GB

#### Powered Off Virtual Machines

		Location: cluster01.tech.local		
	Virtual Machine	Computer Name	VM Size (GB)	Power Off Status (%)
	1			
	AppleDreamProxy		N/A	100.00
	1			
	SecureRest		N/A	100.00
	1		N/A	100.00
	secure		N/A	100.00
	1		N/A	99.09
	test			
	1		N/A	100.00
	Virtual_Lab_2		N/A	100.00
	1		N/A	100.00
	Network Extension Appliance Omega(172)		N/A	100.00
Disk 0 C: D: E:	8			
Disk 0 C: D: E:	10			
DVD Drive_IDE Controller 1_0	1	dns	N/A	100.00
DVD Drive_IDE Controller 1_0	1	dc	N/A	100.00

## Use Case

The report allows you to track VMs that have been in the powered off state for a specified time period. Since powered off VMs consume space required to store their disks and configuration data, you can review storage usage and relocate these machines, or decommission machines that you no longer need.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.
- **Interval/Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Power Off Percent:** defines the threshold for the amount of time when a VM was powered off against the amount of time in the reporting period (in percentage). If the time during which a VM was powered off is less than the specified value in percent, the report will not analyze this VM.

## Undersized VMs

This report allows you to identify VMs that have less allocated resources such as vRAM or vCPU than they require.

The report collects and analyzes historical performance and configuration over a specified period to deliver recommendations for an optimized VM configuration and resource allocation.

## TIP:

Click a VM in the details table to drill down to VM performance charts that show how CPU and memory usage has been changing during the reporting period.



## Undersized VMs

### Description

This report helps you to discover VMs with over-utilized CPU and memory resources. It analyzes VMs historical performance and configuration data to provide recommendations on appropriate vCPU and vRAM allocation for VMs.

### Report Parameters

Scope:	Virtual Infrastructure
Reporting period:	1 month (12/16/2018 - 1/15/2019)
Business View objects:	
CPU usage, more than:	15 %
Physical memory, more than:	1 GB
Memory pressure, more than:	5 %
Working hours:	

### Summary

Total undersized VMs:	2
Total VMs:	64
CPU undersized VMs:	2
Memory undersized VMs:	1
CPU resources to be assigned:	2 vCPUs
vRAM amount to be assigned:	0 GB

### Undersized Virtual Machines by CPU

Cluster/Host	Virtual Machine	SCVMM:			
		vCPUs	CPU Average Usage (%)	Peak Usage (%)	Recommended Number of vCPUs
cluster01.tech.local	2	2	24.40	44.00	3
	VBR954 dr	2	41.38	43.00	3

Note: Consider relocating VM to a different host, if present does not have enough CPU resources.

## Use Case

This report uses the specified parameters to identify VMs with insufficient CPU and memory resources. The report delivers detailed information on detected VMs and suggests recommendations for better resource allocation. You may consider adding the specified amount of resources for the VM, relocating the VM to a more powerful host, or adding more resources for undersized VM.

## Report Parameters

You can specify the following report parameters:

- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- Business View objects:** defines Veeam ONE Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

- **Interval - Interval Type:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **CPU usage, more than:** defines the CPU utilization threshold in percent. If the CPU usage value for a VM exceeds the specified threshold, the VM will be included in the report.
- **Memory pressure, more than:** defines the memory utilization threshold in percent. If the memory usage value for a VM exceeds the specified threshold, the VM will be included in the report. This parameter may be applied only to VMs with dynamic memory.
- **Physical memory, more than:** defines the threshold for total VM storage capacity. If VM memory capacity exceeds the threshold, this VM will be analyzed in the report.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

**NOTE:**

Veeam ONE Reporter checks whether the **CPU ready** and **CPU Usage** conditions are true at the same, and then whether **Swap out rate** and **Memory Usage** conditions are true at the same time (in other words, the conditions in each pair are joined by Boolean "AND").

Veeam ONE Reporter checks whether a pair of these conditions is true, in other words, pairs of these conditions are joined by Boolean "OR".

# Custom Reports

This report pack allows you to define your own configuration parameters, performance metrics and filters when maximum flexibility is required.

**Number of reports:** 8

**Current version:** 1

**Reports included:**

- [Backup Infrastructure Custom Data](#)
- [Custom Infrastructure](#)
- [Hyper-V Custom Performance](#)
- [Hyper-V Raw Performance Data](#)
- [Inventory](#)
- [Report Builder](#)
- [VMware Custom Performance](#)
- [VMware Raw Performance Data](#)

## Backup Infrastructure Custom Data

This report features a collection of custom properties for Veeam Backup & Replication objects, including backup servers, backup jobs, VMs and computers. The report helps you analyze data protection aspects not covered by Veeam Backup & Replication reports.

**veeam**

### Backup Infrastructure Custom Data

#### Description

This report allows to define your own parameters and filters to get custom backup information. The report should be used if maximum flexibility is required.

#### Report Parameters

Scope: Backup Infrastructure  
Object Type: Backup Job  
Columns: Job Name, Job Type, Platform, Last Run Status, Failure Message, Objects to Process  
Custom Filter:

#### Details

Job Name	Job Type	Platform	Last Run Status	Failure Message	Objects to Process
Backup Copy Job Onsite	Backup Copy	VMware	Idle		vdi001
Apache Backup	Backup	VMware	Success		tech_svr01
Dev Daily Backup Job - dev05.tech.local	Agent Backup Job	EndPoint	Success		Entire Computer
Weekly VDI Backup	Backup	VMware	Warning	Backup location [C:\Backup] is getting low on free disk space (4.3 GB free of 119.7 GB).	vdi001
Mediserver Backup to Cloud	Backup	VMware	Failed	Error: No cloud gateways are available; some gateways are not reachable over the network	apache01, apache07, apache02
Onsite Daily Apache Backup	Backup	VMware	Success		apache02
Agent Backup Job Atlanta	Agent Backup Job	EndPoint	Warning	Processing srv11.tech.local	Entire Computer
Delta webservers backup	Backup	VMware	Success		srv30

# Use Case

Use the advanced collection of Veeam Backup & Replication object properties to create custom reports that display key aspects of the backup infrastructure and data protection operations.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of Veeam Backup & Replication servers to include in the report.
- **Object type:** defines a list of Veeam Backup & Replication objects to analyze in the report (*Backup Server, Backup Job, Virtual Machine, Computer*).
- **Columns:** defines configuration properties to analyze in the report. The list of available properties will depend on the selected object type. Use the **Filter** field to search for the necessary properties by name. Note that the number of selected properties must not exceed 50.
- **Custom Filter:** defines filters for the selected object properties.

# Custom Infrastructure

This report features a collection of custom properties and filters to help you analyze virtual infrastructure aspects not covered by other reports.



## Custom Infrastructure

### Description

This report allows to define your own parameters and filters and should be used if maximum flexibility is required.

### Report Parameters

Scope:	Virtual Infrastructure
Session Date:	2/9/2019 12:06 PM
Business View objects:	
Object Types:	Virtual Machine
Columns:	Name, Computer name, Guest OS, Tools: Status, Tools: Version
Custom Filter:	
Group By:	
Sort By:	

### Details

Name	Computer name	Guest OS	Tools: Status	Tools: Version
tapesrv02	tapesrv02.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	9541
VBR03	VBR03.tech.local	Microsoft Windows Server 2012 (64-bit)	not running	9541
srv49	srv49.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	9541
srv06	srv06.tech.local	Microsoft Windows Server 2012 (64-bit)	not running	9541
db01	db01.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	9541
linux01	apache01	CentOS 4/5/6/7 (64-bit)	not running	9541
VBR04	VBR04.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	9541
srv11	srv11.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	9541
srv30	srv30.tech.local	Microsoft Windows Server 2012 (64-bit)	not running	9541
tapesrv01	tapesrv01.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	9541
tech01	tech01.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	9541
tapelibrary	tapelibrary	Red Hat Enterprise Linux 5 (64-bit)	OK	9541
winsrv01	Not set	Microsoft Windows Server 2012 (64-bit)	not running	9541

## Use Case

Use the advanced collection of properties to report on licensing information, host hardware configuration, CPU, RAM, storage and networking performance, and many other aspects to better manage the virtual infrastructure.

## Report Based on

Data collection from Microsoft Hyper-V and VMware vSphere servers.

# Report Parameters

You can specify the following report parameters:

- **Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.
- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Object type:** defines a list of infrastructure objects to analyze in the report. To select multiple items, use the [CTRL] or [SHIFT] key.
- **Columns:** defines configuration properties to analyze in the report. The list of available properties will depend on the selected object type. Use the Filter field to search for the necessary properties by name. Note that the number of selected properties must not exceed 50.
- **Custom Filter:** defines filters for the selected object properties.
- **Group By:** defines whether infrastructure objects in the report must be grouped based on the value of a specific property. To group infrastructure objects by property value, drag this property to the field at the top of the properties list.

You can also use the Sum, Max or Count function to calculate aggregate values of other properties for each group in the report. To do so, select the necessary aggregate functions for corresponding properties in the list.

- **Expand all groups in the report:** defines whether the report should display results in the collapsed or expanded view.
- **Sort By:** defines how data will be sorted in the report.

# Hyper-V Custom Performance

This report allows you to define specific CPU, memory, network and disk metrics to analyze performance of Hyper-V hosts, VMs, Cluster Shared Volumes and SMB shares.



## Hyper-V Custom Performance

### Description

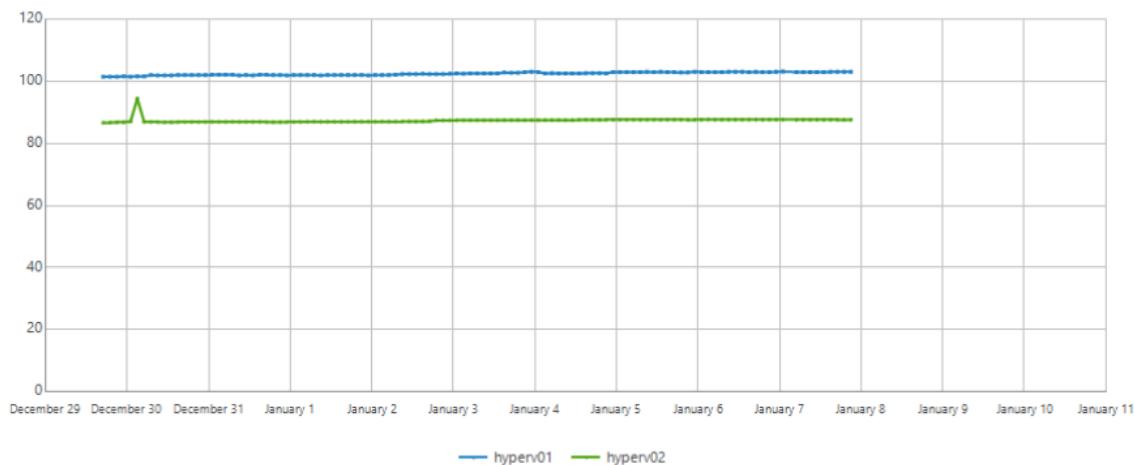
This report allows to define your own performance metrics for hosts, VMs and datastores and should be used if maximum flexibility is required.

### Report Parameters

Selected Object:	Virtual Infrastructure
Report Creation Date:	1/15/2019 4:59 PM
Report Period:	12/29/2018 - 1/10/2019
Object Type:	Hosts
Excluded Objects:	
Included Objects:	*
Business View:	
Top N:	10
Business hours:	From 12:00 AM to 11:00 PM
CPU:	Total Run Time (Percent), Total Run Time (MHz)
Memory:	Memory Usage (Percent), Hyper-V Services Memory Consumed (B)

### Memory

Hyper-V Services Memory Consumed (GB)



Virtual Server	Object Name	Average	Maximum	Minimum	Std. Deviation	Trend
cluster01.tech.local						
	hyperv01	102.53	103.22	101.56	0.49	Increasing
	hyperv02	87.44	94.51	86.72	0.76	Increasing

## Use Case

Use this report to investigate specific performance issues in the environment.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Interval/Period/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Object Type:** defines the infrastructure object to analyze in the report (*Hosts, Virtual Machines, Local Datastore, CSV 2008, CSV, SMB Shares*).
- **Monitor Subsystems:** defines subsystems to analyze in the report (*CPU, Memory, Network, Disk or Virtual Switch*). The list of available subsystems will depend on the selected object type.
- **Metrics:** defines metrics to analyze in the report. The list of available metrics will depend on the selected monitor subsystem.
- **Include/Exclude:** defines a list of objects that should be included in/excluded from the report scope:
  - Use the **Include** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the Include field will be excluded from the baseline used for data analysis.
  - Use the **Exclude** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the Exclude field will be included in the baseline used for data analysis.

## NOTE:

The **Include/Exclude** parameters support wildcards. Search is not case sensitive.

To illustrate how to use wildcard queries, consider the following example. You have selected 4 hosts as a report scope: 2 NAS servers (*NASServ1, NASServ2*) and 2 Active Directory servers (*AD01 and AD02*).

If you want the report to show performance details only for the NAS servers, type *nasserv\** in the **Include** field. Alternatively, type *ad\** in the **Exclude** field.

- **Top N:** defines the maximum number of VMs to display in the report.
- **Show Graphics:** defines whether to show charts in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

# Hyper-V Raw Performance Data

This report allows you to get detailed raw data on specific CPU, memory, network and disk metrics to analyze performance of Hyper-V hosts, VMs, Cluster Shared Volumes and SMB shares.



## Hyper-V Raw Performance Data

### Description

This report allows to define your own performance metrics for hosts, VMs and datastores and should be used if maximum flexibility is required.

### Report Parameters

Selected Object:	Virtual Infrastructure
Report Creation Date:	1/15/2019 5:04 PM
Report Period:	1/1/2019 - 1/15/2019
Object Type:	Hosts
Excluded Objects:	
Included Objects:	*
Business View:	
CPU:	Total Run Time (Percent), Total Run Time (MHz)
Memory:	Memory Usage (Percent), Hyper-V Services Memory Consumed (B)

### Subsystem: CPU

#### Counter: Total Run Time

Object Name	Value (Percent)	Time
hyperv01	4410.00	1/7/2019 1:00 PM
hyperv01	21.00	1/7/2019 3:00 PM
hyperv01	5187.00	1/7/2019 3:00 PM
hyperv01	18.00	1/7/2019 5:00 PM
hyperv01	4475.00	1/7/2019 5:00 PM
hyperv01	17.00	1/7/2019 7:00 PM
hyperv01	4225.00	1/7/2019 7:00 PM
hyperv01	17.00	1/7/2019 9:00 PM
hyperv01	4259.00	1/7/2019 9:00 PM
Max Observed:	21.00	1/7/2019 3:00 PM
Min Observed:	17.00	1/1/2019 1:00 AM
Average:	17.44	1/1/2019 1:00 AM - 1/7/2019 9:00 PM

Object Name	Value (Percent)	Time
hyperv02	10.00	1/1/2019 1:00 AM
hyperv02	2510.00	1/1/2019 1:00 AM
hyperv02	10.00	1/1/2019 3:00 AM
hyperv02	2516.00	1/1/2019 3:00 AM
hyperv02	10.00	1/1/2019 5:00 AM
hyperv02	2497.00	1/1/2019 5:00 AM
hyperv02	10.00	1/1/2019 7:00 AM
hyperv02	2497.00	1/1/2019 7:00 AM
hyperv02	10.00	1/1/2019 9:00 AM
hyperv02	2512.00	1/1/2019 9:00 AM
Max Observed:	10.00	1/1/2019 3:00 AM
Min Observed:	10.00	1/1/2019 9:00 AM
Average:	10.00	1/1/2019 1:00 AM - 1/1/2019 9:00 AM

# Use Case

This report provides advanced historical performance data that you can export to a spreadsheet application and use for analysis and reporting purposes.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Interval/Start date - End date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Sample's Length:** defines the resolution level, that is, granularity of raw data that should be displayed in the report output. Note that data with the Raw sample length (5-minute resolution) is available only for the custom interval of last week; if you select Year/Quarter/Month as a reporting interval, the report will show data with 2-hour resolution.
- **Object Type:** defines the infrastructure object to analyze in the report (*Hosts, Virtual Machines, Local Datastore, CSV 2008, CSV, SMB Shares*).
- **Monitor Subsystems:** defines subsystems to analyze in the report (*CPU, Memory, Network, Disk or Virtual Switch*). The list of available subsystems will depend on the selected object type.
- **Metrics:** the performance metrics to analyze in the report. The choice of available metrics will depend on the selected monitored subsystems.
- **Include/Exclude:** defines a list of objects that should be included in/excluded from the report scope:
  - Use the **Include** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the Include field will be excluded from the baseline used for data analysis.
  - Use the **Exclude** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the Exclude field will be included in the baseline used for data analysis.

### NOTE:

The **Include/Exclude** parameters support wildcards. Search is not case sensitive.

To illustrate how to use wildcard queries, consider the following example. You have selected 4 hosts as a report scope: 2 NAS servers (*NASServ1, NASServ2*) and 2 Active Directory servers (*AD01* and *AD02*).

If you want the report to show performance details only for the NAS servers, type *nasserv\** in the **Include** field. Alternatively, type *ad\** in the **Exclude** field.

# Inventory

This report provides the most complete and up-to-date configuration information on all objects in your virtual environment.



## Inventory

### Description

This report contains all configuration properties for all collected objects in your virtual infrastructure.

### Report Parameters

Scope: Virtual Infrastructure  
Session Date: 2/9/2019 12:06 PM

### Details

#### Object Type: Cluster

Cluster Location	Cluster Name	Property Group	Property	Value
elal.dev.amust.local>Datacenter1	Cluster1	Cluster DAS VM Settings	Isolation Response	none
elal.dev.amust.local>Datacenter1	Cluster1	Cluster DAS VM Settings	Restart Priority	medium
elal.dev.amust.local>Datacenter1	Cluster1	Cluster DPM: Mode	Disabled	
elal.dev.amust.local>Datacenter1	Cluster1	Cluster DPM: Threshold	3	
elal.dev.amust.local>Datacenter1	Cluster1	CPU cores count	20	
elal.dev.amust.local>Datacenter1	Cluster1	CPU threads count	32	
elal.dev.amust.local>Datacenter1	Cluster1	CPU: Effective (MHz)	30479	
elal.dev.amust.local>Datacenter1	Cluster1	CPU: Total (MHz)	41024	
elal.dev.amust.local>Datacenter1	Cluster1	Datacenter	Datacenter1	
elal.dev.amust.local>Datacenter1	Cluster1	DRS	enabled	
elal.dev.amust.local>Datacenter1	Cluster1	DRS automation level	fullyAutomated	
elal.dev.amust.local>Datacenter1	Cluster1	DRS current balance	64	

## Use Case

This report allows you to document the current configuration of your virtual infrastructure for audit purposes.

## Report Based on

Configuration data collected from virtual servers.

## Report Parameters

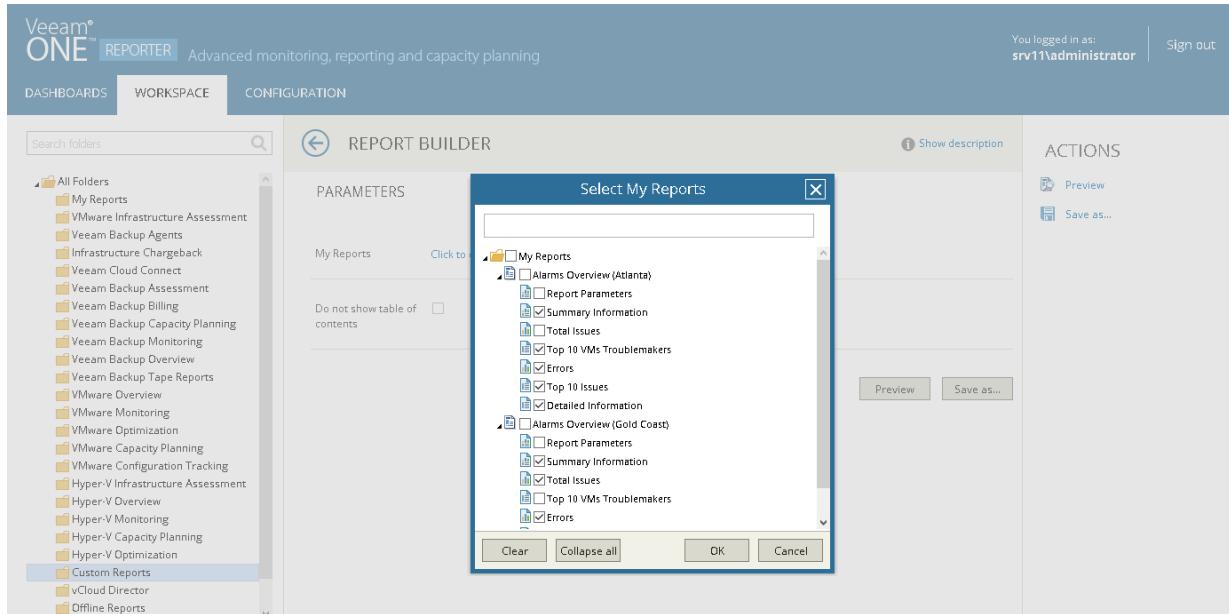
You can specify the following report parameters:

- Session:** defines a data collection session in Veeam ONE Reporter – a point in time to use as a basis to generate the report.
- Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

## Report Builder

This report merges data generated by separate custom reports into a single document.

To use the Report Builder, you first need to configure and save custom reports in the **My Reports** folder. The Report Builder will then offer you to include different sections from the saved reports into the resulting report providing you a consolidated view of core virtual environment properties.



## Use Case

This report eliminates data redundancy and helps you focus on the most relevant and important information about your infrastructure.

## Report Pack Based on

Data derived from a number of custom reports.

## Report Parameters

You can specify the following report parameters:

- **My Reports:** defines custom report sections that should be included in the resulting report.
- **Do not show table of contents:** defines whether the report output will include table of contents or display results in the expanded view.

# VMware Custom Performance

This report allows you to define specific CPU, memory, network and disk metrics to analyze performance of vSphere hosts, datastores and VMs.



## VMware Custom Performance

### Description

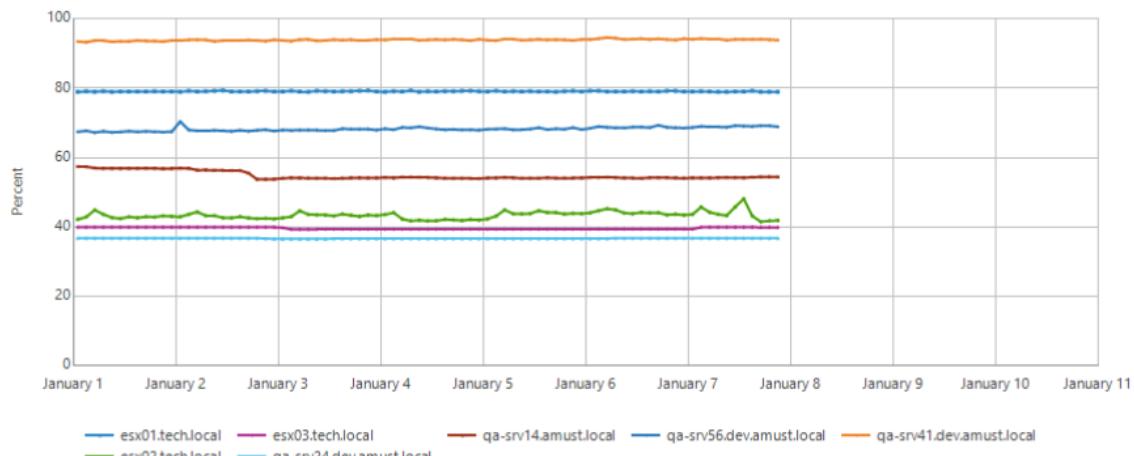
This report allows to choose aggregated data samples for all collected hosts, VMs and datastore performance metrics.

### Report Parameters

Selected Object:	Virtual Infrastructure
Report Creation Date:	1/16/2019 10:21 AM
Report Period:	1/1/2019 - 1/10/2019
Object Type:	Hosts
Excluded Objects:	
Included Objects:	*
Business View:	
Top N:	All Items
Business hours:	From 12:00 AM To 11:00 PM
CPU:	CPU Usage (Percent), CPU Usage (MHz)

### Memory

#### Memory Usage (Percent)



Virtual Server	Object Name	Average	Maximum	Minimum	Std. Deviation	Trend
elal.dev.amust.local	qa-srv41.dev.amust.local	93.95	94.62	93.29	0.24	Increasing
	qa-srv56.dev.amust.local	68.24	70.39	67.23	0.57	Increasing
	qa-srv14.amust.local	54.79	57.42	53.72	1.16	Decreasing
	qa-srv24.dev.amust.local	36.73	36.80	36.59	0.05	Increasing
vcenter01.tech.local	esx01.tech.local	79.09	79.37	78.91	0.10	Decreasing
	esx02.tech.local	43.35	48.10	41.53	1.09	Increasing
	esx03.tech.local	39.59	39.93	39.31	0.29	Decreasing

## Use Case

Use this report to investigate specific performance issues in the environment.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **vCloud Director:** defines vCloud Infrastructure levels to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Interval/Period/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Object Type:** defines the infrastructure object to analyze in the report.
- **Monitor Subsystems:** defines subsystems to analyze in the report (*CPU, Memory, Network, Disk, Storage Adapter, Storage Path, Datastore, Power or Guest Disk*). The list of available subsystems will depend on the selected object type.
- **Metrics:** defines metrics to analyze in the report. The list of available metrics will depend on the selected monitor subsystem.
- **Include/Exclude:** defines a list of objects that should be included in/excluded from the report scope:
  - Use the **Include** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the Include field will be excluded from the baseline used for data analysis.
  - Use the **Exclude** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the Exclude field will be included in the baseline used for data analysis.

### NOTE:

The **Include/Exclude** parameters support wildcards. Search is not case sensitive.

To illustrate how to use wildcard queries, consider the following example. You have selected 4 hosts as a report scope: 2 NAS servers (*NASServ1, NASServ2*) and 2 Active Directory servers (*AD01* and *AD02*).

If you want the report to show performance details only for the NAS servers, type *nasserv\** in the **Include** field. Alternatively, type *ad\** in the **Exclude** field.

- **Top N:** defines the maximum number of VMs to display in the report.
- **Show Graphics:** defines whether to show charts in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## VMware Raw Performance Data

This report allows you to get detailed raw data on specific CPU, memory, network, storage and disk metrics to analyze performance of VMware hosts, VMs and datastores.

## VMware Raw Performance Data

### Description

This report allows to define your own performance metrics for hosts, VMs and datastores and should be used if maximum flexibility is required.

### Report Parameters

Selected Object:	Virtual Infrastructure
Report Creation Date:	1/16/2019 10:33 AM
Report Period:	1/6/2019 - 1/16/2019
Object Type:	
Excluded Objects:	
Included Objects:	*
Business View:	
CPU:	CPU Usage (Percent), CPU Usage (MHz)
Memory:	Memory Usage (Percent)

### Subsystem: Memory

#### Counter: Memory Usage

Object Name	Value (Percent)	Time
esx01.tech.local	79.22	1/6/2019 1:00 AM
esx01.tech.local	79.24	1/6/2019 3:00 AM
esx01.tech.local	79.05	1/6/2019 5:00 AM
esx01.tech.local	79.05	1/6/2019 7:00 AM
esx01.tech.local	79.04	1/6/2019 9:00 AM
esx01.tech.local	79.14	1/6/2019 11:00 AM
esx01.tech.local	79.05	1/6/2019 1:00 PM
esx01.tech.local	79.04	1/7/2019 11:00 AM
esx01.tech.local	79.01	1/7/2019 1:00 PM
esx01.tech.local	79.25	1/7/2019 3:00 PM
esx01.tech.local	78.96	1/7/2019 5:00 PM
esx01.tech.local	78.97	1/7/2019 7:00 PM
esx01.tech.local	78.91	1/7/2019 9:00 PM
Max Observed:	79.25	1/7/2019 3:00 PM
Min Observed:	78.91	1/7/2019 9:00 PM
Average:	79.07	1/6/2019 1:00 AM - 1/7/2019 9:00 PM

Object Name	Value (Percent)	Time
esx02.tech.local	44.06	1/6/2019 1:00 AM
esx02.tech.local	44.70	1/6/2019 3:00 AM
esx02.tech.local	45.23	1/6/2019 5:00 AM
esx02.tech.local	44.92	1/6/2019 7:00 AM
esx02.tech.local	44.00	1/6/2019 9:00 AM
esx02.tech.local	43.43	1/6/2019 11:00 AM
esx02.tech.local	43.61	1/7/2019 1:00 AM
esx02.tech.local	45.72	1/7/2019 3:00 AM
esx02.tech.local	44.25	1/7/2019 5:00 AM
esx02.tech.local	43.17	1/7/2019 3:00 PM
esx02.tech.local	41.53	1/7/2019 5:00 PM
esx02.tech.local	41.74	1/7/2019 7:00 PM
esx02.tech.local	41.88	1/7/2019 9:00 PM
Max Observed:	48.10	1/7/2019 1:00 PM
Min Observed:	41.53	1/7/2019 5:00 PM
Average:	44.02	1/6/2019 1:00 AM - 1/7/2019 9:00 PM

# Use Case

This report provides advanced historical performance data that you can export to a spreadsheet application and use for analysis and reporting purposes.

## Report Parameters

You can specify the following report parameters:

- **Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.
- **Business View objects:** defines Veeam ONE Business View groups to analyze in the report.
- **Interval/Start date - End date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected scope. Otherwise, the report will contain no data.
- **Sample's Length:** defines the resolution level, that is, granularity of raw data that should be displayed in the report output. Note that data with the Raw sample length (5-minute resolution) is available only for the custom interval of last week; if you select Year/Quarter/Month as a reporting interval, the report will show data with 2-hour resolution.
- **Object Type:** defines the infrastructure object to analyze in the report.
- **Monitor Subsystems:** defines subsystems to analyze in the report (*CPU, Memory, Network, Disk, Virtual Disk, Storage Adapter, Storage Path, Datastore, Power or Guest Disk*). The list of available subsystems will depend on the selected object type.
- **Metrics:** the performance metrics to analyze in the report. The choice of available metrics will depend on the selected monitored subsystems.
- **Include/Exclude:** defines a list of objects that should be included in/excluded from the report scope:
  - Use the **Include** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the Include field will be excluded from the baseline used for data analysis.
  - Use the **Exclude** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the Exclude field will be included in the baseline used for data analysis.

### NOTE:

The **Include/Exclude** parameters support wildcards. Search is not case sensitive.

To illustrate how to use wildcard queries, consider the following example. You have selected 4 hosts as a report scope: 2 NAS servers (*NASServ1, NASServ2*) and 2 Active Directory servers (*AD01* and *AD02*).

If you want the report to show performance details only for the NAS servers, type *nasserv\** in the **Include** field. Alternatively, type *ad\** in the **Exclude** field.

# vCloud Director

This report pack provides information on configuration and performance of the vCloud Director infrastructure.

**Number of reports:** 10

**Current version:** 1

**Reports included:**

- [Catalogs Overview](#)
- [Multiple Organizations vDC Performance](#)
- [Multiple vApps Performance](#)
- [Organization Configuration](#)
- [Organization vDC Performance](#)
- [Provider vDC Performance](#)
- [vApp Configuration](#)
- [vApp Performance](#)
- [VM Performance](#)
- [VMs Uptime](#)

## Catalogs Overview

This report displays an inventory of catalogs created for selected organizations.

For each catalog included in the report, the vApp Template table provides a list of vApp templates stored in the catalog, shows allocated resources and guest operating system profiles imported into the templates.

## veeam

### Catalogs Overview

#### Description

This report provides overview information of all catalogs in organization units.

#### Report Parameters

Scope: Virtual Infrastructure

#### Catalogs

Organization	Catalog	Shared	Publish Status	Owner	Created on	vApp Templates
agorbulnov-org	2					
	sanisimov-catalog-Cluster2	Yes	Published	system	5/24/2018	7
agrigroriev-org	sanisimov-catalog-Cluster1	Yes	Published	system	5/28/2018	9
	sanisimov-catalog-Cluster2	Yes	Published	system	5/24/2018	7
	pv-test-catalog	No	-	system	8/6/2018	2
alazutin-org	sanisimov-catalog-Cluster1	Yes	Published	system	5/28/2018	9
	sanisimov-catalog-Cluster2	Yes	Published	system	5/24/2018	7
	sanisimov-catalog-Cluster1	Yes	Published	system	5/28/2018	9
arastorguev	2					
	sanisimov-catalog-Cluster2	Yes	Published	system	5/24/2018	7
vApp Templates	sanisimov-catalog-Cluster1	Yes	Published	system	5/28/2018	9

Catalog	vApp Template	Hardware Version	OS	vCPU	Memory (GB)	Storage (GB)
pv-test-catalog	2					
	test-vapp-template	vmx-10	Microsoft Windows Server 2016 (64-bit)	4	8.00	115.00
sanisimov-catalog-Cluster1	test-vapp-template0	vmx-11	Microsoft Windows Server 2008 R2 (64-bit)	1	4.00	0.04
	9					
	T_CentOS6.5GUI	vmx-11	Red Hat Enterprise Linux 6 (64-bit)	1	2.00	32.00
	T_CentOS7.0Core	vmx-11	CentOS 4/5/6/7 (64-bit)	1	2.00	12.00
	T_CentOS7.0GUI	vmx-11	CentOS 4/5/6/7 (64-bit)	2	2.00	24.00
	T_Win10x64_1709	vmx-11	Microsoft Windows 10 (64-bit)	4	4.00	40.00
	T_Win10x86	vmx-11	Microsoft Windows 10 (32-bit)	1	2.00	24.00
	T_Win2012R2x64	vmx-11	Microsoft Windows Server 2012 (64-bit)	4	4.00	50.00
	T_Win2012x64	vmx-11	Microsoft Windows Server 2012 (64-bit)	4	4.00	50.00
	T_Win7x64	vmx-11	Microsoft Windows 7 (64-bit)	4	2.00	32.00
	T_Win7x86	vmx-11	Microsoft Windows 7 (32-bit)	2	1.00	24.00

## Use Case

Outdated catalog data consume valuable cloud resources. Use this report to review content of vCloud Director catalogs and to track the amount of space consumed by catalog content across organizations.

## Report Parameters

**Scope:** defines a list of organizations to analyze in the report.

# Multiple Organizations vDC Performance

This report aggregates historical data and shows performance statistics for selected organization virtual datacenters across a time range. The report features a predefined list of performance counters and allows you to report on memory, CPU, disk and network usage.

The report shows performance charts with resource usage statistics for each organization virtual datacenter included in the report scope, lists top resource consuming vApps and VMs, and calculates resource usage trends for them.

**TIP:**

- Click an organization virtual datacenter name in the **Summary** table or in the resource usage table to drill down to performance charts with statistics on CPU, memory, disk and network usage for the virtual datacenter.
- Click a vApp name in the list of top resource consuming vApps to drill down to performance charts with statistics on CPU, memory, disk and network usage for the vApp.
- Click a VM name in the list of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Multiple Organizations vDC Performance

### Description

---

This report shows Organizations vDC performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

---

Scope: Alpha, Beta  
Report Period: 12/29/2018 - 1/10/2019  
Counters: CPU usage (GHz), Memory usage (GB)  
Top N: 3  
Business hours: From 12:00 AM to 11:00 PM

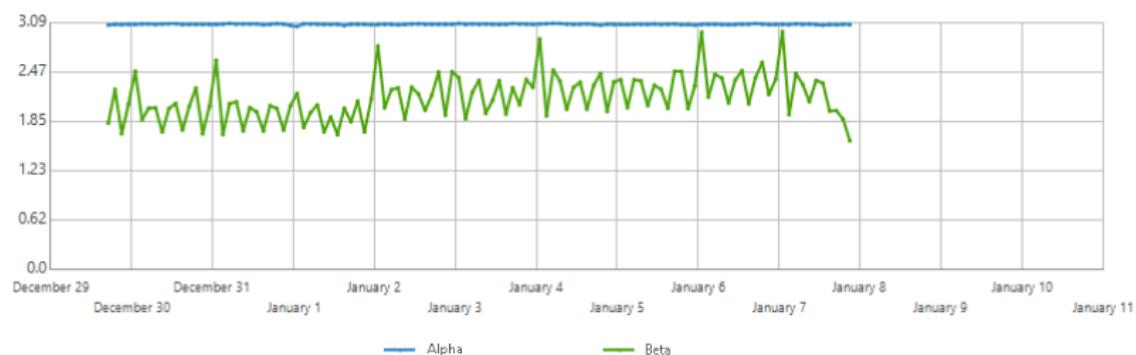
### Summary

---

Org Virtual Datacenter	Allocation Model	CPU Allocation Used	Memory Allocation Used	Storage Allocation Used	Used Network Count
<a href="#">Alpha</a>	Pay As You Go	12.00 GHz	12.00 GB	2598.46 GB	1
<a href="#">Beta</a>	Pay As You Go	4.50 GHz	10.00 GB	133.00 GB	1

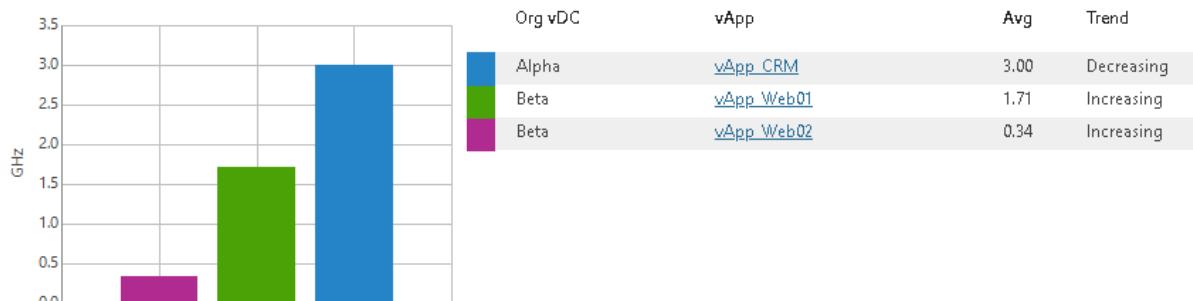
## CPU Performance

CPU Usage (GHz)

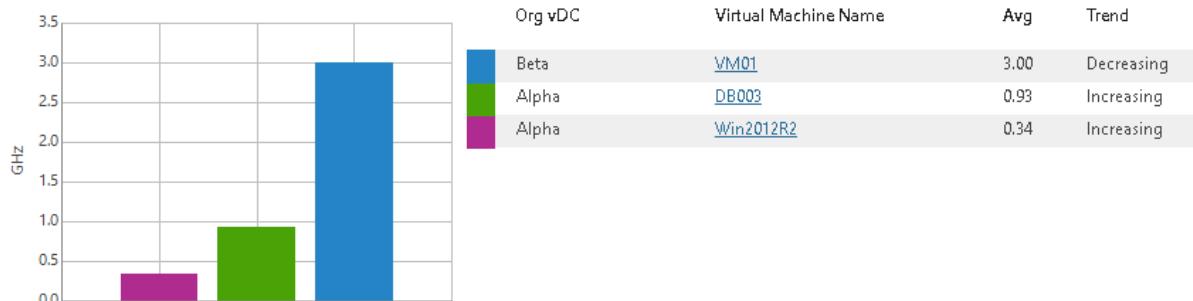


Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
<a href="#">Alpha</a>	3.07	3.05	3.09	0.01	Decreasing
<a href="#">Beta</a>	2.15	1.61	2.98	0.28	Increasing

Top 3 vApps by CPU Usage



Top 3 VMs by CPU Usage



## Use Case

The report helps you identify organization virtual datacenters with performance issues, right-size resource provisioning and eliminate potential performance bottlenecks.

## Report Parameters

- Scope:** defines a list of organization virtual datacenters to analyze in the report.
- Interval/Start Date - End Date:** defines the time period to analyze in the report.
- Top N:** defines the maximum number of vApps and VMs to display in the report output.

- **Counters:** defines a list of performance counters to analyze in the report.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Multiple vApps Performance

This report collects historical information and shows performance statistics on vApps over a specific time period. The report features a list of predefined performance counters and allows you to analyze memory, CPU, memory, disk and network usage.

The report shows performance charts with resource usage statistics, rates the VMs by the resource usage level, and analyzes the resource usage trend.



## Multiple vApps Performance

### Description

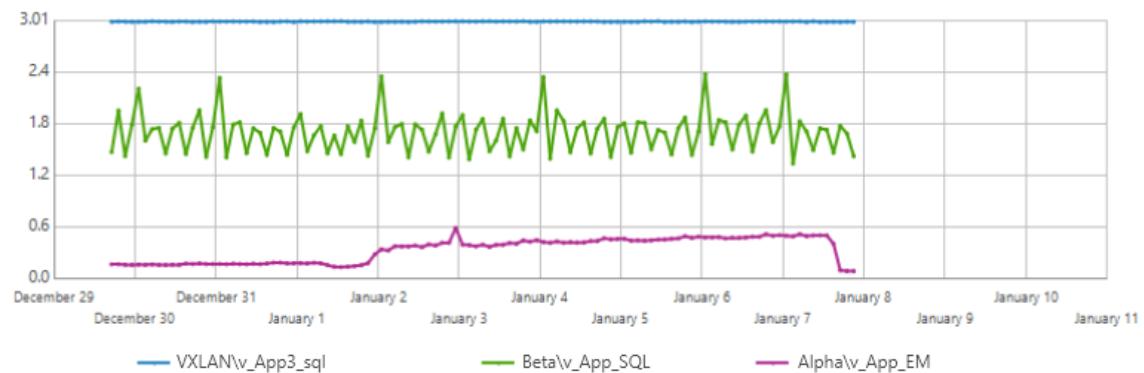
This report shows multiple vApps performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

Scope: vApp\_Web, vApp\_SQL  
Report Period: 12/29/2018 - 1/10/2019  
Counters: CPU usage (GHz), Memory usage (GB)  
Top N: 3  
Business hours: From 12:00 AM to 11:00 PM

### CPU Performance

#### CPU Usage (GHz)



#### Top 3 VMs by CPU Usage



## Use Case

The report provides an overview resource consumption of multiple vApps. This information may help you identify VMs with performance issues, balance workloads, right-size resource provisioning and optimize overall performance.

## Report Parameters

- **Scope:** defines the organization whose vApps must be analyzed in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report.
- **Top N:** defines the maximum number of VMs to display in the report output.
- **Counters:** defines a list of performance counters to analyze in the report.
- **Show graphics:** defines whether to include charts in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Organization Configuration

This report documents the current configuration of organizations in your vCloud Director infrastructure.

- The **Summary** table displays general information on statuses of organizations included in the report scope, the total number of virtual datacenters to which these organizations have access, the total number of catalogs created for the organizations and the total number of vApps in the catalogs.
- The **Virtual Datacenters** table provides details on resource utilization for each virtual datacenter and shows the total number of deployed vApps.  
Click a number in the vApps column to drill down to configuration details for the vApp.
- The **vApps** table shows vApp properties, such as vApp power status, vApp owner and the number of resident VMs.
- The **vApp Policies** table displays information on lease policies for compute and storage resources applied to organizations included in the report scope.

- The **Org Network Pools** table shows network pool properties, such as pool type and the current resource utilization level.

## veeam

### Organization Configuration

#### Description

This report provides general configuration for vCD organizations.

#### Report Parameters

Scope: Virtual Infrastructure

#### Summary

Organization	Status	Virtual Datacenters	Catalogs	vApps	Total VMs	Running VMs	Users
agorbunov-org	Enabled	1	2	1	3	0	1
agrigoriev-org	Enabled	2	3	6	11	0	0
alazutin-org	Enabled	1	2	1	1	1	4
ashelemin-org	Enabled	1	2	0	0	0	1
atreyakov-org	Enabled	0	2	0	0	0	1
dbabushkin-org	Enabled	1	2	3	1	0	1
drusskih-org	Enabled	2	3	3	13	0	2
dsudov-org	Enabled	2	2	5	3	0	1
edavydenko-org	Enabled	1	2	1	1	0	1

#### Virtual Datacenters

Organization	Org Virtual Datacenter	Status	Allocation Model	Processor Usage	Memory Usage	Storage Usage	Used Network Count	vApps
agorbunov-org	agorbunov-vdc	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	2.48 Gb	0	1
agrigoriev-org	ag-org-vdc	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	141.22 Gb	0	5
	pvissarionov-vdc	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	3.00 Gb	0	1
alazutin-org	fuy	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	0.00 Gb	0	0
ashelemin-org								
dbabushkin-org	LW01	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	62.00 Gb	0	3
drusskih-org								
dsudov-org	dsudov_vdc2	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	0.00 Gb	0	1
	dsudov-vdc	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	92.00 Gb	0	4

#### vApps

Organization	Org Virtual Datacenter	vApp	Status	VMs	Created on	Owner
agorbunov-org	1	1				
	agorbunov-vdc	1				
		Cloud_Connect_Replication_agorbu_nov-vdc	POWERED_OFF	3	5/23/2018	system
agrigoriev-org	2	6				
alazutin-org	1	1				
	alazutin-vdc	1				
		vApp_windows	POWERED_ON	1	12/17/2018	system
dbabushkin-org	1	3				
	LW01	3				
		vApp1	RESOLVED	0	6/19/2017	system
		Cloud_Connect_Replication_LW01	POWERED_OFF	2	4/3/2017	system
		vApp01	POWERED_OFF	1	4/3/2017	system
drusskih-org	1	3				
	de-alone-vdc	3				
		dr-alone2	POWERED_OFF	4	10/5/2018	system
		dr-alone3	POWERED_OFF	5	10/5/2018	system
		vApp-alone	POWERED_OFF	4	10/4/2018	system
dsudov-org	2	5				
edavydenko-org	1	1				

# Use Case

The report helps administrators assess configuration properties of organizations in the monitored vCloud Director infrastructure.

## Report Parameters

**Scope:** defines a list of organizations to analyze in the report.

## Organization vDC Performance

**You can specify the following report parameters:** This report aggregates historical data and shows performance statistics for a selected organization virtual datacenter across a time range.

The report shows performance charts with statistics on CPU, memory, disk and network usage for the organization virtual datacenter, lists top resource consuming vApps and VMs, and calculates resource usage trends for them.

**TIP:**

- Click a vApp name in the list of top resource consuming vApps to drill down to performance charts with statistics on CPU, memory, disk and network usage for the vApp.
- Click a VM name in the list of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

## Organization vDC Performance

### Description

---

This report shows Organization vDC performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

---

Selected Object: alpha\_vdc  
Selected Object Location: \\172.16.21.179\Alpha\_Org\alpha\_vdc  
Report Period: 12/29/2018 - 1/10/2019  
Business hours: From 12:00 AM To 11:00 PM

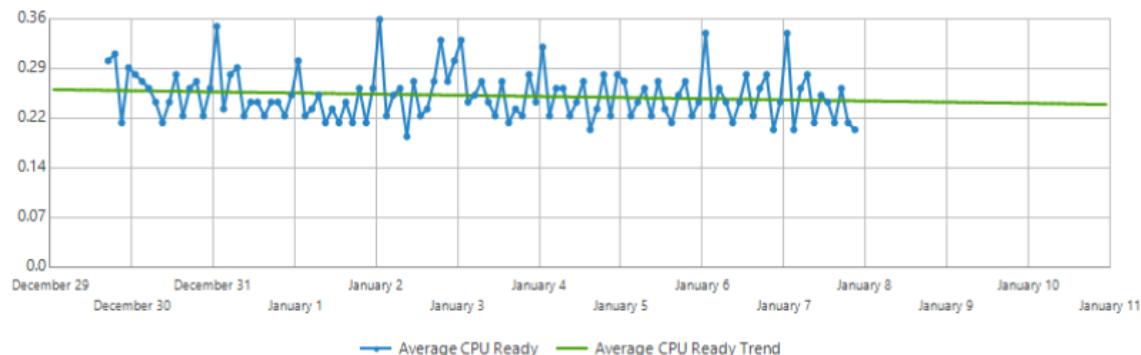
### Summary

---

Org Virtual Datacenter	Allocation Model	CPU Allocation Used	Memory Allocation Used	Storage Allocation Used	Used Network Count
alpha_vdc	Pay As You Go	12.00 GHz	12.00 GB	2588.46 GB	1

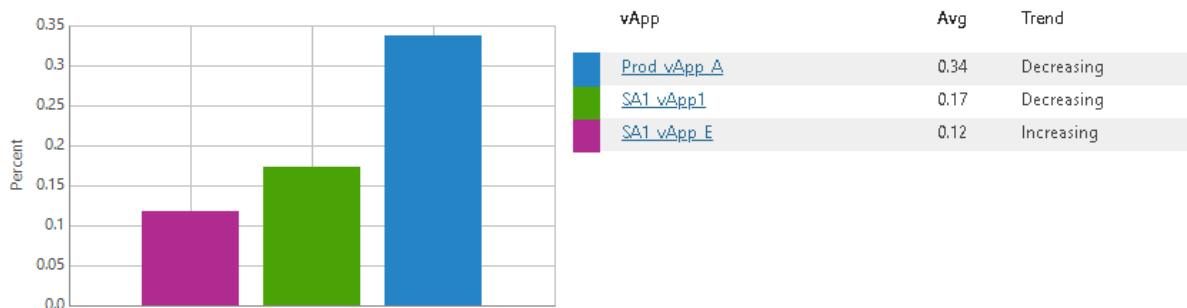
## CPU Performance

### Average CPU Ready (Percent)

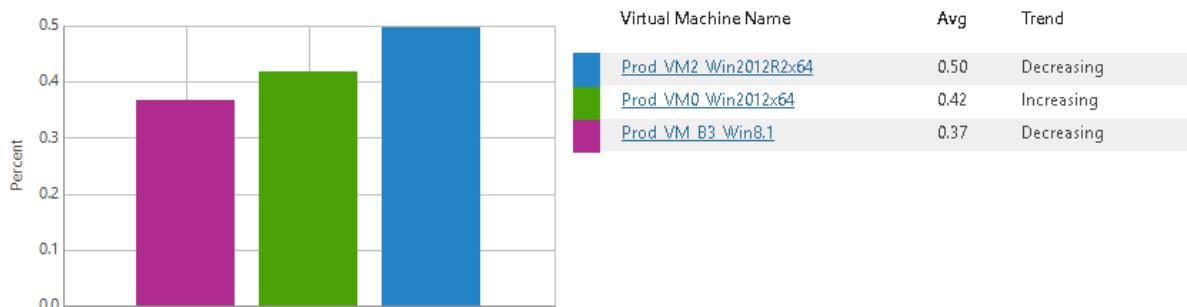


Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
alpha_vdc	0.25	0.19	0.36	0.04	Decreasing

### Top 3 vApps by Average CPU Ready



### Top 3 VMs by Average CPU Ready



## Use Case

The report helps you identify organization virtual datacenters with performance issues, right-size resource provisioning and eliminate potential performance bottlenecks.

## Report Parameters

You can specify the following report parameters:

- Object:** defines the organization virtual datacenter to analyze in the report.
- Interval/Start Date - End Date:** defines the time period to analyze in the report.
- Top N:** defines the maximum number of vApps and VMs to display in the report output.

- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## Provider vDC Performance

This report aggregates historical data and shows performance statistics for selected provider virtual datacenters across a time range.

The report provides **Top N** charts that display provider virtual datacenters with the largest amount of allocated resources and the highest level of CPU, memory and storage utilization.

- The **Current Usage Details** section shows general configuration data for the selected provider virtual datacenters.
- The **Performance Charts** section displays tables and performance charts with resource usage statistics for each provider virtual datacenter included in the report scope.

## veeam

### Provider vDC Performance

#### Description

---

This report provides information on Provider VDCs resource usage.

#### Report Parameters

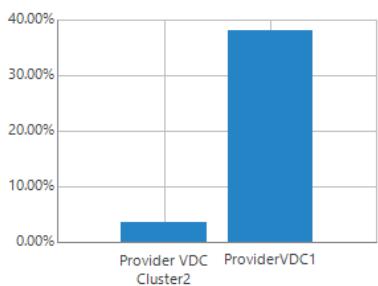
---

Selected Objects:	All Providers
Top N:	3
Report Period:	12/29/2018 - 1/10/2019
Business hours:	From 12:00 AM to 11:00 PM

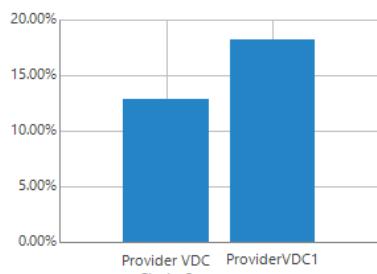
#### Summary

---

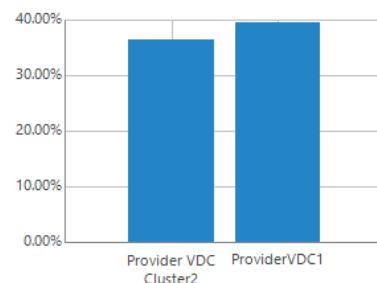
**Top 3 Providers by CPU Usage**



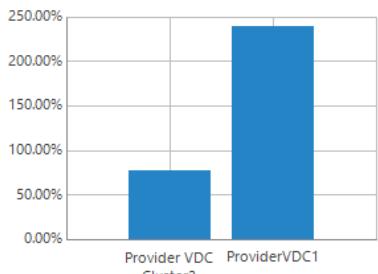
**Top 3 Providers by Memory Usage**



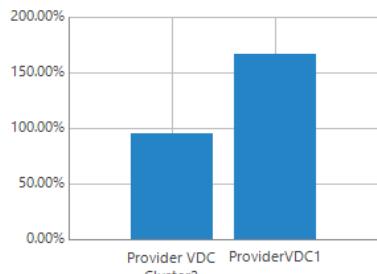
**Top 3 Providers by Storage Usage**



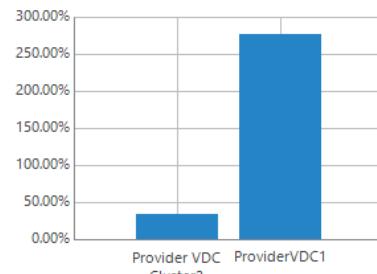
**Top 3 Providers by CPU Allocation**



**Top 3 Providers by Memory Allocation**



**Top 3 Providers by Storage Allocation**



# Use Case

The report helps you identify provider virtual datacenters with performance issues, balance workloads and optimize resource allocation.

## Report Parameters

You can specify the following report parameters:

- **Objects:** defines a list of provider virtual datacenters to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report.
- **Top N:** defines the maximum number of provider virtual datacenters to display in the report output.
- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## vApp Configuration

This report provides an overview of vApp configuration for a selected organization.

The report provides Top 5 charts that display vApps with the highest level of CPU, memory and storage utilization. The report also includes a chart that shows the number of powered off, powered on, resolved and suspended vApps, and a chart that shows statuses of VMware Tools installed in VMs that belong to the organization.

The **Details** table displays detailed information on configuration properties for each vApp created by organization users.

## VEEAM

### vApp Configuration

#### Description

This report provides general vApp configuration information for selected organization.

#### Report Parameters

Scope: Delta\_Org

#### Summary

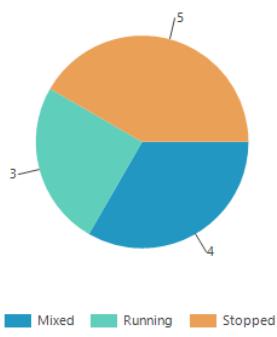
##### General Overview

N. of Virtual Datacenters:	4
N. of vApps:	15
N. of VMs:	27

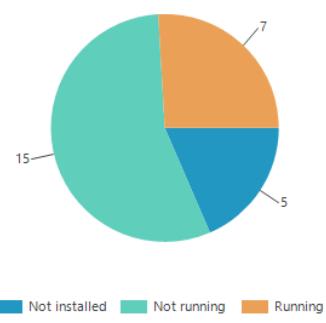
##### Resource Allocation

Allocated CPU (GHz):	61.00
Allocated Memory (GB):	88.00
Allocated Storage (GB):	1,935.00

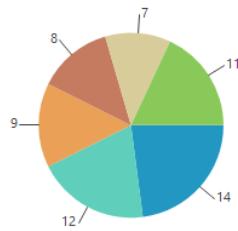
#### vApps by Status



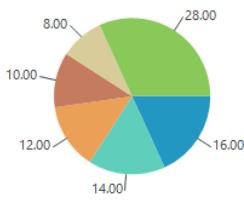
#### VMs by VMware Tools Status



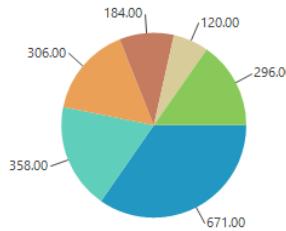
#### Top 5 vApp by CPU Quota



#### Top 5 vApp by Memory Quota



#### Top 5 vApp by Storage Quota



Prod\_vApp\_B  
Prod\_vApp\_A  
SA1\_vApp1  
SA1\_vApp\_E  
Other

Prod\_vApp\_B  
Prod\_vApp\_A  
SA1\_vApp1  
SA5\_vApp1  
Other

Prod\_vApp\_A  
SA1\_vApp1  
SA1\_vApp\_E  
Prod\_vApp\_B  
SA3\_vApp1  
Other

## Use Case

This report helps vCloud administrator right-size resource provisioning to prevent resource waste and to eliminate potential performance bottlenecks.

## Report Parameters

**Scope:** defines the organization whose vApps should be analyzed in the report.

# vApp Performance

This report aggregates historical data and shows performance statistics for a selected vApp and resource pools across a time range.

The report shows tables and performance charts with statistics on CPU, memory, disk and network usage for the vApp. The report also lists top resource consuming VMs and calculates resource usage trends for them.

## vApp Performance

### Description

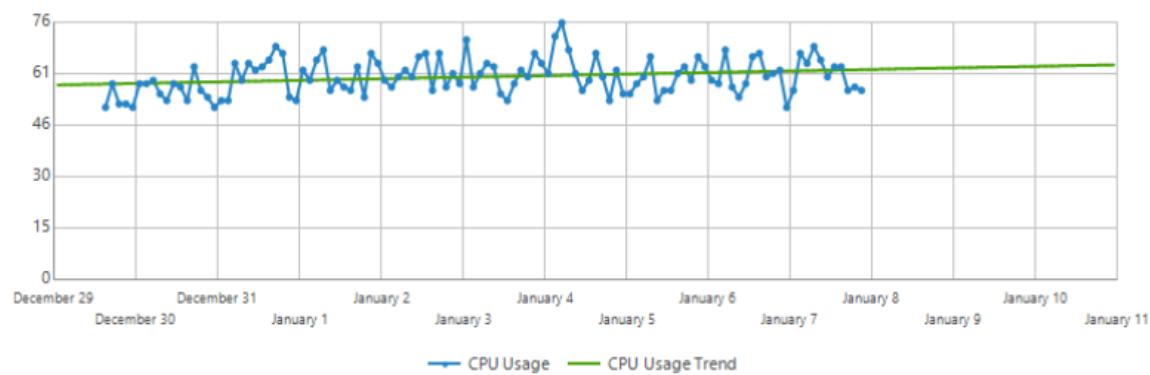
This report shows resource pools and vApps performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

Selected Object: vApp\_windows  
Selected Object Location: \\172.16.21.179\Alpha\_Org\Alpha\_vdc\vApp\_windows  
Report Period: 12/29/2018 - 1/10/2019  
Business hours: From 12:00 AM to 11:00 PM

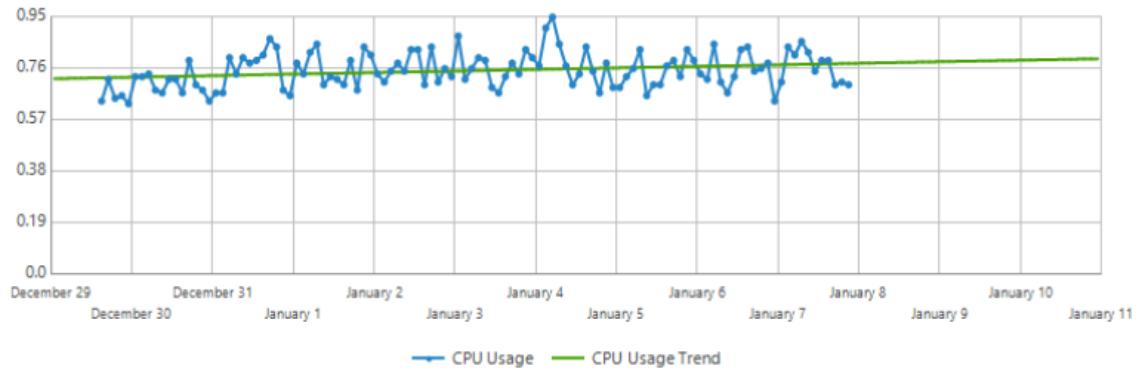
### CPU Performance

CPU Usage (MHz)



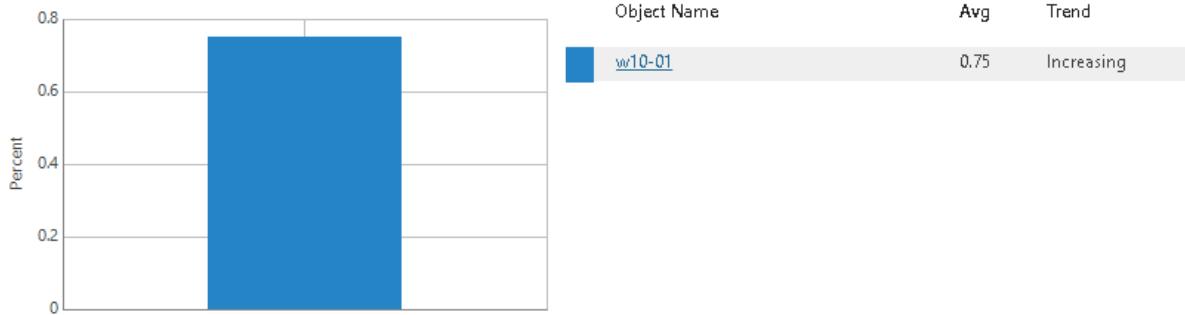
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
vApp_windows	60.03	51.00	76.00	5.23	Increasing

#### CPU Usage (Percent)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
vApp_windows	0.75	0.63	0.95	0.07	Increasing

#### Top 3 VMs by CPU Usage



## Use Case

The report helps you identify vApps with performance issues and decide whether additional right-sizing or reconfiguration actions are necessary.

## Report Parameters

You can specify the following report parameters:

- Object:** defines the vApp to analyze in the report.
- Interval/Start Date - End Date:** defines the time period to analyze in the report.
- Top N:** defines the maximum number of VMs to display in the report output.
- Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

# VM Performance

This report aggregates historical data and shows performance statistics for a selected VM across a time range. The report shows statistics on CPU, memory, disk and network usage for the VM and calculates resource usage trend for it.



## VM Performance

### Description

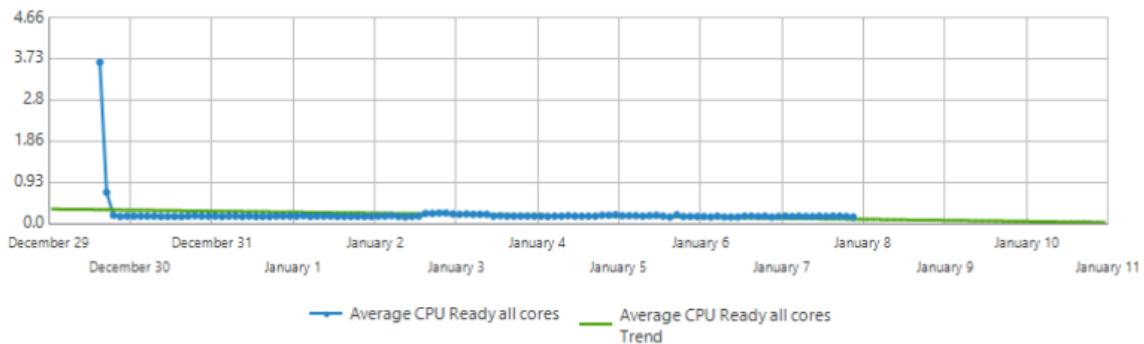
This report shows VMs performance history that includes CPU, Memory, Disk and Network counters.

### Report Parameters

Selected Object: VM2\_Win10x64  
Selected Object Location: \\172.16.21.179\Alpha\_Org\Alpha\_vdc\vApp\_Win\VM2\_Win10x64  
Report Period: 12/29/2018 - 1/10/2019  
Business hours: From 12:00 AM to 11:00 PM

### CPU Performance

#### Average CPU Ready All Cores (Percent)



Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
VM2_Win10x64	0.21	0.15	3.66	0.33	Decreasing

## Use Case

The report allows you to verify that you have provided enough resources to the virtual machine.

## Report Parameters

You can specify the following report parameters:

- Object:** defines the VM that belongs to your organization and should be analyzed in the report.
- Interval/Start Date - End Date:** defines the time period to analyze in the report. Note that the reporting period must include at least one data collection session for the selected VM. Otherwise, the report will contain no data.

- **Business hours from - to:** defines time of a day for which historical performance data will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

## VMs Uptime

This report analyzes VM uptime statistics to track VM availability.

- The **Top Uptime** and **Lowest Uptime** charts display top 5 VMs in terms of the highest and the lowest uptime values.
- The **vApp Virtual Machine Uptime** table provides the full list of VMs whose uptime values are lower and greater than the specified thresholds.

**veeam**

### VMs Uptime

#### Description

This report provides an overview of VMs uptime including VMs with lowest and highest uptime values.

#### Report Parameters

Root Object:	Alpha_Org, Beta_Org
Reporting Period:	Past month (12/1/2018 - 12/31/2018)
Uptime Parameter:	greater than 80.00% and lower than 100.00%
Group By:	vCloud vApp

#### Summary



#### vApp Virtual Machine Uptime

Organization	Virtual Datacenter	vApp	VM Name	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
<b>vApp: SA1_vApp1</b>							
Alpha_Org	Alpha_vdc1	SA1_vApp1	<a href="#">SA1 VM2_Win10x64_1809</a>	0	1	01:45:00	96.98%
<b>vApp: Prod_vApp_A</b>							
Alpha_Org	Alpha_vdc1	Prod_vApp_A	<a href="#">Prod VM0_Win2012x64</a>	0	4	01:48:00	96.90%
Alpha_Org	Alpha_vdc1	Prod_vApp_A	<a href="#">Prod VM B3_Win8.1</a>	0	2	01:45:00	96.98%
Alpha_Org	Alpha_vdc1	Prod_vApp_A	<a href="#">Prod VM2_Win2012R2x64</a>	0	1	01:45:00	96.98%
<b>vApp: vApp_windows</b>							
Beta_Org	Beta_DC	vApp_windows	<a href="#">w10-01</a>	0	1	01:45:00	96.98%
<b>vApp: SA1_vApp_E</b>							
Alpha_Org	Alpha_vdc1	SA1_vApp_E	<a href="#">Prod SA1 VM10_Win10x64_4_1709</a>	0	0	01:45:00	96.98%

## Use Case

Uptime is a measure of time a VM has been up and actively running on a host. When a VM is not operating, cloud space allocated to it is not being used productively. Use this report to track uptime of virtualized workloads.

# Report Parameters

You can specify the following report parameters:

- **Scope:** defines a list of organizations to analyze in the report.
- **Interval/Start Date - End Date:** defines the time period to analyze in the report.
- **Uptime, greater than:** defines the desired minimum uptime value.
- **Uptime, lower than:** defines the desired maximum uptime value.
- **Group by:** defines how data will be grouped in the report output (by *Uptime*, *vCloud Organization*, *vCloud Organization VDC*, *vCloud vApp*).

# Offline Reports

In addition to regular reports that open in a browser and can be automatically delivered, Veeam ONE offers a number of offline reports that can be generated and viewed later with the use of proprietary Veeam Report Viewer software. To learn how to install and use Veeam Report Viewer, refer to chapter [Viewing Offline Reports](#).

Offline reports provide details on major health and configuration properties. Advanced topology maps that are not available with other competing products provide automatically generated representation of your virtual infrastructure layout in a Visio or Excel file format.

**Number of reports:** 2

**Current version:** 1

**Reports included:**

- [Infrastructure Overview \(Visio\)](#)
- [Raw Data Analysis](#)

## Infrastructure Overview (Visio)

This report shows a diagram of the VMware vSphere and Microsoft Hyper-V infrastructure. The infrastructure is presented with a set of diagrams that illustrate different views, or inventories:

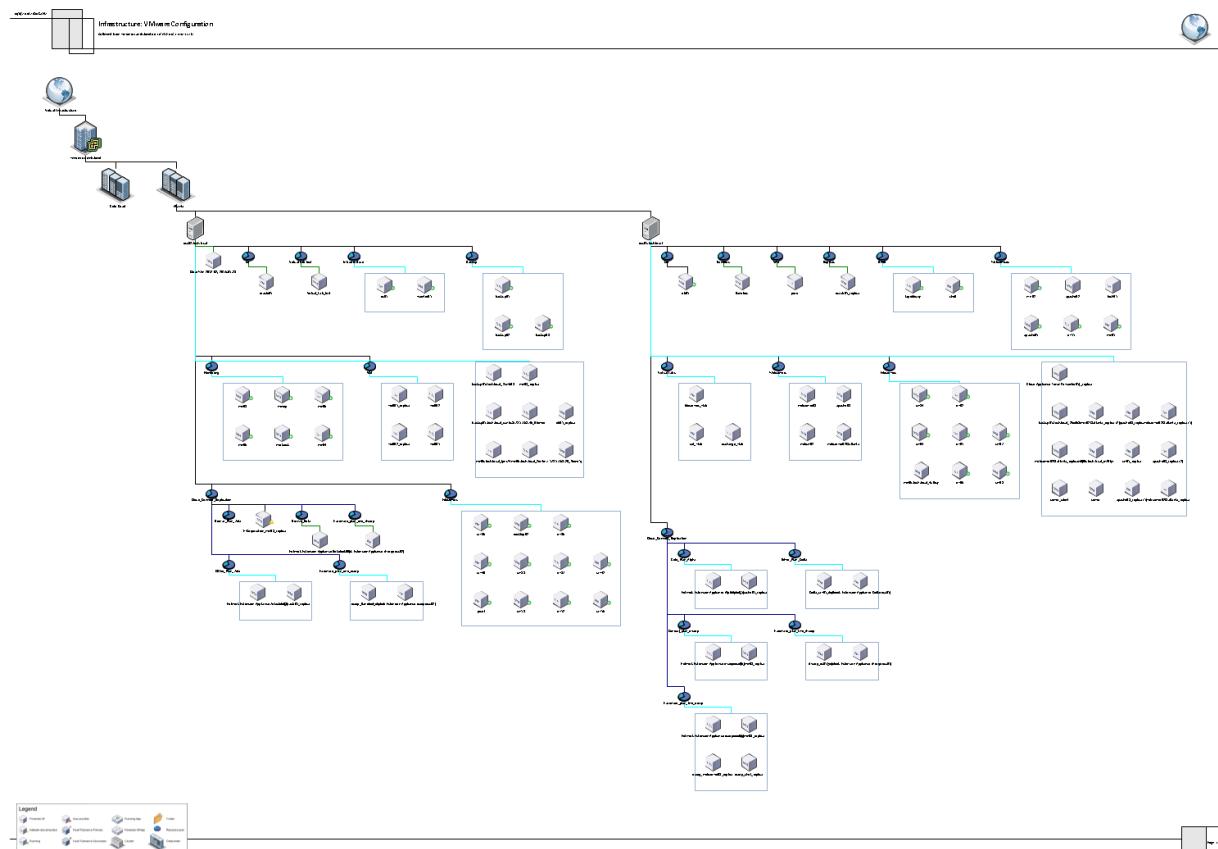
- Configuration inventory
- Storage inventory
- Network inventory (available for VMware vSphere only)
- Datastore Utilization (available for VMware vSphere only)
- vMotion (available for VMware vSphere only)

**NOTE:**

To view the report, you must have Microsoft Visio installed.

# Infrastructure: VMware Configuration

The following diagram displays VMware vSphere configuration inventory.



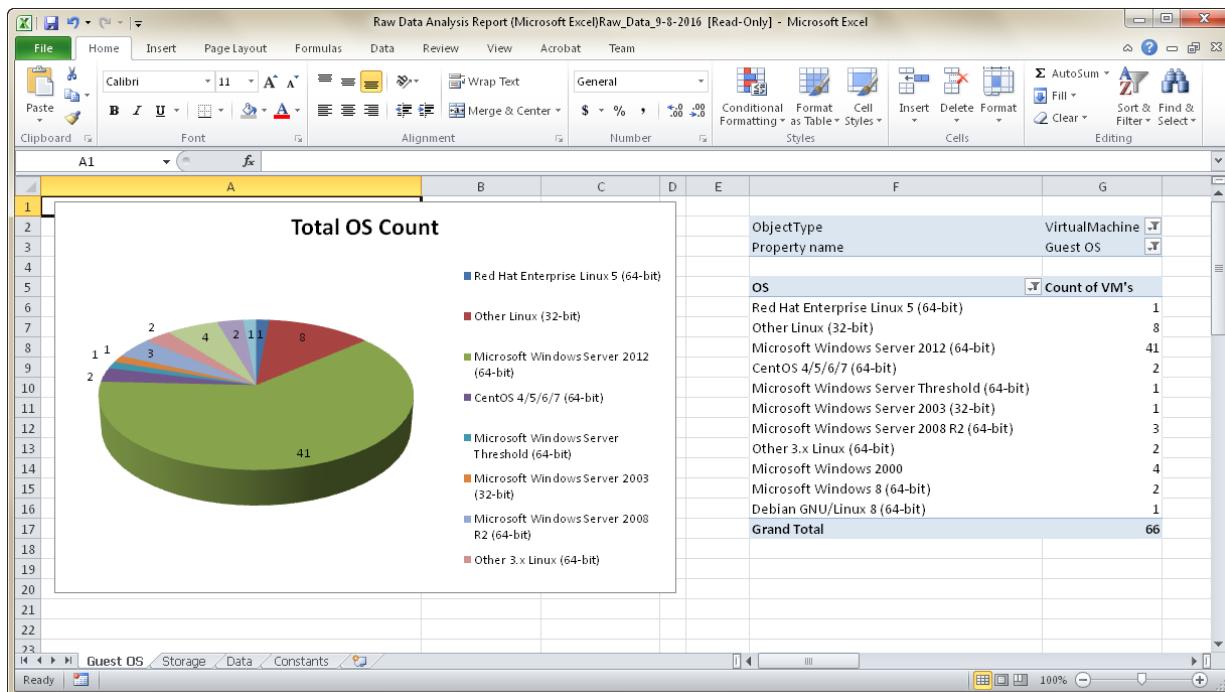
# Infrastructure: Hyper-V Configuration

The following diagram displays Microsoft Hyper-V configuration inventory.



## NOTE:

To view the report, you must have Microsoft Excel installed.



## Use Case

The report allows you to get hardware and software information about your virtual environment that can be used for further data analysis and reporting purposes.

## Report Parameters

**Scope:** defines a virtual infrastructure level and its sub-components to analyze in the report.

# Appendix. Scheduling Script Examples

To facilitate the process of dashboards and report creation, you can schedule automatic delivery of dashboards and reports. As one of the delivery options, you can save created dashboards and reports to a disk or network share. To learn about scheduling dashboards and reports, see [Scheduling Dashboards](#) and [Scheduling Reports](#).

If you need to perform further manipulations with the saved files, you can configure Veeam ONE Reporter to run a custom script after reports and dashboards are saved to the target folder. This allows you to use BAT, CMD, VBS, JS, WSF, EXE, VBE, JSE, WSH, PSC1 scripts.

You can pass the following parameters to post-delivery scripts:

Parameter	Description
%ReportName%	Name of the generated report.
%ReportFolder%	Target folder to which created reports are saved (as specified in the <b>Path</b> field).
%JobName%	Name of the scheduling job that generates reports.
"-hidden"	Defines whether it is necessary to open created VMR reports with the Veeam Report Viewer. If the parameter is specified, the reports will not be opened.

This section explains how to use post-delivery scripts and contains simple script examples.

- [Example A. Copying a Report to Network Shares](#)
- [Example B. Sorting Reports by Name](#)

# Example A. Copying a Report to Network Shares

Consider the following scenario: your backup administrators want to obtain a weekly report with the list of protected VMs in your virtual environment. To deliver the Protected VMs report to backup administrators on a weekly basis, you can take the following steps:

1. [Save the Protected VMs report with the necessary parameters.](#)
2. [Create a script that will copy the report to network shares of backup administrators.](#)
3. [Set the necessary schedule for the report and specify the post-delivery script.](#)

## Step 1. Save Protected VMs Report

Save the Protected VMs report with the necessary parameters as described in [Saving Reports](#).

## Step 2. Create Script

When you schedule a report delivery to a folder or a network share, Veeam ONE Reporter saves the generated report to a target location by the following path:

```
<TargetDirectory>\reporting-task-for-ssrs-report-<ReportName><ID>\
```

The sample script must perform the following operations after the report is created:

1. Access the target report location:  

```
C:\reports\reporting-task-for-ssrs-report-<ReportName><ID>\
```
2. Copy the report from the target location to network shares:
  - o \\andy\shared\backups\reports\
  - o \\brian\shared\backups\reports\
  - o \\chris\shared\backups\reports\
3. Remove the report from the target location and delete the target directory.

An example of the script is provided below:

```
::Changing directory to the target report location
cd reporting-task-for-ssrs-report*
set RD=%cd%

::Copying the report from the target location to admins' shares
xcopy Protected.* \\andy\shared\backups\reports\*.* /y
xcopy Protected.* \\brian\shared\backups\reports\*.* /y
xcopy Protected.* \\chris\shared\backups\reports\*.* /y

::Removing the target report location
cd ..
rd %RD% /s/q
```

Save the script as a Windows batch file on the machine where Veeam ONE Server is installed.

To follow this example, save the script with the `postdelivery.bat` name to the `C:\reports\` directory.

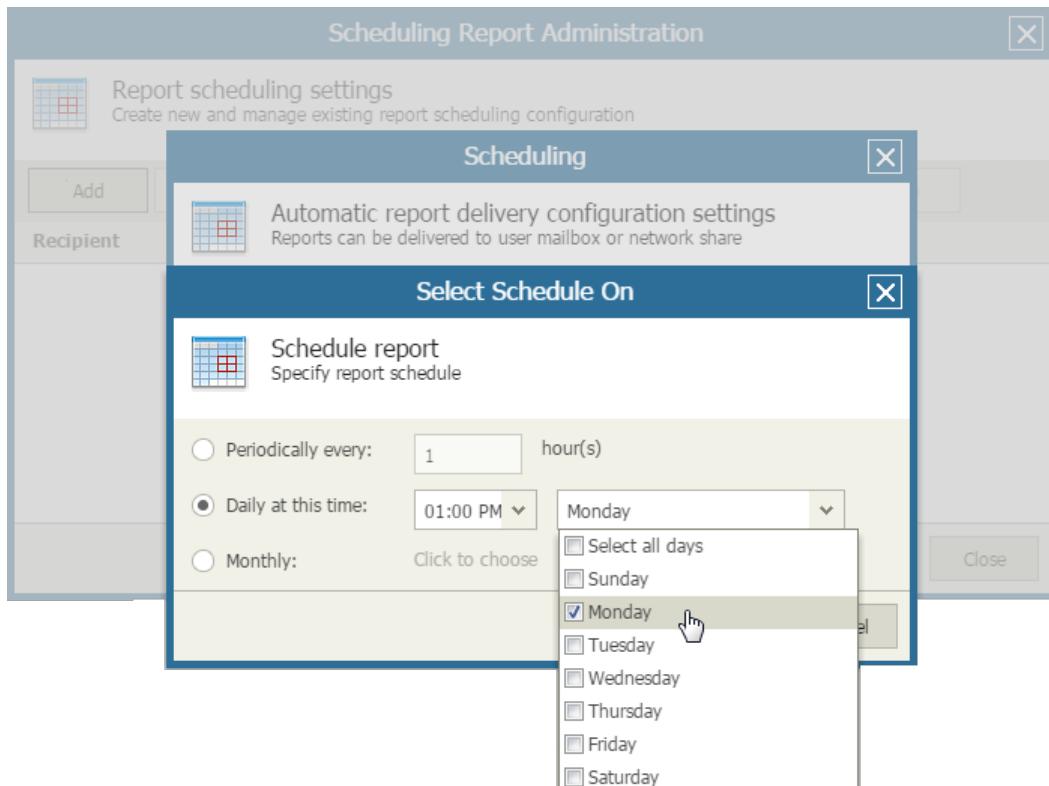
## Step 3. Configure Scheduling Settings

Before scheduling report delivery, make sure that:

- The account under which the *Veeam ONE Reporter Server* service runs has appropriate write permissions on the destination network shares.
- Collection session that gathers data from virtual infrastructure and Veeam Backup & Replication servers completes before the scheduled report generation time.

Configure scheduling settings for the saved report as follows:

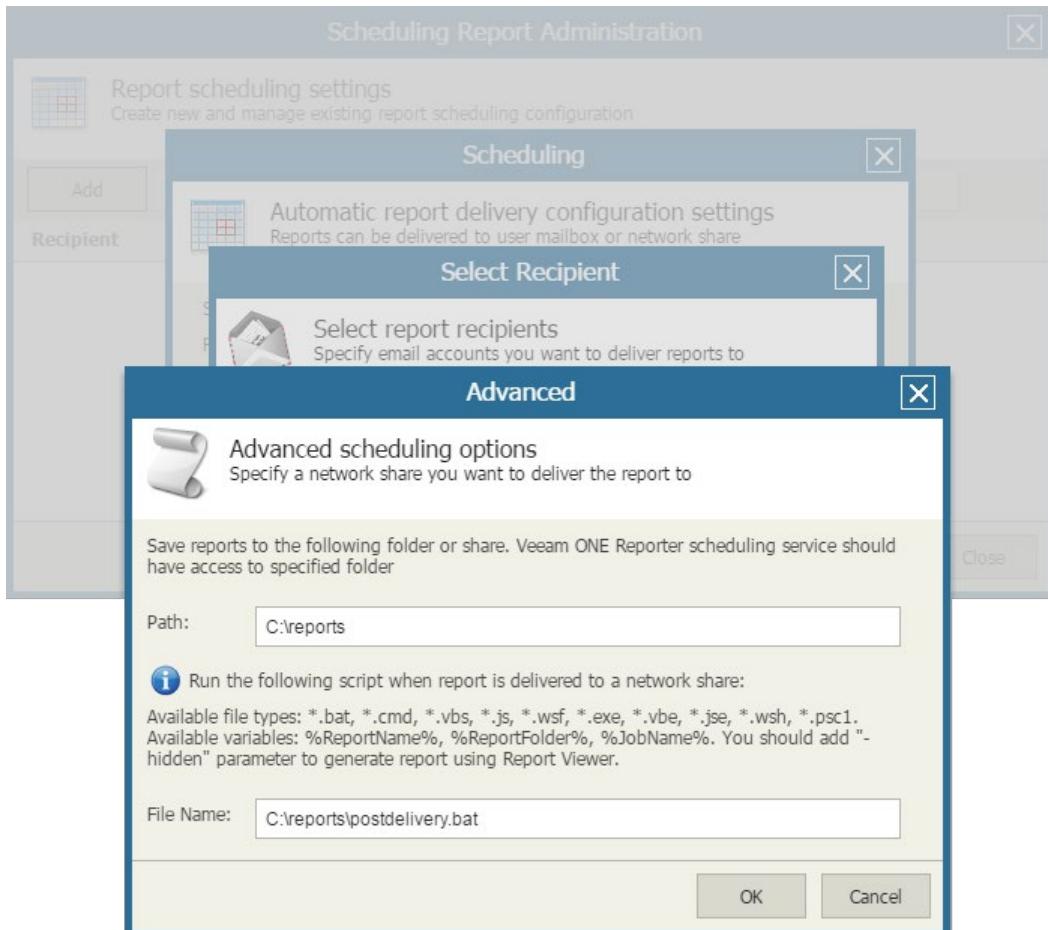
1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. Click the saved report in the list to open its properties.
4. In the **Actions** pane on the right, click **Scheduling**.
5. In the **Scheduling Report Administration** window, click **Add** to create a new schedule.
6. In the **Scheduling** window, configure automatic delivery settings as follows:
  - a. Click the **Schedule on** link and create a schedule according to which the report should be generated. To follow this example, schedule the report to run on a weekly basis.



- b. Click the **Recipient** link.
- c. In the **Select Recipient** window, click **Advanced**.

- d. In the **Advanced** window, specify advanced scheduling options. In the **Path** field, enter the path to the folder where the generated report will be stored. In the **File Name** field, specify the location of the script file.

To follow this example, enter **C:\reports** in the **Path** field and enter **C:\reports\postdelivery.bat** in the **File Name** field.



7. Save the scheduling settings.

## Expected Result

The report will be generated and copied in accordance with the specified schedule.

At the specified schedule time, Veeam ONE Reporter will automatically generate the report. After the report is created, Veeam ONE Reporter will trigger the script that will copy the report to network shares.

# Example B. Sorting Reports by Name

Consider the following scenario: you want to schedule a weekly delivery for a set of reports. After the reports are created, you want to save each report to a separate folder with the report name.

To sort reports into folders by report name, you can take the following steps:

1. [Create a folder that will group a set of necessary reports.](#)
2. [Save reports with the necessary parameters into the folder.](#)
3. [Create a script that will sort the generated reports.](#)
4. [Set the necessary schedule for the folder and specify the post-delivery script.](#)

## Step 1. Create Folder

Create a report folder as described in [Creating Folders](#). The folder will be used to group a set of reports that you want to create on a scheduled basis.

## Step 2. Save Reports

Save reports with the necessary parameters as described in section [Saving Reports](#).

## Step 3. Create Script

When you schedule a report delivery for set of reports in a folder, Veeam ONE Reporter saves the reports to a target location by the following path:

```
<TargetDirectory>\reporting-task-for-folder-<FolderName><ID>\
```

The sample script must perform the following operations:

1. Access the target report location:  
`C:\reports\reporting-task-for-folder-<FolderName><ID>\`
2. For every generated report, retrieve the report name and copy the report to a folder with the report name:  
`C:\share\myreports\%ReportName%\`  
To create a folder with the report name, the script will use the `%ReportName%` parameter.
3. Remove the reports from the target location and delete the target directory.

An example of the script is provided below:

```
::Changing directory to the target report location
cd reporting-task-for-folder*
set RD=%cd%

::Removing extension and date from the report file name
set ReportName=%~n1
set Extension=%~x1
set FolderName=%ReportName:~0,-11%

::Copying the report to a folder with the report name
echo f | xcopy %1 "c:\share\myreports\%FolderName%\%ReportName%%Extension%" /y

::Removing the target report location
cd ..
rd %RD% /s/q
```

Save the script as a Windows batch file on the machine where Veeam ONE Server is installed.

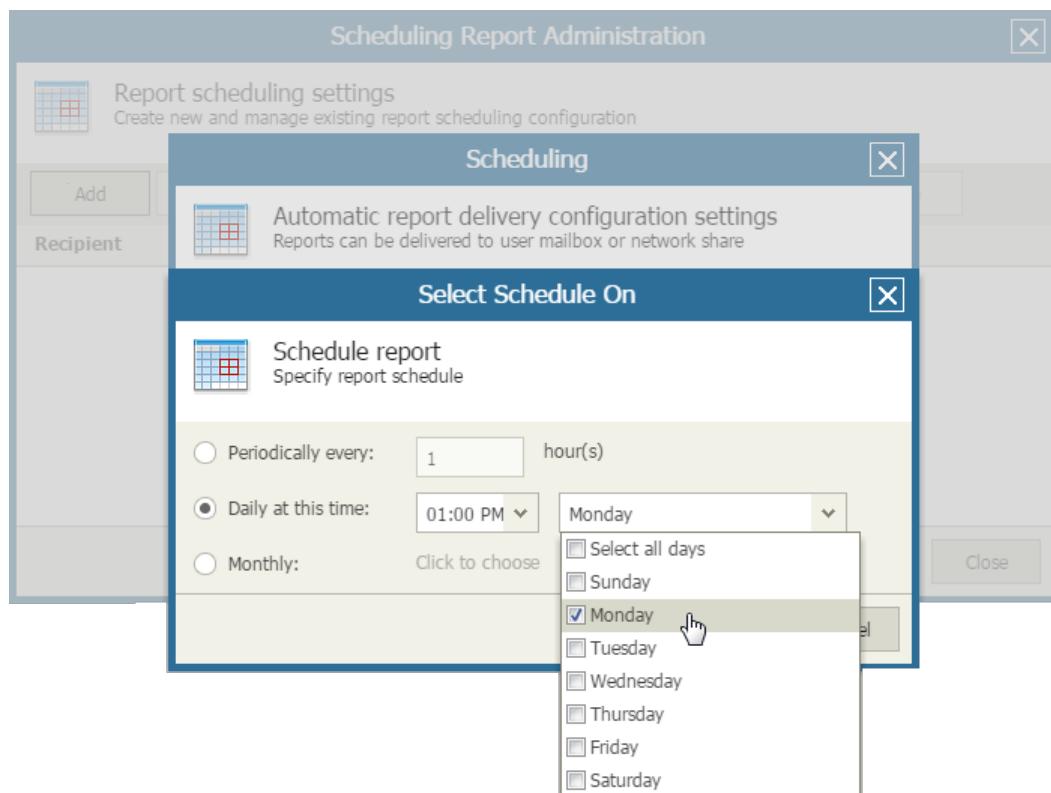
To follow this example, save the script with the `postdelivery.bat` name to the `C:\reports\` directory.

## Step 4. Configure Scheduling Settings

Configure scheduling settings for the saved report as follows:

1. Open Veeam ONE Reporter.
2. Open the **Workspace** section.
3. Select the folder that contains the necessary set of reports.
4. At the top of the reports list, click **Schedule Folder**.
5. In the **Scheduling Folder Administration** window, click **Add** to create a new schedule.

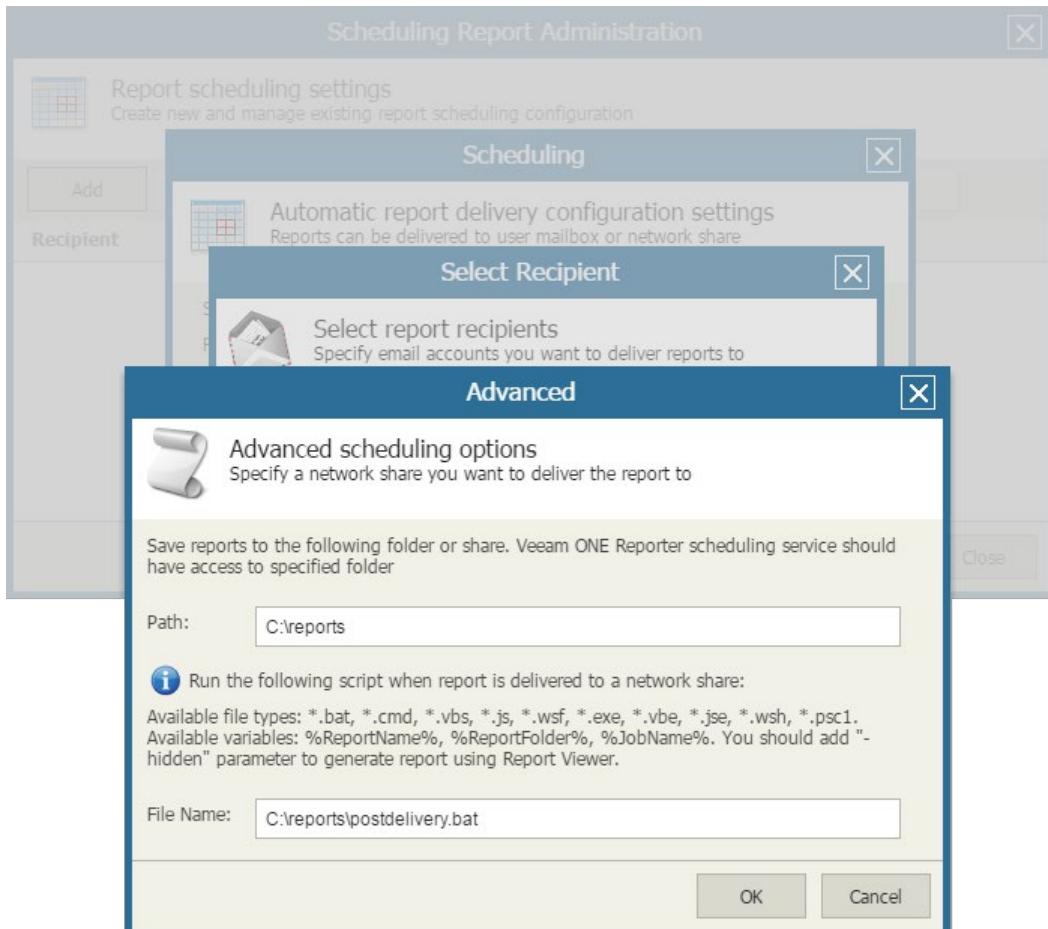
6. In the **Scheduling** window, configure automatic delivery settings as follows:
- Click the **Schedule on** link and create a schedule according to which the report should be generated. To follow this example, schedule the report to run on a weekly basis.



- Click the **Recipient** link.
- In the **Select Recipient** window, click **Advanced**.

- d. In the **Advanced** window, specify advanced scheduling options. In the **Path** field, enter the path to the folder where the generated report will be stored. In the **File Name** field, specify the location of the script file.

To follow this example, enter `C:\reports` in the **Path** field. In the **File Name** field, enter the path to the script and pass the report name parameter to the script: `C:\reports\postdelivery.bat %ReportName%`



7. Save the scheduling settings.

# Expected Result

At the specified schedule time, Veeam ONE Reporter will automatically generate the reports. When a report is created, Veeam ONE Reporter will trigger the script that will copy the report to a separate folder.

