Veeam ONE

Version 12

Reporting Guide

July, 2023

> **NOTE**
>
> Read the End User Software License Agreement before using the accompanying software programs. Using any part of the software indicates that you accept the terms of the End User Software License Agreement.

Contents

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 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 office locations, visit the Veeam Contacts Webpage.

Online Support

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

- Full documentation set: veeam.com/documentation-guides-datasheets.html

- Veeam R&D Forums: 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 prospective Veeam ONE users.

About Veeam ONE Web Client

Veeam ONE Web Client — part of an integrated Veeam ONE solution — is designed for documenting and reporting on the Veeam Backup & Replication and Veeam Backup for Microsoft 365 infrastructures, VMware vSphere, VMware Cloud Director and Microsoft Hyper-V environments. Veeam ONE Web Client includes detailed reports and dashboards for documentation, analysis, decision-making, chargeback, change tracking, capacity planning and optimization of resource utilization.

Accessing Veeam ONE Web Client

To start working with Veeam ONE Web Client:

1. Open the Veeam ONE Web Client website using one of the following options:

   o Access Veeam ONE Web Client from the Veeam ONE Client. To do this, in the main menu, click **Reports**.

   o Access Veeam ONE Web Client locally, on the machine where the Veeam ONE Web UI component is installed. To do this, in Microsoft Windows Programs menu choose **Veeam ONE Web Client**.

   o Access Veeam ONE Web Client remotely using your web browser. To do this, browse to the URL of the Veeam ONE Web Client 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 Web Client is available over HTTPS.

2. If Veeam ONE is configured to display a consent banner, read the banner content and click **I Agree**.

3. Type credentials of a user account under which you want to connect to Veeam ONE Web Client.

   The user account must either:

   o Be a member of the *Veeam ONE Administrators, Veeam ONE Power Users* or *Veeam ONE Read-Only Users* group. For details on user groups, see section Security Groups of the Veeam ONE Deployment Guide.

   o Have permissions assigned on objects in the vCenter Server or VMware Cloud Director inventory hierarchy. For details, see Veeam ONE Multi-Tenant Monitoring and Reporting.

   This prerequisite applies to the VMware vSphere and VMware Cloud Director platforms.

   To connect using credentials of a Microsoft Windows user account under which you are logged on to the machine, click **Log in as current user**.

   If multi-factor authentication (MFA) is enabled through certificate authentication, select **Log in with your certificate**. For details, see section Veeam ONE Web Settings of the Veeam ONE Monitoring Guide.

4. Click **Log In**.
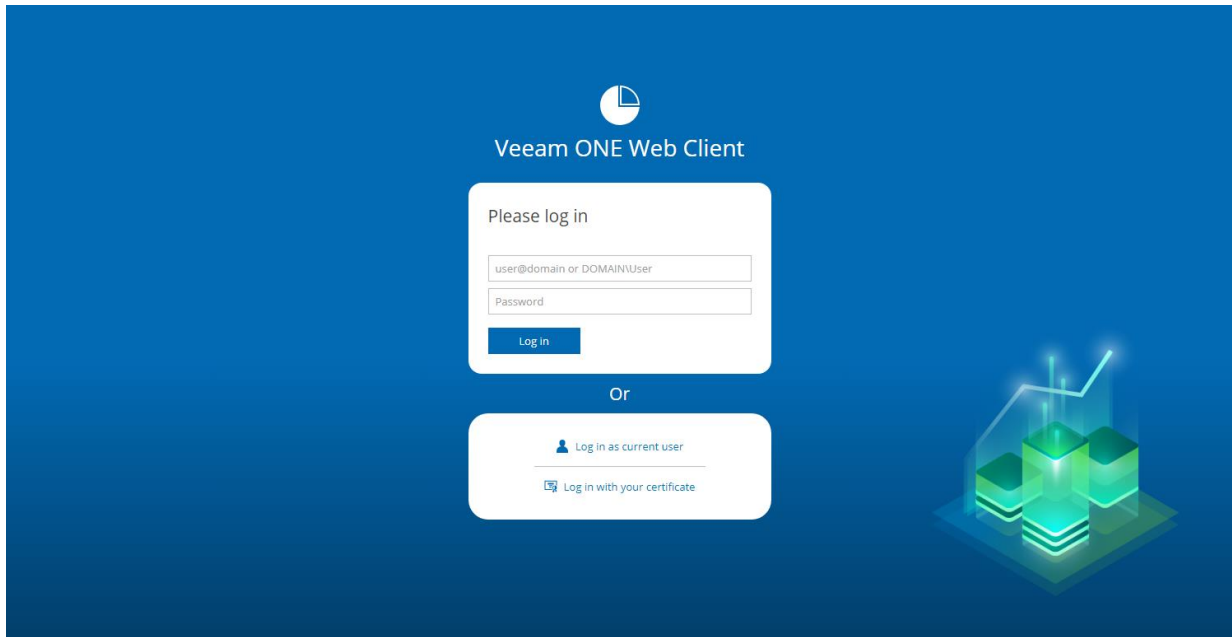
5. In the displayed **Welcome** pop-up window, click **Start** to view all updates.

   If you do not want to view updates, click **Skip**.

   If you do not want Veeam ONE Web Client to display the **Welcome** window, select the **Don't show again** check box.

> **NOTE:**
>
> If you log in for the first time, make sure that pop-up windows are allowed for the Veeam ONE Web Client website.

Configuring Veeam ONE Web Client

Veeam ONE Web Client is ready for use right after the installation of Veeam ONE. However, before you start using Veeam ONE Web Client, you may need to check and adjust its default configuration.

1. Schedule data collection for connected servers.

2. Customize reporting settings.

3. Schedule dashboards and reports delivery.

4. Adjust the login session settings.

Required Permissions

To be able to access the **Configuration** section, a user must be a member of the *Veeam ONE Administrators* group on the machines where the Veeam ONE Server and Veeam ONE Web Services components are installed. For details on Veeam ONE security groups, see section Security Groups of the Veeam ONE Deployment Guide.

Data Collection

To start working with dashboards and reports, you need to collect data from Veeam Backup & Replication, Veeam Backup for Microsoft 365 and virtualization servers.

Server connections can be configured either during Veeam ONE installation or you can connect servers later, in the Veeam ONE Client. In Veeam ONE Web Client, you can review configured connections, change the data collection schedule or run data collection manually.

Before you configure Veeam ONE Web Client settings, review the data collection summary:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the **Configuration** menu on the left, click **Data Collection**.

The **Data collection overview** section contains information about connected servers, including results of the latest collection sessions and date and time of the next data collection run according to the schedule.

If you do not have any connected servers yet, connect them in the Veeam ONE Client. For details, see section Connecting Servers of the Veeam ONE Deployment Guide.

The **Details** section displays Veeam Backup & Replication, Veeam Backup for Microsoft 365 and virtualization servers from which data for Veeam ONE Web Client is collected.

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

- Server name

- Status of the latest data collection (*Success*, *Warning*, *Failed*, *Processing*, *Stopped*)

- Date and time when connection settings were configured

- Date and time of the latest data collection session

Scheduling Data Collection

By default, data for Veeam ONE Web Client and 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, Veeam Backup for Microsoft 365 and virtualization 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 Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Data Collection**.

4. On the toolbar, click **Schedule**.

5. Make sure the **Collect data automatically** check box is selected.

6. Set the schedule according to which data collection must start.

   o To run data collection with specific time intervals, select the **Periodically every N 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.

   o 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 **Days** section, select days of week on which data collection must run.

7. Click **Save**.

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 Web Client, 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 Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Data Collection**.

4. On the toolbar, click **Schedule**.

5. Clear the **Collect data automatically** check box.

6. Click **Save**.

Running Data Collection Manually

You can run data collection for Veeam ONE Web Client 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

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

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Data Collection**.

4. On the toolbar, click **Start**.

Stopping Data Collection

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

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Data Collection**.

4. On the toolbar, click **Stop**.

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 Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Event Logs**.

4. In the list of sessions, select the necessary *Object properties data collection*.

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

   o **Task name** — limit the list of sessions by name

   o **Task type** — limit the list of sessions by data collection type

   o **Task status** — limit the list of sessions by status (*Success, Warning, Failed, Processing, Stopped*)

   o **Time period** — limit the list of sessions by start date

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

Task Details   ✕

Task name:	Object properties data collection
Status:	✅ Success
Start time:	1/16/2023 2:16:29 AM
End time:	1/16/2023 2:38:37 AM

Events:

1/16/2023 2:16:31 AM [info]: Retrieving collection job tasks number

1/16/2023 2:16:31 AM [info]: Collection task has been started for 'vbrv1.tech.local'.

1/16/2023 2:16:31 AM [info]: Initializing data collector

1/16/2023 2:16:31 AM [info]: Initializing connection

1/16/2023 2:16:31 AM [info]: vbrv1.tech.local: Collecting data from Veeam backup server.

1/16/2023 2:16:36 AM [info]: Collection task has been started for 'vvgz5.tech.local'.

1/16/2023 2:16:36 AM [info]: Initializing data collector

1/16/2023 2:16:36 AM [info]: Initializing connection

1/16/2023 2:16:36 AM [info]: vvgz5.tech.local: Collecting data from Veeam backup server.

1/16/2023 2:16:41 AM [info]: Collection task has been started for 'vvgz4.tech.local'.

1/16/2023 2:16:41 AM [info]: Initializing data collector

1/16/2023 2:16:41 AM [info]: Initializing connection

1/16/2023 2:16:41 AM [info]: vvgz4.tech.local: Collecting data from Veeam backup server.

1/16/2023 2:16:46 AM [info]: Collection task has been started for 'zvc.tech.local'.

1/16/2023 2:16:46 AM [info]: Initializing data collector

Close

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

Database Maintenance Tasks

In addition to data collection, Veeam ONE periodically runs database maintenance tasks to delete data that must no longer be kept in the database according to the retention policy. Database maintenance tasks run every Sunday at 3:00 a.m.

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

Reporting Settings

In the **Reporting** section, you can customize miscellaneous settings of the Veeam ONE Web Client configuration:

- Report Branding

  In this section, you can replace the default report header with a custom image.

- SSRS Server

  In this section, you can specify settings of the Microsoft SQL Server Reporting Services server. These settings will be used for integration with Veeam ONE Web Client.

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.

Image Requirements

Before creating an image that will replace the default report header, make sure that the image file is saved in the PNG, JPEG, JPG or BMP formats.

Replacing Default Report Header

To replace the default report header with a custom image:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Reporting**.

4. In the **Report branding** section, click **Browse** and specify path to the custom report image file.

5. Click **Apply.**
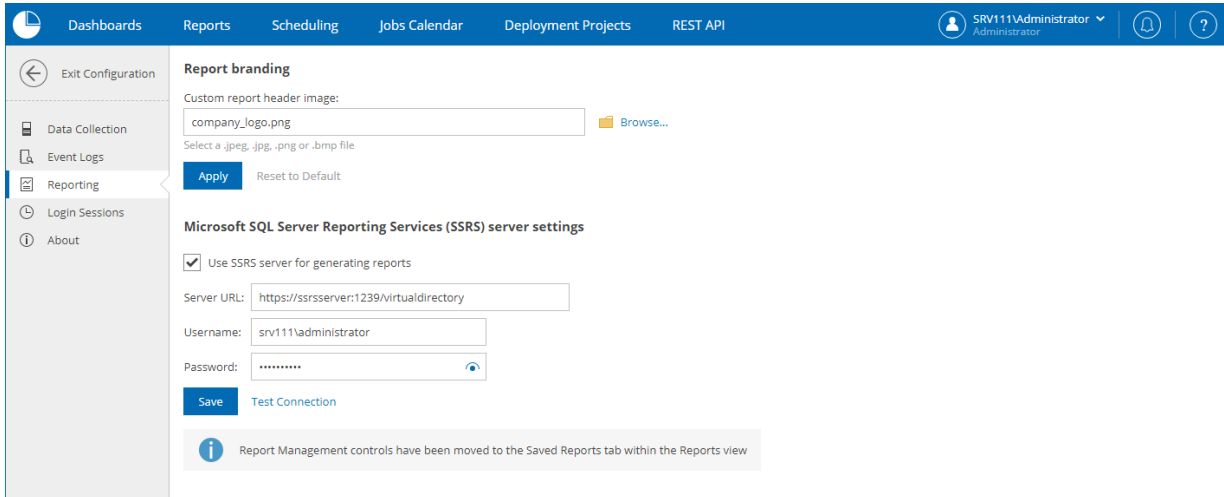
Restoring the Default Report Header

To restore the default report header:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Reporting**.

4. In the **Report branding** section, click **Reset to Default**.

5. In the **Reset Report Header Image** window, click **Reset**.

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 Web Client 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 Web Client:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Reporting Settings**.

4. In the **Microsoft SQL Server Reporting Services (SSRS) Server Settings** section, select the **Use SSRS server for generating reports** check box.

5. In the **Server URL** field, enter the address of the SSRS hosting server.

   The URL must be specified in the following format: `https://servername:port/virtualdirectory`. To check if this URL is correct, launch the Reporting Services Configuration Manager and check the **Web Service URL** section.

6. Specify a user name and a password to connect to the SSRS server.

   The user name must be specified in the `DOMAIN\USERNAME` format.

7. To verify SSRS server settings, click **Test Connection**. Veeam ONE Web Client will display verification results on a summary screen.

8. Click **Save** to save SSRS server settings.
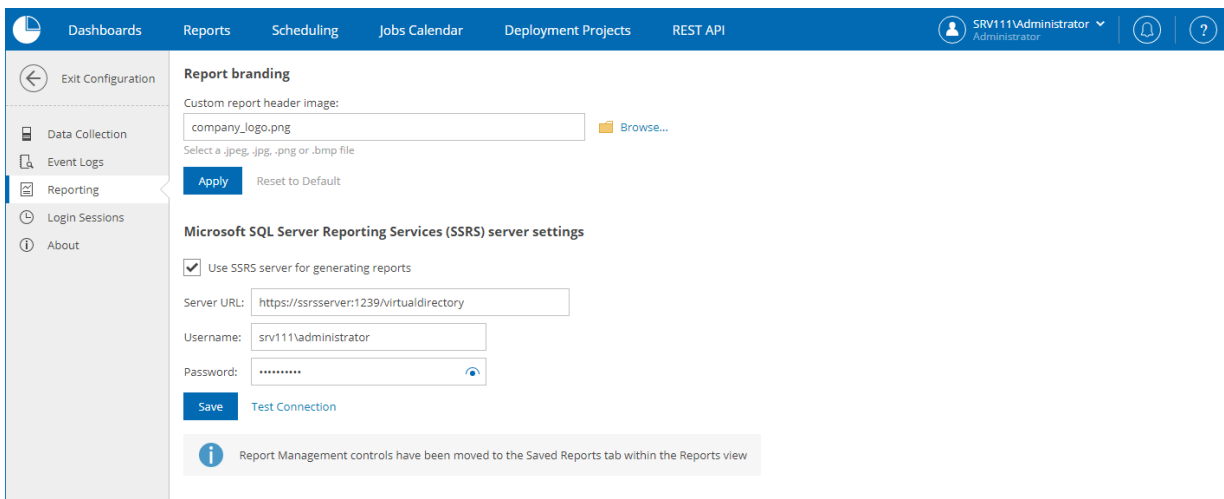
Login Sessions

You can adjust the login session settings to optimize the process of accessing Veeam ONE Web Client. To do that:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Login Sessions**.

4. Specify login session settings:

   o In the **Idle user login session timeout, minutes**, specify the time period in minutes after which an idle user must be automatically logged out.

   o In the **Idle administrator login session timeout, minutes**, specify the time period in minutes after which an idle administrator must be automatically logged out.

   o In the **Maximum number of concurrent login sessions per user**, specify the maximum allowed number of simultaneously processed login attempts performed by a single user.

   o To view information on previous login sessions, select the **Show previous login attempts after logging in** check box. The information will be displayed on an additional page that opens after you log in.

5. Click **Save**.

General Configuration Details

To access Veeam ONE Web Client configuration details:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **About**.

In the **About** section, you can view the following product details: Veeam ONE version, the machine where the Veeam ONE Server component runs and the location of the log files on the machine where Veeam ONE Server component is installed.

Dashboards

Veeam ONE Web Client dashboards provide at-a-glance view on the managed Veeam Backup & Replication and Veeam Backup for Microsoft 365 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 Web Client 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 Web Client 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 Web Client.

2. Open the **Dashboards** section.

3. Click the dashboard preview image.
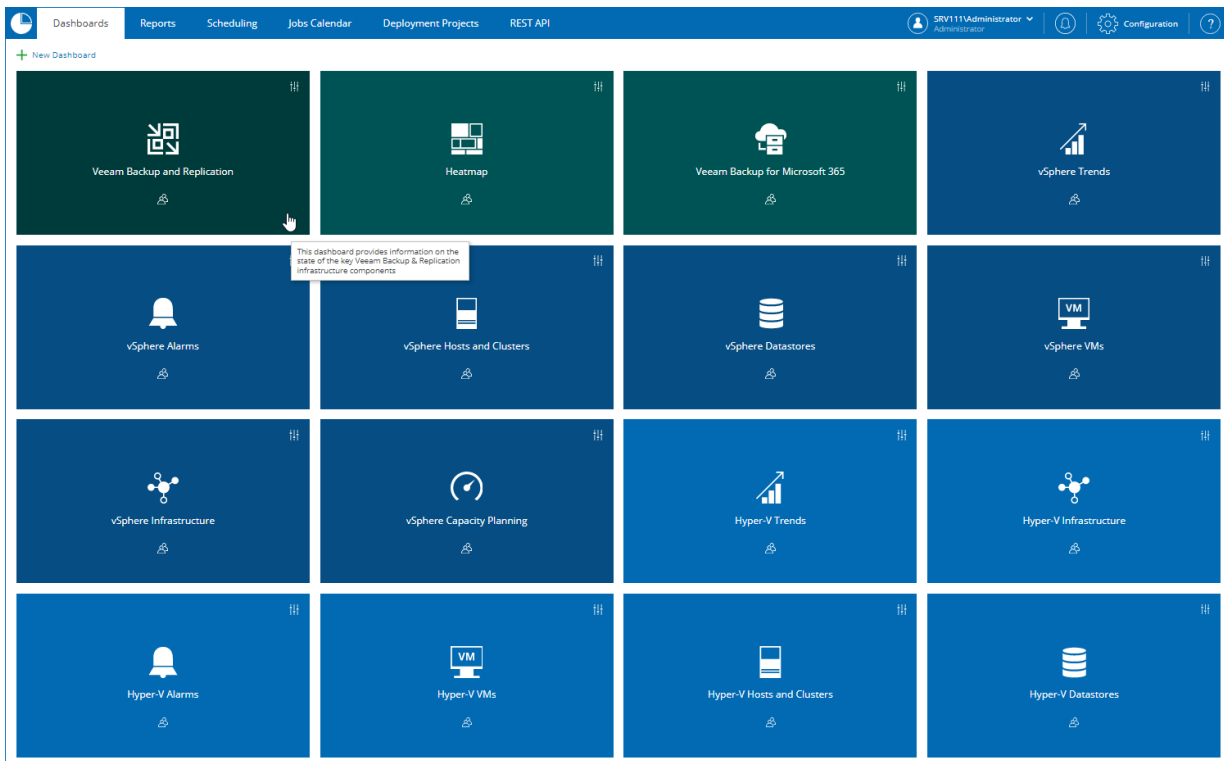
Dashboard Details

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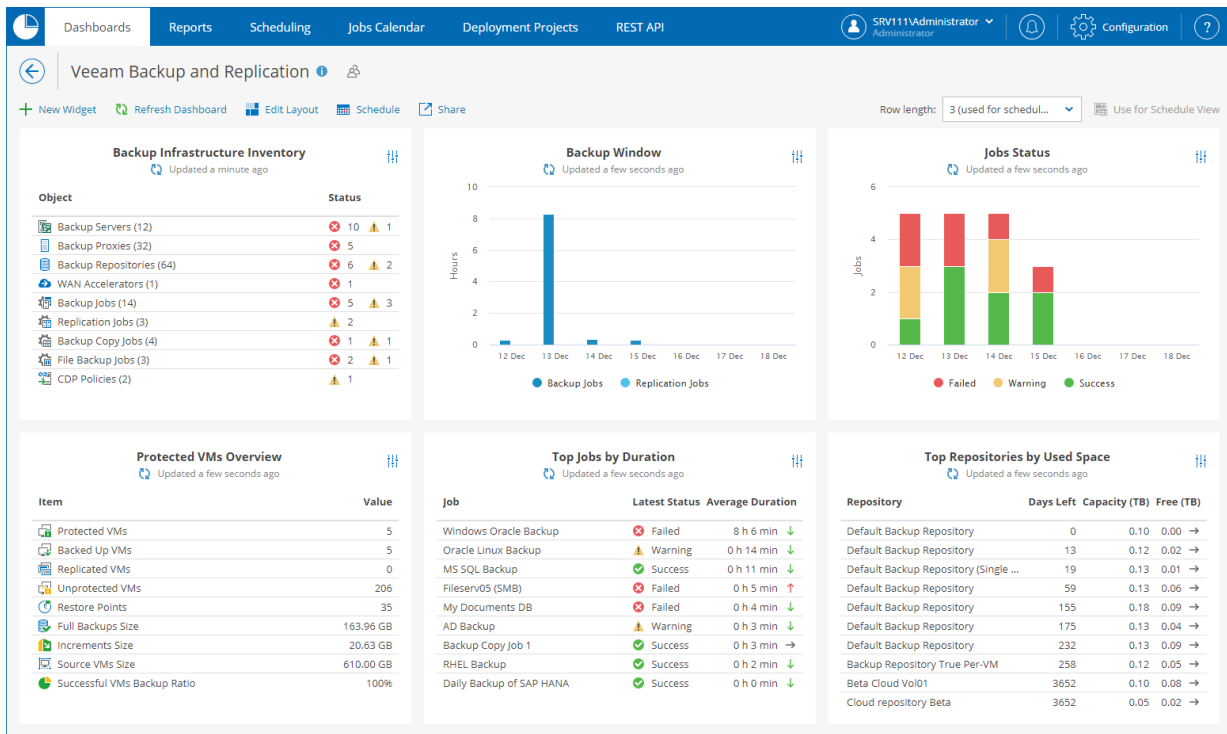
To get back to the list of dashboards, click the **Dashboards** tab at the top of the page, click the **Back** button at the top left corner or use the browser **Back** button.

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.

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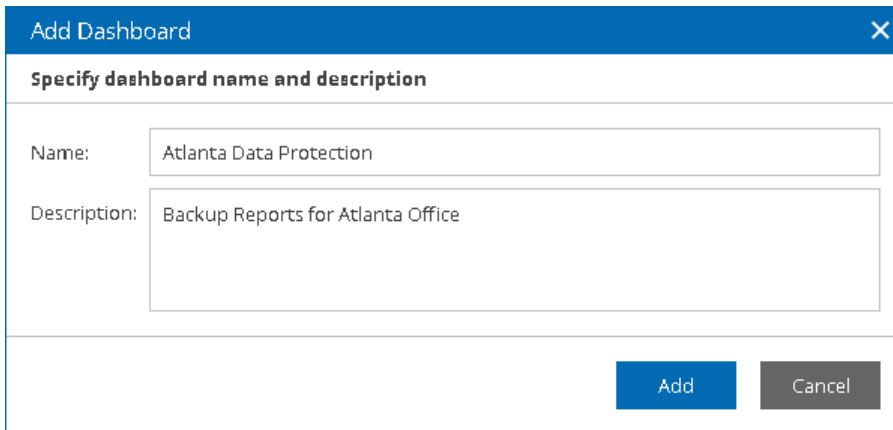
   Add custom widgets to the new dashboard and specify widget settings.

Step 1. Create Dashboard

To create a new dashboard:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. At the top left corner of the **Dashboards** section, click **New Dashboard**.

4. In the **Add dashboard** window, specify dashboard settings:

   o In the **Name** field, specify the name that will be displayed at the top of the dashboard.

   o In the **Description** field, specify a brief dashboard description.

5. Click **Add**.

A new empty dashboard will be created and added to the **Dashboards** section.

Step 2. Add Widgets to Dashboard

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

Veeam ONE Web Client comes with a set of widgets packs for Veeam Backup & Replication, Veeam Backup for Microsoft 365, 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 Web Client.

2. Open the **Dashboards** section.

3. Click the dashboard preview image.

4. At the top left corner of the dashboard window, click **New Widget**.

   Veeam ONE Web Client will launch the **Add Widget** wizard.

5. At the **Widget** step of the wizard, select a widget to add on the dashboard and specify the widget name in the **Widget name** field. The widget name will be displayed at the top of the widget on the dashboard.
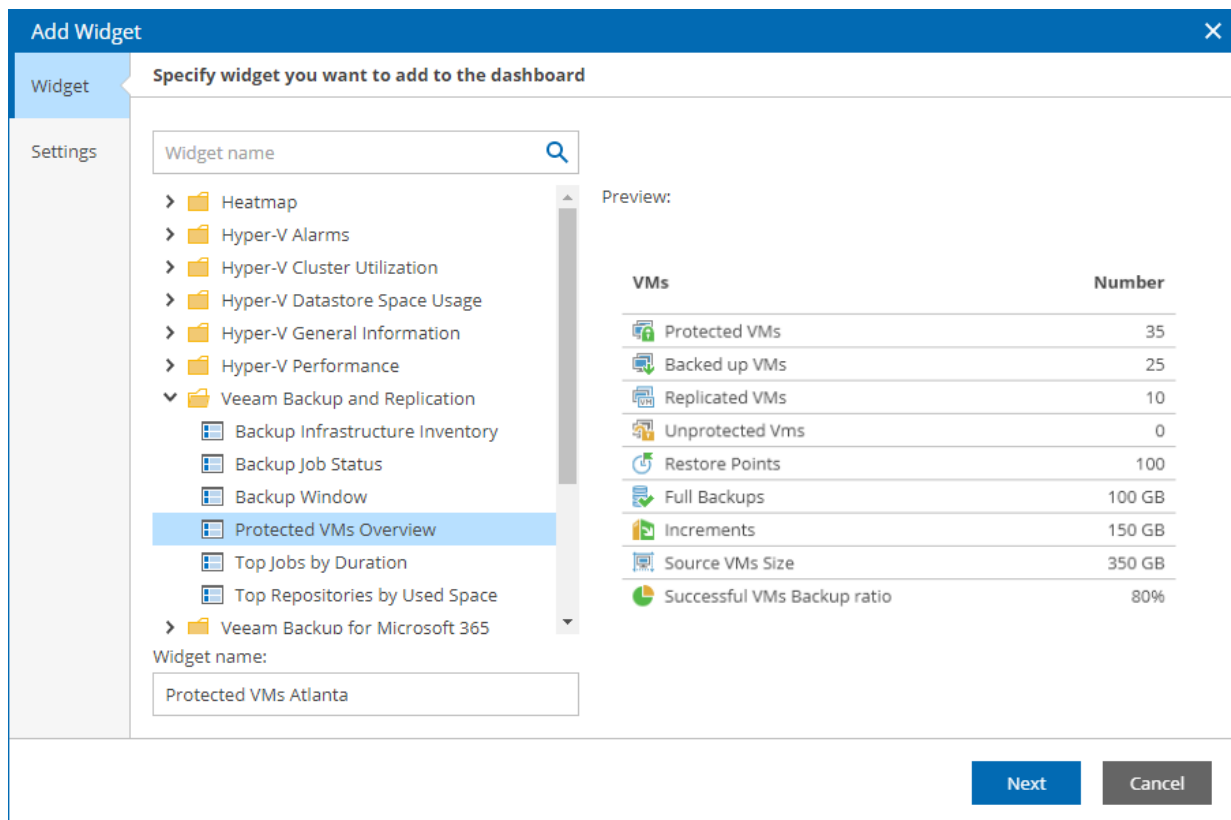
6. At the **Settings** step of the wizard, define widget options, such as the scope, time interval, number of objects to display in the widget and so on.

   Availability of widget options depends on the type of the selected widget.
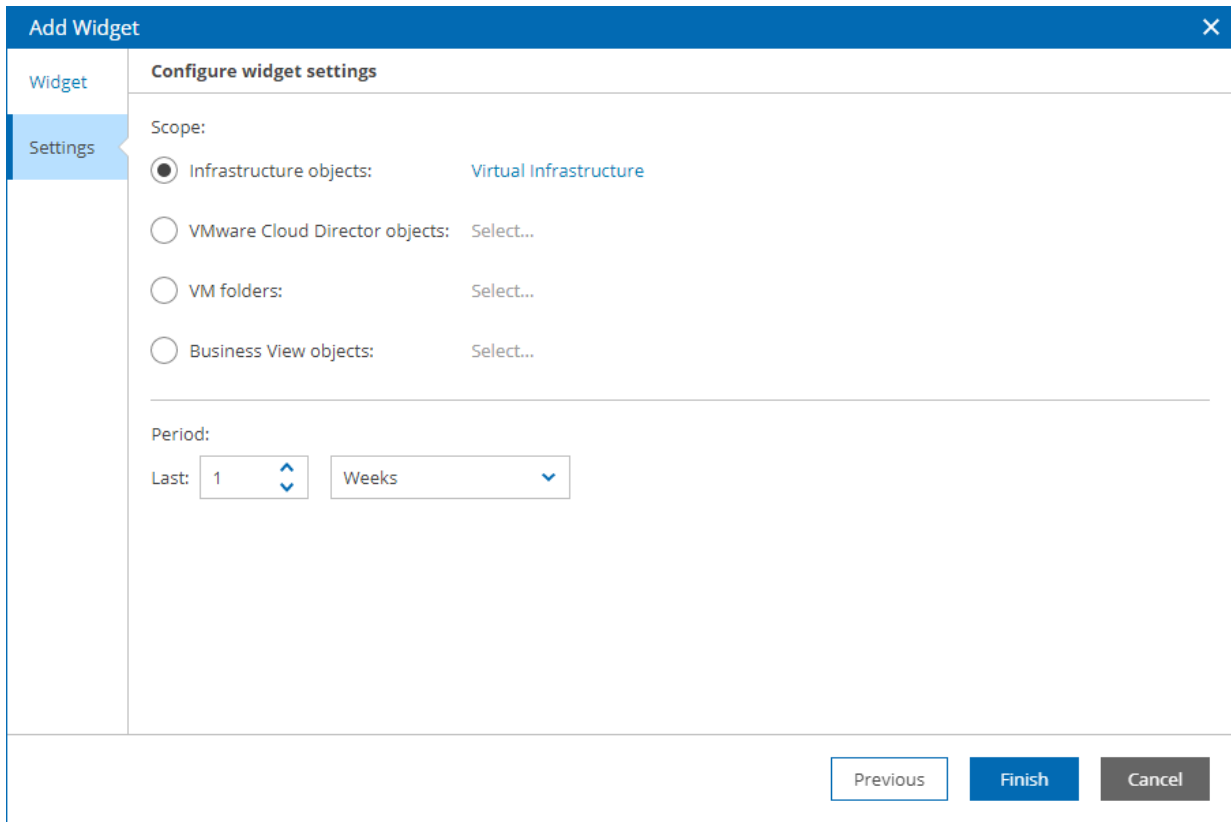
7. Click **Finish** to add the widget to the dashboard.
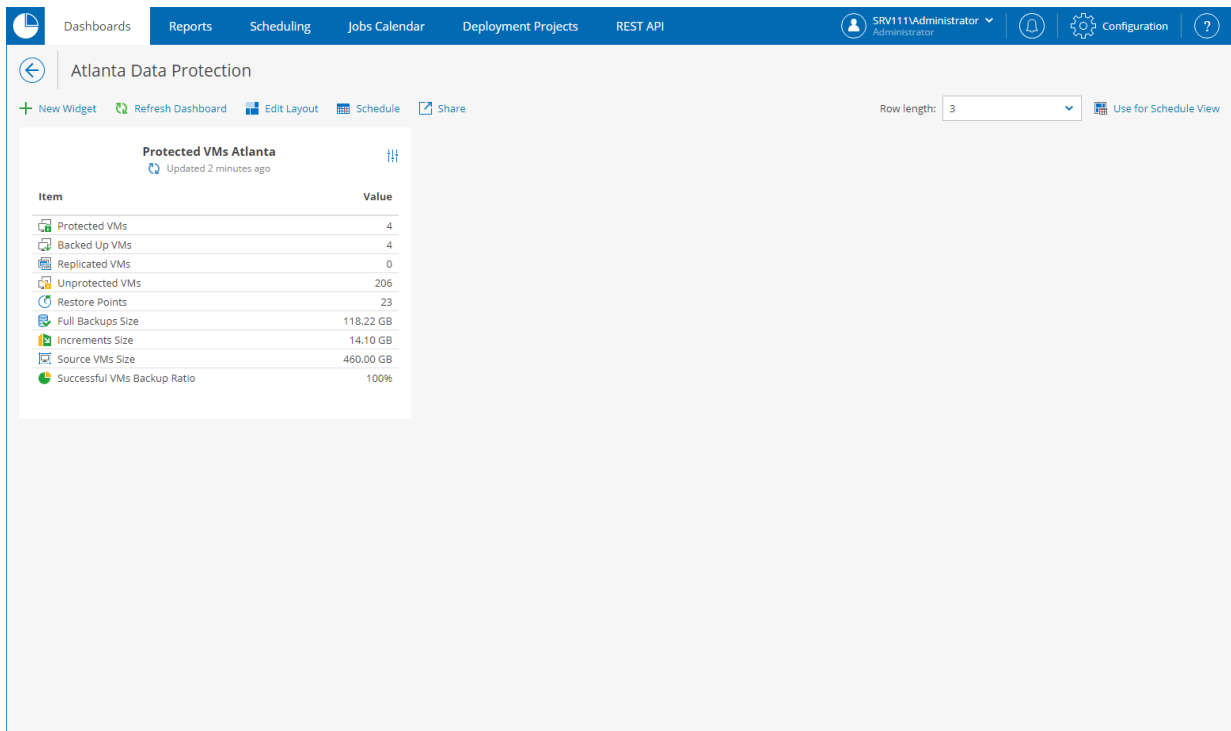
8. Repeat steps **4–8** for each new widget you want to add to the dashboard.

Setting Dashboard Preview Image and Color

You can select the preview image and background color that will be used to depict the dashboard in the **Dashboards** section.

To set a preview image and background color for a dashboard:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Edit Appearance**.

4. In the **Select color** palette, choose the necessary background color.

5. In the **Select icon** list, choose an image that must depict the dashboard.

   You can select a custom image preview image. To do so, click the **Browse** link at the top of the list and select the necessary image file. The image must be in GIF, JPEG, JPG, PNG, BMP or SVG format.

6. Click **Save**.
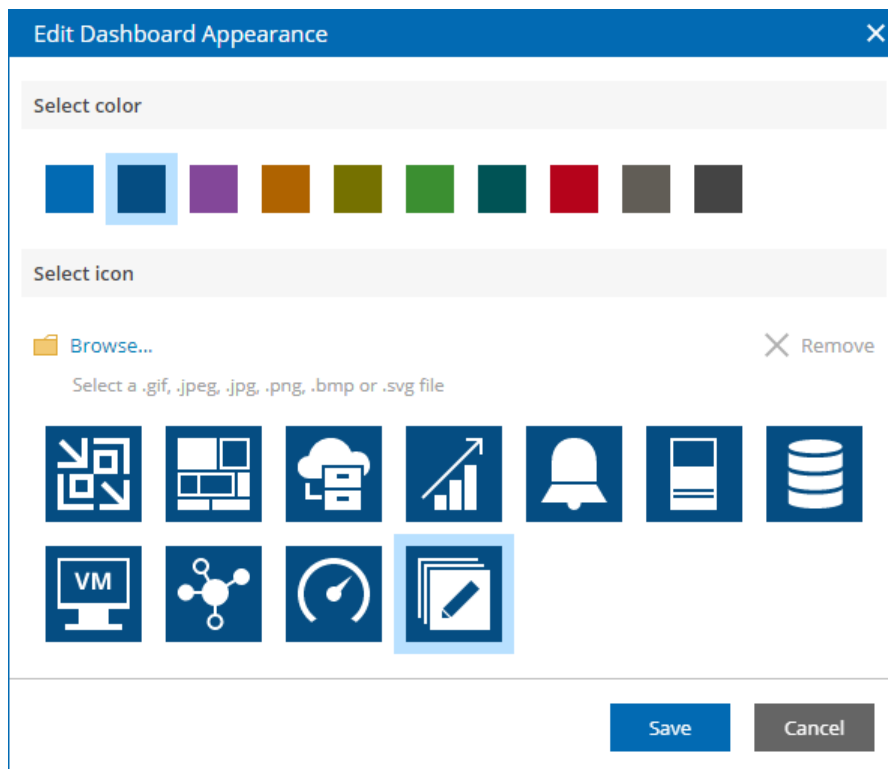
Managing Dashboard Layout

You can arrange widgets in a dashboard, change the number of widget columns and select a row length for dashboard schedule.

Changing Dashboard Layout

To change the arrangement of dashboard widgets:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. Click the necessary dashboard to open it.

4. At the top left corner of dashboard window, click **Edit Layout**.

5. Change the arrangement of widgets by dragging them to the necessary dashboard cells.

6. Click **Save**.

Changing Dashboard Row Length

To change the number of widget columns:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. Click the necessary dashboard to open it.

4. In the **Row length** list, choose the number of widget columns.

5. To assign the selected number of columns to automatically delivered dashboards, click **Use for Schedule View**.

   For details on dashboard delivery, see Scheduling Dashboards.

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 Web Client.

2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Schedule**.

    Alternatively, you can click the dashboard preview image to open the dashboard and click **Schedule** at the top left corner of the dashboard window.

4. In the **Dashboard Scheduling Settings** window, click **Add**.

    Veeam ONE Web Client will launch the **Add Dashboard Schedule** wizard.

5. Configure dashboard delivery schedule as described in section Configuring Delivery Schedule.

6. Click **Close**.

Managing Dashboard Schedules

You can create multiple schedules for a dashboard. Configuring 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 Web Client.

2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Schedule**.

   Alternatively, you can click the dashboard preview image to open the dashboard and click **Schedule** at the top left corner of the dashboard window.

4. Use buttons in the **Dashboard Scheduling Settings** window to manage the schedules that you added for the dashboard:

   o To create a new dashboard schedule, click **Add**.

   o To edit scheduling settings, select a schedule in the list and click **Edit**.

   o To enable a previously disabled schedule, select the schedule in the list and click **Enable**.

   o To temporarily disable a schedule, select the schedule in the list and click **Disable**.

   o To delete a schedule from the list, select the schedule in the list and click **Delete**.

5. To finish working with the schedules, click **Close**.

Dashboard Scheduling Settings					✕
Create and manage multiple dashboard delivery schedules, and configure delivery settings					
➕ Add ✏ Edit ⏻ Enable ⛔ Disable ✕ Delete					
Destination	**State**	**Schedule**	**Status**	**Created by**	⬚⬚⬚
administrator@alpha.com	⏻ Enabled	Periodic	▶ Processing	👤 SRV111\Administrator	
					Close
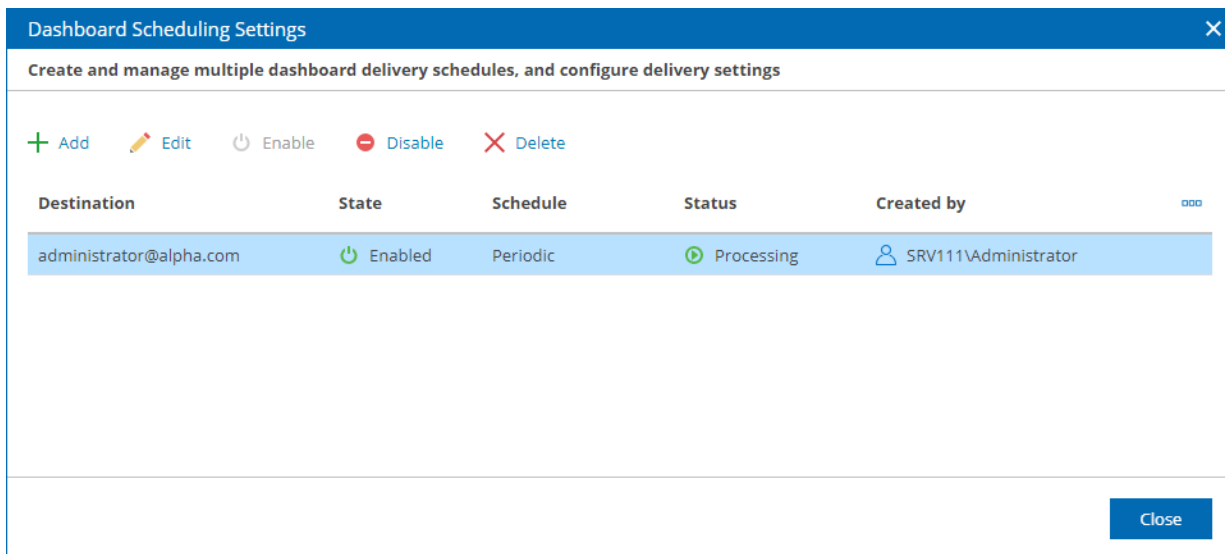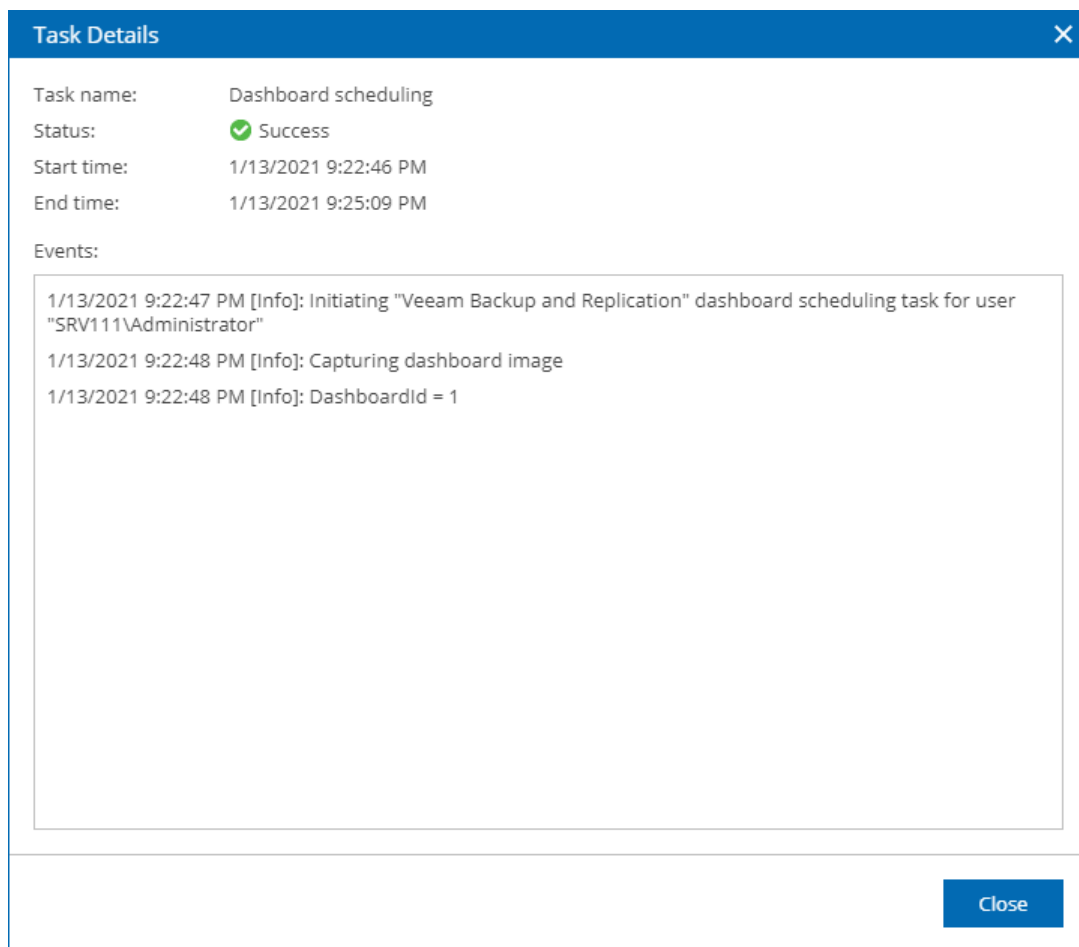
Viewing Dashboard Delivery Results

Every dashboard delivery initiates a new delivery session.

To view details of dashboard delivery sessions:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Event Logs**.

4. To display all dashboard delivery sessions, click **Filters**, select *Dashboard scheduling*, and click **Apply**.

5. Click the necessary session in the list to display detailed information about it.

Cloning Dashboards

If you need a custom dashboard, you can create a clone of an existing dashboard and modify its settings and widgets.

To clone a dashboard:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Clone**.

4. In the **Clone Dashboard** window, change the name and description of a dashboard clone.

5. Modify dashboard widgets as described in Managing Widgets.

6. If necessary, modify dashboard preview image and color as described in Setting Dashboard Preview Image and Color.

7. If necessary, modify dashboard layout as described in Managing Dashboard Layout.

Sharing Dashboards

To share a dashboard with other users, you can enable public access to the dashboard or generate a direct dashboard link.

Generating Direct Dashboard Link

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

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Share**.

   Alternatively, you can click the dashboard preview image to open the dashboard and click **Share** at the top left corner of the dashboard window.

4. In the **Share Dashboard** window, switch the **Direct link access** toggle to *On*.

5. Click **Copy Link** to copy the link and use it to share with other users or integrate to web portals.

6. If you need to generate a new direct link, click **Reset Link**.

   Note that after you change the direct link, the previous link will become invalid.

7. Click **Close**.
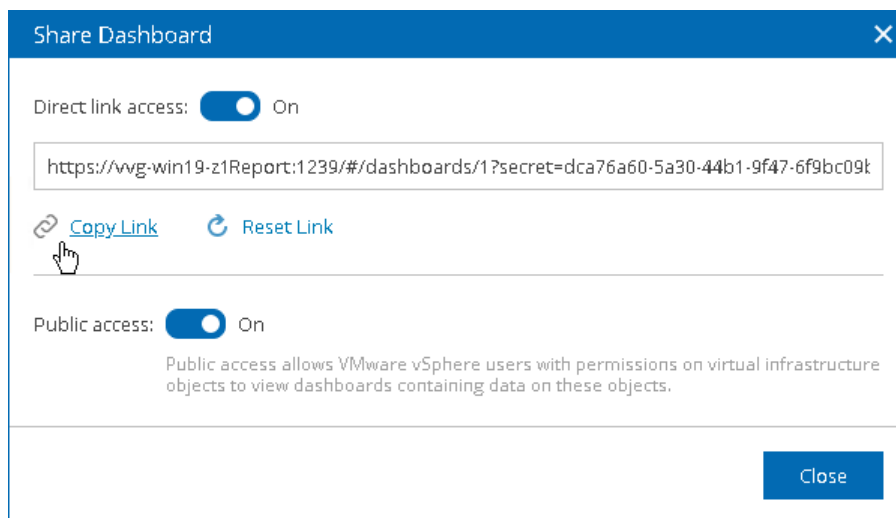
Enabling and Disabling Public Access

To share a dashboard with other users, you can enable public access to this dashboard. Veeam ONE users, including VMware vSphere and VMware Cloud Director users who have permissions assigned on virtual infrastructure objects, can access published dashboards in the Veeam ONE Web Client.

> **NOTE:**
>
> Predefined dashboards are available for public access by default.

To enable or disable public access to a dashboard:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Share**.

   Alternatively, you can click the dashboard preview image to open the dashboard and click **Share** at the top left corner of the dashboard window.

4. In the **Share Dashboard** window, switch the **Public access** toggle to *On* to enable public access, or to *Off* to disable public access.

5. Click **Close**.

Modifying Dashboards

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

Changing Dashboard Name and Description

To modify the name or description of a dashboard:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. At the top right corner of the dashboard preview image, expand the menu and click **Edit Information**.

4. In the **Edit Dashboard Information** window, change the dashboard name and description.

5. Click **Save**.

Changing Dashboard Widgets

To modify widgets of a dashboard:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. Click the dashboard preview image.

4. Change properties of dashboard widgets.

   For details, see Managing Widgets.

5. Change the arrangement of dashboard widgets.

   For details, see Managing Dashboard Layout.

Deleting Dashboards

You can delete dashboards if you no longer need them:

1. Open Veeam ONE Web Client.

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 **Delete** to confirm deletion.

Managing Widgets

You can edit settings of dashboard widgets, create reports based on widgets and remove widgets from dashboards.

Changing Widget Properties

You can change the way your widgets look on dashboards:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. Click the necessary dashboard to open it.

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**.

6. In the **Edit Widget** wizard, change the widget settings.

   For details, see Add Widgets to Dashboard.

7. Save changes.

Creating a Widget Report

You can create reports associated with dashboard widgets:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** view.

3. Click the necessary dashboard to open it.

4. On the dashboard, 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 report window, specify report parameters.

7. Click **Preview** to open the report.

Deleting Widgets

You can delete widgets from dashboards:

1. Open Veeam ONE Web Client.

2. Open the **Dashboards** section.

3. Click the necessary dashboard to open it.

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**.

6. In the displayed window, click **Delete** to confirm deletion.

Reports

Veeam ONE reports analyze data collected from VMware vSphere, Microsoft Hyper-V, Veeam Backup & Replication and Veeam Backup for Microsoft 365 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 Web Client 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 Web Client reports are available in the **Reports** section.

The **Report Templates** tab of the **Reports** section contains a hierarchy of report packs or folders organizing reports. The **Saved Reports** tab of the **Reports** section contains your saved reports. The right part of the **Reports** section displays the list of reports in the selected report pack or folder.

The *User reports* folder of the **Saved reports** tab contains reports created by users who have permissions assigned on objects in the vCenter Server or VMware Cloud Director inventory hierarchy. For details, see Multi-Tenant Monitoring and Reporting.

> **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 Web Client.

To create a report:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. In the left part, select the necessary tab.

4. In the hierarchy on the left, select the necessary report pack or folder.

5. In the displayed list of reports, click the necessary report.

6. Specify report parameters, such as the virtual or backup infrastructure scope, reporting period and so on.

7. At the top of the report parameters, click the **Preview link**.

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

Navigating Reports

Veeam ONE reports vary depending on the type and input parameters. They can be short or span to several pages. Report data can be presented as graphs, charts, tables or text entries.
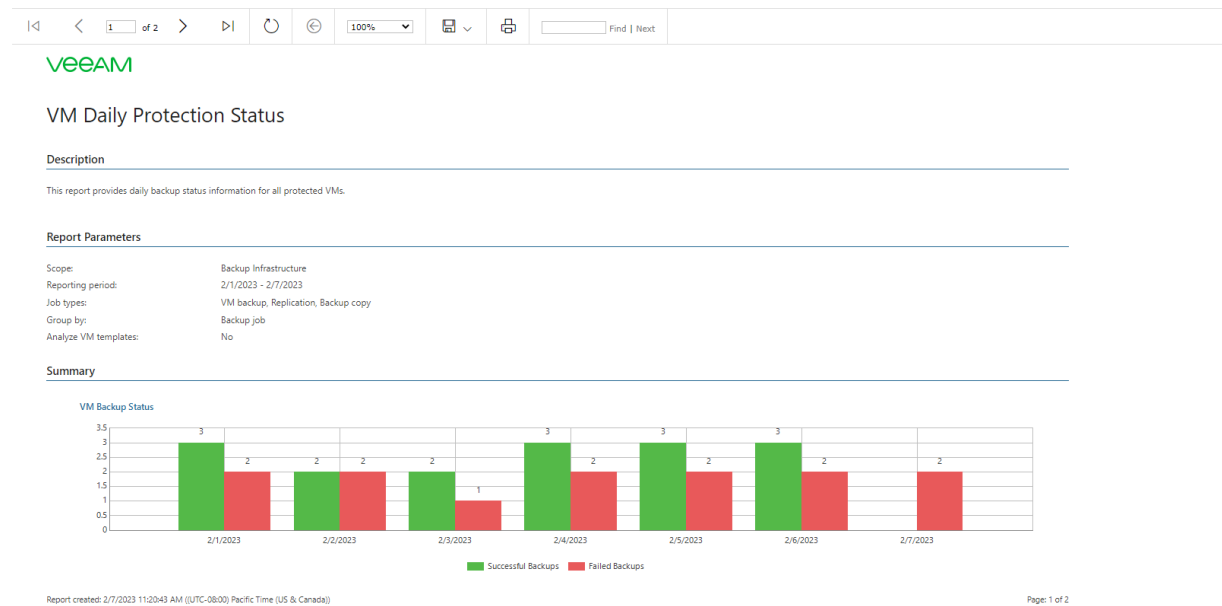
The navigation menu at the top of a report allows you to navigate the report:

- 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 Web Client 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 12, you must upgrade it to the latest available version.

To download and install Veeam Report Viewer:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. In the hierarchy on the left, select **Offline Reports**.

4. In the list of offline reports, click any report.

5. In the information section, click the **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.

8. Follow the steps of the setup wizard to install Veeam Report Viewer.
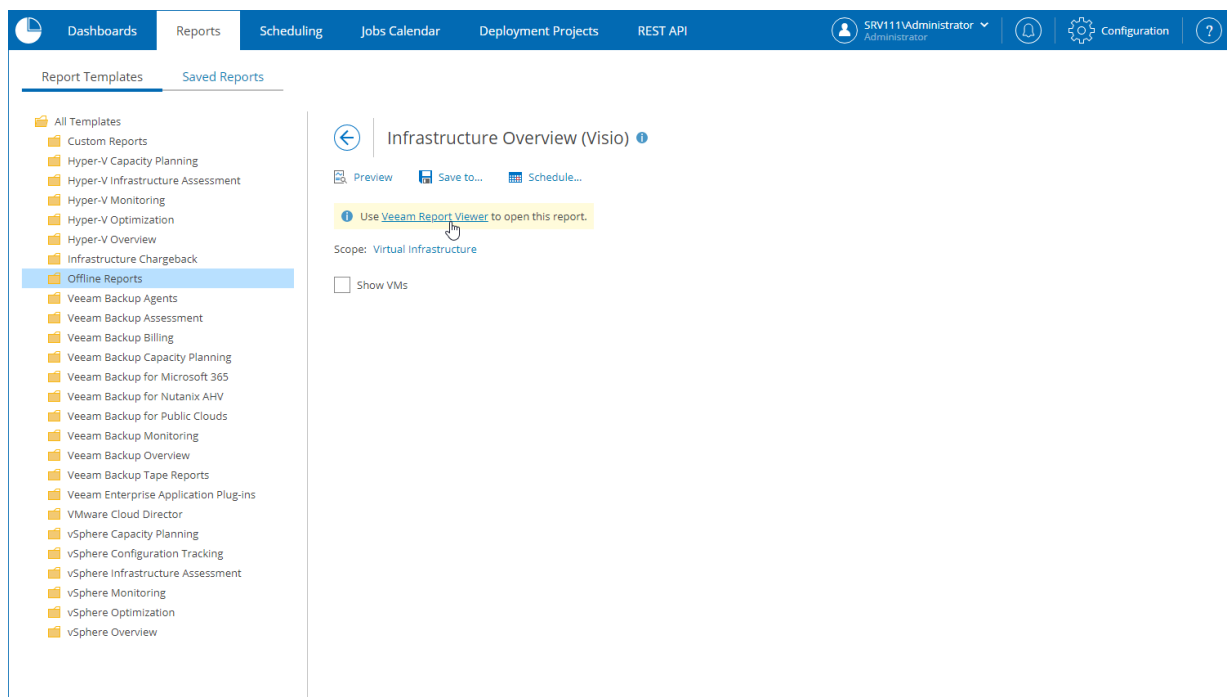
Viewing Offline Reports

To access and view offline reports:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. In the hierarchy on the left, select **Offline Reports**.

4. In the list of offline reports, click the necessary report.

5. Specify the report parameters.

6. Click **Preview** to generate a report file.

   Veeam ONE Web Client will generate a file with the `VMR` extension and save it to the download location.

7. 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. Make sure 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 Web Client.

If you use Chrome, Firefox or Edge the date and time format will be determined by language preferences (locale) set in the browser.

To change the date and time format for those browsers, 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. To learn how to change the language in Edge, see Use Microsoft Edge in another language.

Saving Reports

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

1. Open Veeam ONE Web Client.

2. Open the **Reports** 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. At the top of the report parameters, click **Save to**.

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. Click **Save**.

   If you want to open the report after saving, click **Save and navigate to the saved report**.

> **NOTE:**
>
> A saved report can become unavailable if you change the Veeam ONE license.

Modifying Reports

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

Modifying Report Name and Description

To modify the name of a saved report:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report whose name and description you want to modify.

6. At the top of the report parameters, click **Other Actions** and select **Edit Information**.

   Alternatively, you can right-click the necessary report and select **Edit Information** in the context menu.

7. In the **Edit Report Information** window, modify report name and description.

8. Click **Save**.

Changing Report Parameters

To change parameters of a saved report:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report whose parameters you want to modify.

6. Change the report parameters.

7. At the top of the report parameters, click **Save**.

Organizing Reports

You can organize your reports with the help of report folders. Similar to file system folders, Veeam ONE Web Client 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* folder of the **Saved Reports** tab.

> **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 Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. 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.

5. At the top of the hierarchy, click **Folder Management** and choose **New folder**.

   Alternatively, you can right-click the necessary folder and select **New Folder** in the context menu.

6. In the **New 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 Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, under *My reports*, select the necessary folder.

5. At the top of the hierarchy, click **Folder Management** and choose **Rename**.

   Alternatively, you can right-click the necessary folder and select **Rename** in the context menu.

6. In the **Rename Folder** window, specify a new folder name 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 Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, under *My reports*, select the necessary folder.

5. At the top of the hierarchy, click **Folder Management** and choose **Delete**.

   Alternatively, you can right-click the necessary folder and select **Delete** in the context menu.

6. 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 **Delete folder and move contained reports to the following folder** option and choose the new destination folder from the list. If you want to delete the folder with its content, select the **Delete folder and all contained reports** option.

7. Click **Delete**.

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 Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, under *My reports*, select the necessary folder.

5. In the displayed list of reports, click a saved report that you want to move.

6. At the top of the report parameters, click **Other Actions** and choose **Move**.

   Alternatively, you can right-click the necessary report and select **Move** in the context menu.

7. In the **Move Report** window, choose a new target folder for the report.

8. Click **Move**.

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 Web Client.

2. Open the **Reports** section.

3. In the hierarchy on the left, select the necessary folder.

4. In the displayed list of reports, click a report for which you want to enable scheduled delivery.

5. At the top of the report parameters, click **Schedule**.

   Veeam ONE Web Client will launch the **Add Report Schedule** wizard.

6. At the **General** step of the wizard, specify the report name and description and select a folder to which you want to place the report.

7. Configure report delivery schedule as described in section Scheduling.

8. Click **Close**.

Scheduling Saved Reports

To schedule automatic report delivery for saved reports:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a report for which you want to enable scheduled delivery.

6. At the top of the report parameters, click **Schedule**.

   Alternatively, you can right-click the necessary report and select **Schedule** in the context menu.

7. In the **Report Scheduling Settings** window, click **Add**.

   Veeam ONE Web Client will launch the **Add Schedule** wizard.

8. Configure report delivery schedule as described in section Scheduling.

9. Click **Close**.

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 Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select a folder for which you want to schedule delivery.

5. At the top of the hierarchy, click **Folder Management** and choose **Schedule**.

   Alternatively, you can right-click the necessary folder and select **Schedule** in the context menu.

6. In the **Report Folder Scheduling Settings** window, click **Add**.

   Veeam ONE Web Client will launch the **Add Schedule** wizard.

7. Configure the schedule and delivery method as described in section Scheduling.

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 Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder or click a saved report in the displayed list of reports.

5. Do one of following:

   o At the top of the report parameters, click **Schedule**.

   o At the top of the report folder list, click **Folder Management** and select **Schedule**.

   o Right-click the necessary folder and select **Schedule** in the context menu.

   The **Report Scheduling Settings** or **Report Folder Scheduling Settings** window will open.

6. Do one of the following:

   o To create a new schedule, click **Add**.

   o To modify scheduling settings, select a schedule in the list and click **Edit**.

   o To delete a schedule from the list, select the schedule in the list and click **Delete**.

   o To temporarily disable a schedule, select the schedule in the list and click **Disable**.

   o To enable a previously disabled schedule, select the schedule in the list and click **Enable**.

7. To finish working with the schedules, click **Close**.
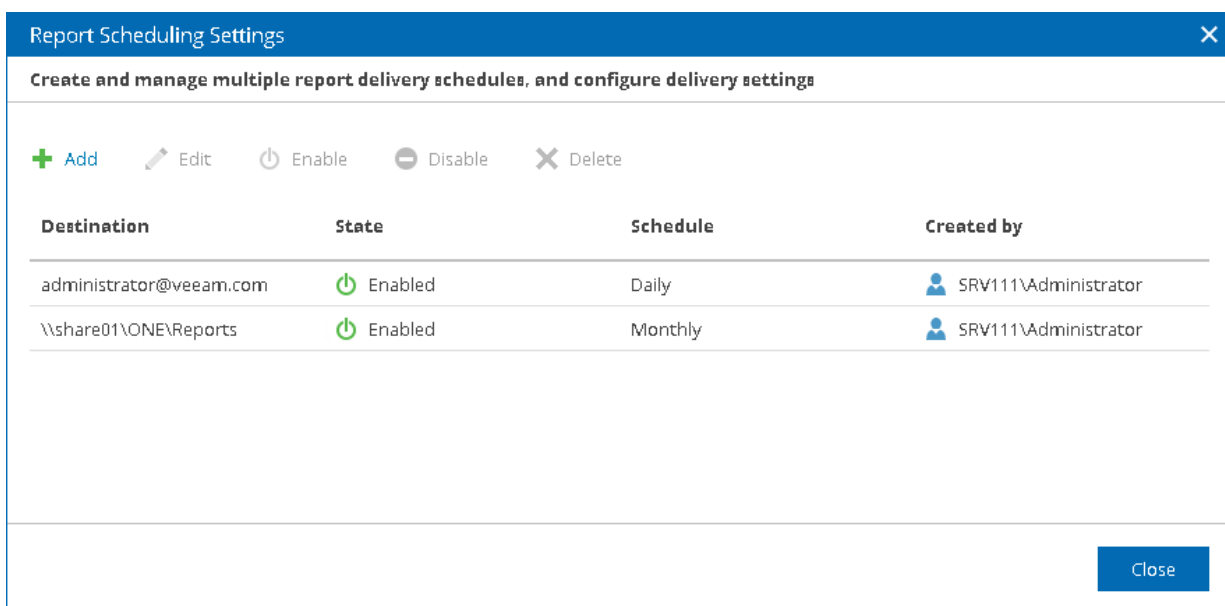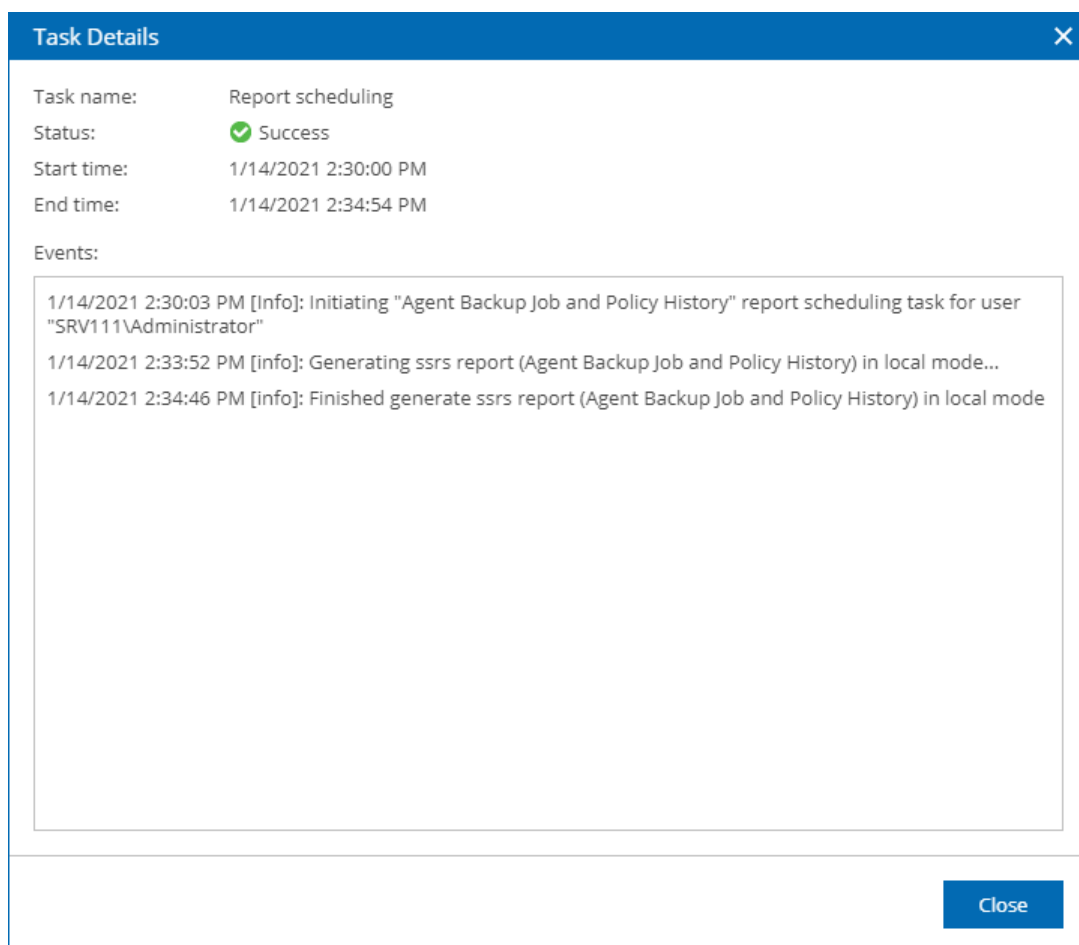
Viewing Scheduled Report Delivery Results

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

To view details on report or report folder scheduling sessions:

1. Open Veeam ONE Web Client.

2. At the top right corner of the Veeam ONE Web Client window, click **Configuration**.

3. In the configuration menu on the left, click **Event Logs**.

4. To display all report or report folder delivery sessions, click **Filter**, select *Report scheduling* or *Report folder scheduling* and click **Apply**.

5. Click the session in the list to display detailed information on it.

Task Details   ✕

Task name: Report scheduling
Status: ✅ Success
Start time: 1/14/2021 2:30:00 PM
End time: 1/14/2021 2:34:54 PM

Events:

> 1/14/2021 2:30:03 PM [Info]: Initiating "Agent Backup Job and Policy History" report scheduling task for user "SRV111\Administrator"
>
> 1/14/2021 2:33:52 PM [info]: Generating ssrs report (Agent Backup Job and Policy History) in local mode...
>
> 1/14/2021 2:34:46 PM [info]: Finished generate ssrs report (Agent Backup Job and Policy History) in local mode

                                                        [Close]

Cloning Reports

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

Cloning 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 clones of the saved report and change report parameters for each report clone.

To create a report copy:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report that you want to clone.

6. At the top of the report parameters, click **Other Actions** and choose **Clone**.

    Alternatively, you can right-click the necessary report and select **Clone** in the context menu.

7. In the **Clone Report** window, specify the name of the report, its description and select a folder to which the report clone should be saved. You can only choose a folder in the *My reports* hierarchy.

8. Click **Clone**.

After you create a report clone, 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 Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report that you want to delete.

6. At the top of the report parameters, click **Delete**.

   Alternatively, you can right-click the necessary report and select **Delete** in the context menu.

7. In the displayed dialog box, click **Delete** to confirm report deletion.

Sharing Reports

To share a saved report with other users or integrate the report to a web portal, you can enable public access to the report or generate a direct report link.

Before you share a report with other users, make sure that you have saved the report to *My Reports*. For details, see Saving Reports.

Generating Direct Report Link

To share a report with other users, or integrate a report to a web portal, you can generate a direct report link:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report for which you want to generate a direct link.

6. At the top of the report parameters, click **Other Actions** and choose **Share**.

    Alternatively, you can right-click the necessary report and select **Share** in the context menu.

7. In the **Share Report** window, switch the **Direct link access** toggle to *On*.

8. Click **Copy Link** to copy the link and use it to share with other users or integrate to web portals.

9. If you need to generate a new direct link, click **Reset Link**.

    Note that after you change the direct link, the previous link will become invalid.

10. Click **Close**.
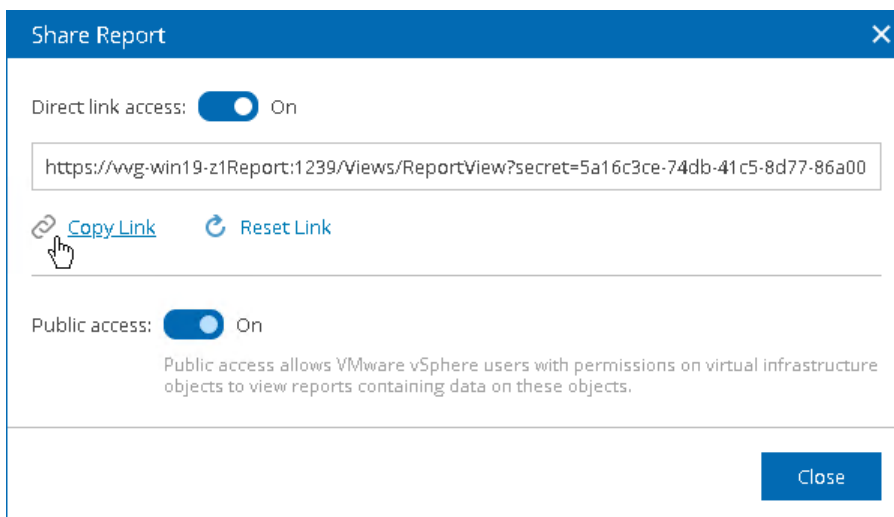
Enabling Public Access

To share a report with other users, you must enable public access to this report. Veeam ONE users, including VMware vSphere users who have permissions assigned on virtual infrastructure objects, can access published reports in the Veeam ONE Web Client.

To enable public access to a report:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report for which you want to enable public access.

6. At the top of the report parameters, click **Other Actions** and choose **Share**.

   Alternatively, you can right-click the necessary report and select **Share** in the context menu.

7. In the **Share Report** window, switch the **Public access** toggle to *On*.

8. Click **Close**.

Disabling Public Access

To make a published report inaccessible, you can disable public access to the report:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report for which you want to disable public access.

6. At the top of the report parameters, click **Other Actions** and choose **Share**.

   Alternatively, you can right-click the necessary report and select **Share** in the context menu.

7. In the **Share Report** window, switch the **Public access** toggle to *Off*.

8. Click **Close**.

Exporting and Importing Reports

You can export saved reports to a `JSON` file and import reports from a `JSON` 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 report to a `JSON` file:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. In the displayed list of reports, click a saved report which you want to export.

6. At the top of the report parameters, click **Other Actions** and choose **Export**.

   Alternatively, you can right-click the necessary report and select **Export** in the context menu.

The selected report will be exported to a `JSON` file and saved to the download location on your machine.

Exporting Report Folders

To export report folders to a `JSON` file:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, under *My reports*, select the necessary folder.

5. At the top of the hierarchy, click **Folder Management** and choose **Export**.

   Alternatively, you can right-click the necessary folder and select **Export** in the context menu.

6. In the displayed window, click **Close**.

The selected folder and all contained objects will be exported to a `JSON` file and saved to the download location on your machine.

Importing Reports

To import saved user reports from a `JSON` file:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. In the hierarchy on the left, select the necessary folder.

5. At the top of the hierarchy, click **Folder Management** and choose `Import`.

   Alternatively, you can right-click the necessary folder and select `Import` in the context menu.

6. In the Windows **Open** dialog box, select the `JSON` file that describes saved user reports, and click **Open**.

7. In the displayed window, click **Close**.

Reports from the `JSON` file will be installed to the selected folder.

Jobs Calendar

Jobs Calendar visually represents jobs scheduled for a specified time period. It shows both upcoming and finished job sessions arranged in the calendar format. With the help of Jobs Calendar, you can analyze job history and plan job schedule avoiding previously occurred issues and without the risk of overloading the server.

Limitations

Jobs Calendar does not provide information on the following types of jobs:

- Veeam Backup for Nutanix AHV jobs

- Veeam Backup for AWS jobs

- Veeam Backup for Google Cloud jobs

- Veeam Backup for Microsoft Azure jobs

- MS SQL plug-in backup jobs

- CDP policies

- Transaction log backups

- Veeam Backup for Microsoft 365 jobs

Accessing Jobs Calendar

To view Jobs Calendar:

1. Open Veeam ONE Web Client.

2. Open the **Jobs Calendar** section.

3. From the **Backup server** drop-down list, select a backup server.

   The protection calendar will display data on completed and jobs configured on the selected server.

4. To narrow down the list of jobs:

   o Click **Filters** and select protected workload types and job types that you want to display.

   o Create a custom list of jobs:

      i. Click **Jobs**.

      ii. Select **Manual selection**.

      iii. Select check boxes of the jobs that you want to display.

5. To specify time period:

   o Click **Day, Week** or **Month** button.

   o Click the date link and select the day, week or month that you want to be displayed.

      To select the current day, week or month, click the **Today** button.

Viewing Jobs Calendar

Jobs Calendar marks the monitored job types with the following colors:

- *Light blue* — backup job.

- *Blue* — replication job.

- *Aquamarine* — backup copy job.

- *Coral* — backup to tape job.

- *Beige* — file to tape job.

- *Brown* — VM or file copy job.

- *Dark green* — SureBackup.

Jobs Calendar represents completed and scheduled job sessions differently:

- Completed job sessions are transparent.

  In the **Month** view, completed sessions are filled with color.

- Scheduled job sessions are filled with color.

  In the **Month** view, scheduled sessions are transparent.

- Continuous job sessions scheduled for backup window periods are fully colored and connected with dashes.

  If a continuous job schedule is split into smaller schedules, the job band will also be split.

To get brief information on a specific job, do one of the following:

- In the **Month** view, hover the cursor over the job name in the calendar.

- In the **Day** and **Week** view, hover the cursor over the job name in the **Job** column.

- In the **Day** and **Week** view, hover the cursor over the colored band of the job.

NOTE:

For backup copy jobs, the job list will include a separate line for each source job. The job name is presented in the *Backup copy job|Source job* format.

For backup agent jobs, the job list will include a separate line for each backup agent. The job name is presented in the *Backup agent job - backup agent name* format.

The purple band above the calendar indicates how many jobs sessions ran simultaneously during the time period. The more parallel job sessions, the more saturated the band becomes. To see the exact number of job sessions for a specific period, hover the pointer over the purple band. Note that the purple band is available in the **Day** and **Week** view only.
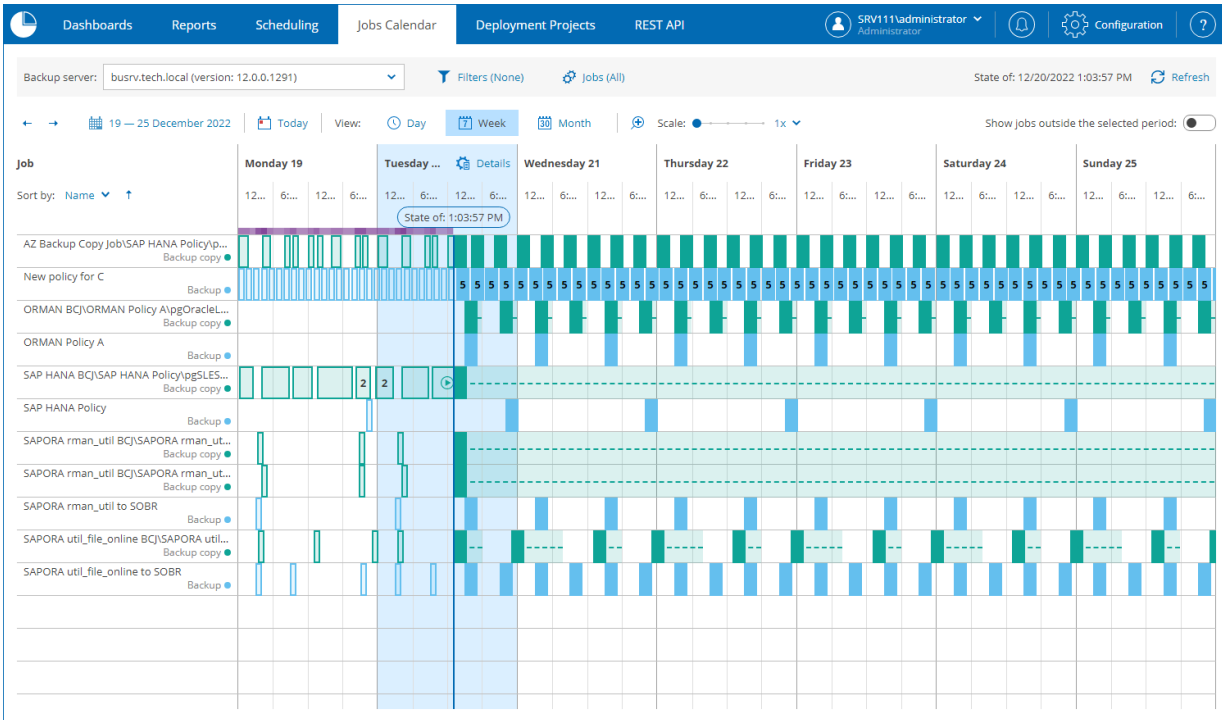
By default, jobs are sorted by name. You can change that by selecting the **Job types** or **Earliest job session / Job schedule** option in the **Sort by** drop-down list. Note that sorting is available in the **Day** and **Week** view only.

Chained jobs are marked with a chain-like sign. To see information on a job after which a chained job starts, hover the cursor over the chained job color band.

The currently running job sessions are marked with a right-pointing triangle in a circle.

Disabled jobs are marked with horizontal line in a circle.

> **TIP:**
> - You can include jobs that do not have any job sessions during the selected period into Jobs Calendar. To do that, switch the **Show jobs outside the selected period** toggle to *On*.
>   Note that the toggle is available in the **Day** and **Week** view only.
> - If you want to zoom in the time period and all scheduled jobs, use **Scale**.
>   Note that the **Scale** slider is available in the **Day** and **Week** view only.

Viewing Job Details

The protection calendar allows you to view detailed information on all jobs sessions for a specific day. To open day details, do one of the following:

- In the **Day** view, click **Details**.

- In the **Week** view, hover the cursor over the column associated with the necessary day and click **Details**.

- In the **Month** view, select the cell associated with the necessary day and click **Details**.

Each scheduled job session is described with the following set of properties:

- **Job** — name of a job.

- **Job Type** — type of job (*Backup*, *Replication*, *Backup copy*, *Backup to tape*, *File to tape*, *VM and file copy*, *SureBackup*).

- **Start Time** — date and time when the job session will start.

- **Average Duration** — average time a job session takes to complete. Only the latest 5 sessions are considered.

Each completed job session is described with the following set of properties:

- **Job** — name of a job.

- **Job Type** — type of a job (*Backup*, *Replication*, *Backup copy*, *Backup to tape*, *File to tape*, *VM and file copy*, *SureBackup*).

- **Job Status** — status of the job session (*Success*, *Warning*, *Failed*, *Running*).

- **Start Time** — date and time when the job session started.

- **End Time** — date and time when the job session ended.

- **Duration** — duration of the job session.

- **Average Duration** — average time a job session takes to complete. Only the latest 5 sessions are considered.

- **Data Transferred, GB** — total amount of data transferred during the a job session.

Some colored band segments include data on multiple sessions. Usually, those segments are marked with the number of aggregated sessions. To view the sessions data, click the related segment.

Job Details				✕
Job name: FF Job				

Start Time ↑	End Time	Duration	Job Status	⊡⊡⊡
2/13/2023, 9:33:15 PM	2/13/2023, 9:34:16 PM	00:01:01	❌ Failed	
2/13/2023, 10:00:19 PM	2/13/2023, 10:01:20 PM	00:01:01	❌ Failed	

Close

Deployment Projects

Veeam ONE Web Client 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 will use the average value of the VM resource consumption during the current week.

- When calculating the amount of free space, Veeam ONE 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 checks if there is any overlapping project. If there are changes that may affect the concurrent project, Veeam ONE Web Client 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. Calculate 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, perform the following steps:

1. Launch Add Deployment Project Wizard

2. Specify Deployment Project Name and Description

3. Specify Deployment Infrastructure

4. Define Project Scenarios

Step 1. Launch Add Deployment Project Wizard
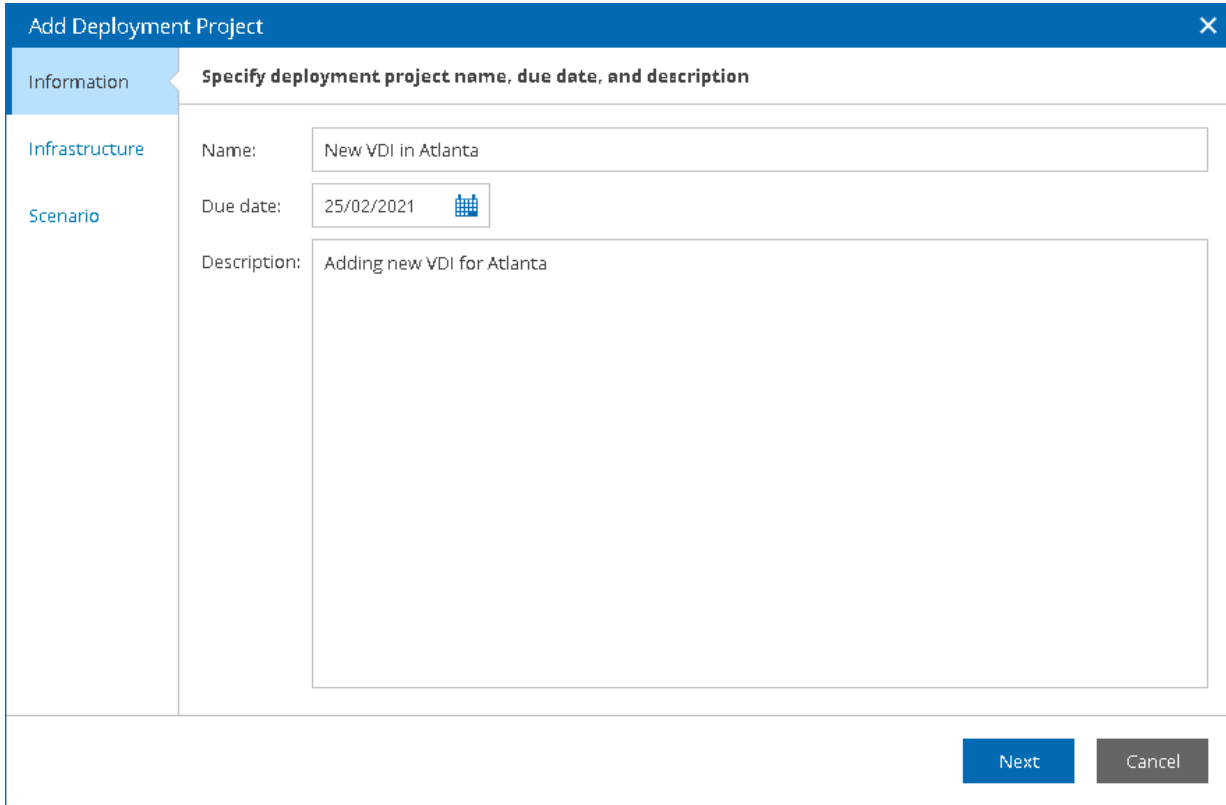
To launch the **Add Deployment Project** wizard:

1. Open Veeam ONE Web Client.

2. Open the **Deployment Projects** section.

3. At the top of the list, click **Add**.

   Veeam ONE Web Client will launch the **Add Deployment Project** wizard.

Step 2. Specify Deployment Project Name and Description

At the **Information** step of the wizard, specify deployment project name, description and the date when the deployment project must be completed.

Step 3. Specify Deployment Infrastructure

At the **Infrastructure** step of the wizard, select cluster or host on which you want to build deployment project:

1. In the **Clusters and hosts** hierarchy, select a host or cluster to which you want to add hosts or VMs, or from which you want to remove hosts or VMs.

2. [Optional] In the **Datastores** list, select one or more datastores to which VMs will be deployed. 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.
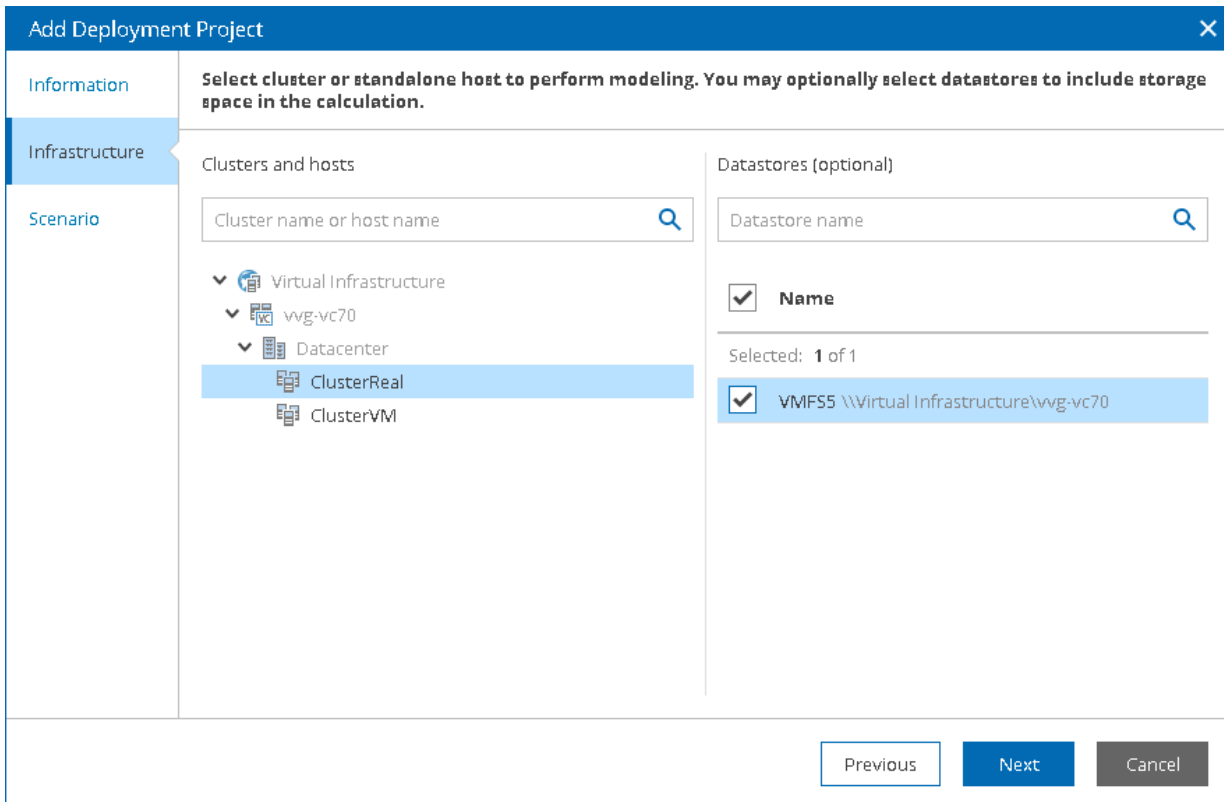
Step 4. Define Project Scenarios

At the **Scenario** step of the wizard, change parameters of the deployment project scenario. 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.

To change parameters of the deployment project scenario:

- Click **Add** and choose which object you want to add to the selected container:

    - New VM

    - New Host

    - Existing VM

    - Existing Host

- Click **Evict** and choose which object you want to evict from the selected container:

    - Existing VM

    - Existing Host

- Click **Edit** to modify the selected scenario entry.

- Click **Delete** to delete the selected scenario entry.
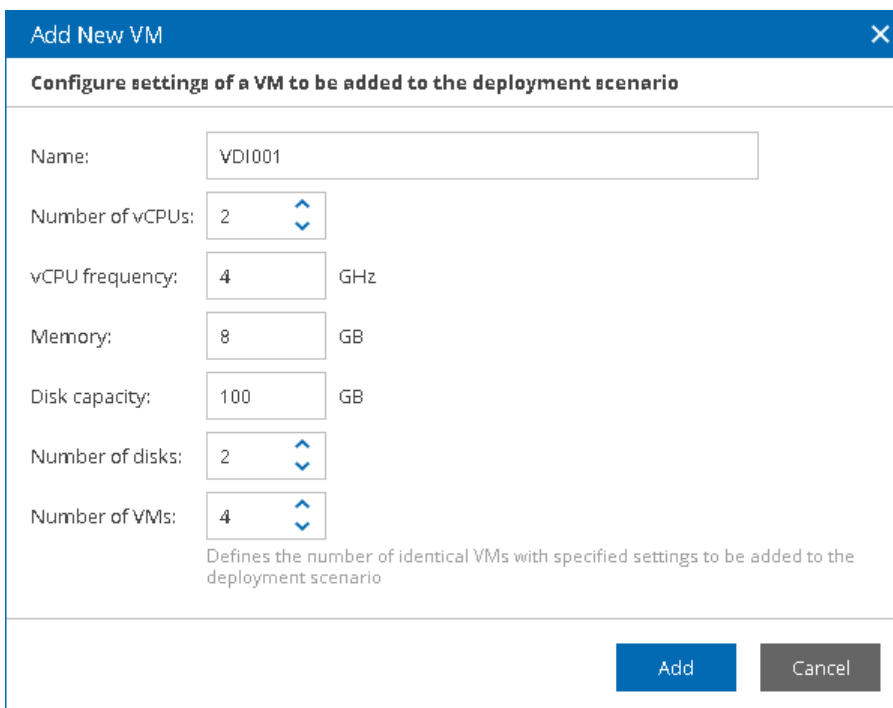
After you configure deployment scenario parameters, click **Finish** to save the deployment project.
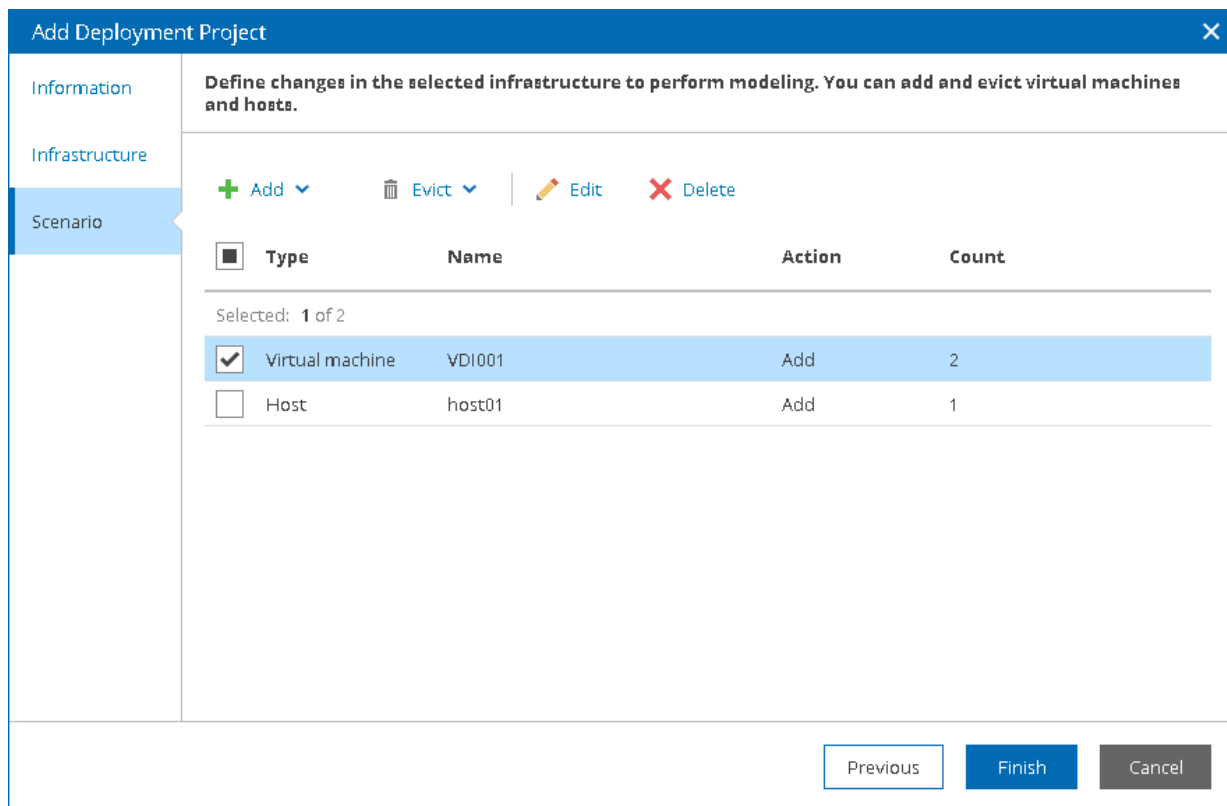
Adding New VM

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

- o At the **Scenario** step of the wizard, click **Add** and select **New VM**.

- o In the **Add New VM** window, specify VM properties:

    - o **Name** — VM name.

    - o **Number of vCPUs** — the number of virtual CPU cores allocated to the VM.

    - o **vCPU frequency** — each virtual CPU clock speed.

    - o **Memory** — the amount of memory resources allocated to the VM.

    - o **Disk capacity** — capacity of each virtual disk allocated to the VM.

    - o **Number of disks** — the number of virtual disks allocated to the VM.

    - o **Number of VMs** — the number of identical VMs to be added to the deployment project.
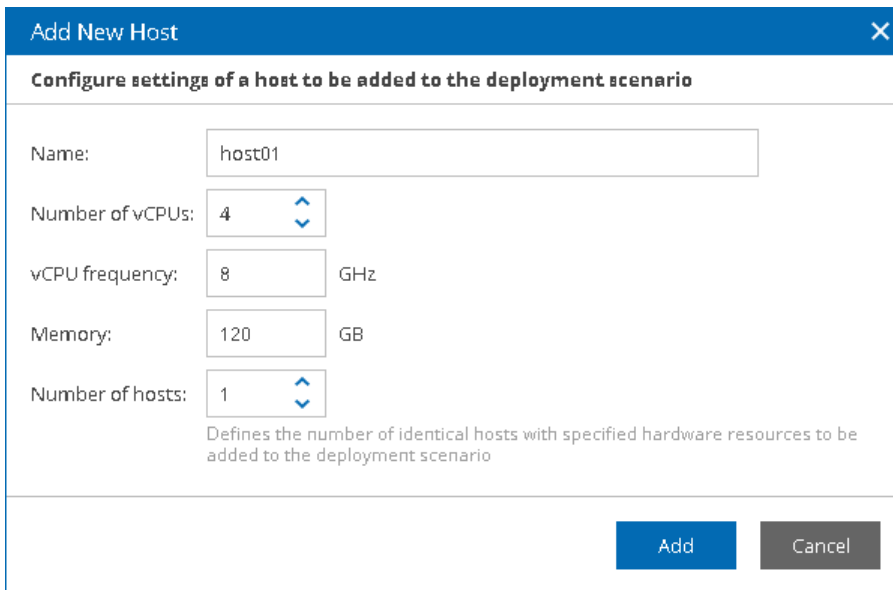
- o Click **Add**.

Adding New Host

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

1. At the **Scenario** step of the wizard, click **Add** and select **New Host**.

2. In the **Add New Host** window, specify host properties:

    - o **Name** — the host name.

    - o **Number of vCPUs** — the number of virtual CPU cores allocated to the host.

    - o **vCPU frequency** — each virtual CPU clock speed.

o **Memory** — the amount of memory resources allocated to the host.

o **Number of hosts** — the number of identical hosts to be added to the deployment project.

o Click **Add**.

Adding Existing VM

To simulate a situation of adding copies of an existing VM to a host or cluster:

1. At the **Scenario** step of the wizard, click **Add** and select **Existing VM**.

2. In the **Add Existing VM** window, select a VM from the list and specify the number of VMs to be added.

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

3. Click **Add**.

Adding Existing Host

To simulate a situation of adding copies of existing host to a cluster:

1. At the **Scenario** step of the wizard, click **Add** and select **Existing Host**.

2. In the **Add Existing Host** window, select a host from the list and specify the number of hosts to be added.

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

3. Click **Add**.

Evicting Existing VM

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

1. At the **Scenario** step of the wizard, click **Evict** and select **Existing VM**.

2. In the **Evict Existing VM** window, select a VM from the list.

   The VM selection scope includes all VMs in the selected container.
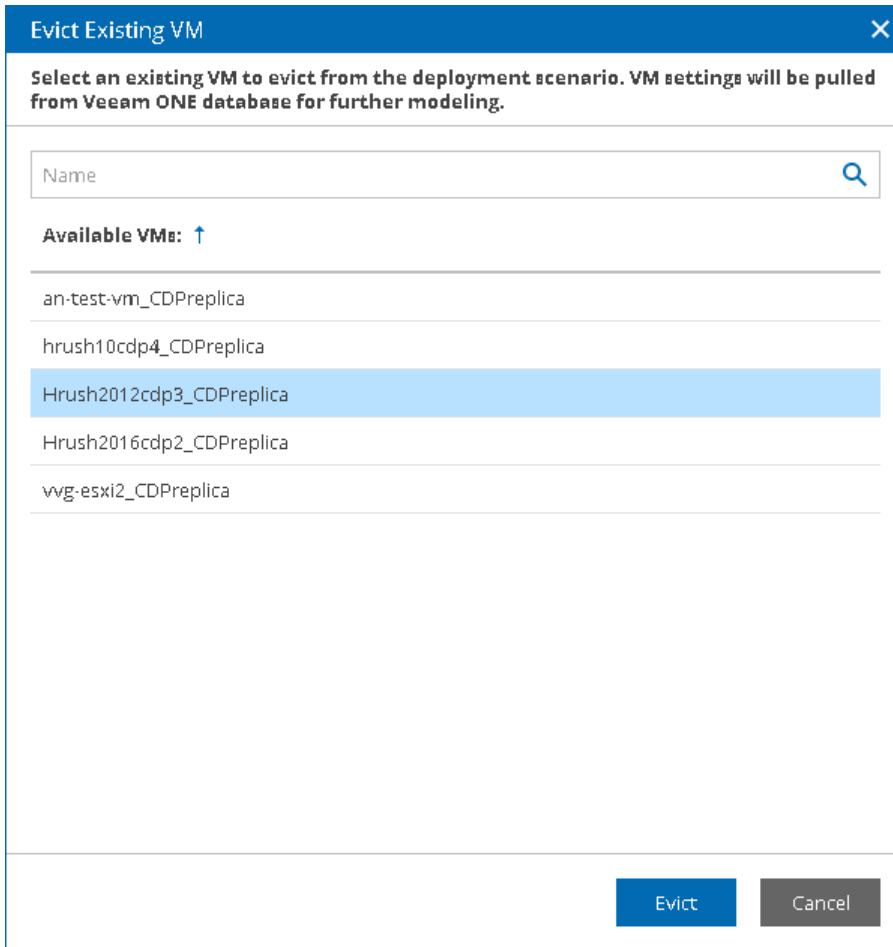
3. Click **Evict**.

Evicting Existing Host

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

1. At the **Scenario** step of the wizard, click **Evict** and select **Existing Host**.

2. In the **Evict Existing Host** window, select a host from the list.

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

3. Click **Evict**.

Evict Existing Host

Select an existing host to evict from the deployment scenario. Host hardware resources will be pulled from Veeam ONE database for further modeling.

Name 🔍

Available Hosts: ↑

172.24.154.234

172.24.155.215

Evict   Cancel

Adjusting Performance Thresholds

Before you run a scenario simulation, you may 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 Web Client.

2. Open the **Deployment Projects** section.

3. At the top of the list, click **Thresholds**.

4. Change threshold values if required:

   o **CPU utilization** — maximum allowable processor utilization level on a physical host.

   o **vCPUs per physical 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.

   o **Memory utilization** — maximum allowable memory utilization level on the physical host.

   o **Space utilization** — maximum allowable amount of used space on the target datastores.

5. Click **Save**.

Calculating Deployment Projects

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

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

To calculate a deployment project:

1. Open Veeam ONE Web Client.

2. Open the **Deployment Projects** section.

3. Select the necessary deployment project in the list and click **Calculate**.

Veeam ONE Web Client will calculate the project and display the project result in the **Status** field. For details on deployment project statuses, see Deployment Project Statuses.

Viewing Deployment Project Report

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

1. Open Veeam ONE Web Client.

2. Open the **Deployment Projects** section.

3. 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.
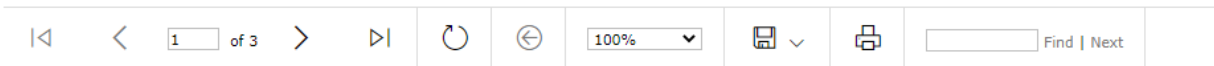
Deployment Scenarios Modelling

Description

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

Report Parameters

Deployment project name:	New VDI in Atlanta
Calculation result:	Passed with warnings

Hosts and clusters:	prgtwesx02.tech.local
Datastores:	prgtwesx02-ds01
Due Date:	12/20/2022 12:00:00 PM
Created:	12/20/2022 2:44:20 AM
CPU utilization threshold:	80.00%
vCPUs per physical core:	4
Memory utilization threshold:	90.00%
Space utilization threshold:	90.00%

Project Details

Action	Name	Number	CPU (GHz)	vCPU/Core Count	Memory Allocated /Used (GB)	Storage (GB)	Disk Count
Add							
	as2016DC	1	0.08	4	4.00 / 2.38	80.00	1

Total Scope Power

Current			By Pending Projects (With Current Resource Usage)		
CPU (GHz)	Core Count	Memory (GB)	CPU (GHz)	Core Count	Memory (GB)
57.60	24	382.66	57.60	24	382.66

Report created: 12/20/2022 2:45:38 AM ((UTC-08:00) Pacific Time (US & Canada))   Page: 1 of 3

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.

Modelling results for Compute resources

Metric	Average		In Peak		Estimate For Next Six Months	
	Usage	Required	Usage	Required	Usage	Required
CPU (GHz)	26.27% (15.13)	-	35.74% (20.59)	-	79.79% (45.96)	-
Passed						
	Usage	Required				
vCPU	181.25% (174)	78				
Warning						
	Usage	Required	Usage	Required	Usage	Required
Memory (GB)	57.47% (219.92)	-	58.67% (224.50)	-	115.89% (443.47)	110.08
Warning						

Report created: 12/20/2022 2:45:38 AM ((UTC-08:00) Pacific Time (US & Canada))   Page: 2 of 3

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 Web Client 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 Web Client.

2. Open the **Deployment Projects** section.

3. Select the necessary deployment project in the list and click **Complete**.

4. In the displayed dialog box, click **Complete** to confirm project completion.

After you complete a project, the date in the **Completed** column 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 calculated with the *Failed* state.

To modify deployment project settings:

1. Open Veeam ONE Web Client.

2. Open the **Deployment Projects** section.

3. Select the necessary deployment project in the list and click **Edit**.

4. Change the deployment project settings as described in Creating Deployment Projects.

5. Save changes.

After you change project settings, you need to calculate the project anew. You may also need to recalculate overlapping or dependent projects. For example, if you change the project due date to an earlier date, Veeam ONE Web Client will offer you to recalculate 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 Web Client.

2. Open the **Deployment Projects** section.

3. Select the necessary deployment project in the list and click **Delete**.

4. In the displayed dialog box, click **Delete** to confirm project deletion.

After you delete a deployment project, you may need to rebuild overlapping or dependent projects. For details, see Calculating Deployment Projects.

Deployment Project Statuses

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

- **To be calculated**

  The status indicates that project calculation is pending. Remediation action is to calculate the project. For details, see Calculating Deployment Projects.

- **To be recalculated**

  The status is assigned if the project settings have changed, or changes in a concurrent project affect the project. Remediation action is to calculate the project. For details, see Calculating Deployment Projects.

- **Not passed**

  The status 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 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 status 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 successfully**

  The status 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.

Scheduling
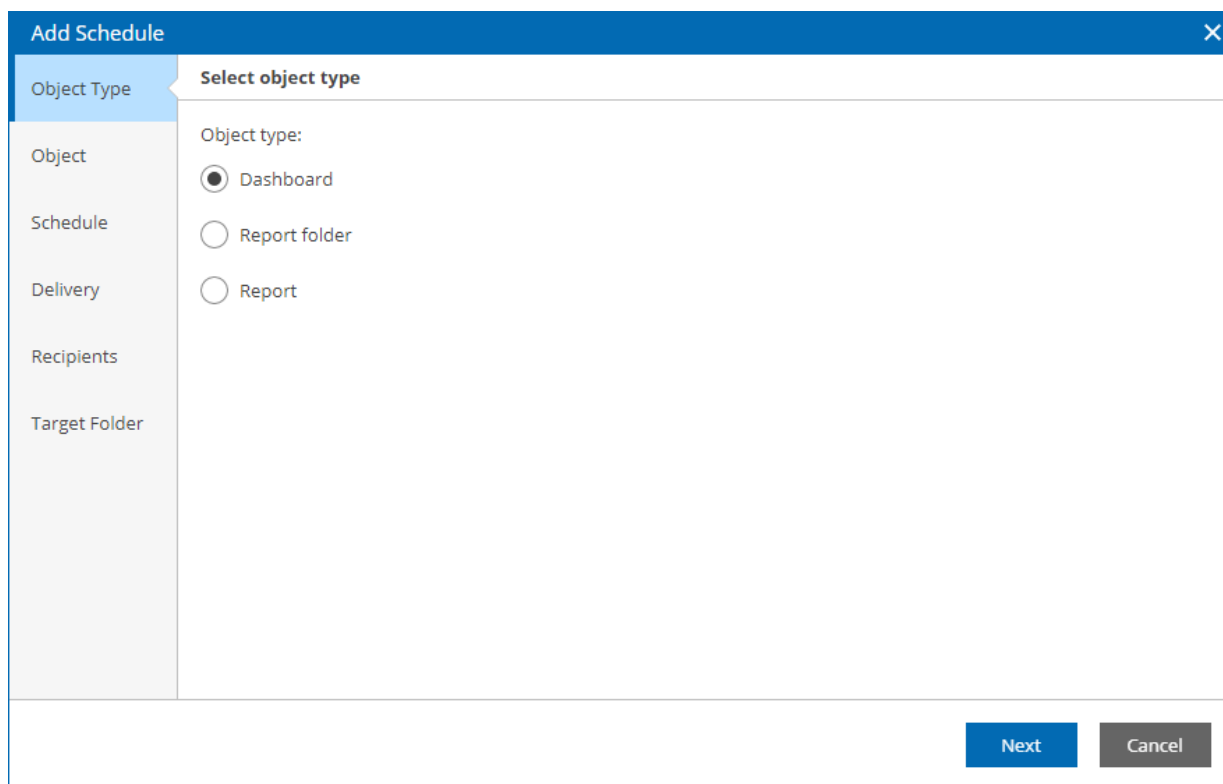
In Veeam ONE Web Client, you can schedule automatic delivery for dashboards, reports and report folders. You can choose to receive dashboards and reports by email, save dashboards and reports to a local folder or network share. Note that you can only schedule delivery for saved reports (that is, reports in the *My Reports* folder and its subfolders).

To schedule delivery for dashboards, reports and report folders:

1. Open Veeam ONE Web Client.

2. Open the **Scheduling** section.

3. At the top of the list, click **Add**.

   Veeam ONE Web Client will launch the **Add Schedule** wizard.

4. At the **Object Type** step of the wizard, specify the type of object for which you want to enable scheduled delivery.

5. At the **Object** step of the wizard, select the dashboard, report or report folder for which you want to enable scheduled delivery.
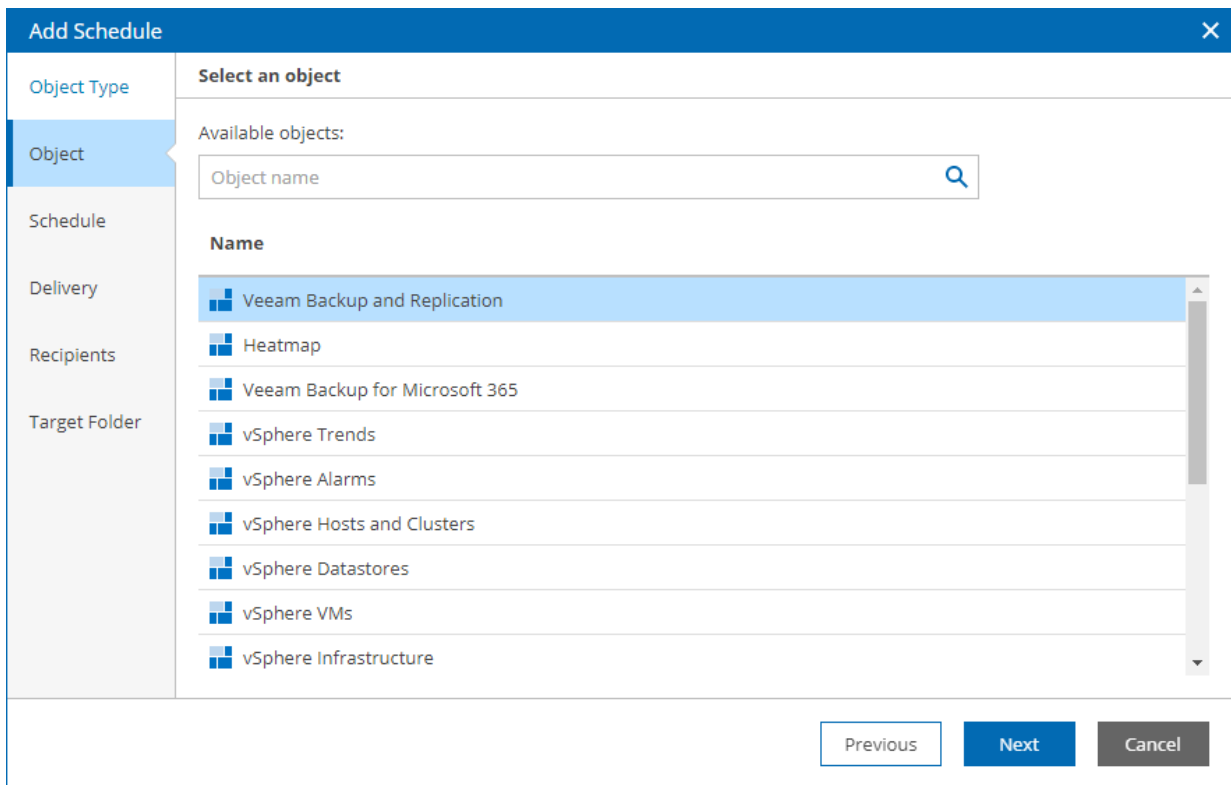
6. At the **Schedule** step of the wizard, define a schedule according to which the object must be generated and delivered.

   ○ To generate and deliver the object repeatedly, with a specific time interval, select the **Periodically every** option and define the necessary interval.

   ○ To generate and deliver the object at specific time of day, select the **Daily at** option and specify the time and days of week on which the object must be delivered.

   ○ To generate and deliver the object on a monthly basis, select the **Monthly** option and choose the necessary months, dates or weekdays.

o To configure a schedule without enabling it, select the **Disable schedule upon creation** check box.

You can enable the schedule later. For details, see Managing Delivery Schedules.

7. At the **Delivery** step of the wizard, define object delivery options:

   o Select the **Send by email** check box to send objects by email.

   If this option is selected, the **Recipients** step will become available in the wizard.

   If you want to send objects by email, make sure you specified SMTP settings in Veeam ONE Client. For details, see section Configure SMTP Server Settings of the Veeam ONE Deployment Guide.

   [For the *Dashboard* object type] Additionally, you can select whether you want to attach a dashboard file to an email message or embed it into an email body.

   [For the *Report folder* object type] If you want to send several reports from the folder in a single email, select the **Send multiple reports in a single email** check box and specify the maximum number of reports to include in a single email. If the number of reports in the folder exceeds the specified maximum, Veeam ONE Web Client will send several emails.

   o Select the **Save to a folder** check box to save objects to a network share or a local folder on a machine where Veeam ONE Server component runs.

   With this option selected, the **Add Schedule** wizard will include an additional **Target Folder** step.

○ [For the *Report folder* and *Report* object types] From the **Report format** drop-down list, select the format in which the report must be saved. You can choose one of the following formats: *PDF*, *MS Word*, *MS Excel*, *CSV*, *XML*.

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

Add Schedule		×
Object Type	**Specify delivery options and select report delivery format**	
Object	☑ Send by email	
Schedule	The dashboard will be sent to the specified email addresses as an email attachment or embedded in the email body.	
Delivery	Dashboard delivery format:	
Recipients	● Attached to the email	
Target Folder	○ Embedded in the email body	
	☑ Save to a folder	
	The dashboard will be saved to the specified local or network path. Additionally, you can instruct Veeam ONE to execute a script upon dashboard delivery.	
	✔ SMTP server is configured	
	Previous Next Cancel	

8. At the **Recipients** step of the wizard, configure object delivery by email:

   a. In the **Recipients** field, specify the recipient email address.

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

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

You can use the `%ReportName%` `%DashboardName%` and `%Date%` variables in the subject line — Veeam ONE will substitute these variables with the name of a delivered report, dashboard and the current date.

9. At the **Target Folder** step of the wizard, configure automated delivery to a local folder or a network share:

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

The path must refer to an existing folder. Veeam ONE will check if the specified folder exists and if the account under which Veeam ONE Reporting service runs has write permissions on the folder. If the folder cannot be accessed, Veeam ONE Web Client will display a warning message.

b. To run a custom script after the dashboard is delivered to the target folder, in the **Path to the script file** field, specify a path to the script file.

Running a custom script allows you to perform further actions after the dashboard is generated. For script examples, see Appendix. Scheduling Script Examples.

10. Click **Finish**.

If you want to configure multiple schedules, repeat steps **4–10** for each new schedule.

Managing Delivery Schedules

You can create multiple schedules for a single dashboard, report of report folder. Configuring multiple schedules allows you to set up complex scheduling and delivery method settings for the same object.

To manage delivery schedules:

1. Open Veeam ONE Web Client.

2. Open the **Scheduling** section.

3. Use controls at the top of the list to manage the delivery schedules:

   o To create a new delivery schedule, click **Add**.

   o To edit scheduling settings, select a schedule in the list and click **Edit**.

   o To enable previously disabled schedules, select one or more schedules in the list and click **Enable**.

   o To temporarily disable schedules, select one or more schedules in the list and click **Disable**.

   o To delete schedules, select one or more schedules in the list and click **Delete**.

Business View Reporting

Veeam ONE Web Client integrates with 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 Web Client.

2. Open the **Reports** 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**.
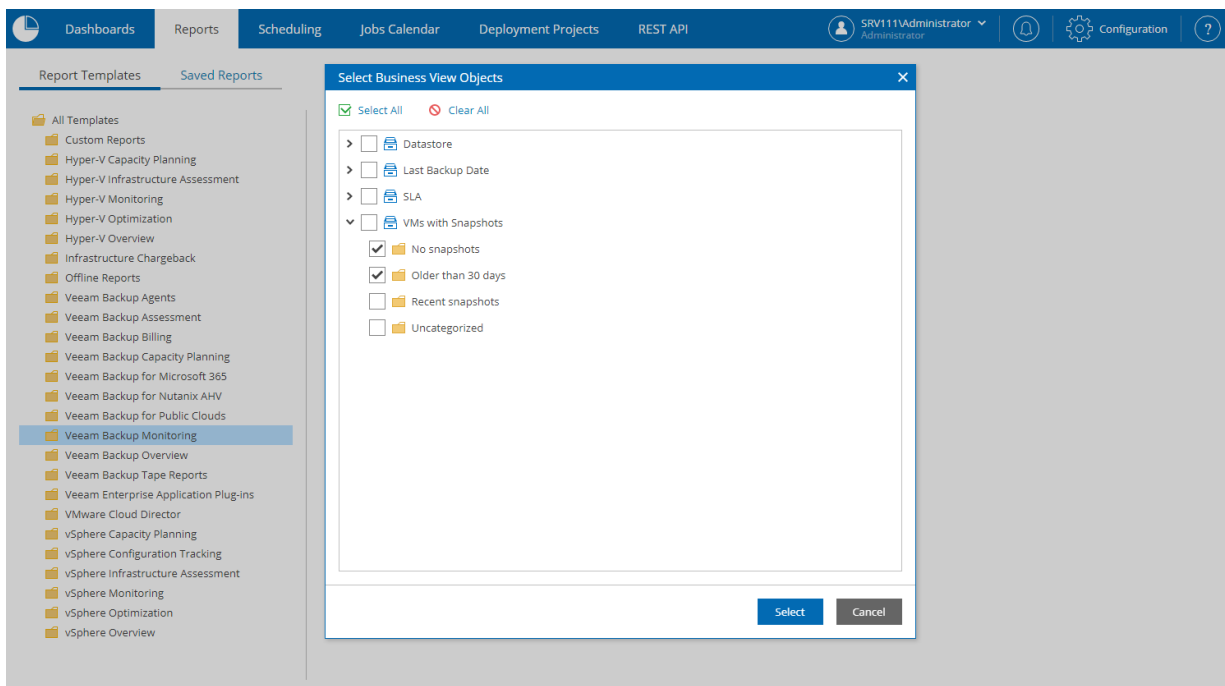
Veeam ONE Web Client will present data from the business point of view — that is, for the selected business groups.

Protected VMs

Description

This report lists protected and unprotected VMware vSphere and Microsoft Hyper-V VMs including their last backup job status.
Note: VM replicas not protected by any Veeam Backup & Replication job are not accounted in this report.

Report Parameters

Scope:	Virtual Infrastructure
RPO:	24 hours (12/19/2022 8:00:00 AM)
VM exclusion rule:	
Job types:	VM backup, Replication, Backup copy, Cloud Director backup, Cloud Director replication
Business View objects:	VMs with Snapshots: Older than 30 days, No snapshots
Analyze VM templates:	No
Excluded jobs:	-

Summary

VMs Overview

Total VMs:	197
Including VM Replicas:	9
Protected VMs:	2
With Backup:	2
With Replication:	0
Unprotected VMs:	186

Protected VMs
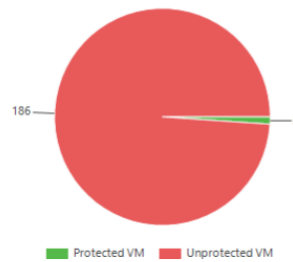
VM Last Backup State

VM Last Backup Age

Report created: 12/20/2022 7:22:38 AM ((UTC-08:00) Pacific Time (US & Canada))

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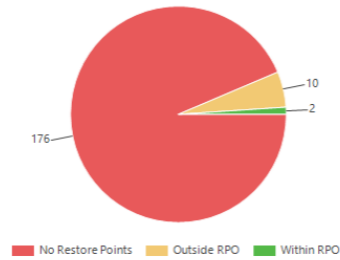
Accessing Veeam ONE REST API

You can access Veeam ONE REST API Swagger UI directly from Veeam ONE Web Client. To do that:

1. Open Veeam ONE Web Client.

2. Open the **REST API** section.

For details on Veeam ONE Swagger UI, see section Evaluation with Swagger UI of the REST API Reference guide.

Viewing Notifications

Veeam ONE Web Client generates notifications about important internal events such as data collection failure, Veeam ONE license expiration and so on.

To view the notifications, at the top right corner, click the button with the bell icon. The drop-down list of notifications will open.

To clear the list of notifications, click **Clear All**.

By default, new notifications are automatically displayed. To disable this behavior, move the **Auto-display new message** toggle to the left. In case new notification is generated, the red circle will appear on the notification button.

Multi-Tenant Monitoring and Reporting

Veeam ONE supports multi-user access to its monitoring and reporting capabilities. Authorized users can concurrently access the same instance of Veeam ONE to monitor the health state of the virtual infrastructure, view dashboards and run reports.

To restrict access to sensitive infrastructure data, you can limit the scope of virtual infrastructure objects and associated data that must be available to a Veeam ONE user. Thus you can control what subset of the managed virtual infrastructure the user can see and work with.

User permissions can be restricted for two types of inventories:

- VMware vSphere inventory

- VMware Cloud Director inventory

In a multi-tenant environment, you can configure restricted access to Veeam ONE data for owners of virtualized systems or responsible personnel and delegate monitoring and reporting tasks.

For example, if you manage VMware vSphere systems that belong to different business units, you can restrict permissions so that users can monitor and report on systems owned by their business unit. Or, if you manage resources for multiple organizations in a VMware Cloud Director environment, you can restrict permissions on a per-organization basis, so that users can monitor and report on vApps and VMs that belong to their organization.

This document describes how to configure permissions for multi-tenant monitoring and reporting in Veeam ONE, and provides a basic configuration example.

How Access to Virtual Infrastructure Objects is Restricted

Veeam ONE collects inventory details about virtual infrastructure objects from connected VMware vSphere and VMware Cloud Director servers. In addition to objects and object properties, Veeam ONE gathers information about user permissions assigned to objects in VMware vSphere and VMware Cloud Director inventories. Permission details are gathered in real time, as part of the regular data collection procedure.

Collected permissions determine what users must (and must not) have access to objects in the Veeam ONE virtual infrastructure inventory. When a user authenticates to Veeam ONE, Veeam ONE checks what permissions are assigned to objects in the VMware vSphere and VMware Cloud Director inventories.

- If the user has appropriate permissions on an object, the user can access this object and associated data in the Veeam ONE infrastructure inventory.

- If the user does not have permissions on an object, the object is hidden. Data associated with this object is unavailable to the user.
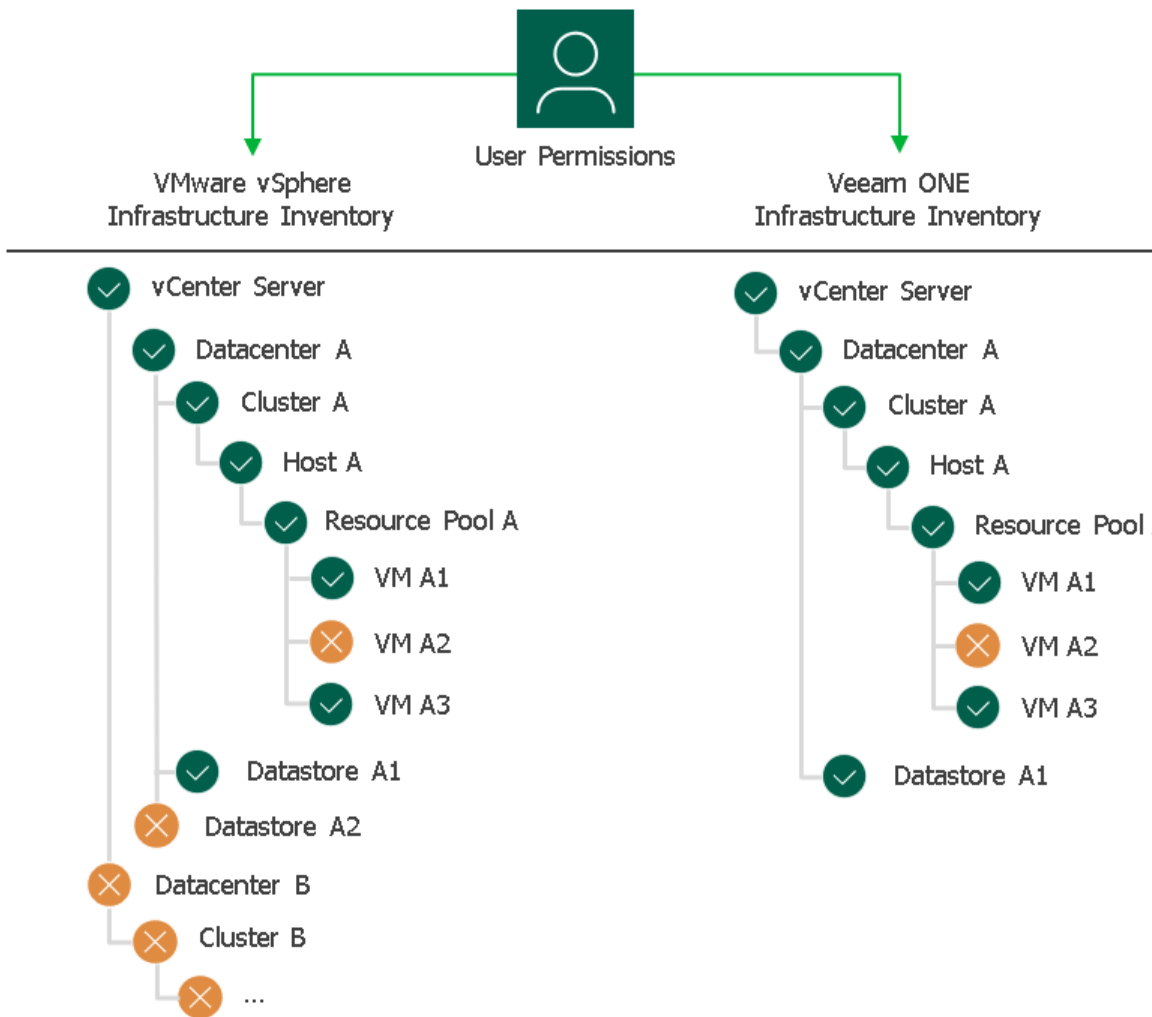
Permissions and Security Groups

Do not mix permissions on virtual infrastructure inventory objects with the Veeam ONE security model that is based on security groups.

Users in Security Groups

Security groups define what actions users can perform in Veeam ONE. That is, what part of Veeam ONE functionality is available to users.

- *Veeam ONE Administrators* have access to all functions in Veeam ONE. They can perform all types of actions that Veeam ONE supports, including configuration actions.

- *Veeam ONE Power Users* have read access to monitoring data and can fully manage reports and dashboards but do not have access to Veeam ONE configuration settings.

  > **NOTE:**
  >
  > Note that members of the *Power Users* security group can run report and dashboard scheduling scripts on the machine on which the Veeam ONE Web Services component is installed. Include users into this group with caution.

- *Veeam ONE Read-Only Users* have limited access to Veeam ONE functions: they can access data in the read-only mode but cannot perform configuration tasks.

Users included in either Veeam ONE security group (*Administrators, Power Users* or *Read-Only Users*) have access to:

- All Veeam ONE consoles (Veeam ONE Client, Veeam ONE Web Client)

- All objects of the infrastructure inventory (including VMware vSphere, VMware Cloud Director, Microsoft Hyper-V, Veeam Backup & Replication and Veeam Backup for Microsoft 365)

Users with Restricted Permissions on Virtual Infrastructure Inventory

Permissions define what part of the virtual infrastructure is visible to a Veeam ONE user. To monitor and report on a restricted subset of the virtual infrastructure in Veeam ONE, a user must have permissions assigned on objects of the VMware vSphere or VMware Cloud Director inventory hierarchy. In this case, the user can utilize Veeam ONE monitoring and reporting capabilities for available objects of the VMware vSphere or VMware Cloud Director infrastructure. Microsoft Hyper-V, Veeam Backup & Replication and Veeam Backup for Microsoft 365 inventory objects will be unavailable for the user.

Note that for users of this type some Veeam ONE functionality is disabled. For details on limitations, see section Functional Restrictions.

> **IMPORTANT!**
>
> Do not include a user with restricted permissions into Veeam ONE security groups. Members of security groups always have access to the whole infrastructure inventory in Veeam ONE, regardless of their permissions on the VMware vSphere or VMware Cloud Director inventory hierarchy.

Functional Restrictions

Users with restricted permissions on the virtual infrastructure inventory have limited access to Veeam ONE functionality. Functional restrictions prevent these users from changing settings that may affect other users in Veeam ONE.

Monitoring

In Veeam ONE Client, users with restricted permissions cannot perform the following tasks:

- Access and modify configuration settings (connections to virtual servers, notification settings, Veeam ONE server settings and license).

- Create, modify, delete, acknowledge or resolve alarms.

Reporting

In Veeam ONE Web Client, users with restricted permissions cannot perform the following tasks:

- Access and modify all configuration settings.

- Modify and delete predefined and custom dashboards.

- View custom reports that were saved by other users with restricted permissions.

- Work with specific reports.

  For the list of reports available to these users, see Reports for Users with Restricted Permissions.

Users with restricted permissions can access custom dashboards and saved reports that have been shared by *Veeam ONE Administrator* and *Veeam ONE Power User*. The virtual infrastructure scope on dashboards and in reports will be restricted in accordance with effective user permissions.

For details on sharing dashboards and reports, see sections Sharing Dashboards and Sharing Reports of the Veeam ONE Reporting Guide.

Configuring Access for Users with Restricted Permissions

To provide access to Veeam ONE reporting and monitoring features for a user with restricted permissions, perform these steps:

1. Check Veeam ONE security group membership.

2. Check requirements to the user account.

3. Assign permissions on the VMware vSphere or VMware Cloud Director inventory objects.

4. Log in to Veeam ONE as the user with restricted permissions.

Step 1. Check Veeam ONE Security Group Membership

Check that the user is **not included** in Veeam ONE security groups (*Veeam ONE Administrators, Veeam ONE Power Users* or *Veeam ONE Read-Only Users*). Otherwise, the user will be granted access to the whole infrastructure inventory in Veeam ONE, including VMware vSphere, VMware Cloud Director, Microsoft Hyper-V, Veeam Backup & Replication and Veeam Backup for Microsoft 365.

For details, see Permissions and Security Groups.

Step 2. Check Requirements to User Account

You can provide access to Veeam ONE for single users and user groups.

The following table describes types of accounts for which you can configure restricted permissions.

Platform	Account Type	Description and Notes
vCenter Server	Domain users and groups	Members of the Active Directory domain. vCenter Server must be configured to use Active Directory for authentication. For details on user authentication in VMware vSphere, see Active Directory Identity Source Settings. To log in to Veeam ONE, you must provide user name in the following format: `domain\username`.
	Local users and groups	Local users and groups on the machine where vCenter Server is installed. To log in to Veeam ONE, you must provide user name in the following format: `hostname\username`.
	Single Sign-On users and groups	Single Sign-On users and groups on vCenter Server. For details, see vSphere Authentication with vCenter Single Sign-On. **Note**: Single Sign-On must be installed on the machine where vCenter Server runs, with the default installation path and port settings. Otherwise, Veeam ONE will not be able to detect its database with user groups and users. To log in to Veeam ONE, you must provide user name in the following format: `ssodomain\username`.
ESXi host	Domain users and groups	Members of the Active Directory domain. Standalone hosts must be configured to use Active Directory for authentication. For details, see Using Active Directory to Manage ESXi Users. To log in to Veeam ONE, you must provide user name in the following format: `domain\username`.

Platform	Account Type	Description and Notes
VMware Cloud Director	Domain users and groups	Members of the Active Directory domain. Users must be able to authenticate to an LDAP server. For details, see VMware Cloud Director documentation. To log in to Veeam ONE, you must provide user name in the following format: `domain\username`.
	Local users and groups	Local users and groups in VMware Cloud Director. To log in to Veeam ONE, you must provide user name in the following format: • For organization user: `organization\username` • For VMware Cloud Director administrator: `system\username`

NOTE:

For each local or Single Sign-On user that authenticates to Veeam ONE, Veeam ONE creates a temporary Windows account on the machine that runs the Veeam ONE Server component. This temporary account is deleted after 30 days of inactivity.

Authorizing with Veeam ONE

To authorize with Veeam ONE components (Veeam ONE Client and Veeam ONE Web Client), a user must have the *Allow log on locally* privilege assigned.

By default, this privilege is assigned to users included in the local Administrators group. For users not included in the local Administrators group, you must assign this privilege manually.

NOTE:

If you use the advanced deployment scenario, you must assign the *Allow log on locally* privilege on the machines that host the Veeam ONE Server and Veeam ONE Web UI components.

Step 3. Assign Permissions on Infrastructure Inventory Objects

To view and work with virtual infrastructure objects in Veeam ONE, the user must have appropriate permissions on these objects set in the VMware vSphere or VMware Cloud Director inventory.

VMware vSphere Permissions

Connect to vCenter Server or standalone host with vSphere Client and assign permissions on objects to which the user must have access.

The following table shows minimal required privileges on VMware vSphere inventory objects.

vCenter Server (root) **Data Center** **Cluster** **Host** **Resource Pool/vApp** **Datastore Cluster** **Datastore**	Read-only
Virtual Machine	• Read-only • Virtual machine.Interaction.Answer question[1] • Virtual machine.Interaction.Console interaction[1]

[1] Required to access VM console in Veeam ONE Client

> **NOTE:**
>
> If you assign permissions to container objects (such as hosts, resource pools or vApps), consider enabling propagation. In this case, all new child objects that may be added to the container in future will become available to the user.

VMware Cloud Director Permissions

Connect to VMware Cloud Director and assign permissions on objects to which the user must have access.

The following table shows minimal required roles for VMware Cloud Director inventory objects.

VI Inventory Object	VMware Cloud Director Role
vCloud Director (root)	System Administrator
Organization	Console access only

Step 4. Log in to Veeam ONE as User with Restricted Permissions

Log in to Veeam ONE Client and Veeam ONE Web Client as the user to make sure the user has access to Veeam ONE.

For details on how to log in to Veeam ONE Client, see section Accessing Veeam ONE Client of the Monitoring guide. Veeam ONE Client will display the *[Restricted permissions mode]* label next to the user name under which you are logged in.

For details on how to log in to Veeam ONE Web Client, see Accessing Veeam ONE Web Client. Veeam ONE Web Client will display the *Restricted permissions user* label next to the user name under which you are logged in.

Reports for Users with Restricted Permissions

The following reports are available to users with restricted permissions:

Report Pack	Report	Available for VMware vSphere users	Available for VMware Cloud Director users
Infrastructure Chargeback	VM Configuration Chargeback	Yes	Yes
	VM Performance Chargeback	Yes	Yes
vSphere Infrastructure Assessment	Datastore Performance Assessment	Yes	No
	VM Change Rate Estimation	Yes	Yes
	VM Configuration Assessment	Yes	Yes
Veeam Backup Assessment	VM Backup Compliance Overview	Yes	Yes
	VMs with no Archive Copy	Yes	Yes
Veeam Backup Monitoring	Protected VMs	Yes	Yes
	VM Daily Protection Status	Yes	No
	Data Change Rate History	Yes	Yes
	CDP SLA Compliance	Yes	No
Veeam Backup Overview	Protected VMs Job Schedule	Yes	Yes
vSphere Overview	Cluster Configuration	Yes	No
	Datastore Capacity	Yes	No

Report Pack	Report	Available for VMware vSphere users	Available for VMware Cloud Director users
	Datastore Configuration	Yes	No
	Datastore Space Usage History	Yes	No
	Guest Disk Free Space	Yes	No
	Host Configuration	Yes	No
	Hypervisor Version	Yes	No
	Infrastructure Overview	Yes	No
	VMs Configuration	Yes	No
	VMs Growth	Yes	No
vSphere Monitoring	Alarms Current State Overview	Yes	No
	Alarms Overview	Yes	No
	Cluster Hosts Performance	Yes	No
	Cluster Performance	Yes	No
	Datastore Performance	Yes	No
	Host Performance	Yes	No
	Host Uptime	Yes	No
	Multiple Clusters Performance	Yes	No
	Resource Pool and vApp Performance	Yes	No
	VM Performance	Yes	Yes

Report Pack	Report	Available for VMware vSphere users	Available for VMware Cloud Director users
	VM Uptime	Yes	No
vSphere Optimization	Active Snapshots	Yes	Yes
	Garbage Files	Yes	No
	Idle VMs	Yes	Yes
	Inefficient Datastore Usage	Yes	Yes
	Orphaned VM Snapshots	Yes	No
	Oversized VMs	Yes	Yes
	Powered Off VMs	Yes	Yes
	Undersized VMs	Yes	Yes
vSphere Configuration Tracking	Infrastructure Changes Audit	Yes	No
	Infrastructure Changes by Object	Yes	No
Custom reports	vSphere Custom Performance	Yes	Yes
	vSphere Raw Performance Data	Yes	No
VMware Cloud Director	Catalogs Overview	No	Yes
	Organization Configuration	No	Yes
	Organization VDC Performance	No	Yes
	Provider VDCs Performance	No	Yes

Report Pack	Report	Available for VMware vSphere users	Available for VMware Cloud Director users
	vApp Configuration	No	Yes
	vApp Performance	No	Yes
	VM Uptime	No	Yes

Predefined Dashboards and Reports

Veeam ONE Web Client features a set of preconfigured dashboards and reports for Veeam Backup & Replication, Veeam Backup for Microsoft 365, 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.

Predefined Veeam ONE Dashboards

Veeam ONE Web Client includes the following predefined dashboards:

- Veeam Backup & Replication Dashboard
- Heatmap
- Veeam Backup for Microsoft 365
- vSphere Trends
- vSphere Alarms
- vSphere Hosts and Clusters
- vSphere Datastores
- vSphere VMs
- vSphere Infrastructure
- vSphere Capacity Planning
- Hyper-V Trends
- Hyper-V Alarms
- Hyper-V Hosts and Clusters
- Hyper-V Datastores
- Hyper-V VMs
- Hyper-V Infrastructure

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.
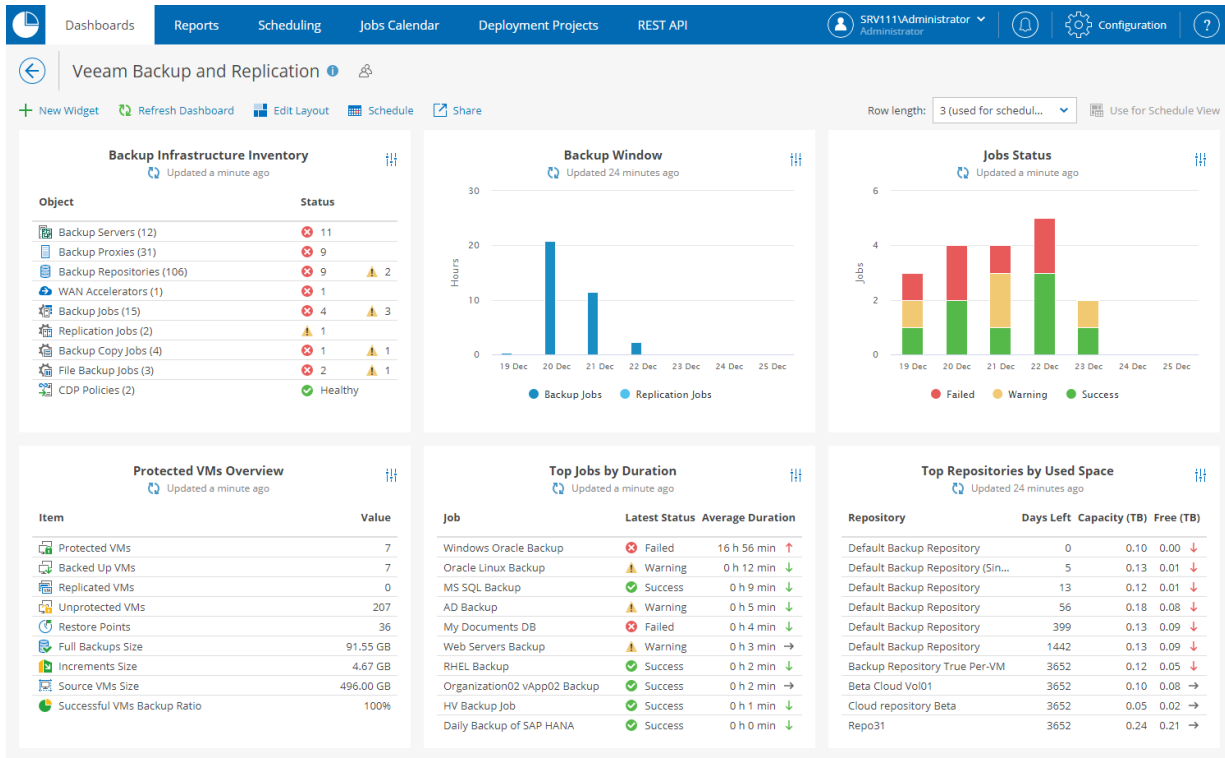
Widgets Included

- ### 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), 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 VMware vSphere and Microsoft Hyper-V 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 Size* — the amount of storage space consumed by full backups.

  - *Increments Size* — 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 Web Client displays file backup copy jobs together with other backup copy jobs.
> - Veeam ONE Web Client displays CDP Proxy servers together with other proxy servers.
> - Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match.
>   Otherwise, Veeam ONE Web Client may 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 grey 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.

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.
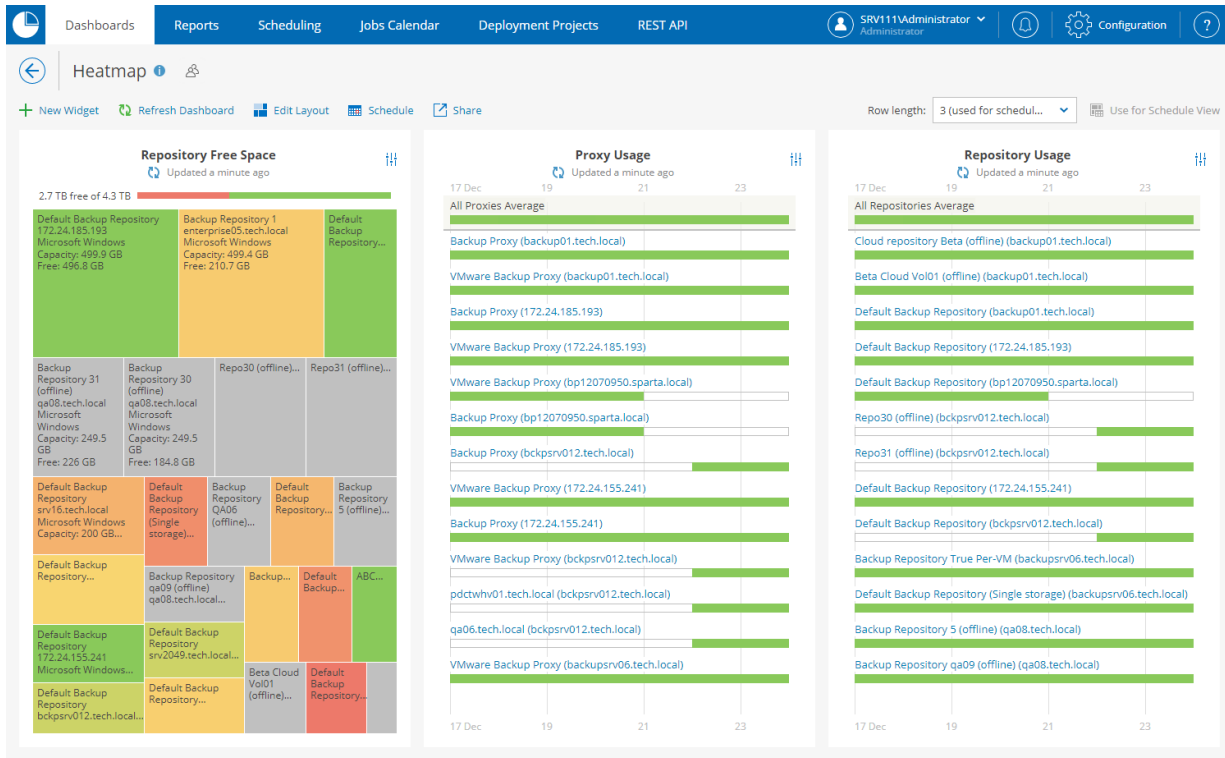
Widgets Included

- **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 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 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 the cell. This section includes the following elements:

    - o **Backup server** — host name of the backup server.

    - o **CPU count** — number of CPU cores.

- Concurrent tasks limit — number of maximum concurrent tasks.

- Max concurrent tasks processed — 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 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 the cell. This section includes the following elements:

    - Repository type — type of the repository.

    - Backup server — host name of the backup server.

    - Concurrent tasks limit — configured number of maximum concurrent tasks.

    - Max concurrent tasks processed — 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.

Veeam Backup for Microsoft 365

The **Veeam Backup for Microsoft 365** dashboard provides information on the state of the key Veeam Backup for Microsoft 365 infrastructure components. The built-in widgets display a list of important events and help focus on the core efficiency indicators.
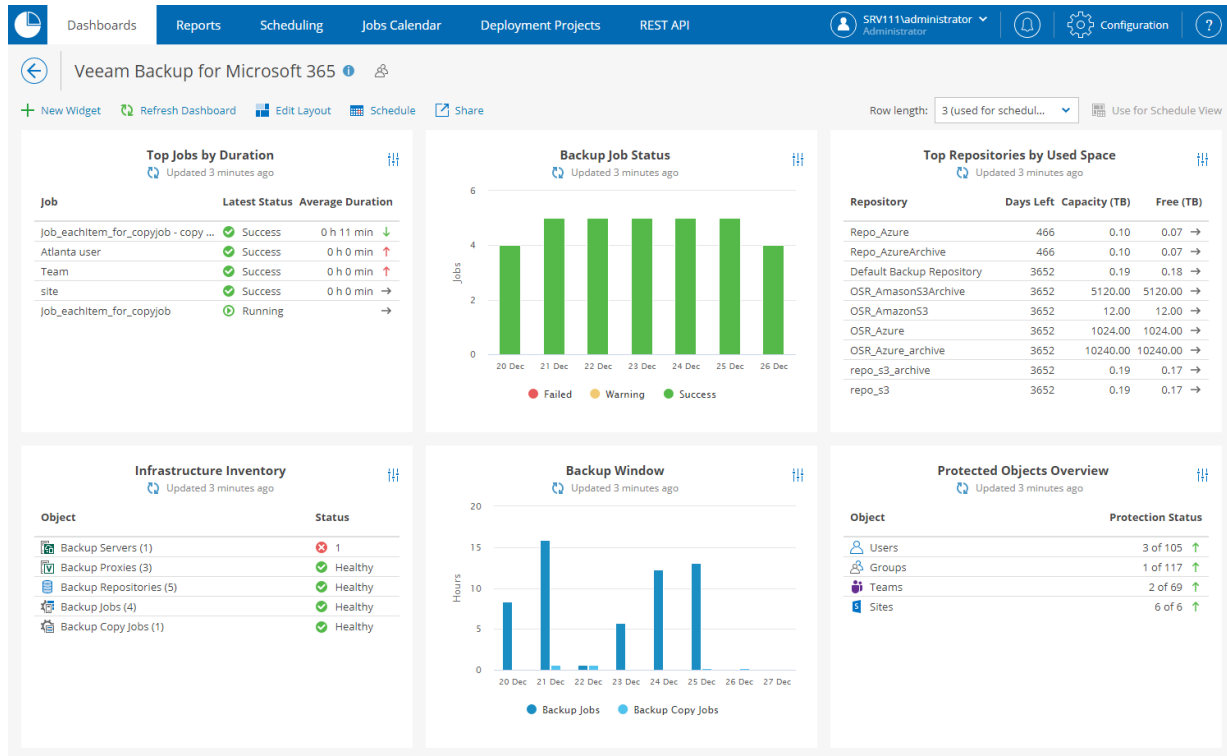
Widgets Included

- **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*.

- **Backup Job Status**

  This widget provides information on the completion state of scheduled backup and backup copy 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.

- **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*.

- **Infrastructure Inventory**

  This widget describes your Veeam Backup for Microsoft 365 infrastructure inventory and shows how many backup components of each type are deployed. The widget reflects the health state of backup infrastructure and displays how many objects have the *Warning* and *Error* statuses.

- **Backup Window**

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

- **Protected Objects Overview**

  This widget displays information on Microsoft 365 objects protected with backup jobs, specifically:

  o *Users* — the total number of protected user accounts.

    Note that shared mailboxes are counted as separate users.

  o *Groups* — the total number of protected user groups.

  o *Teams* — the total number of protected Microsoft Teams teams.

  o *Sites* — the total number of protected Microsoft 365 organization sites.

*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 grey 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.

vSphere Trends

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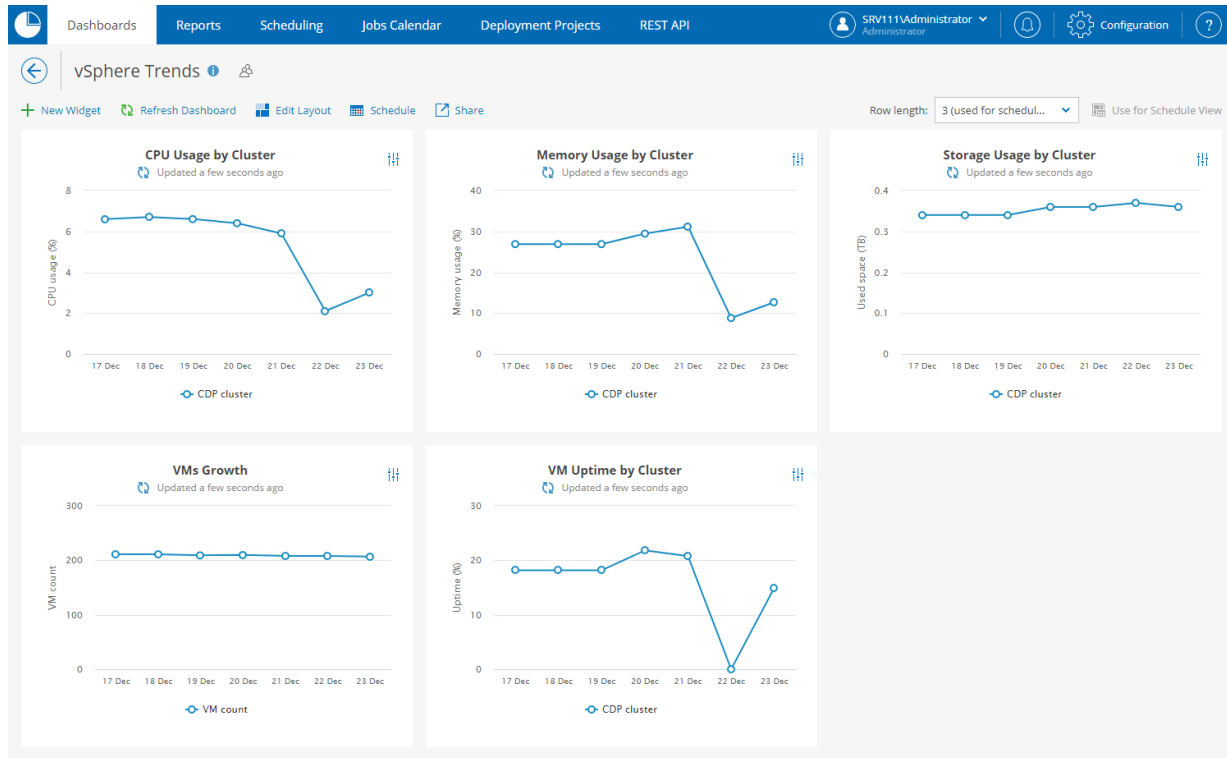
Widgets Included

- **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.

vSphere Alarms

The **vSphere Alarms** dashboard provides an overview of alarms triggered by Veeam ONE Client 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 Status 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).

vSphere Hosts and Clusters

The **vSphere 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.
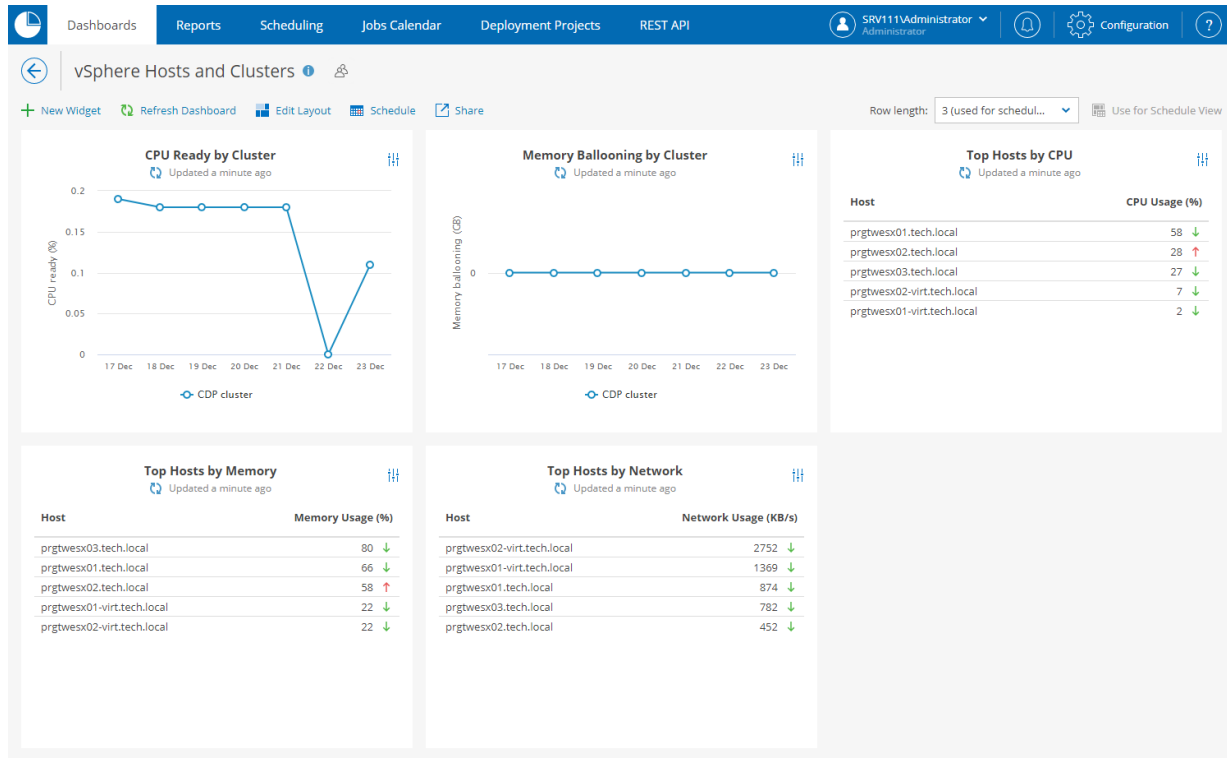
Widgets Included

- **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 grey 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.

vSphere Datastores

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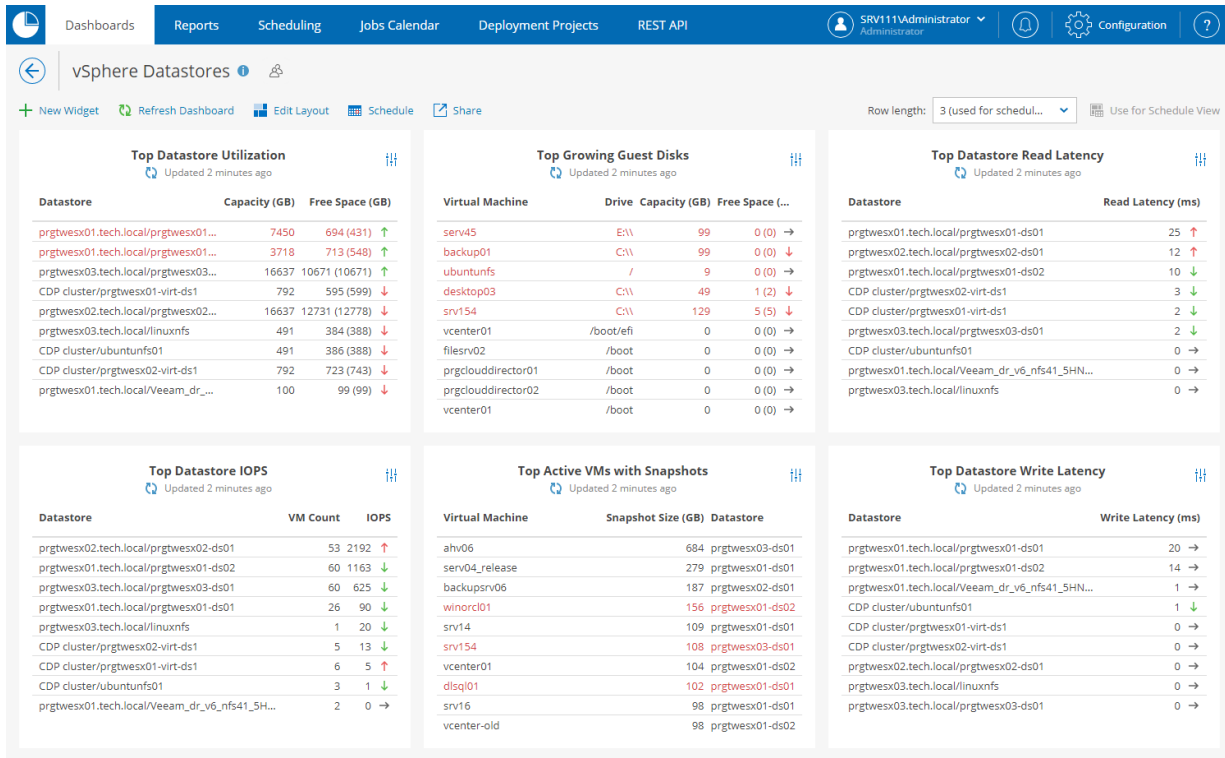
Widgets Included

- **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 grey 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.

vSphere VMs

The **vSphere 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.
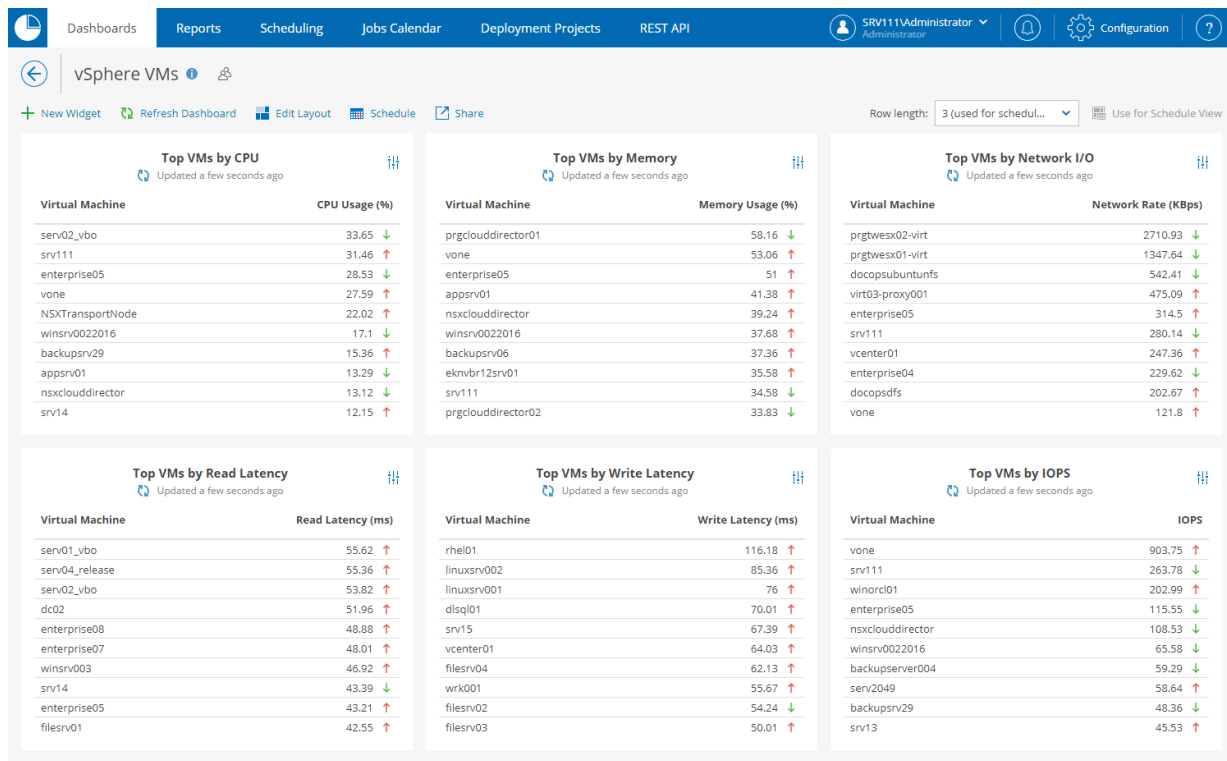
Widgets Included

- ## 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 grey 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.

vSphere Infrastructure

The **vSphere 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.
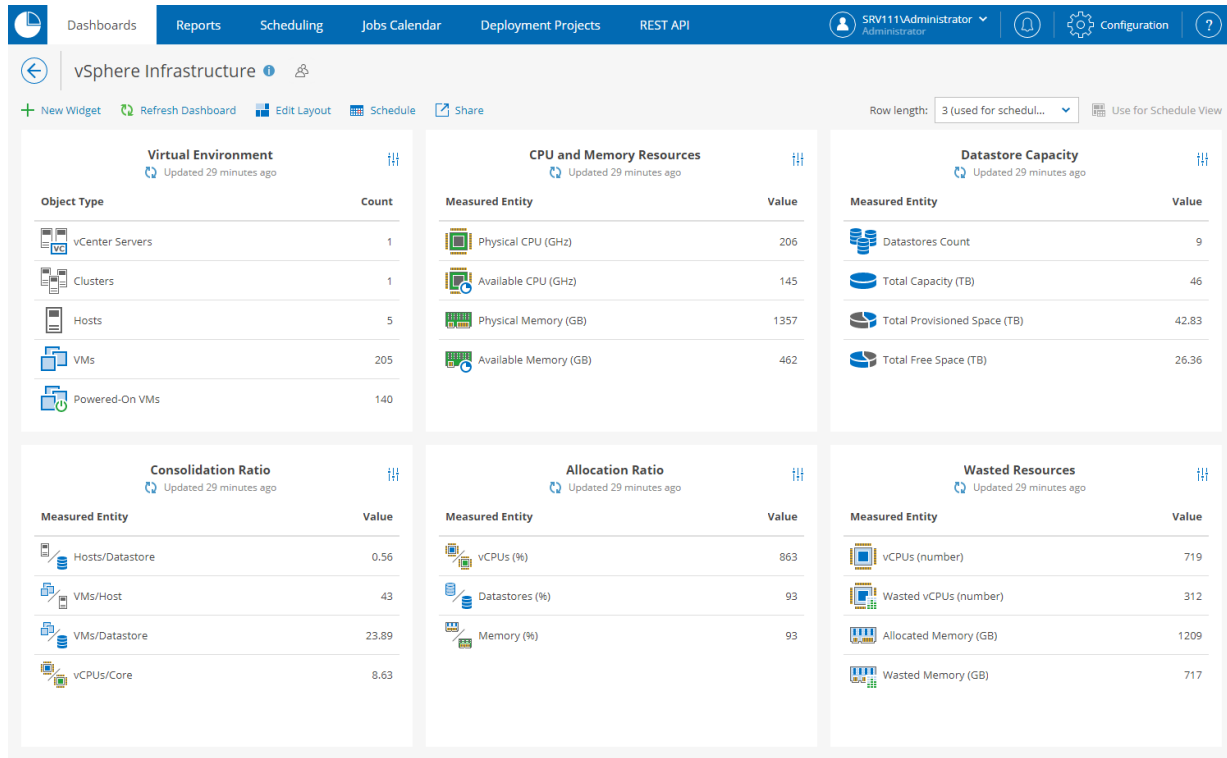
Widgets Included

- **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.

- **Datastore 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:

  - *Hosts/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.

  - *vCPUs/Core* ratio shows the average number of virtual processors operating on a single physical CPU core.

- **Allocation Ratio**

  The widget tracks the amount of virtual and physical resources allocated to VMs:

  - *vCPU* allocation ratio shows the number of virtual processors operating on a single physical CPU core (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.

vSphere Capacity Planning

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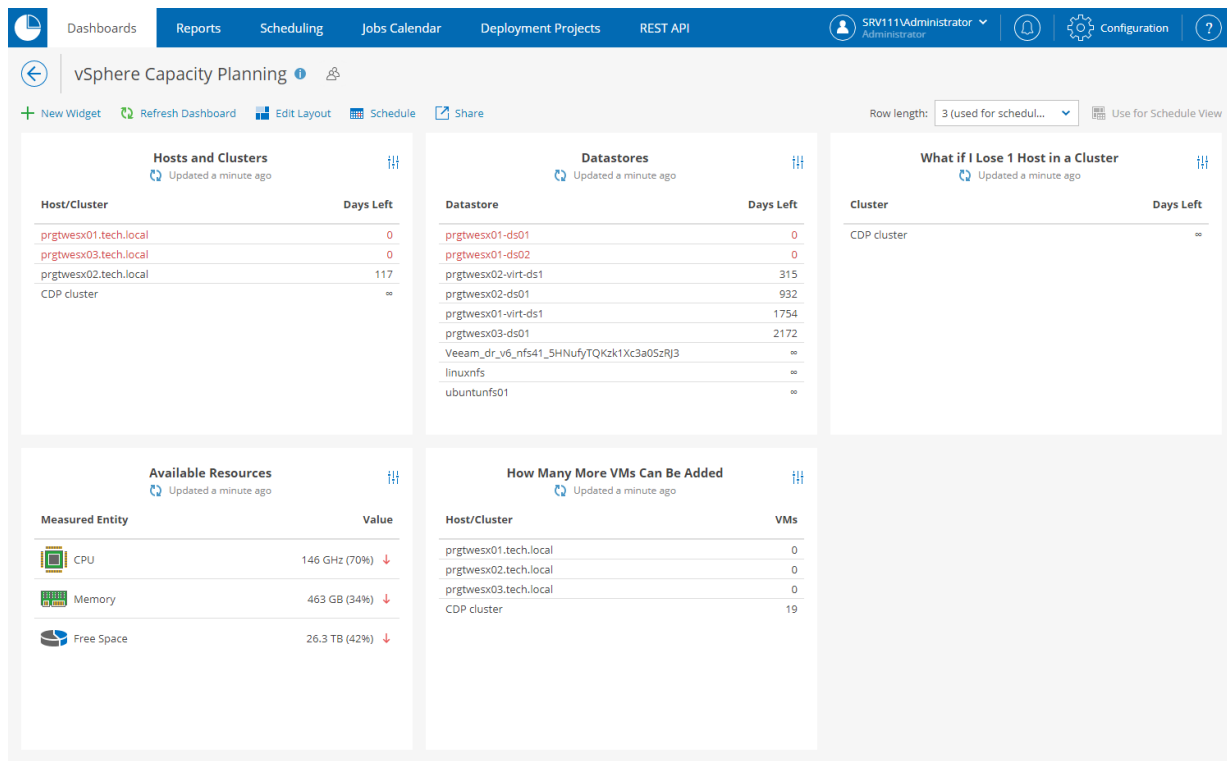
Widgets Included

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.
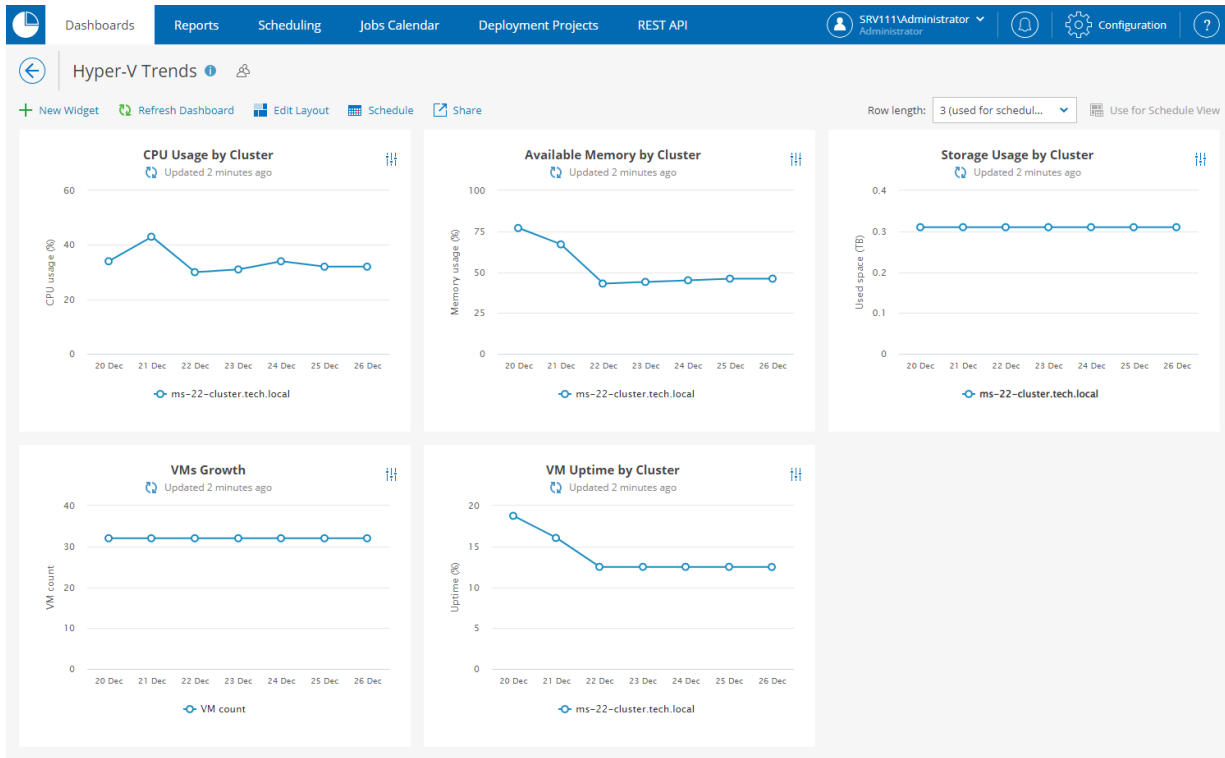
Widgets Included

- **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 Client 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 Status 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 and disks 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.
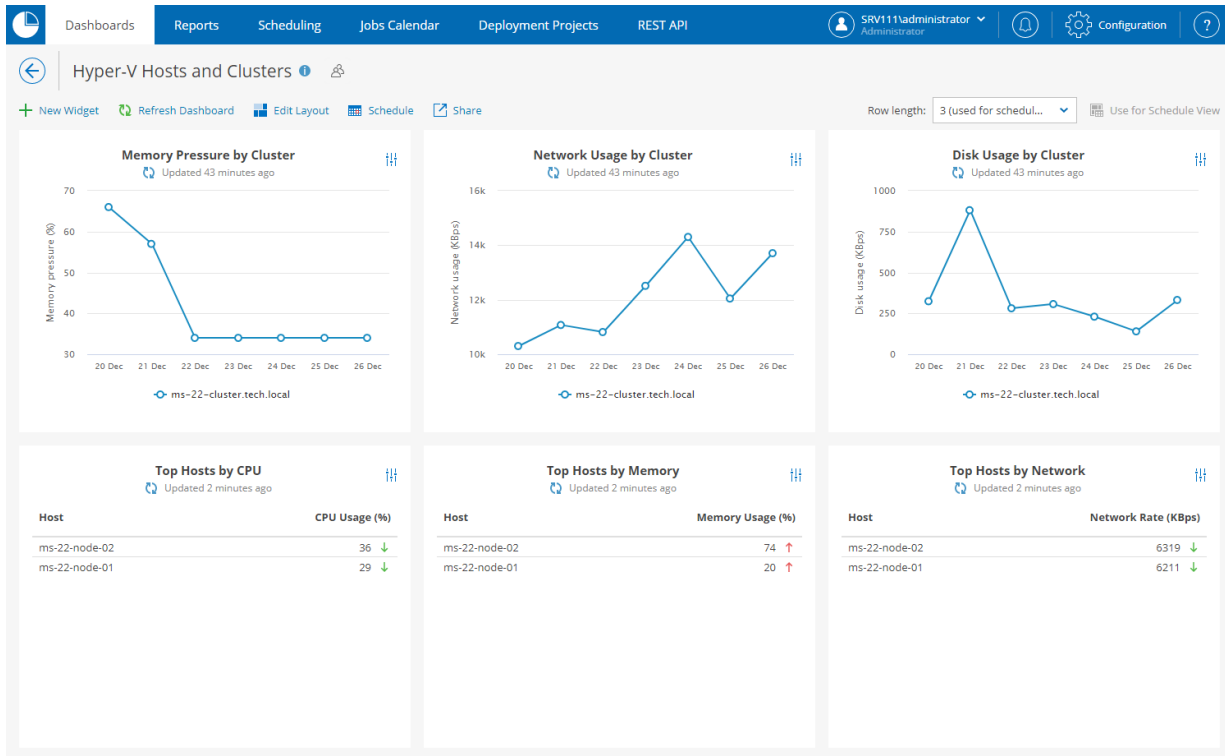
Widgets Included

- **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.

- **Disk Usage 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 by 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 by 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 by 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 grey 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.
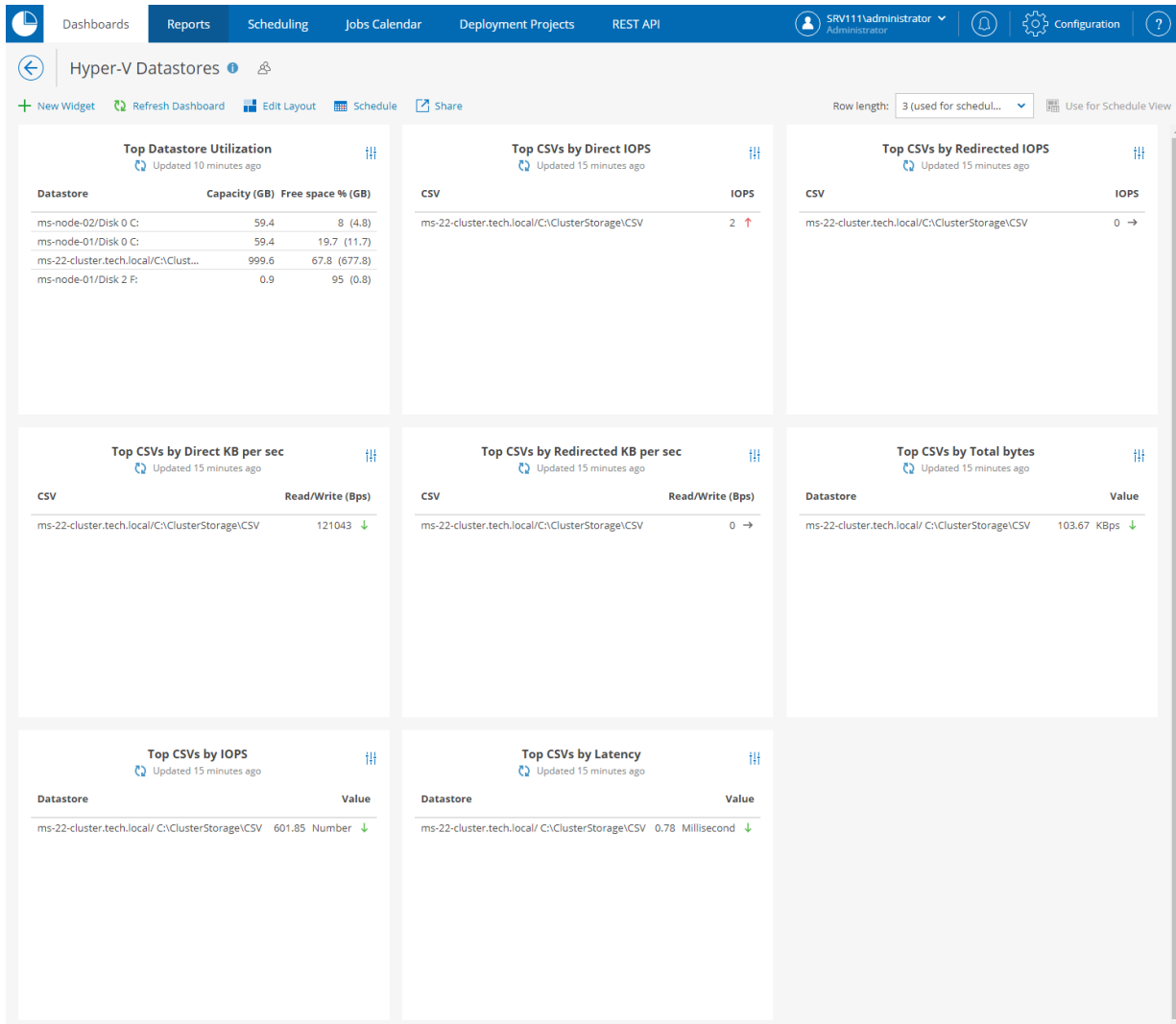
Widgets Included

- **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 by 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 by 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 by 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 by 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 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 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 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 grey 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.

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.
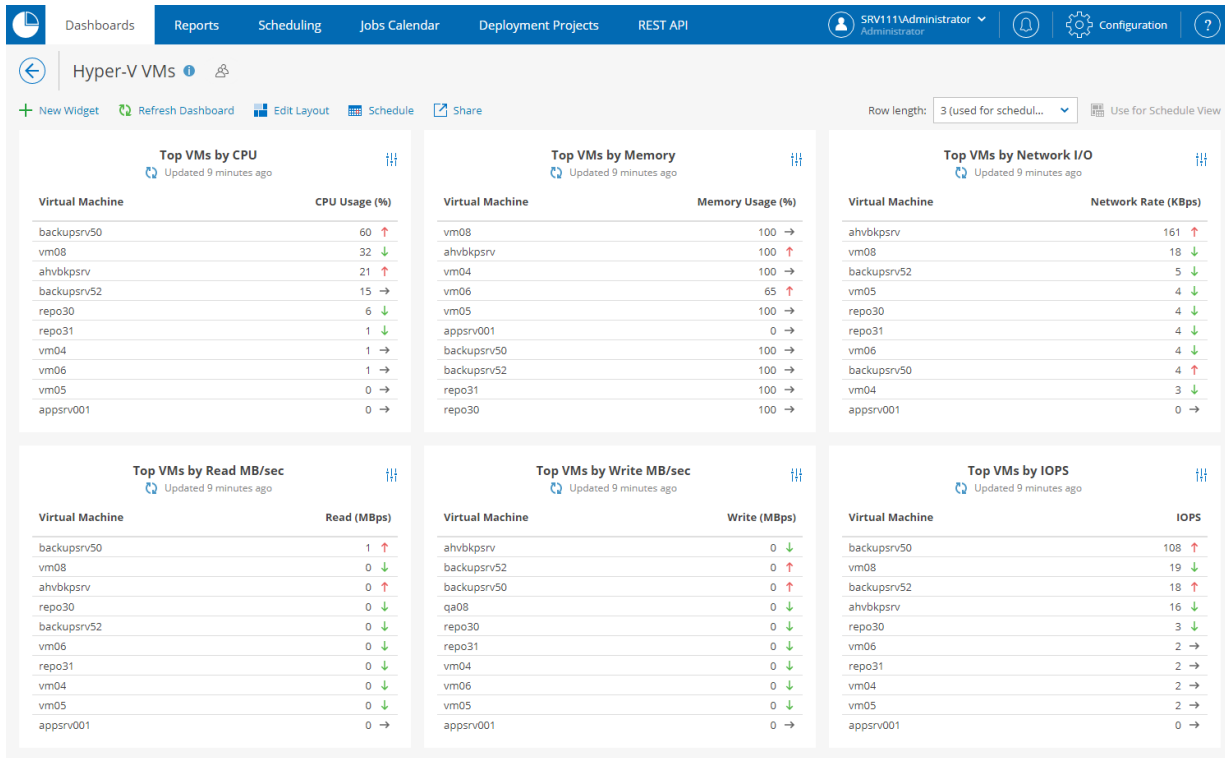
Widgets Included

- **Top VMs by CPU**

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

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

- **Top VMs by Read MB/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 by Write MB/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 grey 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.
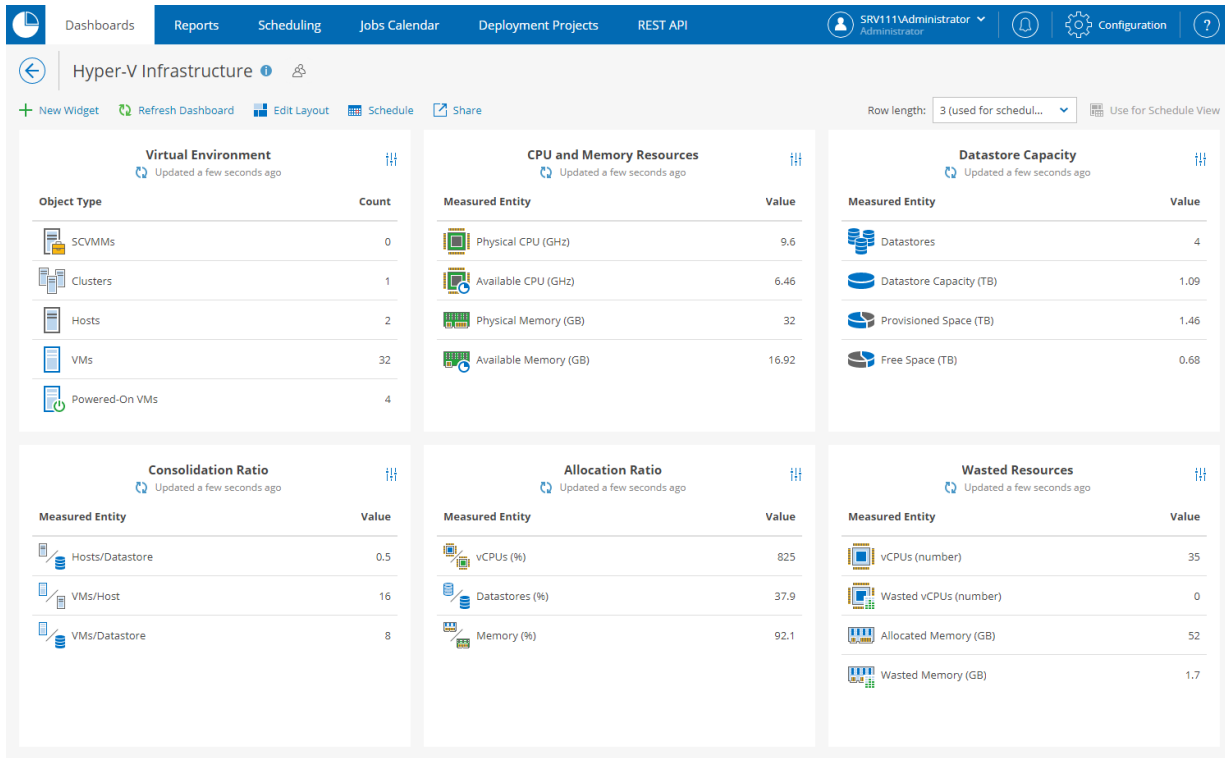
Widgets Included

- **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:

  o *Hosts/Datastore* ratio shows the average number of hosts connected to a single volume.

  o *VMs/Host* ratio shows the average number of VMs running on a single physical host.

  o *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):

  o *vCPU* allocation ration shows the amount of CPU resources allocated to VMs.

  o *Datastores* allocation ratio shows the amount of volume space allocated to VMs.

  o *Memory* allocation ratio shows the amount of RAM allocated to VMs.

- **Wasted Resources**

  The widget tracks the amount of available and wasted resources:

  o *vCPU* value shows the number of vCPUs configured for VMs.

  o *vCPU Wasted* value shows the number of vCPUs that can be reclaimed from oversized VMs.

  o *Allocated Memory* shows the amount of memory allocated to VMs.

  o *Memory Wasted* value shows the amount of memory that can be reclaimed from oversized VMs.

Predefined Veeam ONE Reports

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

- Custom Reports
- Hyper-V Capacity Planning
- Hyper-V Infrastructure Assessment
- Hyper-V Monitoring
- Hyper-V Optimization
- Hyper-V Overview
- Infrastructure Chargeback
- Offline Reports
- Veeam Backup Agents
- Veeam Backup Assessment
- Veeam Backup Billing
- Veeam Backup Capacity Planning
- Veeam Backup for Microsoft 365
- Veeam Backup for Nutanix AHV
- Veeam Backup for Public Clouds
- Veeam Backup Monitoring
- Veeam Backup Overview
- Veeam Backup Tape Reports
- Veeam Cloud Connect
- Veeam Enterprise Application Plug-ins
- VMware Cloud Director
- vSphere Capacity Planning
- vSphere Configuration Tracking
- vSphere Infrastructure Assessment
- vSphere Monitoring
- vSphere Optimization
- vSphere Overview

Custom Reports

This report pack allows you to define your own configuration parameters, performance metrics and filters when maximum flexibility is required.

Reports included:

- Backup Infrastructure Custom Data

- Custom Infrastructure

- Hyper-V Custom Performance

- Hyper-V Raw Performance Data

- Inventory

- Report Builder

- vSphere Custom Performance

- vSphere 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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*, *Job*, *Virtual machine*, *Computer*, *Repository*, *Workload*).

- **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 filters**: defines filters for the selected object properties.

> **NOTE:**
>
> To analyze data about protected VMs in the report, you must connect the target virtualization servers to Veeam ONE. For details, see section Connecting Servers of the Veeam ONE Deployment Guide.

Veeam

Backup Infrastructure Custom Data

Description

This report features a collection of custom properties for Veeam Backup & Replication objects to help you analyze data protection aspects not covered by other reports.

Report Parameters

Scope: Backup Infrastructure
Object type: Job
Columns: Job Name, Backup Mode, Protection Type, Platform, Backup Server
Custom filters:
Report generation time: 12/26/2022 5:08 AM

Details

Job Name	Protection Type	Backup Mode	Backup Server	Platform
Daily Backup Job	VM backup	Forward Incremental	backupsrv29.tech.local	VMware
arm-policy	Cloud backup policy	Forever Forward Incremental	172.24.155.241	Microsoft Azure
Backup Copy Job 1\RHEL Backup	Backup copy		enterprise05.tech.local	VMware
PGsnap	Cloud backup policy	Forever Forward Incremental	172.24.185.193	GCP
Cloud machines	Agent backup	Forever Forward Incremental	backupserver004.tech.local	Veeam Agent for Linux
BTT Ext0230	Backup to tape	Forever Forward Incremental	qa08.tech.local	Hyper-V
Replication Job	Replication	Forever Forward Incremental	backupsrv06.tech.local	VMware
Backup Job Lin	VM backup	Forward Incremental	qa08.tech.local	Hyper-V

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.

Custom Infrastructure

This report features a collection of custom properties and filters to help you analyze virtual infrastructure aspects not covered by other reports.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Object type**: defines a list of infrastructure objects to analyze in the report.

- **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 filters**: 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, select that property from the **Group by** drop-down 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 that, select the necessary aggregate functions for required properties in the list.

- **Sort by**: defines how data will be sorted in the report.

- **Show all groups expanded**: defines whether the report should display results in the collapsed or expanded view.

Custom Infrastructure

Description

This report features a collection of custom properties and filters to help you analyze virtual infrastructure aspects not covered by other reports.

Report Parameters

Scope:	Virtual Infrastructure
Business View objects:	
Object types:	vSphere Virtual Machine
Columns:	Name, Computer name, Guest OS, Tools: Status, Tools: Version
Custom filters:	
Group by:	
Sort by:	

Details

Name	Computer name	Guest OS	Tools: Status	Tools: Version
VeeamFLR_dr-nfs3-qtree_413e1d3a-3128-49a7-ba90-1a6351a03523	VeeamFLR-dr-nfs3-qtree-413e1d3a-3128-49a7-ba90-1a6351a03523	Other 4.x or later Linux (64-bit)	OK	2147483647
dr-nfs3-qtree_9f092028-ac44-400e-957e-81c1b4f4875e	Not set	CentOS 4/5/6/7 (64-bit)	not running	0
linuxsrv002	linuxsrv002	Oracle Linux 7 (64-bit)	OK	2147483647
avspem1	avspem1	Oracle Linux 8 (64-bit)	not running	11328
dlsql01	dlsql01.tech.local	Microsoft Windows Server 2016 or later (64-bit)	out of date	11265
172.24.31.67_pskehq	pskehq	Other 4.x or later Linux (64-bit)	not running	2147483647
srv05_proxy	srv05.tech.local	Microsoft Windows Server 2016 (64-bit)	out of date	11297
filesrv04	filesrv04.tech.local	Microsoft Windows Server 2012 (64-bit)	OK	11365

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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Object type**: defines the infrastructure object to analyze in the report (*Hosts*, *Virtual Machines*, *Local Datastore*, *CSV 2008*, *CSV*, *SMB Shares*).

- **Measured entities**: 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.

- **Inclusion rule/Exclusion rule**: defines a list of objects that should be included in/excluded from the report scope:

  o Use the **Inclusion rule** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the **Inclusion rule** field will be excluded from the baseline used for data analysis.

  o Use the **Exclusion rule** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the **Exclusion rule** field will be included in the baseline used for data analysis.

> **NOTE:**
>
> The **Inclusion rule/Exclusion rule** 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 **Inclusion rule** field. Alternatively, type *ad** in the **Exclusion rule** field.

- **Top N:** defines the maximum number of VMs to display in the report.

- **Show graphs**: defines whether to show charts in the report output.

veeam

Hyper-V Custom Performance

Description

This report allows you to define specific metrics to analyze performance of Hyper-V infrastructure elements.

Report Parameters

Selected object:	Virtual Infrastructure
Report creation date:	12/26/2022 5:33 AM
Report period:	1 month (11/27/2022 - 12/26/2022)
Object type:	Hosts
Exclusion rule:	
Inclusion rule:	*
Business View objects:	
Top N:	All Items
CPU:	Total Run Time (Percent), Total Run Time (MHz)
Memory:	Memory Usage (Percent), Hyper-V Services Memory Consumed (B)

CPU

Total Run Time (Percent)
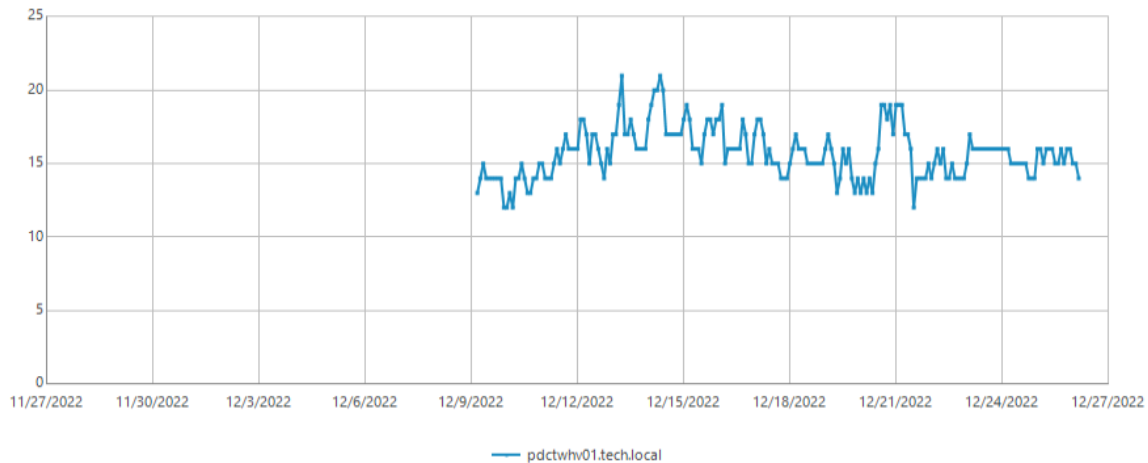
Virtual Server	Object Name	Average	Maximum	Minimum	Std. Deviation	Trend
pdctwhv01.tech.local						
	pdctwhv01.tech.local	15.71	21.00	12.00	1.71	Decreasing

Use Case

Use this report to investigate specific performance issues in the environment.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Sample size**: 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*).

- **Measured entities**: 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.

- **Inclusion rule/Exclusion rule**: defines a list of objects that should be included in/excluded from the report scope:

  - Use the **Inclusion rule** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the **Inclusion rule** field will be excluded from the baseline used for data analysis.

  - Use the **Exclusion rule** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the **Exclusion rule** field will be included in the baseline used for data analysis.

> **NOTE:**
>
> The **Inclusion rule/Exclusion rule** 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 **Inclusion rule** field. Alternatively, type *ad** in the **Exclusion rule** field.

Hyper-V Raw Performance Data

Description

This report allows you to get detailed raw data on specific metrics to analyze performance of Hyper-V infrastructure elements.

Report Parameters

Selected object:	Virtual Infrastructure
Report creation date:	12/26/2022 6:03 AM
Report period:	11/26/2022 - 12/26/2022
Object type:	Hosts
Exclusion rule:	
Inclusion rule:	*
Business View objects:	
Sample size:	Raw
CPU:	Total Run Time (Percent), Total Run Time (MHz)
Memory:	Memory Usage (Percent), Hyper-V Service Memory Consumed (P)

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.

Inventory

This report provides the most complete and up-to-date configuration information on all objects in your virtual environment.

Report Parameters

You can specify the following report parameter:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

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Inventory

Description

This report contains all configuration properties for all collected objects in your virtual infrastructure.

Report Parameters

Scope: Virtual Infrastructure

Details

Object Type: Cluster

Cluster Location	Cluster Name	Property Group	Property	Value
elal>Datacenter1	Cluster1		Cluster DAS VM Settings Isolation Responce	none
elal>Datacenter1	Cluster1		Cluster DAS VM Settings Restart Priority	medium
elal>Datacenter1	Cluster1		Cluster DPM: Mode	Disabled
elal>Datacenter1	Cluster1		Cluster DPM: Threshold	3
elal>Datacenter1	Cluster1		CPU cores count	20
elal>Datacenter1	Cluster1		CPU threads count	32
elal>Datacenter1	Cluster1		CPU: Effective (MHz)	30479
elal>Datacenter1	Cluster1		CPU: Total (MHz)	41024
elal>Datacenter1	Cluster1		Datacenter	Datacenter1
elal>Datacenter1	Cluster1		DRS	enabled
elal>Datacenter1	Cluster1		DRS automation level	fullyAutomated
elal>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 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.

Report Parameters

You can specify the following report parameters:

- **Reports**: defines custom report sections that should be included in the resulting report.

- **Hide table of contents**: defines whether the report output will include table of contents or display results in the expanded view.
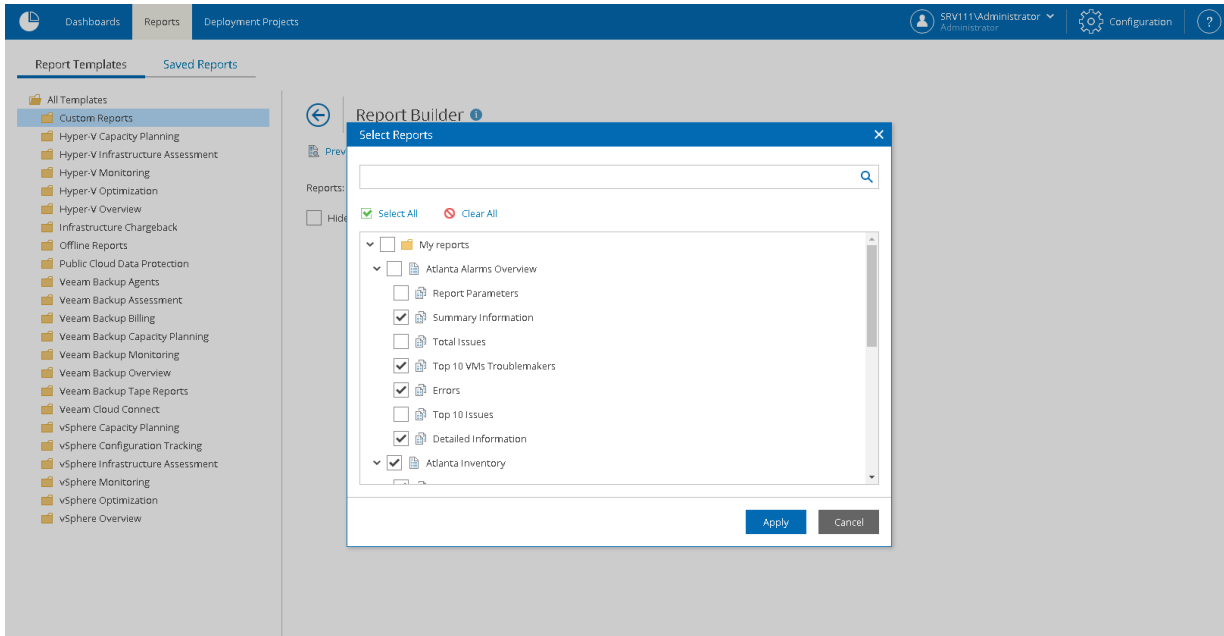
Use Case

This report eliminates data redundancy and helps you focus on the most relevant and important information about your infrastructure.

vSphere Custom Performance

This report allows you to define specific CPU, memory, network and disk metrics to analyze performance of vSphere hosts, datastores and VMs.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director Infrastructure levels to analyze in the report.

- **Business View objects**: defines Business View groups to analyze in the report.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task 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 will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

- **Object type**: defines the infrastructure object to analyze in the report.

- **Measured entities**: 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.

- **Inclusion rule/Exclusion rule**: defines a list of objects that should be included in/excluded from the report scope:

    - Use the **Inclusion rule** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the **Inclusion rule** field will be excluded from the baseline used for data analysis.

    - Use the **Exclusion rule** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the **Exclusion rule** field will be included in the baseline used for data analysis.

NOTE:

The **Inclusion rule/Exclusion rule** 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 (*ADO1* and *ADO2*).

If you want the report to show performance details only for the NAS servers, type *nasserv** in the **Inclusion rule** field. Alternatively, type *ad** in the **Exclusion rule** field.

- **Top N**: defines the maximum number of VMs to display in the report.

- **Show graphs**: defines whether to show charts in the report output.

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vSphere Custom Performance

Description

This report allows you to define specific metrics to analyze performance of vSphere infrastructure elements.

Report Parameters

Selected object:	Virtual Infrastructure
Report creation date:	12/26/2022 11:35 PM
Report period:	2 weeks (12/13/2022 - 12/26/2022)
Object type:	Hosts
Exclusion rule	
Inclusion rule:	*
Business View objects:	
Top N:	All Items
CPU:	CPU Usage (Percent), CPU Usage (Absolute) (MHz)
Memory:	Memory Usage (Percent)

CPU

CPU Usage (Percent)
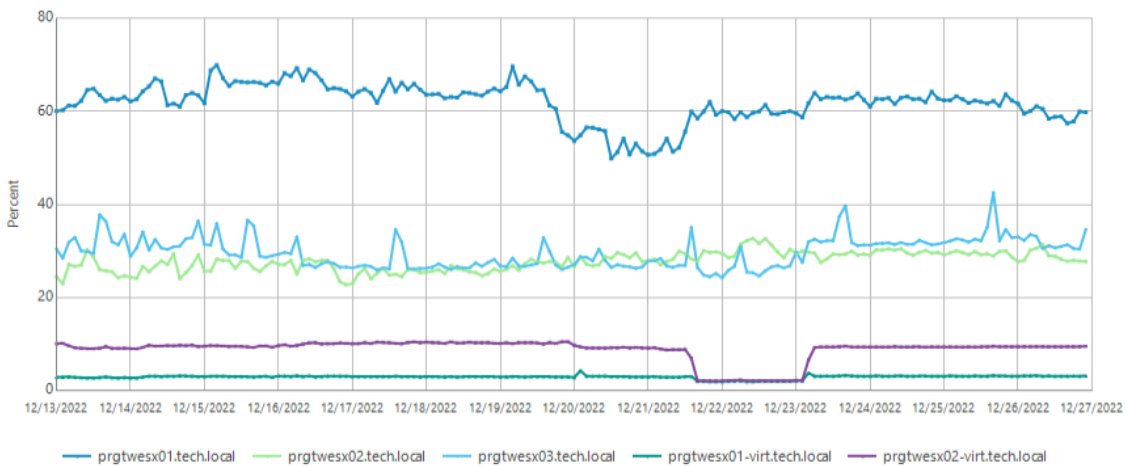
Virtual Server	Object Name	Average	Maximum	Minimum	Std. Deviation	Trend
vcenter01.tech.local						
	prgtwesx01.tech.local	61.92	70.00	49.92	4.14	Decreasing
	prgtwesx03.tech.local	29.71	42.57	24.28	3.28	Increasing
	prgtwesx02.tech.local	27.80	32.72	22.75	2.04	Increasing
	prgtwesx02-virt.tech.local	8.81	10.50	2.07	2.38	Decreasing
	prgtwesx01-virt.tech.local	2.95	4.29	1.99	0.35	Decreasing

Use Case

Use this report to investigate specific performance issues in the environment.

vSphere 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Sample size**: 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.

- **Measured Entities**: defines subsystems to analyze in the report (*CPU*, *Memory*, *Network*, *Storage Adapter*, *Storage Path*, *Datastore* or *Power*). 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.

- **Inclusion rule/Exclusion rule**: defines a list of objects that should be included in/excluded from the report scope:

  - Use the **Inclusion rule** option to define names of virtual infrastructure objects that should be included in the report. All objects not specified in the **Inclusion rule** field will be excluded from the baseline used for data analysis.

  - Use the **Exclusion rule** option to define names of virtual infrastructure objects that should be excluded from the report. All objects not specified in the **Exclusion rule** field will be included in the baseline used for data analysis.

NOTE:

The **Inclusion rule/Exclusion rule** 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 **Inclusion rule** field. Alternatively, type *ad** in the **Exclusion rule** field.

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vSphere Raw Performance Data

Description

This report allows you to get detailed raw data on specific metrics to analyze performance of vSphere infrastructure elements.

Report Parameters

Selected object:	Virtual Infrastructure
Report creation date:	12/26/2022 11:41 PM
Report period:	12/19/2022 - 12/25/2022
Object type:	Hosts
Exclusion rule:	
Inclusion rule:	*
Business View objects:	
Sample size:	Raw
CPU:	CPU Usage (Percent), CPU Usage (Absolute) (MHz)

Subsystem: CPU

Counter: CPU Usage

Object Name	Value (Percent)	Time
prgtwesx01.tech.local	59.63	12/26/2022 2:00 AM
prgtwesx01.tech.local	60.34	12/26/2022 4:00 AM
prgtwesx01.tech.local	60.86	12/26/2022 6:00 AM
prgtwesx01.tech.local	60.63	12/26/2022 8:00 AM
prgtwesx01.tech.local	58.63	12/26/2022 10:00 AM
prgtwesx01.tech.local	58.96	12/26/2022 12:00 PM
prgtwesx01.tech.local	58.79	12/26/2022 2:00 PM
prgtwesx01.tech.local	57.50	12/26/2022 4:00 PM
prgtwesx01.tech.local	57.83	12/26/2022 6:00 PM
prgtwesx01.tech.local	59.83	12/26/2022 8:00 PM
prgtwesx01.tech.local	59.94	12/26/2022 10:00 PM
prgtwesx01.tech.local	58.79	12/27/2022 12:00 AM
Max Observed:	**60.86**	**12/26/2022 6:00 AM**
Min Observed:	**57.50**	**12/26/2022 4:00 PM**
Average:	**59.31**	**12/26/2022 2:00 AM - 12/27/2022 12:00 AM**

Object Name	Value (Percent)	Time
prgtwesx02.tech.local	28.27	12/26/2022 2:00 AM
prgtwesx02.tech.local	30.11	12/26/2022 4:00 AM
prgtwesx02.tech.local	30.51	12/26/2022 6:00 AM
prgtwesx02.tech.local	31.22	12/26/2022 8:00 AM
prgtwesx02.tech.local	29.23	12/26/2022 10:00 AM
prgtwesx02.tech.local	28.93	12/26/2022 12:00 PM
prgtwesx02.tech.local	28.11	12/26/2022 2:00 PM
prgtwesx02.tech.local	27.77	12/26/2022 4:00 PM
prgtwesx02.tech.local	28.10	12/26/2022 6:00 PM
prgtwesx02.tech.local	27.92	12/26/2022 8:00 PM
prgtwesx02.tech.local	27.63	12/26/2022 10:00 PM
prgtwesx02.tech.local	28.50	12/27/2022 12:00 AM
Max Observed:	**31.22**	**12/26/2022 8:00 AM**
Min Observed:	**27.63**	**12/26/2022 10:00 PM**
Average:	**28.86**	**12/26/2022 2:00 AM - 12/27/2022 12:00 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.

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.

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 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 and calculate the performance trend.

- **Perform planning for**: defines a time period in the future for which performance data will be used to forecast resource usage trend.

- **CPU utilization (%)**: defines the CPU usage threshold as a percentage of total CPU resources of virtual infrastructure objects.

- **Memory utilization (%):** defines the used memory threshold as a percentage of total memory resources of virtual infrastructure objects.

- **Space utilization (%):** defines the maximum amount of space in use on a datastore.

- **Free space (min):** defines the minimum amount of free space left on a datastore in GB.

- **Read/write speed (max):** defines the maximum read and write rates in MB 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 graphs**: defines whether the report must include charts that illustrate historical performance data for the specified period.

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Capacity Planning

Description

This report predicts when resource utilization for selected objects in the infrastructure will reach the configured threshold.

Report Parameters

Scope:	Virtual Infrastructure
Datastores:	All Datastores
Analyze performance data for:	Past 6 months
Perform planning for:	Next 6 months
CPU utilization threshold:	80.00 %
Memory utilization threshold:	80.00 %
Datastore space utilization threshold:	90.00 %
Datastore read/write speed (max) threshold:	50 MBps

Summary

Virtual Infrastructure		Days Remaining		Resources Required	
Number of standalone hosts:	1	CPU:	∞	CPU:	0.00 GHz
Number of hosts:	1	Memory:	∞	Memory:	0.00 GB
Number of datastores:	2	Datastore space utilization:	∞	Datastore capacity:	0.00 TB
Number of VMs:	16	Datastore read rate:	∞		
Number of powered on VMs:	10	Datastore write rate:	∞		

Top 5 Utilized Clusters and Standalone Hosts

Object Name	Bottleneck	Average Usage	Days Remaining
pdctwhv01.tech.local	CPU usage	15.60 %	∞

Details

Selected Object: pdctwhv01.tech.local

Physical Resources

CPU (GHz)	CPU Sockets	CPU Cores	Memory (GB)	Datastore Capacity (GB)
50.42	2	24	382.67	16764.94

Resource Usage

Resources	Memory Usage	CPU Usage	Datastore Used Space	Read Rate	Write Rate
Current usage	14.64 %	14.00 %	14.39 %	1.11 MBps	1.13 MBps
Average usage	14.54 %	15.60 %	14.39 %	5.94 MBps	1.52 MBps
Days remaining	∞	∞	∞	∞	∞

Recommendations

The selected object has enough capacity to maintain the current workload, no additional resources are required.

Performance Trends
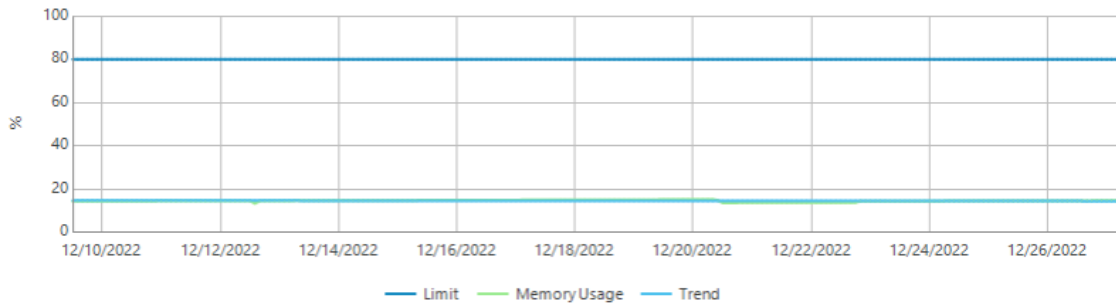
Memory Usage

Memory Usage (%)

Object Name	Minimum	Maximum	Average	Std.Deviation	Days Left
pdctwhv01.tech.local	13.35	15.18	14.54	0.41	∞

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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

- **Failed hosts**: defines a list of hosts for which you want to simulate a failure.

- **Business View migration scope**: filters report scope objects that belong to the selected Business View groups.

- **CPU utilization threshold (%)**: defines the CPU usage threshold as a percentage of total cluster CPU resources.

- **Memory utilization threshold (%)**: defines the used memory threshold as a percentage of total cluster memory resources.

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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 threshold:	90.00%
Memory utilization threshold:	80.00%
Business View migration scope:	

Summary

Virtual Infrastructure		Physical Resources		Resources Required	
Number of clusters:	1	CPU:	9.60 GHz	CPU:	0.00 GHz
Number of hosts:	2	Memory:	32.00 GB	Memory:	9.79 GB
Number of datastores:	4	**Physical Resources After 1 Hosts Failure**			
Number of VMs:	32	CPU:	4.80 GHz		
Number of powered on VMs:	4	Memory:	16.00 GB		

Modelling Results
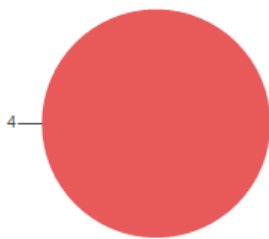
VMs Migration Count   **Available CPU Resources (GHz)**   **Available Memory Resources (GB)**

4

| | 4.80 | | 4.80 | | 16.00 | | 16.00 |

- VMs to Migrate - Unaffected VMs
- Failed - Available
- Failed - Available

Details

Cluster	Average CPU Usage (%)	Average Memory Usage (%)	Predicted CPU Usage (%)	Predicted Memory Usage (%)	Failed Hosts	Affected VMs
ms-22-cluster.n.local	33.78	70.59	67.55	141.19	1	4
					ms-22-node-02	4

Recommendations

ms-22-cluster.n.local:

To ensure this Cluster remains functional after 1 hosts failure, add one host with (at least): Memory: 9.79 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.

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 **Summary** section includes the following elements:

    o The **Top 5 Over-provisioned Datastores** chart shows 5 disks whose amount of provisioned storage space exceeds the total capacity.

    o The **Top 5 Under-provisioned Datastores** chart shows 5 disks whose amount of provisioned storage space is way below the total capacity.

    o 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.

    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.

> **NOTE:**
>
> The **Provisioned Space (GB)** column shows the size of all datastore files, including files that are not associated with any VM.
>
> If you want to see the size of files associated with VMs that store data on disk, click a number in the **VM Count** column.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Space utilization threshold**: defines the threshold for the amount of space in use on the disks.
- **Minimum free space threshold**: defines the threshold for the amount of free space left on the disks.

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
Space utilization threshold:	80.00%
Business View objects:	

Summary

Top 5 Over-provisioned Datastores (GB)
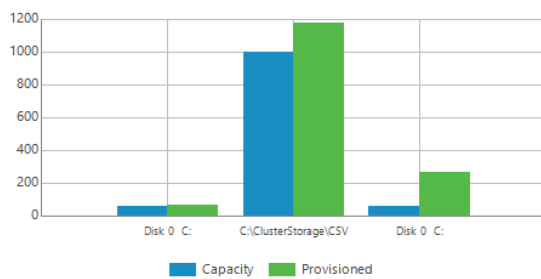
Top 5 Under-provisioned Datastores (GB)
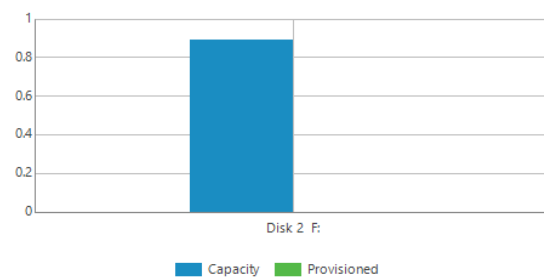
Top 5 Datastores with Least Amount of Free Space

Datastore Name	Parent Node	SCVMM	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VM Count
Disk 2 F:	ms-22-node-01		0.8	0.9	0.0	0.00	0
Disk 0 C:	ms-22-node-02		4.8	59.4	62.0	104.42	2
Disk 0 C:	ms-22-node-01		11.7	59.4	263.0	442.96	6
C:\ClusterStorage\CSV	ms-22-cluster.tech.local		677.8	999.6	1173.0	117.35	20

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)	
ms-22-node-02								
	Disk 0 C:	4.8	59.4	62.0	104.42	2	0	↑
ms-22-node-01								
	Disk 0 C:	11.7	59.4	263.0	442.96	6	0	↑
ms-22-cluster.tech.local								
	C:\ClusterStorage\CSV	677.8	999.6	1173.0	117.35	20	...	↑

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)	
ms-22-node-01								
	Disk 2 F:	0.8	0.9	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.

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.

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 **Summary** section includes the following elements:

    o The **Verification Results** chart displays the share of failed and passed verification tests, and tests that completed with warnings.

    o 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.

The report takes into account the following criteria when analyzing Hyper-V configuration:

Cluster Optimization

Criterion	Description
Hosts use same CPU vendors/models	The report analyzes cluster configuration to make sure clusters include hosts with CPUs of the same vendors. A cluster that includes hosts with CPUs from different vendors may not operate correctly when you perform some tasks in Veeam Backup & 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.
Hosts are updated equally	The report verifies that hosts in a cluster have the same Hyper-V version installed. When hosts in a cluster have different Hyper-V versions installed, it may cause compatibility issues and unexpected errors.

Criterion	Description
Storage controllers are of the same vendors	The report analyzes cluster configuration to verify that storage controllers installed on hosts are of the same vendor. If you have storage controllers of different vendors on hosts in a cluster, you may experience unexpected errors and failures.
NICs compatibility	The report analyzes cluster configuration to verify whether NIC cards within a cluster are of the same vendor. Incompatible NIC cards may cause issues during backup and restore operations in a cluster.

Host Optimization

Criterion	Description
Host is not running on a balanced power plan	The report analyzes host configuration to verify whether hosts in the infrastructure are running on a balanced power plan. The **Balanced** power plan is the default power plan in Windows operating systems. However, to increase host efficiency, you are recommended using the **High Performance** power plan.
No RDP printers mapped	The report analyzes your infrastructure to verify that there are no RDP mapped printers on hosts. Printers mapped through RDP may not work efficiently and may cause unexpected errors and failures. You can disable RDP printer mapping through a group policy.
Virtual CPUs/Logical CPUs ratio	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. If CPU configuration is not balanced, VMs may not obtain enough processor resources. For information on how to measure processor performance, see this Microsoft article.

VM Optimization

Criterion	Description
Integration Services state	The report analyzes your infrastructure to verify that all Integration Services on VMs in the infrastructure are enabled. Integration Services participate in application-aware image processing during backup in Veeam Backup & Replication. To use application-aware image processing efficiently, enable Integration Services.
Hyper-V VSS Requestor state	The report analyzes the infrastructure to identify the state of VSS Requestor on VMs. 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. If the state of VSS Requestor on a VM is **Started/Automatic or Started/Automatic (Delayed Start)**, the report will show the **Success** verification result. In other cases, the verification result will be **Warning**.
No Checkpoints used	The report analyzes the virtual infrastructure to find VMs with existing checkpoints. To use Veeam Changed Block Tracking for incremental backup, you must remove snapshots.
No VMs on datastores with less than 10% of free space	The report analyzes the Hyper-V infrastructure to find datastores that have less than 10% of free space. During backup Veeam Backup & 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%.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Cluster type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Objects to assess**: defines types of objects to analyze in the report.

- **Max vCPUs per physical core**: defines the threshold for the maximum number of vCPU cores per a single instance of the physical CPU core.

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:	
Objects to assess:	All items
Max vCPUs per physical core:	8

Summary

Verification Results

45.45 %

18.18 %

36.36 %

■ Not applicable   ■ Passed   ■ Warning
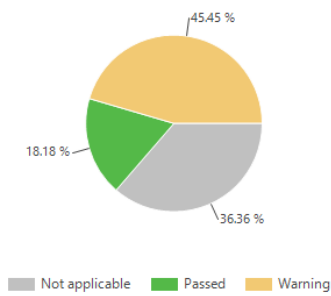
Assessment Criteria	Verification Results
Criteria Group: Cluster optimization	**Not applicable**
Hosts use same CPU vendors / models	Not applicable
Hosts are updated equally	Not applicable
Storage controllers are of the same vendor	Not applicable
NICs compatibility	Not applicable
Criteria Group: Host optimization	**Warning**
Host is not running on a balanced power plan	Warning
No RDP printers mapped	Warning
Virtual CPUs / Logical CPUs ratio	Passed
Criteria Group: VM optimization	**Warning**
Integration Services state	Warning
Hyper-V VSS Requestor state	Warning
No Checkpoints used	Warning
No VMs on datastores with less than 10% of free space	Passed

Host Is Not Running on A Balanced Power Plan

Recommendation: For better host performance in POWERCFG.EXE/S SCHEME_MIN to change "min" to "max".

Host	Cluster	Balanced Power Plan Is Disabled	Verification Result
pdctwhv01.tech.local	-	False	Warning

No RDP Printers Mapped

Recommendation: Use Group Policy to disable remote desktop printer mapping on the Hyper-V hosts.

Host	Cluster	RDP Client Printer Mapping Is Disabled	Verification Result
pdctwhv01.tech.local	-	False	Warning

Virtual CPUs / Logical CPUs Ratio

Recommendation: Your Hyper-V infrastructure meets all known best practices.

Host	Cluster	VP/LP Ratio	Verification Result
pdctwhv01.tech.local	-	0.77	Success

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.

Performance Assessment

This report evaluates whether the Microsoft Hyper-V infrastructure is configured optimally, helps find potential issues and suggests actions aimed at boosting its efficiency. The report analyzes data over the past 2 weeks and checks whether performance thresholds are exceeded or the number of times Veeam ONE Client triggered *Error* and *Warning* alarms. Performance thresholds are defined in alarm counters in Veeam ONE Client. If a threshold is exceeded, the report will deliver *Warning* or *Error* verification result depending on counter settings.

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

  o The **Verification Result** chart displays the share of failed and passed verification tests, test that are not applicable, and tests that completed with warnings.

  o 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.

The report takes into account the following criteria when analyzing performance parameters:

CPU Performance

Criterion	Description
CPU Runtime	The criterion thresholds are specified in the **Total run time** counter settings of the **Host CPU Usage** alarm.

Memory Performance

Criterion	Description
Available Memory	The criterion thresholds are specified in the **Hyper-V Services Memory Usage** counter settings of the **Host Available Memory** alarm.
Memory Pages Rate	The criterion thresholds are specified in the **Pages/sec** counter settings of the **Host Memory Pages Usage** alarm. For more information about memory page rate counters, see Microsoft TechNet article.
Host Memory Pressure	The criterion thresholds are specified in the **Average Pressure** counter settings of the **Host Average Memory Pressure** alarm.

Disk Performance

Criterion	Description
Disk read Latency	The criterion thresholds are specified in the **Disk/Physical Disk: Avg Disk sec/Read** counter settings of the **Datastore read latency** alarm.
Disk write Latency	The criterion thresholds are specified in the **Disk/Physical Disk: Avg Disk sec/Write** counter settings of the **Datastore write latency** alarm.
Cluster Shared Volume read latency	The criterion thresholds are specified in the **Disk/CSV: Read Latency** counter settings of the **Cluster shared volume read latency** alarm.
Cluster Shared Volume write latency	The criterion thresholds are specified in the **Disk/CSV: Write Latency** counter settings of the **Cluster shared volume write latency** alarm

Network Performance

Criterion	Description
Network Output Queue Length	The criterion thresholds are specified in the **Network Output Queue Length** counter of the **Host network average output queue length** alarm.
Network Interface Transmission Rate	The criterion threshold is calculated the following way: **Network Bytes Total/sec** counter value divided by the **Network Bandwidth** value specified in the report parameters.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Network bandwidth**: defines network bandwidth to analyze in the report.

- **Areas to assess**: defines a type of resources to analyze in the report (*All*, *CPU*, *Memory*, *Disk*, *Network*).

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 objects:
Areas to assess: All
Network bandwidth: 1 Gbps

Summary

Verification Results
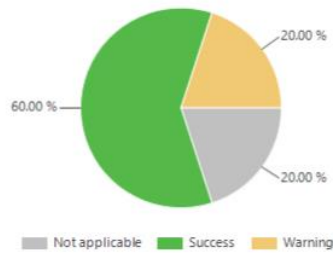
Assessment Criteria	Verification Results
Criteria Group: CPU Performance	Success
Hyper-V Hypervisor Logical Processor Total Run Time	Success
Criteria Group: Memory Performance	Warning
Available Memory	Success
Memory Pages Rate	Success
Memory Pressure	Warning
Criteria Group: Disk Performance	Success
Disk read latency	Success
Disk write latency	Success
Cluster Shared Volume read latency	Not applicable
Cluster Shared Volume write latency	Not applicable
Criteria Group: Network Performance	Warning
Network Output Queue Length	Success
Network Interface Transmission Rate	Warning

Memory Performance

Available Memory

Recommendation: -

Host	Host Memory (GB)	Cluster	Memory Usage, %			Alarms Triggered		Verification Result
			Avg.	Max.	Recommended	Warning	Error	
pdctwhv01.tech.local	382.67	-	16.59	17.20	<80 (306.13 GB)	0	0	Success

Memory Pages Rate

Recommendation: -

Host	Cluster	Memory, Pages/Sec			Alarms Triggered		Verification Result
		Avg.	Max.	Recommended	Warning	Error	
pdctwhv01.tech.local	-	3.15	11.00	<500	0	0	Success

Host Memory Pressure

Recommendation: Check historical memory pressure usage, number of VMs running, alerts for VMs with high memory pressure.

Host	Cluster	Host Memory Pressure, %			Alarms Triggered		Verification Result
		Avg.	Max.	Recommended	Warning	Error	
pdctwhv01.tech.local	-	83.57	91.00	<90	73	0	Warning

Use Case

The report analyzes performance of the Microsoft Hyper-V infrastructure and provides recommendations to improve its configuration. You can use report results to implement the necessary hardware and software optimizations.

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 VMs that grew faster and slower than other VMs.

- The **Summary** section contains the following charts:

    o The **Top 5 VMs with Largest Change Rate (GB)** chart shows 5 VMs with the greatest amount of changed blocks within the reporting period.

    o 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: 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:	Virtual Infrastructure
Interval:	Current week (12/26/2022 - 1/1/2023)
Top N:	5
Show VMs with no changes:	False
Business View objects:	

Summary

Top 5 VMs with Largest Change Rate (GB)

Top 5 VMs with Least Change Rate (GB)

Details

Scope	VM	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
pdctwhv01.tech.local	9	114.34 GB	95.17 GB	102.93 GB	14.79 GB	-	-	-	327.23 GB
	backupsrv52	26.35 GB	26.87 GB	38.82 GB	4.35 GB	-	-	-	96.39 GB
	ahvbkpsrv	49.10 GB	23.08 GB	18.96 GB	2.34 GB	-	-	-	93.47 GB
	backupsrv50	12.33 GB	11.17 GB	12.94 GB	4.03 GB	-	-	-	40.48 GB
	qa08	10.64 GB	13.29 GB	10.31 GB	1.55 GB	-	-	-	35.80 GB
	repo30	4.64 GB	7.74 GB	9.04 GB	1.24 GB	-	-	-	22.67 GB
	repo31	3.00 GB	3.47 GB	3.38 GB	< 1 GB	-	-	-	10.34 GB
	qa04	2.91 GB	3.39 GB	3.32 GB	< 1 GB	-	-	-	9.79 GB
	qa06	2.79 GB	3.17 GB	3.16 GB	< 1 GB	-	-	-	9.61 GB
	qa05	2.57 GB	2.99 GB	2.99 GB	< 1 GB	-	-	-	8.69 GB
Total:		114.34 GB	95.17 GB	102.93 GB	14.79 GB	-	-	-	327.23 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.

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.

Reports included:

- Alarms Current State Overview

- Alarms Overview

- Failover Cluster Performance

- Host Performance

- Host Uptime

- Local Datastore Performance

- VM Performance

- VM Uptime

- Windows 2008 Cluster Shared Volume Performance

- Windows Cluster Shared Volume Performance

Alarms Current State Overview

This report shows alarms triggered by Veeam ONE Client for the managed virtual infrastructure.

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

    - The **Total Issues Number** chart shows the number of triggered alarms.

    - The **Top 10 Alarms** table shows 10 most frequently triggered alarms.

- The **Details** section provides information on each triggered alarm, including affected object, location, alarm name, alarm type, trigger and date and time when the alarm was triggered.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Alarm statuses**: defines the status of alarms that must be included in the report (*Error*; *Error and Warning*; *Error, Warning, Acknowledged*; *Acknowledged*).

Veeam

Alarms Current State Overview

Description

This report shows all currently unresolved alarms for the virtual infrastructure.

Report Parameters

Scope:	Virtual Infrastructure
Business View objects:	
Alarm statuses:	Errors, Warnings, Acknowledged

Summary

Total Warnings:	44
Total Errors:	17
Alarmed Objects:	61

Total Issues Number
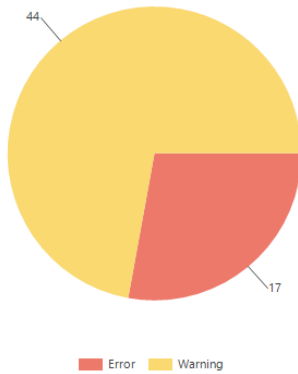
Top 10 Alarms

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
Object Type: Host			3		
hyperv01	\Virtual Infrastructure\cluster01	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	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	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
Object Type: Local storage			1		
Disk 1 F: G:	\Virtual Infrastructure\cluster01\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
Object Type: Virtual Machine			57		

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.

Alarms Overview

Veeam ONE Client 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 **Summary** section includes the following elements:

  - The **Errors** and **Warnings** charts show top 5 objects that caused the greatest number of alarms.

  - The **Total Issues** chart shows alarm activity during the reporting period.

  - The **Top 10 Issues** table shows 10 most frequently triggered alarms.

- The **Details** section provides information on each affected object , including object type, location, object name, number of triggered alarms and alarm activity trend.

  Click a number in the **Alarms** column in the details table to drill down to details for alarms raised for the infrastructure object.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task 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 types**: defines a list of virtual infrastructure object types to analyze in the report.

- **Alarms**: defines a list of alarms to analyze in the report.

  For details on alarms you can select in the list, see section Microsoft Hyper-V Alarms of the Veeam ONE Working with Alarms Guide.

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
Reporting period:	1 week (12/23/2022 - 12/29/2022)
Group by:	Issue type
Business View objects:	
Object types:	All items
Alarms:	All items

Summary

Total Errors:	90
Total Warnings:	122

Top Objects and Issues

Errors
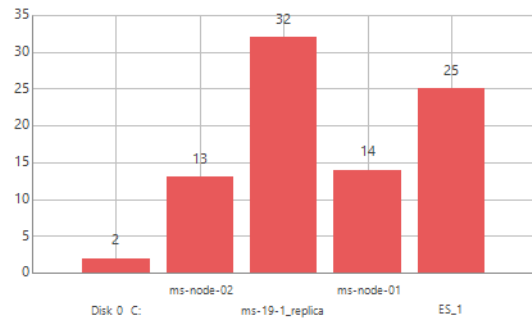
Warnings
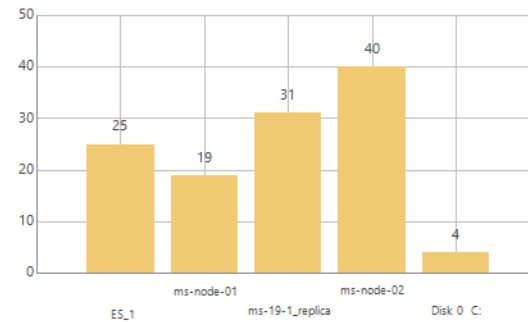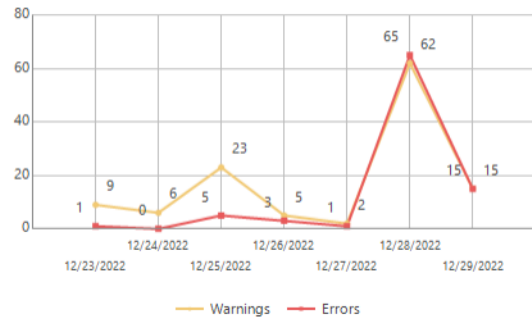
Total Issues

Top 10 Issues

Name	Total Triggered	Total Objects
VM vCPU time per dispatch	116	4
Host available memory	53	1
Host Memory Pages Usage	29	1
Datastore read latency	6	1
Host CPU time per dispatch	4	1
Latest checkpoint age	2	2
Datastore write latency	1	1
Cluster memory overcommitment	1	1

Details

Issue Type: Error

Object Type	Location	Object	Alarms	Trend
⊟ Hyper-V Failover Cluster		1	1	
	\Virtual Infrastructure	ms-cluster.tech.local	1	Increasing
⊟ Hyper-V Host		2	27	
	\Virtual Infrastructure\ms-cluster.tech.local	ms-node-01	14	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local	ms-node-02	13	Increasing
⊟ Hyper-V Storage		1	2	
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-02	Disk 0 C:	2	Increasing
⊟ Hyper-V Virtual Machine		4	60	
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-02	ES_1	25	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-01	ms-19-1	2	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-01	ms-19-1_replica	32	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-02	Virtual_Lab_ES_Hyper-V	1	Increasing

Issue Type: Warning

Object Type	Location	Object	Alarms	Trend
⊟ Hyper-V Host		2	59	
	\Virtual Infrastructure\ms-cluster.tech.local	ms-node-02	40	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local	ms-node-01	19	Increasing
⊟ Hyper-V Storage		2	5	
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-02	Disk 0 C:	4	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-01	Disk 2 F:	1	Increasing
⊟ Hyper-V Virtual Machine		4	58	
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-02	ES_1	25	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-01	ms-tape-01	1	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-01	ms-19-1_replica	31	Increasing
	\Virtual Infrastructure\ms-cluster.tech.local\ms-node-01	node-1-vm1	1	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.

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 describes configuration of each host in the cluster, including allocated memory and CPU resources and the number of CPU cores and sockets.

- The **Performance** subsections provide information on CPU, memory, disk and network usage, including usage trends and top resource consuming hosts and VMs in the cluster.

  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 of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

Report Parameters

You can specify the following report parameters:

- **Object**: defines a cluster to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected cluster. 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.

- **Top N**: defines the maximum number of hosts and VMs to display in the report.

veeam

Failover Cluster Performance

Description

This report shows cluster host performance history that includes CPU, Memory, Disk and Network counters.

Report Parameters

Selected object:	ms-cluster.tech.local
Object location:	\\Virtual Infrastructure
Reporting period:	12/19/2022 - 12/25/2022
Top N:	3

Summary

Host Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets
ms-node-01	16	4.8	2	1
ms-node-02	16	4.8	2	1
Total:	32	9.6	4	2

CPU Performance

Total Run Time (Percent)
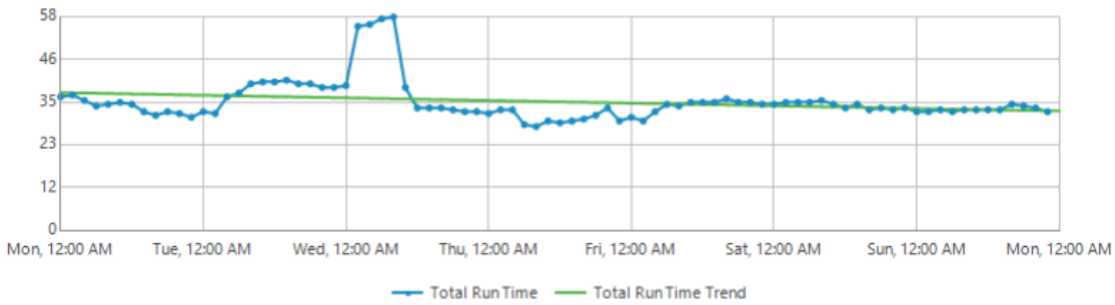
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
ms-cluster.tech.local	34.67	28.00	57.50	5.58	Decreasing

Top 3 Hosts by Total Run Time
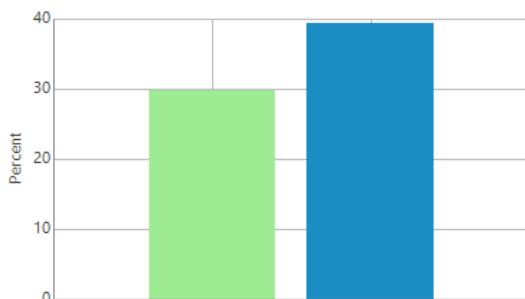
Object Name	Avg	Trend
ms-node-02	39.46	Decreasing
ms-node-01	29.88	Decreasing

Top 3 VMs by Total Run Time
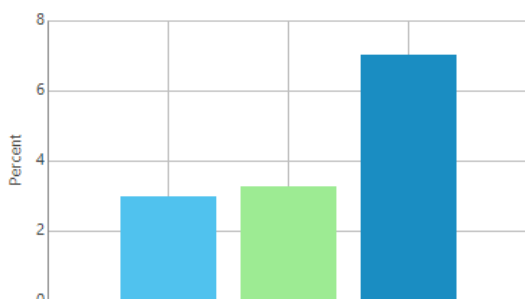
Object Name	Avg	Trend
win19-dyn	7.02	Decreasing
ms-19-1	3.25	Increasing
win19-static	2.96	Decreasing

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.

Host Performance

This report aggregates historical data and shows performance statistics for a selected host across a time range.

- The **Performance** subsections provide information on CPU, memory, disk and network usage, including usage trends and top resource consuming VMs 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.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the host to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected host. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of VMs to display in the report output.

VEEAM

Host Performance

Description

This report shows host performance history that includes CPU, Memory, Disk and Network counters.

Report Parameters

Selected object:	hyperv01
Object location:	Virtual Infrastructure\cluster01
Reporting 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)
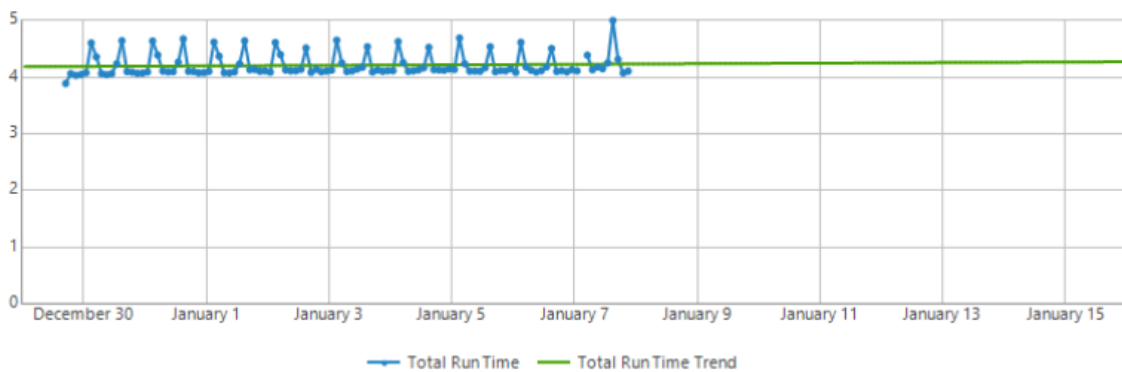
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
hyperv01	4.37	4.03	5.19	0.21	Increasing

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.

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** 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 Client and host restarts.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Uptime, greater than**: defines the desired minimum uptime value.

- **Uptime, less 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 month (2/1/2021 - 2/28/2021)
Uptime:	greater than 80.00% and lower than 100.00%
Grouping:	Group by Uptime
Business View objects:	
Business hours:	From 12:00 AM to 12:00 AM

Summary
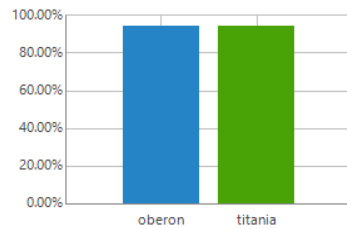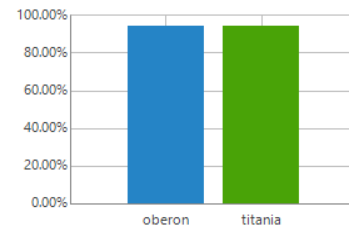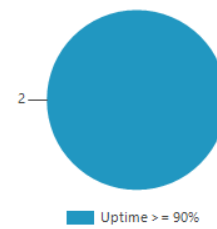
Host Uptime

Cluster	Host	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
Uptime: Uptime >= 90%					
midsummer	oberon	0	2	00:35:00	94.17%
midsummer	titania	0	4	00:35:00	94.17%

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 **Datastore** subsections provide information on read/write rates, read/write latency and IOPS for the disk, including top 3 resource consuming VMs and resource usage trends.

  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.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the local disk to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected disk. Otherwise, the report will contain no data.

- **Business hours only**: 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.

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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:
Object location:	Virtual Infrastructure\pdctwhv01.tech.local
Reporting period:	12/19/2022 - 12/25/2022

Summary

Name:	Disk 0 C: D:
Type:	local storage
Capacity:	16.4TB
Free Space:	14.0TB
Virtual Machines:	16

Datastore IOPs

Disk/Physical Disk: Disk Transfers/sec (Number)

Disk/Physical Disk: Disk Transfers/sec

Disk/Physical Disk: Disk Transfers/sec Trend
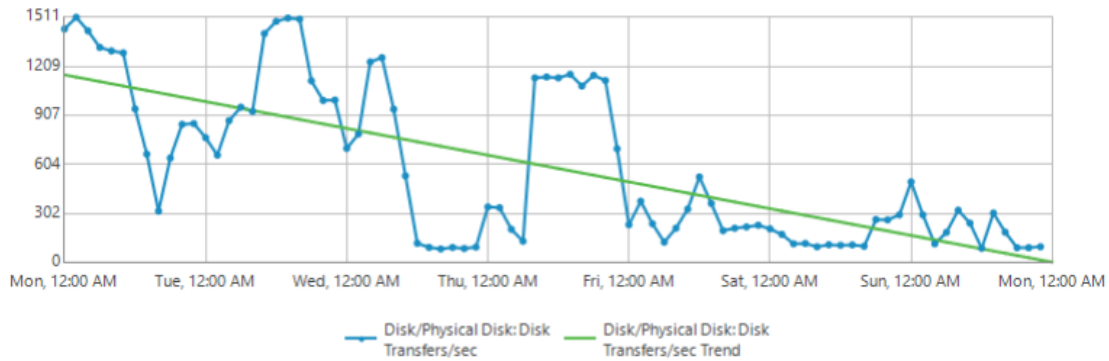
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Disk 0 C: D:	587.17	85.00	1511.00	476.60	Decreasing

Top 3 VMs by Virtual Storage Reads/Sec
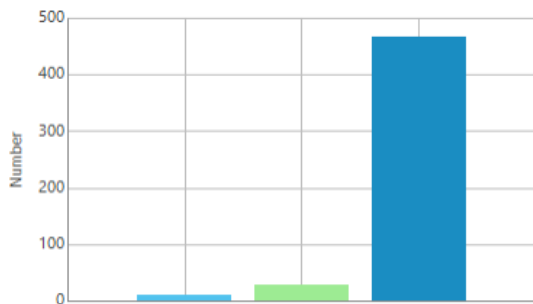
Object Name	Avg	Trend
srv08	467.99	Decreasing
backupsrv50	26.80	Increasing
repo30	11.14	Decreasing

Use Case

The report helps you identify local disks with performance issues.

VM Performance

This report aggregates historical data and shows performance statistics for a selected VM across a time range.

- The **Performance** subsections provide information on CPU, memory, disk and network usage and usage trends for the VM.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the VM to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected VM. Otherwise, the report will contain no data.

- **Business hours only**: 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.

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VM Performance

Description

This report shows VMs performance history that includes CPU, Memory, Disk and Network counters.

Report Parameters

Selected object:	dr
Object location:	Virtual Infrastructure\cluster01\hyperv01
Reporting period:	12/29/2018 - 1/15/2019
Business hours:	From 12:00 AM to 11:00 PM

CPU Performance

Guest Run Time (Percent)
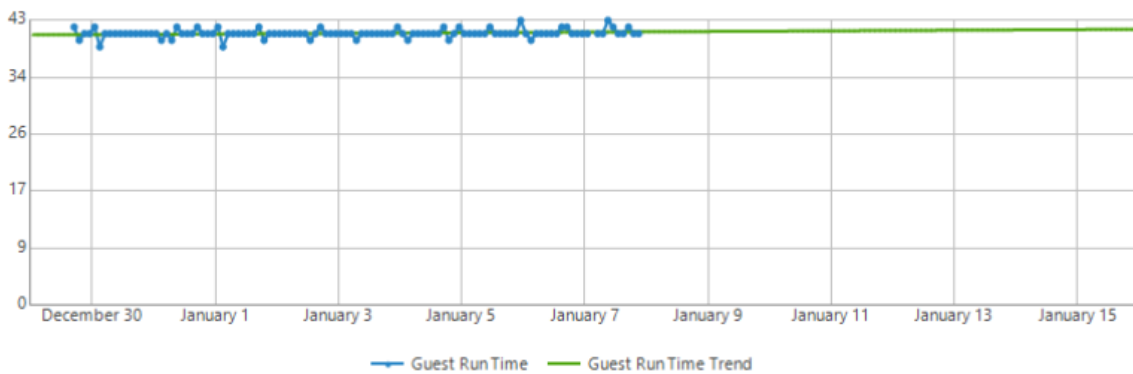
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
dr	41.05	39.00	43.00	0.60	Increasing

Use Case

The report allows you to verify that you have provided enough resources to the virtual machine.

VM Uptime

This report analyzes VM uptime statistics to track VM uptime.

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

  - 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Uptime, greater than**: defines the desired minimum uptime value.

- **Uptime, less than**: defines the desired maximum uptime value.

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VM Uptime

Description

This report provides an overview of VM uptime including VMs with lowest and highest uptime values.

Report Parameters

Scope:	Virtual Infrastructure
Reporting period:	Past month (11/1/2022 - 11/30/2022)
Uptime:	Greater than or equal to 80.00% and lower than or equal to 100.00%
Business View objects:	
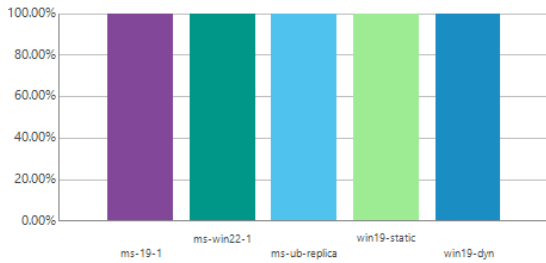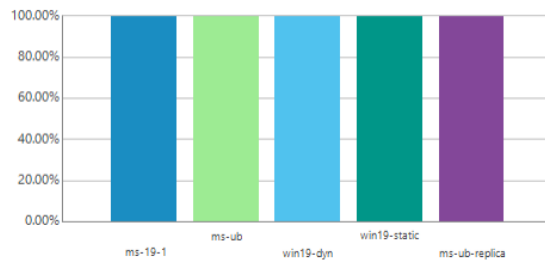
Summary

Top Uptime

Lowest Uptime

Uptime Distribution
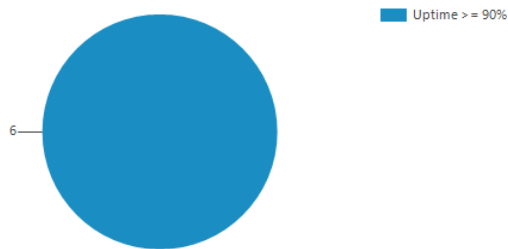
Uptime >= 90%

Virtual Machine Uptime

Cluster	Host	VM Name	Number of Restarts	Number of Alarms	Downtime	Uptime (%)
Uptime: Uptime >= 90%						
ms-22-cluster.tech.local	ms-node-01	ms-19-1	0	3	01:25:45	99.56%
ms-22-cluster.tech.local	ms-node-01	ms-ub	0	2	01:25:45	99.56%
ms-22-cluster.tech.local	ms-node-02	ms-ub-replica	0	1	01:25:43	99.56%
ms-22-cluster.tech.local	ms-node-02	ms-win22-1	0	3	01:25:43	99.56%
ms-22-cluster.tech.local	ms-node-02	win19-dyn	0	3	01:25:43	99.56%
ms-22-cluster.tech.local	ms-node-02	win19-static	0	1	01:25:43	99.56%

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.

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 **Performance** subsections provide information on read/write rates, IOPS, top 3 resource consuming VMs and usage trends for the CSV.

  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.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the Windows Server 2008 CSV to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected CSV. Otherwise, the report will contain no data.

- **Business hours only**: 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.

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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
Report Period:	2/19/2021 - 2/20/2021

Summary

Name:	C:\ClusterStorage\Volume1
Type:	CSV
Capacity:	150.0GB
Free Space:	39.5GB
Virtual Machines:	5

Datastore Usage

Disk/CSV2008: IO Redirected KBytes/sec (KBps)
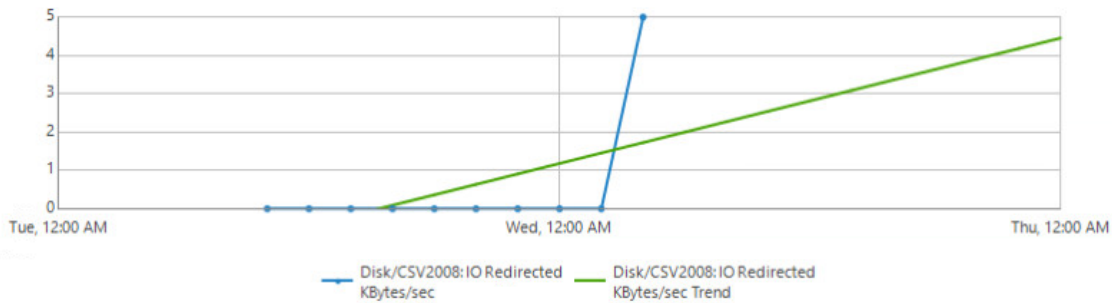
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
C:\ClusterStorage\Volume1	0.54	0.00	5.42	1.71	Increasing

Disk/CSV2008: IO KBytes/sec (KBps)
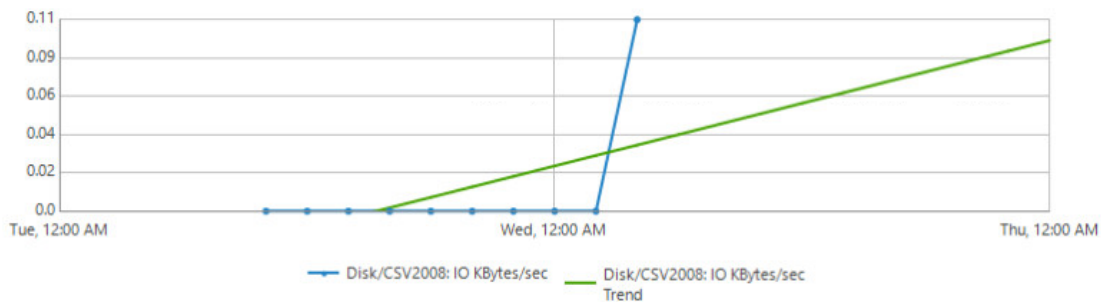
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
C:\ClusterStorage\Volume1	0.01	0.00	0.11	0.03	Increasing

Use Case

The report assesses latency and IOPS values to identify Windows Server 2008 Cluster Shared Volumes with performance issues.

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 **Performance** subsections provide information on read/write rates, read/write operations completed in the direct/redirected access mode, read/write latency, IOPS, top 3 resource consuming VMs and usage trends for the CSV.

  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.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the Windows 2012+ Server CSV to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected CSV. Otherwise, the report will contain no data.

- **Business hours only**: 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.

Veeam

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\CSV
Object location:	Virtual Infrastructure\ms-22-cluster.tech.local
Reporting period:	12/19/2022 - 12/25/2022

Summary

Name:	C:\ClusterStorage\CSV
Type:	CSV
Capacity:	999.6GB
Free Space:	678.1GB
Virtual Machines:	20

Datastore IOPs

Disk/CSV: Direct IOPS (Number)
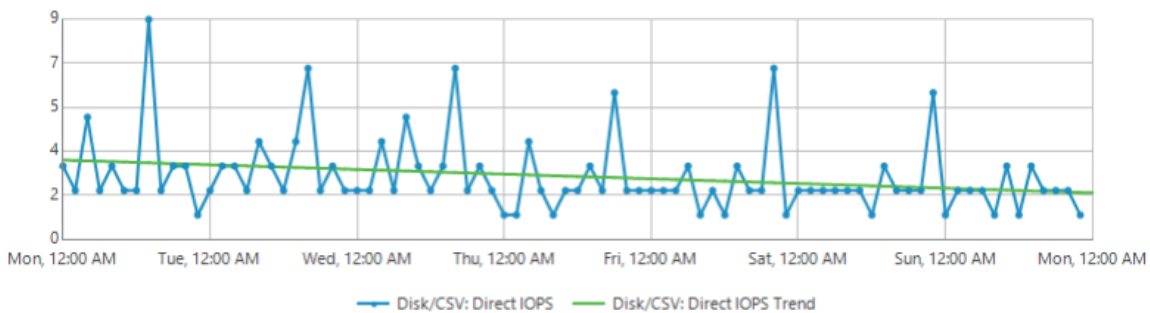
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
C:\ClusterStorage\CSV	2.58	1.00	9.00	1.51	Decreasing

Datastore Usage

Top 3 VMs by Virtual Storage Read KBytes/Sec
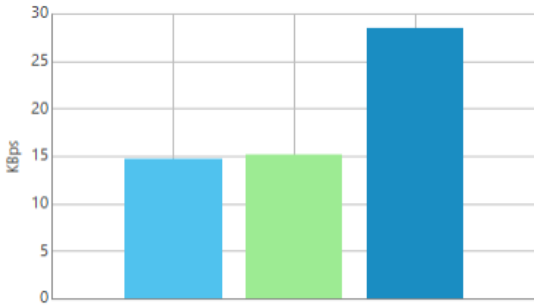
	Object Name	Avg	Trend
	win19-static-mem	28.56	Decreasing
	win19-dyn-mem	15.09	Decreasing
	ms-19-test-1	14.64	Decreasing

Top 3 VMs by Virtual Storage Write KBytes/Sec
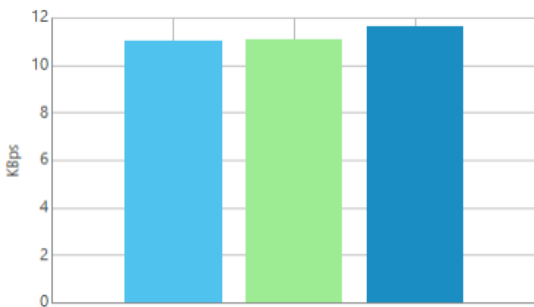
	Object Name	Avg	Trend
	ms-win22-test-1	11.64	Increasing
	ms-19-test-1	11.08	Decreasing
	win19-dyn-mem	11.03	Increasing

Top 3 VMs by Virtual Storage Total KBytes/Sec
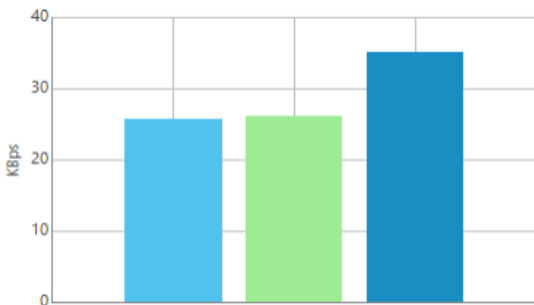
	Object Name	Avg	Trend
	win19-static-mem	35.18	Decreasing
	win19-dyn-mem	26.13	Increasing
	ms-19-test-1	25.72	Decreasing

Latency

Disk/CSV: Read Latency (Millisecond)
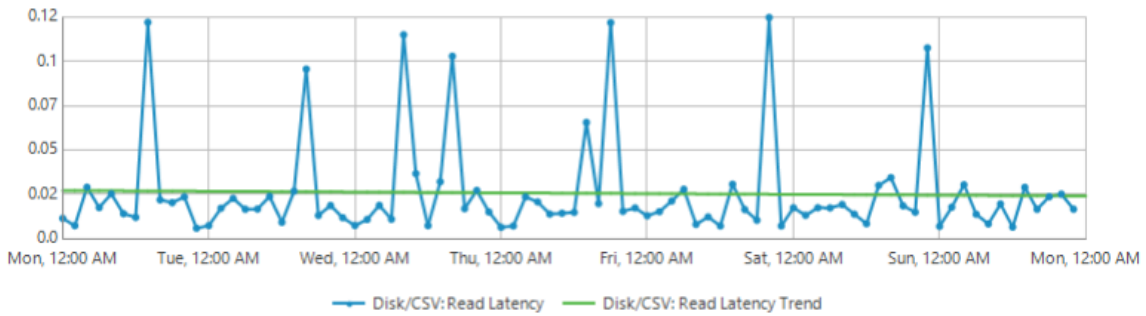
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
C:\ClusterStorage\CSV	0.03	0.01	0.12	0.03	Decreasing

Disk/CSV: Write Latency (Millisecond)
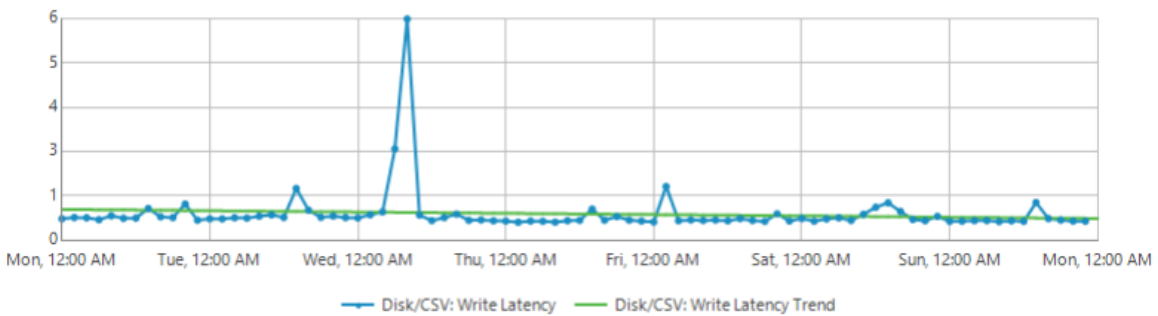
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
C:\ClusterStorage\CSV	0.75	0.51	6.29	0.67	Decreasing

Use Case

The report assesses latency and IOPS values to identify Windows 2012+ Server Cluster Shared Volumes with performance issues.

Hyper-V Optimization

This report pack delivers recommendations on resource allocation to optimize performance and resource utilization.

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 VMs by Active Checkpoint Size (GB)** and **Top VMs by Active 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, location, date and time when the checkpoint was created, checkpoint size and VM state.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Checkpoint age, older than**: defines checkpoint age threshold. If a VM checkpoint is older than the specified age, the VM will be included in the report.

- **Ignore replica VMs created by Veeam products**: 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.

Active Checkpoints

Description

This report lists all VMs with their active checkpoints, highlighting the VMs with the oldest and largest active checkpoints in your virtual environment.

Report Parameters

Scope:	Virtual Infrastructure
Checkpoints age:	older than 1 week
Business View objects:	
Ignore replica VMs created by Veeam products:	True

Summary

Top VMs by Active Checkpoint Size (GB)
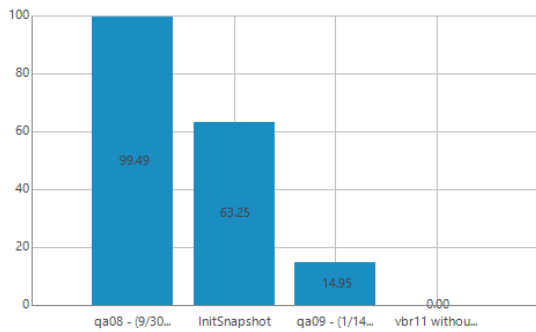
Top VMs by Active Checkpoint Age (Weeks)
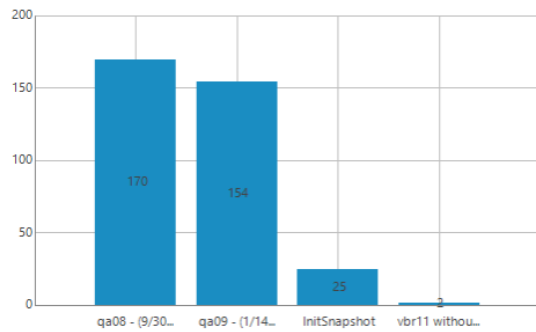
Details

Virtual Machine	Active Checkpoint	Location	Checkpoint Directory	Checkpoint Create Time	Delta Size (GB)	VM State
qa09	qa09 - (1/14/2020 - 3:53:37 PM)	pdctwhv01.tech.local	D:\Storage\Hyper-V\qa09	1/14/2020 4:54:04 AM	14.95	Suspended
qa08	qa08 - (9/30/2019 - 7:23:16 PM)	pdctwhv01.tech.local	D:\Storage\Hyper-V\qa08	9/30/2019 9:24:03 AM	99.49	Powered on
ahvbkpsrv	InitSnapshot	pdctwhv01.tech.local	D:\Storage\HyperV\ahvbkpsrv	7/11/2022 1:35:50 AM	63.25	Powered on
srv24	vbr11 without qa host	pdctwhv01.tech.local	D:\Storage\Hyper-V\srv24	12/19/2022 12:25:58 AM	0.00	Powered off

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.

Idle VMs (Hyper-V)

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.

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

    o The **Idle/Active VMs** chart shows the number of idle and active VMs.

    o The **Wasted Storage, GB** chart shows the amount of valuable and wasted storage resources.

    o The **Idle CPU, GHz** and **Idle Memory, GB** charts show the amount of active and idle CPU and memory resources.

- The **Details** table provides information on idle VMs, including cluster or host name, VM name, CPU, memory, disk and network usage, and the number of days during which VM was inactive.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task 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 pressure, 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 spent in the defined conditions**: 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 Web Client checks whether the **CPU usage**, **Memory pressure**, **Disk usage** and **Network usage** conditions are all true (in other words, the conditions are joined by Boolean "AND").

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 week (2/9/2021 - 2/15/2021)
CPU usage:	0.1 GHz
Memory pressure:	0.256 GB
Disk usage:	20 KBps
Network usage:	1 KBps
Time spent in the defined conditions:	for more than 90 % of the time
Business View objects:	

Summary

Total VMs:	64
Idle VMs:	15
Powered-off VMs:	24

Idle/Active VMs
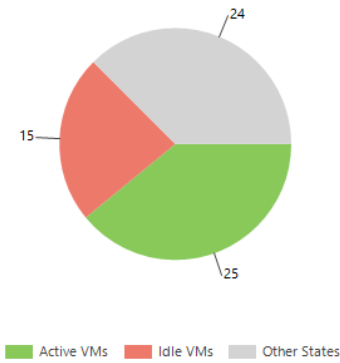
Wasted Storage, GB
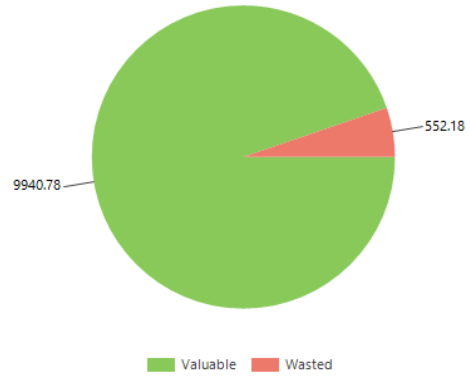
Idle CPU, GHz
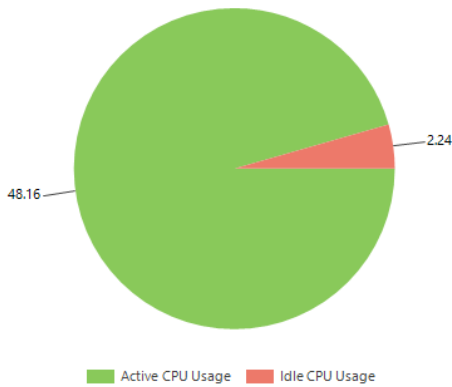
Idle Memory, GB
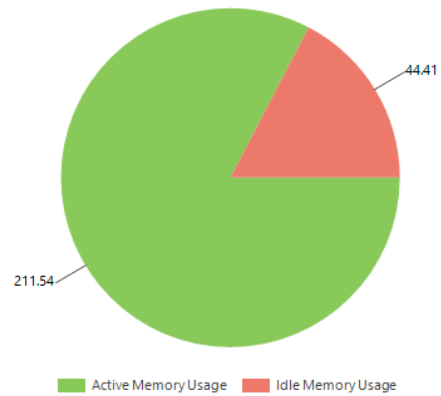
Details

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	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
	veeamcol1	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 VMs that can be shut down or decommissioned to reclaim resources and improve performance of your virtual infrastructure.

Oversized VMs (Hyper-V)

This report allows you to identify VMs that have more allocated resources such as vRAM or vCPU than they require.

- The **Summary** section provides an overview of the current state of your infrastructure, including the total number of VMs and the number of CPU and memory oversized VMs, and shows recommendations on resource allocation.

- 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 name 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of VMs the report will analyze.

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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 week (12/24/2022 - 12/30/2022)
Business View objects:	
Top N:	5
Working hours:	

Summary

Total oversized VMs:	6
Total VMs:	16
CPU oversized VMs:	6
Memory oversized VMs:	2
CPU resources that can be reclaimed:	8 vCPUs
vRAM amount that can be reclaimed:	3.40 GB

Oversized Virtual Machines by CPU

SCVMM:

Cluster/Host	Virtual Machine	vCPUs	CPU Average Usage (%)	Peak Usage (%)	Reclaimed CPU Resource	Recommended Number of vCPUs
pdctwhv01.tech.local					7	
	ahvbkpsrv	4	12.00	25.00	2	2
	backupsrv52	4	17.37	22.00	2	2
	repo31	2	2.00	2.00	1	1
	qa04	2	1.98	2.00	1	1
	qa05	2	0.19	1.00	1	1

Virtual Machines With Static Memory

Recommendation: Enable Dynamic Memory for these VMs.

SCVMM:

Host	Virtual Machine	Assigned Memory (MB)
Cluster:		
pdctwhv01.tech.local	5	
	ahvbkpsrv	6,144.00
	qa04	4,096.00
	qa05	4,096.00
	qa08	5,120.00
	repo30	2,048.00

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.

Powered Off VMs (Hyper-V)

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 displays the amount of time during which a VM was powered off against the time of the reporting period in percent.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Time spent powered off**: 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.

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
Time spent powered off:	80 %
Business View objects:	
Interval:	1 month (1/16/2021 - 2/15/2021)

Summary

Total VMs:	25
Powered Off VMs:	20
Wasted Storage:	40.60 GB

Powered Off Virtual Machines

⊟Location: **midsummer**

Datastore	Virtual Machine ⇕	Computer Name ⇕	VM Size (GB)	Power Off Status (%)
⊞ C:\VeeamVirtualLabs\AppleDream\ProxyAppliance\hvproxy.iso	1			
	AppleDreamProxy		N/A	100.00
⊟ C:\VeeamVirtualLabs\MadLab\ProxyAppliance\hvproxy.iso	1			
	SecureRest		N/A	100.00
⊟ C:\VeeamVirtualLabs\SecureRest\ProxyAppliance\hvproxy.iso	1			
	secure		N/A	100.00
⊟ C:\VeeamVirtualLabs\test\ProxyAppliance\hvproxy.iso	1			
	test		N/A	99.09
⊟ C:\VeeamVirtualLabs\Virtual Lab 2\ProxyAppliance\hvproxy.iso	1			
	Virtual_Lab_2		N/A	100.00
⊟ D:\Replicas\Omega\ProxyAppliance\hvproxy.iso	1			
	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.

Undersized VMs (Hyper-V)

This report allows you to identify VMs that have less allocated resources such as vRAM or vCPU than they require.

- The **Summary** section provides an overview of the current state of your infrastructure, including the total number of VMs and the number of CPU and memory undersized VMs, and shows recommendations on resource allocation.

- The **Undersized Virtual Machines by CPU** and **Undersized Virtual Machines by Memory** tables display VMs with insufficient CPU and memory resources and deliver recommendations for their reconfiguration.

  Click a VM name 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task 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 will be used to calculate the performance trend. All data beyond this interval will be excluded from the baseline used for data analysis.

- **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 dynamic memory pressure threshold in percent. If the memory pressure value for a VM exceeds the specified threshold, the VM will be included in the report.

- **Physical memory, more than**: defines the threshold for the amount of physical memory assigned to a VM. If the physical memory amount exceeds the specified threshold, this VM will be analyzed in the report.

> **NOTE:**
>
> Veeam ONE Web Client 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 Web Client checks whether a pair of these conditions is true, in other words, pairs of these conditions are joined by Boolean "OR".

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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 week (12/24/2022 - 12/30/2022)
Business View objects:	
CPU usage, more than:	80 %
Physical memory, more than:	1 GB
Memory pressure, more than:	80 %
Working hours:	

Summary

Total undersized VMs:	2
Total VMs:	16
CPU undersized VMs:	0
Memory undersized VMs:	2
CPU resources to be assigned:	0 vCPUs
vRAM amount to be assigned:	3.40 GB

Undersized Virtual Machines by Memory

⊟SCVMM:

Cluster/Host	Virtual Machine	Memory				Recommended Amount of RAM
		Capacity (GB)	Average Demand (GB)	Peak Demand (GB)	Peak Pressure (%)	
⊟ pdctwhv01.tech.local	2					
	ahvbkpsrv	6.00	5.58	6.47	108.00	6.5 GB
	srv08	5.00	7.29	7.81	156.00	8 GB

Note: Consider relocating VM to a different host, if present does not have enough memory 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.

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.

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 **Total CPU (GHz)**, **Total Memory (GB)** and **Total Storage (GB)** charts show the amount of resources allocated to clusters.

- The **Details** table provides information on each cluster, including total number of hosts and VMs in the cluster, total amount of available cluster resources and the name of the cluster host owner.

  Click a number in the **Total Hosts** column to drill down to host configuration details.

  Click a number in the **HA VMs** column to drill down to VM configuration details.

- The **Networking** table provides information on network configuration for each cluster, including subnets, networks, cluster use and the number of VMs.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Cluster type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

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:

Summary
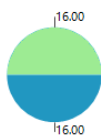
Total CPU (GHz) — 16.00 / 16.00 — midsummer, scots
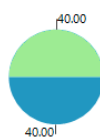
Total Memory (GB) — 40.00 / 40.00 — midsummer, scots
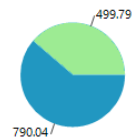
Total Storage (GB) — 499.79 / 790.04 — midsummer, scots

Details

Cluster	Total Hosts	HA VMs	Total CPU (GHz)	Total Memory (GB)	Total Local Storage (GB)	Total CSVs Capacity (GB)	Cluster Host Owner
midsummer	2	1	16.00	40.00	630.05	159.99	oberon
scots	2	1	16.00	40.00	299.80	199.99	lowlandhv

Networking

Name	Subnets	Networks	Cluster Use	Status	VMs
⊟ midsummer		1			
	172.16.0.0; 2002:50f9:ba01:40::	Cluster Network 2	Both	Up	16
⊟ scots		1			
	172.16.0.0; 2002:50f9:ba01:40::	Cluster Network 1	Both	Up	7

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.

Datastore Configuration

This report documents the current configuration of CSVs, SMB shares and local disks in your infrastructure.

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

  - The **Utilization (%)** chart shows the percentage of used and free space on all datastores.

  - The **Provisioned Space (GB)** chart shows datastore capacity and the amount of provisioned space.

o The summary table provides information on each volume, including owner name, total capacity, free and provisioned space, provisioning ratio and free space utilization trend.

Click a link in the **Free Space Trend** column 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.

- The **Top N VMs** section provides information on top space consuming VMs, including VM name, number of disks and the amount of used space.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Top N VMs**: defines the number of top virtual machines that will be displayed in the report charts.

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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
Business View objects:	
Top N VMs:	15

Summary

Utilization (%)
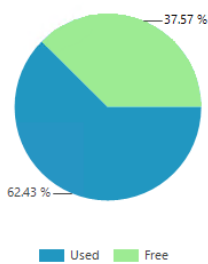
Provisioned Space (GB)
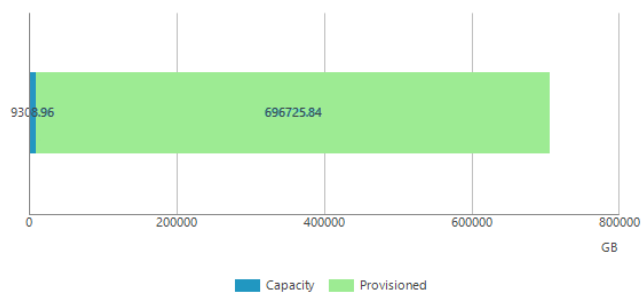
Name	Owner	Capacity (GB)	Free Space (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	Free Space Trend
Disk 0 C: D: E:	hyperv02	4654.48	1070.44	563042.55	12096.78	Increasing
Disk 0 C: D: E:	hyperv01	4654.48	2427.09	133683.29	2872.14	Decreasing

Top 15 VMs

Top 15 Largest VMs
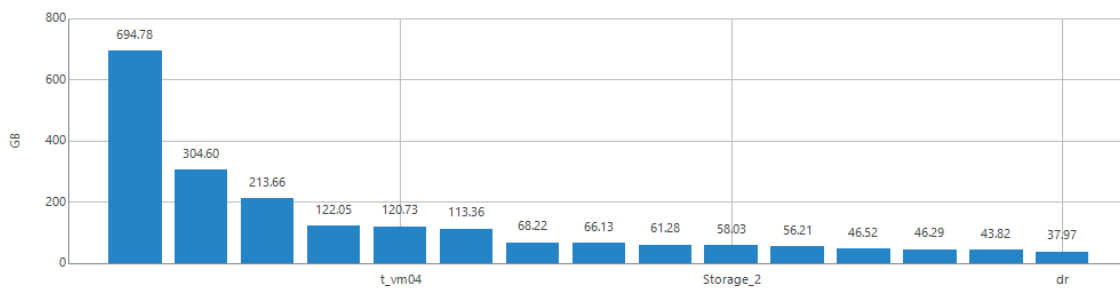
VM Name	Number of Disks	Space Used (GB)
fileserver04	1	694.78
Storage_3	1	304.60
repo30	1	213.66
Storage_1	1	122.05
t_vm04	1	120.73
MSSQLSERVER	1	113.36
prod	1	68.22
winsrv22	1	66.13
sampledb	1	61.28
Storage_2	1	58.03
BETA	1	56.21
veeamcol1	1	46.52
wan31	1	46.29
ORACLEDBLINUX	1	43.82
dr	1	37.97

Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

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 Partitions 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 Partitions 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.

  Click a VM name in the **Virtual Machine** column to drill down to VM guest disk space usage details.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report.

- **Disk capacity, 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*).

- **Ignore excluded disks**: 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 Client. To learn more, see section Virtual Machine Summary of the Veeam ONE Monitoring Guide.

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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 (2/9/2021 - 2/15/2021)
Disk capacity, more than:	5 GB
Free space, less than:	50.00 %
Sort by:	Virtual machines
Ignore excluded disks:	True

Summary

Overview

VMs analyzed	7
Virtual disks in the infrastructure	20
Including Fixed disks	0
Dynamic disks	19
Differencing disks	1
Disks to reach 100% in less than 30 days	0
Disks to reach 100% in less than 60 days	0
Disks with less than 1 GB of free space	0
Disks with less than 1% of free space	0
Average disks` daily growth [GB]	0.67
Average disks` daily growth [%]	0.15 %

Disks to reach threshold first

Virtual Machine	Partition	Capacity (GB)	Free Space (GB)	Daily Growth (GB)	Days to Reach 90%	Days to Reach 100%
MSSQLSERVER	C:	126.66	45.63	0.42	63	88
fileserver04	C:	1023.66	501.87	3.96	76	97
gamma	C:	126.66	23.52	0.08	266	560
VBR954	C:	126.48	47.25	0.12	529	∞
Storage_1	C:	126.66	54.18	0.07	∞	∞
ms2012r2	C:	59.48	17.56	0.04	∞	∞
VEMu4	C:	59.48	17.56	0.04	∞	∞

Top 10 Partitions by Relative Space Growth
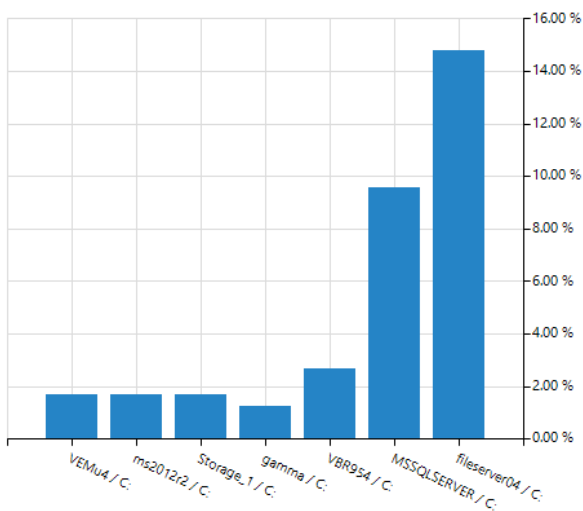
Top 10 Partitions by Absolute Space Growth
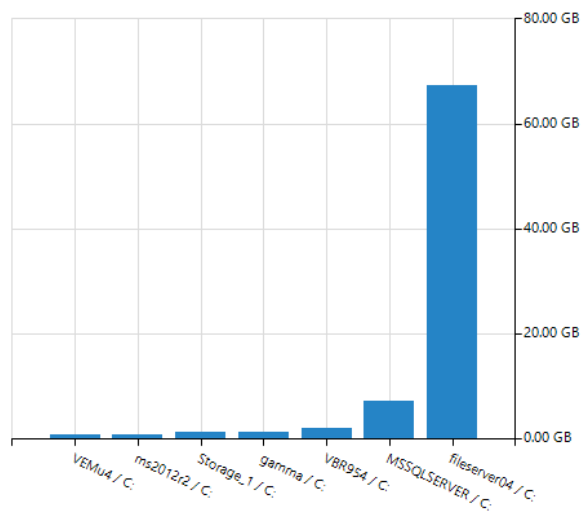
Guest Disk Free Space (GB)

Virtual Server: ms-node-02

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%
win19-static	C:	39.40	43.70	17.22	56.30	22.18	0.01	0.00	∞

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.

Host Configuration

This report documents the current configuration of hosts in your infrastructure.

- The **Summary** section provides an overview of the infrastructure, including the total number of hosts, number of VMs per host and number of hosts per datastore.

- The **General Information** section provides information on each host, including host name, manufacturer, system model, OS type, update version and host status.

- The **Available Resources** section provides information on resources available for each host, including CPU frequency, number of cores, amount of physical and virtual memory, local and shared storage size and the number of VMs.

- The **Network Configuration** section provides information on network configuration for each host, including network name, type, number of VMs, adapter and IP address.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

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:

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.

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 subsections provide detailed information on 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 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 Business View categories and VMs that belong to these categories.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View VM category**: defines a Business View group that includes VMs to analyze in the report.

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.

Report Parameters

Scope:	Virtual Infrastructure
Business View VM category:	SLA

Summary

Hosts per Cluster:	2.0
VMs per Host:	13.0
Datastores per Host:	2.5
VMs per Datastore:	5.2

Hosts

Top Hosts Configurations

100.00 % ―

■ X9DR3-F 2 Sockets, 12 Cores, 127.97 Gb
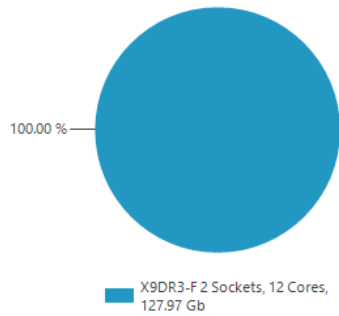
[Details](#)

All Hosts Configurations

SCVMM	Cluster	Cores	Memory (GB)	Host
N\A	⊟ cluster01	24	255.95	2
		12	127.97	hyperv01
		12	127.97	hyperv02
Total:		24	255.95	2

Virtual Machines

Power State
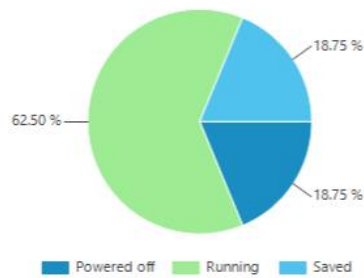
Details

Integration Service Status
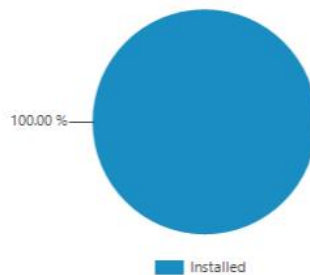
Details

Use Case

The report helps administrators track the state of monitored virtual infrastructure.

VMs Configuration

This report documents the current configuration of VMs in the virtual infrastructure.

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

    o 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.

    o 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.

    o 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

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

- Installed
- Partially installed

93.75 %
6.25 %

Details

VM State Summary

- Powered off
- Running
- Saved

62.50 %
18.75 %
18.75 %
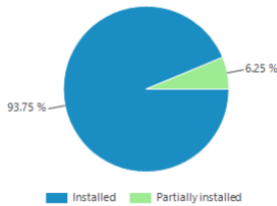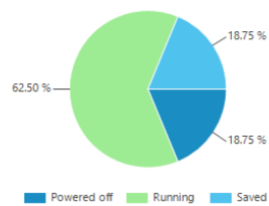
Details

Guest OS Distribution

- Windows Server 2012 R2 Datacenter
- Windows Server 2016 Datacenter
- Windows Server 2016 Standard

22.22 %
11.11 %
66.67 %
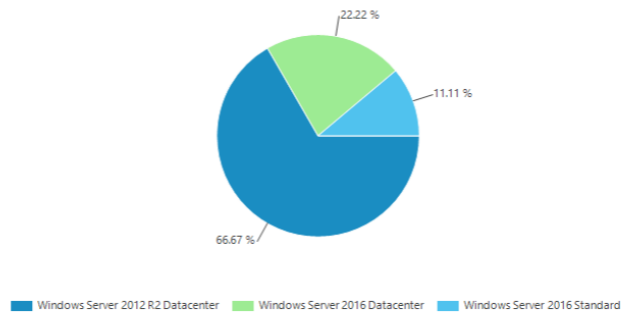
Details

Details

SCVMM: N/A

Host	VM Name	Computer Name	Guest OS	vCPU	Memory Type	Startup Memory (MB)	Minimum Memory (MB)	Maximum Memory (MB)	Storage Allocated (GB)	Storage Used (GB)
⊟ Cluster: N/A				37		58,368	3,076	2,103,296	1,900.00	1,278.63
⊟ pdctwhv01.tech.local				37		58,368	3,076	2,103,296	1,900.00	1,278.63
	ahvbkpsrv	ahvbkpsrv.tech.local	Windows Server 2016 Standard	4	Static	6,144			130.00	81.79
	appsrv001			1	Dynamic	2,048	512	1,048,576	20.00	0.00
	appsrv001_ir			1	Dynamic	2,048	512	1,048,576	20.00	0.00
	appsrv02			1	Static	4,096			50.00	20.07
	backupsrv50	backupsrv50.tech.local	Windows Server 2016 Datacenter	4	Static	6,144			130.00	75.50
	backupsrv52	backupsrv52.tech.local	Windows Server 2016 Datacenter	4	Static	6,144			130.00	85.66
	ext0130			2	Static	2,048			60.00	36.29
	ext0230			2	Static	2,048			60.00	45.44
	qa04	qa04.tech.local	Windows Server 2012 R2 Datacenter	2	Static	4,096			130.00	42.00
	qa05	qa05.tech.local	Windows Server 2012 R2 Datacenter	2	Static	4,096			130.00	19.13
	qa06	qa06.tech.local	Windows Server 2012 R2 Datacenter	2	Dynamic	3,072	1,028	3,072	130.00	129.66
	qa08	qa08.tech.local	Windows Server 2012 R2 Datacenter	4	Static	5,120			130.00	253.59
	qa09			2	Dynamic	1,024	1,024	3,072	130.00	41.48
	repo30	repo30.tech.local	Windows Server 2012 R2 Datacenter	2	Static	2,048			250.00	213.66
	repo31	repo31.tech.local	Windows Server 2012 R2 Datacenter	2	Static	2,048			250.00	35.47
	srv24			2	Static	6,144			150.00	198.89

Use Case

The report helps administrators assess configuration properties of VMs in the monitored virtual infrastructure.

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.

- The **Summary** section provides information on the total number of VMs, number of added and removed VMs, allocated vCPU, memory and storage resources, allocation ratios and VMs growth during the reporting period.

- The **Added VMs Details** table provides information on each added VM, including VM location, name, number of vCPUs, allocated memory and storage resources, initiator and the date and time when the VM was added.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period:** defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

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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

VMs Growth
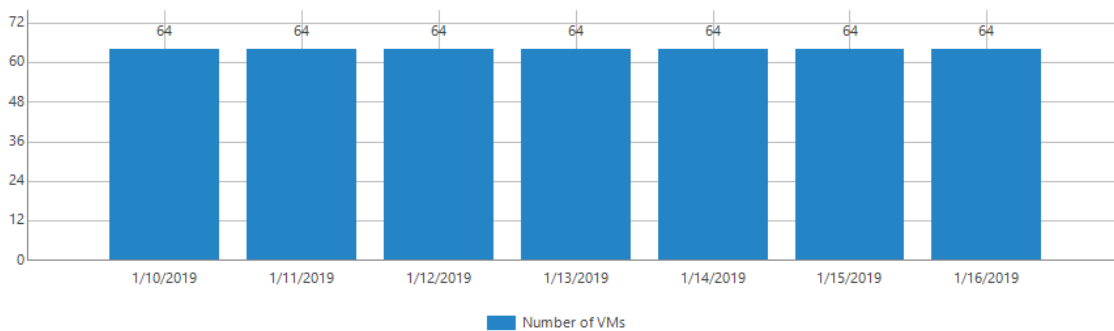
Added VMs Details

SCVMM: N/A

Cluster/Host: cluster01

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.

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.

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.

> **NOTE**:
>
> - 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.

- 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 **Top 10 Most Expensive VMs** subsection shows the most expensive VMs in terms of consumed resources, and provides cost of average CPU, memory and storage resources used by each VM. This chart is available if you choose to include VM details in the report.

- 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 show VM cost details 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:

- **Infrastructure objects**: defines a list of virtual infrastructure level and its sub-components to analyze in the report.

- **Currency**: defines a payment currency.

- **Calculate host costs based on**: defines how host costs will be calculated in the report. You can select one of the following options:

  - **Total host cost** — defines the total cost of CPU and memory hardware resources for all hosts included in the report, in the selected currency.

  - **Individual host costs** — defines the hardware cost of each host separately.

    To edit host costs:

      - Click **Configure**.

      - In the **Configure Individual Host Costs** window, select the necessary host and click **Edit**.

      - In the **Set Individual Host Cost** window, specify the desired cost and click **Save**.

      - Repeat steps 2-3 for each host cost you want to edit.

- **CPU/RAM slider:** defines the percentage of cost, or cost share of CPU and memory 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, set the *CPU* parameter value to *25%*. The *RAM* parameter value will adjust automatically.

- **Calculate datastore costs based on**: defines how datastore costs will be calculated in the report. You can select one of the following options:

  - **Exclude datastores from the calculation** — defines to exclude datastores cost details from the report.

  - **Total datastore cost** — defines the total cost of storage resources in the selected currency.

  - **Individual datastore costs** — defines the cost of each datastore separately.

    To edit datastore costs:

      - Click **Configure**.

      - In the **Configure Individual Datastore Costs** window, select the necessary datastore and click **Edit**.

      - In the **Set Individual Datastore Cost** window, specify the desired cost and click **Save**.

      - Repeat steps 2-3 for each datastore cost you want to edit.

  - **Calculate VM storage hosts based on**: defines how VM storage host must be calculated in the report (*Provisioned space, Used space*).

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

  - **Show VM details**: 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 you to perform an infrastructure costs audit and identify the most and least expensive VMs based on the hardware price and current VM configuration.

Report Parameters

Hosts:	6 Hosts
Datastores:	10 Datastores
Hosts cost:	110.00 USD
Host expenses distribution:	CPU: 50% / RAM: 50%
Datastores cost:	220.00 USD
Include powered-off VMs in the calculation:	True
Show VM details:	True
Calculate VM storage costs based on:	Provisioned space

Summary

Hosts:	6	Processor core avg. cost:	0.54	Virtual CPU avg. cost:	0.07
Datastores:	10	Physical memory, GB avg. cost:	0.09	Virtual Memory, GB avg. cost:	0.02
Virtual Machines:	228	Datastore, TB avg. cost:	3.53	Virtual Storage, TB avg. cost:	4.91
Average VM cost:	1.45				
Total hardware cost, USD:	330.00				

Cost Distribution
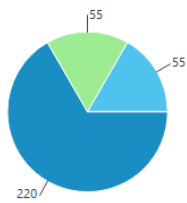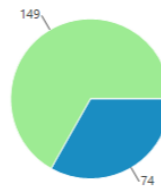
VM Power Status

Top 10 Most Expensive VMs
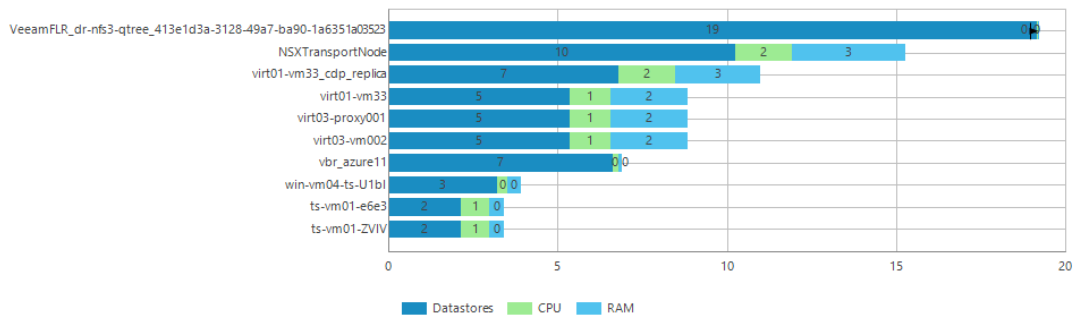
Details

VMware

CPU

Cluster	Host	CPUs Cost, USD	VMs	Physical Processors		Virtual Processors	
				# of Cores	Core Cost, USD	# of vCPUs	vCPU Cost, USD
⊟ CDP cluster		18.33	19	24.00	0.76	53.00	0.35
	prgtwesx01-virt.tech.local	9.17	9	12.00	0.76	31.00	0.30
	prgtwesx02-virt.tech.local	9.17	10	12.00	0.76	22.00	0.42
⊟ Standalone hosts		27.50	193	64.00	0.43	681.00	0.04
	prgtwesx01.tech.local	9.17	88	16.00	0.57	291.00	0.03
	prgtwesx02.tech.local	9.17	53	24.00	0.38	170.00	0.05
	prgtwesx03.tech.local	9.17	52	24.00	0.38	220.00	0.04

Memory

Cluster	Host	Memory Cost, USD	VMs	Physical Memory		Virtual Memory	
				Capacity, GB	GB Cost, USD	# of vRAM, GB	GB Cost, USD
⊟ CDP cluster		18.33	19	79.99	0.23	46.00	0.40
	prgtwesx01-virt.tech.local	9.17	9	40.00	0.23	24.00	0.38
	prgtwesx02-virt.tech.local	9.17	10	40.00	0.23	22.00	0.42
⊟ Standalone hosts		27.50	193	1,277.22	0.02	1,169.88	0.02
	prgtwesx01.tech.local	9.17	88	511.89	0.02	520.88	0.02
	prgtwesx02.tech.local	9.17	53	382.66	0.02	250.00	0.04
	prgtwesx03.tech.local	9.17	52	382.66	0.02	399.00	0.02

Datastores

Datastore Owner	Datastore Name	Datastore Cost, USD	VMs and Templates	Physical Storage		Virtual Storage	
				Capacity, TB	TB Cost, USD	Provisioned, TB	vTB Cost, USD
⊟ CDP cluster		22.00	9	0.48	45.87	0.16	137.29
	docopsubuntunfs01	22.00	9	0.48	45.87	0.16	137.29
⊟ prgtwesx01.tech.local		66.00	88	11.00	6.00	18.58	3.55
	prgtwesx01-ds01	22.00	26	3.63	6.06	4.60	4.78
	prgtwesx01-ds02	22.00	60	7.28	3.02	13.96	1.58
	Veeam_dr_v6_nfs41_5HNufyTQK zk1Xc3a0SzRJ3	22.00	2	0.10	225.28	0.02	1,154.14
⊟ prgtwesx01-virt.tech.local		22.00	5	0.77	28.43	0.52	42.14
	prgtwesx01-virt-ds1	22.00	5	0.77	28.43	0.52	42.14
⊟ prgtwesx02.tech.local		22.00	53	16.25	1.35	8.42	2.61
	prgtwesx02-ds01	22.00	53	16.25	1.35	8.42	2.61
⊟ prgtwesx02-virt.tech.local		22.00	5	0.77	28.43	0.41	53.56
	prgtwesx02-virt-ds1	22.00	5	0.77	28.43	0.41	53.56
⊟ prgtwesx03.tech.local		44.00	63	16.73	2.63	14.89	2.96
	docopslinuxnfs	22.00	1	0.48	45.87	0.21	102.96
	prgtwesx03-ds01	22.00	62	16.25	1.35	14.67	1.50

⊟ vCenter Server: elal

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
⊟ qa-srv14	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.

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** subsection shows 10 most expensive VMs in terms of consumed resources, and provides cost of average CPU, memory and storage resources used by each VM. This chart is available if you choose to include VM details in the report.

- 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:

- **Infrastructure objects**: defines a list of virtual infrastructure level and its sub-components to analyze in the report.

- **Currency**: defines a payment currency.

- **Calculate host costs based on**: defines how host costs will be calculated in the report. You can select one of the following options:

    - **Total host cost** — defines the total cost of CPU and memory hardware resources for all hosts included in the report, in the selected currency.

- o **Individual host costs** — defines the hardware cost of each host separately.

  To edit host costs:

  - o Click **Configure**.
  - o In the **Configure Individual Host Costs** window, select the necessary host and click **Edit**.
  - o In the **Set Individual Host Cost** window, specify the desired cost and click **Save**.
  - o Repeat steps 2-3 for each host cost you want to edit.

- **CPU/RAM slider:** defines the percentage of cost, or cost share of CPU and memory 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, set the *CPU* parameter value to *25%*. The *RAM* parameter value will adjust automatically.

- **Calculate datastore costs based on**: defines how datastore costs will be calculated in the report. You can select one of the following options:

  - o **Exclude datastores from the calculation** — defines to exclude datastores cost details from the report.
  - o **Total datastore cost** — defines the total cost of storage resources in the selected currency.
  - o **Individual datastore costs** — defines the cost of each datastore separately.

    To edit datastore costs:

    - o Click **Configure**.
    - o In the **Configure Individual Datastore Costs** window, select the necessary datastore and click **Edit**.
    - o In the **Set Individual Datastore Cost** window, specify the desired cost and click **Save**.
    - o Repeat steps 2-3 for each datastore cost you want to edit.

- **Period**: 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 successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Show VM details**: 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 you to perform an infrastructure costs audit and identify the most and least expensive VMs based on the hardware price and VM performance.

Report Parameters

Hosts:	Virtual Infrastructure
Hosts cost:	110.00 USD
Host expenses distribution:	CPU: 50% / RAM: 50%
Datastores cost:	220.00 USD
Reporting period:	1 month (12/3/2022 - 1/2/2023)
Business hours:	From 9:00 AM To 6:00 PM
Show VM details:	True

Summary

Hosts:	6		CPU, GHz average cost:	0.23 USD
VMs:	228		RAM, GB average cost:	0.09 USD
Datastores:	11		Datastore, TB average cost:	35.30 USD
Average VM price:	0.48 USD			
Total hardware cost:	330.00 USD			

Cost Distribution

220.0 (66.7 %)
55.0 (16.7 %)
55.0 (16.7 %)

Legend: RAM CPU Datastore
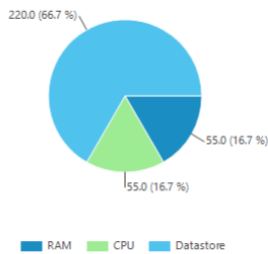
Top 5 Hosts with Expensive CPU Resources

Host Name	CPU GHz Cost, USD	Average VM Price, USD
prgtwesx01-virt.tech.local	0.32	2.04
prgtwesx02-virt.tech.local	0.32	1.83
prgtwesx01.tech.local	0.27	0.21
pdctwhv01.tech.local	0.18	1.15
prgtwesx02.tech.local	0.16	0.35

Top 5 Hosts with Expensive Memory Resources

Host Name	GB RAM Cost, USD	Average VM Price, USD
prgtwesx01-virt.tech.local	0.23	2.04
prgtwesx02-virt.tech.local	0.23	1.83
prgtwesx03.tech.local	0.02	0.30
prgtwesx02.tech.local	0.02	0.35
pdctwhv01.tech.local	0.02	1.15

Top 5 Datastores with Expensive Resources

Datastore Name	Store TB Cost, USD	Average VM Price, USD
Veeam_dr_v6_nfs41_5HNufyTQK zk1Xc3a0SzRJ3	225.28	0.10
docopsubuntunfs01	45.87	0.50
docopslinuxnfs	45.87	4.51
prgtwesx01-virt-ds1	28.43	1.08
prgtwesx02-virt-ds1	28.43	0.33

Top 10 Most Expensive VMs

Legend: RAM CPU Datastore
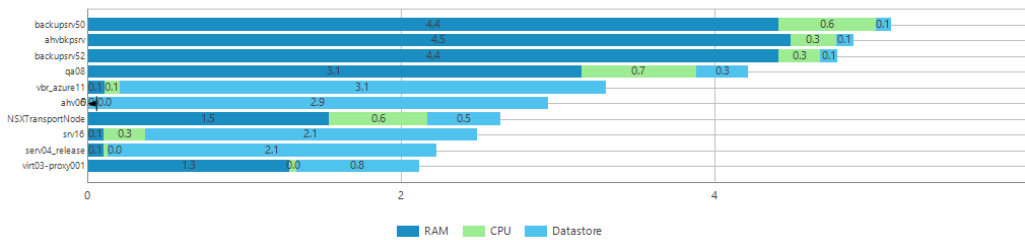
Details (VMware)

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	203	27.50	64	6.90	148.80	0.59
prgtwesx01.tech.local	88	9.17	16	2.10	33.60	0.27
prgtwesx02.tech.local	53	9.17	24	2.40	57.60	0.16
prgtwesx03.tech.local	62	9.17	24	2.40	57.60	0.16
⊟ Cluster: CDP cluster	19	18.33	24	4.80	57.60	0.64
prgtwesx01-virt.tech.local	9	9.17	12	2.40	28.80	0.32
prgtwesx02-virt.tech.local	10	9.17	12	2.40	28.80	0.32

Memory

vCenter Server: vcenter01.tech.local

Host	VMs	Memory Cost, USD	RAM Capacity, GB	RAM GB Cost, USD
⊟ Cluster: CDP cluster	19	18.33	79.99	0.46
prgtwesx01-virt.tech.local	9	9.17	40.00	0.23
prgtwesx02-virt.tech.local	10	9.17	40.00	0.23
⊟ Cluster: Standalone hosts	203	27.50	1277.22	0.07
prgtwesx01.tech.local	88	9.17	511.89	0.02
prgtwesx02.tech.local	53	9.17	382.66	0.02
prgtwesx03.tech.local	62	9.17	382.66	0.02

Datastores

Datastore Name	Type	Owner	VMs	Cost, USD	Capacity, TB	TB Cost, USD
⊟ vCenter Server: vcenter01.tech.local						
prgtwesx01-ds01	VMFS	prgtwesx01.tech.local	26	22.00	3.63	6.06
prgtwesx01-ds02	VMFS	prgtwesx01.tech.local	60	22.00	7.28	3.02
Veeam_dr_v6_nfs41_5HNufyTQKzk1Xc3a0SzRJ3	NFS	prgtwesx01.tech.local	2	22.00	0.10	225.28
prgtwesx01-virt-ds1	VMFS	prgtwesx01-virt.tech.local	5	22.00	0.77	28.43
prgtwesx02-ds01	VMFS	prgtwesx02.tech.local	53	22.00	16.25	1.35
docopsubuntunfs01	NFS	prgtwesx02-virt.tech.local	9	22.00	0.48	45.87
prgtwesx02-virt-ds1	VMFS	prgtwesx02-virt.tech.local	5	22.00	0.77	28.43
docopslinuxnfs	NFS	prgtwesx03.tech.local	1	22.00	0.48	45.87
prgtwesx03-ds01	VMFS	prgtwesx03.tech.local	62	22.00	16.25	1.35

VM Cost (VMware)

vCenter Server: vcenter01.tech.local

Host	Virtual Machine	VM Uptime	CPU Avg. Usage, GHz	CPU Cost, USD	Memory Avg. Usage, GB	Memory Cost, USD	Datastore Avg. Usage, GB	Datastore Cost, USD	Total VM Cost, USD
Cluster: Standalone hosts	193			10.97		18.29		47.52	76.78
prgtwesx01.tech.local	88			5.70		5.91		31.86	43.47
	srv16	99.28 %	0.97	0.26	6.00	0.11	356.97	2.11	2.48
	serv04_release	99.25 %	0.09	0.02	6.00	0.11	354.12	2.10	2.23
	srv14	99.27 %	0.50	0.13	6.00	0.11	307.81	1.82	2.06
	backupserver004	99.28 %	1.89	0.51	8.00	0.14	323.89	0.96	1.61
	srv12	99.25 %	0.84	0.23	8.00	0.14	395.90	1.17	1.54
	serv45	99.28 %	0.08	0.02	7.97	0.14	227.83	1.35	1.51
	enterprise05	99.20 %	3.78	1.02	8.00	0.14	103.21	0.30	1.47
	serv21	99.28 %	0.64	0.17	5.85	0.10	324.87	0.96	1.23
	enterprise03	99.28 %	0.20	0.05	4.00	0.07	372.14	1.10	1.22
	filesrv01	99.28 %	0.16	0.04	5.81	0.10	163.74	0.97	1.12
	vcenter01	99.28 %	0.54	0.15	18.88	0.34	214.15	0.63	1.11
	srv13	99.19 %	0.82	0.22	6.00	0.11	253.43	0.75	1.08
	dlsql01	99.28 %	0.13	0.04	8.00	0.14	142.86	0.85	1.02
	appsrv01	99.28 %	0.56	0.15	6.00	0.11	105.26	0.62	0.88
	linuxsrv001	99.28 %	0.36	0.10	14.70	0.26	168.08	0.50	0.85
	serv02_vbo	99.28 %	2.13	0.58	4.00	0.07	69.05	0.20	0.85
	winsrv0022016	99.28 %	1.36	0.37	6.00	0.11	111.02	0.33	0.80
	backupserver001	0.00 %	0.00	0.00	0.00	0.00	253.98	0.75	0.75
	winorcl01	99.28 %	0.24	0.07	8.00	0.14	176.52	0.52	0.73
	vcenter-old	0.00 %	0.00	0.00	0.00	0.00	242.94	0.72	0.72
	enterprise07	99.28 %	0.17	0.05	8.00	0.14	172.16	0.51	0.70
	avspem1	0.00 %	0.00	0.00	0.00	0.00	116.08	0.69	0.69
	winsrv004	99.24 %	1.00	0.27	7.99	0.14	82.82	0.24	0.66
	winsrv001	99.22 %	0.25	0.07	6.00	0.11	163.53	0.48	0.66
	serv01_vbo	99.28 %	0.34	0.09	8.00	0.14	139.57	0.41	0.65
	winsrv88	99.28 %	0.11	0.03	6.00	0.11	78.25	0.46	0.60

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:

    o Details on the number of VMs, average VM cost and total cost of VMs.

    o The **Top 10 Most Expensive VMs** subsection shows 10 most expensive VMs in terms of allocated resources, and provides cost of vCPU, vRAM and storage resources configured for each VM.

    o The **Cost Distribution** chart shows the cost of hardware CPU, memory and storage resources.

    o 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.

    o The **Business View Groups Cost** chart shows the cost of VMs included in Business View groups. This chart is available if you include Business View groups in the report scope.

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

NOTE:

- 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components (hosts) to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Currency**: defines a payment currency.

- **Single vCPU cost**: defines the cost of one vCPU configured for a VM, in the selected currency.

- **Memory cost, per GB**: defines the cost of a memory GB allocated for a VM, in the selected currency.

- **Storage cost, per GB**: defines the cost of a storage GB allocated for a VM, in the selected currency.

- **Calculate storage hosts based on**: defines how VM storage host must be calculated in the report (*Provisioned space, Used space*).

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

VM Configuration Chargeback

Description

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

Report Parameters

Scope:	Virtual Infrastructure
Single vCPU cost:	20 USD
Memory cost, per GB:	2 USD
Storage cost, per GB:	1 USD
Include powered-off VMs in the calculation:	Yes
Calculate storage costs based on:	Provisioned space

Summary

Number of VMs:	228
Average VM price, USD:	233.80
Total cost of VMs, USD:	53,307

Top 10 Most Expensive VMs
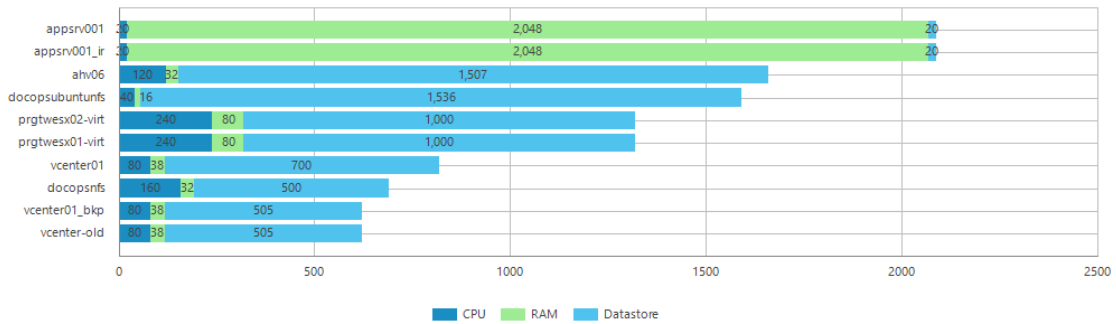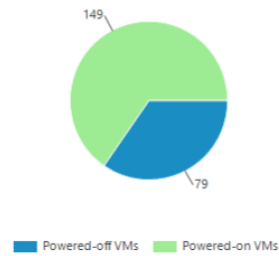
Cost Distribution

VM Power Status

Details

VMware

vCenter Server: vcenter01.tech.local

Host	Virtual Machine	Power Status	vCPUs		RAM		Datastore		Total Price, USD
			Count	Cost, USD	Quantity, GB	Cost, USD	Quantity, GB	Cost, USD	
Cluster:	**193**								
⊟ prgtwesx01.tech.local	88		291	5,820.00	520.88	1,041.75	12,060.39	12,060.39	18,922.14
	vcenter01	On	4	80.00	19.00	38.00	700.17	700.17	818.17
	vcenter01_bkp	Off	4	80.00	19.00	38.00	504.71	504.71	622.71
	vcenter-old	Off	4	80.00	19.00	38.00	504.71	504.71	622.71
	enterprise03	On	3	60.00	4.00	8.00	500.00	500.00	568.00
	srv12	On	4	80.00	8.00	16.00	400.00	400.00	496.00
	serv21	On	8	160.00	32.00	64.00	260.00	260.00	484.00
	srv13	On	4	80.00	6.00	12.00	350.00	350.00	442.00
	backupserver004	On	8	160.00	8.00	16.00	260.00	260.00	436.00
	backupserver001	Off	4	80.00	12.00	24.00	300.00	300.00	404.00
	serv02_vbo	On	3	60.00	4.00	8.00	300.00	300.00	368.00
	winsrv001	On	4	80.00	6.00	12.00	270.00	270.00	362.00
	enterprise05	On	6	120.00	8.00	16.00	220.00	220.00	356.00
	linuxsrv001	On	8	160.00	16.00	32.00	152.00	152.00	344.00
	srv16	On	4	80.00	6.00	12.00	250.00	250.00	342.00
	avspem1	Off	4	80.00	4.00	8.00	250.00	250.00	338.00
	enterprise07	On	6	120.00	8.00	16.00	200.00	200.00	336.00
	winsrv002	On	4	80.00	6.00	12.00	220.00	220.00	312.00
	enterprise01	On	4	80.00	8.00	16.00	200.00	200.00	296.00
	winorcl01	On	4	80.00	8.00	16.00	200.00	200.00	296.00
	linorcl01	On	4	80.00	8.00	16.00	200.00	200.00	296.00

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 according to the allocated resources.

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.

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:

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

  o The **Top 10 Most Expensive VMs** subsection shows 10 most expensive VMs in terms of consumed resources, and provides cost of vCPU, vRAM and storage resources utilized by each VM.

  o The **Cost Distribution** chart shows the cost of vCPU, vRAM and storage resources for all VMs included in the report.

  o The **Business View Groups Cost** chart shows the cost of VMs for 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:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components (hosts) to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Currency**: defines a payment currency.

- **Calculate costs for each**: defines a time measurement unit for which prices are set.

- **vCPU cost, per GHz**: defines a cost for each consumed CPU GHz.

- **Memory cost, per GB**: defines a cost for each consumed memory GB.

- **Storage cost, per GB**: defines a cost of each consumed storage GB.

- **Period**: 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 successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only:** 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.

Veeam

VM Performance Chargeback

Description

This report helps you to perform a VM costs audit and identify the most and least expensive VMs based on the VM performance.

Report Parameters

Scope:	Virtual Infrastructure
vCPU cost, per GHz:	10 USD per hour
Memory cost, per GB:	1 USD per hour
Storage cost, per GB:	0.1 USD per hour
Reporting period:	1 week (12/27/2022 - 1/2/2023)

Summary

Number of VMs	230
Average VM price, USD	2,499.66
Total cost of VMs, USD	559,924.11

Top 10 Most Expensive VMs
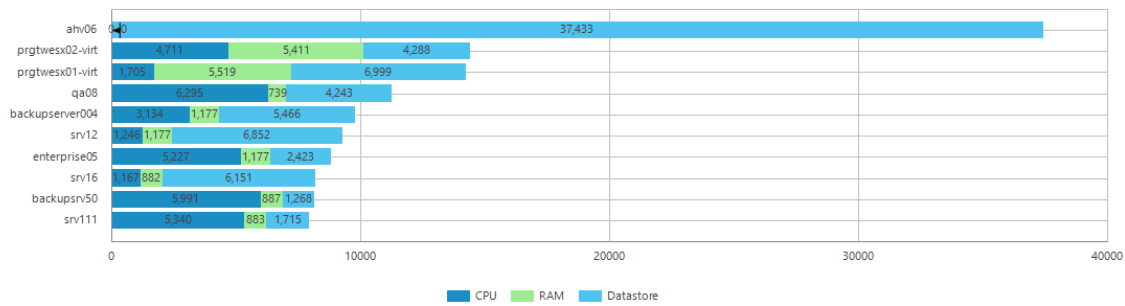
Cost Distribution

Details

VMware

vCenter Server: vcenter01.tech.local

Host	Virtual Machine	VM Uptime Time	%	CPU Avg. Usage, GHz	Cost, USD	Memory Avg. Usage, GB	Cost, USD	Datastore Avg. Usage, GB	Cost, USD	VM Cost, USD
Cluster:	**193**			**57.15**	**82,719.43**	**856.59**	**125,174.77**	**18,099.22**	**304,061.83**	**511,956.03**
⊟	1			0.01	0.00	0.01	0.00	0.45	2.41	2.41
	apache04_restored		0.00%	0.01	0.00	0.01	0.00	0.45	2.41	2.41
⊟ prgtwesx01.tech.local	87			20.44	30,062.94	334.24	49,171.85	8,421.41	141,479.61	220,714.40
	backupserver004	6d 3h 7m	99.97%	2.13	3,133.59	8.00	1,176.74	325.35	5,465.88	9,776.21
	srv12	6d 3h 7m	99.97%	0.85	1,246.08	8.00	1,176.73	407.86	6,852.06	9,274.87
	enterprise05	6d 3h 7m	99.97%	3.55	5,227.06	8.00	1,176.79	144.22	2,422.97	8,826.81
	srv16	6d 3h 6m	99.95%	0.79	1,166.50	6.00	882.13	366.14	6,151.18	8,199.81
	vcenter01	6d 3h 7m	99.97%	0.53	773.83	18.89	2,778.56	223.70	3,758.21	7,310.61
	serv21	6d 3h 7m	99.97%	0.64	938.60	5.85	860.24	324.87	5,457.82	7,256.67
	srv14	6d 3h 6m	99.95%	0.50	738.44	6.00	882.51	320.62	5,386.38	7,007.33
	serv04_release	6d 3h 7m	99.97%	0.08	110.34	6.00	882.67	354.14	5,949.51	6,942.51
	srv13	6d 3h 7m	99.97%	0.85	1,243.14	6.00	882.59	284.45	4,778.80	6,904.52
	enterprise03	6d 3h 7m	99.97%	0.18	257.45	4.00	588.28	313.62	5,268.79	6,114.53

Hyper-V

SCVMM: N/A

Host	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	
Cluster:	16			12.86	18,999.86	38.00	5,320.60	1,276.70	21,448.63	45,769.08
⊟ pdctwhv01.tech.local	16			12.86	18,999.86	38.00	5,320.60	1,276.70	21,448.63	45,769.08
	qa08	6d 3h 46m	99.85%	4.26	6,295.36	5.00	738.89	252.56	4,243.08	11,277.33
	backupsrv50	6d 3h 46m	99.85%	4.05	5,990.93	6.00	886.67	75.50	1,268.47	8,146.07
	repo30	6d 3h 46m	99.85%	2.19	3,237.82	2.00	295.56	213.66	3,589.49	7,122.87
	backupsrv52	6d 3h 46m	99.85%	1.71	2,522.58	6.00	886.67	84.99	1,427.84	4,837.08
	srv24		0.00%	0.00		0.00		198.89	3,341.43	3,341.43
	ahvbkpsrv	6d 3h 46m	99.85%	0.41	610.32	6.00	886.67	81.54	1,369.92	2,866.91
	qa06	6d 3h 46m	99.85%	0.04	63.54	1.00	148.36	129.66	2,178.29	2,390.19
	qa04	6d 3h 46m	99.85%	0.08	112.31	4.00	591.11	42.00	705.67	1,409.09
	repo31	6d 3h 46m	99.85%	0.08	121.18	2.00	295.56	35.47	595.94	1,012.68
	qa05	6d 3h 46m	99.85%	0.03	45.81	4.00	591.11	19.13	321.37	958.29
	ext0230		0.00%	0.00		0.00		45.44	763.42	763.42
	qa09		0.00%	0.00		0.00		41.48	696.89	696.89
	ext0130		0.00%	0.00		0.00		36.29	609.59	609.59
	appsrv02		0.00%	0.00		0.00		20.07	337.12	337.12
	appsrv001		0.00%	0.00	0.00	2.00	0.00	0.00	0.07	0.07
	appsrv001_ir		0.00%	0.00		0.00		0.00	0.07	0.07

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 according to allocated resources.

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.

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.

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.

Report Parameters

You can specify the following report parameters:

- **Scope**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Show VMs**: defines whether to show VMs in the report.

Infrastructure: VMware Configuration

The following diagram displays VMware vSphere configuration inventory.
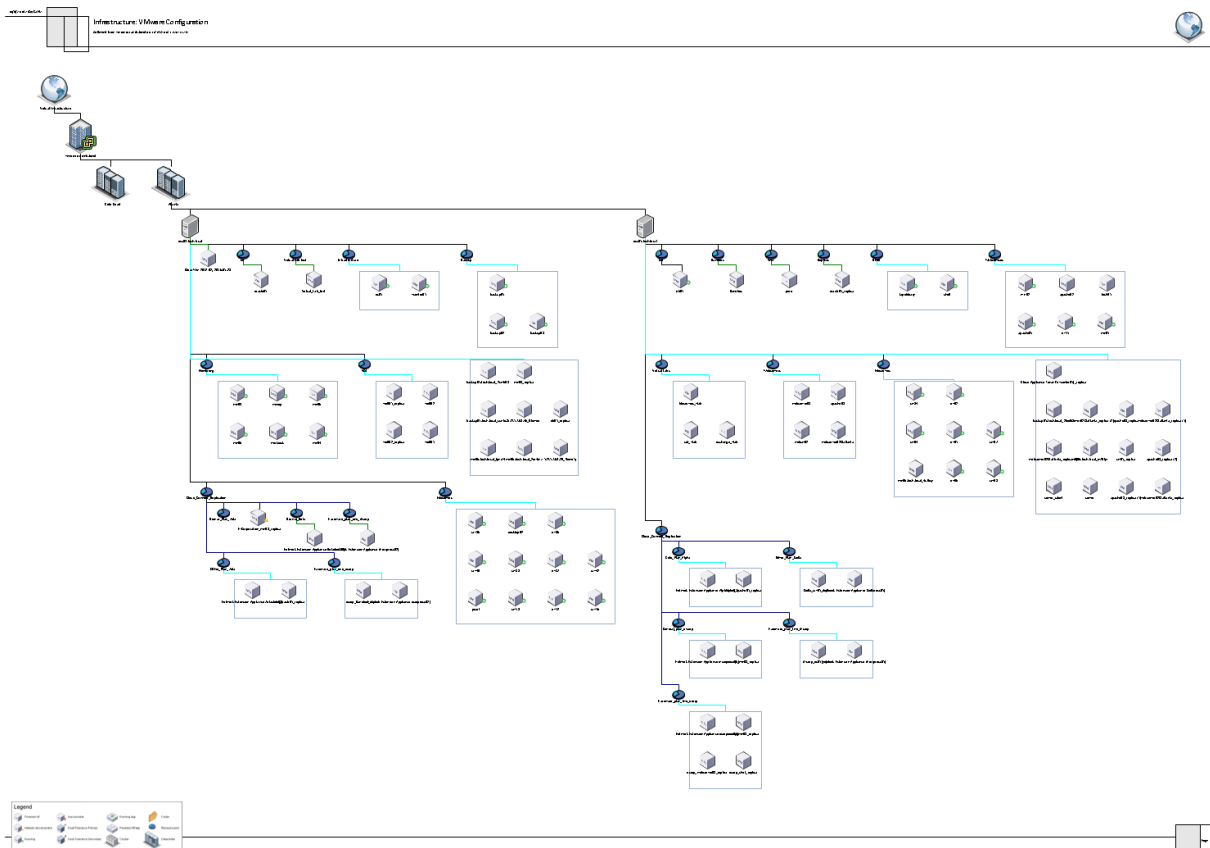
Infrastructure: Hyper-V Configuration

The following diagram displays Microsoft Hyper-V configuration inventory.
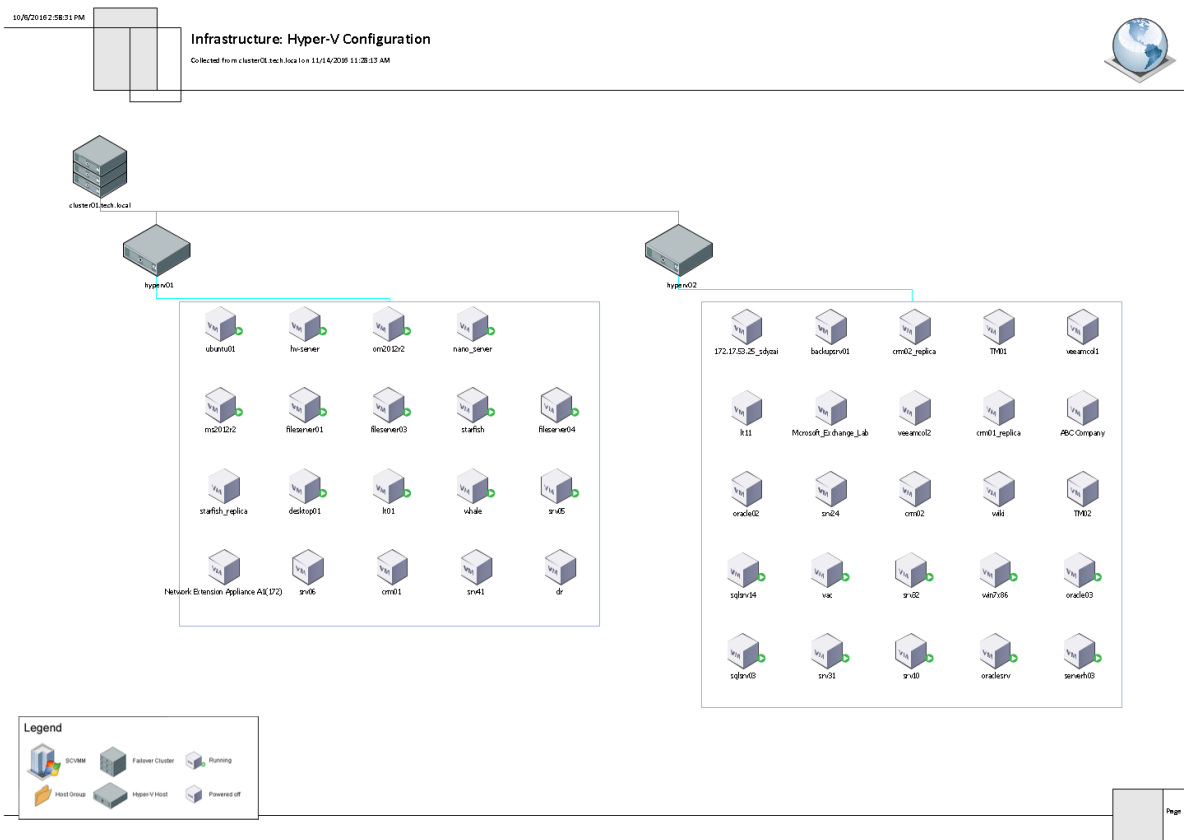
Use Case

The report includes a set of Microsoft Visio diagrams that show infrastructure configuration from different viewpoints.

Raw Data Analysis

This report creates a Microsoft Excel workbook that contains detailed raw data on all infrastructure objects and all performance metrics collected from VMware vSphere systems.

> **NOTE:**
>
> To view the report, you must have Microsoft Excel installed.

Report Parameters

You can specify the following report parameter:

- **Scope**: defines a virtual infrastructure level and its sub-components to analyze in the report.
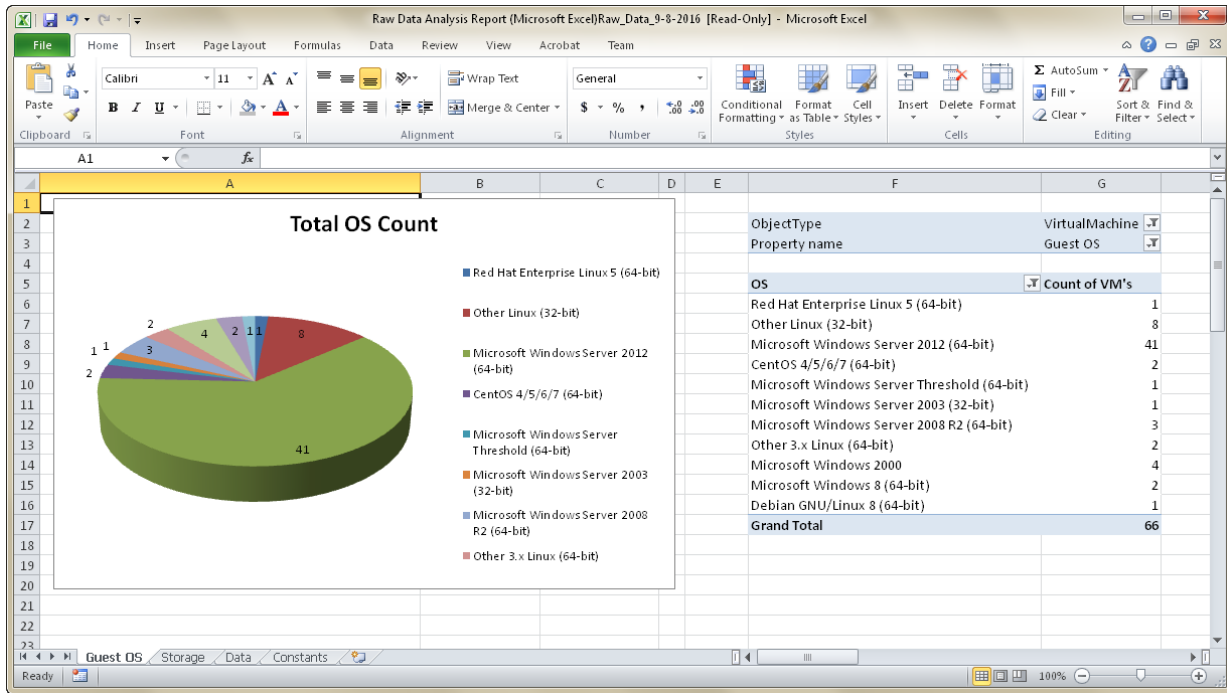
Use Case

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.

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, Veeam Agents for Linux, Veeam Agents for Mac and Veeam Agents for Unix (Veeam backup agents) that are managed by Veeam Backup & Replication servers.

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 jobs/policies**: defines a list of backup jobs and policies to include in the report.

- **Period:** 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:	12/1/2022 - 12/31/2022

Summary

Top 5 Jobs and Policies by Restore Points Created

Top 5 Jobs and Policies by Backed up Data (GB)
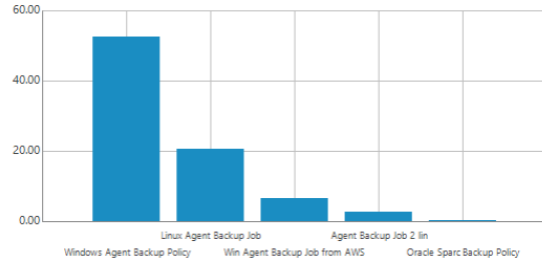
Agent Backup Jobs and Policies Result
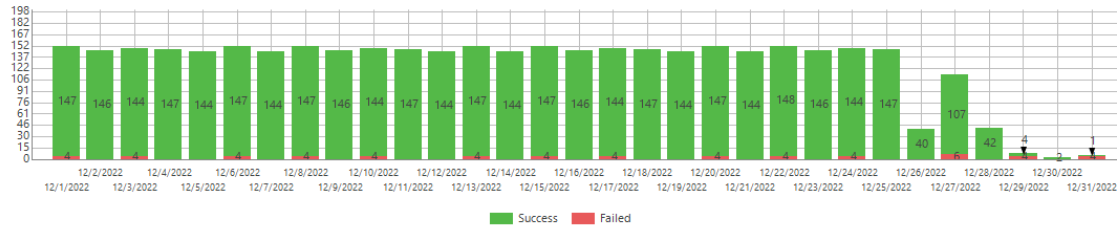
Job/Policy name: "Linux Agent Backup Job"

Date	Backed Up Agents	Restore Points Created	Agent Backup Run Status			Total Backup Size (GB)
			Success	Warning	Failed	
12/1/2022	1	1	1	0	0	0.03
12/2/2022	1	1	1	0	0	6.72
12/4/2022	1	1	1	0	0	0.03
12/6/2022	1	1	1	0	0	0.10
12/8/2022	1	1	1	0	0	0.04
12/9/2022	1	1	1	0	0	6.78
12/11/2022	1	1	1	0	0	0.03
12/13/2022	1	1	1	0	0	0.04
12/15/2022	1	1	1	0	0	0.04
12/16/2022	1	1	1	0	0	6.82
12/18/2022	1	1	1	0	0	0.04
12/20/2022	1	1	1	0	0	0.09
12/22/2022	1	1	1	0	0	0.04
12/23/2022	1	1	1	0	0	6.85
12/25/2022	1	1	1	0	0	0.04
12/27/2022	1	1	1	0	0	0.10
12/29/2022	1	1	1	0	0	0.04
12/30/2022	1	1	1	0	0	6.93

Use Case

This report allows you to track historical statistics, amount of backed up 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:

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

- **Business View objects**: defines Business View groups to analyze in the report. The parameter options are limited to objects of the Computer type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Backup jobs/policies**: defines a list of agent backup jobs to include in the report.

- **Agent types**: defines types of Veeam backup agents to include in the report.

- **Period**: defines a time period to analyze in the report (number of weeks from 1 to 10).

- **Computer inclusion rule**: defines names of computers to include in the report.

- **Group by**: defines how data will be grouped in the report output (by *Backup Job/Policy* or *Agent Type*).

Veeam

Computer Backup Status

Description

This report provides daily backup status information for all computers protected with Veeam Agents.

Report Parameters

Scope:	Backup Infrastructure
Period:	1 week (12/27/2022 - 1/2/2023)
Backup job/Policy:	All Jobs and Policies
Agent types:	All Types
Computer inclusion rule:	
Group by:	Backup job/Policy

Summary

Agent Backup Status
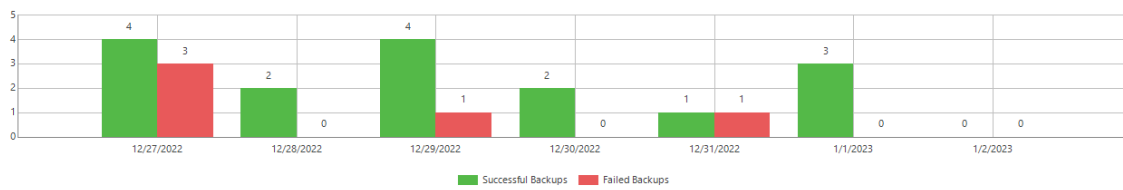
Details

Computer Name	12/27/2022	12/28/2022	12/29/2022	12/30/2022	12/31/2022	1/1/2023	1/2/2023
Backup Job/Policy: Agent Backup Job 1 win							
win16.tech.local	-	-	-	-	-	-	-
Backup Job/Policy: Agent Backup Job 2 lin							
mmfubuntu	-	Success	-	-	-	-	-
Backup Job/Policy: ES Backup Job 2 agent							
ms-12.tech.local	Failed	-	-	-	-	-	-
vvg-win19.tech.local	Failed	-	-	-	-	-	-
Backup Job/Policy: ES Oracle Sparc to Local							
knv-sparc-s11.4	Success	Success	-	-	-	-	-
Backup Job/Policy: Linux Agent Backup Job							
ms-ub-02	Success	-	Success	Success	-	Success	-
Backup Job/Policy: Linux Agent Backup Policy							
ms-ub-01	Success	-	Success	-	-	Success	-

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:

    o The **Computers Archive Status** chart displays the number of agents with and without archive copy.

    o The **Archive Copies by Location Type** chart displays the types of backup target locations.

- The **Details** table provides information on computers with and without archive copy, including computer type, 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:

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

- **Business View objects**: defines Business View groups to analyze in the report. The parameter options are limited to objects of the *Computer* type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Backup jobs/policies**: defines a list of agent backup jobs to include in the report.

- **Agent types**: defines types of Veeam backup agents to include in the report.

- **Computer inclusion rule**: defines names of computers to include in the report.

- **Last <N> days/weeks/months**: defines the time period to analyze in the report.

- **Show computers with no primary backup within the reporting period**: defines whether to include in the report agents without primary backup that is valid within the defined time period.

Veeam

Computers with no Archive Copy

Description

This report lists all computers protected with Veeam Agent that do not have an archive copy. Note that the report does not include direct cloud backups.

Report Parameters

Scope:	Backup Infrastructure
Backup Job/Policy:	All Jobs and Policies
Agent types:	All Types
Computer inclusion rule:	
Reporting period:	1 week (12/27/2022 - 1/2/2023)
Show computers with no primary backup within the reporting period:	False

Summary

Computers Archive Status

Archive Copies by Location Type

■ At least 1 Copy ■ No Archive Copy

■ Backup Repository ■ Cloud Repository
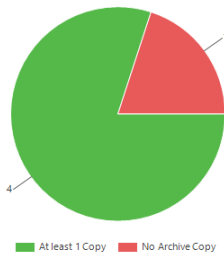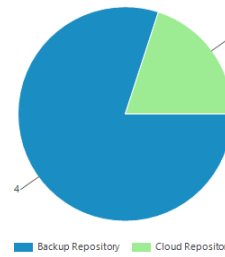
Details

Computers with Archive Copy

Computer Name	Computer Type	Primary Job/Policy				Secondary Job		
		Name	Source	Target	Last Backup Date	Name	Target	Last Backup Date with Copy
knv-s11.4	Oracle Solaris Server	Oracle Sparc Backup Policy	All user directories	Backup Repository	12/31/2022 2:00 PM	Solaris SPARC Backup Copy Job	Copy Repository	12/29/2022 2:00 PM
mmfubuntu	Linux Server	Agent Backup Job 2 lin	Entire Computer	Backup Repository 2	12/28/2022 6:18 AM	mapping copy job	Scale-out Backup Repository 2	12/28/2022 6:18 AM
mmfubuntu	Linux Server	Agent Backup Job 2 lin	Entire Computer	Backup Repository 2	12/28/2022 6:18 AM	new copy job	Scale-out Backup Repository 1	12/28/2022 6:18 AM
ms-ub-01	Linux Workstation	Linux Agent Backup Policy	Entire Computer	Backup Repository	1/1/2023 11:00 PM	Linux Backup Copy Job periodic (pruning)	Default Backup Repository	12/29/2022 11:00 PM
ms-ub-02	Linux Server	Linux Agent Backup Job	Entire Computer	Backup Repository	1/1/2023 10:02 PM	Backup Copy Job 24	Cloud backup copy repository vcd	12/27/2022 10:02 PM

Computers without Archive Copy

Computer Name	Computer Type	Backup Job/Policy	Backup Source	Backup Target	Last Backup Date
knv-s11.4	Oracle Solaris Server	ES Oracle Sparc to Local	/home/	/	12/28/2022 6:39 AM
ms-agent.tech.local	Windows Workstation	Windows Agent Backup Policy	Entire Computer	Backup Repository	1/1/2023 7:01 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 the number of discovered, backed up and protected computers and contains the following charts:

  - The **Protected Computers** chart shows the number of protected and unprotected computers.

  - The **Computer Type** chart shows types of protected computers.

  - The **Computer Last Backup State** chart shows status of the latest job session for a discovered/protected computer.

  - The **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:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Backup jobs/policies**: defines a list of backup jobs and policies to include in the report.

- **Agent types**: defines types of Veeam backup agents to include in the report.

- **Computer inclusion rule**: defines names of computers that must be included in the report.

  In the **Computer inclusion rule** 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.

Veeam

Protected Computers

Description

This report lists all protected and unprotected computers including their last backup state.

Report Parameters

Scope:	Backup Infrastructure
RPO:	24 hours (1/1/2023 6:00:00 AM)
Backup job/policy:	All Jobs and Policies
Agent types:	All Types
Computer inclusion rule:	

Summary

Discovered Computers:	11
Backed Up Computers:	9
Protected Computers:	3

Protected Computers

- Protected Computers
- Unprotected Computers

Computer Type

- IBM AIX Server
- Linux Workstation
- Windows Server
- Linux Server
- Oracle Solaris Server
- Windows Workstation

Computer Last Backup State

- Failure
- N/A
- Success
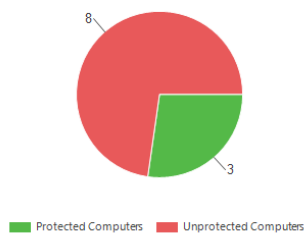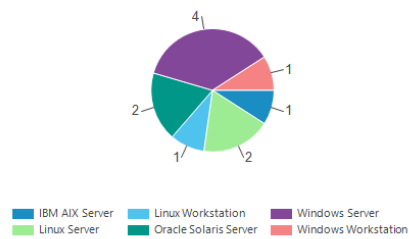
Unprotection Reason
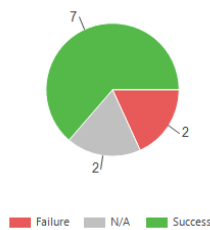
- No Backup
- Outside RPO
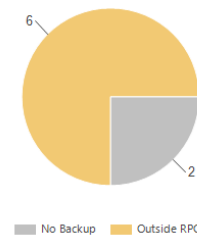
Details

Protected Computers

Computer Name	IP Address	Protection Group	Backup Job/Policy	Backup Source	Backup Target	Available Restore Points	Last Backup Date
ms-agent.tech.local	172.24.153.95	Windows Protection Group	Windows Agent Backup Policy	Entire Computer	Backup Repository	11	1/1/2023 7:01 PM
ms-ub-02	172.25.48.70	Manually Added	Linux Agent Backup Job	Entire Computer	Backup Repository	7	1/1/2023 10:02 PM
ms-ub-01	172.25.48.69	Manually Added	Linux Agent Backup Policy	/home/administrator/ Desktop/test	Backup Repository	7	1/1/2023 11:00 PM

Unprotected Computers

Computer Name	IP Address	Protection Group	Backup Job/Policy	Backup Source	Backup Target	Available Restore Points	Last Backup Date
Last Backup: More than 1 month ago							
ms-agent.tech.local	172.24.183.150	Manually Added	ES Backup Job 2 agent	C:\ProgramData\Veea m	Backup Repository	4	8/17/2022 3:39 AM
vvg-z2.tech.local	172.25.50.3	Manually Added	ES Backup Job 2 agent	C:\ProgramData\Veea m	Backup Repository	6	8/17/2022 3:55 AM
ms-1-agent.tech.local	172.24.183.150	Manually Added	Windows Agent Tiny Backup Job	E:\	Backup Repository	4	10/18/2022 12:01 PM
win16.tech.local	172.24.152.116	Manually Added	Agent Backup Job 1 win	Personal files	Scale-out Backup Repository 2	3	10/24/2022 7:02 AM

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.

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.

Reports included:

- Backup Infrastructure Assessment

- Data Sovereignty Overview

- Data Sovereignty Violations

- Immutable Workloads

- 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.
> - Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.
> - Veeam Cloud Connect service providers cannot see performance data for proxies used by tenant data protection jobs.

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 or 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 or completed with warnings and marks criteria that does not apply to the infrastructure as *Not required*.

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	The report searches for jobs that do not have the **Enable application-aware image processing** option enabled. 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 & 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.
VMware tools quiescence for Linux/Unix VMs	The report searches for jobs that do not have the **Enable VMware Tools quiescence** option enabled. 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.
VMware tools status	The report analyzes your virtual infrastructure to find VMs that do not have VMware Tools installed, running or up-to-date. To enable backup with application-aware image processing, it is required that guest OS running inside your VMs have VMware Tools installed and running.
VMs verification	The report analyzes your virtual infrastructure to find VMs for which SureBackup jobs are not configured. 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.

Job Performance Optimization

Criterion	Description
Parallel virtual disk processing	The report searches for Veeam Backup servers that do not have the **Enable parallel VM and virtual disk processing** option enabled. Multiple VMs and VM disks can be processed in parallel, optimizing your backup infrastructure performance and increasing the efficiency of resource usage. For Veeam Backup & Replication 12 or later, this parameter is enabled by default.

Criterion	Description
Virtual stand-by proxy server	The report analyzes your virtual infrastructure to find virtual backup proxy servers. For data retrieval, Veeam Backup & Replication offers the Virtual Appliance mode. The mode can only be used if the backup proxy is deployed on a VM. 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.
Proxy server on the remote site	The report analyzes your virtual infrastructure to find backup proxy servers on the remote site. 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.
Direct SAN access iSCSI performance tweaks	The report analyzes your infrastructure to find backup proxies configured to use the Direct SAN Access mode working with iSCSI storage. 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.
Meeting Backup Window	The report analyzes job sessions to find jobs whose duration exceeds the defined backup window. If job duration exceeds the backup window and the bottleneck is a proxy, the report will provide recommendations to deploy more proxies. This criterion is available only if you specified the **Required Backup Window** parameter.
Backup job processing mode optimizations	The report analyzes job statistics to find bottlenecks in the data flow. 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 & Replication detects the component with the maximum workload: that is, the component that works for the most time of the job. 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.

Backup Infrastructure Configuration

Criterion	Description
VMs failed over to network processing mode	The report analyzes your virtual infrastructure to find VMs that failed over to the Network Processing mode. 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.
Backup server protection	The report analyzes your virtual infrastructure to find backup servers that do not run configuration backups on their database. 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.
SQL Server optimization	The report analyzes Veeam Backup & Replication databases hosted on SQL Server Express instances to check whether these instances need to be upgraded to the full version of SQL Server. If the amount of data stored in Veeam Backup & Replication databases exceeds SQL Server Express capabilities, it may cause slow operation of the Veeam Backup & Replication console.
Repository free space	The report analyzes your virtual infrastructure to find repositories that have run out of free space.
Storage latency control	The report searches for jobs that do not have the **Enable storage latency control** option enabled. Storage latency control should be enabled in the Veeam Backup & Replication console to ensure that running jobs do not impact storage availability to production workloads.
Proxy Server Configuration	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.

File level restores

Criterion	Description
Indexing of Guest OS files (optional)	The report searches for jobs that do not have the **Enable guest file system indexing** option enabled. This criterion is available only if you selected the **1-Click file level restores** parameter.

TIP:

Click a criterion in the output table to drill down to recommendations for resolving the issue.

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 restore sessions**: 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

26.67%	
53.33%	
20.00%	

Failed ■ Passed ■ Warning
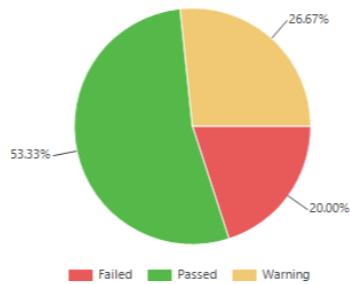
Criteria	Verification Results
Criteria Group: VM configuration and application-aware VM processing	
Application-aware image processing for Windows Servers	Failed
VMware tools quiescence for Linux/Unix VMs	Warning
VM VMware tools status	Failed
VMs verification	Warning
Criteria Group: Job performance optimization	
Parallel virtual disk processing	Passed
Virtual stand-by proxy server	Warning
Proxy server on the remote site	Passed
Direct SAN access iSCSI performance tweaks	Warning
Backup job processing mode optimizations	Passed
Criteria Group: Backup infrastructure configuration	
VMs failed over to network processing mode	Passed
Backup server protection	Failed
SQL Server optimization	Passed
Repository free space	Passed
Proxy Server Configuration	Passed

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: mmf-vbr.tech.local			
Backup Job for sure	12/28/2022 8:33 AM		
		mmf-win16vbr	Success
Backup Server: ms-vbr11a.tech.local			
az_job	12/31/2022 11:00 AM		
		azReplica	Success
mk backup to smb 12	12/28/2022 5:03 AM		
		KM-2012R2-WG	Success
Replication_Job	12/10/2022 2:19 PM		
		iiaut	Success

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 locations of production data, their backups, backup 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.

- **Locations**: defines a list of locations configured on monitored Veeam Backup & Replication servers.

- **Show backup infrastructure objects locations**: defines whether the report will include the list of backup infrastructure objects and their locations.

- **Group by:** defines how objects in the **Backup Infrastructure Objects** table will be grouped (by *Location* or *Backup Server*).

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

Data Sovereignty Overview

Description

This report lists all protected objects, backups and replicas grouped by location or backup servers.

Report Parameters

Scope:	Backup Infrastructure
VM and computer locations:	All locations
Show Backup Objects Location:	Yes
Group Objects by:	Location

Summary

Discovered data sources: 20

VM & Computer Locations

dc   host   Undefined   windows

Backup Locations

def repo   repo1   sobr   Undefined
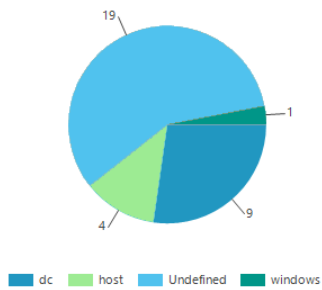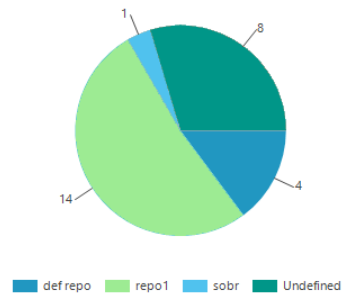
Backup Copy Locations

repo mirror   Undefined
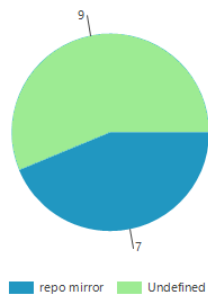
Replica VMs Locations

dc   Undefined
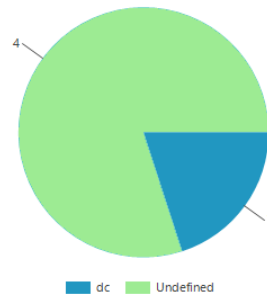
Tape Backups Locations

tape libraries   vault
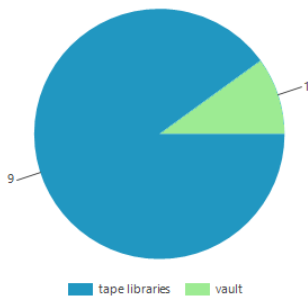
Veeam Backup Server: 172.17.53.76

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	Netherlands, Netherlands	Germany, Germany	N/A	-

Production data location: Oregon (USA)

Data Source	Backup Location	Backup Copy Location	Replication Location	Tape Location
windows01	Netherlands	Germany	N/A	-
windows03	Netherlands	Germany	N/A	-
windows02	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.

- The **Summary** section contains charts that display the sovereignty violations of production data, their backups, backup copies and replicas.

- The **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.

- The **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.

- **Protection types**: defines a list of Veeam Backup & Replication jobs to include in the report.

- **Workload types**: defines whether physical computers or virtual machines are included in the report.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

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
Workload types:	All types
Protection types:	All job types

Summary

Discovered data sources:	62
Target replication hosts:	1
Repositories:	14
Tape vaults:	0

Data Sovereignty
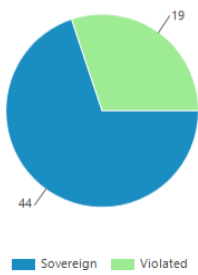
Backup Job Compliance
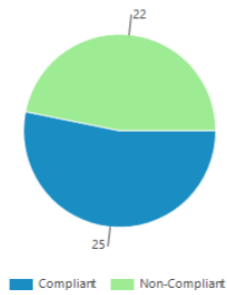
Backup Copy Compliance
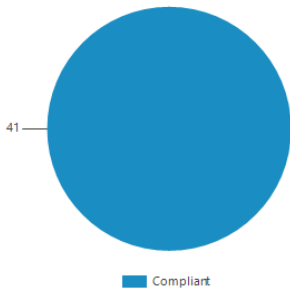
Replication Compliance
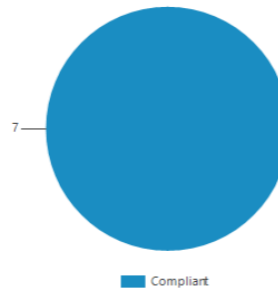
Tape Backup Compliance
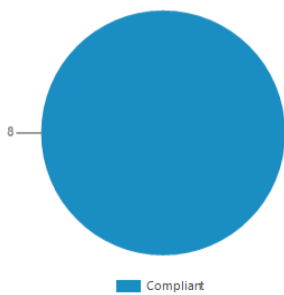
Objects with no Location Tag
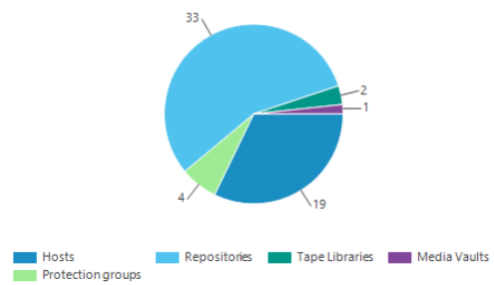
Data Sovereignty Violations

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	Germany	Germany	Backup Vol01	Infrastructure Servers Backup
windows01	Oregon (USA)	Netherlands	Default Backup Repository	Daily Servers Backup to VBR Repository
windows02	Oregon (USA)	Netherlands	Default Backup Repository	Daily Servers Backup to VBR Repository
windows02	Undefined	Netherlands	Default Backup Repository	Daily Servers Backup to VBR Repository
windows03	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	Oregon (USA)	Germany	Backup Vol01	Main Office Servers Backup Copy to DR
windows02	Oregon (USA)	Germany	Backup Vol01	Main Office Servers Backup Copy to DR
windows02	Undefined	Germany	Backup Vol01	Main Office Servers Backup Copy to DR
windows03	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	Mediaservers Replication to DR
webserver03	Singapore	Netherlands	esx02	Mediaservers Replication to DR
websrv02	Singapore	Netherlands	esx02	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	vcenter01	55
esx02	vcenter01	69
qa-srv14	elal.dev	186
qa-srv24	elal.dev	68

Hyper-V Host	SCVMM Server	VM Count
hyperv01		34

Computers

Protection Group	Backup Server	Computers Count
Manually Added	172.17.53.76	2
Manually Added	saturn	2
Protection Group 1	saturn	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.

Immutable Workloads

This report lists workloads and their restore points providing information on whether immutability targets are met by these workloads and their backups.

- The **Summary** section provides the numbers of mutable and immutable workloads and restore points as well as their immutability ratio, and includes the following elements:

    - The **Workloads by Immutability** chart shows the number mutable and immutable workloads.

    - The **Restore Points by Immutability** chart shows the number mutable and immutable restore points.

    - The **Workload Types by Immutability** chart shows the number mutable and immutable workloads of each workload type.

- The **Details** table provides information about every immutable and mutable workload including the workload platform, name and type of a backup job, target repository, number of available and immutable restore points, date and time of the latest and oldest immutable restore points creation.

    To get the detailed information on restore points of each workload, click the link in the workload name. The drill-down report page will open.

    To get the detailed information on restore points created by a specific backup job, click the link in restore point number. The drill-down report page will open.

Report Parameters

You can specify the following report parameters:

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

- **Business View objects**: defines Business View groups to analyze in the report.

- **Protected workload types**: defines types of protected workloads to analyze in the report (*Virtual machine*, *Computer*, *File share*, *Cloud instance*, *Enterprise application*).

- **Job types**: defines a job type to analyze in the report (*VM backup*, *Backup copy*, *Agent backup policy*, *Agent backup*, *File backup*, *Cloud backup policy*, *Application backup policy*, *Cloud Director backup*).

- **Jobs**: defines a list of jobs to analyze in the report.

- **Workload exclusion rule**: defines a list of workloads that should be excluded from the report scope. You can enter workload 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 workloads with the _R&D suffix from appearing in the report: *_R&D.

- **Group by**: defines how workloads will be grouped in the report (*No grouping*, *Job name*, *Job type*, *Repository*, *Workload type*).

- **Detailed immutability target**: defines whether specific immutability target values must be applied to the analyzed workloads. You can specify target immutability period and number of immutable restore points.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

Veeam

Immutable Workloads

Description

This report lists workloads and their backups that do not have at least one immutable restore point or are not compliant with the desired immutability targets. This helps to make sure backups being safely protected against ransomware and other malicious and erroneous deletions.

Report Parameters

Scope:	Backup Infrastructure
Protected workloads:	All workload types
Job types:	All job types
Jobs:	All jobs
Excluded workloads:	-
Group by:	No grouping

Summary

Total workloads:	47
Immutable workloads:	11
Mutable workloads:	36
Workload immutability ratio:	23.40%
Total restore points:	263
Immutable restore points:	20
Mutable restore points:	243
Restore point immutability ratio:	7.60%

Workloads by Immutability
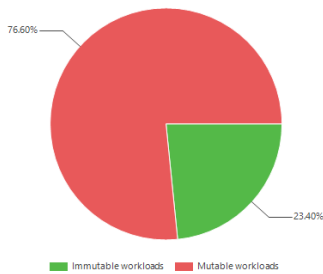
Restore Points by Immutability
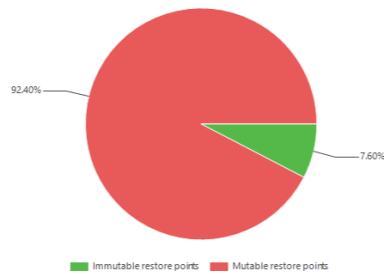
Workload Types by Immutability
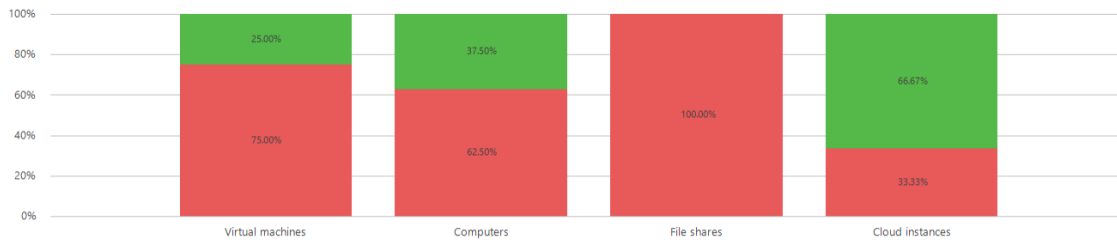
Details

Immutable Workloads

Workload	Platform	Job Name	Job Type	Repository	Available Restore Points	Immutable Restore Points	Oldest Immutable Restore Point	Oldest Immutable Restore Point Immutable Until	Latest Immutable Restore Point	Latest Immutable Restore Point Immutable Until
srv01	vSphere	Backup Job 1	VM backup	vbrv5.tech.local\SOBR	3	3	12/20/2022	1/9/2023	12/22/2022	1/16/2023
srv03	vSphere	Backup Copy Job mirroring	Backup copy	vbrv5.tech.local\Linux Hardened repository	1	1	12/27/2022	12/28/2023	12/27/2022	12/28/2023
AE_11.1PRX	Nutanix AHV	Backup Copy Job mirroring	Backup copy	vbrv5.tech.local\Linux Hardened repository	1	1	12/27/2022	12/28/2023	12/27/2022	12/28/2023
FF	vSphere	FF Job will be deleted	VM backup	vbrv5.tech.local\Linux Hardened repository	127	1	12/16/2022	12/17/2023	12/16/2022	12/17/2023
Mail Server	Nutanix AHV	Nutanix To SOBR	VM backup	vbrv5.tech.local\SOBR	4	3	12/20/2022	1/4/2023	12/20/2022	1/9/2023
NZALin	vSphere	Backup Job 2 Yearly GFS	VM backup	vbrv5.tech.local\Linux Hardened repository	8	1	12/14/2022	12/15/2023	12/14/2022	12/15/2023
NZAWin3.tech.local	Windows Server	Agent Backup Job 1	Agent backup	vbrv5.tech.local\SOBR	3	2	12/20/2022	1/9/2023	12/20/2022	1/4/2023
NZAWin3.tech.local	Windows Server	Backup Copy Job mirroring	Backup copy	vbrv5.tech.local\Linux Hardened repository	1	1	12/27/2022	12/28/2023	12/27/2022	12/28/2023
NZAWin4.tech.local	Windows Workstation	Agent Backup Policy 1	Agent backup policy	vbrv5.tech.local\Linux Hardened repository	1	1	12/28/2022	12/29/2023	12/28/2022	12/29/2023
sheepA	AWS	Backup Copy Job AWS	Backup copy	vbrv5.tech.local\Linux Hardened repository	4	4	12/19/2022	1/5/2023	1/2/2023	1/2/2024
sheepA	AWS	Backup Copy Job mirroring	Backup copy	vbrv5.tech.local\Linux Hardened repository	2	2	12/27/2022	12/28/2023	1/2/2023	1/12/2023

Mutable Workloads

Workload	Platform	Job Name	Job Type	Repository	Available Restore Points	Immutable Restore Points	Oldest Immutable Restore Point	Oldest Immutable Restore Point Immutable Until	Latest Immutable Restore Point	Latest Immutable Restore Point Immutable Until
\\fileserv05\Documents	SMB Share	My Documents DB	File backup	qa08.tech.local\Backup Repository QA06	18	0	N/A	N/A	N/A	N/A
\\fileserv05\Documents	SMB Share	My Documents DB	File backup	qa08.tech.local\Backup Repository 5	2	0	N/A	N/A	N/A	N/A
\\FILESERV05\Documents	SMB Share	Fileserv05 (SMB) (Copy) 1	Backup copy	bckpsrv012.tech.local\Repo31	24	0	N/A	N/A	N/A	N/A
\\FILESERV05\Documents	SMB Share	Fileserv05 (SMB)	File backup	bckpsrv012.tech.local\Repo30	1	0	N/A	N/A	N/A	N/A
apache04	vSphere	Web Servers Backup	VM backup	enterprise05.tech.local\Default Backup Repository	9	0	N/A	N/A	N/A	N/A
apache05	vSphere	Web Servers Backup	VM backup	enterprise05.tech.local\Default Backup Repository	9	0	N/A	N/A	N/A	N/A
appsrv001	Hyper-V	HV Backup Job	VM backup	enterprise05.tech.local\Backup Repository 1	3	0	N/A	N/A	N/A	N/A
backup03.tech.local	Windows Server	Agent Backup Job Server	Agent backup	backup01.tech.local\Cloud repository Beta	5	0	N/A	N/A	N/A	N/A
backupsrv50	Hyper-V	Backup Job HV	VM backup	backupsrv06.tech.local\Default Backup Repository	1	0	N/A	N/A	N/A	N/A
ext0130	Hyper-V	Ext0130	VM backup	qa08.tech.local\Backup Repository 30	2	0	N/A	N/A	N/A	N/A
ext0230	Hyper-V	Ext0230	VM backup	qa08.tech.local\Default Backup Repository	1	0	N/A	N/A	N/A	N/A
linux02-OeX8	vSphere	Organization02 vApp02 Backup	Cloud Director backup	enterprise05.tech.local\Default Backup Repository	8	0	N/A	N/A	N/A	N/A

Use Case

This report helps to make sure workloads and their backups are safely protected from loss as a result of attacks, malware activity or any other injurious actions.

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 following elements:

    o The **Job Modifications by User** chart shows the number of job configuration changes performed by each authorized user.

    o The **Modifications by Day** chart shows the daily number of changes.

- The **Details** table provides information about every change performed within the reporting period, including the backup server where the change was made, the changed job, 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.

- **Period**: defines the time period to analyze in the report.

- **Users**: defines users whose activity must be analyzed.

- **Protection types**: defines a protection type to evaluate in the report (*SureBackup*, *VM Backup*, *Replication*, *Backup copy*, *Agent backup policy*, *Agent backup*, *File backup*, *CDP policy*, *Application backup policy*).

veeam

Job Configuration Change Tracking

Description

This report provides detailed information on job configuration changes that occurred during a specified period, including the exact time and the account name of the user who made the changes.

Report Parameters

Scope:	Backup Infrastructure
Interval:	12/1/2022 - 12/31/2022
User:	All
Protection types:	SureBackup, VM backup, Replication, Backup copy, Agent backup policy, Agent backup, File backup, CDP policy, Application backup policy

Summary

Job Modifications by User
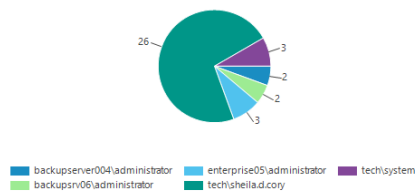
Modifications by Day
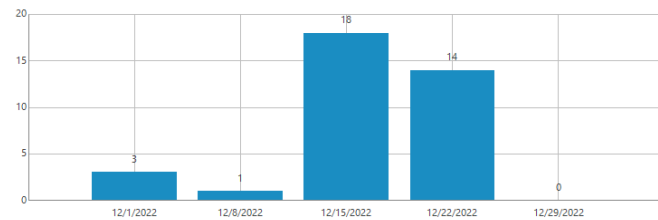
Details

Backup Server	Job	Type	Wizard Page	Property	Previous Setting	New Setting	Modification Time	Modified By
⊟ backupsrv06.tech.local								
	⊟ Backup Job Linux	VM backup						
			⊟ Name					
				Description		Daily backup for Linux-based servers.	12/5/2022 12:25 AM	backupsrv06\administrator
	⊟ Backup Job True Per-VM	VM backup						
			⊟ Schedule					
				Scheduled	True	False	12/5/2022 12:24 AM	backupsrv06\administrator
⊟ backupserver004.tech.local								
	⊟ Daily Backup of SAP HANA_clone1	Application backup policy						
			⊟ Undefined					
				EpPluginPolicy 'Daily Backup of SAP HANA_clone1' has been deleted.			12/13/2022 10:39 AM	backupserver004\administrator
	⊟ Backup to IBM by Veeam Agent	Agent backup policy						
			⊟ Storage					
				Backup repository	Object storage repository 3	Default Backup Repository	12/1/2022 3:01 AM	backupserver004\administrator

Use Case

Backup 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.

- The **Summary** section includes the **VMs without Backup Jobs** chart that shows the number of VMs that are not included in jobs.

- The **Details** table provides information on orphaned VMs, including protection type, the number of restore points, backup location, the date of the last backup session and the date when the backup will be deleted according to the current file retention policy.

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 job type to include in the report (*Backup*, *Replication*, *Archive*, *All*).

- **Group by**: defines whether data in the report output will be grouped by (*Type of protection*, *Backup target*).

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

Replication   VM backup
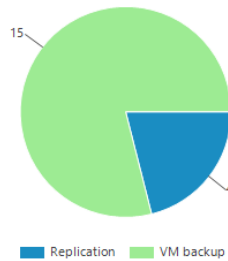
Details

Type of Protection: Replication

VMs	Restore Points	Backup Location	Last Backup Date	Backup Will Be Deleted at...
vApp01_replica	2	urn:vcloud:vapp:f09548af-a404-4f26-8b2e-b48760c9b5cf	9/15/2022 5:17 AM	Never
vm01-WBid	2	vm-150916	9/15/2022 5:17 AM	Never
vm2-da90d340-76cc-44d5-a2f3-ddd76ae285c3_replica	1	urn:vcloud:vapp:c0cfff27-3cee-463b-9a66-5990487cbe91	9/15/2022 5:17 AM	Never
vm2-K22D	1	vm-158165	9/15/2022 5:17 AM	Never

Type of Protection: VM backup

VMs	Restore Points	Backup Location	Last Backup Date	Backup Will Be Deleted at...
AnT_vApp1_replica	9	enterprise05.tech.local\Backup Repository 1	10/24/2021 10:04 PM	Never
AnT_VM1	9	enterprise05.tech.local\Backup Repository 1	10/24/2021 10:04 PM	Never
AnT_VM2	9	enterprise05.tech.local\Backup Repository 1	10/24/2021 10:05 PM	Never
backupsrv50	1	backupsrv06.tech.local\Default Backup Repository	11/18/2022 2:43 AM	Never
backupsrv50	1	backupsrv06.tech.local\Default Backup Repository	11/18/2022 2:44 AM	Never
enterprise04	7	enterprise05.tech.local\Backup Repository 1	4/15/2022 5:01 AM	Never
ext0130	2	bckpsrv012.tech.local\repo30	10/18/2021 11:31 PM	Never
qa03	1	qa08.tech.local\Backup Repository QA06	2/16/2020 10:01 PM	Never
tsvm	1	backupsrv06.tech.local\Backup Repository True Per-VM	10/3/2022 11:14 PM	Never
t-vapp	1	backupsrv06.tech.local\Backup Repository True Per-VM	10/3/2022 11:14 PM	Never
ubuntusrv20	1	backupsrv06.tech.local\Default Backup Repository	11/18/2022 3:42 AM	Never
ubuntusrv20	1	backupsrv06.tech.local\Default Backup Repository	11/18/2022 3:43 AM	Never
veeampn_21	1	backupsrv06.tech.local\Backup Repository True Per-VM	10/4/2022 8:00 AM	Never
winsrv29	2	backupsrv06.tech.local\Default Backup Repository	11/10/2022 10:00 PM	Never
winsrv29	7	backupsrv06.tech.local\Backup Repository True Per-VM	11/10/2022 10:00 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.

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.

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

    o The **Restore by User** chart shows the number of restore actions performed by each authorized user.

    o The **Restore Session Statistics** chart shows the number of restore actions performed during the reporting period.

- The **Details** table provides information on restore actions, including restore type, initiating user, name of the recovered item or VM, restore point age, the intended restore destination and the success status of the completed job.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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*, *Application item restores*, *Restore from tape*, *All*).

- **Period**: defines the time period to analyze in the report.

- **Group by**: defines the way data will be grouped in the report (*Initiator*, *Status*, *Start Time*).

*This entry includes the following components: full VM restores, Instant VM Recovery, restore of virtual disks, VM files, Replica Failover.

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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:	Current week (1/9/2023 - 1/15/2023)
Users:	All
Restore type:	All

Summary

Restores by User

9

■ ES-WIN19-VBRV11\Administrator

Restore Session Statistics

—■— Application Item Restores —■— Full Restore —■— Guest Files —■— Restore from Tape
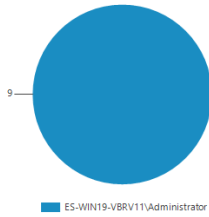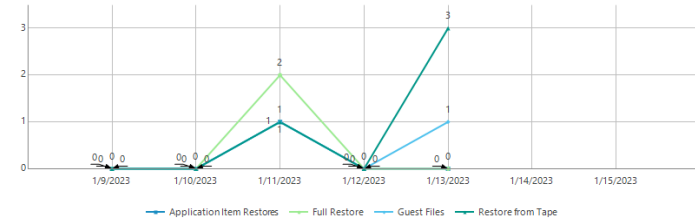
Details

Backup Server: ES-win19-vbr2.tech.local
Restore Type: Full Restore

Initiator	Restore Point	Restore Point Age, Days	Restored Item	Restored Item Size	Destination	Start Time	Status	Antivirus	AV Check Result	RTBF Script Result
ES-WIN19-VBRV11\Administrator	ES-replica									
	1/6/2023 2:12 AM	7	[Scsi0-0] ES-REPLICA.VHDX	3.00 Gb	[This server]C:\Linux 2 Distribs	1/11/2023 12:53 AM	Successful	N/A	None	N/A
	srv11									
	12/21/2022 5:51 AM	23	[Backup Job VM to CC - vm-71120 12/21/2022 4:51:19 PM] srv11	1.00 Gb	[pdcqa100.hv1.tech.local]Original location	1/11/2023 3:16 AM	Successful	N/A	None	N/A

Use Case

Since data can be restored from the Veeam Backup & Replication console, Veeam Backup Enterprise Manager and Veeam self-service 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.

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 **Summary** section provides an overview on the total number of datastores, the number of unmapped datastores, their capacity and the number of VMs on unmapped datastores.

- 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.

Report Parameters

You can specify the following report parameters:

- **Scope**: defines a virtual infrastructure level and its sub-components to analyze in the report.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

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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.

VM Backup Compliance Overview

This report returns a list of VMs that do not meet the requirement to have a minimal number of available backup copies.

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.

- The **Summary** section includes the **VM Compliance Status** 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, including VM location, number of backup copies/replicas, backup type and the date of the latest backup.

Report Parameters

You can specify the following report parameters:

- **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.

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **VMware Cloud Director objects**: defines VMware Cloud Director components to analyze in the report.

- **Required number of VM copies**: defines the minimum number of backup copies/replicas a virtual machine must have to meet the compliance requirements.

- **VM exclusion rule**: 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.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

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VM Backup Compliance Overview

Description

This report lists all VMs that do not have enough number of backup copies.

Report Parameters

Scope:	Virtual Infrastructure
Required number of VM copies:	2
VM exclusion rule:	

Summary

VM Compliance Status

🟥 Non-Compliant VMs 🟩 VMs in compliance
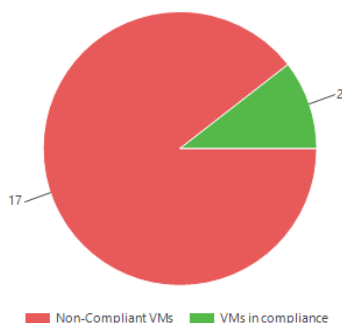
Non-Compliant VMs

Location	VMs	Actual Number of Copies	Backup Type	Last Backup Date
⊟ pdctwhv01.tech.local	2			
	appsrv001	1	Backup	12/24/2022
	backupsrv50	1	Backup	11/18/2022
⊟ vcenter01.tech.local	15			
	apache04	1	Backup	1/2/2023
	apache05	1	Backup	1/2/2023
	as2016DC	1	Backup	1/3/2023
	dlsql01	1	Backup	1/3/2023
	linorcl01	1	Backup	1/3/2023
	linux02-OeX8	1	Backup	1/2/2023
	linux03-zRea	1	Backup	1/2/2023
	srv29-app	1	Backup	11/17/2022
	ts-vm01-ZVIV	1	CDP Replica	1/4/2023
	ts-vm022-1ZGE	1	CDP Replica	1/4/2023
	ubuntusrv20	1	Backup	11/18/2022
	virt01-vm33	1	CDP Replica	1/4/2023
	winorcl01	1	Backup	9/27/2022
	winsrv25	1	Replica	11/17/2022
	winsrv27	1	Backup	11/17/2022

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.

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 **Summary** section includes the following elements:

  - The **VMs with Largest Avg. Transferred Data (GB)** chart shows top 5 VMs with the largest amount of transferred backup data.

  - The **VMs with Largest Processing Time (Minutes)** chart shows top 5 VMs with 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.

Report Parameters

You can specify the following report parameters:

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

- **Business View objects**: defines Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Job type**: defines a job type to evaluate in the report (*Backup*, *Replica*, *All*).

- **Exclude jobs**: defines a list of backup and replication jobs to exclude from the report.

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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
Excluded jobs:	-
Business View objects:	

Summary

VMs with Largest Avg. Transferred Data (GB)
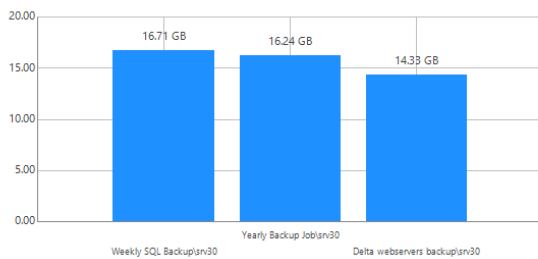
VMs with Largest Processing Time (Minutes)
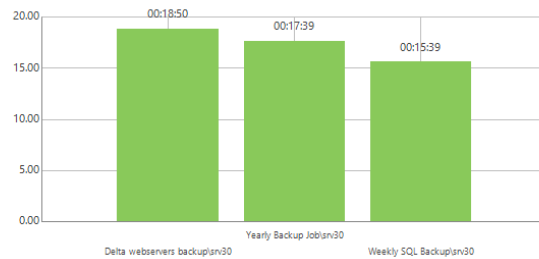
Details

Backup Server: etna

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
srv30								
	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.

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 stored on secondary backup repositories or on tapes.

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

    o The **VMs by Archive Status** chart shows the number of VMs with 1 or 2 archived copies.

    o The **VMs per Backup Location** chart shows 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.

Report Parameters

You can specify the following report parameters:

- **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.

- **Infrastructure objects**: 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 Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **VMware Cloud Director objects**: defines VMware Cloud Director components to analyze in the report.

- **Interval**: defines the time period to analyze in the report.

- **VM exclusion rule**: 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.

> **NOTE：**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

VMs with no Archive Copy

Description

This report lists all VMs that do not have an archive copy.

Report Parameters

Scope: Virtual Infrastructure
VM exclusion rule:
Interval: Last month

Summary

VMs by Archive Status

- VMs with archive and tape backup
- VMs with at least 1 archive
- VMs with no archives

VMs per Backup Location

- Main Backup Repository
- Secondary Backup Repository
- Tapes
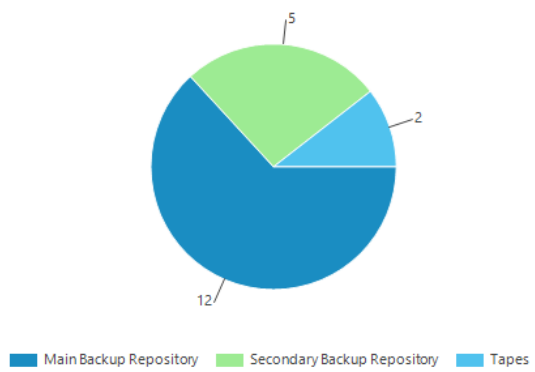
Details

Location: ms-22-cluster.n.local

Virtual Machine	Main Backup Repository	Secondary Backup Repository	Tape Media Set	Last Backup Date
ms-ub-tape-01	Default Backup Repository	Scale-out Backup Repository 2	Media set # 1 10/26/2022 12:51 AM	12/28/2022 6:18 AM
ms-ub-tape-01	Default Backup Repository	Scale-out Backup Repository 2	Media set # 1 10/26/2022 12:56 AM	12/28/2022 6:18 AM

Location: oceanvc.tech.local

Virtual Machine	Main Backup Repository	Secondary Backup Repository	Tape Media Set	Last Backup Date
tf0i	Cloud Backup repository vcd			12/31/2022 8:02 AM
Network	Default Backup Repository	Scale-out Backup Repository 1		12/28/2022 8:31 AM
Network	Default Backup Repository	Scale-out Backup Repository 2		12/28/2022 8:31 AM

Location: alphavc.tech.local

Virtual Machine	Main Backup Repository	Secondary Backup Repository	Tape Media Set	Last Backup Date
KM-2012R2-WG	Default Backup Repository			12/28/2022 5:05 AM
KM-2012R2-WG	smb			12/28/2022 5:05 AM
mmf-win16vbr	Scale-out Backup Repository 1			12/28/2022 8:35 AM
ms-ub-03(98)-cc-replica	Cloud Backup repository VW			12/30/2022 10:02 PM
pgBox	Erepo			12/29/2022 10:32 AM
pgClientM	Erepo			12/29/2022 9:31 AM
pgEglantine	pgbox_NFS			12/13/2022 3:37 AM
azReplica	Backup Repository	Copy Repository		12/31/2022 11:01 AM
ms-esxi-02	Default Backup Repository	Copy Repository		12/29/2022 6:50 AM
mmf-1	Default Backup Repository	Scale-out Backup Repository 1	Media set # 1 10/26/2022 12:51 AM	12/28/2022 6:19 AM
mmf-1	Default Backup Repository	Scale-out Backup Repository 2	Media set # 1 10/26/2022 12:51 AM	12/28/2022 6:19 AM

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.

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.

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.

- The **Summary** section provides an overview on the number of backup jobs, used repositories and backed up VMs and computers, total size of backups and total cost in selected currency.

- The **Details** section provides information on each backup job, including the number of backed up VMs and computers, restore points size, total amount of gigabytes transferred to the storage and total cost.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of backup repositories to analyze in the report.

- **Business View objects**: defines a list of Business View objects to analyze in the report.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Job type**: defines a job type to evaluate in the report (*VM backup*, *Backup copy*, *Agent backup policy*, *Agent backup*, *All types*).

- **Jobs**: defines a list of backup and backup copy jobs to include in the report.

- **Period**: defines the interval for which the billing statement is required.

- **Storage price**: defines a storage price for accommodating 1 GB/TB of backup files or a price for a single VM included in backup.

- **Individual repository price multipliers**: 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.

  To edit price multipliers:

  a. Click **Configure**.

  b. In the **Configure Individual Repository Price Multipliers** window, select the target repository and click **Edit**.

  c. In the **Set Individual Repository Price Multiplier** window, specify the desired price adjustment multiplier and click **Save**.

  d. For scale-out backup repositories:

     ▪ To include capacity and archive tiers in the list of extents, select the **Count data stored on Capacity and Archive tier extents** check box.

     ▪ To set a single multiplier for all extents of a scale-out backup repository, select the **Specify the same multiplier for each extent** check box and specify the multiplier.

     ▪ To apply an individual multiplier to each extent, click the value in the **Multiplier** column next to an extent and specify the multiplier.

  e. Repeat steps 2–3 for each repository price multiplier you want to edit.

- **Calculate price based on:** defines the value based on which prices will be calculated (*Latest value, Max value*).

- **Customer**: defines a customer name to display in the report output.

- **Show days with no backup activities**: defines whether the report will include days without backup activity.

Backup Billing

Description

This report provides chargeback capabilities for the backup infrastructure.

Report Parameters

Scope:	Backup Infrastructure
Job type:	All Types
Jobs:	All Jobs
Customer:	Delta Inc.
Price per GB:	2 US Dollar
Interval:	Current week (2/15/2021 - 2/21/2021)
Show days with no backup activities:	True

Summary

Jobs Number:	26	Total Backups Size:	1.26 TB
Used Repositories:	8	Backed up VMs & Computers:	20
		Total Cost, USD:	2584.98

Details

Backup Server: nz2019vbrv10r.n.local

Repository	Backed up VMs & Computers	Backups Size (GB)	Price Multiplier	Total Cost
Windows Backup Repository per VM	4	81.09	x1.00	162.18
Windows Backup Copy (pruning) Repository	7	335.39	x1.00	670.78
Default Backup Repository	4	1.88	x1.00	3.76
Windows Backup Repository 1	11	325.99	x1.00	651.98
Windows Backup Copy (mirroring) Repository	7	357.56	x1.00	715.12
Windows Backup Copy Repository Per VM	1	55.54	x1.00	111.08
Linux Backup Repository 1	3	0.33	x1.00	0.66
Scale-out Backup Repository 1	1	134.71	x1.00	269.42

Repository Name: Windows Backup Repository per VM

Backup Server: nz2019vbrv10r.n.local

Price Multiplier: x1.00

Virtual Machines Backups

VMware Backup Job with exclusion per VM

VM\Computer Name	Date	Restore Points Size (GB)	Total Space Used (GB)
NZAgentWindows4			
	2/15/2021	0.02	0.12
	2/16/2021	-	0.12
NZAgentWindows2			
	2/15/2021	-	13.28
	2/16/2021	-	13.28
NZWindowsAgent3			
	2/15/2021	-	12.17
	2/16/2021	-	12.17
NZAgentWindows1			
	2/15/2021	-	55.53
	2/16/2021	-	55.53
	Backup Size of all VMs & Computers (GB):		81.09
	Backed up VMs & Computers:		4

Repository Total:

Backup Size (GB):	81.09
Backed up VMs & Computers:	4
Backups Cost, USD:	162.18

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 **Details** section provides information on each replication job, including the number of replicated up VMs, total amount of gigabytes transferred to the storage and total cost.

Report Parameters

You can specify the following report parameters:

- **Scope**: defines a backup infrastructure subset to analyze in the report.

- **Replication jobs**: defines a list of replication jobs to include in the report.

- **Period**: 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.

- **Individual datastore price multipliers**: 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 datastore multiplier.

  To edit price multipliers:

  a. Click **Configure**.

  b. In the **Configure Individual Datastore Price Multipliers** window, select the target datastore and click **Edit**.

  c. In the **Set Individual Datastore Price Multiplier** window, specify the desired price adjustment multiplier and click **Save**.

  d. Repeat steps **2–3** for each datastore price multiplier you want to edit.

- **Datastores**: defines a list of datastores and volumes that will be analyzed in the report.

- **Customer**: defines a customer name to be displayed in the report output.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.
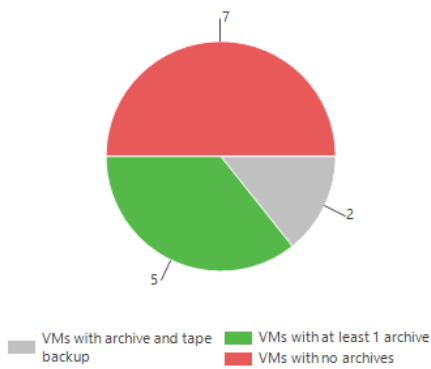
Veeam

Replica Billing

Description

This report provides chargeback capabilities for the backup infrastructure.

Report Parameters

Scope:	Backup Infrastructure
Replication Job:	All Jobs
Customer:	
Price per VM:	1
Interval:	12/1/2022 - 12/31/2022
Datastores:	All

Details

Datastore Name: Datacenter\pdc99
Backup Server: ms-vbr11a.tech.local
Price Multiplier: x1.00

Job	Job Runs	N. of VMs	Stored Size (GB)	Transferred Size (GB)
⊟ Replication Job 2		1	40.65	4.95
	12/10/2022 2:19 PM	1	40.65	4.95

Total Size (GB):	40.65
Total VMs:	2
Total Cost:	2.00

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.

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.

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 repositories and forecasts how many days remain before a 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 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 selected time period, 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 **Summary** section provides an overview of the backup infrastructure (the total number of repositories, jobs and stored computers, VMs and file shares), shows repositories capacity, the amount of free space, the utilization ratio, the number of days left before specified thresholds will be reached, and the amount of space required to sustain the current workloads without exceeding the specified thresholds.

  - 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 free space.

  Click a repository name to drill down to the list of jobs that utilize the backup repository storage capacity.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of backup repositories to analyze in the report.

- **Space utilization threshold**: defines the maximum amount of used space measured as a percentage of total capacity on the available repositories.

- **Free space (min) threshold**: defines the minimum total amount of free space on the repositories.

- **Safety interval**: 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.

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 threshold:	90.0 %
Safety interval:	30 days
Analyze performance data for:	6 months

Summary

Backup Infrastructure		Physical Resources		Capacity Planning	
Number of repositories:	29	Total capacity:	35.5 TB	Min days left:	0
Number of jobs:	24	Total free space:	33.8 TB	Space required:	338.4 GB
Stored VMs and Computers:	35	Utilization ratio:	4.68 %		
Stored file shares:	3				
Application Servers / Clusters:	1				

Top 5 Utilized Repositories (GB)
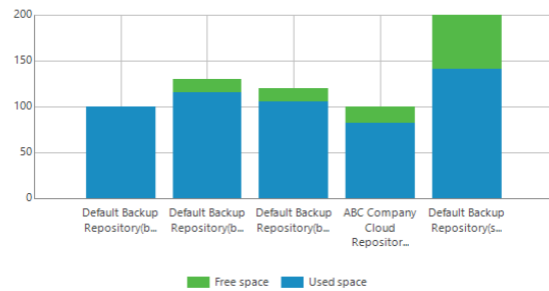
Top 5 Repositories by Days Left
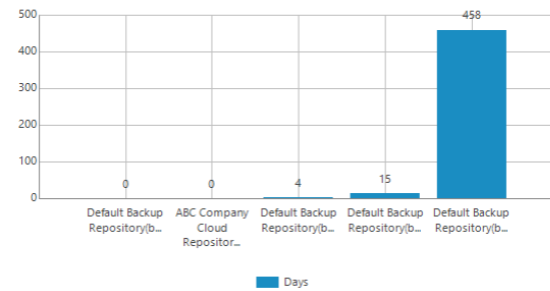
Details

Repository	Backup Server	Type	Capacity (GB)	Free Space (GB)	VMs and Computers	File Shares	Application Servers / Clusters	Days Left	Space to Add (GB)
Default Backup Repository	backup01.tech.local	Microsoft Windows	99.45	0.00	1	0	0	0	9.98
ABC Company Cloud Repository	enterprise05.tech.local	Cloud	100.00	17.29	0	0	0	0	323.37
Default Backup Repository	backupsrv06.tech.local	Microsoft Windows	129.66	14.20	5	1	0	4	2.80
Default Backup Repository	backupsrv29.tech.local	Microsoft Windows	119.66	14.68	2	0	0	15	2.23
Default Backup Repository	backupserver004.tech.local	Microsoft Windows	129.40	57.39	2	0	1	458	0.00
Default Backup Repository	enterprise05.tech.local	Microsoft Windows	219.45	116.85	8	0	0	511	0.00
Default Backup Repository	qa08.tech.local	Microsoft Windows	129.48	40.99	1	1	0	579	0.00
Default Backup Repository	srv2049.tech.local	Microsoft Windows	129.45	89.28	0	0	0	1377	0.00
Default Backup Repository	bckpsrv012.tech.local	Microsoft Windows	129.66	91.38	0	0	0	2358	0.00
Object storage repository 2	backupserver004.tech.local	Microsoft Azure Blob Storage	N/A	N/A	0	0	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.

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 **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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of backup repositories to analyze in the report.

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

- **Period**: defines the time period to analyze in the report.

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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 week (12/26/2022 - 1/1/2023)

Summary

General Overview		Jobs Overview	
Repository Capacity	4.46 TB	Backup Jobs	26
Repository Free Space	2.80 TB	N. of Job Runs	25
Full Backup Files	29.88 GB	Stored VMs and Computers	8
Inc. Restore Points	3.42 GB		

Top 10 Jobs by Largest Backup File Size

Job Name	VMs and Computers	Date	Total Backup Size (GB)
MS SQL Backup	1	12/31/2022 1:00 AM	29.23
Backup Copy Job 1	1	12/31/2022 5:00 AM	2.35
AD Backup	1	12/30/2022 6:00 PM	0.83
Oracle Linux Backup	1	12/30/2022 11:30 PM	0.49
RHEL Backup	1	12/29/2022 10:00 PM	0.37
Web Servers Backup	2	12/31/2022 6:00 AM	0.02
Organization02 vApp02 Backup	2	12/30/2022 9:00 AM	0.02

Selected Object - enterprise05.tech.local\Backup Repository 1

Repository: Backup Repository 1
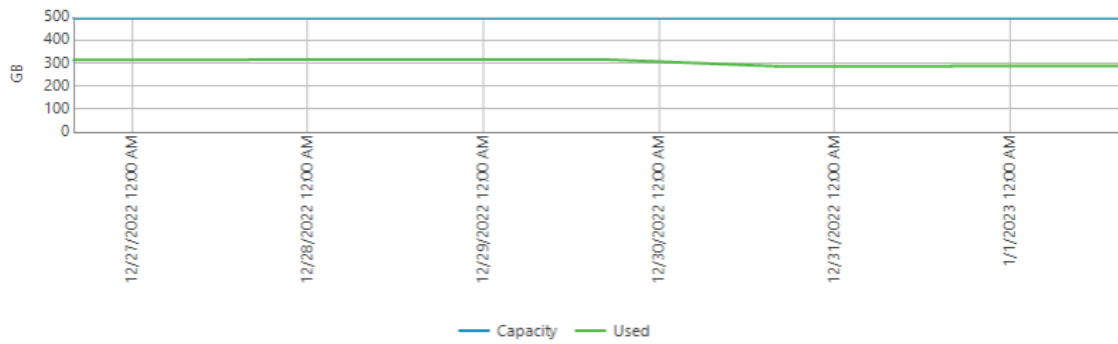
AD Backup

Per-VM Backup Files

VM/Computer	Backup File Type	Date	Restore Points Size (GB)	Deduplication Rate	Compression Rate	Total Space Used (GB)
as2016DC						
	Incremental	12/26/2022 6:00:16 PM	0.31	1	2.8	0.31
	Incremental	12/28/2022 6:00:09 PM	0.26	1	2.9	0.57
	Incremental	12/30/2022 6:00:05 PM	0.26	1	2.8	0.83
		Total Size for All VMs and Computers (GB):				0.83

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.

Veeam Backup for Microsoft 365

This report pack helps you evaluate backup protection of Microsoft 365 infrastructure objects.

Reports included:

- Backup SLA Compliance (Veeam Backup for Microsoft 365)

- Job History (Veeam Backup for Microsoft 365)

- Latest Job Status (Veeam Backup for Microsoft 365)

- Protected Objects (Veeam Backup for Microsoft 365)

Backup SLA Compliance (Veeam Backup for Microsoft 365)

This report analyzes backups of Microsoft 365 infrastructure objects. The report examines whether these objects are compliant with SLA target.

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

  - Information on SLA compliance of different organization object types.

  - The **Organization Objects by Compliance State** chart shows the percentage of organization objects of each type that meet the target SLA.

- The **Organizations** table provides information on all types of protected objects for each organization.

- The **Organization Objects That Meet Target Backup SLA** and **Organization Objects That Breach Target Backup SLA** tables provide information on all organization objects, jobs that include the objects, number of available restore points and SLA compliance percentage.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of Veeam Backup for Microsoft 365 servers to include in the report.

- **Organizations**: defines Microsoft organizations to analyze in the report.

- **Object types**: defines Microsoft 365 infrastructure objects to analyze in the report.

- **Jobs**: defines backup jobs to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Object exclusion rule**: defines a list of Microsoft 365 infrastructure objects that should be excluded from the report scope. You can enter object names explicitly or create a wildcard mask by using the asterisk (*) to replace any number of characters. Multiple entries are separated by comma. Usage example: the following string will exclude objects with the _R&D suffix from appearing in the report: *_R&D.

- **Target SLA**: defines the target SLA value (in percent).

- **Show organizations overview**: defines whether organizations overview should be included in the report.

- **Show organization objects that breach target SLA**: defines whether objects not compliant with the target SLA should be included in the report.

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Backup SLA Compliance (Veeam Backup for Microsoft 365)

Description

This report highlights organizations and organization objects, including users, groups, teams, and sites that are processed by Veeam Backup for Microsoft 365 backup jobs and assesses where these entities meet the desired SLA which is determined as the ratio of total number of backup job sessions for a particular organization object to the number of failed job sessions for this object. This report helps to make sure the jobs are operating normally and the backups are successfully created in accordance with the desired backup targets.

Report Parameters

Scope:	Veeam Backup for Microsoft 365
Organizations:	All organizations
Object types:	Groups, Users, Sites, Teams
Backup jobs:	All jobs
Object exclusion rule:	
Interval:	Current week (1/2/2023 - 1/8/2023)
Target backup SLA:	100%
Show organization objects that breach target backup SLA:	Yes
Show organizations overview:	Yes

Summary

Organizations in backup jobs:	1	Total average organization backup SLA:	100%
Organization objects in backup jobs:	3	Total average user backup SLA:	100%
Users in backup jobs:	1	Total average group backup SLA:	0%
Meet target backup SLA:	1	Total average teams backup SLA:	100%
Breach target backup SLA:	0	Total average site backup SLA:	100%
Groups in backup jobs:	0		
Meet target backup SLA:	0		
Breach target backup SLA:	0		
Teams in backup jobs:	1		
Meet target backup SLA:	1		
Breach target backup SLA:	0		
Sites in backup jobs:	1		
Meet target backup SLA:	1		
Breach target backup SLA:	0		

Organization Objects by Compliance State

Meet target backup SLA
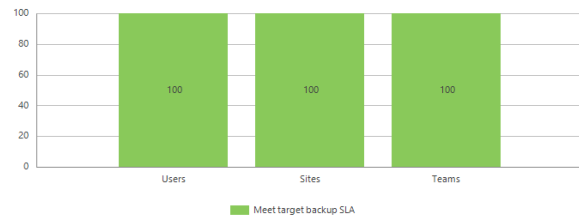
Organizations

Organization	# of Compliant Users	Average User Backup SLA, %	# of Compliant Groups	Average Group Backup SLA, %	# of Compliant Teams	Average Team Backup SLA, %	# of Compliant Sites	Average Site Backup SLA, %
alpha.onmicrosoft.com	1 of 1	100	0 of 0	0	1 of 1	100	1 of 1	100

Organization Objects That Meet Target Backup SLA

Veeam Backup for Microsoft 365 server: At_vbm.tech.local
Organization: alpha.onmicrosoft.com
Object type: User

User	Backup Job Name	Job Schedule	Target Repository	# of Mailbox Restore Points	# of Archive Restore Points	# of OneDrive Restore Points	# of Site Restore Points	# of Successful Sessions	Backup SLA, %
j.smith@alpha.onmicrosoft.com	Arthur user	Daily at 5:00 AM (Everyday)	Default Backup Repository	4	0	0	0	4 of 4	100

Object type: Team

Team	Backup Job Name	Job Schedule	Target Repository	# of Restore Points	# of Successful Sessions	Backup SLA, %
Team Beta	Team	Daily at 6:00 AM (Everyday)	Default Backup Repository	4	4 of 4	100

Object type: Site

Site	Backup Job Name	Job Schedule	Target Repository	# of Restore Points	# of Successful Sessions	Backup SLA, %
Alpha Site	site	Daily at 5:00 AM (Everyday)	Default Backup Repository	4	4 of 4	100

Use Case

This report helps you discover protected objects that breach the target SLA and jobs that do not operate properly.

Job History (Veeam Backup for Microsoft 365)

This report provides advanced information on completed Veeam Backup for Microsoft 365 job sessions, and helps you identify possible performance bottlenecks.

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

  - The **Top 5 Jobs by Average Duration** and **Top 5 Jobs by Transferred Data** charts display jobs in terms of the backup duration and amount of transferred data.

  - The **Successful Backup Ratio by Day (%)** chart displays the percentage of job sessions that completed successfully during the reporting period. If a job session finished with warning but a restore point was created successfully, the job will be displayed as successful.

- The **Details** table provides information on each performed job, including completion status, number of processed objects, session start time, job duration, processing rate and the amount of transferred data.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of Veeam Backup for Microsoft 365 servers to include in the report.

- **Organizations**: defines Microsoft organizations to analyze in the report.

- **Job types**: defines a job type to evaluate in the report (*Backup*, *Backup Copy*).

- **Jobs**: defines a list of jobs to include in the report.

- **Job status**: defines a job status to include in the report (*Success*, *Failed*, *Warning*).

- **Period:** defines the time period to analyze in the report.

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Job History (Veeam Backup for Microsoft 365)

Description

This report provides historical information for all Veeam Backup for Microsoft 365 jobs.

Report Parameters

Infrastructure objects:	Veeam Backup for Microsoft 365
Organizations:	All organizations
Job types:	All job types
Jobs:	All jobs
Job statuses:	All statuses
Reporting period:	Past month (12/1/2022 - 12/31/2022)

Summary

Top 5 Jobs by Average Duration (Hours)
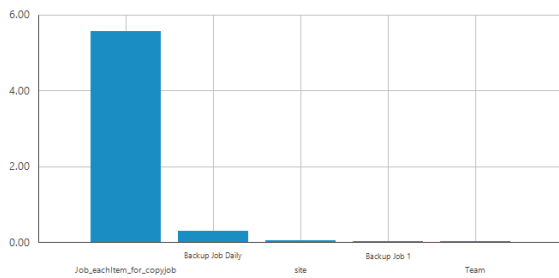
Top 5 Jobs by Transferred Data (GB)
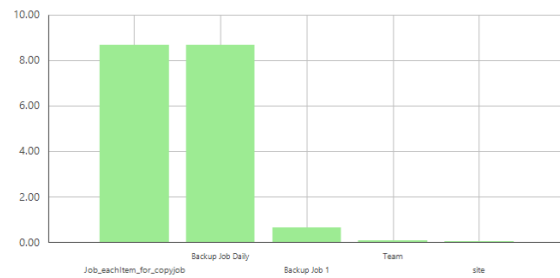
Successful Backup Ratio by Day (%)
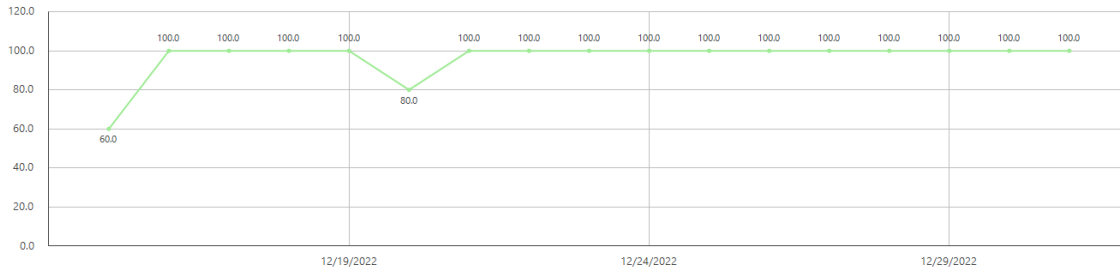
Details

Job Type: Backup

Veeam Backup for Microsoft 365 Server: At_vbm.tech.local

Organization: alpha.onmicrosoft.com

Status	# of Processed Objects	Start Time	Duration	Processing Rate (MB/sec)	Transferred Data (GB)
Job Name: Backup Job 1					
Success	1 of 1	1/2/2023 1:59:57 AM	00:00:28	0.46	0.00
Success	1 of 1	1/3/2023 1:59:58 AM	00:00:28	0.64	0.00
Success	1 of 1	1/4/2023 1:59:57 AM	00:00:13	0.70	0.00
Success	1 of 1	1/5/2023 1:59:57 AM	00:00:28	0.46	0.00
Job Name: site					
Success	1 of 1	1/2/2023 1:59:57 AM	00:00:12	0.00	0.00
Success	1 of 1	1/3/2023 1:59:57 AM	00:00:11	0.00	0.00
Success	1 of 1	1/4/2023 1:59:57 AM	00:00:13	0.00	0.00
Success	1 of 1	1/5/2023 1:59:57 AM	00:00:28	0.00	0.00
Job Name: Team					
Success	1 of 1	1/2/2023 3:00:00 AM	00:00:15	0.00	0.00
Success	1 of 1	1/3/2023 3:00:00 AM	00:00:14	0.00	0.00
Success	1 of 1	1/4/2023 3:00:00 AM	00:00:15	0.00	0.00
Success	1 of 1	1/5/2023 3:00:00 AM	00:00:15	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; this will allow you to regularly receive information on vital job sessions by email or through a shared portal.

Latest Job Status (Veeam Backup for Microsoft 365)

This report evaluates the success status of recently performed backup and backup copy jobs. The report shows whether they triggered any errors, warnings or completed successfully on the latest session.

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

  - The **Job Statuses** chart represents overall efficiency of protection operations by displaying the total number of idle jobs and jobs whose last session completed successfully/with warnings.

  - The table containing a summary of the 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 objects, the amount of transferred data.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of Veeam Backup for Microsoft 365 servers to include in the report.

- **Organizations**: defines Microsoft organizations to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Job types**: defines a list of job types to evaluate in the report (*Backup*, *Backup Copy*).

- **Latest job statuses**: defines job session statuses to include in the report (*Success*, *Warning*, *Failed*).

- **Show job details**: defines whether details of job sessions must be included in the report.

Latest Job Status (Veeam Backup for Microsoft 365)

Description

This report provides information about latest Veeam Backup for Microsoft 365 job statuses.

Report Parameters

Infrastructure objects:	Veeam Backup for Microsoft 365
Organizations:	alpha.onmicrosoft.com, gamma.onmicrosoft.com
Job types:	All
Latest statuses:	All
Interval:	Current week (1/2/2023 - 1/8/2023)
Show job details:	No

Summary

Job Statuses
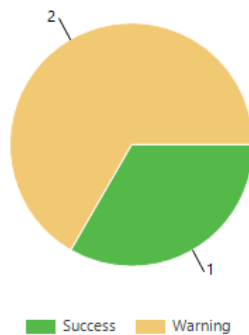
■ Success ■ Warning

Job Name	Duration (Last Run)	Transferred (GB)	Avg. Duration	Status
beta_team	00:00:38	0.00	00:00:35	Warning
j.smith	00:00:00	0.00	00:00:00	Success
alpha site	00:00:00	0.00	00:00:00	Warning

Details

Veeam Backup for Microsoft 365 Server: vbmv7.tech.local

Jobs with Warnings

Job	Last Run	Successed Objects	Transferred (GB)	Retry Count	Duration	Avg. Duration	Details	Organization
beta_team	1/4/2023 2:00 PM	8 of 10	0.00	0	00:00:38	00:00:35	Some objects were processed with warnings	alpha.onmicrosoft.com
alpha site	11/7/2022 9:28 AM	of	0.00	0	00:00:00	00:00:00	-	alpha.onmicrosoft.com

Successful Jobs

Job	Last Run	Backed Up Objects in Job	Transferred (GB)	Retry Count	Duration	Avg. Duration	Details	Organization
j.smith	11/7/2022 8:54 AM		0.00	0	00:00:00	00:00:00	-	gamma.onmicrosoft.com

Use Case

This report helps backup administrators track the recent Microsoft 365 object protection operations and identify root causes of failed jobs.

Protected Objects (Veeam Backup for Microsoft 365)

This report analyzes backup protection of Microsoft 365 objects in your virtual environment.

An object is considered *Protected* if there is at least one valid backup restore point that meets the designated RPO for it.

The report examines whether objects have valid backup restore points created within the specified time range (RPO period), shows the total number of restore points available for each protected object, and provides information on the completion status of recent backup job sessions.

The report helps you identify which objects in your environment function without proper protection and make sure the existing backups and replicas meet established RPO requirements.

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

    o The **Objects by Protection State** chart shows the number of protected and unprotected objects.

    o The **Objects by Type by Protection State** chart shows the number of protected and unprotected objects for each object type.

- The **Details** section provides information on all protected and unprotected users, groups, sites and teams.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of Veeam Backup for Microsoft 365 servers to include in the report.

- **Organizations**: defines Microsoft organizations to analyze 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 objects protected on a daily basis, you need to set the RPO value to 1 day.

- **Object types**: defines Microsoft 365 object types to analyze in the report (*Users*, *Groups*, *Sites*, *Teams*).

- **User backup should contain**: defines user backup types to analyze in the report (*Mailbox*, *Archive*, *OneDrive, Site*).

- **Group backup should contain**: defines group backup types to analyze in the report (*Group mailbox*, *Group site*).

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Protected Objects (Veeam Backup for Microsoft 365)

Description

This report lists protected and unprotected Microsoft 365 objects including their protection history.

Report Parameters

Infrastructure objects:	Virtual Infrastructure
RPO:	1 Months (12/6/2022 8:00:00 AM-1/6/2023 8:00:00 AM)
Organizations:	alpha.onmicrosoft.com, gamma.onmicrosoft.com
Object types:	Users, Groups, Teams
User backup options:	Mailbox, Archive
Group backup options:	All items

Summary

Objects:	37
Protected objects:	3
Unprotected objects:	34
Total users:	21
Protected users:	0
Unprotected users:	21
Total groups:	15
Protected groups:	2
Unprotected groups:	13
Total teams:	1
Protected Teams:	1
Unprotected Teams:	0

Objects by Protection State

- Protected objects
- Unprotected objects

Objects by Type by Protection State
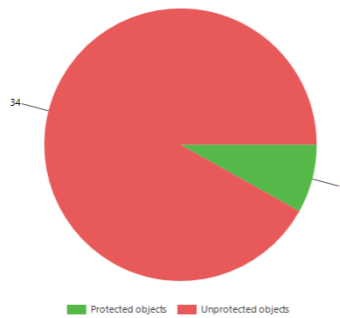
- Protected
- Unprotected
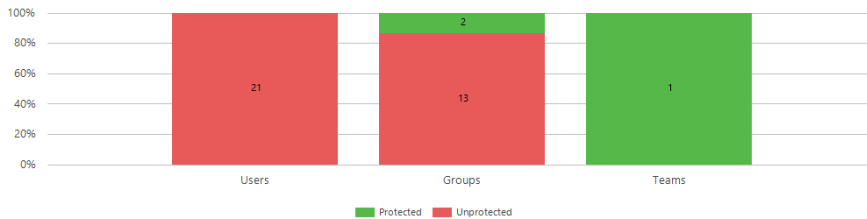
Unprotected Users

Veeam Backup for Microsoft 365 server: vbmv7.tech.local

User Name	User Type	Email	Last Mailbox Backup	Last Archive Backup	Last OneDrive Backup	Last Site Backup	Organization
Alex Wilber	User	alexw@alpha.onmicrosoft.com	11/7/2022 9:28 AM	N/A	11/7/2022 9:28 AM	11/7/2022 9:28 AM	alpha.onmicrosoft.com
Diego Siciliani	User	diegos@alpha.onmicrosoft.com	11/7/2022 9:28 AM	N/A	11/7/2022 9:28 AM	11/7/2022 9:28 AM	alpha.onmicrosoft.com
Feofan Makiyarvi	User	fm@gamma.onmicrosoft.com	11/7/2022 8:54 AM	N/A	11/7/2022 8:54 AM	11/7/2022 8:54 AM	gamma.onmicrosoft.com
John Smith	User	j.smith@alpha.onmicrosoft.com	N/A	N/A	N/A	N/A	alpha.onmicrosoft.com

Protected Groups

Veeam Backup for Microsoft 365 server: vbmv7.tech.local

Group Name	Group Type	Group Email	Last Group Mailbox Backup	Last Group Site Backup	Organization
Smith Group	M365 Group	smith_g@alpha.onmicrosoft.com	1/4/2023 10:00 PM	1/4/2023 10:00 PM	alpha.onmicrosoft.com
Research	M365 Group	research_g@alpha.onmicrosoft.com	1/4/2023 10:00 PM	1/4/2023 10:00 PM	alpha.onmicrosoft.com

Use Case

This report displays a list of Microsoft 365 objects protected by up-to-date backups, as well as a list of unprotected objects which have outdated or missing backups. This information helps you validate the state of backup protection in your organization.

Veeam Backup for Nutanix AHV

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

Reports included:

- Protected VMs

Protected VMs (Nutanix AHV)

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:

    o The **Protected VMs** chart shows the number of protected and unprotected VMs.

    o The **Last Backup State** chart shows status of the latest job session for discovered/protected VMs.

    o 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:

- **Infrastructure objects**: 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 rule**: 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.

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Protected VMs (Nutanix AHV)

Description

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

Report Parameters

Scope:	Backup Infrastructure
RPO:	24 hours
VM exclusion rule:	
Backup jobs:	All jobs

Summary

VMs Overview

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

Protected VMs

■ Protected VMs ■ Unprotected VMs

Last Backup State

■ N/A ■ Success
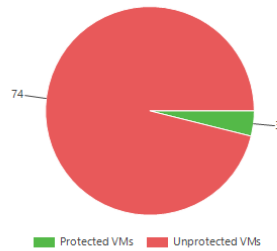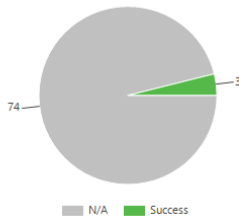
Unprotection Reason
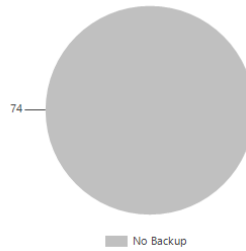
■ No Backup

Details

Protected VMs

Backup Server: mmf-vbr.tech.local

VM Name	Cluster Name	Protection Domain	Job Name	Backup Target	Available Restore Points	Last Backup Date
ako-2	172.16.24.233	ako-pd1	Nutanix backup job 19	Backup Repository 2	7	1/5/2023 11:12:45 PM
vm1	172.16.24.233	mmfV	Nutanix backup job 19	Backup Repository 2	7	1/5/2023 11:12:45 PM

Backup Server: ms-vbr11a.tech.local

VM Name	Cluster Name	Protection Domain	Job Name	Backup Target	Available Restore Points	Last Backup Date
vm2	172.16.24.233	mmfV	Nutanix Backup Job	Backup Repository	14	1/5/2023 2:01:22 PM
vm3	172.16.24.233	mmfV	Nutanix Backup Job	Backup Repository	14	1/5/2023 2:01:19 PM

Unprotected VMs

Backup Server: mmf-vbr.tech.local

VM Name	Cluster Name	Protection Domain	Job Name	Backup Target	Available Restore Points	Last Backup Date
Last Backup: No Backup						
ako-1	172.16.24.233				-	-
ako-2	172.16.24.233				-	-
ako-3	172.16.24.233				-	-
ako-4	172.16.24.233				-	-

Use Case

When you set up your backup 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.

Veeam Backup for Public Clouds

This report pack helps you evaluate backup, snapshot and replication snapshot protection of VMs in Microsoft Azure, Amazon Web Services and Google Cloud Platform cloud infrastructures.

Reports included:

- Protected Cloud Instances

Protected Cloud Instances

This report analyzes backup, snapshot and replication snapshot protection of cloud instances in your Microsoft Azure, Amazon Web Services and Google Cloud Platform cloud infrastructures. Note that report scope includes only target repositories connected to Veeam Backup & Replication server.

A cloud instance is considered *Protected* if there is at least one valid backup, snapshot or replication snapshot restore point that meets the designated RPO for it. A cloud instance is considered *Unprotected* if it has outdated or missing restore points.

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

    o The **Instances by Protection State** chart shows the number of protected and unprotected VMs.

    o The **Instances by Last Session State** chart shows status of the latest job session for discovered VMs.

    o 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 or replication snapshot target, number of available restore points and date and time of the latest backup, snapshot or replication snapshot.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 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.

- **Instance types**: defines a type of cloud instances to include in the report (*Amazon Web Services*: *EC2*, *RDS*, *EFS*, *VPC*; *Microsoft Azure*: *Virtual Machines*, *SQL Database*, *Files*; *GCP*: *Compute Engine (VMs)*, *Cloud SQL*).

- **Protection types**: defines a type of protection to include in the report (*Backup*, *Backup Copy*, *Snapshot*, *Replication*, *Archive*).

- **Instance exclusion rule**: 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. For example, the following string will exclude machines with the _R&D suffix from appearing in the report: *_R&D*.

- **Group by**: defines the way data will be grouped in the report (*Instance type*, *No grouping*, *Region*).

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Protected Cloud Instances

Description

This report analyzes backup, snapshot, replication, backup copy, and archive protection of cloud instances running in Microsoft Azure, AWS, and Google Cloud Platform. The report only analyzes backup repositories added to Veeam Backup & Replication.

Report Parameters

Scope:	Backup Infrastructure
RPO:	24 hours
Platform:	All platforms
Protection types:	All types
Instance exclusion rule:	
Group by:	No grouping

Summary

Cloud Instances Overview

Total instances:	6718
AWS instances:	54
EC2:	48
RDS:	5
EFS:	1
VPC:	2
Microsoft Azure instances:	633
Virtual Machines:	518
SQL Database:	115
GCP instances:	6033
Compute Engine (VMs):	5030
Cloud SQL:	1004
Protected instances:	37
With backup:	16
With snapshot:	37
Unprotected instances:	6681

Instances by Protection State
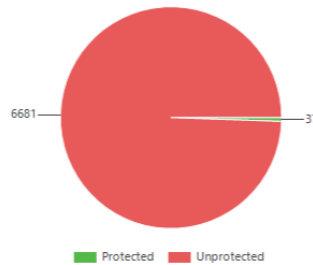
Instances by Last Session Status
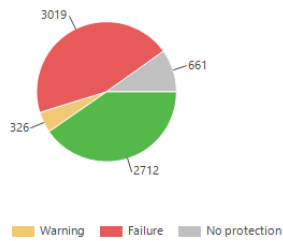
Unprotection Reason
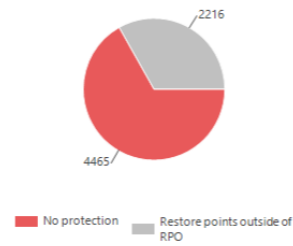
Instances by Type by Protection State
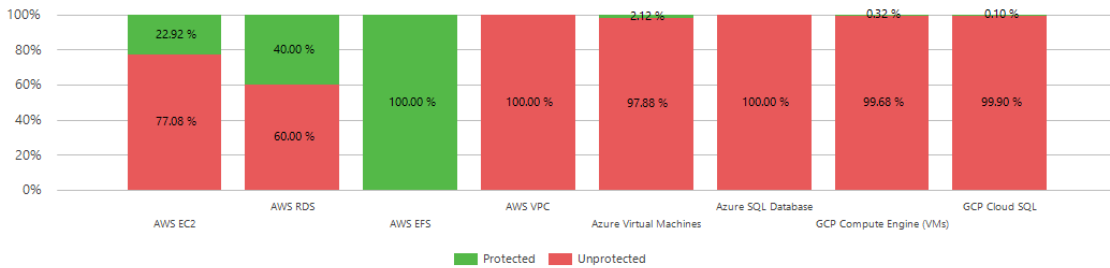
Details

Protected Cloud Instances (AWS)

Instance Name	Instance Type	Region	Instance ID	Protection Type	Policy	Target	Restore Points	Last Protection Date
abor2012r2-amaz	EC2	Europe (Paris)	i-063d6c572976eba35	Snapshot	-	EU (Paris)	3	1/5/2023 2:00 AM
abor-2019	EC2	Europe (Paris)	i-00bd715015fe80ed1	Backup	amaz-immut-policy	vb60-167	14	1/5/2023 3:00 PM
				Snapshot	amaz-immut-policy	EU (Paris)	1	1/5/2023 3:00 PM
abor2022-amaz	EC2	Europe (Paris)	i-0fd922536fd571454	Snapshot	-	EU (Paris)	3	1/5/2023 2:00 AM
abor-amaz2	EC2	Europe (Paris)	i-02bb5b4a6ad745697	Snapshot	-	EU (Paris)	3	1/5/2023 9:00 AM

Unprotected Cloud Instances (AWS)

Instance Name	Instance Type	Region	Instance ID	Protection Type	Policy	Restore Points	Last Protection Date
Last Protection: 1 day < Last protection < 1 week							
abor-ubu2004	EC2	Europe (Paris)	i-0035a95a86a68ae80	Snapshot	-	1	1/4/2023 2:00 PM
abor-ubun-bez-ip-ren	EC2	Europe (Paris)	i-0f44f85f0b2f50c38	Snapshot	-	1	1/4/2023 2:00 PM
abor-win2004	EC2	Europe (Paris)	i-043d853754db6271d	Snapshot	-	2	1/4/2023 2:00 PM
abor-database-1	RDS	Europe (Frankfurt)	db-h7m7ibkaerp4pfyigstoptbyz4	Snapshot	-	9	1/4/2023 7:16 PM

Use Case

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

This report displays a list of cloud instances protected by up-to-date backups and snapshots, as well as a list of unprotected cloud instances which have outdated or missing restore points. This information helps you validate the state of data protection in your organization.

Instance Name	Instance Type	Region	Instance ID	Protection Type	Policy	Restore Points	Last Protection Date
Last Protection: 1 day < Last protection < 1 week							
abor-ubu2004	EC2	Europe (Paris)	i-0035a95a86a68ae80			1	1/4/2023 2:00 PM

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 virtualization servers (VMware vSphere, VMware Cloud Director or Microsoft Hyper-V) to both the Veeam ONE Web Client and Veeam Backup & Replication.

Reports included:

- Backup Copy Job

- Backup Infrastructure Audit

- Backup Objects Change Tracking

- CDP SLA Compliance

- Data Change Rate History

- GFS Backup Files

- Job History

- Latest Job Status

- Protected VMs

- Recovery Verification Overview

- Verified VMs

- 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 the Veeam Blog article How to follow the 3-2-1 backup rule with Veeam Backup & Replication.

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 **Summary** section includes the following elements:

  - 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.

- o 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).

- o 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 jobs that used this pair of accelerators, 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.

> **NOTE:**
>
> For WAN accelerators used in Veeam Cloud Connect jobs, performance data is available only if the target WAN accelerator is present in the Veeam ONE infrastructure.

Report Parameters

You can specify the following report parameters:

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

- **WAN 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.

- **Period**: defines the time period to analyze in the report.

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Backup Copy Job

Description

This report provides information on backup copy jobs including data transfer efficiency through WAN accelerators.

Report Parameters

Scope:	Backup Infrastructure
WAN accelerators:	All Accelerators
Backup copy jobs:	All Jobs
Interval:	Current week (1/2/2023 - 1/8/2023)

Summary

Traffic Efficiency (GB)
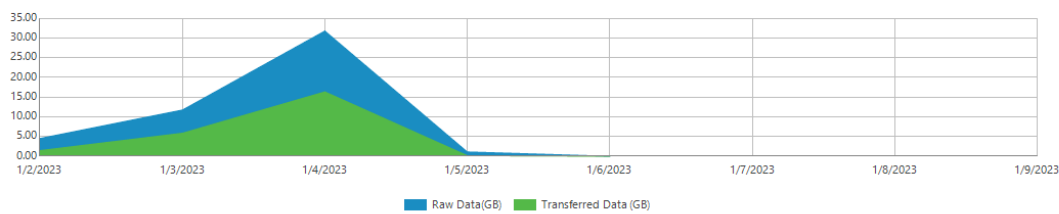
Traffic Savings by Day (GB)
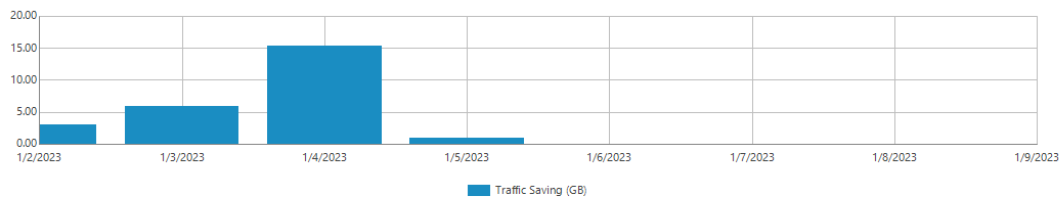
Savings Ratio by Day
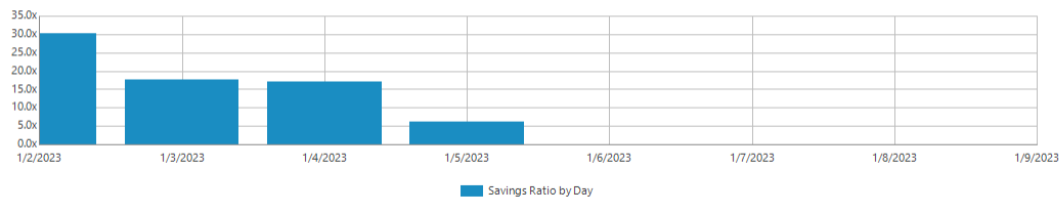
Accelerators Details

Source WAN Accelerator	Target WAN Accelerator	Backup Copy Job	Processed Data (GB)	Transferred Data (GB)	Traffic Savings (GB)	Savings Ratio
ms-wan-01.tech.local	ms-wan-02.tech.local	2				
		Nutanix Backup Copy Job	0.00	0.00	0.00	1.00x
		Linux Backup Copy Job periodic	0.02	0.01	0.01	2.39x

Job Details

Periodic copy (pruning) mode

Backup Server: ms-vbr11a.tech.local

Name	Session Start Time	Source	Status	Source Size (GB)	Transferred Data (GB)	Traffic Savings (GB)	Savings Ratio	Backup Size (GB)	WAN Accelerator Enabled
ES Backup Copy Job periodic un+m	48								Disabled
	1/2/2023 1:47 AM	-	Success	0.00	0.00	0.00	1.00x	0.01	
	1/2/2023 3:48 AM	-	Success	0.00	0.00	0.00	1.00x	0.01	
	1/2/2023 5:49 AM	-	Success	0.00	0.00	0.00	1.00x	0.01	
	1/2/2023 7:50 AM	-	Success	0.00	0.00	0.00	1.00x	0.01	

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.

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** chart illustrates types of changed objects and shows the share of particular object type changes.

  - The **Modifications per User** 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.

> **NOTE:**
> - For WAN accelerators used in Veeam Cloud Connect jobs, performance data is available only if the target WAN accelerator is present in the Veeam ONE infrastructure.
> - Veeam Cloud Connect service providers cannot see performance data for proxies used by tenant data protection jobs.

Report Parameters

You can specify the following report parameters:

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

- **Period**: defines the time period to analyze in the report.

- **Object types**: defines a list of backup infrastructure objects to include in the report (*Backup Server*, *Backup Proxy*, *Backup Repository*, *Cloud Gateway*, *WAN Accelerator*, *Cloud Repository*).

- **Users**: 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*, *Occurrence time*).

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Backup Infrastructure Audit

Description

This report tracks configuration changes in your virtual environment, providing detailed information about every change for each user.

Report Parameters

Scope:	Backup Infrastructure
Reporting period:	1 week (12/31/2022 - 1/6/2023)
Object types:	Any object types
Users:	All
Group by:	Object

Summary

Modifications by Object Types

- Backup Proxy
- Backup Server

92 %
8 %

Modifications per User

39 %
8 %
53 %

- sparta\zverev
- backupsrv06\administrator
- enterprise05\administrator
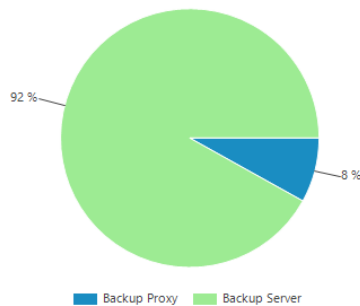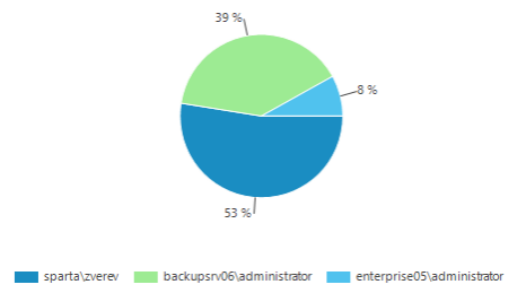
Change Details

Backup Server: backupsrv06.tech.local
Object Type: Backup Server
Object: backupsrv06.tech.local

Event Description	Time	Initiator
Credentials tech\hue.spenser have been added	1/3/2023 3:28:23 AM	backupsrv06\administrator
Host vcenter01.tech.local (VC) has been created.	1/3/2023 3:28:46 AM	backupsrv06\administrator
Credentials administrator have been added	1/3/2023 4:20:42 AM	backupsrv06\administrator
Credentials administrator have been added	1/3/2023 4:22:07 AM	backupsrv06\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** chart illustrates types of changed objects and shows the share of particular object type changes.

  - The **Modifications per Initiator** 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.

> **NOTE:**
>
> Veeam Cloud Connect service providers cannot see performance data for proxies used by tenant data protection jobs.

Report Parameters

You can specify the following report parameters:

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

- **Period**: defines the time period to analyze in the report.

- **Object types**: defines a list of backup infrastructure objects to include in the report (*Backup Server*, *Backup Proxy*, *Backup Repository*, *All Items*).

- **Object inclusion rule**: defines names of objects to include in the report. You can enter object names explicitly or create a wildcard mask by using the asterisk (*) to replace any number of characters. Multiple entries are separated by semicolon.

- **Users**: defines a list of backup users, changes from whom to include in the report.

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Backup Objects Change Tracking

Description

This report provides detailed information on backup infrastructure configuration changes that occurred during a specified period, including the exact time and the account name of the user who made the changes.

Report Parameters

Scope:	Backup Infrastructure
Interval:	12/1/2022 - 12/31/2022
Object types:	All objects
Object inclusion rule:	
Users:	All

Summary

Modifications by Object Types
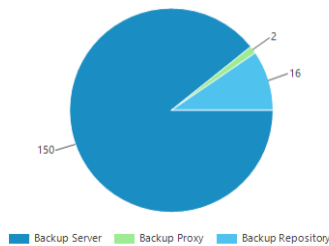
Modifications per Initiator
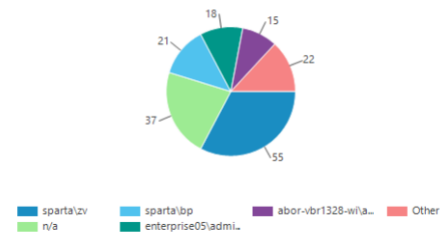
Modifications by Day
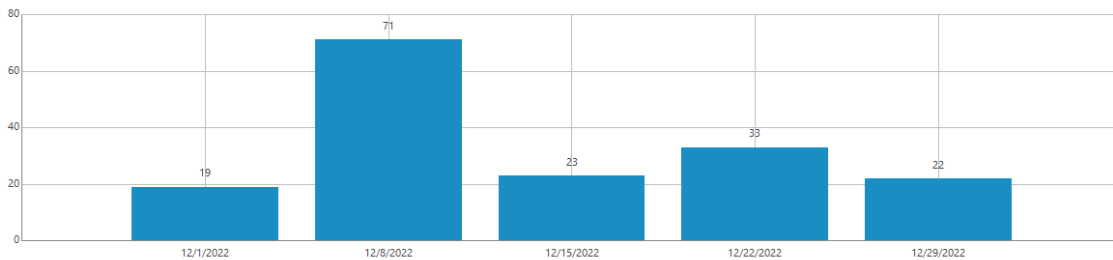
Change Details

Backup Server: 172.42.126.153

Object type: Backup Server

Property Name	Previous Setting	New Setting	Modification Time	Initiator
Object: 172.42.126.153				
Credentials zdservice have been added			12/29/2022 2:34 AM	sparta\zv
Credentials zd have been added			12/29/2022 2:34 AM	sparta\zv
External repository Abec-1 (GoogleCloudStorageExternal) has been deleted.			12/29/2022 6:41 AM	sparta\zv
External repository Abec-2 (GoogleCloudStorageExternal) has been deleted.			12/29/2022 6:41 AM	sparta\zv
Credentials zd-near have been added			12/29/2022 7:36 AM	sparta\zv

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.

CDP SLA Compliance

This report analyzes continuous data protection of VMs in your virtual infrastructure. The report examines whether VMs protected by CDP policy are compliant with SLA target.

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

  o The **Average SLA** chart shows the average SLA percentage for protected and unprotected VMs.

- The **Workloads by Compliance State** chart shows the number of VMs that meet the target SLA, VMs that breach the target SLA and VMs that do not have a CDP replica.

  - The **Workloads by SLA** chart shows the SLA value for protected and unprotected VMs.

  - The **Session Statistics** chart shows number of job sessions for protected and unprotected VMs finished with different statuses.

- The **Details** table provides information on all VMs protected by CDP policies, including VM name, CDP policy name, VM location, replica location, RPO, average SLA, maximum delay, number of crash-consistent and application-consistent restore points, status of the last replication session, amount of transferred data, primary bottleneck and date and time of the last successful replication session.

  Click a VM name in the details table to drill down to the detailed information on session statistics and last 100 occurred issues.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **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.

- **Business View objects**: defines Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

- **VMware Cloud Director objects**: defines VMware Cloud Director components to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **VM exclusion rule**: 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 comma. Usage example: the following string will exclude machines with the _R&D suffix from appearing in the report: *_R&D.

- **Target SLA**: defines the target SLA value (in percent).

- **Group by**: defines how objects will be grouped in the report (No grouping, CDP Policy, Business View Group, Original Location).

- **Show non-compliant VMs**: defines whether VMs not compliant with the target SLA should be included in the report. You can choose to show all non-compliant VMs or only VMs added to CDP policies.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

Veeam

CDP SLA Compliance

Description

This report helps to identify whether VMs protected with CDP policy are compliant with the SLA target. The report analyses only time periods when CDP policies were enabled.

Report Parameters

Scope:	Virtual Infrastructure
Interval:	Current week (1/2/2023 - 1/8/2023)
Workload exclusion rule:	
Target SLA:	90 %
Show non-compliant Workloads:	Added to CDP policies
Group by:	No grouping

Summary

Discovered Workloads:	3
Workloads that meet target SLA:	2
Workloads that breach target SLA:	1
Workloads with no CDP replica:	0
Average SLA:	92%

Average SLA

Workloads by Compliance State

Legend: Breach target SLA | No CDP replica | Meet target SLA

Workloads by SLA

Legend: 75-100% | 50-75% | 25-50% | 0-25%

Session Statistics

Legend: Success | Warning | Error
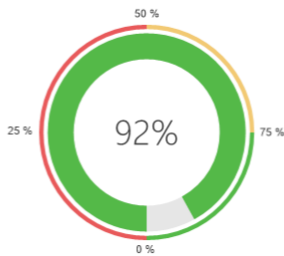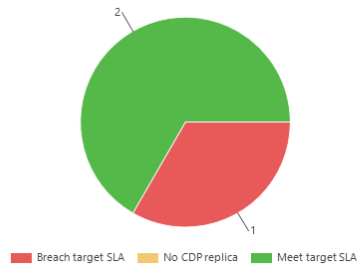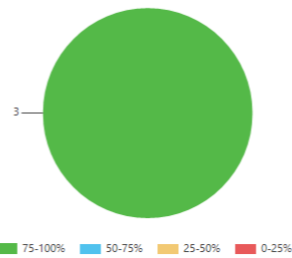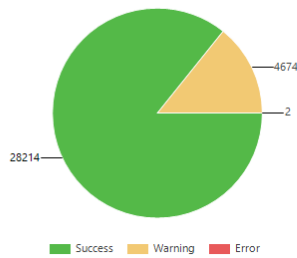
Details

Workloads That Meet Target SLA

Workload Name	CDP Policy Name	Original Location	Replica Location	RPO (seconds)	Average SLA (%)	Max Delay	Crash-consistent Restore Points	Application-consistent Restore Points
ts-vm01-ZVIV	Cloud Director CDP Policy	vcenter01.tech.local\prg twesx01-virt.tech.local	vcenter01.tech.local\p rgtwesx01-virt.tech.local	30	96	00:00	6	0
ts-vm022-1ZGE	Cloud Director CDP Policy	vcenter01.tech.local\prg twesx02-virt.tech.local	vcenter01.tech.local\p rgtwesx01-virt.tech.local	30	96	00:00	6	0

Workloads That Breach Target SLA

Workload Name	CDP Policy Name	Original Location	Replica Location	Last Session Status	RPO (seconds)	Average SLA (%)	Max Delay	Data Read	Data Transferred	Primary Bottleneck	Last Successful Session
virt01-vm33	CDP Policy for Servers	vcenter01.tech.local\prg twesx01-virt.tech.local	vcenter01.tech.local\p rgtwesx02-virt.tech.local	Warning	30	86	00:00	21.07 GB	20.41 GB	None	1/5/2023 8:00:26 AM

Use Case

This report helps you discover VMs that breach the target SLA or do not have a CDP replica. It provides details on the state of CDP policies so that you can reconfigure current policy settings or include mission critical VMs in CDP policies.

Data Change Rate History

This report allows you to track backup and replication jobs and workloads whose backup files and replicas grow too fast and may quickly consume storage space on the target repository or target datastore.

- The **Change Rate History** chart shows percentage of VMs and computers data changes that took place during the reporting period.

- The **Objects with Largest Change Rate (GB)** and **Objects with Least Change Rate (GB)** charts displays the most and least active VMs and computers in terms of the amount of data changes that occurred on their virtual disks.

- The **Details** table provides information on the list of workloads included in the backup and replication jobs, the average and aggregate amount of data changes that took place during the reporting period, the number of full backups and increments, and the size of the current full backup file*.

  Click a VM name to drill down to change rate statistics for each day of the reporting period.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **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.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Backup Infrastructure objects**: defines Veeam Backup & Replication servers to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Job types**: defines a job type to evaluate in the report (*VM Backup, Replication, Agent Backup Policy, Agent Backup, All items*).

- **Exclude jobs**: defines a list of backup and replication jobs to exclude from the report.

- **Calculate change rate based on**: defines the way change rate will be calculated in the report (based on *Data transferred* or *Data read*).

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

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Data 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:	Virtual Infrastructure
Interval:	Current week (1/2/2023 - 1/8/2023)
Job types:	All jobs
Excluded jobs:	-
Calculate change rate based on:	Data transferred

Summary

Total objects:	10
Virtual machines:	6
Computers:	4
Total average change rate:	2%
Average VM change rate:	2%
Average computer change rate:	2%

Change Rate History (%)
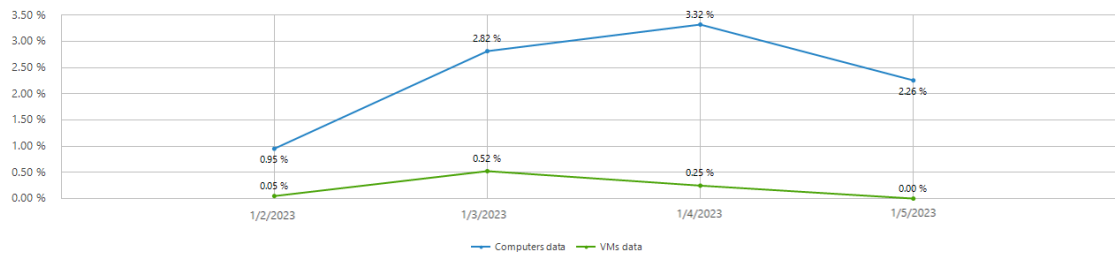
Objects with Largest Change Rate (GB)
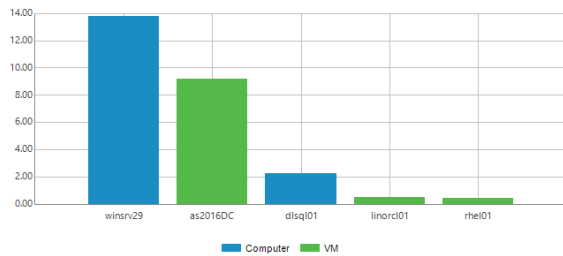
Objects with Least Change Rate (GB)
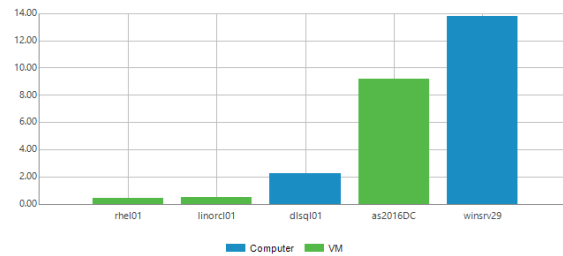
Details

Job Name	Object Name	Object Type	Average Change Rate per Day (GB)	Average Change Rate per Day (%)	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
Backup server: backupsrv06.tech.local											
⊟ Daily Backup Job	1		13.79	27.57 %	-	13.79	-	13.84	13.84	-	1
	winsrv29	Computer	13.79	27.57 %	-	13.79	-	13.84	13.84	-	1
Backup server: enterprise05.tech.local											
⊟ AD Backup	1		1.84	0.31 %	8.69	0.50	9.65	22.06	31.71	49	2
	as2016DC	VM	1.84	0.31 %	8.69	0.50	9.65	22.06	31.71	49	2
⊟ MS SQL Backup	1		0.75	0.94 %	1.46	0.79	1.48	55.47	56.95	2	2
	dlsql01	Computer	0.75	0.94 %	1.46	0.79	1.48	55.47	56.95	2	2
⊟ Oracle Linux Backup	1		0.17	0.09 %	0.52	-	1.02	15.88	16.90	6	1
	linorcl01	VM	0.17	0.09 %	0.52	-	1.02	15.88	16.90	6	1
⊟ Organization02 vApp02 Backup	2		0.00	0.00 %	-	-	0.03	0.00	0.03	20	2
	linux02-OeX8	VM	0.00	0.00 %	-	-	0.02	0.00	0.02	10	1
	linux03-zRea	VM	0.00	0.00 %	-	-	0.02	0.00	0.02	10	1
⊟ RHEL Backup	1		0.21	0.42 %	0.42	-	0.79	1.86	2.65	4	1
	rhel01	VM	0.21	0.42 %	0.42	-	0.79	1.86	2.65	4	1
⊟ Web Servers Backup	2		0.00	0.00 %	-	-	0.01	0.00	0.01	7	2
	apache04	Computer	0.00	0.00 %	-	-	0.01	0.00	0.01	4	1
	apache05	Computer	0.00	0.00 %	-	-	0.00	0.00	0.01	3	1
⊟ Windows Oracle Backup	1		0.00	0.00 %	-	-	-	12.94	12.94	-	1
	winorcl01	VM	0.00	0.00 %	-	-	-	12.94	12.94	-	1

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.

*Note that no data will be available for synthetic or reversed backup, as well as for replicas.

GFS Backup Files

This report provides historical information about restore points for Veeam Backup & Replication jobs with the Grandfather-Father-Son (GFS) retention policy.

- **The Summary** section provides information about 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 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, as well as their size, type and objects they contain.

    Click a job name to drill down to the job details section.

- **The Job sub**sections display information about 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:

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

- **Job types**: defines a job type to evaluate in the report (*VM Backup, Backup Copy, Agent Backup, Agent Backup Policy, All items*).

- **Jobs**: defines a list of 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*).

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GFS Backup Files

Description

This report provides historical information about backups for jobs with GFS retention policy.

Report Parameters

Scope:	Backup Infrastructure
Job types:	VM backup, Backup copy, Agent backup policy, Agent backup
Selected jobs:	All Jobs
Sort restore points by:	Creation date

Summary

Jobs with GFS retention policy:	24
Total number of historical backup files:	11
Total number of restore points:	19
Used space:	0.09 TB

Restore Points Age
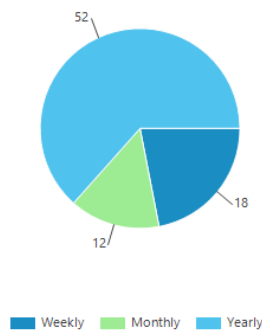
Top 5 Jobs by Number of Restore Points
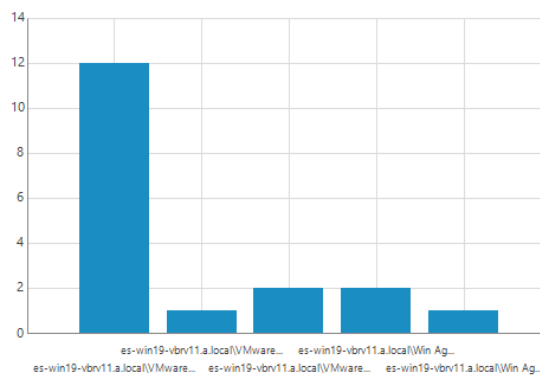
Details

Next Restore Points to Be Deleted by Retention

Job Name	Restore Point Name	VMs/Computers	Retention Type	Size, GB	Removal Date
es-win19-vbrv11.a.local\Win Agent Backup Policy	Win Agent 2022-06-04T121028_EE19	1	Yearly	15.13	6/4/2023
es-win19-vbrv11.a.local\VMware Backup Job to Amazon SOBR	RB-Fake-2.vm-13958D2022-03-26T220639_178E	1	Yearly	0.00	3/26/2023
es-win19-vbrv11.a.local\VMware Backup Job to CC	VMware Backup Job to CCD2022-03-26T111208_4325	1	Yearly	13.26	3/26/2023
es-win19-vbrv11.a.local\VMware Backup Job	VMware Backup JobD2022-03-26T081302_3C14	6	Yearly	11.62	3/26/2023
es-win19-vbrv11.a.local\AWS EC2 Backup Copy Job	AWS EC2 Backup Copy JobD2022-03-25T173810_EBEC_Y	1	Yearly	0.51	3/25/2023

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 **Summary** section includes the following elements:

  - The **Top 5 Jobs by Average Duration (Hours/Minutes)** and **Top 5 Jobs by Transferred Data (GB/MB)** charts display top 5 jobs in terms of the longest backup duration and the largest amount of transferred data.

  - The **Successful Backup Ratio by Day (%)** chart displays the percentage of backup and replication job sessions that completed successfully during the reporting period. If a job session finished with warning but a restore point was created successfully, the job will be displayed as successful.

- The **Details** table provides information on each performed backup and replication job, including completion status, number of processed objects, backup type, session start time, job duration, processing rate, the amount of transferred data and the total backup size.

  Click the **Job Name** link or a link in the **Objects Processed** 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:

- **Infrastructure objects**: 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 to tape*, *Cloud Director backup*, *Cloud Director replication*, *File backup*, *File copy*, *File to tape*, *Nutanix backup*, *Replication*, *VM backup*, *VM copy*, *All*).

- **Jobs**: defines a list of backup and replication jobs to include in the report.

- **Job status**: defines a job status to include in the report (*Success, Success and warnings, Failures and warnings, Failures only, All*).

- **Period**: defines the time period to analyze in the report.

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Job History

Description

This report provides historical information for all Veeam Backup & Replication jobs.

Report Parameters

Scope:	Backup Infrastructure
Job type:	All
Jobs:	All Jobs
Job status:	All
Reporting period:	Current week (1/2/2023 - 1/8/2023)

Summary

Top 5 Jobs by Average Duration (Minutes)
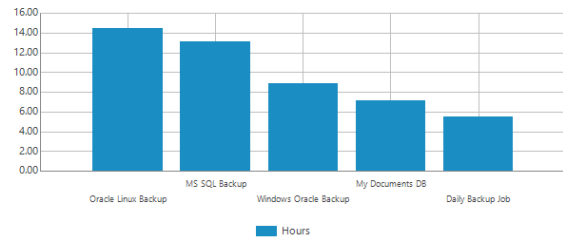
Top 5 Jobs by Transferred Data (GB)
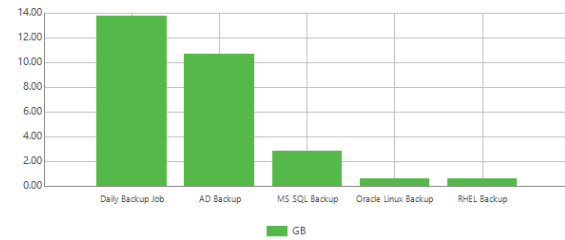
Successful Backup Ratio by Day (%)
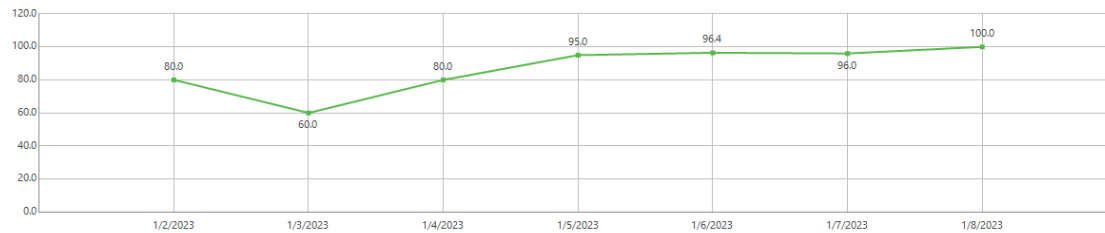
Details

Job Type: Backup

Backup Server: backupsrv06.tech.local

Status	Objects Processed	Backup Type	Start Time	Duration	Processing Rate (MB/Sec)	Data Size (GB)	Transferred (GB)	Total Backup Size (GB)
Job Name: Daily Backup Job								
Success	1	Full	1/3/2023 3:38 AM	00:05:33	104.59	50.00	13.79	13.84

Backup Server: enterprise05.tech.local

Status	Objects Processed	Backup Type	Start Time	Duration	Processing Rate (MB/Sec)	Data Size (GB)	Transferred (GB)	Total Backup Size (GB)
Job Name: AD Backup								
Warning	1 of 1	Incremental	1/2/2023 6:00 PM	00:03:29	25.52	80.00	0.39	35.24
Warning	1 of 1	Incremental	1/4/2023 6:00 PM	00:03:57	18.54	80.00	0.26	35.50

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 by 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 latest session.

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

    - The **B&R Job Status** 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.

    [If the **Show job details** check box is cleared] Click a link in the **Objects in Job** column to drill down to the list of VMs included in the job and their individual backup properties.

Report Parameters

You can specify the following report parameters:

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

- **Period**: defines the time period to analyze in the report.

- **Job types**: defines a list of job types to evaluate in the report (*VM backup*, *Replication*, *File to tape*, *Backup to tape*, *Backup copy*, *Agent backup policy*, *Agent backup*, *Cloud Director Backup*, *Cloud Director Replication*).

- **Latest statuses**: defines a job run status to include in the report (*Success*, *Warning*, *Failed*).

- **Show job details**: defines whether details of backup job sessions must be included in the parent report.

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Latest Job Status

Description

This report provides information about latest Veeam Backup & Replication job statuses.

Report Parameters

Scope:	Backup Infrastructure
Job types:	VM backup, Replication, File to tape, Backup to tape, Backup copy, Agent backup policy, Agent backup, Cloud Director backup, Cloud Director replication
Latest statuses:	All
Interval:	Current week (1/2/2023 - 1/8/2023)
Show job details:	Yes

Summary

B&R Job Status

Failed Success Warning
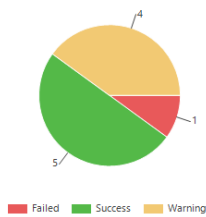
Top 10 Jobs by Duration

Job Name	Duration (Last Run)	Transferred (GB)	Avg. Duration	Status
enterprise05.tech.local\Oracle Linux Backup	00:19:07	0.13	00:14:26	Warning
enterprise05.tech.local\MS SQL Backup	00:09:08	0.60	00:13:05	Success
enterprise05.tech.local\Windows Oracle Backup	00:08:36	0.00	3 day(s) 00:59:39	Failed
backupsrv06.tech.local\Daily Backup Job	00:05:33	13.79	00:05:33	Success
enterprise05.tech.local\AD Backup	00:04:15	0.09	00:03:48	Warning
enterprise05.tech.local\RHEL Backup	00:03:56	0.20	00:02:38	Success
enterprise05.tech.local\Backup Copy Job 1\RHEL Backup	00:02:36	0.24	00:02:26	Warning
enterprise05.tech.local\Organization02 vApp02 Backup	00:02:34	0.00	00:02:06	Success
enterprise05.tech.local\Web Servers Backup	00:02:10	0.00	00:02:34	Warning
backupserver004.tech.local\wrk002 BackupJob1	00:01:29	0.00	00:01:15	Success

Details

Backup Server: enterprise05.tech.local

Failed Jobs

Job	Last Run	Objects in Job Failed / Total	Transferred (GB)	Retry Count	Duration	Avg. Duration	Details
Windows Oracle Backup	1/7/2023	1 of 1	0.00	4	00:08:36	3 day(s) 00:59:39	**Errors:** Job finished with error at 1/7/2023 3:37:05 AM Processing winorcl01 Error: Unable to perform installation Cannot upload guest agent's files to the admin share [\\winorcl1\ADMIN$\VeeamVssSupport]. Failed to upload file C:\Program Files (x86)\Veeam\Backup Transport\GuestInteraction\VSS\VeeamGuestHelpers\x64\VeeamGuestHelper.exe via administrative share Cannot copy file. Source file: [C:\Program Files (x86)\Veeam\Backup Transport\GuestInteraction\VSS\VeeamGuestHelpers\x64\VeeamGuestHelper.exe]. Target file: [\\winorcl1\ADMIN$\VeeamVssSupport\VeeamGuestHelper.exe]. CopyFile() failed. Win32 error:There is not enough space on the disk. Code: 112

Jobs with Warnings

Job	Last Run	Objects in Job Warning / Total	Transferred (GB)	Retry Count	Duration	Avg. Duration	Details
AD Backup	1/8/2023	1 of 1	0.09	0	00:04:15	00:03:48	**Warnings:** Job finished with warning at 1/8/2023 2:04:34 AM
Backup Copy Job 1\RHEL Backup	1/7/2023	1 of 1	0.24	0	00:02:36	00:02:26	**Warnings:** Job finished with warning at 1/7/2023 5:02:58 AM Backup copy RPO violation: [rhel01] was not copied within 1 day 6 hours 59 minutes
Oracle Linux Backup	1/7/2023	1 of 1	0.13	0	00:19:07	00:14:26	**Warnings:** Job finished with warning at 1/7/2023 11:49:28 PM
Web Servers Backup	1/7/2023	2 of 2	0.00	0	00:02:10	00:02:34	**Warnings:** Job finished with warning at 1/7/2023 6:02:30 AM

Successful Jobs

Job	Last Run	Backed Up Objects in Job	Transferred (GB)	Retry Count	Duration	Avg. Duration	Duration Trend
MS SQL Backup	1/8/2023	1	0.60	0	00:09:08	00:13:05	↑
Organization02 vApp02 Backup	1/7/2023	1	0.00	0	00:02:34	00:02:06	↑
RHEL Backup	1/7/2023	1	0.20	0	00:03:56	00:02:38	↑

Use Case

This report helps backup administrators track the recent VM protection operations and identify root causes of failed jobs.

Protected VMs

This report analyzes backup protection of VMware vSphere and Microsoft Hyper-V 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.

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

    o The **Protected VMs** chart shows the number of protected and unprotected VMs.

    o The **VM Last Backup State** chart shows status of the latest job session for discovered/protected VMs.

    o The **VM Last Backup Age** chart shows compliance of latest VM backups with the specified RPO requirements.

- The **Details** section provides information on all protected and unprotected VMs including VM location, protection type, job name, number of available restore points, date of the oldest restore point and date and time of the latest backup or replica.

> **NOTE:**
> - VM replicas not protected by any Veeam Backup & Replication job are not accounted in this report.
> - Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **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.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **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.

- **VM exclusion rule**: 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. For example, the following string will exclude machines with the _R&D suffix from appearing in the report: *_R&D.

- **Job types**: defines a job type to evaluate in the report (*Backup*, *Replication*, *Backup Copy*, *Cloud Director Backup*, *Cloud Director Replication*, *All items*).

- **Exclude jobs**: defines a list of backup and replication jobs to exclude from the report.

- **Analyze VM templates:** defines whether VM templates should be included in the report.

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Protected VMs

Description

This report lists protected and unprotected VMware vSphere and Microsoft Hyper-V VMs including their last backup job status.
Note: VM replicas not protected by any Veeam Backup & Replication job are not accounted in this report.

Report Parameters

Scope:	Virtual Infrastructure
RPO:	24 hours (1/7/2023 3:00:00 AM)
VM exclusion rule:	
Job types:	VM backup, Replication, Backup copy, Cloud Director backup, Cloud Director replication
Analyze VM templates:	No
Excluded jobs:	-

Summary

VMs Overview

Total VMs:	228
Including VM Replicas:	7
Protected VMs:	6
With Backup:	6
With Replication:	0
Unprotected VMs:	215

Protected VMs

Protected VM / Unprotected VM (215 / 6)

VM Last Backup State

Success / Warning (4 / 2)

VM Last Backup Age

No Restore Points / Outside RPO / Within RPO (208 / 6 / 6)
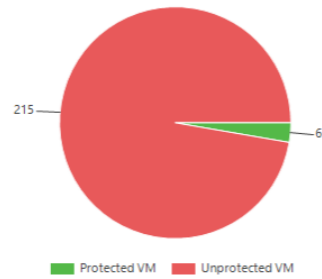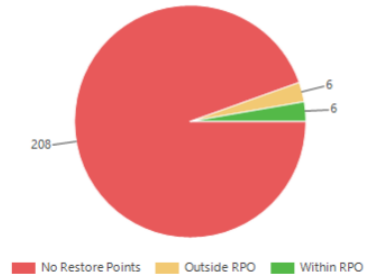
Details

Protected VMs (VMware)

Location: vcenter01.tech.local > prgtwesx01.tech.local

VM Name	Protection Type	Job Name	Available Restore Point	Oldest Restore Points	Latest Restore Point
Status: Success					
dlsql01	Backup	MS SQL Backup	5	12/31/2022	1/8/2023 1:05:46 AM
rhel01	Backup	RHEL Backup	6	12/24/2022	1/7/2023 10:00:45 PM
Status: Warning					
apache04	Backup	Web Servers Backup	6	12/31/2022	1/7/2023 6:00:51 AM
apache05	Backup	Web Servers Backup	6	12/31/2022	1/7/2023 6:00:51 AM
as2016DC	Backup	AD Backup	72	12/24/2022	1/8/2023 2:01:47 AM
linorcl01	Backup	Oracle Linux Backup	8	12/24/2022	1/7/2023 11:40:56 PM

Unprotected VMs (VMware)

Location: vcenter01.tech.local > prgtwesx01.tech.local

VM Name	VM Creation Date	Creator	VM Size (GB)	Available Restore Points	Last Backup (Replica) Date
Unprotected Time: Last backup more than 1 month ago					
winorcl01	Not defined	Not defined	199	1	9/27/2022 7:51:14 AM
Unprotected Time: No Backup					
172.35.30.226_35c99y	Not defined	Not defined		-	-
172.35.31.67_g5z7ma	Not defined	Not defined		-	-
172.35.31.67_pskehq	Not defined	Not defined		-	-
172.35.31.67_sjnmu7	Not defined	Not defined		-	-

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.

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 **Summary** section includes the following elements:

    o The **SureBackup Job Status** chart chows the latest state of SureBackup job sessions.

    o The **Verified VMs Status** chart shows the percentage of VMs for which the latest SureBackup job session completed successfully, completed with warnings or failed, and percentage of VMs for which SureBackup jobs have not been run at all.

    o The **Antivirus Check** chart shows the results of the last antivirus check run.

- The **Details** table shows the results of completed SureBackup job sessions, including 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.

Report Parameters

You can specify the following report parameters:

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

- **Business View objects**: defines Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **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*).

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, you will not be able to generate the report based on **Business View objects**.

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

SureBackup Job Status

66.67%

33.33%

■ Success   ■ Failed

Verified VMs Status

60.00%

40.00%

■ Success   ■ Failed

Antivirus Check

66.67%

33.33%

■ Clean   ■ N/A
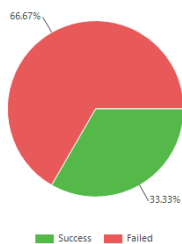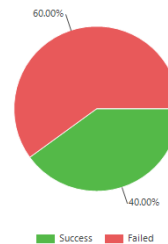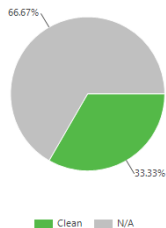
Details

Backup Server: mmf-vbr.tech.local

Status	Duration	Virtual Machine	Application Type	Verification Date	Verified Backup	Ping	Heartbeat	Script	SureBackup Job	Antivirus	AV Check Result
Success		2									
	02:21:44	mmf-win16vbr	-	1/7/2023 9:00 AM	11/1/2022 7:37 AM	Success	Success	Disabled	SureBackup Job 1 vmware	Windows Defender	Clean
	02:34:08	mmf-win16vbr	-	1/7/2023 9:00 AM	12/28/2022 8:35 AM	Success	Success	Disabled	SureBackup Job 1 vmware	Windows Defender	Clean

Backup Server: ms-vbr11a.tech.local

Status	Duration	Virtual Machine	Application Type	Verification Date	Verified Backup	Ping	Heartbeat	Script	SureBackup Job	Antivirus	AV Check Result
Failed		3									
	00:01:37	ms-22-sql(196)	-	12/24/2022 11:05 AM	12/19/2022 11:03 AM	Not Running	Not Running	Disabled	SureBackup Job VMware	-	N/A
	00:01:44	ms-ub-01(97)	-	12/24/2022 9:01 AM	12/23/2022 12:01 PM	Not Running	Not Running	Disabled	SureBackup Job 3	-	N/A
	00:01:57	ms-22-03	-	12/24/2022 9:01 AM	12/23/2022 12:01 PM	Not Running	Not Running	Disabled	SureBackup Job 3	-	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.

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 **Summary** section provides an overview on the number of protected and verified VMs, displays the status history of verified VMs and verification rate during the reporting period.

- The **Details** table provides information on VMs tested and verified with SureBackup and SureReplica, including the number of failed verifications, last verified restore point, status of the last verification and the results of VM verification tests (ping commands, scripts execution and heartbeat messages).

Report Parameters

You can specify the following report parameters:

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

- **Business View objects**: defines Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Last <N> weeks/months**: defines the time period to analyze in the report.

- **Platform**: 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*).

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may 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
Reporting period:	1 week (1/2/2023 - 1/8/2023)
Platform:	All
Job type:	Backup and replication jobs

Summary

VMs Overview

Protected VMs:	10
Verified VMs:	1

Verified VMs Status History

Passed:	6
Passed with warnings:	0
Failed:	1

Verification Rate

Successfully verified VMs
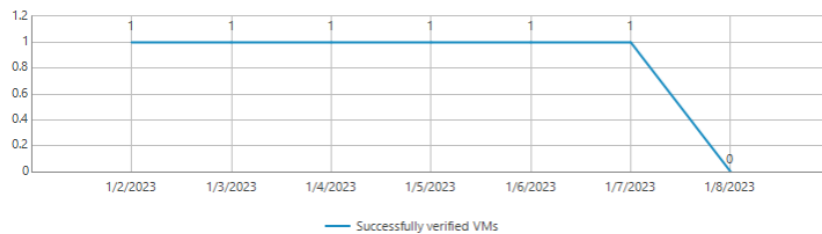
Details

Virtual Machines	Failed/Total Verifications	Last Verified Restore Point	Last Verification Status
VM Role: No Role Specified			
ms-22-sql(196)	1/1	N/A	FAILED
mmf-win16vbr	0/6	12/28/2022 8:35:09 AM	PASSED

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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a list of Veeam Backup & Replication servers and protected VI servers to include in the report.

- **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 Business View groups to analyze in the report. The parameter options are limited to objects of the Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Interval**: defines a time period to analyze in the report (*Current week*, *Past week*, *Past 7 days*).

- **1 week starting at**: defines a time period (a week) to analyze in the report.

- **7 days starting at**: defines a start date of the reporting period. The report will analyze a 7-day period starting from the selected date.

- **Last <N> weeks**: defines the number of weeks in the past (starting from today) to analyze in the report.

- **Job types**: 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*.

- **Analyze VM templates**: defines whether VM templates should be included in the report.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, you will not be able to generate the report based on **VM folders** or **Business View objects**.

Veeam

VM Daily Protection Status

Description

This report provides daily backup status information for all protected VMs.

Report Parameters

Scope:	Backup Infrastructure
Reporting period:	1/2/2023 - 1/8/2023
Job types:	VM backup, Replication, Backup copy
Group by:	Backup job
Analyze VM templates:	No

Summary

VM Backup Status

Legend: Backups with Warnings | Successful Backups | Failed Backups
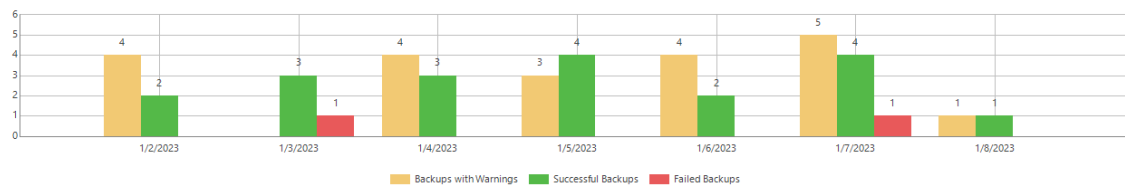
Details

Backup Server: backupsrv06.tech.local

VM Name	Monday (1/2/2023)	Tuesday (1/3/2023)	Wednesday (1/4/2023)	Thursday (1/5/2023)	Friday (1/6/2023)	Saturday (1/7/2023)	Sunday (1/8/2023)
⊟ **Job Name: Daily Backup Job**							
winsrv29	-	Success	-	-	-	-	-

Backup Server: enterprise05.tech.local

VM Name	Monday (1/2/2023)	Tuesday (1/3/2023)	Wednesday (1/4/2023)	Thursday (1/5/2023)	Friday (1/6/2023)	Saturday (1/7/2023)	Sunday (1/8/2023)
⊟ **Job Name: AD Backup**							
as2016DC	Warning	-	Warning	Warning	Warning	Warning	Warning
⊟ **Job Name: Backup Copy Job 1**							
rhel01	-	-	Success	-	-	Warning	-
⊟ **Job Name: MS SQL Backup**							
dlsql01	-	Success	-	Success	-	Success	Success
⊟ **Job Name: Oracle Linux Backup**							
linorcl01	Warning	-	Warning	-	Warning	Warning	-
⊟ **Job Name: Organization02 vApp02 Backup**							
linux02-OeX8	Success	-	Success	Success	Success	Success	-
linux03-zRea	Success	-	Success	Success	Success	Success	-

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.

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.

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 Failover Plan Overview

- Workload Protection History

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 Client, and see most affected Veeam Backup & Replication jobs and components.

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

    o The **Job Issues History** chart displays the total number of warnings and errors for each day within a reporting period.

    o The **Top 10 VMs with Issues** table lists 10 most affected VMs and the number of alarms triggered for each machine.

    o The **Top 5 Jobs with Issues** chart displays top 5 jobs that caused more alarms than other jobs.

    o The **Top 10 Triggered Alarms** 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 Triggered** column to drill down to alarm details.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines backup infrastructure objects to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Group by**: defines the way data will be grouped in the report (by *Alarm severity* or *Object type*).

- **Alarm types**: defines a list of data protection object types to analyze and include in the report.

- **Alarms**: defines a list of alarms to analyze in the report. The options in the list depend on the selected *Alarm types* parameter.

  For details on alarms you can select in the list, see section Veeam Backup & Replication Alarms of the Veeam ONE Working with Alarms Guide.

Veeam

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 (6/16/2021 - 7/15/2021)
Group by:	Alarm Severity
Alarm types:	All items
Alarms:	All items

Summary

Backup Infrastructure Alarms

Total Errors:	30
Total Warnings:	16

Job Issues

Total Job Failures:	15163
Total Job Warnings:	186

Job Issues History
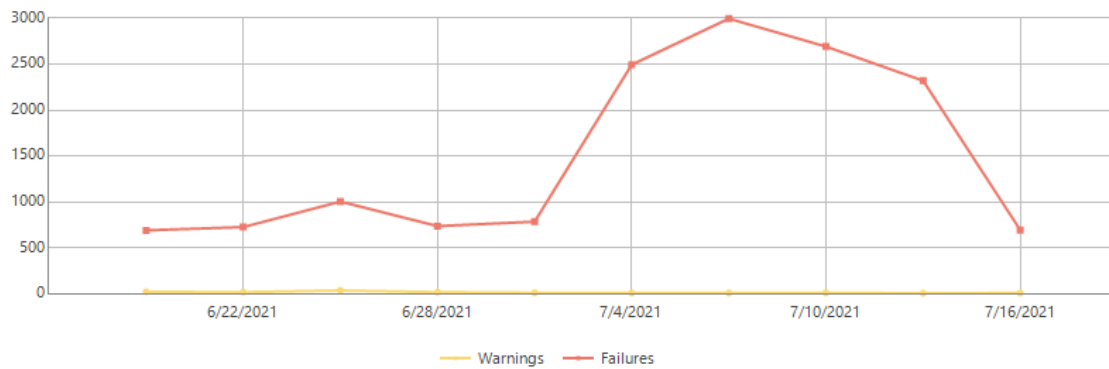
Top 10 VMs with Issues

VM Name	Job	Warnings	Failures	Total Issues
At_agent_h2	Hyper-V Backup Copy Job immediate (mirroring), Hyper-V Backup Copy Job periodic (pruning)	1	2510	2511
ES-win10-WS	VMware Replication Job	0	1886	1886
prgvbr03	VMware Backup Copy Job immediate(mirroring), VMware Backup Copy Job periodic (pruning), VMware Backup Copy Job to CC	17	711	728
vbr_cc_101	VMware Backup Copy Job immediate(mirroring), VMware Backup Copy Job periodic (pruning), VMware Backup Copy Job to CC	17	711	728
rnd_vbr_004	VMware Backup Copy Job immediate(mirroring), VMware Backup Copy Job periodic (pruning), VMware Backup Copy Job to CC	5	711	716
NZ2019VOv1	VMware Backup Copy Job immediate(mirroring), VMware Backup Copy Job periodic (pruning), VMware Backup Copy Job to CC	5	711	716
vbr_cc_097	VMware Backup Copy Job immediate(mirroring), VMware Backup Copy Job periodic (pruning), VMware Backup Copy Job to CC	5	711	716
prgvbr02	VMware Backup Copy Job immediate(mirroring), VMware Backup Copy Job periodic (pruning), VMware Backup Copy Job to CC	5	711	716
Kali-linux-vm	replication to CC	0	116	116
yam-tiny05	Backup Job ALARM test	0	116	116

Top 5 Jobs with Issues

3000

Details

Alarm Severity: Error

Object Type	Object Name	Alarms Triggered	Trend
Backup Proxy	3	3	
	pgBRe	1	Increasing
	highlandhv	1	Increasing
	lowlandhv	1	Increasing
Backup Repository	5	5	
	172.17.46.22	1	Increasing
	Backup Repository09	1	Increasing
	MK SMB repository	1	Increasing
	Backup Repository agent	1	Increasing
	Default Backup Repository	1	Increasing
Backup Server	3	21	
	es-win19-vbrv11	9	Increasing
	pgbr101	8	Increasing
	mmf-win19vbr	4	Increasing
Cloud Repository	1	1	
	Cloud repository 1	1	Increasing

Alarm Severity: Warning

Object Type	Object Name	Alarms Triggered	Trend
Backup Repository	6	6	
	Amazon S3 Archive Tier	1	Increasing
	GH SOBR	1	Increasing
	Amazon S3 Capacity Tier	1	Increasing
	Object storage repository 4	1	Increasing
	ii amazon s3	1	Increasing
	Amazon Scale-out Backup Repository	1	Increasing
Backup Server	3	10	
	pgbr101	3	Increasing
	mmf-win19vbr	5	Increasing
	es-win19-vbrv11	2	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.

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.

  Veeam Cloud Connect service providers cannot see performance data for proxies used by tenant data protection jobs.

- 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, computers and file shares 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, computers and file shares 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.

  For WAN accelerators used in Veeam Cloud Connect jobs, performance data is available only if the target WAN accelerator is present in the Veeam ONE infrastructure.

- 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, a port that a cloud gateway uses to transport data, and related gateway pools.

- The **Cloud Gateway Pools** section provides information about number of gateways in each gateway pool.

- The **Jobs** section displays all backup jobs, their types and the number of VMs, computers and file shares in each job.

> **NOTE:**
>
> Veeam ONE Web Client displays file backup copy jobs together with other backup copy jobs.

Report Parameters

You can specify the following report parameters:

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

veeam

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	Rental	Backup	No	0	0	100	0	N/A	6/20/2022	N/A	0
172.35.185.193	EnterprisePlus	Evaluation	Backup	No	0	0	15000	5801	N/A	5/31/2023	N/A	0
bp12070950.sparta.local	EnterprisePlus	Evaluation	Suite	No	0	0	1000	0	N/A	12/31/2022	N/A	0
172.35.155.241	EnterprisePlus	Evaluation	Suite	No	0	0	1000	15	N/A	12/29/2023	N/A	0
bckpsrv012.tech.local	EnterprisePlus	Perpetual	Backup	No	0	0	100	0	5/31/2023	Never	N/A	0
backupsrv06.tech.local	EnterprisePlus	Subscription	Backup	No	0	0	100	0	N/A	5/31/2023	N/A	0
backupsrv29.tech.local	EnterprisePlus	Evaluation	Backup	No	0	0	2000	0	N/A	5/31/2023	N/A	0
srv16.tech.local	EnterprisePlus	Subscription	Backup	No	0	0	100	2	N/A	5/31/2023	N/A	0
qa08.tech.local	Enterprise	Perpetual	Backup	No	100	0	6	0	5/31/2023	Never	N/A	0
srv2049.tech.local	Community	N/A	N/A	No	0	0	10	0	N/A	N/A	N/A	0
backupserver004.tech.local	EnterprisePlus	Rental	Backup	No	0	0	100	22	N/A	5/31/2023	N/A	0
enterprise05.tech.local	EnterprisePlus	Subscription	Backup	No	0	0	100	13	N/A	5/31/2023	N/A	0

Instances Usage

Backup Servers	Managed Objects						Used Instances					
	VMs	Cloud Instances	Workstations	Physical Servers	File Shares	Enterprise Application Servers	VMs	Cloud Instances	Workstations	Physical Servers	File Shares	Plugin Servers
backup01.tech.local	0	0	0	0	0	0	0	0	0	0	0	0
172.35.185.193	0	5801	0	0	0	0	0	5801	0	0	0	0
bp12070950.sparta.local	0	0	0	0	0	0	0	0	0	0	0	0
172.35.155.241	0	15	0	0	0	0	0	15	0	0	0	0
bckpsrv012.tech.local	0	0	0	0	0	0	0	0	0	0	0	0
backupsrv06.tech.local	0	0	0	0	0	0	0	0	0	0	0	0
backupsrv29.tech.local	0	0	0	0	0	0	0	0	0	0	0	0
srv16.tech.local	0	0	0	1	0	1	0	0	0	1	0	1
qa08.tech.local	0	0	0	0	0	0	0	0	0	0	0	0
srv2049.tech.local	0	0	0	0	0	0	0	0	0	0	0	0
backupserver004.tech.local	0	0	0	1	0	1	0	0	0	11	0	11
enterprise05.tech.local	13	0	0	0	0	0	13	0	0	0	0	0

Veeam B&R Infrastructure

Backup Server	Backup Server Version	Proxy Servers	CIFS Repositories	Windows Repositories	Linux Repositories	Linux Hardened Repositories	Object Storage Reposiotires	Scale-out Repositories
backup01.tech.local	11.0.0.837	2	0	1	0	0	0	0
172.35.185.193	12.0.0.1372	2	0	1	0	0	0	0
bp12070950.sparta.local	12.0.0.1326	2	0	1	0	0	0	0
172.35.155.241	12.0.0.1328	2	0	1	0	0	0	0
bckpsrv012.tech.local	12.0.0.1357	4	0	4	0	0	0	0
backupsrv06.tech.local	12.0.0.1364	2	0	1	0	0	0	0
backupsrv29.tech.local	12.0.0.1267	2	0	1	0	0	0	0
srv16.tech.local	12.0.0.1333	2	0	1	0	0	0	0
qa08.tech.local	11.0.1.1261	5	0	6	0	0	0	0
srv2049.tech.local	12.0.0.1284	2	0	1	0	0	0	0
backupserver004.tech.local	12.0.0.1120	2	0	1	0	0	2	0
enterprise05.tech.local	12.0.0.1364	4	0	2	0	0	3	0

Backup Proxies

Type	Proxy Server	Transport Mode	Host Type	Max. Concurrent Tasks	Connected Datastores	Throttling
⊟ File Share	14					
	qa08.tech.local\qa05.tech.local	Network	Windows	2	N/A	Disabled
	backup01.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	172.35.185.193\Backup Proxy	Network	N/A	2	N/A	Disabled
	bp12070950.sparta.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	172.35.155.241\Backup Proxy	Network	Windows	2	N/A	Disabled
	bckpsrv012.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	backupsrv06.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	backupsrv29.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	srv16.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	qa08.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	srv2049.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	backupserver004.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	enterprise05.tech.local\Backup Proxy	Network	Windows	2	N/A	Disabled
	bckpsrv012.tech.local\qa06.tech.local	Network	Windows	4	N/A	Disabled
⊟ VM	16					
	bckpsrv012.tech.local\pdctwhv01.tech.local	On-Host	Windows	4	Automatic	Disabled
	backup01.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	172.35.185.193\VMware Backup Proxy	Automatic	N/A	2	Automatic	Disabled
	bp12070950.sparta.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	172.35.155.241\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	bckpsrv012.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	backupsrv06.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	backupsrv29.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	srv16.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	qa08.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	srv2049.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	backupserver004.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	enterprise05.tech.local\VMware Backup Proxy	Automatic	Windows	2	Automatic	Disabled
	qa08.tech.local\172.41.52.14	On-Host	Windows	4	Automatic	Disabled
	qa08.tech.local\hyperv03.tech.local	On-Host	Windows	4	Automatic	Disabled
	enterprise05.tech.local\pdctwhv01.tech.local	On-Host	Windows	5	Automatic	Disabled
⊟ VMware CDP	1					
	enterprise05.tech.local\172.35.28.217	N/A	Windows	N/A	N/A	Disabled

Tape Servers

Backup Servers	Tape Server Name	Type	Connected Tape Library	Throttling
⊟ bckpsrv012.tech.local				
	172.35.29.99	VMware (VM)	HP MSL G3 Series 9.50, HP MSL G3 Series 9.50, HP MSL G3 Series 9.50	Disabled
⊟ qa08.tech.local				
	sw-vtl-main-lib.tech.local	VMware (VM)		Disabled

Backup Repositories

Type	Repository		Capacity (GB)	Free Space (GB)	Full Backup Size (GB)	Increments Size (GB)	Backup Jobs	VMs and Computers	File Shares
⊟ Amazon Glacier		1							
	172.35.155.241\glacier-test		N/A	N/A	0.00	0.00	N/A	0	N/A
⊟ Amazon S3		4							
	172.35.155.241\wb60-167		N/A	N/A	0.00	0.00	N/A	0	N/A
	172.35.155.241\paris-kms		N/A	N/A	0.00	0.00	N/A	0	N/A
	172.35.155.241\paris-repo-simple		N/A	N/A	0.00	0.00	N/A	0	N/A
	172.35.155.241\repo-s3-test		N/A	N/A	0.00	0.00	N/A	0	N/A
⊟ Cloud		2							
	backup01.tech.local\Beta Cloud Vol01		100.00	81.41	0.00	0.00	0	0	0
	backup01.tech.local\Cloud repository Beta		50.00	16.13	27.87	5.53	1	2	0

WAN Accelerators

Name	Hight Bandwidth Mode	Port	Max. Connections	Max. Cache Size (GB)	Cache Free Space (GB)	Cache Location
qa08.tech.local\wan30.tech.local	Enabled	6165	5	20.00	20.00	C:\VeeamWAN

Jobs

Backup Server	Job Name	↕	Protection Type	↕	# of Workloads
⊟ backup01.tech.local		4			4
	Agent Backup Job Server		Windows Agent backup		1
	Backup Copy Job Cloud		Backup copy		1
	Backup Job Local		Backup		1
	Backup Job Webservers		Backup		1
⊟ bckpsrv012.tech.local		3			2
	Fileserv05 (SMB)		File backup		1
	Fileserv05 (SMB) (Copy) 1		Backup copy		1
	Payroll Reports to Tape (Q1-Q2)		File tape backup		N/A

Use Case

This report displays information on the state of backup infrastructure components and provides product licensing details.

Backups on Repository

This report provides detailed information about files stored on backup repositories.

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

    o 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.

    o The **Top Repositories by VM/Computer/File/Application Backups, GB** 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.

IMPORTANT!

If one restore point contains several VMs, the report will not provide detailed information on the size of individual backups for every VMs in this restore point.

Report Parameters

You can specify the following report parameters:

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

- **Backup repositories**: defines a list of backup repositories to include in the report.

- **Protected workloads**: defines types of objects to include in the report (*Virtual machine*, *Computer*, *File share*, *Enterprise Application*).

Backups on Repository

Description

This report provides information about VM, computer and file backups stored on backup repositories.

Report Parameters

Scope:	Backup Infrastructure
Backup repositories:	All repositories
Protected workloads:	All types

Summary

Repositories number:	124
Scale-out repositories:	0
Used space:	4.59 TB
File sources stored:	2
Computers stored:	7
VMs stored:	81
Enterprise Application stored:	0

Top Repositories by Used Space, %
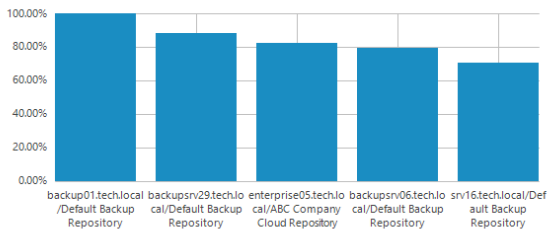
Top Repositories by VM Backups, GB
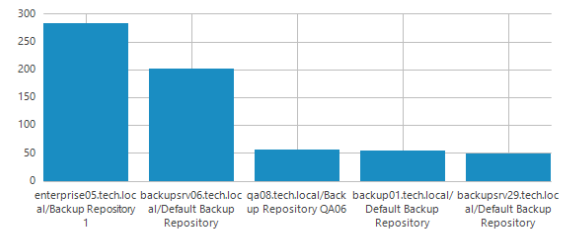
Top Repositories by Computer Backups, GB
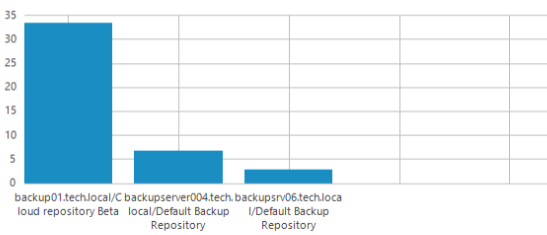
Top Repositories by File Backups, GB
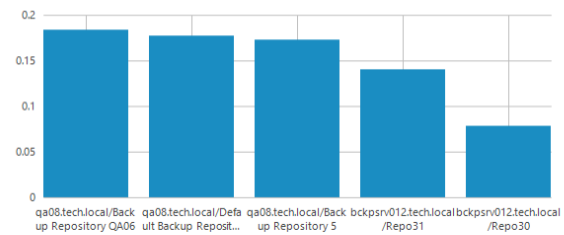
Top Repositories by Application Backups, GB
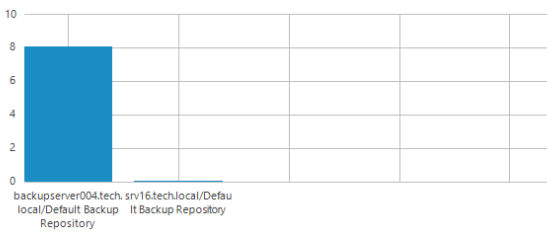
backup01.tech.local\Default Backup Repository

Repository type: Microsoft Windows
Capacity: 99.45 GB
Free space: N/A
Used space: 99.45 GB
VM backups size: 55.15 GB
Computer backups size: 0 B
File backups size: 0 B
Application backups size: 0 B

VM Backups

Virtual Machine	Full Backups #	Increments #	Restore Points #	Full Backups Size, GB	Increments Size, GB	Total Backups Size, GB	Parent Jobs	Latest Restore Point
monitor2	1	17	18	22.67	32.48	55.15	Backup Job Local	10/12/2021 11:00 AM

backup01.tech.local\Cloud repository Beta

Repository type: Cloud
Capacity: 50 GB
Free space: 16.13 GB
Used space: 33.87 GB
VM backups size: 0 B
Computer backups size: 33.4 GB
File backups size: 0 B
Application 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 Restore Point
srv1	1	6	7	27.86	5.53	33.38	Windows server - Entire computer_backup02	10/21/2021 12:30 AM
srv2	1	4	5	0.01	0.01	0.02	Agent Backup Job Server	10/20/2021 5:01 PM

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 Client triggered for the Veeam Backup & Replication infrastructure.

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

    o The **Total Issues Number** chart shows the total number of alarms specified in the **Alarm Status** parameter.

    o 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.

Report Parameters

You can specify the following report parameters:

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

- **Alarms statuses**: defines statuses of alarms to display in the report (*Acknowledged*; *Error*; *Error, Warning*; *Error, Warning, Acknowledged*).

Veeam

Current Backup Alarms State Overview

Description

This report shows all currently unresolved alarms for the backup infrastructure.

Report Parameters

Scope:	Backup Infrastructure
Alarm statuses:	Errors and Warnings

Summary

Total Issues Number

22

40
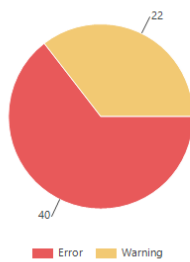
■ Error ■ Warning

Top 10 Issues

Alarm Name	Warnings	Errors	Total Issues
Backup repository connection failure	0	7	7
Backup proxy connection failure	0	5	5
Remote console may demonstrate poor performance	4	0	4
Plug-in backup data collection failure	0	3	3
Jobs utilizing HotAdd mode take a considerable amount of time	3	0	3
Hyper-V jobs hang when using networkless guest processing mode	0	3	3
Veeam console failed to display backup infrastructure components	0	3	3
Potential data loss when using Instant VM Recovery	3	0	3
Backup job state	0	2	2
Backup Copy job state	1	1	2

Details

Backup Server: 172.24.155.241

Object Type	Object Name	Alarm Name	Type	Repeat Count	Trigger	Time ⇕
Backup server		3				
	172.35.155.241	Job disabled	Warning	1	Job 'VPC Configuration Backup' is in the disabled state for more than defined in the threshold (12 hours).	12/9/2022 10:26:00 PM
	172.35.155.241	Plug-in backup data collection failure	Error	6		1/7/2023 3:17:20 PM
	172.35.155.241	Cloud backup policy session state	Error	89	Policy "SimpleSQLPolicy" backup session for Azure SQL "yak-db1" finished with error	1/8/2023 5:33:07 AM
Intelligent Diagnostics		2				
	172.35.155.241	Veeam console failed to display backup infrastructure components	Error	1	Veeam console failed to display backup infrastructure components pattern is found Issue occurred at 12/9/2022 9:56:51 AM (UTC-8:00)	12/9/2022 11:11:24 AM
	172.35.155.241	Remote console may demonstrate poor performance	Warning	1	Remote console may demonstrate poor performance pattern is found Issue occurred at 12/9/2022 9:58:12 AM (UTC-8:00)	12/9/2022 11:11:24 AM

Backup Server: 172.24.185.193

Object Type	Object Name	Alarm Name	Type	Repeat Count	Trigger	Time ⇕
Backup server		11				
	172.35.185.193	Job disabled	Warning	32	Job 'ParisVm21' is in the disabled state for more than defined in the threshold (12 hours).	1/4/2023 4:15:46 PM
	172.35.185.193	Job disabled	Warning	32	Job 'ParisVm22' is in the disabled state for more than defined in the threshold (12 hours).	1/4/2023 4:15:46 PM
	172.35.185.193	Job disabled	Warning	32	Job 'ParisVm23' is in the disabled state for more than defined in the threshold (12 hours).	1/4/2023 4:15:46 PM
	172.35.185.193	Job disabled	Warning	32	Job 'ParisVm24' is in the disabled state for more than defined in the threshold (12 hours).	1/4/2023 4:15:46 PM
	172.35.185.193	Job disabled	Warning	32	Job 'ParisVm25' is in the disabled state for more than defined in the threshold (12 hours).	1/4/2023 4:15:46 PM
	172.35.185.193	Cloud backup policy session state	Error	15213	Policy "ParisVm25" backup session for VM "zd-small-deb-forem--004994" finished with warning	1/6/2023 6:41:41 PM
					Policy "ParisVm25" snapshot session for VM "zd-small-deb-forem--004994" finished with warning	

Use Case

You can use this report to detect and resolve current and the most pressing issues with Veeam Backup & Replication.

Delegated Restore Permissions Overview

This report analyzes restore permissions configured in Veeam Backup Enterprise Manager.

- The **Details** section displays the list of users who can restore entire VMs, guest OS files and application items with 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.

Report Parameters

You can specify the following report parameters:

- **Enterprise Manager servers**: defines a list of Veeam Backup Enterprise Manager servers to include in the report.

- **Group by**: defines whether data in the report output will be grouped by *User* or *Object*.

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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

Enterprise Manager servers:	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.

Job Configuration Dump

The report provides configuration details for Veeam Backup & Replication jobs.

- The **Details** section provides information on Veeam Backup & Replication jobs configuration properties and settings configured for these properties, including schedule, notifications, and backup file encryption settings.

Report Parameters

You can specify the following report parameters:

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

- **Protection type**: defines types of Veeam Backup & Replication jobs to include in the report (*All items*, *VM backup*, *Replication*, *Backup copy*, *Surebackup*, *File to tape backup*, *Backup to tape*, *File backup*, *Agent backup job*, *Agent backup policy*, *CDP policy*, *Application backup policy*).

- **Jobs**: defines Veeam Backup & Replication jobs to analyze in the report.

- **Configuration setting areas**: defines job configuration properties to include in the report.

VEEAM

Job Configuration Dump

Description

This report provides complete information on current job configuration parameters.

Report Parameters

Scope:	Backup Infrastructure
Protection type:	SureBackup, VM backup, Replication, File to tape, Backup to tape, Backup copy, Agent backup policy, Agent backup, Agent backup job, File backup, CDP policy, Application backup policy
Jobs:	All Jobs
Configuration setting areas:	All items

Details

Job Name: AD Backup (VM backup - enterprise05.tech.local)

Wizard Page	Property	Setting
Advanced		
	Backup > Active full backup	False
	Backup > Backup mode	Increment
	Backup > Create active full backups kind	Daily
	Backup > Create synthetic full backups on	Saturday
	Backup > Create synthetic full periodically	True
	Backup > Transform previous backup chains into rollbacks	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	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
	Reset CBT on each Active Full backup automatically	True
	Scripts > Post-script	False
	Scripts > Pre-script	False
	Storage > Backup file encryption	False
	Storage > Compression level	Optimal
	Storage > Exclude deleted file blocks	True
	Storage > Exclude swap file blocks	True
	Storage > Inline data deduplication	True
	Storage > Storage optimization	1MB (recommended)
	vSphere > CBT for all protected VMs automatically	True
	vSphere > Use change block tracking data	True
	vSphere > VMware Tools quiscence	False
Guest processing		
	Application-aware processing	True
	Autodetect guest interaction proxies	True
	Guest file system indexing	False
	Windows credentials	as2016dom\Administrator
Name		
	Description	Created by ENTERPRISE05\Administrator
	Name	AD Backup
Schedule		
	Automatic retry	True
	Backup window	Monday: All day; Tuesday: All day; Wednesday: All day; Thursday: All day; Friday: All day; Saturday: All day; Sunday: All day
	Retry failed items processing (times)	3
	Run job automatically	True
	Run job periodically every	True
	Run job periodically period	1 hour(s)
	Run job periodically schedule	Monday: All day; Tuesday: All day; Wednesday: All day; Thursday: All day; Friday: All day; Saturday: All day; Sunday: All day
	Run the job daily option	False
	Run the job monthly option	False
	Terminate job if it exceeds allowed backup window	True
	Time periods > Start time within an hour (minutes)	0
	Wait before each retry attempt (minutes)	10
Secondary target		
	HPE 3PAR Peer Persistence secondary target enabled	False
	HPE 3PAR remote copy enabled	False
	Nimble Snapshot replicated copy	False

Use Case

The report helps you review settings of Veeam Backup & Replication jobs to ensure that the jobs are properly configured.

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 **Jobs with Object-level Exclusions**, **Jobs with Disk Exclusions** and **File System Exclusions** charts that display the share of jobs with excluded objects, disks and file system objects and jobs without exclusions.

- The **Exclusions** tables show exclusion settings and objects excluded from processing in Veeam Backup & Replication.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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*).

- **Jobs**: defines Veeam Backup & Replication jobs to analyze in the report.

- **Exclusion types**: defines type of excluded objects to show in the report (*All items*, *Object-level*, *Disk*, *File System*, *Default exclusions*).

- **Hide jobs without configured exclusions**: defines whether jobs without exclusions must be included in the report.

Veeam

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
Jobs:	All Jobs
Exclusion types:	All types
Hide jobs without configured exclusions:	Yes

Summary

Total number of jobs:	94
Jobs with Object-level exclusions:	11
Jobs with disk exclusions:	4
Jobs with File system exclusions:	0
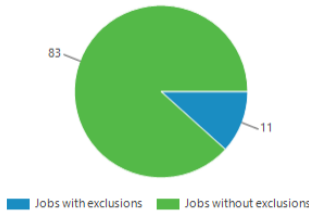
Jobs with Object-level Exclusions   **Jobs with Disk Exclusions**   **File System Exclusions**

83   11

90   4

94
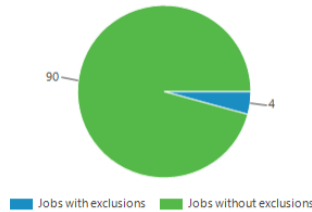
Jobs with exclusions   Jobs without exclusions   Jobs with exclusions   Jobs without exclusions   Jobs without exclusions
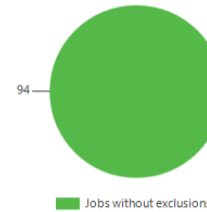
Object-level Exclusions

Job Name	Included Objects		Excluded Objects	
	Name	Type	Name	Type
⊟ Backup Copy Job 23				
	mmf	Backup	msvo6z	VM
⊟ Backup Job 3 hv gfs				
	ms-ub-tape-01	VM	ms-19-1_replica	VM
	ms-22-node-01	Host	ms-19-1	VM
			ms-22-1_replica	VM
			ms-22-1_replica1	VM
			ms-ub-tape-01_replica	VM
			ms-win22-1_replica1	VM
			node-1-vm1	VM
			node-1-vm1_replica_mmf	VM
			Virtual_Lab_Hyper-V	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.

Protected VMs Job Schedule

This report publishes the timetable for all scheduled backup, replication and backup copy jobs. The report analyzes all recurrent jobs in the selected scope and reveals advanced details:

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

    - 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 scheduled 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Job types**: defines a job type to evaluate in the report (*VM backup*, *Replication*, *Backup copy*).

- **VM exclusion rule**: 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*.

- **Analyze VM templates**: defines whether VM templates should be included in the report.

> **NOTE:**
>
> Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

Veeam

Protected VMs Job Schedule

Description

This report provides information about job schedule for protected VMs.

Report Parameters

Scope:	Virtual Infrastructure
VM exclusion rule:	
Group by:	Location
Job types:	VM backup, Replication, Backup copy
Analyze VM templates:	No

Summary

Jobs Schedule
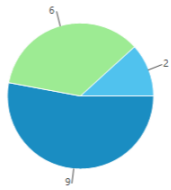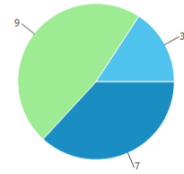
Legend: Continuously, Daily, Monthly

Protected VMs

Legend: Backup, Backup Copy, Replication

Details

VM Location: ms-22-node-01

VMs	Schedule	Time	Runs On	Full Backup	Backup Job	Job Type	Retention Policy Value	Type
node-1-vm1	Daily	at 9:00:00 PM	WeekDays	-	Replication Job 3 hv	Replication	7	Days
ms-ub-tape-01	Continuously	When a new restore point appears	N/A	-	Backup Copy Job 4 hv	Backup Copy	7	Days
ms-ub-tape-01	Continuously	When a new restore point appears	N/A	-	new copy job	Backup Copy	7	Days
ms-ub-tape-01	Continuously	When a new restore point appears	On 22 day of September, October, November, December	-	new periodic copy	Backup Copy	7	Days

VM Location: pdcqa100.tech.local

VMs	Schedule	Time	Runs On	Full Backup	Backup Job	Job Type	Retention Policy Value	Type
mmf-1	Continuously	When a new restore point appears	N/A	-	Backup Copy Job 1 vm	Backup Copy	7	Days
mmf-2	Continuously	When a new restore point appears	N/A	-	new copy job	Backup Copy	7	Days
mmf-3	Continuously	When a new restore point appears	On 22 day of September, October, November, December	-	new periodic copy	Backup Copy	7	Days
mmf-4	Monthly	at 11:00:00 AM	Third Wednesday - January, March	-	Replication Job 1 vmware	Replication	7	Days
mmf-5	Monthly	at 11:00:00 AM	Third Wednesday - January, March	-	Replication Job 1 vmware	Replication	7	Days

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.

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 in the report:

    - The **Overview** table shows the list of extents in the repository, their type, type of stored backup files, maximum number of concurrent tasks, region, container, operational restore windows settings, immutability, encryption settings, infrequent access storage, storage consumption limit, archive policy settings and deep archive settings.

    - 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

Veeam

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

Infrastructure Statistics		Resource Statistics		Extent Statistics		Policy Used	
Scale-out backup repositories:	4	Total capacity:	1.54 TB	Windows Server:	4	Performance:	1
Performance tier extents:	4	Total free space:	1.25 TB	Linux Server:	0	Data locality:	3
Capacity tier extents:	2	Data on capacity tier:	0.01 TB	CIFS Share:	0		
Archive tier extents:	1	Data on archive tier:	0.00 TB				
Jobs:	44	Utilization ratio:	19.43%	Deduplicating Storage Appliance:	0		
Stored workloads:	20			Amazon Glacier:	1		
				Amazon S3:	2		
				Microsoft Windows:	4		

Top Utilized SOBRs
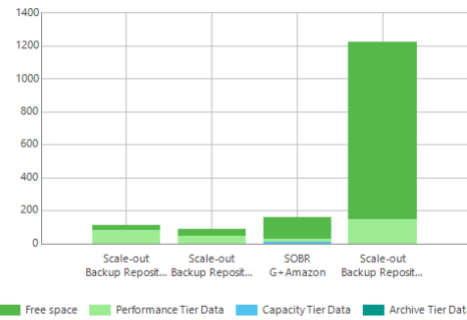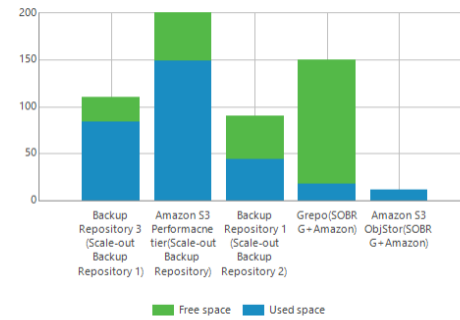
Legend: Free space, Performance Tier Data, Capacity Tier Data, Archive Tier Data

Top Utilized Extents

Legend: Free space, Used space

Scale-out Backup Repository Configuration

Backup placement policy:	Data locality
Copy policy:	Disabled
Operational restore window:	2 days
Archiving policy:	2 days

Performance Tier	Type	Backup Files to Store	Max Concurrent Tasks	Immutability
Amazon S3 Performacne tier	Microsoft Windows	Full and Increment	4	N/A

Capacity Tier	Type	Region	Container	Max Concurrent Tasks	Immutability	Encryption	Infrequent Access Storage	Storage Consumption Limit
Amazon S3 Capacity tier	Amazon S3	EU (Frankfurt)	es-bucket-vbr11	N/A	Disabled	Disabled	Disabled	1 TB

Archive Tier	Type	Region	Container	Immutability	Deep Archive
Amazon Glacier S3 Archive tier	Amazon Glacier	EU (Frankfurt)	es-bucket-vbr11	Disabled	Enabled

Dynamics of SOBR Free Space Usage

Legend: Capacity, Performance Tier Data, Capacity Tier Data, Archive Tier Data
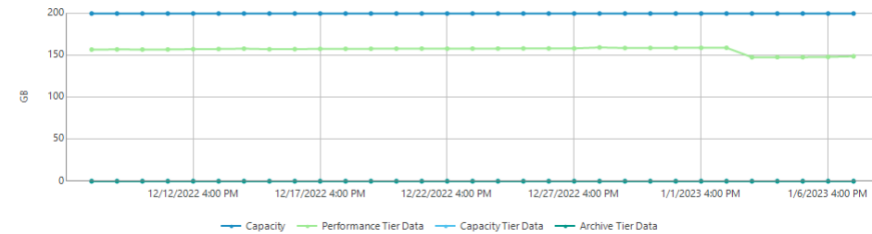
Extent	Capacity (GB)	Free Space (GB)	Full Backups Files	Full Backups Size (GB)	Increments Files	Increments Size (GB)	Workloads
Amazon Glacier S3 Archive tier	N/A	N/A	0	0.00	-	-	0
Amazon S3 Capacity tier	1024.00	1024.00	0	0.00	0	0.00	0
Amazon S3 Performacne tier	199.88	50.87	1	0.49	0	0.00	1
Total:	**1223.88**	**1074.87**	**1**	**0.49**	**0**	**0.00**	**1**

Use Case

The report shows configuration and utilization data for scale-out backup repositories and their extents.

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 **Summary** section includes the following elements:

    o The **Failover Plan by State** chart shows statuses of existing failover plans.

    o The **VMs per Failover Plan** chart shows the number of VMs comprised in each failover 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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

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:	6
Total VMs:	7
Total Data Size:	16.23 GB

Failover Plan by State

VMs per Failover Plan

Ready

■ Failover plan 1	■ Failover plan 3 CDP	■ MK failover plan HV
■ Failover plan 2 hv	■ Failover plan test	■ MK failover plan VW
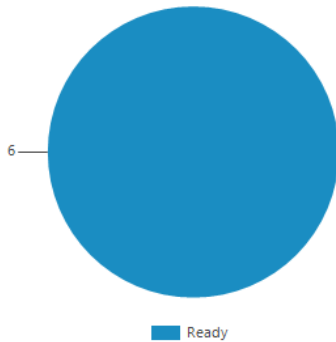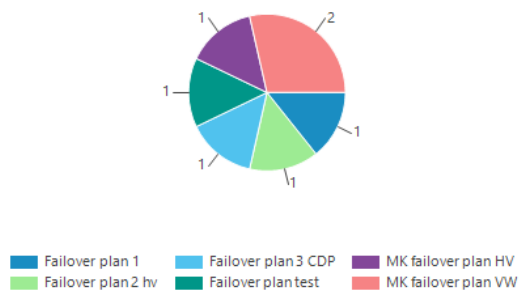
Details

Backup Server: ms-vbr11a.tech.local

Platform: VMware

Failover Plan	VMs	Size (GB)	Delay (sec)	Created by	Status
⊟ MK failover plan HV				TECH\administrator	Ready
	km-ub20 (Replica VM not found)	0.00	60		

Failover Plan	VMs	Size (GB)	Delay (sec)	Created by	Status
⊟ MK failover plan VW				TECH\administrator	Ready
	KM-2012R2-WG (Replica VM not found)	1.68	60		
	mk-1 (Replica VM not found)	0.01	60		
⊟ Failover plan test				TECH\administrator	Ready
	iiaut	4.48	60		
⊟ Failover plan 3 CDP				TECH\administrator	Ready
	vvg7-centos (Replica VM not found)	0.00	60		

Use Case

The report allows you to keep records of your failover plans for auditing purposes and compliance tests.

Workload Protection History

This report provides historical information on workloads data protection.

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

  - The **Success and Failure Rates History** chart displays the amount of successful and failed resulting job sessions during the reporting period. A resulting job session is the last session started for a job on each day of the reporting period.

  - The **Success and Failure Rates History** table provides information on each day of the reporting period, including number of processed unique workloads, total number of sessions, number of resulting sessions finished successfully, finished with warning and finished with errors, number of running sessions and the percentage of resulting sessions finished successfully and finished with errors.

- The **Details** table provides information on each backup job based on the selected properties.

  Veeam Cloud Connect service providers cannot see performance data for proxies used by tenant data protection jobs.

Report Parameters

You can specify the following report parameters:

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

- **Business View objects**: defines a list of Business View objects to include in the report.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Object types**: defines a list of backup infrastructure objects to include in the report (*VM*, *Computer*, *File share*, *Enterprise Application*).

- **Job types**: defines a list of job types to evaluate in the report (*VM backup*, *Replication*, *File to tape*, *Backup to tape*, *Backup copy*, *SQL log backup*, *Oracle log backup*, *Agent backup policy*, *Agent backup*, *File backup*, *Nutanix AHV backup*, *Application backup policy*, *PostgreSQL log backup*, *Cloud Director backup*, *Cloud Director replication*, *SOBR sessions*: *Offload (copy policy)*, *Offload (move policy)*, *Download*, *Archiving*, *Retrieval*).

- **Jobs**: defines a list of jobs to include in the report.

- **Job statuses**: defines a backup job status to analyze in the report (*Success*, *Failed*, *Warning*, *Running*).

- **Job inclusion rule**: defines a job to include in the report. You can enter job name explicitly or create a wildcard mask by using the asterisk (*) to replace any number of characters. Multiple entries are separated by comma.

- **Period**: defines the time period to analyze in the report.

- **Columns**: defines job properties to analyze in the report. Use the **Filter** field to search for the necessary properties by name.

- **Sort by**: defines the way data will be grouped in the report (by *Object name*, *Job name*, *Job start time*, *Job finish time*, *Backup status*).

- **Show summary**: defines whether the report must include the protection rates summary.

NOTE：
- o Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, you will not be able to generate the report based on **Business View objects**.
- o Veeam ONE Web Client displays file backup copy jobs together with other backup copy jobs.

Veeam

Workload Protection History

Description

This report provides detailed historical information on the protection state of individual workloads.

Report Parameters

Scope:	Backup Infrastructure
Workload types:	VM, Computer, File Share, Enterprise Application
Job types:	VM backup, Replication, File to tape, Backup to tape, Backup copy, SQL log backup, Oracle log backup, Agent backup policy, Agent backup, File backup, Nutanix AHV backup, Application backup policy, PostgreSQL log backup, Cloud Director backup, Cloud Director replication, Offload (move policy), Download, Archiving, Retrieval
Jobs:	All Jobs
Job statuses:	All
Job inclusion rule:	
Sort by:	Object name
Interval:	Past week (1/2/2023 - 1/8/2023)
Columns:	Object Name, Job Name, Job Type, Backup Server, Start Time, Backup Mode, Schedule Type, Backup Status

Summary

Total number of unique workloads:	13
Virtual machines:	10
Computers:	0
File shares:	0
Databases:	3
Total number of sessions:	173
Total number of resulting sessions:	79
Average success rate:	92.11 %
Average failure rate:	7.89 %

Success and Failure Rates History
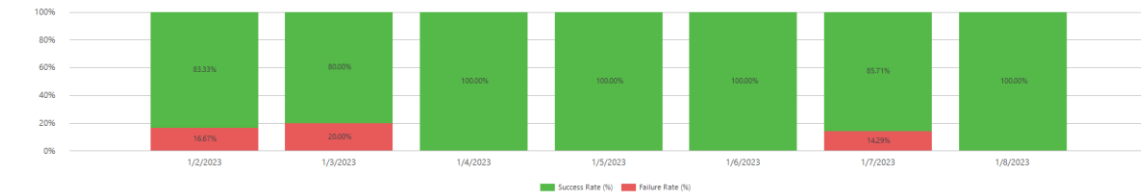
Date	Total # of Unique Workloads	Total # of Sessions	Total # of Resulting Sessions	# of Succeeded Resulting Sessions	# of Resulting Sessions with Warning	# of Failed Resulting Sessions	# of Running Sessions	Failure Rate (%)	Success Rate (%)
1/2/2023	12	15	12	6	4	2	0	16.67 %	83.33 %
1/3/2023	7	16	10	7	1	2	0	20.00 %	80.00 %
1/4/2023	10	10	10	6	4	0	0	0.00 %	100.00 %
1/5/2023	10	29	12	8	4	0	0	0.00 %	100.00 %
1/6/2023	9	32	9	5	4	0	0	0.00 %	100.00 %
1/7/2023	13	28	14	7	5	2	2	14.29 %	85.71 %

Details

Object Name	Job Name	Job Type	Backup Server	Start Time	Backup Mode	Schedule Type	Backup Status
apache04	Web Servers Backup	VM backup	enterprise05.tech.local	1/2/2023 6:00 AM	Forward Incremental	Daily	Warning
apache04	Web Servers Backup	VM backup	enterprise05.tech.local	1/4/2023 6:00 AM	Forward Incremental	Daily	Warning
apache04	Web Servers Backup	VM backup	enterprise05.tech.local	1/5/2023 6:00 AM	Forward Incremental	Daily	Warning
apache04	Web Servers Backup	VM backup	enterprise05.tech.local	1/6/2023 6:00 AM	Forward Incremental	Daily	Warning
apache04	Web Servers Backup	VM backup	enterprise05.tech.local	1/7/2023 6:00 AM	Forward Incremental	Daily	Warning
apache04	Web Servers Backup	VM backup	enterprise05.tech.local	1/8/2023 6:00 AM	Forward Incremental	Daily	Warning
apache05	Web Servers Backup	VM backup	enterprise05.tech.local	1/2/2023 6:00 AM	Forward Incremental	Daily	Warning
apache05	Web Servers Backup	VM backup	enterprise05.tech.local	1/4/2023 6:00 AM	Forward Incremental	Daily	Warning
apache05	Web Servers Backup	VM backup	enterprise05.tech.local	1/5/2023 6:00 AM	Forward Incremental	Daily	Warning
apache05	Web Servers Backup	VM backup	enterprise05.tech.local	1/6/2023 6:01 AM	Forward Incremental	Daily	Warning
apache05	Web Servers Backup	VM backup	enterprise05.tech.local	1/7/2023 6:00 AM	Forward Incremental	Daily	Warning
apache05	Web Servers Backup	VM backup	enterprise05.tech.local	1/8/2023 6:01 AM	Forward Incremental	Daily	Warning
as2016DC	AD Backup	VM backup	enterprise05.tech.local	1/2/2023 6:00 PM	Forward Incremental	Periodically	Warning
as2016DC	AD Backup	VM backup	enterprise05.tech.local	1/4/2023 6:00 PM	Forward Incremental	Periodically	Warning
as2016DC	AD Backup	VM backup	enterprise05.tech.local	1/5/2023 9:00 AM	Forward Incremental	Periodically	Warning

Use Case

This report provides historical information on backup sessions for workloads in your backup infrastructure.

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.

Reports included:

- Backups on Tape

- Exported Tapes

- Tape Backup Jobs

- 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, including 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.

IMPORTANT!

If one restore point contains several VMs, the report will not provide detailed information on the size of individual backups for every VMs in this restore point.

Report Parameters

You can specify the following report parameters:

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

- **Media pools**: defines a list of media pools to include in the report.

- **Tapes**: defines a list of tapes to include in the report.

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 pools:	All
Tapes:	All

Details

Tape ID:	0014002G
Used Space:	9 GB
VM Backups size:	26.03* GB
Computers Backup size:	0 GB
Free space:	1 GB
Expires in:	Expired

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
ext0230	1	0	1	26.03*	0	26.03*	BTT Ext0230	3/17/2022 10:07 AM

*Some files were written to tape not entirely. Files size may differ from actual.

Backed up File Sources

File Share / Server	Last Written to Tape
qa08.tech.local	3/17/2022 2:18 AM

Use Case

This report helps you monitor tape space usage and the number of VMs, computers and file shares stored on tapes.

Exported Tapes

The report provides inventory information on tapes exported from tape libraries connected to Veeam Backup & Replication servers.

- The **Summary** section shows the total number of exported tapes.

- The **Number of Exported Tapes in Libraries** chart displays how many tapes were exported from connected libraries.

- The **Details** table provides information on each tape library, including a list of all exported tapes, their IDs, media sets and media pools, backup job and exportation date and time.

Report Parameters

You can specify the following report parameters:

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

- **Tape libraries**: defines tape libraries to include in the report.

- **Jobs**: defines a list of tape jobs to analyze in the report.

- **Sort by**: defines how data will be sorted in the report (*Date of export* or *Job name*).

Veeam

Exported Tapes

Description

This report provides information about exported tapes.

Report Parameters

Scope:	Backup Infrastructure
Tape libraries:	All libraries
Jobs:	All Jobs
Sort by:	Date of export

Summary

Number of exported tapes: 2

Number of Exported Tapes in Libraries
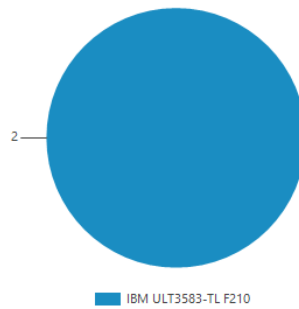
■ IBM ULT3583-TL F210

Details

Library: **IBM ULT3583-TL F210**

Tape ID	Media Set	Media Pool	Expiration Date	Written by Job	Date of export
MMF014L1		Media Pool 2	Not Defined		11/3/2022 7:23 AM
MMF013L1		Media Pool 2	Not Defined		11/3/2022 7:25 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.

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.

Report Parameters

You can specify the following report parameters:

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

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Tape Backup Jobs

Description

This report provides information on tape backup jobs including the list of VMs and computers offloaded to tapes.

Report Parameters

Scope: Backup Infrastructure

Summary

VMs and computers with disk backups:	10156
VMs and computers on tapes:	3
Tape data size:	88.82 GB
Tapes used:	9

Details

Backup to Tape Job	Restore Point	VMs/Computers	Tape ID	Type
⊟ qa08.tech.local\Test Backup to Tape Job 3	1			
	10/19/2021 9:30 AM	1	SWGO2001	Full
⊟ qa08.tech.local\BTT Ext0130	2			
	10/19/2021 7:27 AM	1	00230004, 00230005	Full
	10/19/2021 9:30 AM	1	00230001, 00230005, 00230006, 0023000G	Full
⊟ qa08.tech.local\BTT Ext0230	1			
	3/17/2022 10:02 AM	1	0014002G, 0014002O, 00140039	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.

Tape GFS Backup Files

This report provides historical information about 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 the **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.

Report Parameters

You can specify the following report parameters:

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

- **Media pools**: defines a list of Veeam Backup & Replication GFS media pools to analyze in the report.

Veeam

Tape GFS Backup Files

Description

This report provides historical information about backups stored on GFS Tape Media Pools.

Report Parameters

| Scope: | Backup Infrastructure |
| Media pools: | All |

Summary

GFS Media Pools number:	2
Total number of historical backup files:	43
Total number of restore points:	43
Used space (GB):	11.16

Historical Restore Points Count

- Daily
- Weekly
- Monthly
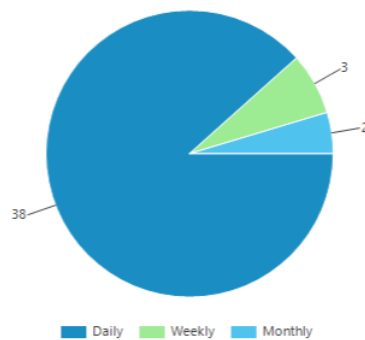
Details

Media Pool: mmf-win19vbr.tech.local/GFS Media Pool 1

Libraries assigned: IBM ULT3583-TL F210

Existing Restore Points

Backed Up Object (Type)	Backed Up VMs/Computers	Backup Files Size, GB	Restore Point Date	Tape Job Name	Tape ID
Media Set: Daily					
Backup Repository 2 (Repository)	4	5.89	Several dates. Check drill-down	Backup to Tape Job 2 gfs	MMF016L1
Media Set: Weekly					
Backup Repository 2 (Repository)	3	5.27	Several dates. Check drill-down	Backup to Tape Job 2 gfs	MMF017L1
Media Set: Monthly					
Backup Repository 2 (Repository)	2	0.00	10/26/2022	Backup to Tape Job 2 gfs	MMF018L1

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.

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 **Jobs Writings to The 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.

Report Parameters

You can specify the following report parameters:

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

- **Media pools**: defines a list of Veeam Backup & Replication GFS media pools to analyze in the report.

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 pools:	All

Details

Media Pool: etna/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.

Tape Media Retention Period

This report provides information on retention policy settings configured for tape media pools in Veeam Backup & Replication.

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

    o The **Tapes By Expiration Status** chart shows 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.

    o The **Expired Tapes Status** chart shows 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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*).

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

109 / 1 / 4 / 8

■ Any time ■ Expired ■ No expiration ■ Other

Expired Tapes Status

2 / 6

■ Offline ■ Online
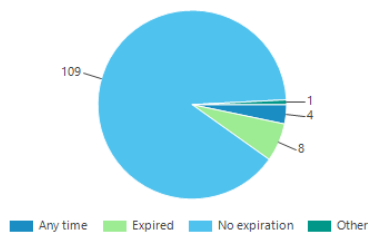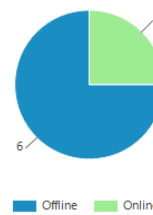
Expired Media

Library: HP MSL G3 Series 9.50
Media Pool: Agent GFS Media Pool
Protection period: GFS specific

Media Set	Tape	Tape State	Tape Location	Last Write Time	Capacity (GB)	Free Space (GB)	Expiration Date
Daily media set #1 24.02.2021 14:07							
	SWDM4007	Online	Slot 11	6/12/2021 1:09:33 PM	20.00	19.73	6/19/2021 1:09:12 PM
Monthly media set #3 08.03.2021 0:02							
	SWDM400C	Offline	Offline	6/6/2021 11:01:33 PM	20.00	19.98	9/6/2021 11:01:22 PM
Quarterly media set #4 05.04.2021 0:01							
	SWDM400D	Offline	Offline	7/8/2021 9:01:44 PM	20.00	20.00	7/8/2022 9:01:09 PM
Weekly media set #2 01.03.2021 0:02							
	SWDM4008	Offline	Offline	5/30/2021 11:07:58 PM	20.00	19.96	6/27/2021 11:07:43 PM
Yearly media set #5 03.01.2022 6:01							
	SWDM400E	Online	Drive 1	1/3/2022 7:31:16 AM	20.00	1.32	1/3/2023 5:52:15 AM

Media Pool: VM GFS Media Pool
Protection period: GFS specific

Media Set	Tape	Tape State	Tape Location	Last Write Time	Capacity (GB)	Free Space (GB)	Expiration Date
Monthly media set #4 08.03.2021 0:02							
	SWDM4009	Offline	Offline	6/8/2021 7:03:14 AM	20.00	1.17	9/6/2021 11:13:16 PM
Quarterly media set #6 05.04.2021 0:01							
	SWDM400F	Offline	Offline	7/11/2021 1:23:01 AM	20.00	1.54	7/10/2022 11:30:50 PM
Weekly media set #5 15.03.2021 17:22							
	SWDM400A	Offline	Offline	7/12/2021 12:24:33 AM	100.00	1.41	7/26/2021 12:36:35 AM

Use Case

This report allows you to review retention policies applied to tapes and estimate available tape resources.

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 **Summary** section includes the **Tapes By Expiration Date** chart that 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, including Veeam Backup & Replication server where the vault was created, stored offline tapes, previous location of each tape and 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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

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

Legend: Any Time | Expired
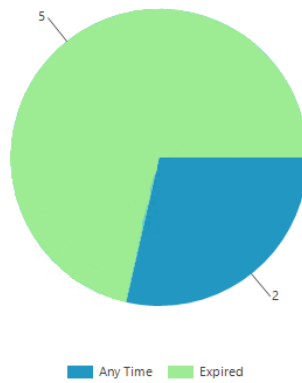
Details

Backup Server: etna

Vault Name	Tape	Tape Library	Media Pool	Media Set	Retention	Expires in...
Atlanta Veeam Media Vault	1	1	1	1		
	0014003F	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		
	0014003E	HP MSL G3 Series 3.00	GFS Media Pool 1	Daily media set #1 1/14/2019 11:59 PM	Not defined	Expired
	0014003D	HP MSL G3 Series 3.00	GFS Media Pool 1	Daily media set #1 1/14/2019 11:59 PM	Not defined	Expired
	0014003A	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.

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.

Reports included:

- Cloud Connect Inventory

- Cloud Connect Replication Provisioning

- Cloud Connect User Report (Backup)

- Cloud Connect User Report (Replication)

- Over-provisioned Backup Repositories

- Tenants Backup Compatibility

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 cloud backups and replicas, 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.

  Veeam Cloud Connect service providers cannot see performance data for proxies used by tenant data protection jobs.

- 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.

  For WAN accelerators used in Veeam Cloud Connect jobs, performance data is available only if the target WAN accelerator is present in the Veeam ONE infrastructure.

- 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 related 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 **Storages** section shows total capacity of cloud storage, amount of free space and the number of VM replicas located on each storage.

Report Parameters

You can specify the following report parameters:

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

NOTE:
- Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.
- To analyze data about replicated VMs in the report, you must connect the target virtualization servers to Veeam ONE. For details, see Connecting Servers.

Veeam

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		Workstations Backup		Physical Server Backup		VM Cloud Replica		Total Instances Used	License Expiration
		Managed	Instances	Managed	Instances	Managed	Instances	Managed	Instances		
srv92.tech.local	6	0	0	0	0	0	0	0	0	0	Never
es-win19-vbrv11.tech.local	100	0	0	0	0	0	0	0	0	0	6/1/2023

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
es-win19-vbrv11.tech.local	100	0	0	0	0	0	0	0	0

Veeam B&R Infrastructure

Backup Server	Backup Server Version	Proxy Servers	CIFS Repositories	Windows Repositories	Linux Repositories	Scale-out Repositories
srv92.tech.local	12.0.0.1335	3	0	2	0	0
es-win19-vbrv11.tech.local	11.0.0.837 P20210401	10	1	3	2	4

Backup Proxies

Type	Proxy Server		Transport Mode	Host Type	Max. Concurrent Tasks	Connected Datastores	Throttling
⊟ File Share		5					
	srv92.tech.local\Backup Proxy		Network	Windows	2		Disabled
	es-win19-vbrv11.tech.local\Backup Proxy		Network	Windows	2		Disabled
	es-win19-vbrv11.tech.local\ES-win19-PrRep2.tech.local		Network	Windows	2		Disabled
	es-win19-vbrv11.tech.local\ES-win19-PrRep.tech.local		Network	Windows	2		Disabled
	srv92.tech.local\srv93		Network	Windows	4		Disabled
⊟ VM		6					
	srv92.tech.local\VMware Backup Proxy		Automatic	Windows	2	Automatic	Disabled
	es-win19-vbrv11.tech.local\VMware Backup Proxy		Automatic	Windows	3	Automatic	Disabled
	es-win19-vbrv11.tech.local\ES-win19-PrRep.tech.local		Automatic	Windows	2	Automatic	Disabled
	es-win19-vbrv11.tech.local\ES-win19-PrRep2.tech.local		Automatic	Windows	2	Automatic	Disabled
	es-win19-vbrv11.tech.local\vonehv1.tech.local		On-Host	Windows	4	Automatic	Disabled
	es-win19-vbrv11.tech.local\ES-ubuntu-WS		Automatic	Linux	1	Automatic	Disabled
⊟ VMware CDP		2					
	es-win19-vbrv11.tech.local\ES-win19-PrRep.tech.local		N/A	Windows			Disabled
	es-win19-vbrv11.tech.local\Veeam CDP Proxy		N/A	Windows			Disabled

Tape Servers

Backup Server	Tape Server Name	Type	Connected Tape Library	Throttling
⊟ es-win19-vbrv11.tech.local				
	ES-WIN19-VBRV11	VMware (VM)	HP MSL G3 Series 9.50	Disabled

Backup Repositories

Type	Repository		Capacity (GB)	Free Space (GB)	Full Backup Size (GB)	Increments Size (GB)	Backup Jobs	VMs and Computers	File Shares
⊟ Amazon Glacier		2							
	es-win19-vbrv11.tech.local\Object storage repository 6		N/A	N/A	0.00	0.00	0	0	N/A
	srv92.tech.local\Object storage repository 1		N/A	N/A	0.00	0.00	0	0	N/A
⊟ Amazon S3		4							
	srv92.tech.local\Object storage repository 6		N/A	N/A	0.00	0.00	0	0	N/A
	srv92.tech.local\External repository 1		N/A	N/A	0.76	0.03	N/A	1	N/A
	es-win19-vbrv11.tech.local\Object storage repository 5		10240.00	10240.00	0.00	0.00	0	0	N/A
	es-win19-vbrv11.tech.local\External repository AWS		N/A	N/A	1.37	0.29	N/A	2	N/A

Scale-Out Backup Repositories

Repository	Count	Regular Extents Capacity (GB)	Free Space (GB)	Used Space (GB)	Count	Capacity Tiers Capacity (GB)	Free Space (GB)	Used Space (GB)	Backup Jobs	VMs and Computers	File Shares
es-win19-vbrv11.tech.local/SOBR 3	1	99.66	83.46	16.19		N/A	N/A	N/A	0	0	0
es-win19-vbrv11.tech.local/Scale-out Backup Repository 2	1	47.05	19.01	28.04	1	9216.00	9216.00	0.00	0	0	0
es-win19-vbrv11.tech.local/Scale-out Backup Repository 1+2	2	999.96	771.67	228.30		N/A	N/A	N/A	1	3	0
es-win19-vbrv11.tech.local/Amazon Scale-out Backup Repository	1	499.98	445.55	54.43	1	1024.00	1024.00	0.00	6	9	0

WAN Accelerators

Name	Port	Max. Connections	Max. Cache Size (GB)	Cache Free Space (GB)	Cache Location
es-win19-vbrv11.tech.local\ES-win19-wan2	6165	5	10.00	10.00	C:\VeeamWAN
es-win19-vbrv11.tech.local\ES-win19-wan1	6165	5	10.00	10.00	C:\VeeamWAN

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 provides information on 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:

- **Infrastructure objects**: defines a list of virtual infrastructure objects to include in the report.

- **CPU Utilization Thresholds**: defines minimum and maximum CPU utilization thresholds in percent.

- **Memory Utilization Thresholds**: defines minimum and maximum memory utilization thresholds in percent.

- **Datastore Utilization Thresholds**: defines minimum and maximum storage utilization thresholds in percent.

- Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.

- To analyze data about replicated VMs in the report, you must connect the target virtualization servers to Veeam ONE. For details, see Connecting Servers.

- When specifying threshold intervals, note the following:

  o 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.

  o 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.

  o 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.

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 (min):	30
CPU utilization (max):	100
Memory utilization (min):	30
Memory utilization (max):	100
Datastore space utilization (min):	30
Datastore space utilization (max):	100

Summary

Top 5 Over-provisioned Hosts/Clusters (by CPU), GHz
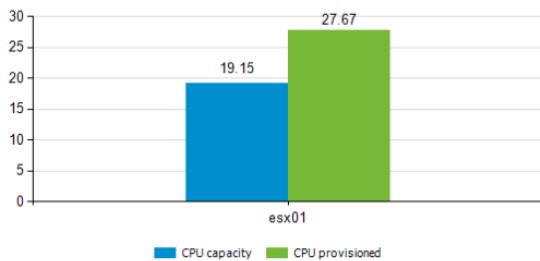
Top 5 Over-provisioned Hosts/Clusters (by Memory), GB
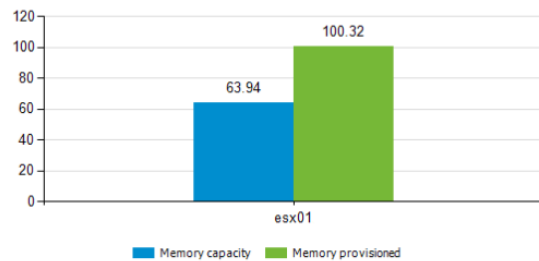
Top 5 Over-provisioned Datastores, GB
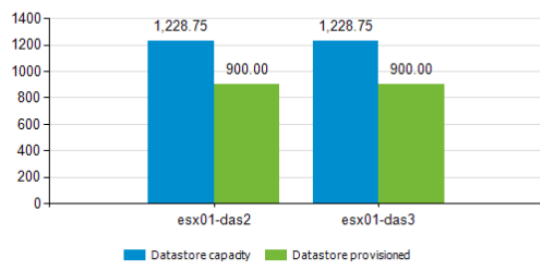
Use Case

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:

  o The **Overview** subsections provide information 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.

- o 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 provides information on 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:

- **Infrastructure objects**: defines a list of Veeam Backup & Replication servers and Veeam Cloud Connect tenants to include in the report.

- **Last <N> weeks/months**: 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.

veeam

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 period:	4 weeks (12/13/2022 - 1/9/2023)

Summary

Users Overview

N. of Users	15
Active Users	3
Inactive for past 30 days	4
Users to expire in next 30 days	0

Repositories Overview

N. of Repositories	7
Total Quota (GB)	540.00
Used Quota (GB)	234.68
Available Space (GB)	305.32
VMs and Computers	37

Top Users by Days Left to Reach Quota
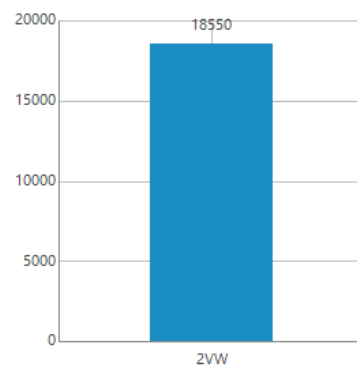
Top User by Quota Utilization (%)
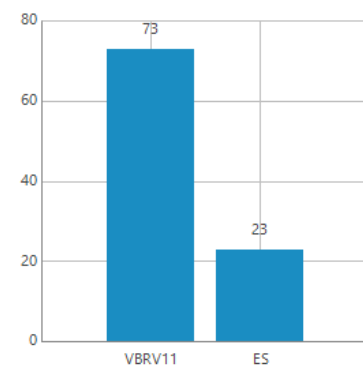
Backup Server: vvg-z2.tech.local

⊟ Tenant: **2VW**

User Contract Expiration Date: Never

⊟ Repository: **Cloud repository 2VW**

Space Usage Trend: Increasing
Days Left to Reach Quota: 18550
Last Active: 1/9/2023 7:07 AM

Date	VMs and Computers	Quota (GB)	Used Space (GB)	Free Space (GB)	Data Transferred (GB)
1/2/2023	9	30.00	0.21	29.79	0.04
1/3/2023	9	30.00	0.22	29.78	0.01
1/4/2023	9	30.00	0.23	29.77	0.00
1/5/2023	9	30.00	0.25	29.75	0.00
1/6/2023	9	30.00	0.26	29.74	0.00
1/7/2023	9	30.00	0.27	29.73	0.00
1/8/2023	9	30.00	0.21	29.79	0.00
1/9/2023	9	30.00	0.22	29.78	0.00

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:

  o The **Overview** subsections provide information on the total number of Veeam Cloud Connect replication users, number of users with standalone and VMware Cloud Director accounts, configured hardware plans and total VMs replicated. It also includes information on standalone and VMware Cloud Director tenants' compute and storage resources, their capacity, amount of provisioned and used resources.

  o The **Top Users by VMs Replicated** chart displays 5 users with the greatest number of VMs replicated to cloud.

  o The **Top Users by CPU/Memory/Storage Quota** charts display 5 users with the greatest amount of provisioned CPU, memory and storage resources, and visualize the amount of used cloud resources.

- The **Details** table provides information on 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. 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:

- **Infrastructure objects**: defines a list of Veeam Backup & Replication servers and Veeam Cloud Connect tenants to include in the report.

- **Last <N> weeks/months**: defines a time period to analyze in the report.

NOTE:

- Infrastructure topology view in Veeam ONE and Veeam Backup & Replication must match. Otherwise, Veeam ONE Web Client may show invalid data for Veeam Backup & Replication reports and dashboards.
- To analyze data about replicated VMs in the report, you must connect the target virtualization 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
Reporting period: 1 week (1/3/2023 - 1/9/2023)

Summary

Tenants Overview		Cloud Hosts Overview		VMware Cloud Director Overview	
Total tenants:	15	Hosts:	4	Provider VDCs:	5
Standalone tenants:	9	Total CPU capacity (GHz):	124.75	Organizations:	5
VMware Cloud Director tenants:	5	Total CPU provisioned (GHz):	657.34	Organization VDCs:	5
		Total CPU quota (GHz):	∞	Storage policies:	9
Tenants exceeding a quota:	2	Total CPU quota usage (GHz):	34.39	vCenter servers:	3
Hardware plans:	8	Total memory capacity (GB):	801.30	Hosts:	12
VMs replicated:	14	Total memory provisioned (GB):	639.66	Total CPU capacity (GHz):	415.15
		Total memory quota (GB):	∞	Total CPU provisioned (GHz):	4,699.13
		Total memory quota usage (GB):	19.77	Total CPU quota (GHz):	∞
		Storages:	8	Total CPU usage (GHz):	0.00
		Total storage capacity (GB):	22,852.12	Total memory capacity (GB):	2,435.82
		Total storage quota (GB):	886.00	Total memory provisioned (GB):	4,521.59
		Total storage usage (GB):	50.33	Total memory quota (GB):	∞
				Total memory usage (GB):	0.00
				Total storage capacity (GB):	277,470.52
				Total storage quota (GB):	∞
				Total storage usage (GB):	698.35

Top Users by VMs Replicated
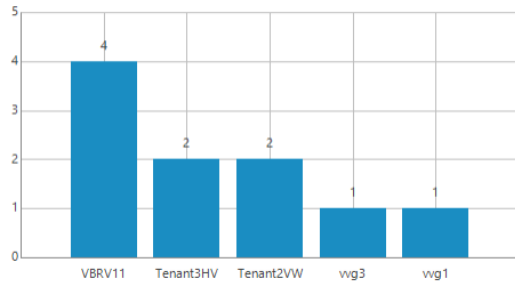
Top Users by Storage Quota
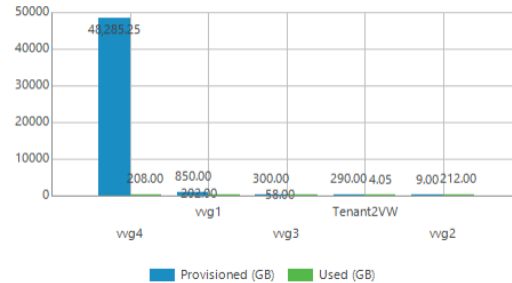
Top Users by CPU Quota

Top Users by Memory Quota

Details

Tenant: Tenant2VW
Platform: VMware vSphere
Hardware Plan: Hardware plan 2 VW

Date	N. of VMs	CPU (GHz)		Memory (GB)		Storage (GB)	
		Quota	Quota Usage	Quota	Quota Usage	Quota	Usage
1/3/2023	2	13.48	4.80	12.44	2.00	290.00	4.04
1/4/2023	2	13.48	4.80	12.44	2.00	290.00	4.04
1/5/2023	2	13.48	4.80	12.44	2.00	290.00	4.04
1/6/2023	2	13.48	4.80	12.44	2.00	290.00	4.04
1/7/2023	2	13.48	4.80	12.44	2.00	290.00	4.03
1/8/2023	2	13.48	4.80	12.44	2.00	290.00	4.03
1/9/2023	2	13.48	4.80	12.44	2.00	290.00	4.04

Tenant: VBRV11
Platform: VMware vSphere
Hardware Plan: Hardware plan VMware

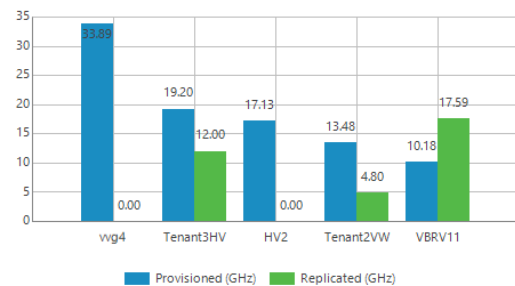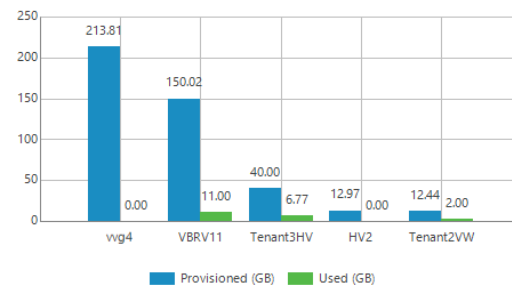| Date	N. of VMs	CPU (GHz)		Memory (GB)		Storage (GB)	
		Quota	Quota Usage	Quota	Quota Usage	Quota	Usage
1/5/2023	4	10.18	17.59	150.02	11.00	150.00	22.37
1/6/2023	4	10.18	17.59	150.02	11.00	150.00	22.37
1/7/2023	4	10.18	17.59	150.02	11.00	150.00	22.37
1/8/2023	4	10.18	17.59	150.02	11.00	150.00	22.37
1/9/2023	4	10.18	17.59	150.02	11.00	150.00	22.37

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:

- **Infrastructure objects**: defines a list of Veeam Backup & Replication servers and repositories to include in the report.

- **Space utilization**: defines the threshold for the amount of space in use on repositories.

- **Free space (min)**: defines the threshold for the amount of free space left on repositories.

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

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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)
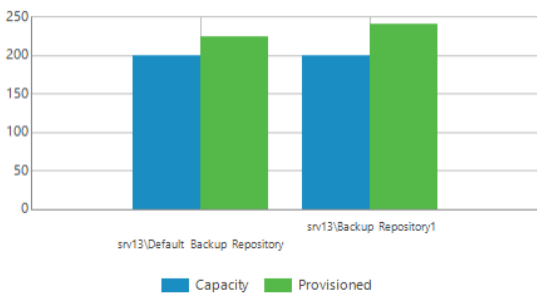
Top 5 Under-provisioned Repositories (GB)
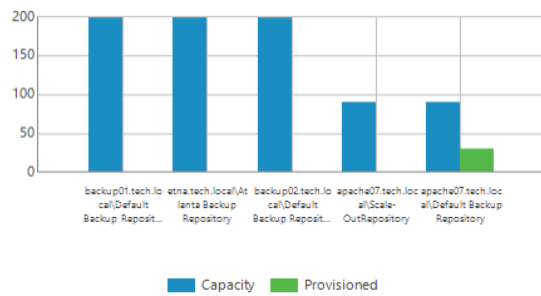
Top Repositories with Least Amount of Free Space

Repository	N. of Cloud Repositories	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VMs and Computers
backup01.tech.local\Default Backup Repository	1	35.0	89.4	30.0	33.54	9
apache07.tech.local\Scale-OutRepository	0	42.8	89.4	0.0	0.00	0
backup02.tech.local\Default Backup Repository	2	51.3	119.4	45.0	37.69	3
srv13\Backup Repository1	3	73.4	200.0	240.0	120.01	7
srv13\Default Backup Repository	2	109.7	200.0	225.0	112.51	18

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\Backup Repository1		73.4	200.0	240.0	120.01	7	∞ →
	Cloud repository 1	40.0	40.0			0	∞ →
	Cloud repository 3	10.0	10.0			0	∞ →
	CC repository for backup	50.4	190.0			7	∞ →

Repository Space Usage

Legend: Free Space — Used Space — Provisioned Space — Used Quota Space — Free Space Trend — Free Space Limit — Total Capacity
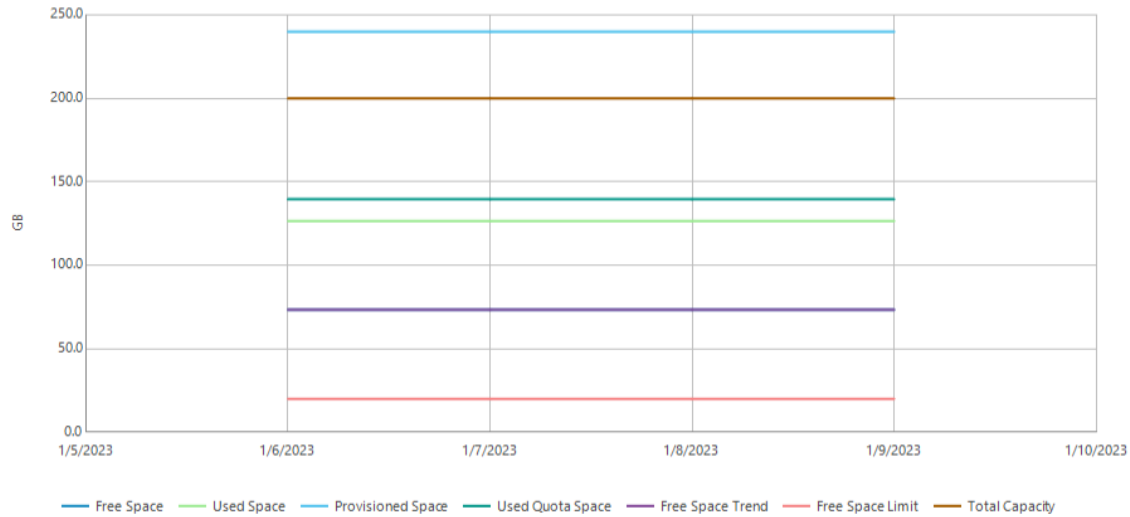
Use Case

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

Tenants Backup Compatibility

This report shows what versions of Veeam Backup & Replication run on backup servers of Veeam Cloud Connect tenants.

- The **Details** section shows a list of tenants and version and build number of Veeam Backup & Replication running on tenants backup servers.

Report Parameters

You can specify the following report parameters:

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

- **Tenants**: defines a list of Veeam Cloud Connect tenants to include in the report.

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Tenants Backup Compatibility

Description

This report shows product versions of all tenants backup servers to avoid incompatibilities.

Report Parameters

Scope: Backup Infrastructure
Tenants: All tenants

Details

Tenant Name	Backup Server Version	Build Number
TechCompanyOrg	10.0	10.0.0.4461
ABC Company	10.0	10.0.1.4854
Omega	10.0	10.0.1.4854

Use Case

If the service provider runs the latest version of Veeam Backup & Replication, it is recommended that tenants connected to this service provider also upgrade to the latest version of Veeam Backup & Replication. Tenants who run an earlier version of Veeam Backup & Replication cannot leverage the full cloud connect functionality, as features introduced in the latest version will not work for them and may result in failed jobs.

For details, see section Console Versions in Veeam Cloud Connect Infrastructure of the Veeam Cloud Connect Guide.

Veeam Enterprise Application Plug-ins

This report pack helps you evaluate database protection provided by Enterprise Application plug-ins.

Reports included:

- Database Log Protection History

- Database Processing Verification

Database Log Protection History

This report provides historical overview of all database log backup jobs. It also includes the list of protected and unprotected databases for each virtual and physical machine. The report helps you ensure that critical databases are properly protected and that transaction logs for these databases have been successfully backed up.

A database is considered to be *Protected* if it was backed up at least once during the last backup job session. A database is considered to be *Unprotected* if it was not backed up during the last backup job session.

- The **Summary** section shows the number of configured backup jobs, the total number of VMs and computers included in these jobs, number of processed application servers and clusters, and the total number of hosted databases. Also the section includes the following elements:

  - The **Databases by Protection State** subsections show the number of protected and 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 databases, number of missed intervals, actual difference between configured log backup interval and time actually required for log backup, and number of secondary target job sessions finished successfully, finished with warnings and finished with errors.

  Click a VM name in the details table to drill down to the detailed view of the backed up database instances.

Report Parameters

You can specify the following report parameters:

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

- **Database types**: defines a list of database types to include in the report (*Microsoft SQL*, *Oracle Database*, *PostgreSQL*, *SAP HANA*, *SAP on Oracle*).

- **Primary job type**: defines the types of jobs that can be selected to include in the report (*VM backup*, *Agent backup*, *Agent backup policy*, *Application backup policy*).

- **Backup jobs**: defines a list of backup jobs to include in the report. Note that the report will include information on Oracle backup jobs only for Veeam Backup & Replication servers version 11 or later.

- **Show backup copy (immediate copy) jobs**: defines whether to include information on immediate backup copy jobs in the report.

- **Interval**: defines the time period to analyze in the report.

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Database Log Protection History

Description

This report gives historical overview of all database log backup jobs including the list of protected and unprotected databases for each virtual and physical machine.
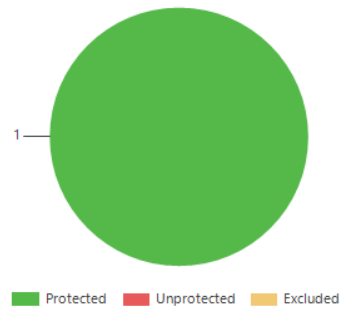
Report Parameters

Scope:	Backup Infrastructure
Interval:	1/9/2023 - 1/15/2023
Database types:	All database types
Backup job types:	All job types
Backup jobs:	All Jobs

Summary

Database log backup jobs:	2
Processed VMs:	0
Processed computers:	0
Processed application servers and clusters:	2
Processed databases and database instances:	1
Protected:	1
Unprotected:	0
Excluded:	0
Processed Oracle databases:	1
Protected:	1
Unprotected:	0
Excluded:	0

Databases by Protection State

1

Protected | Unprotected | Excluded

SLA

50 %
25 % — 50% — 75 %
0 %

Job Sessions by Status

9

Errors | Warning | Success
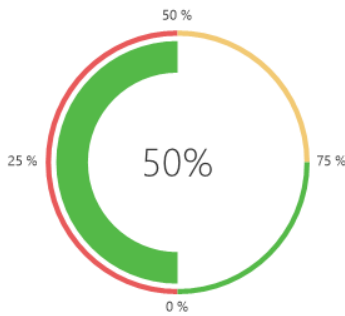
Details

Backup Server: pgbra.tech.local

Parent backup job type: Application backup policy

Backup Job: ORMAN Policy C

Application Server / Cluster	Databases		SLA	RPO Misses	Max Delay	Sessions		
	Protected	Unprotected				Successes	Warnings	Errors
pgOracleLinC	1	0	100.00	0	00:00:00	9	0	0
Total	1	0	100.00	0	00:00:00	9	0	0

Backup Job: ORMAN Policy A

Application Server / Cluster	Databases		SLA	RPO Misses	Max Delay	Sessions		
	Protected	Unprotected				Successes	Warnings	Errors
pgOracleLinA	0	0	0.00	0	00:00:00	0	0	0
Total	0	0	0.00	0	00:00:00	0	0	0

Use Case

A database 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 databases are safely protected.

The report allows you to track historical statistics for SQL and Oracle backup jobs, ensure that the configured jobs allow you to meet the desired SLA requirements.

Database Processing Verification

This report assesses application servers and application clusters added to the protection groups of Veeam Enterprise Application Plug-ins and lists databases with the information on whether these databases were processed or not.

- The **Summary** section includes information on the total number of processed and unprocessed databases and number of databases of each platform. Also the section includes the following elements:

    o The **Databases by Processing State** chart shows the number of processed and unprocessed databases.

    o The **Databases by Latest Data Backup Session Status** chart shows the number of databases with each status of the latest backup session.

    o The **Databases by Platform by Processing State** chart shows the number of processed and unprocessed databases of each platform.

- The **Details** table provides information on processed and unprocessed databases: servers or clusters on which the databases reside, database platforms, protection groups that include databases, backup policies that protect databases, backup repository that stores the database backups, number of back up sessions, date and time of the latest backup session, status of the latest backup session, date and time of the latest log backup session.

Report Parameters

You can specify the following report parameters:

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

- **Business View objects**: defines Business View groups to analyze in the report.

- **RPO**: 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 or 24 hours.

- **Platforms**: defines a list of database platforms to include in the report (*Oracle Database*, *SAP HANA*, *SAP on Oracle*).

- **Backup policies**: defines a list of backup policies protecting the databases to include in the report.

- **Database exclusion rule**: defines a list of databases that should be excluded from the report scope. You can enter database names explicitly or create a wildcard mask by using the asterisk (*) to replace any number of characters. Multiple entries are separated by semicolon. For example, the following string will exclude databases with the _R&D suffix from appearing in the report: *_R&D.

- **Group by**: defines how objects will be grouped in the report (*Backup server*, *Platform*, *No grouping*).

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Database Processing Verification

Description

This report assesses application servers and application clusters added to the protection groups of Veeam Enterprise Application Plug-ins and lists databases that have been and have been not processed during a specified period of time. This helps to identify databases that have been not added to the backup policies, and databases for which the job sessions have failed.

Report Parameters

|	
Scope:	Backup Infrastructure
RPO:	24 hours
Platforms:	Oracle Database, SAP HANA, SAP on Oracle Database
Backup policies:	Daily Backup of SAP HANA
Database exclusion rule:	
Group by:	Backup server

Summary

Total databases:	8
Processed databases:	3
Not processed databases:	5
Oracle databases:	1
Processed Oracle databases:	0
Not processed Oracle databases:	1
SAP HANA databases:	7
Processed SAP HANA databases:	3
Not processed SAP HANA databases:	4

Databases by Processing State
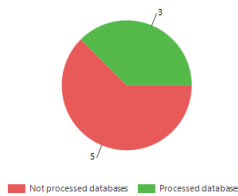
Databases by Latest Data Backup Session Status
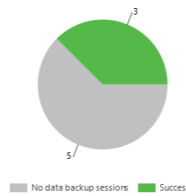
Databases by Platform by Processing State

Processed Databases

Backup server: backupserver004.tech.local

Database	Server/Cluster	Platform	Protection Group	Backup Policy	Backup Repository	Data Backup Sessions	Latest Data Backup	Latest Data Backup Status	Latest Log Backup
SYSTEMDB@HXE	linuxsrv001.tech.local	SAP HANA	Linux Servers with SAP HANA	Daily Backup of SAP HANA	Default Backup Repository	1	1/8/2023 11:00 AM	Success	-
TENANT2@HXE	linuxsrv001.tech.local	SAP HANA	Linux Servers with SAP HANA	Daily Backup of SAP HANA	Default Backup Repository	1	1/8/2023 11:00 AM	Success	-
TENANT1@HXE	linuxsrv001.tech.local	SAP HANA	Linux Servers with SAP HANA	Daily Backup of SAP HANA	Default Backup Repository	1	1/8/2023 11:00 AM	Success	-

Not Processed Databases

Backup server: backupserver004.tech.local

Database	Server/Cluster	Platform	Protection Group	Backup Policy	Backup Repository	Data Backup Sessions	Latest Data Backup	Latest Data Backup Status	Latest Log Backup
/u01/app/oracle/product/19.0.0/dbhome_1/orcl	linuxsrv002	Oracle Database	Windows Servers with RMAN	N/A	N/A	0	Never	N/A	-
SH8@SH8	serv21.tech.local	SAP HANA	Linux Servers with SAP HANA	N/A	N/A	0	Never	N/A	-
SYSTEMDB@SH8	serv21.tech.local	SAP HANA	Linux Servers with SAP HANA	N/A	N/A	0	Never	N/A	-
SH4@SH4	serv21.tech.local	SAP HANA	Linux Servers with SAP HANA	N/A	N/A	0	Never	N/A	-
SYSTEMDB@SH4	serv21.tech.local	SAP HANA	Linux Servers with SAP HANA	N/A	N/A	0	Never	N/A	-

Use Case

A database 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 databases are safely protected.

The report helps to identify databases that were not added to or were not successfully processed by backup policies.

VMware Cloud Director

This report pack provides information on configuration and performance of the VMware Cloud Director infrastructure.

Reports included:

- Catalogs Overview

- Multiple Organizations vDC Performance

- Multiple vApps Performance

- Organization Configuration

- Organization VDC Performance

- Provider VDCs Performance

- vApp Configuration

- vApp Performance

- VM Performance

- VM Uptime

Catalogs Overview

This report displays an inventory of catalogs created for selected organizations.

- The **Catalogs** table provides information on catalogs for each organization, including catalog name, sharing status, publish status, catalog owner, date when catalog was created and number of vApp templates.

- The **vApp Templates** table provides information on vApp templates stored in the catalog, including template name, hardware version, OS and allocated vCPU, memory and storage resources.

Report Parameters

You can specify the following report parameters:

- **VMware Cloud Director objects**: defines a list of organizations to analyze in the report.

Catalogs Overview

Description

This report provides overview information on all catalogs in managed VMware Cloud Director organizations.

Report Parameters

VMware Cloud Director objects:	VMware Cloud Director

Catalogs

Organization	Catalog	Shared	Publish Status	Owner	Created on	vApp Templates
⊟ organization01	1					
	catalog01	No	-	system	12/30/2022	1

vApp Templates

Catalog	vApp Template	Hardware Version	OS	vCPU	Memory (GB)	Storage (GB)
⊟ catalog01	1					
	template01	vmx-07	Other Linux (64-bit)	1	1.00	

Use Case

Outdated catalog data consume valuable cloud resources. Use this report to review content of VMware Cloud Director catalogs and to track the amount of space consumed by catalog content across organizations.

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 **Summary** table provides an overview on organization datacenters, including allocation model, used CPU, memory and storage allocation and used network count.

  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.

- The **Performance** subsections show performance charts with resource usage statistics, list top resource consuming vApps and VMs and resource usage trends for them.

  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.

Report Parameters

You can specify the following report parameters:

- **VMware Cloud Director objects**: defines a list of organization virtual datacenters to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Business hours only**: 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.

- **Metrics**: defines a list of performance counters to analyze in the report.

- **Top N**: defines the maximum number of vApps and VMs to display in the report output.

Multiple Organizations VDC Performance

Description

This report shows organizations VDC performance history, including CPU, memory, disk and network performance history.

Report Parameters

VMware Cloud Director objects:	VMware Cloud Director
Reporting period:	12/1/2022 - 12/31/2022
Metrics:	CPU usage (GHz), Memory usage (GB)
Top N:	3

Summary

Org Virtual Datacenter	Allocation Model	CPU Allocation Used	Memory Allocation Used	Storage Allocation Used	Used Network Count
Main-Org-VDC	Pay As You Go	4.00 GHz	2.00 GB	76.00 GB	0
Repl-Org-VDC	Allocation Pool	0.00 GHz (0.00 %)	0.00 GB (0.00 %)	34.00 GB	0
Organization02-VDC	Pay As You Go	0.00 GHz	0.00 GB	3.00 GB	0
Organization01-VDC	Pay As You Go	0.00 GHz	0.00 GB	2.00 GB	0
QWECompanyOrgVDC	Allocation Pool	0.00 GHz (0.00 %)	0.00 GB (0.00 %)	0.00 GB (0.00 %)	0

CPU Performance

CPU Usage (Absolute) (GHz)

Legend: — Main-Org-VDC — Organization02-VDC — Organization01-VDC — Repl-Org-VDC — QWECompanyOrgVDC
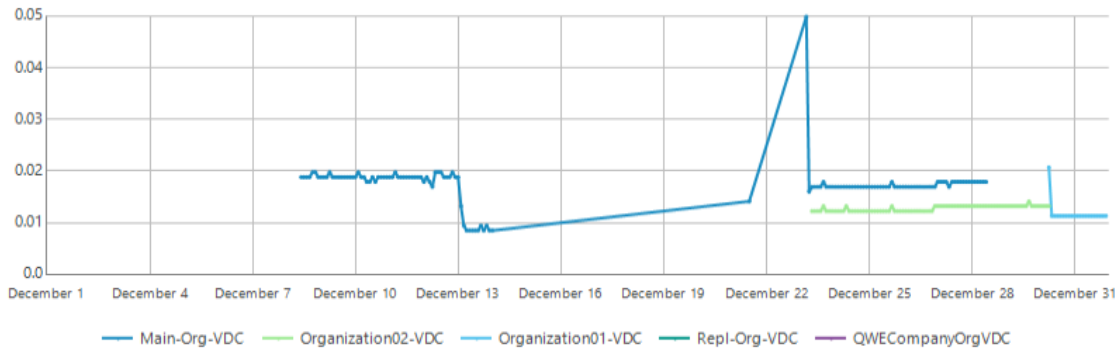
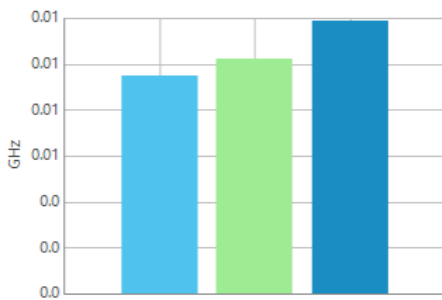| Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Main-Org-VDC	0.02	0.01	0.05	0.00	Decreasing
Organization02-VDC	0.01	0.01	0.02	0.00	Increasing
Organization01-VDC	0.01	0.01	0.02	0.00	Decreasing
Repl-Org-VDC	0.00	0.00	0.00	0.00	No changes
QWECompanyOrgVDC	0.00	0.00	0.00	0.00	No changes

Top 3 vApps by CPU Usage (Absolute)

Org vDC	vApp	Avg	Trend
Organization01-VDC	vApp01	0.01	Increasing
Main-Org-VDC	vApp-TS	0.01	Decreasing
Organization02-VDC	vApp02	0.01	Increasing

Top 3 VMs by CPU Usage (Absolute)
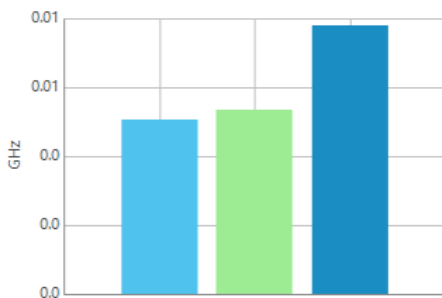
Org vDC	Virtual Machine Name	Avg	Trend
Organization01-VDC	vm02	0.01	Decreasing
Main-Org-VDC	ts-vm01	0.01	Decreasing
Organization02-VDC	linux02	0.01	Increasing

Use Case

The report helps you identify organization virtual datacenters with performance issues, right-size resource provisioning and eliminate potential performance bottlenecks.

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 **Performance** subsections show performance charts with resource usage statistics, rate the VMs by the resource usage level, and analyze the resource usage trend.

Report Parameters

You can specify the following report parameters:

- **VMware Cloud Director objects**: defines the organization whose vApps must be analyzed in the report.

- **Period**: defines the time period to analyze in the report.

- **Business hours only**: 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.

- **Metrics**: defines a list of performance counters to analyze in the report.

- **Top N**: defines the maximum number of VMs to display in the report output.

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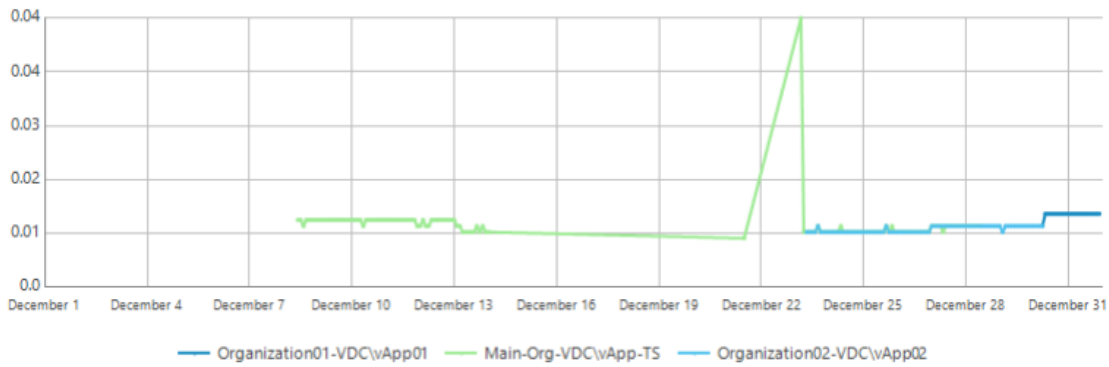
Veeam

Multiple vApps Performance

Description

This report shows multiple vApps performance history, including CPU, memory, disk and network performance history.

Report Parameters

VMware Cloud Director objects:	VMware Cloud Director
Reporting period:	12/1/2022 - 12/31/2022
Metrics:	CPU usage (GHz), Memory usage (GB)
Top N:	3

CPU Performance

CPU Usage (Absolute) (GHz)

— Organization01-VDC\vApp01   — Main-Org-VDC\vApp-TS   — Organization02-VDC\vApp02

Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Organization01-VDC\vApp01	0.01	0.01	0.01	0.00	Increasing
Main-Org-VDC\vApp-TS	0.01	0.01	0.04	0.00	Decreasing
Organization02-VDC\vApp02	0.01	0.01	0.01	0.00	Increasing
Main-Org-VDC\vApp02-TS	0.01	0.01	0.01	0.00	Decreasing
Organization02-VDC\vApp01	0.00	0.00	0.00	0.00	No changes
Repl-Org-VDC\vApp-TS_vcd_cdp_replica					No changes

Top 3 VMs by CPU Usage (Absolute)
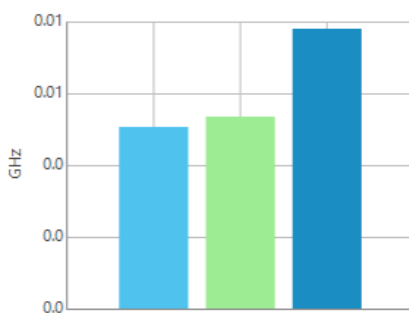
vApp Name	Virtual Machine Name	Avg	Trend
vApp01	vm02	0.01	Decreasing
vApp-TS	ts-vm01	0.01	Decreasing
vApp02	linux02	0.01	Increasing

Memory Performance

Memory Consumed (GB)
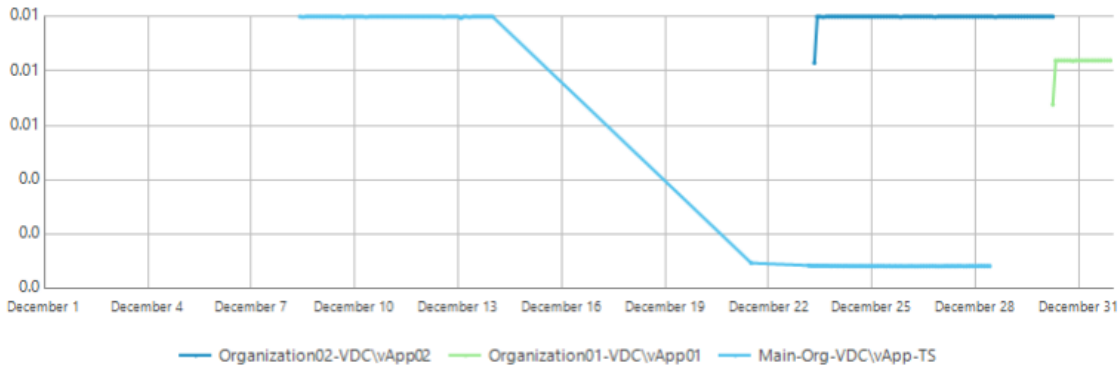
Legend: Organization02-VDC\vApp02 — Organization01-VDC\vApp01 — Main-Org-VDC\vApp-TS

Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Organization02-VDC\vApp02	0.01	0.01	0.01	0.00	Increasing
Organization01-VDC\vApp01	0.01	0.01	0.01	0.00	Increasing
Main-Org-VDC\vApp-TS	0.01	0.00	0.01	0.01	Decreasing
Organization02-VDC\vApp01	0.01	0.01	0.01	0.00	No changes
Main-Org-VDC\vApp02-TS	0.00	0.00	0.00	0.00	No changes
Repl-Org-VDC\vApp-TS_vcd_cdp_replica					No changes

Top 3 VMs by Memory Consumed
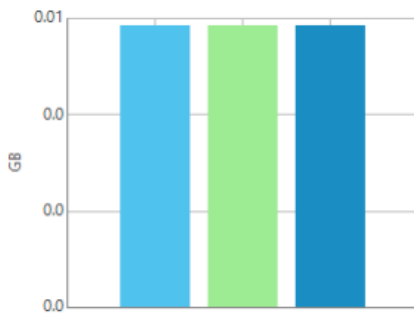
vApp Name	Virtual Machine Name	Avg	Trend
vApp01	linux01	0.01	No changes
vApp02	linux02	0.01	No changes
vApp02	linux03	0.01	No changes

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.

Organization Configuration

This report documents the current configuration of organizations in your VMware Cloud 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.

Report Parameters

You can specify the following report parameters:

- **VMware Cloud Director objects**: defines a list of organizations to analyze in the report.

Veeam

Organization Configuration

Description

This report provides general information on VMware Cloud Director organizations configuration.

Report Parameters

VMware Cloud Director objects: VMware Cloud Director

Summary

Organization	Status	Virtual Datacenters	Catalogs	vApps	Total VMs	Running VMs	Users
Main-Org	Enabled	1	0	2	4	2	0
organization01	Enabled	1	1	1	2	0	3
organization02	Enabled	1	0	2	3	0	1
QWECompanyOrg	Enabled	1	0	0	0	0	2
Replica-Org	Enabled	1	0	1	2	0	0

Virtual Datacenters

Organization	Org Virtual Datacenter	Status	Allocation Model	Processor Usage	Memory Usage	Storage Usage	Used Network Count	vApps
⊟ Main-Org								
	Main-Org-VDC	Enabled	Pay-As-You-Go	4.00 GHz	2.00 Gb	76.00 Gb	0	2
⊟ organization01								
	Organization01-VDC	Enabled	Pay-As-You-Go	0.00 GHz	0.00 Gb	2.00 Gb	0	1
⊟ organization02								
	Organization02-VDC	Enabled	Pay-As-You-Go	0.00 GHz	0.00 Gb	3.00 Gb	0	2
⊟ QWECompanyOrg								
	QWECompanyOrgVDC	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	0.00 Gb	0	0
⊟ Replica-Org								
	Repl-Org-VDC	Enabled	Allocation Pool	0.00 GHz	0.00 Gb	34.00 Gb	0	1

vApps

Organization	Org Virtual Datacenter	vApp	Status	VMs	Created on	Owner
⊟ Main-Org	1	2				
	⊟ Main-Org-VDC	2				
		vApp02-TS	POWERED_OFF	2	11/17/2022	system
		vApp-TS	POWERED_ON	2	11/11/2022	system
⊟ organization01	1	1				
	⊟ Organization01-VDC	1				
		vApp01	MIXED	2	12/23/2022	system
⊟ organization02	1	2				
	⊟ Organization02-VDC	2				
		vApp02	POWERED_OFF	2	12/23/2022	system
		vApp01	POWERED_OFF	1	12/23/2022	system
⊟ Replica-Org	1	1				
	⊟ Repl-Org-VDC	1				
		vApp-TS_vcd_cdp_replica	POWERED_OFF	2	1/3/2023	system

vApp Policies

Organization	Max. Runtime vApp Lease (Days)	Max vApp Storage Lease (Days)	Storage Cleanup Action	Max N. of VMs	Max N. of Running VMs
Main-Org	7.0	30.0	Move to Expired Items	Unlimited	Unlimited
organization01	7.0	30.0	Move to Expired Items	Unlimited	Unlimited
organization02	7.0	30.0	Move to Expired Items	Unlimited	Unlimited
QWECompanyOrg	7.0	30.0	Move to Expired Items	Unlimited	Unlimited
Replica-Org	7.0	30.0	Move to Expired Items	Unlimited	Unlimited

Org Network Pools

Organization	Org Virtual Datacenter	Name	Status	Type	Pool Used	VDS
⊟ Main-Org	1	1				
	⊟ Main-Org-VDC	1				
		Main Network Pool	success	VMWNetworkPoolTy	0 of 100000 (0%)	--
⊟ organization01	1	1				
	⊟ Organization01-VDC	1				
		Main Network Pool	success	VMWNetworkPoolTy	0 of 100000 (0%)	--
⊟ organization02	1	1				
	⊟ Organization02-VDC	1				
		Main Network Pool	success	VMWNetworkPoolTy	0 of 100000 (0%)	--
⊟ QWECompanyOrg	1	1				
	⊟ QWECompanyOrgVDC	1				

Use Case

The report helps administrators assess configuration properties of organizations in the monitored VMware Cloud Director infrastructure.

Organization VDC Performance

This report aggregates historical data and shows performance statistics for a selected organization virtual datacenter across a time range.

- The **Summary** table provides an overview on organization datacenters, including allocation model, used CPU, memory and storage allocation and used network count.

- The **Performance** subsections show performance charts with resource usage statistics, list top resource consuming vApps and VMs and resource usage trends for them.

    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.

Report Parameters

You can specify the following report parameters:

- **Organization virtual datacenter**: defines the organization virtual datacenter to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of vApps and VMs to display in the report output.

Organization VDC Performance

Description

This report shows organization VDC performance history, including CPU, memory, disk and network performance history.

Report Parameters

Organization virtual datacenter: Main-Org-VDC
Virtual datacenter location: \\prgclouddirector01.tech.local\Main-Org\Main-Org-VDC
Reporting period: 12/1/2022 - 12/31/2022

Summary

Org Virtual Datacenter	Allocation Model	CPU Allocation Used	Memory Allocation Used	Storage Allocation Used	Used Network Count
Main-Org-VDC	Pay As You Go	0.00 GHz	0.00 GB	76.00 GB	0

CPU Performance

Average CPU Ready (Percent)

— Average CPU Ready   — Average CPU Ready Trend
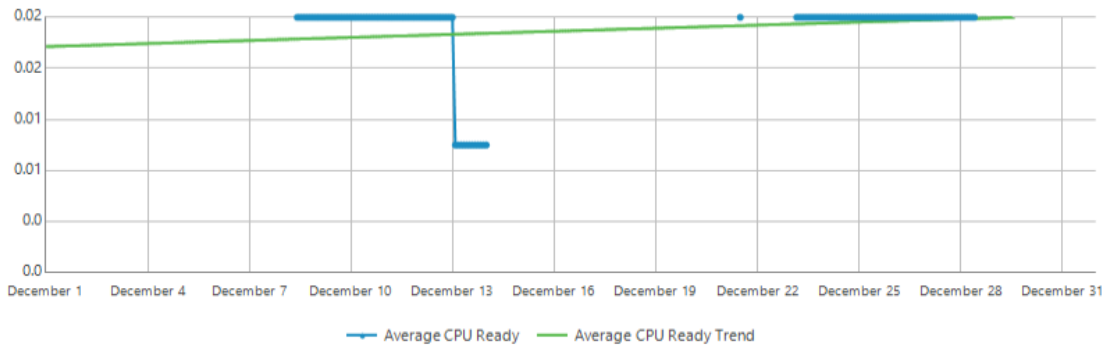
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Main-Org-VDC	0.02	0.01	0.02	0.00	Increasing

Top 3 vApps by Average CPU Ready
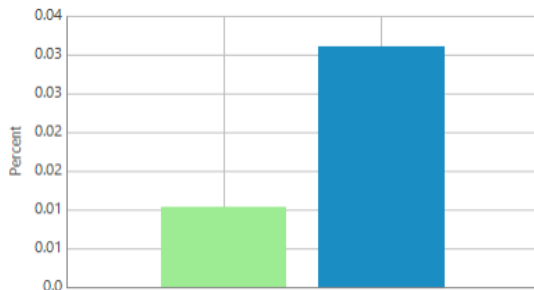
vApp	Avg	Trend
vApp02-TS	0.03	Increasing
vApp-TS	0.01	Increasing

Top 3 VMs by Average CPU Ready
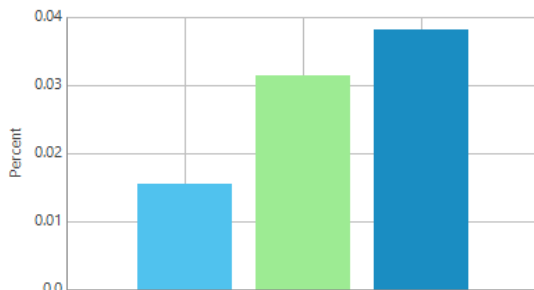
Virtual Machine Name	Avg	Trend
win-vm04-ts	0.04	Increasing
ubuntu-vm03-ts	0.03	Increasing
ts-vm022	0.02	Increasing

Use Case

The report helps you identify organization virtual datacenters with performance issues, right-size resource provisioning and eliminate potential performance bottlenecks.

Provider VDCs Performance

This report aggregates historical data and shows performance statistics for selected provider virtual datacenters across a time range.

- The **Summary** section includes **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.

Report Parameters

You can specify the following report parameters:

- **Provider virtual datacenters**: defines a list of provider virtual datacenters to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of provider virtual datacenters to display in the report output.
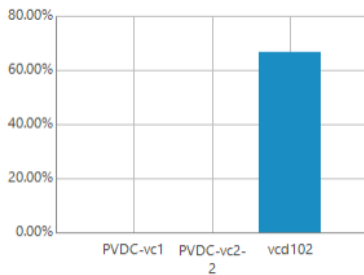
Provider VDCs Performance

Description

This report provides information on provider VDCs resource usage, including CPU and memory usage history.
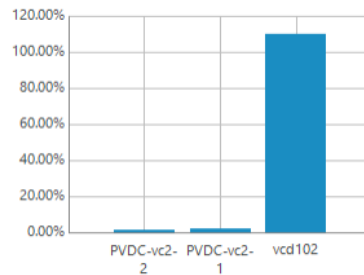
Report Parameters

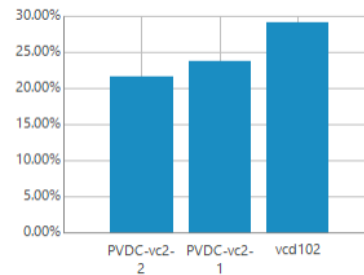|	
Provider virtual datacenters:	All Providers
Top N:	3
Reporting period:	12/1/2022 - 12/31/2022

Summary

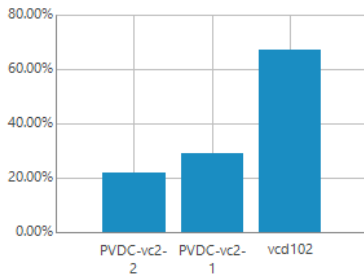Top 3 Providers by CPU Usage

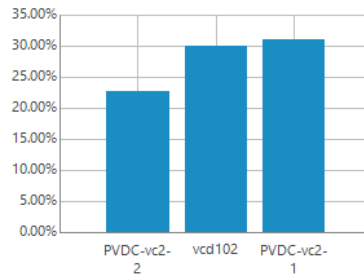Top 3 Providers by Memory Usage
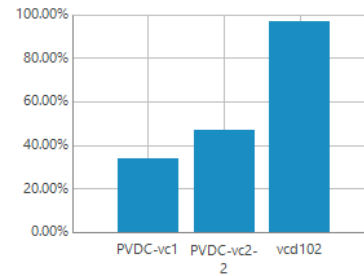

Top 3 Providers by Storage Usage

Top 3 Providers by CPU Allocation

Top 3 Providers by Memory Allocation

Top 3 Providers by Storage Allocation

Current Usage Details

Name	Status	Org Virtual Datacenters	CPU Used (GHz)	Memory Used (GB)	Storage Used (GB)	CPU Allocation (GHz)	Memory Allocation (GB)	Storage Allocation (GB)
PVDC-vc1	READY	1	0.00 GHz (0.00%)	0.00 GB (0.00%)	18.30 GB (9.16%)	0.00 GHz (0.00%)	0.00 GB (0.00%)	68.00 GB (34.04%)
		VDC1(vvg130-1)	0.00 GHz	0.00 GB	68.00 GB	0.00 GHz	0.00 GB	0.00 GB (0.00%)
PVDC-vc2-2	READY	2	0.00 GHz (0.00%)	0.16 GB (1.19%)	85.79 GB (21.48%)	3.00 GHz (21.87%)	3.00 GB (22.60%)	187.00 GB (46.81%)
		VDC4(vvg130-3) PVDC-vc2-2	3.00 GHz	3.00 GB	85.00 GB	0.00 GHz (0.00%)	0.00 GB (0.00%)	0.00 GB (0.00%)
		VDC3(vvg130-2) PVDC-vc2-2	0.00 GHz	0.00 GB	102.00 GB	0.00 GHz (0.00%)	0.00 GB (0.00%)	0.00 GB (0.00%)
PVDC-vc2-1	READY	1	0.00 GHz (0.00%)	0.11 GB (1.75%)	47.28 GB (23.67%)	2.00 GHz (29.15%)	2.00 GB (30.89%)	34.00 GB (17.02%)
		VDC2(vvg130-2) PVDC-vc2-1	2.00 GHz	2.00 GB	34.00 GB	0.00 GHz (0.00%)	0.00 GB (0.00%)	0.00 GB (0.00%)
vcd102	READY	15	33.86 GHz (66.61%)	333.04 GB (109.77%)	14035.88 GB (29.07%)	34.10 GHz (67.09%)	91.04 GB (30.01%)	46870.39 GB (97.07%)

CPU Usage (Absolute)

CPU Usage (Absolute) (Percent)
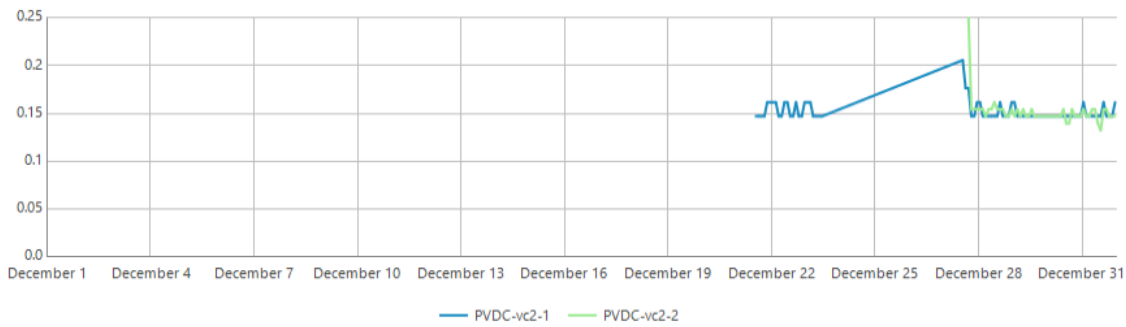
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
PVDC-vc2-1	0.15	0.15	0.20	0.01	Decreasing
PVDC-vc2-2	0.15	0.13	0.25	0.01	Decreasing

CPU Usage (Absolute) (GHz)
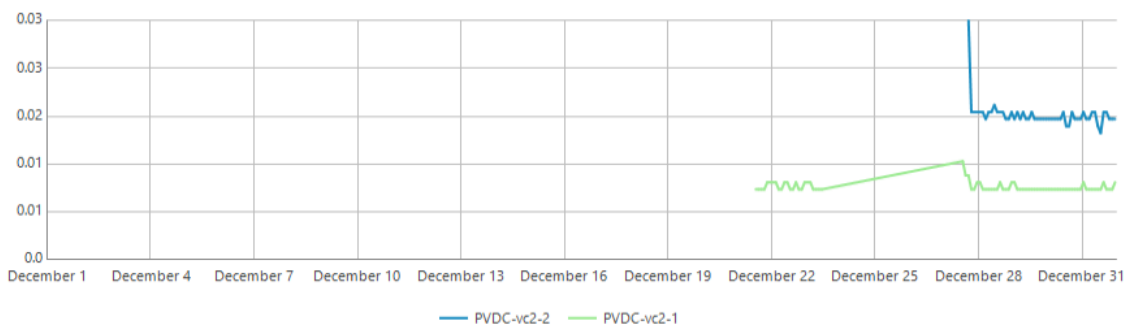
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
PVDC-vc2-2	0.02	0.02	0.03	0.00	Decreasing
PVDC-vc2-1	0.01	0.01	0.01	0.00	Decreasing

Use Case

The report helps you identify provider virtual datacenters with performance issues, balance workloads and optimize resource allocation.

vApp Configuration

This report provides an overview of vApp configuration for a selected organization.

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

    o The **vApps by Status** chart shows the number of powered off, powered on, resolved and suspended vApps.

    o The **VMs by VMware Tools Status** chart shows statuses of VMware Tools installed in VMs that belong to the organization.

    o The **Top 5 vApp** charts that display vApps with the highest level of CPU, memory and storage utilization.

- The **Details** table displays detailed information on configuration properties for each vApp created by organization users.

Report Parameters

You can specify the following report parameters:

- **Organization**: defines the organization whose vApps should be analyzed in the report.

vEEAM

vApp Configuration

Description

This report provides general information on vApp configuration for selected organization.

Report Parameters

Organization: Main-Org

Summary

General Overview

N. of Virtual Datacenters:	1
N. of vApps:	2
N. of VMs:	4

Resource Allocation

Allocated CPU (GHz):	6.00
Allocated Memory (GB):	4.00
Allocated Storage (GB):	72.00

vApps by Status
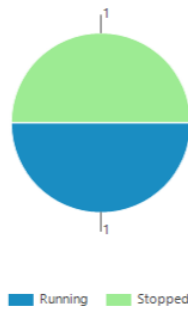
VMs by VMware Tools Status
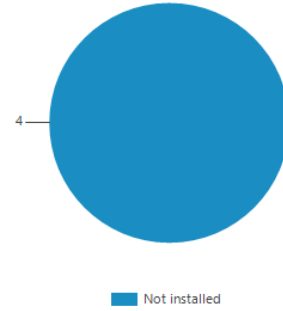
Top 5 vApp by CPU Quota
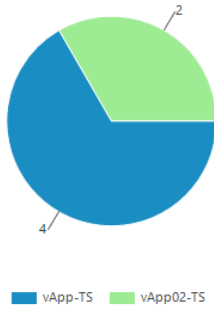
Top 5 vApp by Memory Quota
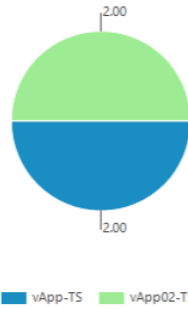
Top 5 vApp by Storage Quota
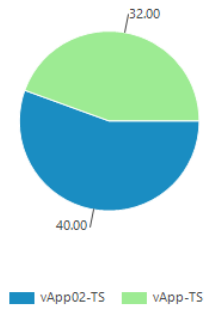
Details

Organization: Main-Org

vApp Configuration

vApp	Virtual Datacenter	Virtual Machine	Runtime Lease Expires on	Storage Lease Expires on
vApp02-TS	Main-Org-VDC	2	-	1/27/2023 11:56 AM
vApp-TS	Main-Org-VDC	2	1/10/2023 9:37 AM	-

vApp Virtual Machines

vApp	Virtual Machine	Status	VMware Tools Status	Processor	Memory (GB)	Storage (GB)
⊟ vApp02-TS	2	Stopped		2	2.00	40.00
	ubuntu-vm03-ts	Powered Off	Not installed	1	1.00	16.00
	win-vm04-ts	Powered Off	Not installed	1	1.00	24.00
⊟ vApp-TS	2	Running		4	2.00	32.00
	ts-vm01	Powered On	Not installed	2	1.00	16.00
	ts-vm022	Powered On	Not installed	2	1.00	16.00

Use Case

This report helps VMware Cloud Director administrator right-size resource provisioning to prevent resource waste and to eliminate potential performance bottlenecks.

vApp Performance

This report aggregates historical data and shows performance statistics for a selected vApp and resource pools across a time range.

- The **Performance** subsections show tables and performance charts with CPU, memory, disk and network usage statistics, list top resource consuming VMs and displays resource usage trends for them.

Report Parameters

You can specify the following report parameters:

- **vApp**: defines the vApp to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of VMs to display in the report output.

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vApp Performance

Description

This report shows vApp performance history, including CPU, memory, disk and network performance history.

Report Parameters

vApp:	vApp01
vApp location:	\\prgclouddirector01.tech.local\organization01\Organization01-VDC\vApp01
Reporting period:	12/25/2022 - 1/10/2023

CPU Performance

CPU Usage (Absolute) (MHz)
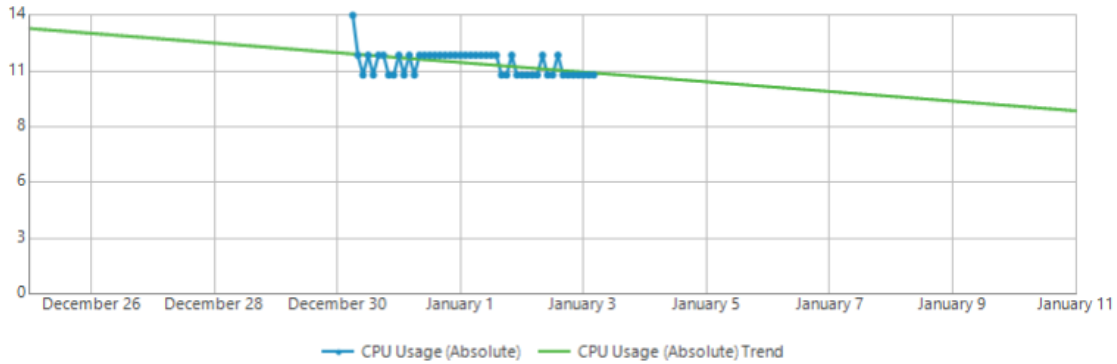
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
vApp01	11.58	11.00	14.00	0.61	Decreasing

CPU Usage (Percent)
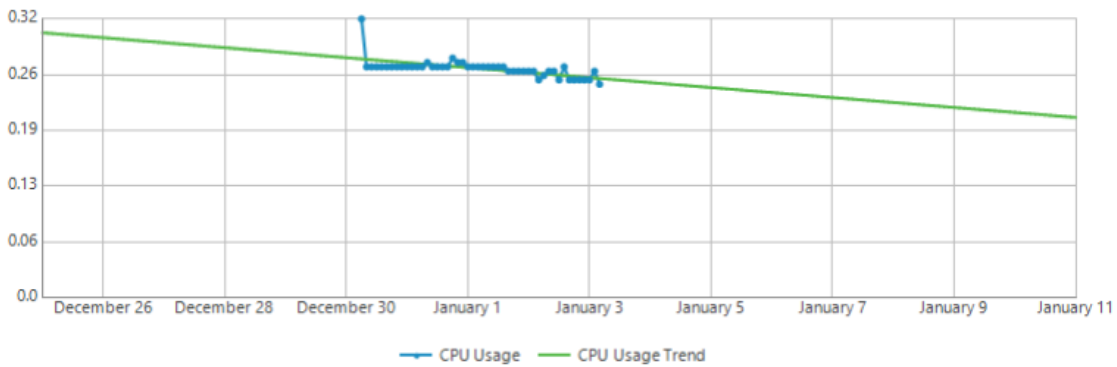
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
vApp01	0.26	0.25	0.32	0.01	Decreasing

Top 3 VMs by CPU Usage
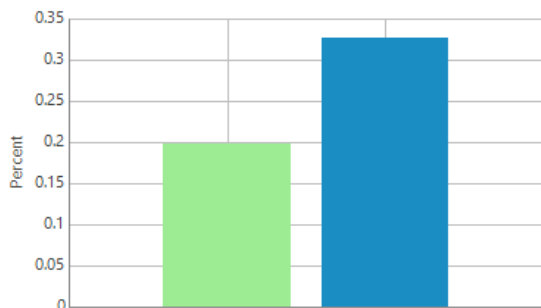
Object Name	Avg	Trend
vm02-RqUH	0.33	Decreasing
vApp01-7nFN	0.20	Decreasing

Use Case

The report helps you identify vApps with performance issues and decide whether additional right-sizing or reconfiguration actions are necessary.

VM Performance

This report aggregates historical data and shows performance statistics for a selected VM across a time range.

- The **Performance** subsections show tables and performance charts with CPU, memory, disk and network usage statistics and displays resource usage trends.

Report Parameters

You can specify the following report parameters:

- **Virtual machine**: defines the VM that belongs to your organization and should be analyzed in the report.

- **Period**: defines the time period to analyze in the report.

- **Business hours only**: 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.

veeam

VM Performance

Description

This report shows VM performance history, including CPU, memory, disk and network performance history.

Report Parameters

Virtual machine:	vm02
Virtual machine location:	\\prgclouddirector01.tech.local\organization01\Organization01-VDC\vApp01\vm02
Reporting period:	1/2/2023 - 1/8/2023

CPU Performance

Average CPU Ready All Cores (Percent)
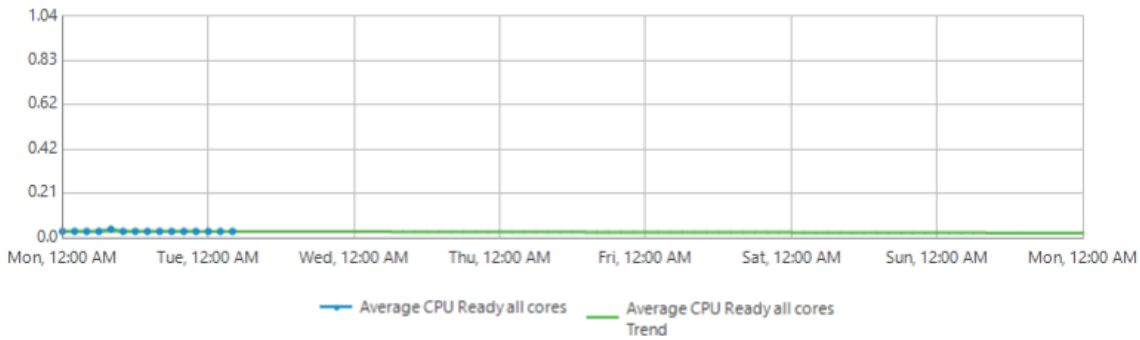
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
vm02-RqUH	0.03	0.03	0.04	0.00	Decreasing

Use Case

The report allows you to verify that you have provided enough resources to the virtual machine.

VM 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.

Report Parameters

You can specify the following report parameters:

- **VMware Cloud Director objects**: defines a list of organizations to analyze in the report.

- **Period**: defines the time period to analyze in the report.

- **Uptime, greater than**: defines the desired minimum uptime value.

- **Uptime, less than**: defines the desired maximum uptime value.

- **Group by**: defines how data will be grouped in the report output (by *Organization*, *Organization VDC*, *Uptime*, *vApp*).

VEEAM

VM Uptime

Description

This report provides overview information on VMs uptime, including VMs with lowest and highest uptime values.

Report Parameters

VMware Cloud Director objects:	VMware Cloud Director
Reporting period:	Past month (12/1/2022 - 12/31/2022)
Uptime:	greater than 80.00% and lower than 100.00%
Group by:	vApp

Summary
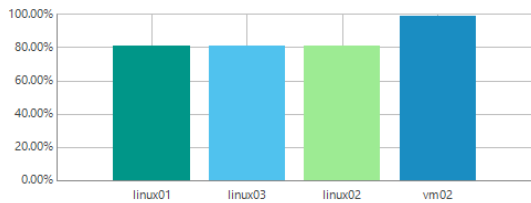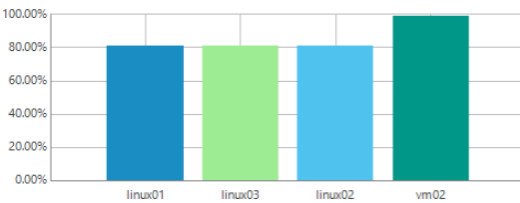
vApp Virtual Machine Uptime

Organization	Virtual Datacenter	vApp	VM Name	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
vApp: vApp02							80.87%
organization02	Organization02-VDC	vApp02	linux03	1	1	1 day(s) 16:05:00	80.73%
organization02	Organization02-VDC	vApp02	linux02	1	2	1 day(s) 15:29:00	81.02%
vApp: vApp01							99.05%
organization01	Organization01-VDC	vApp01	vm02	0	2	00:24:00	99.05%
vApp: vApp01							80.69%
organization02	Organization02-VDC	vApp01	linux01	1	1	1 day(s) 16:10:00	80.69%

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.

vSphere 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 for 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.

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.

    o The **Top 5 Utilized Clusters and Standalone Hosts** 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.

    If the **Average Usage** value is highlighted with red, it means that the resource usage value has reached the specified threshold. If the **Days Remaining** value is highlighted with red, it means that 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

- **Perform planning for**: defines a time period in the future for which performance data will be used to forecast resource usage trend.

- **CPU utilization (%)**: defines the CPU usage threshold as a percentage of total cluster CPU resources.

- **Memory utilization (%)**: defines the used memory threshold as a percentage of total cluster memory resources.

- **Space utilization (%)**: defines the maximum amount of space in use on a datastore.

- **Free space (min)**: defines the minimum amount of free space in GB left on a datastore.

- **Read/write speed (max)**: defines the maximum read and write rates in MB 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 graphs**: defines whether the report must include charts that illustrate historical performance data for the specified period.

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Capacity Planning

Description

This report predicts when resource utilization for selected objects in the infrastructure will reach the configured threshold.

Report Parameters

Scope:	Virtual Infrastructure
Datastores:	All Datastores
Analyze performance data for:	Past 6 months
Perform planning for:	Next 6 months
CPU utilization:	80.00 %
Memory utilization threshold:	80.00 %
Datastore space utilization threshold:	90.00 %
Datastore read/write speed (max) threshold:	50 MBps

Summary

Virtual Infrastructure		Days Remaining		Resources Required	
Number of standalone hosts:	3	CPU:	∞	CPU:	0.00 GHz
Number of hosts:	5	Memory:	0	Memory:	9.73 GB
Number of datastores:	9	Datastore space utilization:	0	Datastore capacity:	0.54 TB
Number of VMs:	222	Datastore read rate:	∞		
Number of powered on VMs:	136	Datastore write rate:	∞		

Top 5 Utilized Clusters and Standalone Hosts

Object Name	Bottleneck	Average Usage	Days Remaining
prgtwesx02.tech.local	CPU usage	27.93 %	∞
CDP cluster	CPU usage	6.24 %	∞
prgtwesx01.tech.local	Datastore space usage	89.69 %	0
prgtwesx03.tech.local	Memory usage	80.32 %	0

Details

Selected Object: prgtwesx01.tech.local

Physical Resources

CPU (GHz)	CPU Sockets	CPU Cores	Memory (GB)	Datastore Capacity (GB)
33.60	2	16	511.89	11268.75

Resource Usage

Resources	Memory Usage	CPU Usage	Datastore Used Space	Read Rate	Write Rate
Current usage	74.00 %	65.67 %	89.69 %	3.54 MBps	10.99 MBps
Average usage	67.73 %	60.28 %	89.69 %	1.33 MBps	3.42 MBps
Days remaining	∞	∞	0	∞	∞

Recommendations

To keep capacity under **90** % for the next **6** months for datastores:

Increase available free space for datastore prgtwesx01-ds02 by **557.2 GB**

Performance Trends
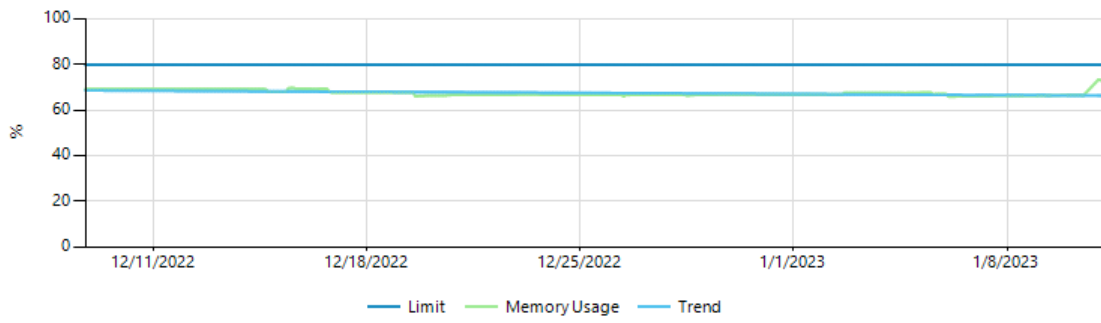
Memory Usage

Memory Usage (%)

Object Name	Minimum	Maximum	Average	Std.Deviation	Days Left
prgtwesx01.tech.local	66.12	74.00	67.73	1.27	∞

CPU Usage
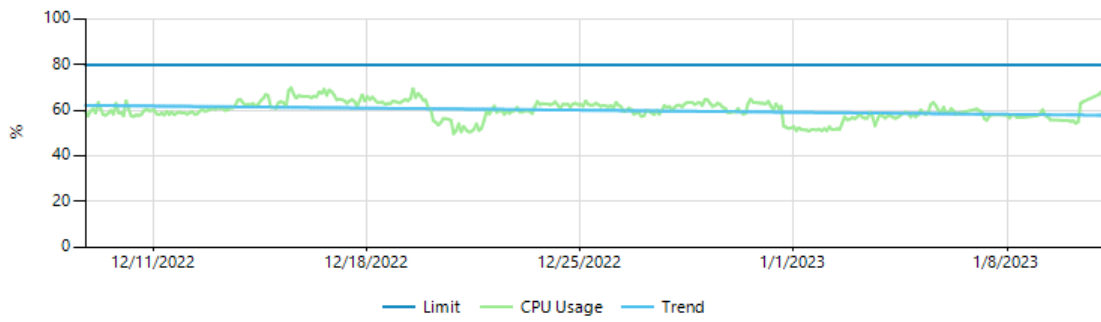
CPU Usage (%)

Object Name	Minimum	Maximum	Average	Std.Deviation	Days Left
prgtwesx01.tech.local	49.92	70.00	60.28	4.07	∞

Read Rate
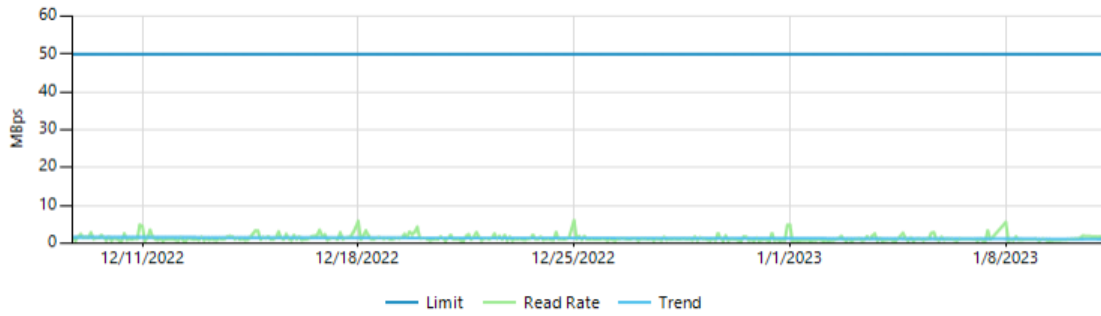
Read Rate (MBps)

Datastore	Minimum	Maximum	Average	Std.Deviation	Days Left
Veeam_dr_v6_nfs41_5HNufyTQKzk1Xc3a0SzRJ3	-	-	-	-	∞
prgtwesx01-ds01	0.15	5.88	0.52	0.45	∞
prgtwesx01-ds02	1.23	17.62	3.49	2.38	∞

Write Rate
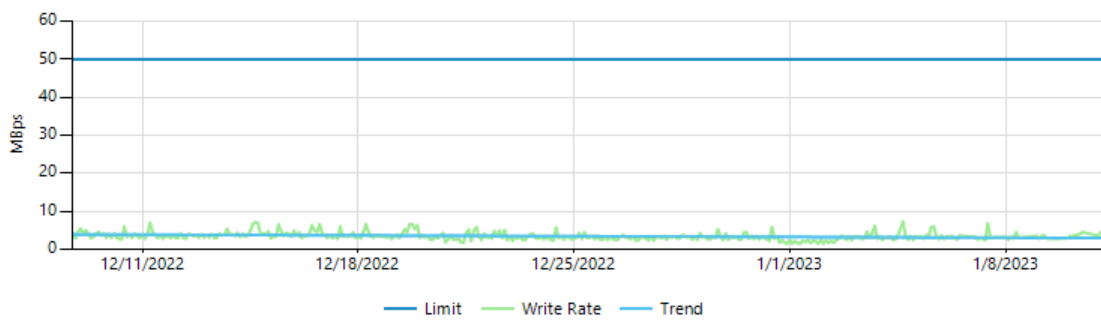
Write Rate (MBps)

Datastore	Minimum	Maximum	Average	Std.Deviation	Days Left
Veeam_dr_v6_nfs41_5HNufyTQKzk1Xc3a0SzRJ3	-	-	-	-	∞
prgtwesx01-ds01	0.79	5.52	1.49	0.52	∞
prgtwesx01-ds02	3.52	20.35	8.79	2.84	∞

Total Datastores Space Usage (TB)
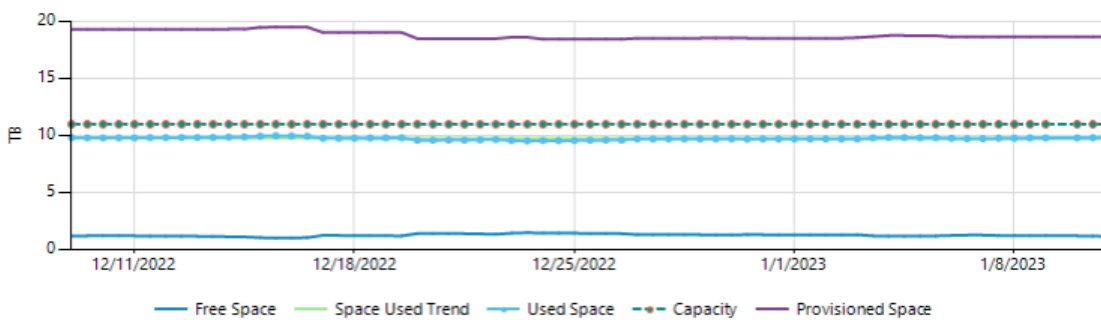
Datastores Space Usage (TB)

Datastore	Capacity	Used Space	Free Space	Provisioned Space	Days Left
Veeam_dr_v6_nfs41_5HNufyTQKzk1Xc3a0SzRJ3	0.10	-	0.10	0.02	∞
prgtwesx01-ds01	3.63	2.95	0.68	4.60	∞
prgtwesx01-ds02	7.28	6.92	0.35	14.07	0

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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

- **Failed hosts**: defines a list of hosts for which you want to simulate a failure.

- **Business View migration scope**: filters report scope objects that belong to the selected Business View groups.

- **CPU utilization threshold (%)**: defines the CPU usage threshold as a percentage of total cluster CPU resources.

- **Memory utilization threshold (%)**: defines the used memory threshold as a percentage of total cluster memory resources.

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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 threshold:	90.00 %
Memory utilization threshold:	80.00 %
Business View migration scope:	

Summary

Virtual Infrastructure		Physical Resources		Resources Required	
Number of clusters:	1	CPU:	57.60 GHz	CPU:	0.00 GHz
Number of hosts:	2	Memory:	79.99 GB	Memory:	0.00 GB
Number of datastores:	9	**Physical Resources after 1 hosts failure**			
Number of VMs:	212	CPU:	28.80 GHz		
Number of powered on VMs:	5	Memory:	40.00 GB		

Modelling Results

VMs Migration Count   **Available CPU Resources (GHz)**   **Available Memory Resources (GB)**

■ VMs to Migrate ■ Unaffected VMs	■ Failed ■ Available	■ Failed ■ Available	

Details

Cluster	Average CPU Usage (%)	Average Memory Usage (%)	Predicted CPU Usage (%)	Predicted Memory Usage (%)	Failed Hosts	Affected VMs
CDP cluster	6.24	27.76	12.48	55.53	1	2
					prgtwesx02-virt.tech.local	2

Recommendations

CDP cluster:

This Cluster has enough resources to maintain high availability after the failure of 1 hosts in this cluster

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.

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.

- The **Summary** section provides information on total number of VMs in capacity, number of existing VMs and VMs that can be added, and VM configuration and average performance.

    - The **Constraining Resource Per Each Object** table displays resources for which the specified thresholds will be breached first for each host, cluster or datastore.

- The **Details** table provides information on average and predicted resource usage for each host, cluster or datastore.

    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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Datastores**: defines a list of datastores to analyze in the report.

- **VM sample**: 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.

- **Count reserved CPU and memory**: defines whether CPU and memory reservations should be taken into account when calculating the number of VMs to be added.

- **CPU utilization (%)**: defines the CPU usage threshold as a percentage of total cluster CPU resources.

- **Memory utilization (%)**: defines the used memory threshold as a percentage of total cluster memory resources.

- **Space utilization (%)**: defines the threshold for the maximum amount of space in use on a datastore.

- **Free space (min)**: defines the threshold for the minimum amount of free space in GB left on a datastore.

- **Read speed (max)**: defines the threshold for read rate in MB per second for datastores.

- **Write speed (max)**: defines the threshold for write rate in MB per second for datastores.

- **Max vCPUs per physical core**: defines the threshold for the maximum number of vCPU cores per a single instance of the logical CPU core.

- **Put 1 host from each cluster into maintenance mode**: defines whether to simulate putting one host into maintenance mode when calculating the number of VMs to be added.

How Many More VMs Can be Provisioned

Description

This report shows how many more VMs can be added to your virtual environment.

Report Parameters

Scope:	Virtual Infrastructure
Datastores:	All Datastores
Max vCPUs per physical core:	4
CPU utilization threshold:	80.00 %
Memory utilization threshold:	90.00 %
Datastore space utilization threshold:	90.00 %
Datastore read speed (max) threshold:	10 MBps
Datastore write speed (max) threshold:	10 MBps
VM sample:	Average VM configuration
Count reserved CPU and memory:	False
Put 1 host from each cluster into maintenance mode:	False

Summary

Number of VMs that can be added:	20
Number of existing VMs in selected Scope:	212
Number of VMs at capacity:	232

VM Configuration

vCPU:	4
Memory:	6.00 GB
Datastore committed space:	42.61 GB
Datastore provisioned space:	159.46 GB

VM Average Performance

CPU:	2.16 %
Memory:	13.09 %
Datastore read rate:	0.09 MBps
Datastore write rate:	0.06 MBps

Constraining Resource Per Each Object

Object Name	Added VM's	Constraining Resource
CDP cluster	20	vCPU per core
Prgtwesx01.tech.local	0	vCPU per core
Prgtwesx02.tech.local	0	vCPU per core
Prgtwesx03.tech.local	0	vCPU per core

Details

Object Name: CDP cluster

Added VMs: 20

Resource	Average Usage	Predicted Usage
CPU	6.24 %	12.55 %
Memory	27.76 %	47.40 %
vCPU per host CPU core ratio	0.67	4.00
Excluded Datastores		
Datastore used space	24.15 %	65.20 %
Datastore read rate	0.12 MBps	1.88 MBps
Datastore write rate	0.40 MBps	1.68 MBps
Datastore IOPs	26	172

Use Case

This report helps administrators to discover how many additional VMs can be deployed without affecting infrastructure performance.

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 **Summary** section includes the following elements:

    o The **TOP 5 Over-provisioned Datastores** chart shows 5 datastores whose amount of provisioned storage space exceeds the total capacity.

    o The **TOP 5 Under-provisioned Datastores** chart shows 5 datastores whose amount of provisioned storage space is way below the total capacity.

    o 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.

      Click a number in the **VM Count** column to get the list of VMs that store data on the datastore and to discover how much space is provisioned for these VMs.

- The **Details** section provides 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 (grey arrow) over the previous week.

    Click a number in the **VM Count** column 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 to drill down to performance details for the datastore.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Space utilization threshold**: defines the threshold for the amount of space in use on datastores.

- **Minimum free space threshold**: defines the threshold for the amount of free space left on datastores.

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

![Veeam logo]

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
Space utilization threshold:	80.00 %
Business View objects:	

Summary

TOP 5 Over-provisioned Datastores (GB)

TOP 5 Under-provisioned Datastores (GB)
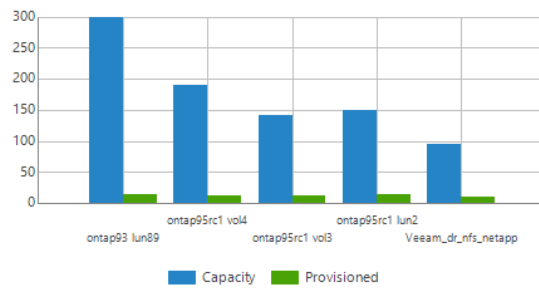
TOP 5 Datastores with Least Amount of Free Space

Datastore Name	vCenter Server	Free Space (GB)	Capacity (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	VM Count
Veeam_svm_nfs_vol7_vault	elal	0.0	0.1	6.0	5064.84	1
Veeam_svm_nfs_vol6_vault	elal	0.2	1.0	5.8	554.18	1
ontap93 nfs support	elal	0.9	1.0	6.1	646.84	1
Veeam_svm_nfs_vol5_vault	elal	2.2	14.2	55.8	392.89	1
Veeam_svm_nfs_vol5_vault_1	elal	2.3	14.2	55.8	392.49	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							
	prgtwesx01-ds01	701.4	3718.0	4708.9	126.65	26	0
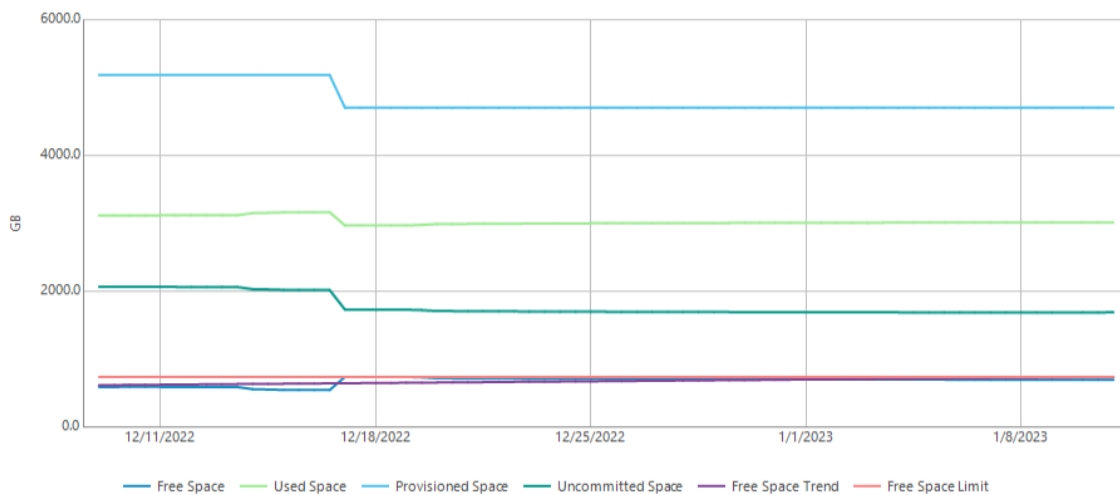
Use Case

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

vSphere Configuration Tracking

This report pack provides information about permissions assigned in your virtual environment and helps you keep an eye on performed configuration changes.

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.

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

    o The **Top 10 VMs/Hosts/Datastores with Changes** tables show VMs, hosts and datastores with the biggest number of changes.

    o The **Number of Changes Made** chart shows how many changes were made during the reporting period.

    o The **Modifications per User (Top 5)** chart shows users who made the most changes during the reporting period.

- The **Change Details** table provides information on changes made, including initiator, event description, changed object name, location and type, and date and time when event occurred.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least two successfully completed *Object properties data collection* tasks for the selected scope. Otherwise, the report will contain no data.

- **Object types**: defines types of virtual infrastructure objects to analyze in the report.

- **Users**: 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*).

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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
Reporting period:	1 week (1/5/2023 - 1/11/2023)
Object types:	Any object types
Users:	All
Sort by:	Time of occurrence

Summary

Top 10 VMs with Changes

VM Name	Cluster/Host	# of Changes
winorcl01	prgtwesx01.tech.local	18674
dlsql01	prgtwesx01.tech.local	11974
as2016DC	prgtwesx01.tech.local	2357
enterprise05	prgtwesx01.tech.local	327
vbr12servicevm4	prgtwesx03.tech.local	297
vboservicevm	prgtwesx03.tech.local	184
vbr12servicevm3	prgtwesx03.tech.local	153
ts-vm01-xbds	prgtwesx01-virt.tech.local	67
ts-vm022-IVrN	prgtwesx01-virt.tech.local	67
winsrv002	prgtwesx01.tech.local	57

Top 10 Hosts with Changes

Host Name	# of Changes
prgtwesx01.tech.local	681
prgtwesx02-virt.tech.local	106
prgtwesx02.tech.local	61
prgtwesx03.tech.local	61
prgtwesx01-virt.tech.local	50

Top 10 Datastores with Changes

Datastore Name	# of Changes
prgtwesx01-ds01	1

Number of Changes Made

Date	Value
1/5/2023	8485
1/6/2023	3915
1/7/2023	5155
1/8/2023	8353
1/9/2023	3928
1/10/2023	7986
1/11/2023	1118

Modifications per User (Top 5)

- TECH\sheila.d.cory (34137)
- com.vmware.vim.eam (3429)
- TECH\john.mcqueen (390)
- TECH\ryan.smith (294)
- TECH\william.fox (132)
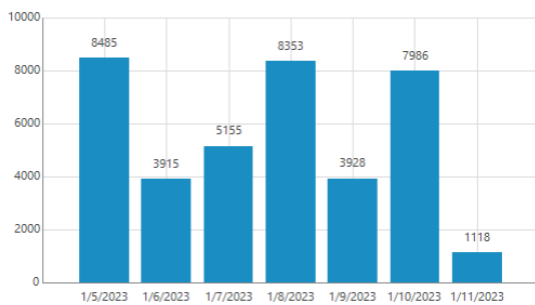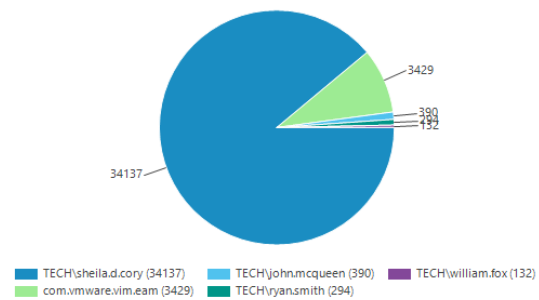
Change Details

Initiator	Event Description	Time	Object	Location	Object Type
TECH\sheila.d.cory	Guest operation Validate Credentials performed on Virtual machine winorcl01.	1/5/2023 12:00:30 AM	winorcl01	>Virtual Infrastructure>vcenter01.tech.local>Prague>prgtwesx01.tech.local	vSphere Virtual Machine
TECH\sheila.d.cory	Guest operation Validate Credentials performed on Virtual machine winorcl01.	1/5/2023 12:00:31 AM	winorcl01	>Virtual Infrastructure>vcenter01.tech.local>Prague>prgtwesx01.tech.local	vSphere Virtual Machine
TECH\sheila.d.cory	Guest operation Validate Credentials performed on Virtual machine virt01-vm33.	1/5/2023 12:00:44 AM	virt01-vm33	>Virtual Infrastructure>vcenter01.tech.local>Prague>CDP cluster>prgtwesx01-virt.tech.local	vSphere Virtual Machine
TECH\sheila.d.cory	Guest operation Create Temporary File performed on Virtual machine virt01-vm33.	1/5/2023 12:00:44 AM	virt01-vm33	>Virtual Infrastructure>vcenter01.tech.local>Prague>CDP cluster>prgtwesx01-virt.tech.local	vSphere Virtual Machine
TECH\sheila.d.cory	Guest operation Delete File performed on Virtual machine virt01-vm33.	1/5/2023 12:00:44 AM	virt01-vm33	>Virtual Infrastructure>vcenter01.tech.local>Prague>CDP cluster>prgtwesx01-virt.tech.local	vSphere Virtual Machine
TECH\sheila.d.cory	Guest operation List Files performed on Virtual machine virt01-vm33.	1/5/2023 12:00:44 AM	virt01-vm33	>Virtual Infrastructure>vcenter01.tech.local>Prague>CDP cluster>prgtwesx01-virt.tech.local	vSphere 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.

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.

- The **Summary** section shows which object types were modified during the reporting period and provides information on update, deletion and creation counts for each object type.

- The **Details** table provides information on modified objects, including change type, object name, type and location, property changed and new and old values of the property.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least two successfully completed *Object properties data collection* tasks for the selected scope. Otherwise, the report will contain no data.

- **Object types**: defines a list of infrastructure objects to analyze in the report. To select multiple items, use the [Ctrl] 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.

- **Show all historical changes of properties during the selected period**: defines whether to include in the report all historical changes for the specified time period.

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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
Reporting period:	1 day (1/10/2023)
Object types:	Any object types
Object properties:	Power state
Show all historical changes of properties during the selected period:	True

Summary

Modified Objects Per Object Types
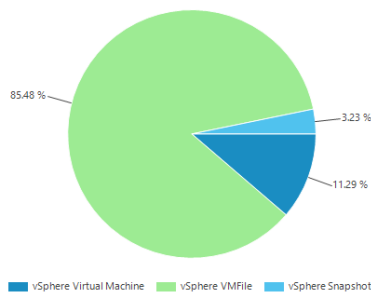
Object Type	Object Update Count	Object Deletion Count	Object Creation Count
vSphere Virtual Machine	7	0	0
vSphere VMFile	0	11	42
vSphere Snapshot	0	0	2

Details

⊟ Object Type: **vSphere Virtual Machine**

Object Name	Object Location	Property	New Value	Old Value
⊟ Change Type: Updated				
winsrv005	>Virtual Infrastructure>vcenter01.tech.local>Prague>prgtwesx01.tech.local	Power state	poweredOff	poweredOn
backupserver001	>Virtual Infrastructure>vcenter01.tech.local>Prague>prgtwesx01.tech.local	Power state	poweredOn	poweredOff
wrk004	>Virtual Infrastructure>vcenter01.tech.local>Prague>prgtwesx01.tech.local	Power state	poweredOn	poweredOff
SQLSRV002	>Virtual Infrastructure>vcenter01.tech.local>Prague>prgtwesx01.tech.local	Power state	poweredOn	poweredOff
SQLSRV001	>Virtual Infrastructure>vcenter01.tech.local>Prague>prgtwesx01.tech.local	Power state	poweredOn	poweredOff
ts-vm01-ZVIV	>Virtual Infrastructure>vcenter01.tech.local>Prague>CDP cluster>prgtwesx01-virt.tech.local	Power state	suspended	poweredOn
ts-vm022-1ZGE	>Virtual Infrastructure>vcenter01.tech.local>Prague>CDP cluster>prgtwesx02-virt.tech.local	Power state	suspended	poweredOn

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.

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.

- The **Permissions** subsections provide information on permissions for each object, including object name, location, user or group, permissions assigned to this user or group and whether permissions can be propagated.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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/User group**: defines a user or a user group for which permissions should be shown.

- **User role**: defines a user role that should be included in the report.

- **Propagated permissions**: defines whether permissions that can be propagated to child/dependent objects should be included in the report.

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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/User group:	*All Users/Groups*
User role:	*All Roles*
Propagated permissions:	*All*

Datacenter Permissions

Datacenter Name	Location	User / Group	Role	Propagate
Atlanta	vcenter01			
		TECH\chloe.lewis	Administrator	Yes
		TECH\stan.smith	Administrator	Yes
Gold Coast	vcenter01			
		TECH\steven.wright	Virtual machine power user (sample)	Yes

Resource Pool Permissions

Resource Pool Name	Location	User / Group	Role	Propagate
Resources	vcenter01\Atlanta\esx02			
		TECH\chloe.lewis	Administrator	Yes
		TECH\mark.scissor	Administrator	Yes
		TECH\stan.smith	Administrator	Yes
Evaluation	vcenter01\Atlanta\esx01			
		TECH\chloe.lewis	Administrator	Yes
		TECH\mark.scissor	Administrator	Yes
		TECH\stan.smith	Administrator	Yes
Fileservers	vcenter01\Atlanta\esx01			
		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 or VM).

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.

- The **Permissions** subsections provide information on permissions of each user, including object name, location, user role and whether permissions can be propagated.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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/User group**: defines a user or a user group for which permissions should be shown.

- **User role**: defines a user role that should be included in the report.

- **Propagated permissions**: defines whether permissions that can be propagated to child/dependent objects should be included in the report.

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/User group:	*All Users/Groups*
User role:	*All Roles*
Propagated permissions:	*All*

Permissions of TECH\chloe.lewis

Location	Name	Role	Propagate
Object Type: Datacenter			
vcenter01	Atlanta	Administrator	Yes
Object Type: Datastore			
vcenter01\Atlanta	esx01-das1	Administrator	Yes
vcenter01\Atlanta	esx01-das2	Administrator	Yes
vcenter01\Atlanta	esx01-das3	Administrator	Yes
vcenter01\Atlanta	esx01-ds-hpvsa	Administrator	Yes

Permissions of TECH\dangray

Location	Name	Role	Propagate
Object Type: Resource Pool			
vcenter01\Atlanta\esx01	Webservices	Administrator	Yes

Use Case

This report helps senior IT administrators review permissions assigned to any registered user.

vSphere 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.

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 **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.

- The **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:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Datastores**: defines the datastore to analyze in the report.

- **Interval**: defines the time period to analyze in the report.

- **Read latency (max) threshold**: 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.

- **Write latency (max) threshold**: 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.

- **Read operations count (max) threshold**: 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.

- **Write operations count (max) threshold**: 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.

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Datastore Performance Assessment

Description

This report provides information on potential datastore performance issues that can show up during the backup process.

Report Parameters

Scope:	Virtual Infrastructure
Datastores:	All Datastores
Reporting period:	Current week (1/9/2023 - 1/15/2023)
Read latency (max) threshold:	50 ms
Write latency (max) threshold:	50 ms

Assessment Results

Read Latency by Datastore

Datastore	Connected Hosts	N. of VMs	N. of Virtual Disks	Average Value
vcenter01.tech.local\Prague\docopslinuxnfs	1	1	1	0.26
vcenter01.tech.local\Prague\docopsubuntunfs01	2	11	4	0.04
vcenter01.tech.local\Prague\prgtwesx01-ds01	1	26	32	16.66
vcenter01.tech.local\Prague\prgtwesx01-ds02	1	59	115	5.43
vcenter01.tech.local\Prague\prgtwesx01-virt-ds1	1	6	3	6.48
vcenter01.tech.local\Prague\prgtwesx02-ds01	1	53	62	13.11
vcenter01.tech.local\Prague\prgtwesx02-virt-ds1	1	5	4	5.07
vcenter01.tech.local\Prague\prgtwesx03-ds01	1	61	57	2.68
vcenter01.tech.local\Prague\Veeam_dr_v6_nfs41_5HNufyTQKz k1Xc3a0SzRJ3	1	2	4	0.00

Write Latency by Datastore

Datastore	Connected Hosts	N. of VMs	N. of Virtual Disks	Average Value
vcenter01.tech.local\Prague\docopslinuxnfs	1	1	1	0.28
vcenter01.tech.local\Prague\docopsubuntunfs01	2	11	4	3.40
vcenter01.tech.local\Prague\prgtwesx01-ds01	1	26	32	5.60
vcenter01.tech.local\Prague\prgtwesx01-ds02	1	59	115	1.46
vcenter01.tech.local\Prague\prgtwesx01-virt-ds1	1	6	3	0.00
vcenter01.tech.local\Prague\prgtwesx02-ds01	1	53	62	0.17
vcenter01.tech.local\Prague\prgtwesx02-virt-ds1	1	5	4	0.00
vcenter01.tech.local\Prague\prgtwesx03-ds01	1	61	57	0.00
vcenter01.tech.local\Prague\Veeam_dr_v6_nfs41_5HNufyTQKz k1Xc3a0SzRJ3	1	2	4	1.51

IOPs by Datastore

| Datastore	Connected Hosts	N. of VMs	N. of Virtual Disks	Average Value
vcenter01.tech.local\Prague\docopslinuxnfs	1	1	1	21.36
vcenter01.tech.local\Prague\docopsubuntunfs01	2	11	4	2.27
vcenter01.tech.local\Prague\prgtwesx01-ds01	1	26	32	95.74
vcenter01.tech.local\Prague\prgtwesx01-ds02	1	59	115	1035.62
vcenter01.tech.local\Prague\prgtwesx01-virt-ds1	1	6	3	5.86
vcenter01.tech.local\Prague\prgtwesx02-ds01	1	53	62	1744.29
vcenter01.tech.local\Prague\prgtwesx02-virt-ds1	1	5	4	32.59
vcenter01.tech.local\Prague\prgtwesx03-ds01	1	61	57	588.44
vcenter01.tech.local\Prague\Veeam_dr_v6_nfs41_5HNufyTQKz k1Xc3a0SzRJ3	1	2	4	0.00

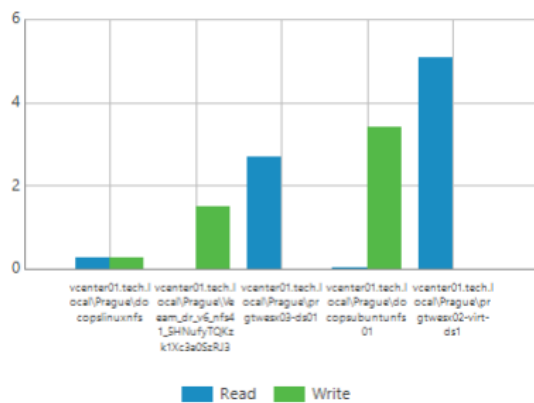All datastores meet the defined performance thresholds.
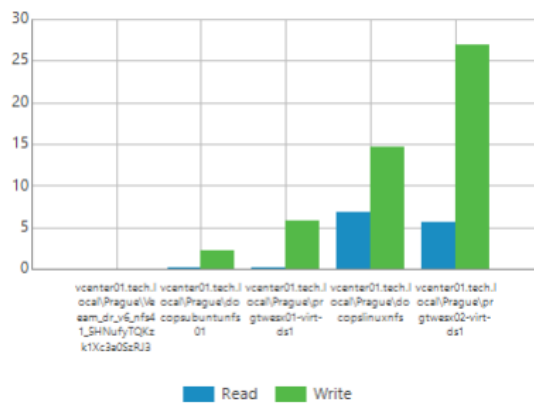
Top Datastores

Top Datastores by Latency
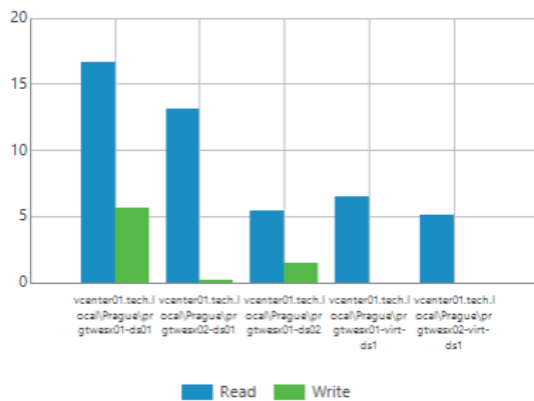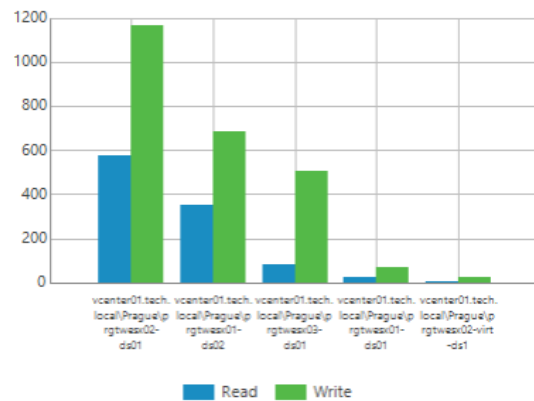
Read ■ Write ■

Top Datastores by IOPS

Read ■ Write ■

Bottom Datastores by Latency

Read ■ Write ■

Bottom Datastores by IOPS

Read ■ Write ■

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:

    o The **Top VMs with Largest Change Rate (GB)** chart shows VMs with the greatest amount of changed blocks within the reporting period.

    o 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:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **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.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: 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.

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VM Change Rate Estimation

Description
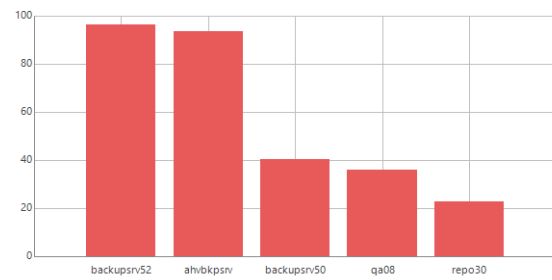
This report predicts the number of changed blocks (measured in GB) for virtual disks based on virtual machines write rate.
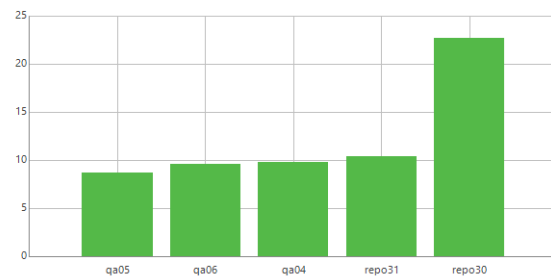
Report Parameters

Scope:	Virtual Infrastructure
Interval:	Current week (12/26/2022 - 1/1/2023)
Top N:	5
Show VMs with no changes:	False
Business View objects:	

Summary

Top 5 VMs with Largest Change Rate (GB)

Top 5 VMs with Least Change Rate (GB)

Details

Scope	VM	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
⊟ pdctwhv01.tech.local	9	114.34 GB	95.17 GB	102.93 GB	14.79 GB	-	-	-	327.23 GB
	backupsrv52	26.35 GB	26.87 GB	38.82 GB	4.35 GB	-	-	-	96.39 GB
	ahvbkpsrv	49.10 GB	23.08 GB	18.96 GB	2.34 GB	-	-	-	93.47 GB
	backupsrv50	12.33 GB	11.17 GB	12.94 GB	4.03 GB	-	-	-	40.48 GB
	qa08	10.64 GB	13.29 GB	10.31 GB	1.55 GB	-	-	-	35.80 GB
	repo30	4.64 GB	7.74 GB	9.04 GB	1.24 GB	-	-	-	22.67 GB
	repo31	3.00 GB	3.47 GB	3.38 GB	< 1 GB	-	-	-	10.34 GB
	qa04	2.91 GB	3.39 GB	3.32 GB	< 1 GB	-	-	-	9.79 GB
	qa06	2.79 GB	3.17 GB	3.16 GB	< 1 GB	-	-	-	9.61 GB
	qa05	2.57 GB	2.99 GB	2.99 GB	< 1 GB	-	-	-	8.69 GB
Total:		114.34 GB	95.17 GB	102.93 GB	14.79 GB	-	-	-	327.23 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.

- The **Summary** section contains the following charts:

  o The **Virtual Machines Overview** chart shows VMs with potential issues and ready to backup VMs.

  o The **Potential Issues** chart shows number of VMs with potential issues.

- The **Details** section provides information on VMs with potential issues and recommendations on resolving the issues.

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

VMware CBT

Criterion	Description
Existing Snapshots	The report analyzes your virtual infrastructure to find VMs with existing snapshots. To use VMware Changed Block Tracking for incremental backup, all existing snapshots must be removed.
Hardware Version 4 or earlier	The report analyzes your virtual infrastructure to find VMs with hardware version 4 or earlier. To use VMware Changed Block Tracking for incremental backup, hardware version of VMs must be 7 or later.

Virtual Disks

Criterion	Description
VMs with Independent Disks	The report analyzes your virtual infrastructure to find VMs with independent virtual disks. Veeam Backup & Replication does not support independent disks; these disks are skipped from processing automatically.
VMs with 2 TB virtual disks running in vSphere 5.1 or older	The report analyzes your virtual infrastructure to find VMs with 2 TB virtual disk size. For ESXi 5.1 and older, the maximum virtual disk (VMDK) size for snapshot operations is limited to 1.9844923662017202 TB. For details, see this VMware KB article.
VMs with disks engaged in SCSI bus sharing	The report analyzes your virtual infrastructure to find VMs that use SCSI bus-sharing. VMware does not support taking snapshots of Microsoft Clustering Services (MSCS) VMs. For details, see this VMware KB article.
Virtual disk size is not a multiple of 1 KB	The report analyzes your virtual infrastructure to find VMs with unaligned virtual disks. Veeam Backup & Replication does not support backup copy jobs and restore jobs for VMs with unaligned disks. For details, see this Veeam KB article.

Criterion	Description
VMs with pRDMs	The report analyzes your virtual infrastructure to find VMs with RDMs used in physical compatibility mode.
	Veeam Backup & Replication will automatically exclude RDMs used in physical compatibility mode from the backup job. For details, see this VMware KB article.

Application-Aware Image Processing

Criterion	Description
VMs with Windows Server 2000 Guest OS	The report analyzes your virtual infrastructure to find Windows Server 2000 VMs.
	To enable backup with application-aware image processing, upgrade guest OS to Windows Server 2003 or later.
VMware Tools Not Running	The report analyzes your virtual infrastructure to find VMs that do not have with VMware Tools installed or running.
	To enable backup with application-aware image processing, it is required that guest OS running inside your VMs has VMware Tools installed and running.

Datastore Free Space

Criterion	Description
VMs on datastores with 10% of free space	The report analyzes your virtual infrastructure to find datastores that have less than 10% of free space.
	When Veeam Backup & 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%.

Other

Criterion	Description
Unsupported VM names	The report analyzes your virtual infrastructure to find VMs with names that contain the following symbols: @ / \ < >. Veeam Backup & Replication does not process VMs with names that contain mentioned symbols. If you want to back up these virtual machines, you must rename them.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Issues**: defines VM assessment criteria to include in the report.

- **Ignore replica VMs created by Veeam products**: defines whether to include in the report VM replicas created with Veeam Backup & Replication.

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# 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).
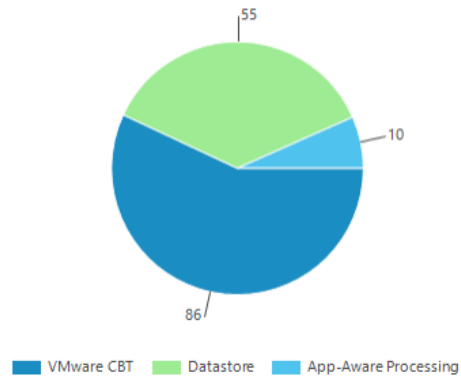
Report Parameters

Scope:	Virtual Infrastructure
Ignore replica VMs created by Veeam products:	True
Business View objects:	
Issues:	All

Summary

Virtual Machines Overview

Potential Issues

VMs with potential issues ■ Ready to backup

■ VMware CBT ■ Datastore ■ App-Aware Processing
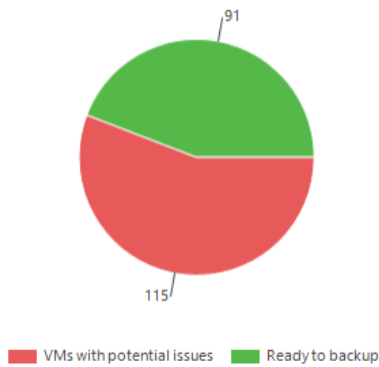
Details

Category: VMware CBT

Potential Issue: Existing snapshots

Virtual Machine	Host	Datastore
filesrv01	prgtwesx01.tech.local	Prague\prgtwesx01-ds01
linuxsrv002	prgtwesx01.tech.local	Prague\prgtwesx01-ds01
srv14	prgtwesx01.tech.local	Prague\prgtwesx01-ds01
srv16	prgtwesx01.tech.local	Prague\prgtwesx01-ds01
wrk001	prgtwesx01.tech.local	Prague\prgtwesx01-ds01
backupserver001	prgtwesx01.tech.local	Prague\prgtwesx01-ds02
backupserver002	prgtwesx01.tech.local	Prague\prgtwesx01-ds02
backupserver003	prgtwesx01.tech.local	Prague\prgtwesx01-ds02
backupserver004	prgtwesx01.tech.local	Prague\prgtwesx01-ds02
enterprise08	prgtwesx01.tech.local	Prague\prgtwesx01-ds02

Category: App-Aware Processing

Potential Issue: VMware tools Not Running

Virtual Machine	Host	Datastore
serv001	prgtwesx01.tech.local	Prague\prgtwesx01-ds02
unxsrv001	prgtwesx01.tech.local	Prague\prgtwesx01-ds02
ts-vm01-ZVIV	prgtwesx01-virt.tech.local	Prague\docopsubuntunfs01
proxy_013	prgtwesx02.tech.local	Prague\prgtwesx02-ds01
repository_013	prgtwesx02.tech.local	Prague\prgtwesx02-ds01
serv60	prgtwesx02.tech.local	Prague\prgtwesx02-ds01
srv011	prgtwesx02.tech.local	Prague\prgtwesx02-ds01
srv06	prgtwesx02.tech.local	Prague\prgtwesx02-ds01
srv93	prgtwesx02.tech.local	Prague\prgtwesx02-ds01
ts-vm022-1ZGE	prgtwesx02-virt.tech.local	Prague\prgtwesx02-virt-ds1

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.

vSphere 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.

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

- VM Uptime

Alarms Current State Overview

This report shows alarms triggered by Veeam ONE Client for the managed virtual infrastructure.

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

  o The **Total Issues Number** chart shows the number of triggered alarms.

  o The **Top 10 Alarms** table shows 10 most frequently triggered alarms.

- The **Details** section provides information on each triggered alarm, including affected object, object location, alarm name, alarm type, trigger and date and time when the alarm was triggered.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Alarm statuses**: defines the status of alarms that must be included in the report (*Errors and Warnings*; *Errors only*; *Errors, Warning, Acknowledged*; *Acknowledged only*).

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Alarms Current State Overview

Description

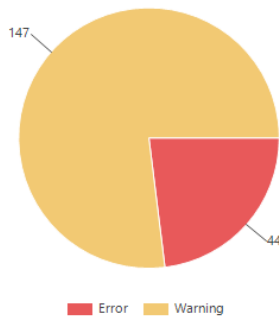This report shows all currently unresolved alarms for the virtual infrastructure.

Report Parameters

Scope:	Virtual Infrastructure
Alarm statuses:	Errors and Warnings

Summary

Total Warnings	147
Total Errors	44
Alarmed Objects:	191

Total Issues Number

147
44

■ Error ■ Warning

Top 10 Alarms

Alarm Name	Alarm Type	Repeat Count
Latest snapshot age	Warning	104
Latest snapshot size	Warning	31
Latest snapshot size	Error	26
Too many snapshots on the VM	Warning	9
Guest disk space	Error	7
Too many snapshots on the VM	Error	4
Host NIC connection state	Error	3
Orphaned VM backup snapshot	Error	3
Datastore free space	Error	1
Datastore read latency	Warning	1

Details

Object	Location	Alarm Name	Type	Trigger	Time
Object Type: Datastore			2		
prgtwesx01-ds02	\Virtual Infrastructure\vcenter01.tech.local\ Prague	Datastore free space	Error	Amount of free space (**4.9%**) is below a defined threshold (5.0%). Current free space is **362.97 GB**.	1/10/2023 7:02:11 PM
prgtwesx01-virt-ds1	\Virtual Infrastructure\vcenter01.tech.local\ Prague	Datastore read latency	Warning	"Disk/Datastore: Datastore Read Latency" (**112.0 Milliseconds**) is above a defined threshold (100.0 Milliseconds)	1/11/2023 12:36:18 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.

Alarms Overview

Veeam ONE Client 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.

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

  - The **Errors** and **Warnings** charts show top 5 objects that caused the greatest number of alarms.

- o The **Total Issues** chart shows alarm activity during the reporting period.

- o The **Top 10 Issues** table shows 10 most frequently triggered alarms.

- The **Details** section provides information on each affected object , including object type, location, object name, number of triggered alarms and alarm activity trend.

    Click a number in the **Alarms** column in the details table to drill down to details for alarms raised for the infrastructure object.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task 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 types**: defines a list of virtual infrastructure object types to analyze in the report.

- **Alarms**: defines a list of alarms to analyze in the report.

  For details on alarms you can select in the list, see section VMware vSphere Alarms of the Veeam ONE Working with Alarms Guide.

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.
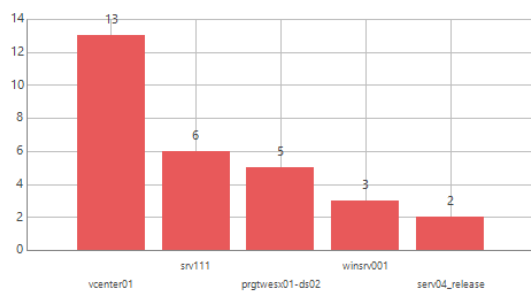
Report Parameters

Scope:	Virtual Infrastructure
Reporting period:	1 week (1/5/2023 - 1/11/2023)
Group by:	Issue type
Business View objects:	
Object types:	All items
Alarms:	All items

Summary

Total Errors:	80
Total Warnings:	280

Top Objects and Issues

Errors

Warnings
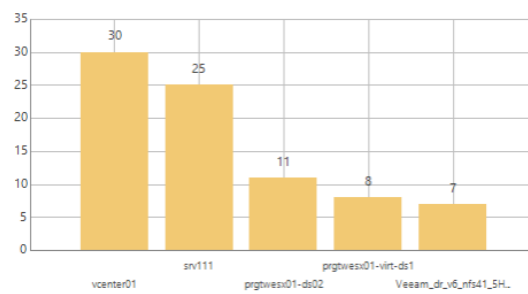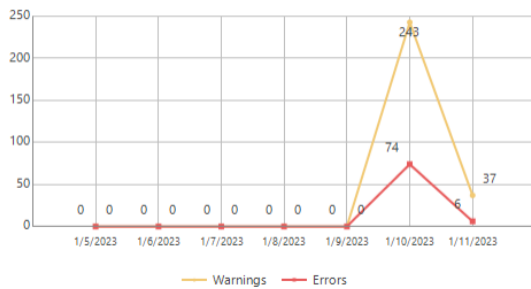
Total Issues

Top 10 Issues

Name	Total Triggered	Total Objects
Latest snapshot age	105	105
VM total disk latency	95	17
Latest snapshot size	60	58
VM CPU usage	28	1
Datastore read latency	25	6
Too many snapshots on the VM	13	13
Datastore write latency	10	3
Guest disk space	7	7
Host CPU usage	5	1
Datastore free space	4	1

Details

Issue Type: Error

Location	Object	Alarms	Trend
Object Type: vSphere Datastore	**2**	**6**	
\Virtual Infrastructure\vcenter01.tech.local\Prague	prgtwesx01-ds02	5	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Prague	prgtwesx03-ds01	1	Increasing
Object Type: vSphere Host System	**3**	**3**	
\Virtual Infrastructure\vcenter01.tech.local\Prague	prgtwesx01.tech.local	1	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Prague	prgtwesx02.tech.local	1	Increasing
\Virtual Infrastructure\vcenter01.tech.local\Prague	prgtwesx03.tech.local	1	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.

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.

- For each host in the cluster, the **Summary** section includes the following elements:

  o The summary table describes configuration of each host in the cluster, including allocated memory and CPU resources and the number of CPU cores and sockets.

  o The resource usage subsections provide information on CPU, memory, disk and network usage and analyzes resource usage trends for each host.

    Click a host 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 host, and the 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Metrics**: defines a list of performance counters to analyze in the report.

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Cluster Hosts Performance

Description

This report shows performance data for all hosts within the selected cluster that includes CPU, Memory, Disk and Network usage.
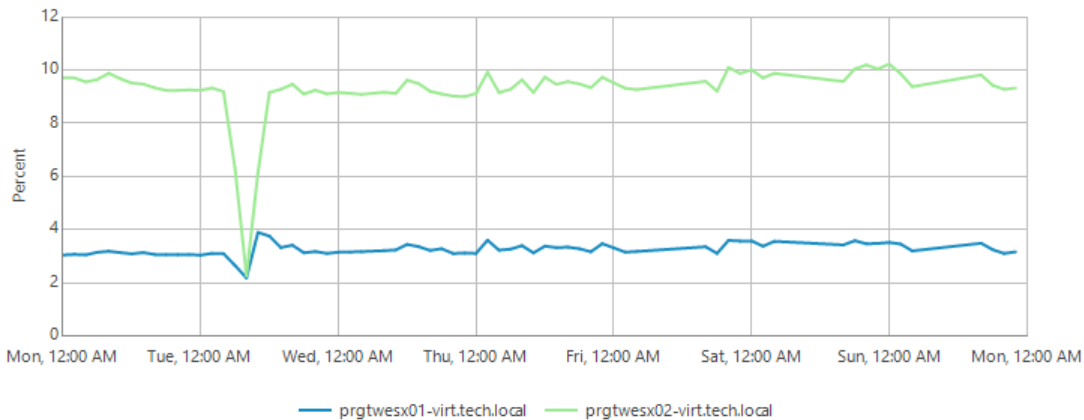
Report Parameters

Scope:	Virtual Infrastructure
Reporting period:	1/2/2023 - 1/8/2023
Metrics:	All Items

Details for: CDP cluster

Summary

Host Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets
prgtwesx01-virt.tech.local	40	28.79	12	2
prgtwesx02-virt.tech.local	40	28.79	12	2
Total:	79.99	57.58	24	4

CPU Usage

— prgtwesx01-virt.tech.local — prgtwesx02-virt.tech.local

Hosts by CPU Usage
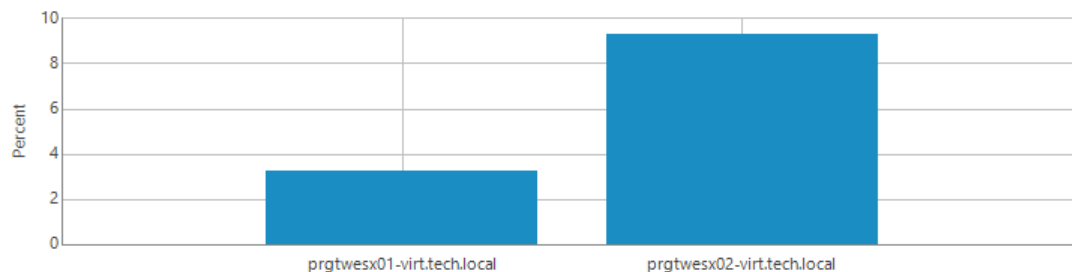
CPU Usage (Percent)

Host Name	Average	Minimum	Maximum	Std. Deviation	Trend
prgtwesx02-virt.tech.local	9.27	2.27	10.22	1.07	Increasing
prgtwesx01-virt.tech.local	3.25	2.18	3.90	0.24	Increasing

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.

Cluster Performance

This report aggregates historical data and shows performance statistics for a selected cluster across a time range.

- The **Summary** section describes configuration of each host in the cluster, including allocated memory and CPU resources and the number of CPU cores and sockets.

- The **Performance** subsections provide information on CPU, memory, disk and network usage, including usage trends and top resource consuming hosts and VMs in the cluster.

  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 of top resource consuming VMs to drill down to performance charts with statistics on CPU, memory, disk and network usage for the VM.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the cluster to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected cluster. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of hosts and VMs to display in the report output.

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Cluster Performance

Description

This report shows cluster hosts performance history that includes CPU, Memory, Disk and Network counters.

Report Parameters

Selected object:	CDP cluster
Object location:	\\Virtual Infrastructure\vcenter01.tech.local\Prague
Reporting period:	1/2/2023 - 1/8/2023

Summary

Host Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets
prgtwesx01-virt.tech.local	40	28.79	12	2
prgtwesx02-virt.tech.local	40	28.79	12	2
Total:	**79.99**	**57.58**	**24**	**4**

CPU Performance

Average CPU Ready (Percent)

Legend: — Average CPU Ready — Average CPU Ready Trend
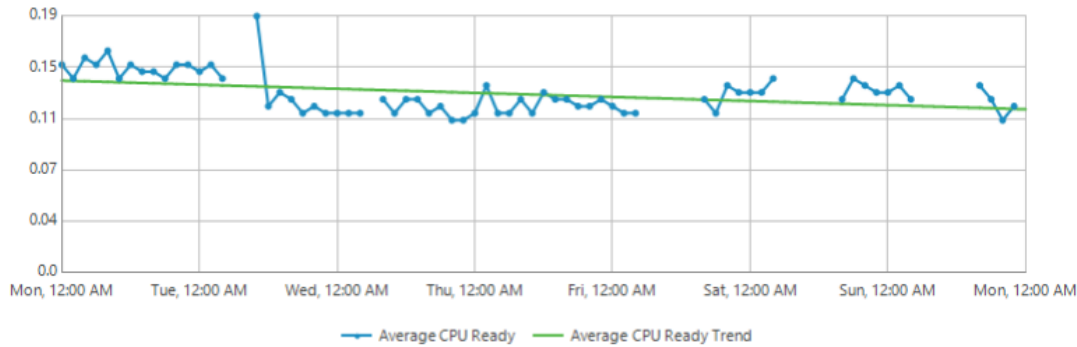
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
CDP cluster	0.13	0.11	0.19	0.01	Decreasing

Top 3 Hosts by CPU Ready
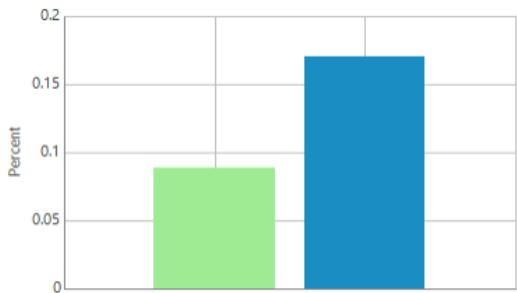
Object Name	Avg	Trend
prgtwesx01-virt.tech.local	0.17	Decreasing
prgtwesx02-virt.tech.local	0.09	Increasing

Top 3 VMs by CPU Ready
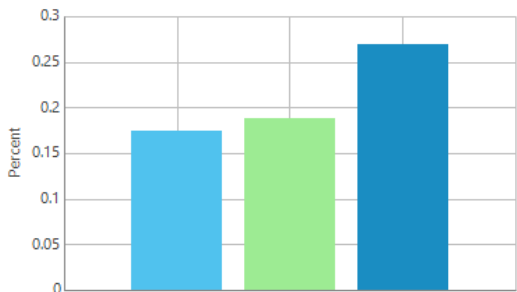
Object Name	Avg	Trend
virt03-proxy001	0.27	Increasing
virt01-vm33	0.19	Increasing
NSXTransportNode	0.17	Decreasing

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.

Datastore Performance

This report aggregates historical data and shows performance statistics for a selected datastore across a time range.

- The **Summary** subsection provides information on type, capacity, free space, number of VMs and VM templates.

- The **Datastore IOPs**, **Datastore Usage**, **Datastore Latency** and **Datastore Errors** subsections provide information on IOPs, read/write rates, read/write latency and errors for the disk, including top 3 resource consuming VMs and resource usage trends.

  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.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the datastore to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected datastore. Otherwise, the report will contain no data.

- **Business hours only**: 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

Description

This report shows datastore performance history that includes Usage, Latency and IOPS counters.
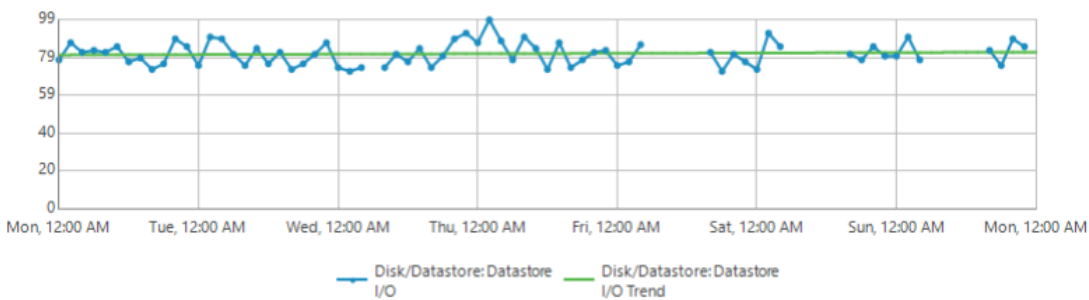
Report Parameters

Selected object:	prgtwesx01-ds01
Object location:	\\Virtual Infrastructure\vcenter01.tech.local\Prague
Reporting period:	1/2/2023 - 1/8/2023

Summary

Name:	prgtwesx01-ds01
Type:	local storage
Capacity:	3.6TB
Free space:	701.4GB
Virtual machines:	26
VM templates:	0

Datastore IOPs

Disk/Datastore: Datastore I/O (Number)

Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
prgtwesx01-ds01	81.22	72.00	99.00	5.99	Increasing

Top 3 VMs by Read IOPs
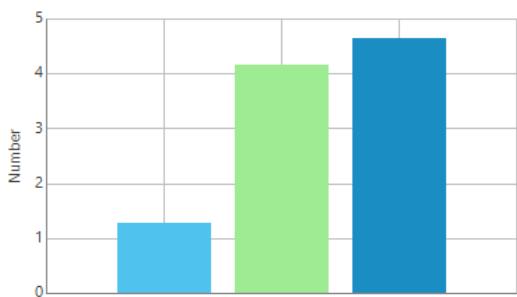
Object Name	Avg	Trend
srv16	4.63	Increasing
srv14	4.15	Decreasing
serv04_release	1.28	Increasing

Top 3 VMs by Write IOPs
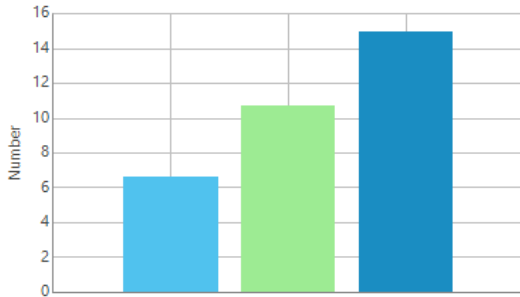
Object Name	Avg	Trend
srv16	14.91	Increasing
appsrv01	10.69	Decreasing
srv14	6.60	Decreasing

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.

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.

- The **Navigation** section shows path to the selected object, including VMware vSphere VC, datacenter, cluster and host system.

  Click a cluster name to drill down to performance charts with statistics on CPU, memory, disk and network usage for the cluster.

- The **Performance** subsections provide information on CPU, memory, disk and network usage, including usage trends and top resource consuming VMs 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.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the host to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected host. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of hosts and VMs to display in the report output.

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Host Performance

Description

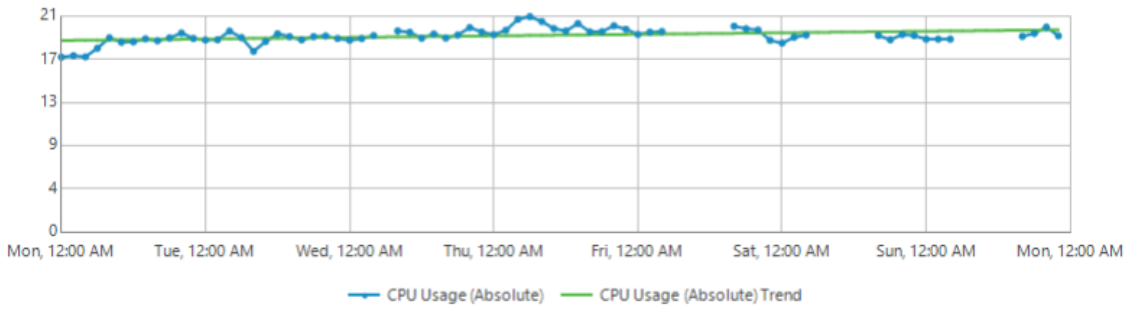This report shows host performance history that includes CPU, Memory, Disk and Network counters.

Report Parameters

Selected object:	prgtwesx01.tech.local
Object location:	\\Virtual Infrastructure\vcenter01.tech.local\Prague
Reporting period:	1/2/2023 - 1/8/2023
Top N:	3

⊞ Navigation

CPU Performance

CPU Usage (GHz)

— CPU Usage (Absolute) — CPU Usage (Absolute) Trend

Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
prgtwesx01.tech.local	19.47	17.35	21.37	0.75	Increasing

CPU Usage (Percent)

— CPU Usage — CPU Usage Trend
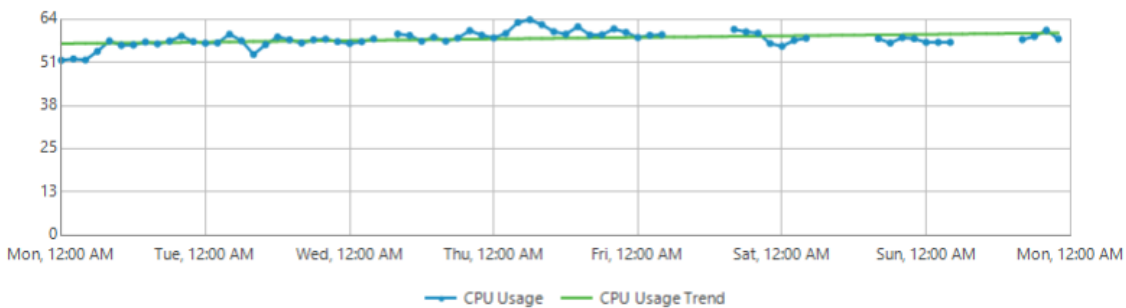
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
prgtwesx01.tech.local	57.95	51.65	63.61	2.22	Increasing

Top 3 VMs by CPU Usage
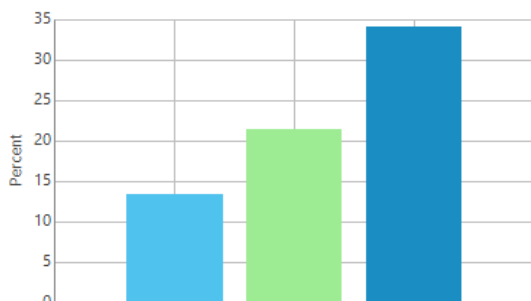
Object Name	Avg	Trend
serv02_vbo	34.04	Decreasing
enterprise05	21.37	Increasing
appsrv01	13.37	Decreasing

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.

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 Client and host restarts.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

   Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Uptime, greater than**: defines the desired minimum uptime value.

- **Uptime, less than**: defines the desired maximum uptime value.

- **Group by**: defines how data will be grouped in the report output (by *Uptime*, *Datacenter* or *Cluster*).
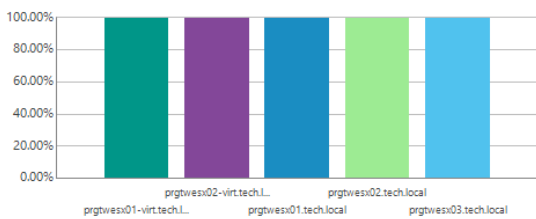
Host Uptime

Description

This report provides an overview of hosts uptime including hosts with lowest and highest uptime values.
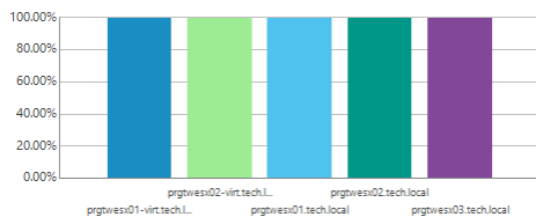
Report Parameters

Scope:	Virtual Infrastructure
Reporting period:	Current month (1/1/2023 - 1/31/2023)
Uptime:	greater than 80.00% and lower than 100.00%
Group by:	Group by Uptime

Summary

Host Uptime

Datacenter	Cluster	Host	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
Uptime: Uptime >= 90%						
Prague	CDP cluster	prgtwesx01-virt.tech.local	2	3	00:27:10	99.76%
Prague	CDP cluster	prgtwesx02-virt.tech.local	2	3	00:27:10	99.76%
Prague		prgtwesx01.tech.local	0	3	00:26:10	99.77%
Prague		prgtwesx02.tech.local	0	1	00:26:10	99.77%
Prague		prgtwesx03.tech.local	0	3	00:26:10	99.77%

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.

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 **Summary** section describes configuration of each selected cluster, including allocated memory and CPU resources, the number of CPU cores and sockets and CPU and memory usage rates.

  Click a cluster name to drill down to performance charts with statistics on CPU, memory, disk and network usage for the cluster.

- The **Performance** subsections provide information on CPU, memory, disk and network usage, including usage trends and top resource consuming hosts and VMs in 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of hosts and VMs to display in the report output.

- **Metrics**: defines a list of performance counters to analyze in the report.

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Multiple Clusters Performance

Description

This report shows performance data for multiple clusters that includes CPU, Memory, Disk and Network usage.

Report Parameters

Scope: Virtual Infrastructure
Reporting period: 12/1/2022 - 12/31/2022
Metrics: CPU usage (%), Memory usage (%)
Top N: 3

Summary

Cluster Name	Memory Size, GB	Total CPU, GHz	Cores	Sockets	CPU Usage %	Memory Usage %
CDP Clu v11a	255.97	23.99	12	2		
OceanCluster	2678.61	383.83	168	14	33.61	75.08
ProductionCluster	382.66	57.58	24	2	37.76	96.27
Total:	**3317.24**	**465.4**	**204**	**18**		

CPU Performance

CPU Usage (Absolute) (Percent)

ProductionCluster — OceanCluster — CDP Clu v11a
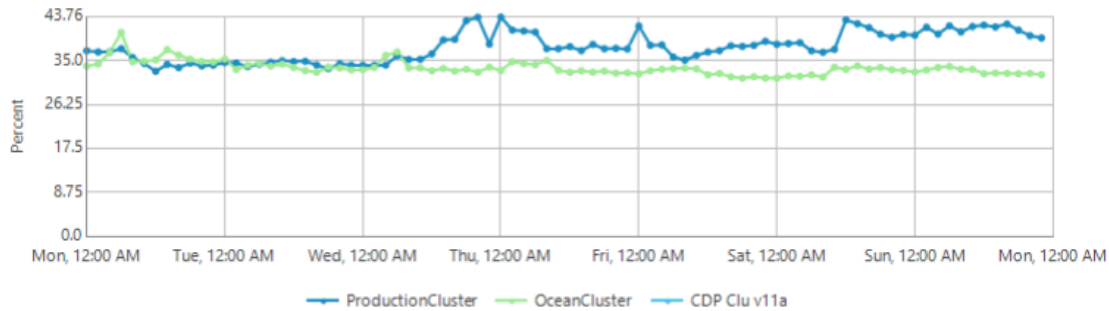
CPU Usage (Absolute) (Percent)

Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
ProductionCluster	37.76	32.93	43.76	2.91	Increasing
OceanCluster	33.61	31.55	40.68	1.43	Decreasing
CDP Clu v11a					No changes

Top 3 Hosts by CPU Usage (Absolute)
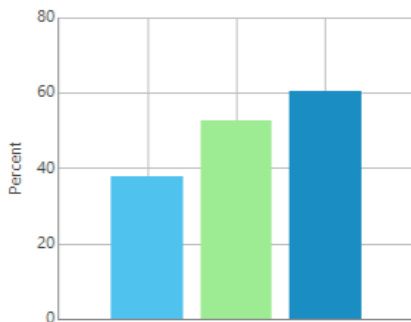
	Cluster Name	Host Name	Avg	Trend
■	OceanCluster	mrn.tech.local	60.56	Decreasing
■	OceanCluster	shr.tech.local	52.63	Decreasing
■	ProductionCluster	production.tech.local	37.76	Increasing

Top 3 VMs by CPU Usage (Absolute)
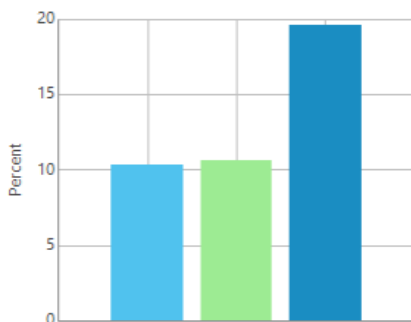
	Cluster Name	Virtual Machine Name	Avg	Trend
■	OceanCluster	amg-cleanVAC	19.57	Decreasing
■	ProductionCluster	xSQL	10.66	Increasing
■	ProductionCluster	vcd103.tech.local	10.38	Increasing

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.

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.

- The **Navigation** section shows path to the selected object, including VMware vSphere VC, datacenter, cluster and resource pool.

  Click a cluster name to drill down to performance charts with statistics on CPU, memory, disk and network usage for the cluster.

- The **Performance** subsections provide information on CPU, memory, disk and network usage, including usage trends and top resource consuming VMs.

  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.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the resource pool or vApp to analyze in the report.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected resource pool/vApp. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Top N**: defines the maximum number of VMs to display in the report output.

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:	Backup
Object location:	\\Virtual Infrastructure\vcenter01.tech.local\Prague\prgtwesx01.tech.local
Reporting period:	1/2/2023 - 1/8/2023

⊞ **Navigation**

CPU Performance
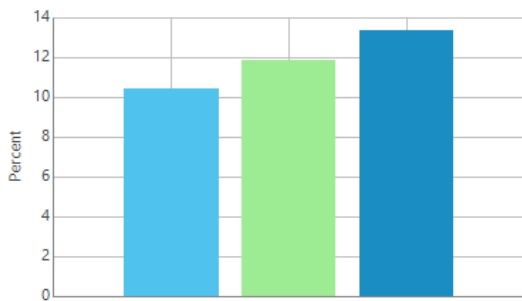
CPU Usage (Absolute) (MHz)

— CPU Usage (Absolute)   — CPU Usage (Absolute) Trend
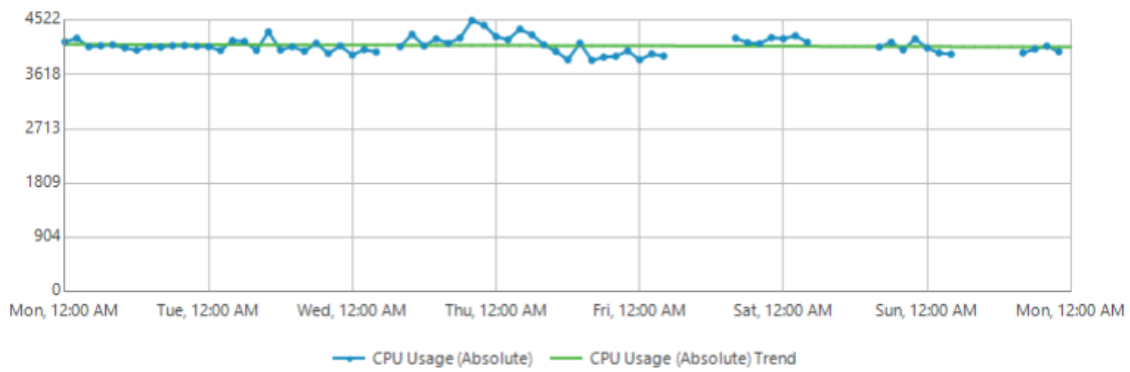
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Backup	4104.60	3858.00	4522.00	130.93	Decreasing

CPU Usage (Percent)
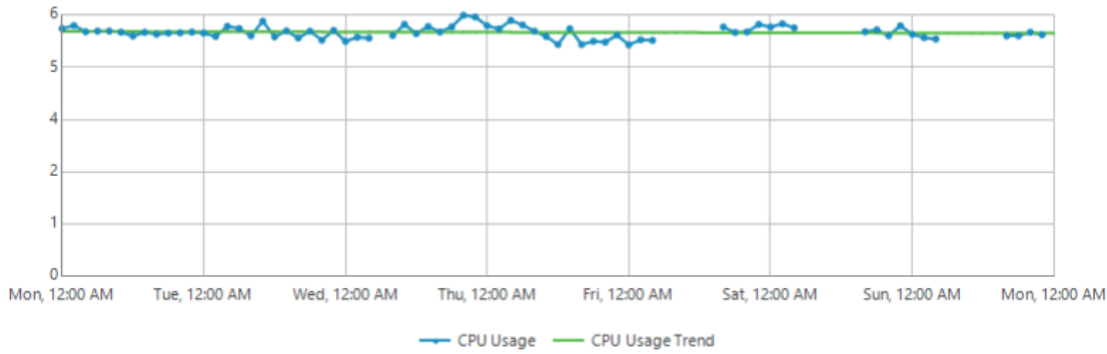
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
Backup	5.70	5.41	6.10	0.15	Decreasing

Top 3 VMs by CPU Usage

Object Name	Avg	Trend
appsrv01	13.37	Decreasing
srv14	11.90	Increasing
srv13	10.42	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.

VM Performance

This report aggregates historical data and shows performance statistics for a selected VM across a time range.

- The **Navigation** section shows path to the selected object, including VMware vSphere VC, datacenter, cluster and resource pool.

  Click a cluster, host or resource pool name to drill down to performance charts with statistics on CPU, memory, disk and network usage.

- The **Performance** subsections provide information on CPU, memory, disk and network usage and analyzes resource usage trends.

Report Parameters

You can specify the following report parameters:

- **Object**: defines the VM to analyze in the report.

- **Period:** defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected VM. Otherwise, the report will contain no data.

- **Business hours only:** 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.

Veeam

VM Performance

Description

This report shows VMs performance history that includes CPU, Memory, Disk and Network counters.

Report Parameters

Selected object:	enterprise01
Object location:	\\Virtual Infrastructure\vcenter01.tech.local\Prague\prgtwesx01.tech.local
Reporting period:	1/2/2023 - 1/8/2023

⊞ **Navigation**

CPU Performance

Average CPU Ready All Cores (Percent)
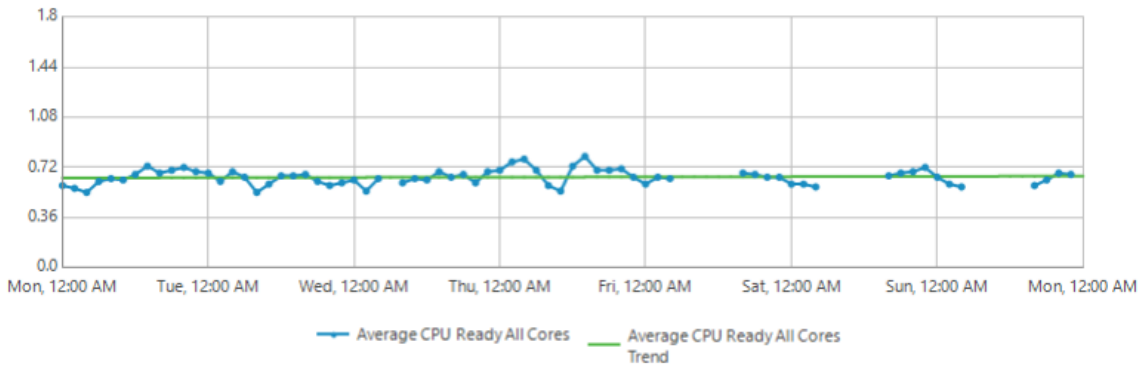
Object Name	Average	Minimum	Maximum	Std. Deviation	Trend
enterprise01	0.65	0.54	0.80	0.05	Increasing

Use Case

The report allows you to verify that you have provided enough resources to the virtual machine.

VM Uptime

This report analyzes VM uptime statistics to track VM availability.

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

  - 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.

> **NOTE:**
>
> The **Number of Restarts** column shows the number of VM restarts from the VMware vSphere Client only.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Uptime, greater than**: defines the desired minimum uptime value.

- **Uptime, less 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*).

VEEAM

VM Uptime
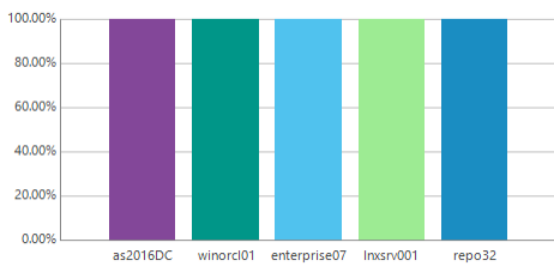
Description

This report provides an overview of VMs uptime including VMs with lowest and highest uptime values.
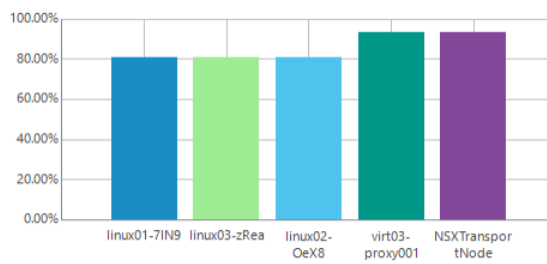
Report Parameters

Scope:	Virtual Infrastructure
Reporting period:	Past month (12/1/2022 - 12/31/2022)
Uptime:	greater than or equal to 80.00% and lower than or equal to 100.00%
Grouping:	Group by Uptime
Business View objects:	

Summary

Top Uptime

Lowest Uptime

Uptime Distribution

Uptime >= 75% and < 90%   Uptime >= 90%
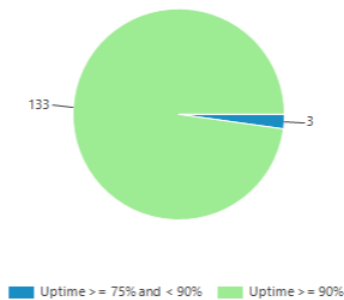
Virtual Machine Uptime

Cluster	Host	VM Name	Number of Restarts	Number of Alarms	Downtime	Sum of Uptime (%)
Uptime: Uptime >= 90%						
CDP cluster	prgtwesx01-virt.tech.local	virt03-proxy001	2	3	1 day(s) 15:45:00	92.98%
CDP cluster	prgtwesx02-virt.tech.local	NSXTransportNode	1	1	1 day(s) 15:45:00	92.98%
	prgtwesx01.tech.local	winsrv003	1	3	18:34:00	96.72%
CDP cluster	prgtwesx02-virt.tech.local	vm02-RqUH	0	2	00:24:00	99.05%
	prgtwesx03.tech.local	vdro11	0	0	00:47:00	99.35%
	prgtwesx01.tech.local	winsrv0022016	3	4	03:16:00	99.42%
	prgtwesx01.tech.local	winsrv004	2	5	02:48:00	99.51%
	prgtwesx02.tech.local	vspc01	1	2	01:57:00	99.54%
	prgtwesx01.tech.local	enterprise05	1	1	02:36:00	99.54%
	prgtwesx01.tech.local	winsrv001	1	5	02:30:00	99.56%
	prgtwesx01.tech.local	serv01_vbo	1	5	02:29:00	99.56%
	prgtwesx03.tech.local	vao_5	1	3	02:25:00	99.57%
	prgtwesx02.tech.local	bckpsrv012	0	3	02:22:00	99.58%
	prgtwesx03.tech.local	vboservicevm	12	1	02:22:00	99.58%

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.

vSphere 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.

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 VMs by Active Snapshot Size (GB)** and **Top VMs by Active Snapshot Age (Weeks)** 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Snapshot age, older than**: defines snapshot age threshold. If a VM snapshot is older than the specified age, the VM will be included in the report.

- **Ignore replica VMs created by Veeam products**: 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.
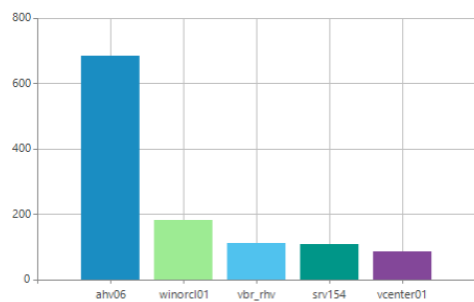
Veeam

Active Snapshots

Description

This report lists all VMs with their active snapshots, highlighting the VMs with the oldest and largest active snapshots in your virtual environment.
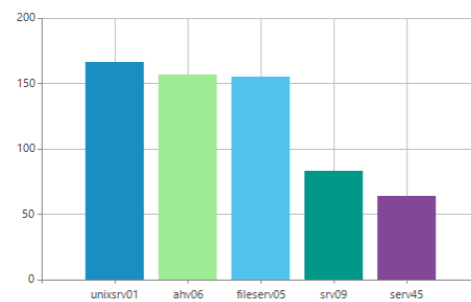
Report Parameters

Scope:	Virtual Infrastructure
Snapshot age:	older than 1 week
Ignore replica VMs created by Veeam products:	True

Summary

Top VMs by Active Snapshot Size (GB)

Top VMs by Active Snapshot Age (Weeks)

Details

Virtual Machine	Active Snapshot	Host	Snapshot Directory	Snapshot Create Time	Delta Size (GB)	VM State
ahv06	VM Snapshot 1/9/2020, 6:06:19 PM	prgtwesx03.tech.local	[prgtwesx03-ds01] ahv06/	1/9/2020 9:09:15 PM	683.54	Powered Off
winorcl01	VM Snapshot 8/29/2022, 7:06:51 PM	prgtwesx01.tech.local	[prgtwesx01-ds02] winorcl01/	8/29/2022 7:07:02 PM	182.03	Powered On
vbr_rhv	VM Snapshot 12/5/2022, 2:13:21 PM	prgtwesx03.tech.local	[prgtwesx03-ds01] vbr_rhv/	12/5/2022 2:13:35 PM	110.80	Powered On
srv154	init_snapshot	prgtwesx03.tech.local	[prgtwesx03-ds01] srv154/	12/27/2021 1:22:08 PM	109.32	Powered On
vcenter01	11/3/2022, 8:36:44 AM	prgtwesx01.tech.local	[prgtwesx01-ds02] vcenter01_new_1/	11/3/2022 8:36:51 AM	84.64	Powered On
srv14	2012 10/13/2022, 4:55:34 PM	prgtwesx01.tech.local	[prgtwesx01-ds01] srv14/	10/13/2022 4:55:40 PM	77.69	Powered On
srv27-tih	srv27-tih_vm-102045_1	prgtwesx02.tech.local	[prgtwesx02-ds01] srv27-tih/	6/6/2022 8:50:46 AM	70.58	Powered On
srv12win16	init_snapshot	prgtwesx03.tech.local	[prgtwesx03-ds01] srv12win16/	11/22/2022 1:42:14 PM	70.19	Powered On
winsrv0022016	winsrv0022016_vm-102083_1	prgtwesx01.tech.local	[prgtwesx01-ds02] winsrv0022016/	6/6/2022 8:50:07 AM	58.96	Powered On
orcserv67	init_snapshot	prgtwesx03.tech.local	[prgtwesx03-ds01] orcserv67/	11/16/2021 10:13:10 AM	58.76	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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

> **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.

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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

Summary

Total garbage files size: 2.67 TB
Total garbage files number: 624

	55.92 %	
5.80 %		
38.28 %		

■ Consumed Space   ■ Free Space   ■ Garbage Space
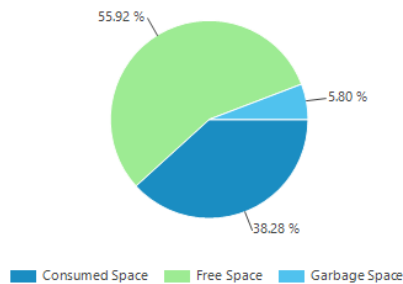
Details

Storage: prgtwesx02-ds01
Location: vcenter01.tech.local

Garbage Files Folder	Number of Garbage Files	Garbage Files Size
srv11/	14	24.25 GB
esx05_linux_ubuntu/	4	10.85 GB
esx05_win10_pro/	4	17.84 GB
esx05_win2012/	4	26.36 GB
esx05_win2016/	4	28.40 GB
repositorysrv/	1	3.11 KB
serv001/	1	3.84 KB
serv01_vbo/	1	3.95 KB
serv02_vbo/	1	150.00 B
serv03_vbo/	1	3.61 KB
SQLSRV001/	1	150.00 B
SQLSRV002/	1	150.00 B
virt03-srv01/	1	155.00 B
winsrv0012016/	1	3.95 KB
wrk004/	1	150.00 B
Total:	**40**	**107.71 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.

Idle Templates

Templates are preconfigured images of your VMs that help you to easily deploy multiple copies of the model VMs across the infrastructure.

- The **Summary** section shows the total number of templates, the number of idle templates and the amount of wasted storage space.

- The **Details** table provides information on inactive templates, including template location, size and the last time the template was used.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Allowed period of inactivity**: 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.

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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
Allowed period of inactivity: 1 week

Summary

Total templates: 10
Idle templates: 10
Wasted Storage: 249.35 GB

Details

Location: vcenter01.tech.local

Datastore	Templates	Templates Folder	Template Size (GB)	Last Access Date
⊟ prgtwesx03-ds01	10		249.35	
	preset_win2012	ISO/	5.03	10/19/2022 4:34 AM
	preset_win2012	win2012/	21.29	10/19/2022 4:34 AM
	preset_win2019	ISO/	5.17	10/17/2022 9:44 AM
	preset_win2019	preset_win2019/	23.28	10/17/2022 9:44 AM
	preset_linux	preset_linux_1/	16.00	10/17/2022 10:16 AM
	win2019	ISO/	5.17	9/26/2022 7:06 AM
	win2019	win2019_1/	25.56	9/26/2022 2:06 PM
	win2016	ISO/	5.59	10/18/2022 9:28 PM
	win2016	win2016_vm/	23.59	10/19/2022 4:28 AM
	won2019_service_template	ISO/	5.17	9/26/2022 7:08 AM
	won2019_service_template	won2019_service_template/	23.08	9/26/2022 2:08 PM
	preset_win10_pro	ISO/	5.33	10/17/2022 10:17 AM
	preset_win10_pro	preset_win10_pro/	13.03	10/17/2022 10:17 AM
	win2012	ISO/	5.03	10/18/2022 9:28 PM
	win2012	win2012_1/	23.47	10/19/2022 4:28 AM
	preset_win2016	ISO/	5.59	10/19/2022 4:33 AM
	preset_win2016	win2016/	19.65	10/19/2022 4:33 AM
	win10_pro	ISO/	5.33	9/26/2022 7:02 AM
	win10_pro	win10_pro/	13.03	9/26/2022 2:02 PM

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.

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.

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

    o The **Idle/Active VMs** chart shows the number of idle and active VMs.

    o The **Wasted Storage, GB** chart shows the amount of valuable and wasted storage resources.

    o The **Idle CPU, GHz** and **Idle Memory, GB** charts show the amount of active and idle CPU and memory resources.

- The **Details** table provides information on idle VMs, including cluster or host name, VM name, CPU, memory, disk and network usage, and the number of days during which VM was inactive.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Last <N>**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **CPU usage, less than (GHz)**: 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 consumed, less than (GB)**: 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 (KBps)**: 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 (KBps)**: 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 spent in the defined conditions (%)**: 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.

Veeam

Idle VMs

Description

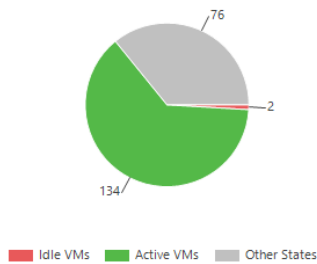This report shows a list of idle VMs in terms of CPU, memory, disk and network utilization parameters.

Report Parameters

Root Object:	Virtual Infrastructure
Interval:	1 week (1/10/2023 - 1/16/2023)
CPU usage, less than:	0.1 GHz
Memory consumed, less than:	0.256 GB
Disk usage, less than:	20 KBps
Network usage, less than:	1 KBps
Time spent in the defined conditions:	for more than 90 % of the time

Summary

Total VMs:	212
Idle VMs:	2

Idle/Active VMs
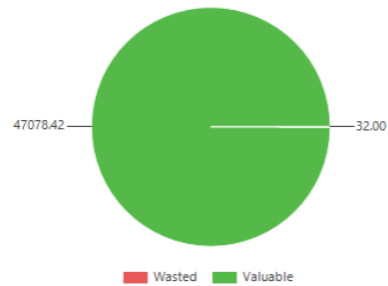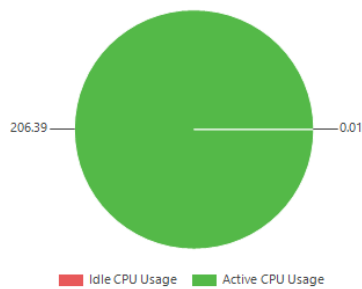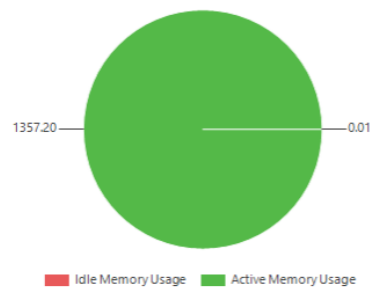
76
2
134

■ Idle VMs   ■ Active VMs   ■ Other States

Wasted Storage, GB

47078.42 ─── 32.00

■ Wasted   ■ Valuable

Idle CPU, GHz

206.39 ─── 0.01

■ Idle CPU Usage   ■ Active CPU Usage

Idle Memory, GB

1357.20 ─── 0.01

■ Idle Memory Usage   ■ Active Memory Usage

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)
prgtwesx01-virt.tech.local	1					
	ts-vm01-ZVIV	5.00	0.01	0.00	0.00	1
prgtwesx02-virt.tech.local	1					
	ts-vm022-1ZGE	5.00	0.01	0.00	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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

Veeam

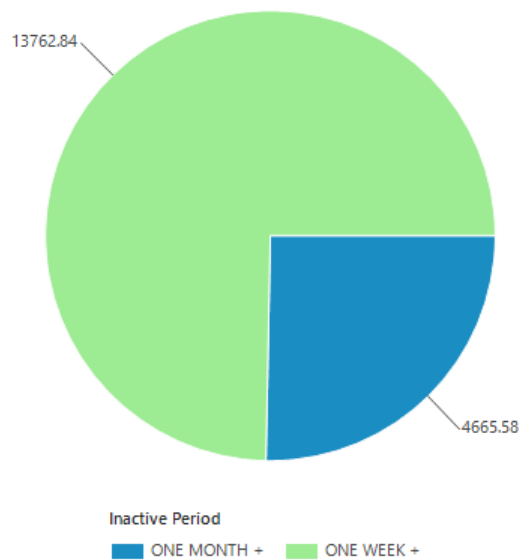# Inefficient Datastore Usage

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

Summary

Storage Consumed by Inactive VMs (GB)

13762.84

4665.58

Inactive Period

▮ ONE MONTH +   ▮ ONE WEEK +

Details

Virtual Machine	Location	Latest Activity	Storage Consumed (GB)
Inactive Period: ONE MONTH +			
ahv06	vcenter01.tech.local\Prague\prgtwesx03.tech.loca l	9/19/2022	2228.17
backupserver001	vcenter01.tech.local\Prague\prgtwesx01.tech.loca l	12/1/2022	253.98
vcenter-old	vcenter01.tech.local\Prague\prgtwesx01.tech.loca l	9/26/2022	243.04
docopsnfs	vcenter01.tech.local\Prague\prgtwesx03.tech.loca l	9/19/2022	168.06
vcenter01_bkp	vcenter01.tech.local\Prague\prgtwesx01.tech.loca l	9/19/2022	144.54
test5	vcenter01.tech.local\Prague\prgtwesx02.tech.loca l	9/19/2022	135.17
avspem1	vcenter01.tech.local\Prague\prgtwesx01.tech.loca l	12/1/2022	116.09
serv58	vcenter01.tech.local\Prague\prgtwesx02.tech.loca l	9/19/2022	111.20
serv57	vcenter01.tech.local\Prague\prgtwesx02.tech.loca l	9/19/2022	106.35
enterprise02	vcenter01.tech.local\Prague\prgtwesx01.tech.loca l	9/19/2022	95.57

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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

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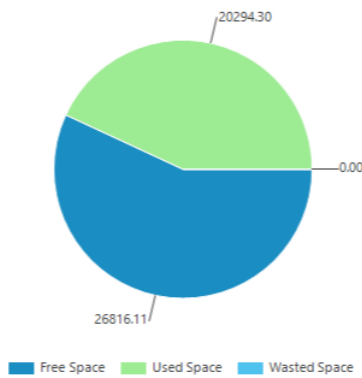## Orphaned VM Snapshots

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

Datastore Space Usage (GB)

Free Space | Used Space | Wasted Space

Details

Virtual Server: vcenter01.tech.local

Folder Name	Snapshot: File Name	Snapshot: File Size (GB)	VM Name
Datastore: prgtwesx01-ds01		15.50 GB	
[prgtwesx01-ds01] srv14/		15.50 GB	
	srv14_1-000003.vmdk	15.25	srv14
	srv14-000003.vmdk	0.25	srv14
	srv14_1-000001.vmdk	0.00	srv14
	srv14-000001.vmdk	0.00	srv14
[prgtwesx01-ds01] serv45/		0.00 GB	
	serv45_1-000002.vmdk	0.00	serv45
	serv45_3-000002.vmdk	0.00	serv45
Datastore: prgtwesx01-virt-ds1		8.42 GB	
[prgtwesx01-virt-ds1] virt01-vm33/		8.42 GB	
	virt01-vm33_2-000002.vmdk	8.42	virt01-vm33

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.

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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Last <N>**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **Memory counter type**: 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.

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 (1/10/2023 - 1/16/2023)
Top N:	5
Memory counter type:	Active

Summary

Total oversized VMs:	147
Total VMs:	212
CPU oversized VMs:	111
Memory oversized VMs:	147
CPU resources that can be reclaimed:	330 vCPUs
vRAM amount that can be reclaimed:	749.00 GB

Oversized Virtual Machines by CPU

⊟ Virtual Server: vcenter01.tech.local

Cluster/Host	Virtual Machine	vCPUs	CPU Average Usage (%)	Peak Usage (%)	Reclaimed CPU Resource	Recommendation
⊟ prgtwesx01.tech.local	2				14	
	serv21	8	3.00	4.00	7	Configure this VM with 1 vCPUs.
	linuxsrv001	8	2.00	2.00	7	Configure this VM with 1 vCPUs.
⊟ prgtwesx03.tech.local	3				28	
	prgtwesx01-virt	12	5.00	8.00	11	Configure this VM with 1 vCPUs.
	prgtwesx02-virt	12	11.00	12.00	10	Configure this VM with 2 vCPUs.
	vboservicevm	8	0.00	1.00	7	Configure this VM with 1 vCPUs.

Oversized Virtual Machines by Memory

⊟ Virtual Server: vcenter01.tech.local

Cluster/Host	Virtual Machine	Capacity (GB)	Memory Average Usage (GB)	Peak Usage (GB)	Reclaimed Memory Resource	Recommendation
⊟ prgtwesx01.tech.local	2				47.10	
	serv21	32.00	0.36	0.43	31.40	Allocate 0.6 GBs of RAM.
	serv37	16.00	0.17	0.20	15.70	Allocate 0.3 GBs of RAM.
⊟ prgtwesx03.tech.local	3				85.40	
	prgtwesx02-virt	40.00	3.35	3.86	35.10	Allocate 4.9 GBs of RAM.
	prgtwesx01-virt	40.00	3.26	4.28	34.60	Allocate 5.4 GBs of RAM.
	virt03-srv01	16.00	0.20	0.22	15.70	Allocate 0.3 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.

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.

- 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 displays the amount of time during which a VM was powered off against the time of the reporting period in percent.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Last <N>**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Time spent powered off**: defines the amount of time when the VM was powered off against the amount of time in the reporting period (in percentage).

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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
Time spent powered off:	80 %
Interval:	1 week (1/10/2023 - 1/16/2023)

Summary

Total VMs:	212
Powered Off VMs:	67
Wasted Storage:	4,078.51 GB

Powered Off Virtual Machines

⊟ **Location: vcenter01.tech.local**

Datastore	Virtual Machine	Computer Name	VM Size (GB)	Power Off Status (%)
⊟ ubuntunfs01	10			
	vApp01-7nFN	Not set	0.00	100.00
	linux03-zRea	Not set	0.00	100.00
	linux02-OeX8	Not set	0.00	100.00
	linux01-7IN9	Not set	0.00	100.00
	vm02-RqUH	Not set	0.00	100.00
	template01-eoCy	Not set	0.00	100.00
	ts-vm01-xbds	Not set	0.00	100.00
	ts-vm022-IVrN	Not set	0.00	100.00
	win-vm04-ts-U1bl	Not set	0.00	100.00
	ts-vm01-ZVlV	Not set	0.88	95.89
⊟ prgtwesx01-ds01	8			
	avspem1	avspem1	116.09	100.00
	172.35.42.67_pskehq	pskehq	0.11	100.00
	unixsrv01	Not set	41.15	100.00
	172.24.31.67_xxjx2s	xxjx2s	0.11	100.00
	ABC Company_filesrv04_replica	Not set	27.78	100.00
	ABC Company_filesrv03_replica	Not set	41.22	100.00
	ABC Company	Not set	0.00	100.00
	172.35.42.67_sjnmu7	Not set	0.11	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.

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.

- The **Summary** section provides an overview of the current state of your infrastructure, including the total number of VMs and the number of CPU and memory undersized VMs, and shows recommendations on resource allocation.

- The **Undersized Virtual Machines by CPU** and **Undersized Virtual Machines by Memory** tables display VMs with insufficient CPU and memory resources and deliver recommendations for their reconfiguration.

  Click a VM name 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **VMware Cloud Director objects**: defines VMware Cloud Director 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Last <N>**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Business hours only**: 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.

- **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 (KBps)**: 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 utilization (%)**: 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 utilization (%)**: 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 type**: defines whether the *Memory Active* or *Memory Consumed* performance metric should be analyzed in the report.

> **NOTE:**
>
> Veeam ONE Web Client 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 Web Client checks whether a pair of these conditions is true, in other words, pairs of these conditions are joined by Boolean "OR".

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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 utilization:	90 %
Swap out rate, more than:	0 Kbps
Memory utilization:	90 %
Memory counter type:	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

Cluster/Host	Virtual Machine	vCPUs	CPU Utilization (%)	CPU Ready (%)	Recommended Number of vCPUs
⊟ Cluster1	1				
	SA5_VM6_Win10x64_EM_sql (f5a52a2a-a188-4b1c-b320-ed2deccb9b13)	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

Cluster/Host	Virtual Machine	Allocated (GB)	Memory Average Usage (%)	Swap out Rate (Kbps)	Recommended Amount of RAM
⊟ Cluster1	2				
	2_SA_VBR_10	4.00	95.12	0.00	5.1 GB
	vCenter Appliance	8.00	91.05	0.00	10.1 GB
⊟ Cluster2	1				
	SA_L2_VM1_Win10_1809	4.00	38.81	0.00	5.1 GB

⊟Virtual Server: vcenter01

Cluster/Host	Virtual Machine	Allocated (GB)	Memory Average Usage (%)	Swap out Rate (Kbps)	Recommended Amount of RAM
⊟ esx01	1				
	srv11	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.

vSphere Overview

This report pack provides general configuration overview for vCenter Servers, datastores, clusters, hosts and VMs.

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 **Summary** section charts provide an overview of cluster resources in terms of memory, CPU and storage utilization.
- The **Details** table provides information on each cluster, including total number of hosts in the cluster, the amount of allocated resources and statuses of HA (High Availability) and DRS (Distributed Resource Scheduler) features.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Cluster type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.
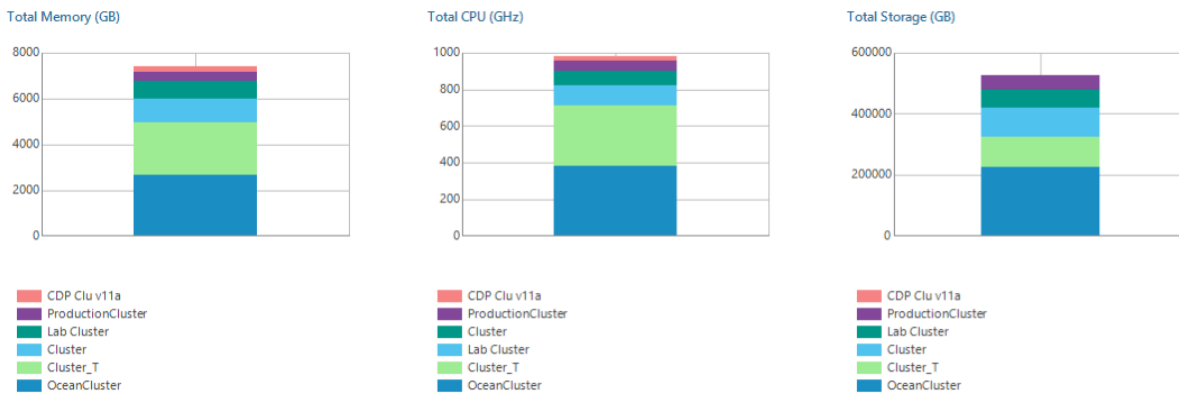
Cluster Configuration

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

Summary

Total Memory (GB) — legend: CDP Clu v11a, ProductionCluster, Lab Cluster, Cluster, Cluster_T, OceanCluster

Total CPU (GHz) — legend: CDP Clu v11a, ProductionCluster, Cluster, Lab Cluster, Cluster_T, OceanCluster

Total Storage (GB) — legend: CDP Clu v11a, ProductionCluster, Lab Cluster, Cluster, Cluster_T, OceanCluster

Details

Name	Total Hosts	Parent VI Object	Total Memory	Total CPU Cores	Total CPU	Total Storage	DRS Status	DRS Automation Level	HA Status
CDP Clu	0	CDP	0.00 B	0	0.00 MHz	0.00 B	disabled	-	disabled
CDPCluster	0	MarikCDP	0.00 B	0	0.00 MHz	0.00 B	disabled	-	disabled
CDP Clu v11a	1	CDP	255.97 GB	12	23.99 GHz	0.00 B	disabled	-	disabled
ProductionCluster	1	OceanDC	382.66 GB	24	57.58 GHz	47.15 TB	enabled	fullyAutomated	disabled
Lab Cluster	2	Labs	765.33 GB	48	115.15 GHz	57.92 TB	enabled	manual	disabled
Cluster	2	Datacenter	1,023.81 GB	32	76.80 GHz	94.15 TB	enabled	fullyAutomated	disabled
Cluster_T	6	Datacenter	2.24 TB	144	326.26 GHz	94.33 TB	enabled	partiallyAutomated	disabled
OceanCluster	7	OceanDC	2.62 TB	168	383.86 GHz	221.18 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.

Datastore Capacity

This report helps administrators evaluate available datastore capacities across the infrastructure.

- 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Top N**: defines the number of top datastores, virtual and logical disks that will be displayed in the report charts.

Datastore Capacity

Description

This report shows storage capacity information for datastores, virtual and logical disks.
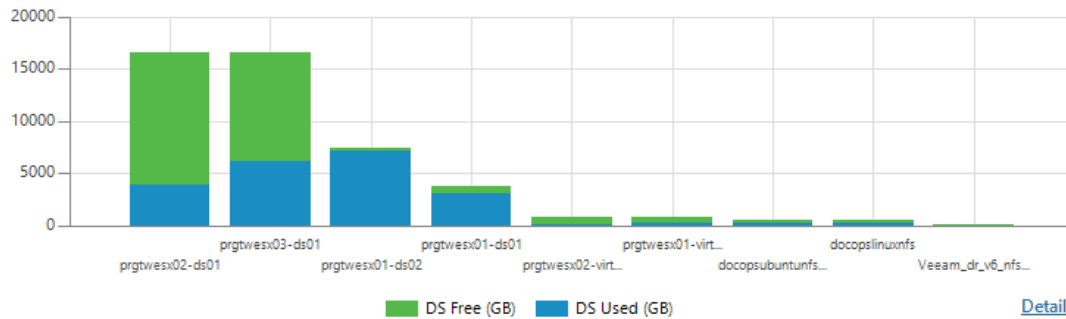
Report Parameters

Scope: Virtual Infrastructure
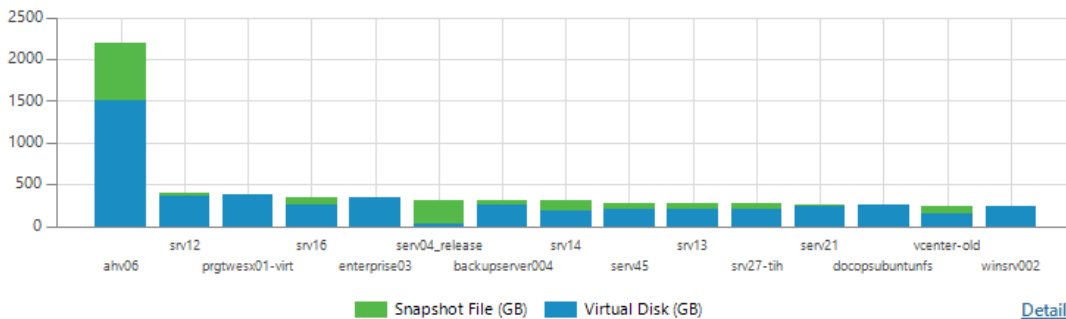
Top N: 15
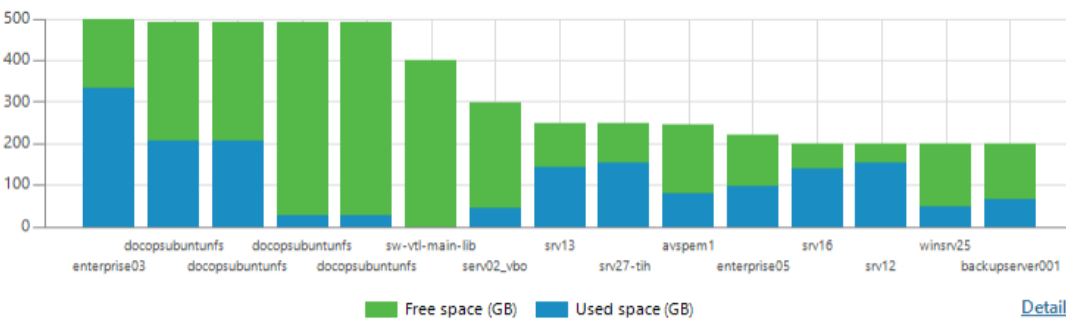
Business View objects:

Summary

Storage Overview (Top 15)

Details

Virtual Disks Capacity (Top 15)

Details

Logical Disks (Top 15)

Details

![Veeam logo]

Datastores

Description

This report shows storage capacity information for datastores.

Report Parameters

Scope: Virtual Infrastructure
Session Date: 1/12/2023 3:01 AM
Business View objects:

Details

Datastore	Capacity (GB)	Free Space (GB)	Used Space		FS Type	VM Count	Template Count
docopslinuxnfs	491.08	308.16		37 %	NFS	1	0
docopsubuntunfs01	491.08	308.16		37 %	NFS	13	0
prgtwesx01-ds01	3718.00	691.73		81 %	VMFS	28	0
prgtwesx01-ds02	7450.75	311.91		96 %	VMFS	59	0
prgtwesx01-virt-ds1	792.50	594.59		25 %	VMFS	5	0
prgtwesx02-ds01	16637.25	12806.50		23 %	VMFS	51	0
prgtwesx02-virt-ds1	792.50	663.86		16 %	VMFS	7	0
prgtwesx03-ds01	16637.25	10561.90		37 %	VMFS	51	10
Veeam_dr_v6_nfs41_5HNu fyTQKzk1Xc3a0SzRJ3	100.00	99.10		1 %	NFS	2	0
Total	**47110.42**	**26345.90**	**20764.52**			**217**	**10**

Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

Datastore Configuration

This report documents the current configuration of datastores in your infrastructure.

- The **Summary** section includes the following elements:
    - The **Utilization (%)** chart shows the amount of free and used space on datastores.
    - The **Provisioned Space (GB)** chart shows datastores capacity and the amount of space provisioned to VMs.

o 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 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

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Datastore Configuration

Description

This report provides information about datastore type and other general information including total capacity, free and provisioned space.
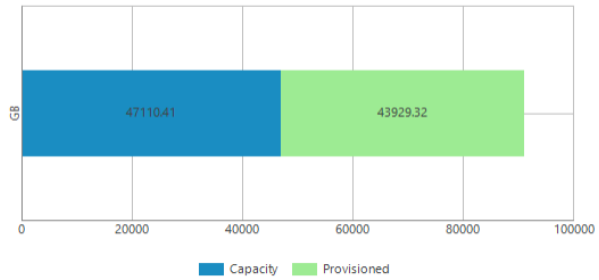
Report Parameters

Scope: Virtual Infrastructure

Summary

Utilization (%)
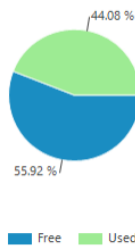
Provisioned Space (GB)

Name	Capacity (GB)	Free Space (GB)	Provisioned Space (GB)	Provisioning Ratio (%)	Free Space Usage Trend
linuxnfs	491	308.16	292.30	59.52	Decreasing
ubuntunfs01	491	308.16	379.52	77.28	Decreasing
prgtwesx01-ds01	3,718	691.73	4712.34	126.74	Decreasing
prgtwesx01-ds02	7,451	311.91	14414.47	193.46	Decreasing
prgtwesx01-virt-ds1	793	594.59	551.73	69.62	Decreasing
prgtwesx02-ds01	16,637	12806.50	8291.78	49.84	Decreasing
prgtwesx02-virt-ds1	793	663.86	527.38	66.55	Decreasing
prgtwesx03-ds01	16,637	10561.90	14740.26	88.60	Decreasing
dr_v6_nfs41_5HNufyTQKzk1Xc3a0SzRJ3	100	99.10	19.54	19.54	Not changed

Top 3 VMs

Top 3 Largest VMs
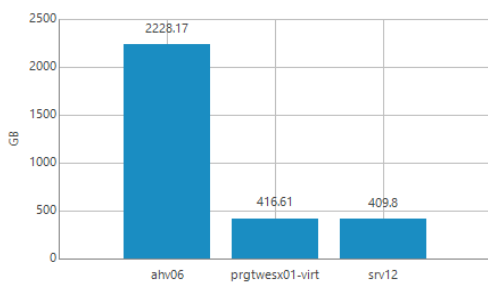
Object Name	Number of Disks	Space Used (GB)
ahv06	3	2228.17
prgtwesx01-virt	1	416.61
srv12	3	409.80

General Information

Name	Hosts/Clusters	Datastore Type	File System	Block Size (MB)	Total VMs and Templates
linuxnfs	prgtwesx03.tech.local	Local	NFS	n\a	1
ubuntunfs01	CDP cluster	Shared	NFS	n\a	13
prgtwesx01-ds01	prgtwesx01.tech.local	Local	VMFS	1	28
prgtwesx01-ds02	prgtwesx01.tech.local	Local	VMFS	1	59
prgtwesx01-virt-ds1	prgtwesx01-virt.tech.local	Local	VMFS	1	5
prgtwesx02-ds01	prgtwesx02.tech.local	Local	VMFS	1	51
prgtwesx02-virt-ds1	prgtwesx02-virt.tech.local	Local	VMFS	1	7
prgtwesx03-ds01	prgtwesx03.tech.local	Local	VMFS	1	61
dr_v6_nfs41_5HNufyTQKzk1Xc3a0SzRJ3	prgtwesx01.tech.local	Local	NFS	n\a	2

Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

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 **Summary** section includes the following elements:

    o 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.

    o 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.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

- **Group by**: defines how data will be grouped in the report output (by *Virtual Server* or *Datacenter*).
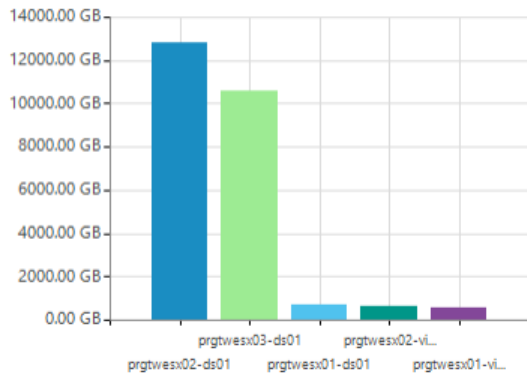
Datastore Space Usage History

Description

This report shows dynamics of datastore usage metrics, including space usage (free/used) and disk provisioning rates.
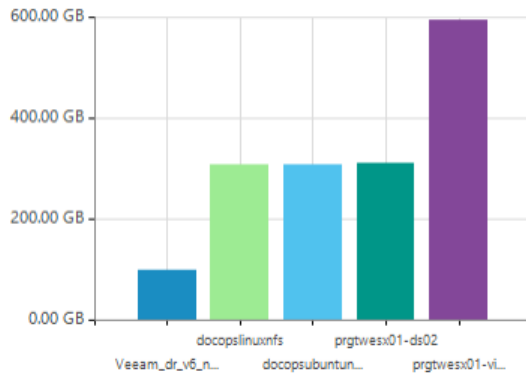
Report Parameters

Scope:	Virtual Infrastructure
Reporting period:	1 week (1/10/2023 - 1/16/2023)
Group by:	Virtual Server

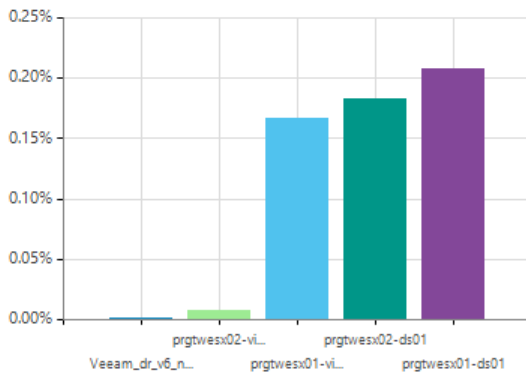## Summary

Datastores with Most Free Space

Datastores with Least Free Space

Most Growing Datastores
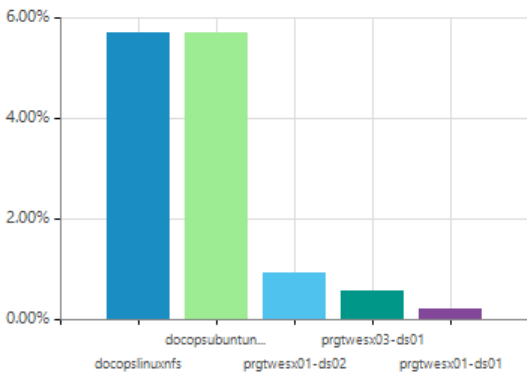
Least Growing Datastores

Details

Datastore	Date	Total Space (GB)	Used Space (GB)	Provisioned Space (GB)	Total VMs	Total VM Templates
Virtual Server: vcenter01.tech.local						
docopslinuxnfs						
	1/10/2023 4:00 PM	491.08	154.93	267.05	1	0
	1/10/2023 6:35 PM	491.08	154.94	267.05	1	0
	1/11/2023 3:01 AM	491.08	174.81	286.24	1	0
	1/12/2023 3:01 AM	491.08	182.92	292.30	1	0
docopsubuntunfs01						
	1/10/2023 4:00 PM	491.08	154.93	351.16	13	0
	1/10/2023 6:35 PM	491.08	154.94	351.17	13	0
	1/11/2023 3:01 AM	491.08	174.81	371.40	13	0
	1/12/2023 3:01 AM	491.08	182.92	379.52	13	0
prgtwesx01-ds01						
	1/10/2023 4:00 PM	3718.00	3018.56	4712.34	28	0
	1/10/2023 6:35 PM	3718.00	3017.92	4712.34	28	0
	1/11/2023 3:01 AM	3718.00	3020.11	4712.34	28	0
	1/12/2023 3:01 AM	3718.00	3026.27	4712.34	28	0

Use Case

The report helps you monitor storage capacities to ensure your VMs have sufficient room to operate.

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 includes the following elements:

  - The **Overview** table 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.

  Click a VM name in the **Virtual Machine** column to drill down to VM guest disk space usage details.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Last <N> days/weeks**: defines the time period to analyze in the report.

- **Disk capacity, more than (GB)**: 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*).

- **Hide disks with "Suppress alarm" setting enabled in Veeam ONE Client**: defines whether guest disks excluded in Veeam ONE Client to analyze in the report.

  You can exclude certain VM guest disks from monitoring in Veeam ONE Client. To lean more, see section Virtual Machine Summary of the Veeam ONE Monitoring Guide.

Guest Disk Free Space

Description

This report provides information about free space for all VMs guest disks.

Report Parameters

|	
Scope:	\\Virtual Infrastructure
Reporting period:	1 week (1/10/2023 - 1/16/2023)
Sort by:	Virtual machines
Hide disks with "Suppress alarms" setting enabled in Veeam ONE Client:	True

Summary

Overview

|	
VMs analyzed	138
Virtual disks in the infrastructure	149
Including Thick disks	26
Thin disks	123
Disks to reach 100% in less than 30 days	3
Disks to reach 100% in less than 60 days	4
Disks with less than 1 GB of free space	24
Disks with less than 1% of free space	6
Average disks` daily growth [GB]	0.10
Average disks` daily growth [%]	0.07 %

Disks to Reach Threshold First

Virtual Machine	Partition	Capacity (GB)	Free Space (GB)	Daily Growth (GB)	Days to Reach 90%	Days to Reach 100%
desktop03	C:\	49.66	0.15	0.00	0	∞
serv45	E:\	100.00	0.00	0.00	0	0
winorcl01	C:\	199.40	0.06	0.00	0	∞
backup01	C:\	99.45	0.00	0.00	0	0
vbr_rhv	C:\	129.45	0.00	0.00	0	∞
srv154	C:\	129.45	4.44	0.01	0	∞
docopsubuntunfs	/	9.75	0.00	0.00	0	0
winsrv0022016	C:\	99.45	13.81	0.56	5	22
srv14	C:\	49.19	5.94	0.15	6	37
srv16	C:\	49.22	8.86	0.41	8	19

Top 10 Partitions by Relative Space Growth
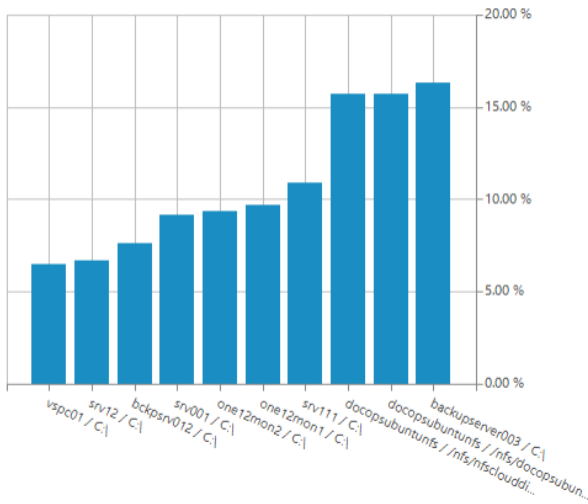
Top 10 Partitions by Absolute Space Growth
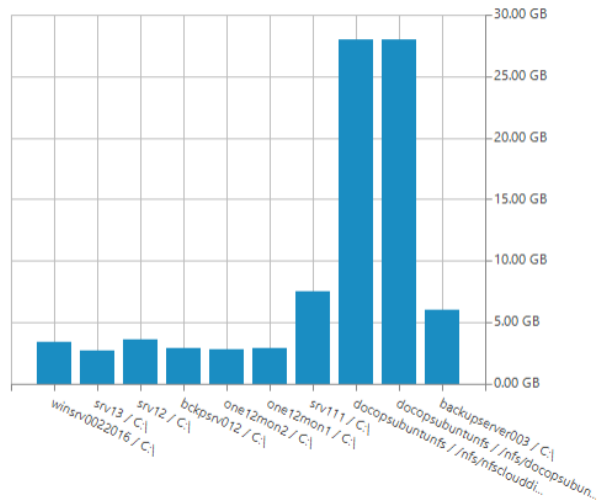
Guest Disk Free Space (GB)

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%
Agent11	C:\	129.66	18.55	24.06	81.45	105.60	0.63	0.10	∞
appsrv01	C:\	69.66	68.96	48.04	31.04	21.62	0.70	0.12	177
appsrv01	E:\	50.00	66.85	33.42	33.15	16.57	0.00	0.00	∞
as2016DC	C:\	79.66	21.23	16.91	78.77	62.75	0.00	0.00	∞
avspem1	/	243.88	32.86	80.14	67.14	163.74	0.00	0.00	∞
avspem1	/boot	0.99	35.41	0.35	64.59	0.64	0.00	0.00	∞
avspem1	/boot/efi	0.58	0.85	0.00	99.15	0.58	0.00	0.00	∞
backup01	C:\	99.45	100.00	99.45	0.00	0.00	0.00	0.00	∞
backup01	F:\	39.87	12.58	5.02	87.42	34.86	0.00	0.00	∞
backup02	C:\	99.45	52.59	52.30	47.41	47.14	-1.62	-0.27	∞

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.

Host Configuration

This report documents the current configuration of hosts in the virtual infrastructure.

- The **Summary** section provides an overview of the infrastructure, including the total number of hosts, number of VMs per host and number of hosts per datastore.

- The **General Information** section provides information on each host, including host name, manufacturer, system model, hypervisor version and host status.

- The **Available Resources** section provides information on resources available for each host, including CPU frequency, number of cores, amount of physical and virtual memory, local and shared storage size and the number of VMs.

- The **Network Configuration** section provides information on network configuration for each host, including network name, type, number of VMs, adapter and IP ranges.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Show host network configuration**: defines whether host network configuration details must be included in the report.

Host Configuration

Description

This report provides general host configuration information, including available resources and network configuration.

Report Parameters

Scope:	Virtual Infrastructure
Show host network configuration:	False

Summary

Total number of hosts	5
VMs per host	43.00
Hosts per datastore	0.50

General Information

Name	Manufacturer	System Model	Hypervisor	Status
prgtwesx01.tech.local	Supermicro	X10DRi	VMware ESXi 7.0.3 build-19193900	Connected
prgtwesx02.tech.local	Supermicro	Super Server	VMware ESXi 7.0.3 build-19193900	Connected
prgtwesx03.tech.local	Supermicro	Super Server	VMware ESXi 7.0.3 build-19482537	Connected
prgtwesx01-virt.tech.local	VMware, Inc.	VMware Virtual Platform	VMware ESXi 7.0.3 build-19482531	Connected
prgtwesx02-virt.tech.local	VMware, Inc.	VMware Virtual Platform	VMware ESXi 7.0.3 build-19482531	Connected

Available Resources

Name	Physical CPU (GHz)	Total Cores	Physical Memory (GB)	Allocated Memory (GB)	Local Storage (GB)	Shared Storage (GB)	Number of VMs
prgtwesx01.tech.local	33.60	16	511.89	526.00	11,268.75	0.00	89
prgtwesx02.tech.local	57.60	24	382.66	242.00	16,637.25	0.00	51
prgtwesx03.tech.local	57.60	24	382.66	391.00	17,128.33	0.00	51
prgtwesx01-virt.tech.local	28.79	12	40.00	29.00	792.50	491.08	11
prgtwesx02-virt.tech.local	28.79	12	40.00	36.00	792.50	491.08	13

Network Configuration

Networks	Network Type	VMs	Adapter name	Observed IP Ranges
Host Name: prgtwesx01.tech.local		**95**		
DB Virtual Lab VM Network	HostPortGroup	1	-	-
Exchange vLab VM Network	HostPortGroup	0	-	-
SQL vLab VM Network	HostPortGroup	2	-	-
Virtual Lab 1 VM Network	HostPortGroup	0	-	-
Virtual Lab Production VM Network	HostPortGroup	0	-	-
tenant.ABC Company.vlan776	HostPortGroup	1	vmnic0	172.35.39.1-172.35.42.254
tenant.ABC Company.vlan771	HostPortGroup	3	vmnic0	172.35.39.1-172.35.42.254
tenant.TechCompany.vlan770	HostPortGroup	1	vmnic0	172.35.39.1-172.35.42.254
tenant.TechCompany.vlan750	HostPortGroup	3	vmnic0	172.35.39.1-172.35.42.254
tenant.Beta.vlan3	HostPortGroup	0	vmnic0	172.35.39.1-172.35.42.254
tenant.Beta.vlan4	HostPortGroup	0	vmnic0	172.35.39.1-172.35.42.254
tenant.Beta.vlan1	HostPortGroup	0	vmnic0	172.35.39.1-172.35.42.254
tenant.Beta.vlan2	HostPortGroup	0	vmnic0	172.35.39.1-172.35.42.254
VM Network	HostPortGroup	84	vmnic0	172.35.39.1-172.35.42.254

Use Case

The report allows you to identify configuration issues, optimize resource provisioning and better handle current and future workloads.

Hypervisor Version

This report provides information on hypervisor versions used in your infrastructure.

- The **Summary** section includes the following charts:

    o The **VMware ESXi** chart shows the versions and build numbers of VMware ESXi servers and the percentage of hosts on which each hypervisor runs.

    o The **VMware vCenter** chart shows the versions and build numbers of VMware vCenter servers and the number of servers on which each VMware vCenter entity runs.

- The **Details** table provides information on the vCenter server and hypervisor version with the build number and the hosts on which each hypervisor version runs.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

veeam

Hypervisor Version

Description

This report shows VMware ESXi and vCenter versions including build numbers and patch levels to help you ensure all your virtual infrastructure components are up-to-date.

Report Parameters

Scope: Virtual Infrastructure

Summary

VMware ESXi

40.00 %

40.00 %   20.00 %

■ VMware ESXi 7.0.3 build-19482537
■ VMware ESXi 7.0.3 build-19193900
■ VMware ESXi 7.0.3 build-19482531

VMware vCenter

100.00 %

■ VMware vCenter Server 7.0.3 build-20395099
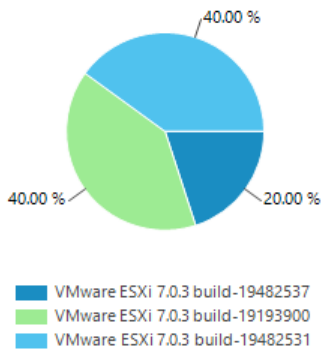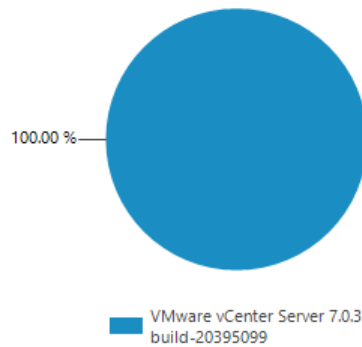
Details

vCenter Version	vCenter Name	
⊟ VMware vCenter Server 7.0.3 build-20395099		
	vcenter01.tech.local	
Total number of vCenter servers:		1

ESXi Version	Host Name	
⊟ VMware ESXi 7.0.3 build-19193900		
	prgtwesx01.tech.local	
	prgtwesx02.tech.local	
⊟ VMware ESXi 7.0.3 build-19482531		
	prgtwesx01-virt.tech.local	
	prgtwesx02-virt.tech.local	
⊟ VMware ESXi 7.0.3 build-19482537		
	prgtwesx03.tech.local	
Total number of hosts:		5

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.

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 subsections provide detailed information on vCenter servers, clusters, datastores, host systems and networks. The report also includes charts that display percentage distribution of VM power states, VMware Tools statuses and Business View groups across the infrastructure.

> **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 Business View categories and groups, as well as VMs in these groups.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: defines a virtual infrastructure level and its sub-components to analyze in the report.

- **Business View VM category**: defines a Business View group that includes VMs to analyze in the report.

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.

Report Parameters

Scope:	Virtual Infrastructure
Business View VM category:	Not selected

Summary

Hosts per cluster:	2.0
VMs per host:	43.0
Datastores per host:	1.8
VMs per datastore:	24.1

vCenter Servers

vCenter Server	vCenter Version	Datacenters	Clusters	Shared Datastores	Virtual Machines	Hosts	Physical CPU (GHz)	Physical Memory (GB)	Datastore Capacity (TB)
vcenter01.tech.local	VMware vCenter Server 7.0.3 build-20395099	1	1	3	215	5	206.4	1357.21	46.01
Total:		1	1	3	215	5	206.4	1357.21	46.01

Clusters

Name	Hosts	vCenter Server	Total Memory (GB)	Total CPU(GHz)	Total Storage (TB)	DRS Status	DRS Automation Level	HA Status
CDP cluster	2	vcenter01.tech.local	79.99	57.6	2.03	enabled	fullyAutomated	disabled

Use Case

The report helps administrators track the state of the managed virtual infrastructure.

VMs Configuration

This report documents the current configuration of VMs in the virtual infrastructure.

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

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

    Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

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

Summary

Guest OS Distribution

- Microsoft Windows Server 2012 (64-bit)
- Microsoft Windows Server 2016 (64-bit)
- Microsoft Windows Server 2016 or later (64-bit)
- Other
- Other Linux (64-bit)
- Ubuntu Linux (64-bit)

Tools Status

- Not Installed
- Not Running
- Ok
- Out of date

VM State Summary

- Powered Off
- Powered On
- Suspended
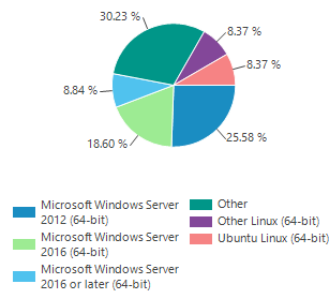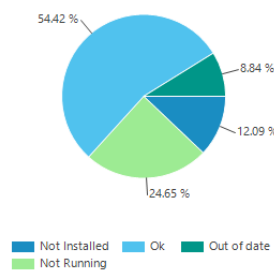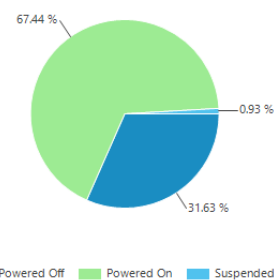
Details   Details   Details

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		**191**			**680**	**1,159.50**	**39,183.28**	**18,131.05**
prgtwesx01.tech.local		89			300	526.50	17,491.11	8,510.84
	Backup	172.35.41.226_35c99y	Not set	Other Linux (64-bit)	4	1.00	1.33	0.00
	Resources	172.35.42.67_eifo7k	eifo7k	Other 4.x or later Linux (64-bit)	4	1.00	1.55	0.00
	Backup	172.35.42.67_g5z7ma	Not set	Other Linux (64-bit)	1	1.00	1.33	0.00
	Backup	172.35.42.67_nwvuk1	nwvuk1	Other 4.x or later Linux (64-bit)	4	1.00	1.55	0.00
	Backup	172.35.42.67_pskehq	pskehq	Other 4.x or later Linux (64-bit)	4	1.00	1.55	0.00
	Backup	172.35.42.67_sjnmu7	Not set	Other Linux (64-bit)	1	1.00	1.33	0.00
	Backup	172.35.42.67_xxjx2s	xxjx2s	Other 4.x or later Linux (64-bit)	4	1.00	1.55	0.00
	VMware_Silver_ABC Company	ABC Company	Not set	Other Linux (64-bit)	4	1.00	2.17	0.00
	VMware_Silver_ABC Company	ABC Company_filesrv03_replica	Not set	Microsoft Windows Server 2012 (64-bit)	2	4.00	95.78	41.23
	VMware_Silver_ABC Company	ABC Company_filesrv04_replica	Not set	Microsoft Windows Server 2012 (64-bit)	2	6.00	83.96	27.78
	Enterprise	apache04	Not set	Microsoft Windows 2000	1	0.38	8.94	0.01
	Enterprise	apache05	Not set	Microsoft Windows 2000	1	0.38	8.94	0.01

Use Case

The report helps administrators assess configuration properties of VMs in the monitored virtual infrastructure.

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.

- The **Summary** section provides information on the total number of VMs, number of added and removed VMs, allocated vCPU, memory and storage resources, allocation ratios and VMs growth during the reporting period.

- The **Added VMs Details** table provides information on each added VM, including VM location, name, number of vCPUs, allocated memory and storage resources, initiator and the date and time when the VM was added.

Report Parameters

You can specify the following report parameters:

- **Infrastructure objects**: 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 Virtual Machine type.

  Business View groups from the same category are joined using Boolean OR operator, Business View groups from different categories are joined using Boolean AND operator. That is, if you select groups from the same category, the report will contain all objects that are included in groups. However, if you select groups from different categories, the report will contain only objects that are included in all selected groups.

- **Period**: defines the time period to analyze in the report. Note that the reporting period must include at least one successfully completed *Object properties data collection* task for the selected scope. Otherwise, the report will contain no data.

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
Reporting period:	1 week (1/10/2023 - 1/16/2023)

Summary

Number of VMs		Allocated Resources		Ratios	
Total number of VMs:	214	vCPU:	738	vCPU/Core:	8.39
VMs added:	3	Memory:	1223.50 GB	VMs per host:	42.80
VMs removed:	0	Storage:	18427.93 GB	VMs per datastore:	23.78

VMs Growth
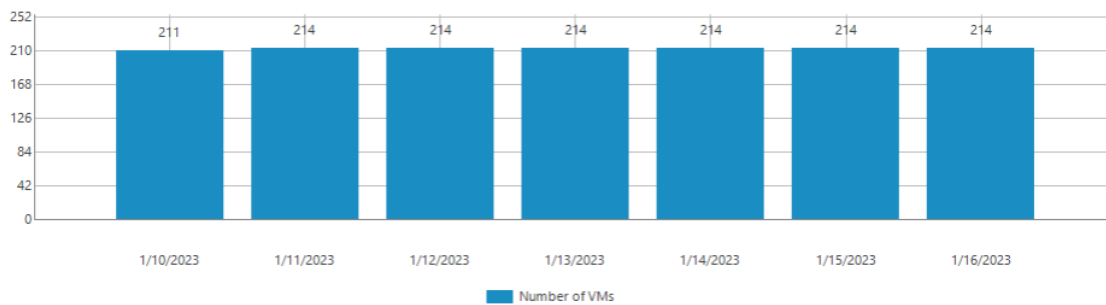
Added VMs Details

vCenter Server: vcenter01.tech.local

Cluster/Host: CDP cluster
Number of VMs: 24

Added VMs	vCPU	Memory (GB)	Storage (GB)	Initiator	Event Date
2	**4**	**10.00**	**77.48**		
ABC Company_filesrv03_replica	2	4.00	43.16	tech\william.fox	1/10/2023 1:42 PM
ABC Company_filesrv04_replica	2	6.00	34.32	tech\william.fox	1/10/2023 1:54 PM

Cluster/Host: prgtwesx01.tech.local
Number of VMs: 88

Added VMs	vCPU	Memory (GB)	Storage (GB)	Initiator	Event Date
1	**4**	**1.00**	**0.00**		
172.35.42.67_nwvuk1	4	1.00	0.00	tech\william.fox	1/10/2023 1:07 PM

Use Case

This report allows you to control virtual machine sprawl and to optimize resource utilization in your infrastructure.

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 Web Client to run a custom script after reports and dashboards are saved to the target folder. Veeam ONE Web Client allows you to use .BAT, .CMD, .VBS, .JS, .WSF, .EXE, .VBE, .JSE, .WSH or .PS1 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 **Path** field).
%DashboardName%	Name of the generated dashboard.
%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 Web Client 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.

- Object properties data collection task that gathers data from virtual infrastructure and Veeam Backup & Replication servers completes before the scheduled report generation time.
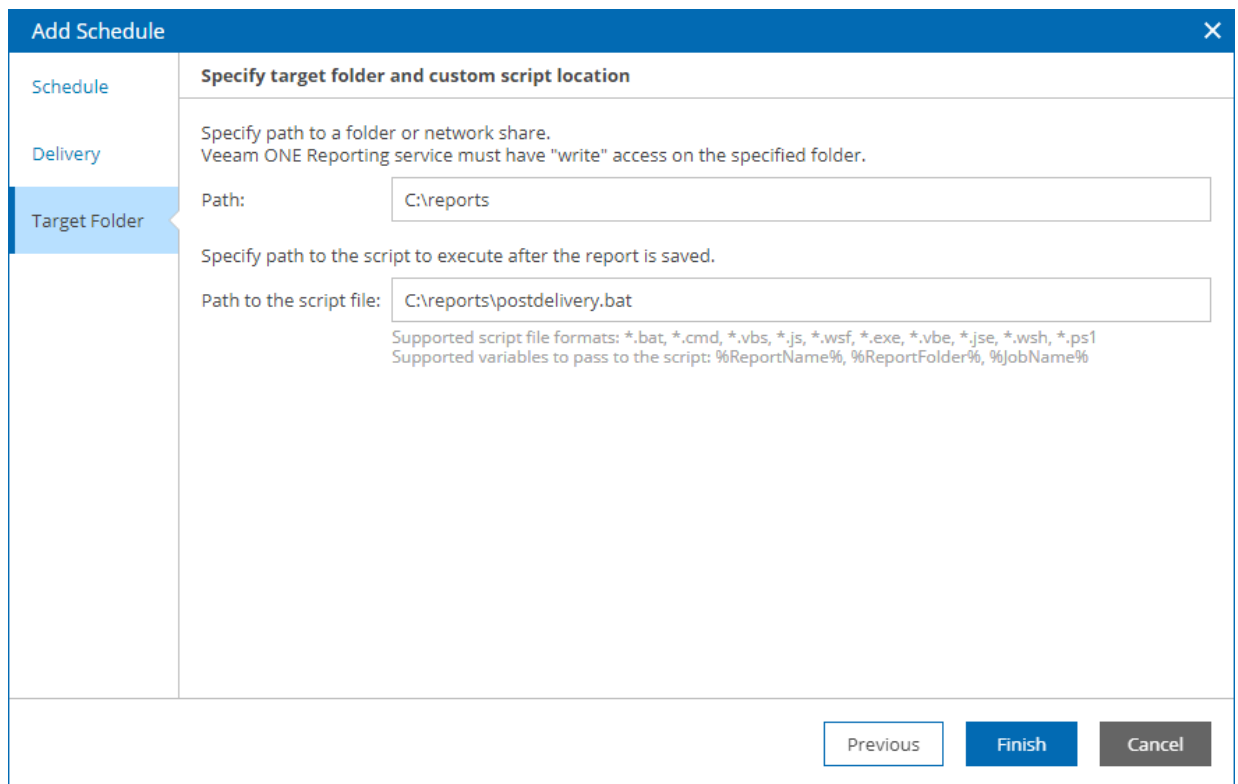
Configure scheduling settings for the saved report as follows:

1. Open Veeam ONE Web Client.

2. Open the **Reports** section.

3. Open the **Saved Reports** tab.

4. Click the saved report in the list to open its properties.

5. At the top of the report parameters, click **Schedule**.

6. In the **Report Scheduling Settings** window, click **Add**.

   Veeam ONE Web Client will launch the **Add Schedule** wizard.

7. In the **Add Schedule** window, configure automatic delivery settings as follows:

   a. At the **Schedule** step of the wizard, 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. At the **Delivery** step of the wizard, select only the **Save to a folder** check box.

c. At the **Target Folder** step of the wizard, specify target folder details. In the **Path** field, enter the path to the folder where the generated report will be stored. In the **Path to the script file** 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 **Path to the script file** field.

8. 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 Web Client will automatically generate the report. After the report is created, Veeam ONE Web Client 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 Web Client 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 Web Client.

2. Open the **Reports** section.

3. Open the **My Reports** tab.

4. Select the folder that contains the necessary set of reports.

5. At the top of the hierarchy, click **Folder Management** and choose **Schedule**.

   Alternatively, you can right-click the necessary folder and select **Schedule** in the context menu.

6. In the **Report Folder Scheduling Settings** window, click **Add**.

   Veeam ONE Web Client will launch the **Add Schedule** wizard.

7. In the **Add Schedule** window, configure automatic delivery settings as follows:

   a. At the **Schedule** step of the wizard, 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. At the **Delivery** step of the wizard, select only the **Save to a folder** check box.

c. At the **Target Folder** step of the wizard, specify target folder details. In the **Path** field, enter the path to the folder where the generated report will be stored. In the **Path to the script file** field, specify the location of the script file.

To follow this example, enter `C:\reports` in the **Path** field. In the **Path to the script file** field, enter the path to the script and pass the report name parameter to the script:
`C:\reports\postdelivery.bat %ReportName%`

8. Save the scheduling settings.

Expected Result

At the specified schedule time, Veeam ONE Web Client will automatically generate the reports. When a report is created, Veeam ONE Web Client will trigger the script that will copy the report to a separate folder.