



RAYVENTORY[®]

Technology Asset Inventory

Release Notes RayVentry Data
Hub 12.4

•rayNET

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Release Notes RayVentory Data Hub RayVentory Data Hub 12.4

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Introduction

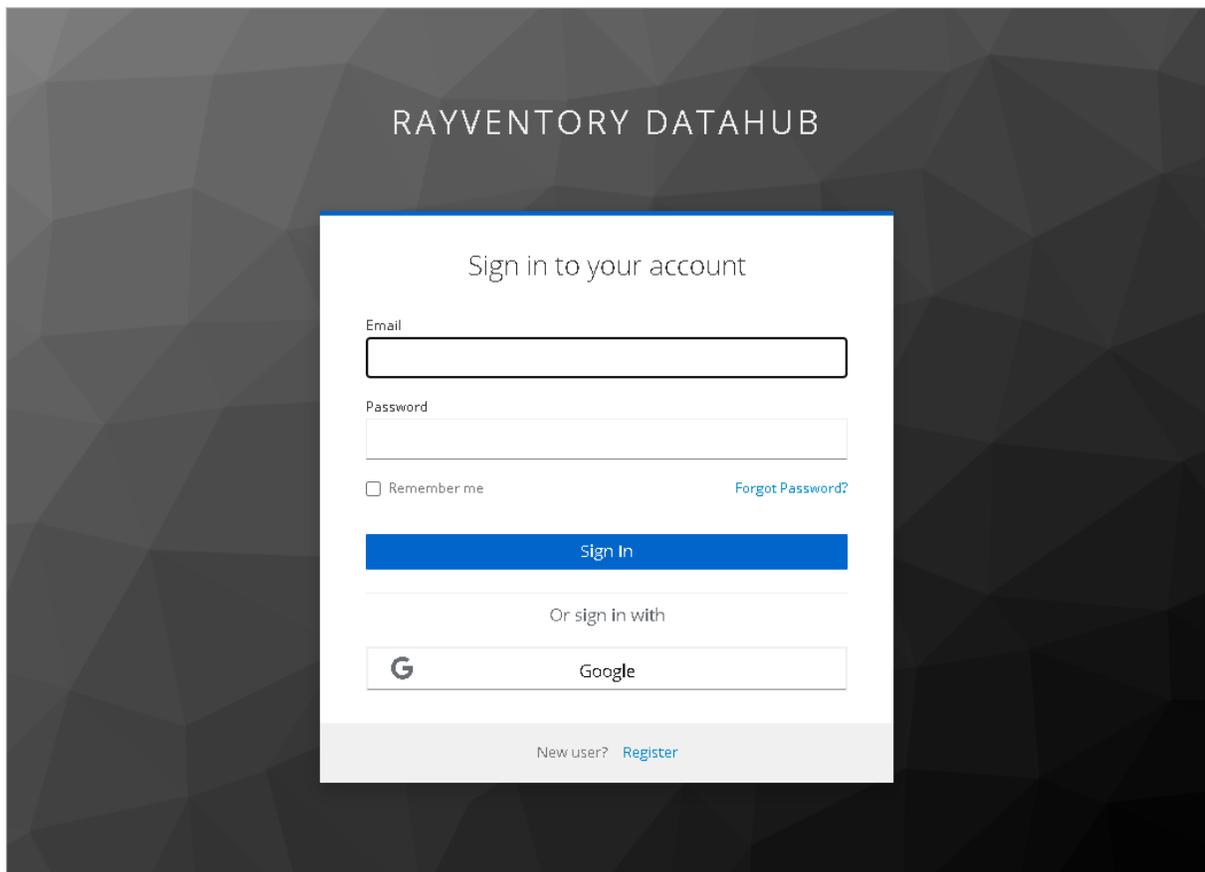
This new release 12.4 is a major upgrade to the previous release. It contains several new features, major product improvements and resolves reported issues. This document describes important changes and feature highlights using the base 12.3 version for comparison. When migrating from an older release (12.0, 12.1, or 12.2), refer to corresponding Release Notes for more information about changes and migration paths.

What's new

Single Sign-on and Support for External Identity Providers

RR-80 RR-2732 RR-3213

With this release, RayVentory Data Hub supports the usage of single sign-on and supports external identity providers. After the new support of KeyCloak has been configured, instead of offering the default login screen, RayVentory Data Hub will now offer the login screen configured in KeyCloak. This method enables users to use one account only for multiple applications and thereby significantly decrease the effort necessary to manage all the different credentials.



New and Updated Cloud Connectors RR-3262 RR-2968 RR-3117

RR-3143

In this version, the following new connectors have been added:



Amazon Athena



Heroku



Qualys



Amazon Organizations



Huawei Cloud Stack



SAP Ariba Contract Workspaces



CloudSphere iQSonar



Monday



SAP Concur



Couchbase



Nutanix Prism Central



*SAP Hybris Cloud for Customer
(SAP C4C)*



Google Cloud BigQuery



OpenStack



SAP Qualtrics



Google Cloud Storage Download



Proxmox



VMware Customer Connect



Google Cloud VM Manager

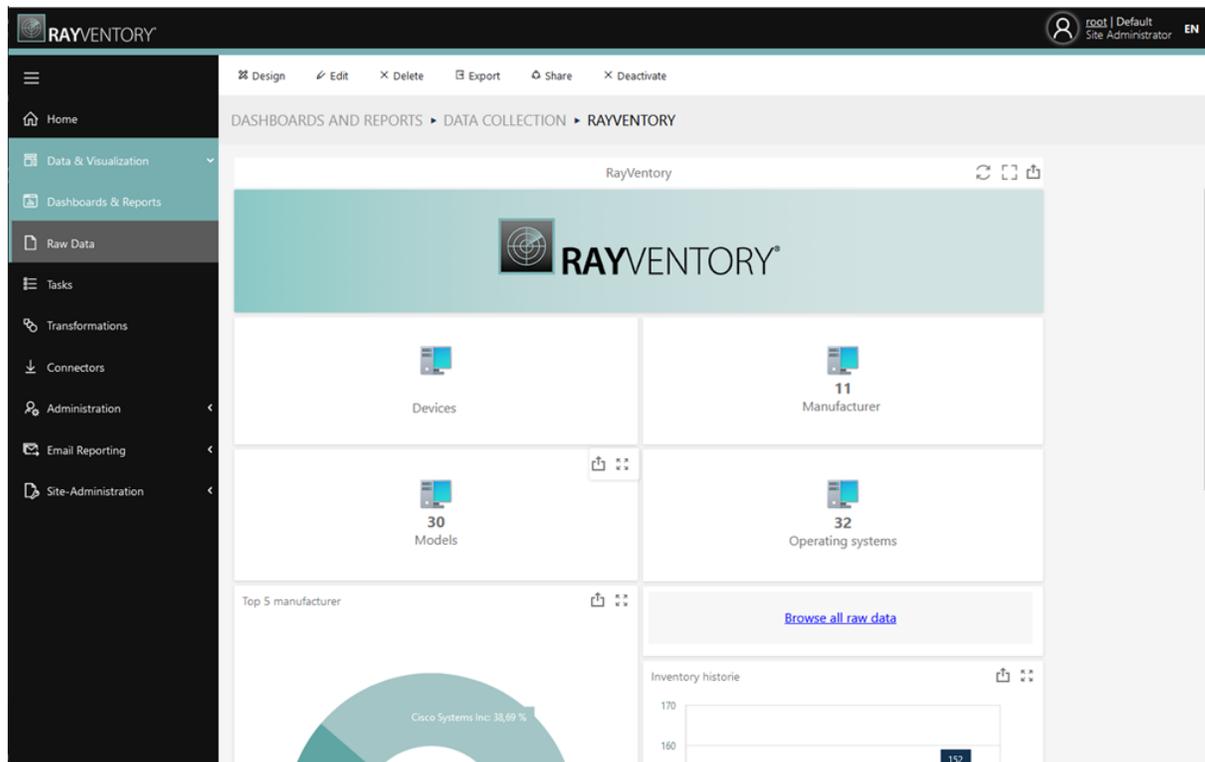


Workday

New Way of Browsing the Raw Data RR-3200 RR-3211

In this version, several older raw data reports were deprecated in favor of general-purpose data viewer. In order to have an overview of the imported raw data, a set of new dashboards for each import category has been provided (for example a generic overview of inventory, directory services etc.). The reports (after import) are available in the **Data and Visualization** tab. Each offers a few quick numbers, source information, and ability to drill-down the required tables.

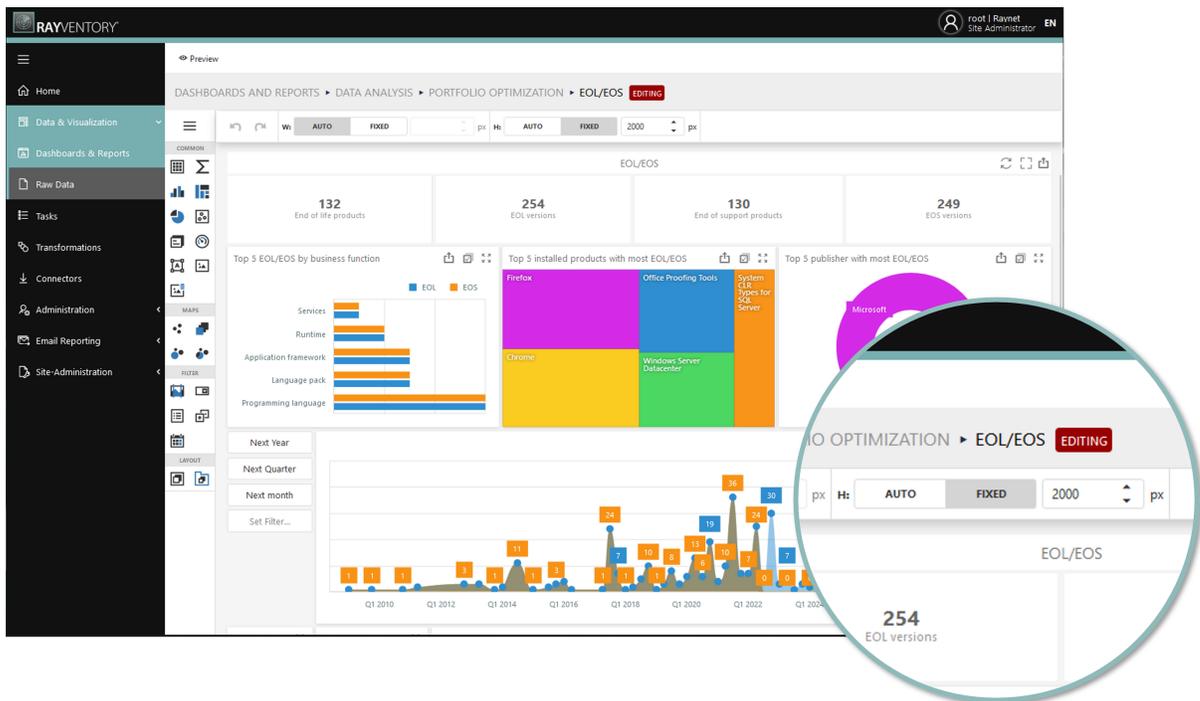
Together with the table viewer, this provides an excellent overview and ability to take a quick peek of the collected data.



Scrollable (Vertical) Dashboards RR-3211

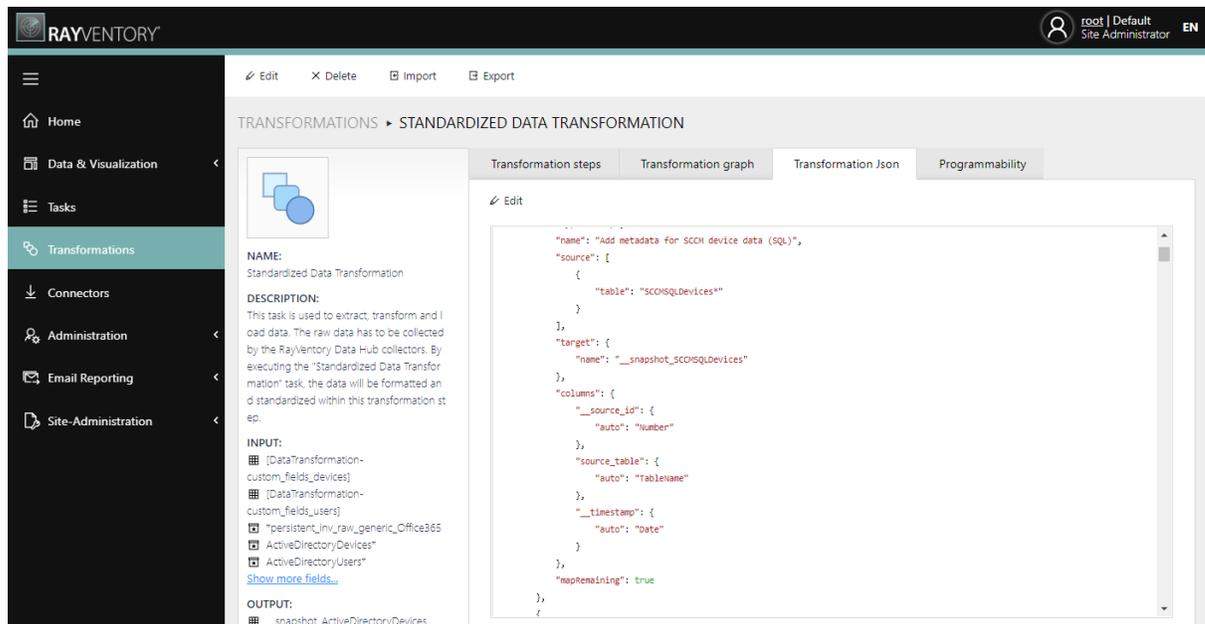
Dashboards can be now configured to be scrollable. This way, users can stack various controls and widgets and display them on a single page without needing to open new tabs and without relying on available resolution.

In order to get started with this feature, head out to the dashboard design view and enter the desired vertical height (in pixels).



Advanced Transformation Editing (JSON) RR-3057 RR-3007

User can now edit transformation steps using a raw, JSON editor. This is also a bridge to a CLI usage of transformations (with help of ETL CLI), which makes simple copy-and-paste, import, and exporting even easier.



The screenshot displays the RayVentory web interface. On the left is a navigation sidebar with options like Home, Data & Visualization, Tasks, Transformations, Connectors, Administration, Email Reporting, and Site-Administration. The main content area shows the 'TRANSFORMATIONS > STANDARDIZED DATA TRANSFORMATION' page. It includes tabs for 'Transformation steps', 'Transformation graph', 'Transformation Json', and 'Programmability'. The 'Transformation Json' tab is active, showing a JSON editor with the following content:

```

{
  "name": "Add metadata for SCOH device data (SQL)",
  "source": [
    {
      "table": "SCOHSQLDevices"
    }
  ],
  "target": {
    "name": "__snapshot_SCOHSQLDevices"
  },
  "columns": {
    "__source_id": {
      "auto": "number"
    },
    "source_table": {
      "auto": "tablename"
    },
    "__timestamp": {
      "auto": "date"
    }
  },
  "mapRemaining": true
}
    
```

On the left side of the editor, there is a metadata panel with the following details:

- NAME:** Standardized Data Transformation
- DESCRIPTION:** This task is used to extract, transform and load data. The raw data has to be collected by the RayVentory Data Hub collectors. By executing the "Standardized Data Transformation" task, the data will be formatted and standardized within this transformation step.
- INPUT:**
 - [DataTransformation-custom_fields_devices]
 - [DataTransformation-custom_fields_users]
 - [persistent_inv_raw_generic_Office365]
 - [ActiveDirectoryDevices]
 - [ActiveDirectoryUsers]
 - [Show more fields...](#)
- OUTPUT:**
 - [__snapshot_ActiveDirectoryDevices]

Download Log Files from the Task View RR-2933

Complete log files from agent execution can now be downloaded from the Task view. This feature can be configured to specifying how long the logs should be stored. Additionally, an excerpt of each log is stored permanently, even for tasks that have already been cleaned-up.

Task history details ✕

STATUS:

● Failed

--:--:--

TRIGGERED:

Oct 6, 2022, 12:24:34 PM by root

START DATE:

Oct 6, 2022, 12:24:39 PM

END DATE:

Oct 6, 2022, 12:24:39 PM

ERROR:

The parameter 'domain' is missing in the job configuration.

AGENT LOG:

```
[06-10-2022 12:24:39] [DEBUG] : Payload for the task:  
{  
  "type": "computers"  
}
```

[Download full log](#)

Close

Interactive Viewer of Raw and Transformed Data RR-

3044 RR-1115

All tables produced by connectors, import tasks and transformation layers can be now browsed directly from the web UI. Interactive features allow for simple data shaping - filtering, sorting, paging etc. The data can be displayed as a list, or grouped by the parent task or the task type.

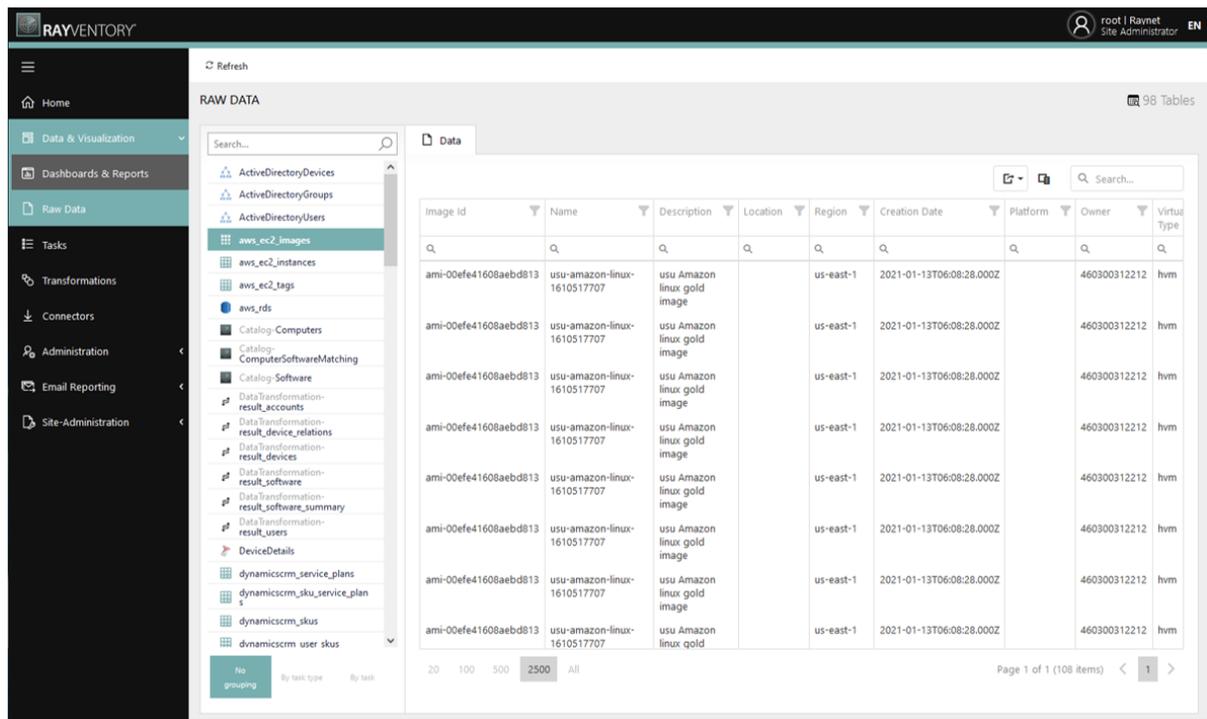
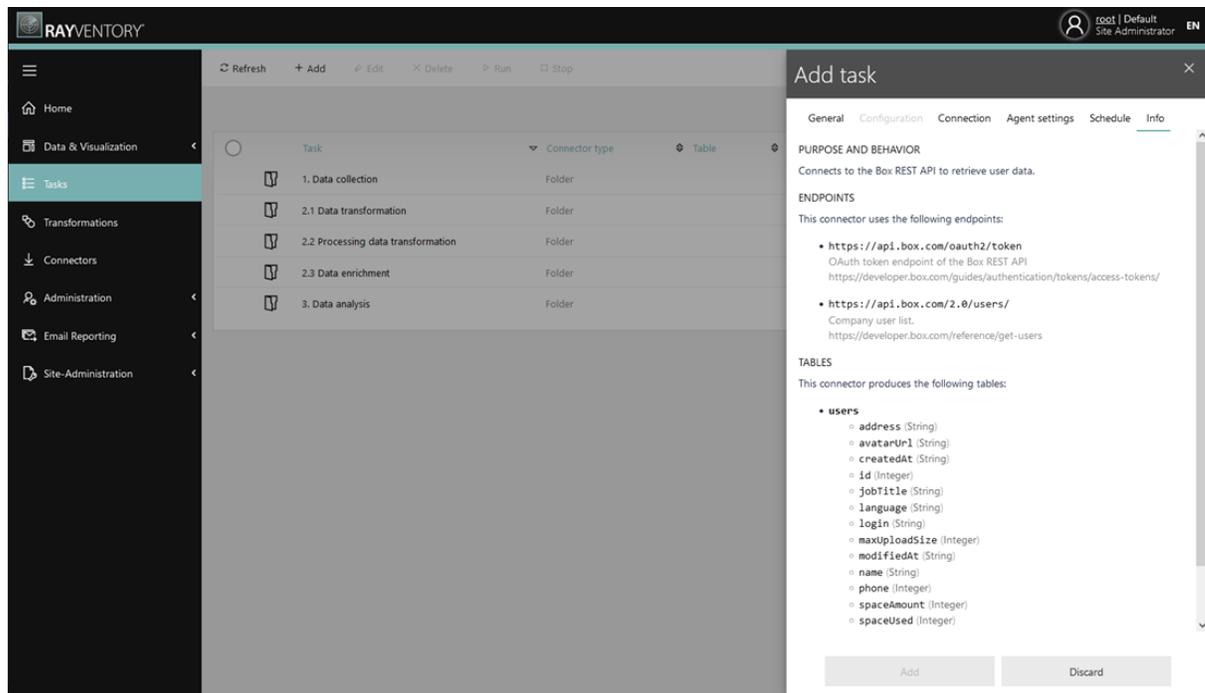


Image Id	Name	Description	Location	Region	Creation Date	Platform	Owner	Virtue Type
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
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ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux gold image		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm
ami-00efe41608aebd813	usu-amazon-linux-1610517707	usu Amazon linux qold		us-east-1	2021-01-13T06:08:28.000Z		460300312212	hvm

Extra Information and In-app Help for Cloud Connectors RR-2689 RR-3302

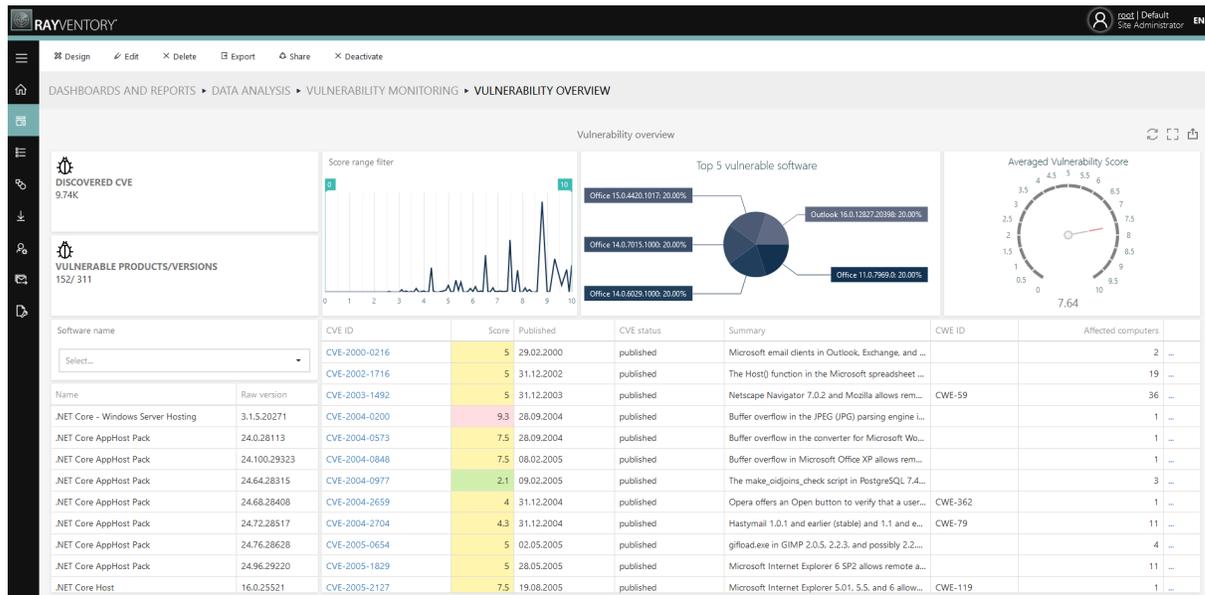
Cloud connectors now have an extra Info tab which - depending on availability - shows information, like the list of used endpoints, required permissions and resources, produced tables and column names. This information (combined with previously available hints and tooltips for various configuration parameters) makes it easier to set up each cloud connector, and makes important technical information available without navigating away from the product.



New Default Vulnerability Management Dashboards

RR-3046 RR-2906 RR-3114 RR-3075 RR-3073

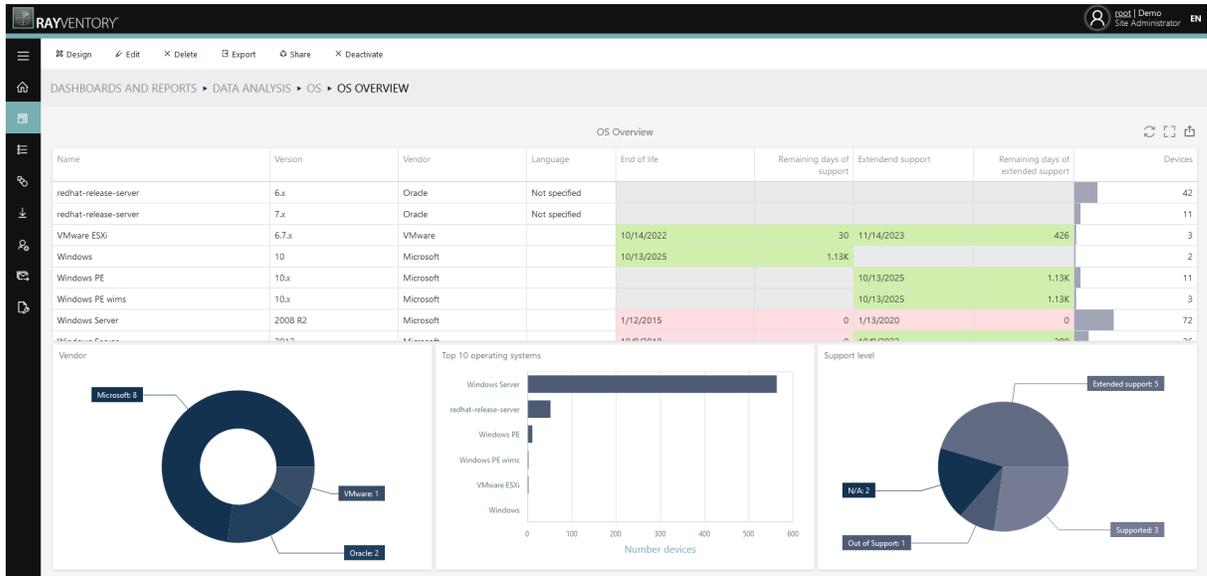
In this version, we reworked and optimized the default Vulnerability Monitoring Dashboard. These changes improve the performance and resolve minor issues, but also give new overviews and widgets, for example to show vulnerability status, CWE classification etc.



Software name	CVE ID	Score	Published	CVE status	Summary	CWE ID	Affected computers
	CVE-2000-0216	5	29.02.2000	published	Microsoft email clients in Outlook, Exchange, and ...		2 ...
	CVE-2002-1716	5	31.12.2002	published	The Host() function in the Microsoft spreadsheet ...		19 ...
	CVE-2003-1492	5	31.12.2003	published	Netscape Navigator 7.0.2 and Mozilla allows rem...	CWE-59	36 ...
JNET Core - Windows Server Hosting	CVE-2004-0200	9.3	28.09.2004	published	Buffer overflow in the JPEG (JPG) parsing engine i...		1 ...
JNET Core AppHost Pack	CVE-2004-0573	7.5	28.09.2004	published	Buffer overflow in the converter for Microsoft Wo...		1 ...
JNET Core AppHost Pack	CVE-2004-0848	7.5	08.02.2005	published	Buffer overflow in Microsoft Office XP allows rem...		1 ...
JNET Core AppHost Pack	CVE-2004-0977	2.1	09.02.2005	published	The make_oidjoins_check script in PostgreSQL 7.4...		3 ...
JNET Core AppHost Pack	CVE-2004-2659	4	31.12.2004	published	Opera offers an Open button to verify that a user...	CWE-362	1 ...
JNET Core AppHost Pack	CVE-2004-2704	4.3	31.12.2004	published	Hotmail 1.0.1 and earlier (stable) and 1.1 and e...	CWE-79	11 ...
JNET Core AppHost Pack	CVE-2005-0654	5	02.05.2005	published	gifload.exe in GIMP 2.0.5, 2.2.3, and possibly 2.2...		4 ...
JNET Core AppHost Pack	CVE-2005-1829	5	28.05.2005	published	Microsoft Internet Explorer 6 SP2 allows remote a...		11 ...
JNET Core Host	CVE-2005-2127	7.5	19.08.2005	published	Microsoft Internet Explorer 5.01, 5.5, and 6 allow...	CWE-119	1 ...

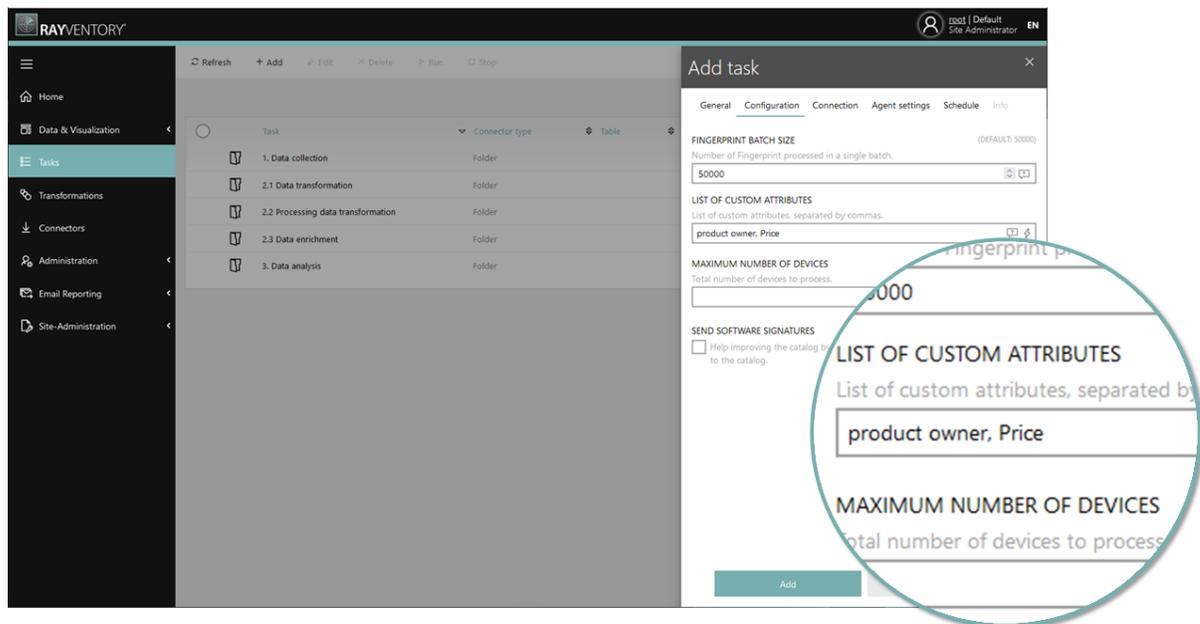
New Default OS Reporting Dashboard RR-2955

New dashboards showing an overview of operating systems can be now imported via template.



Support for Custom Attributes from RayVentory Catalog **RR-3047**

RayVentory Catalog connector can now be configured to specify which custom attributes should be queried. To use this feature, a private cloud or on-prem instance of the RayVentory Catalog is required.



Security Improvements

**Note:**

The following security improvements have already been released as hotfixes for affected installations.

- Fixed a security issue with handling of user sessions, which - under rare circumstances - when using the correct timing and certain unlikely preconditions, could lead to an issue known as "session hijacking". **RR-3315 ZEN-20095**
- Fixed a security issue (CVSS 3.1 scoring = 4.3) where a user outside of the Data Administrator group could access the list of tasks via REST API. **RR-2862**
- Fixed a possible XSS injection in the history of changes view, where the input from the user was not properly escaped (CVSS 3.1 scoring = 4.6). **RR-3181 RR-2861**
- Fixed a possible XSS injection using the file storage (CVSS 3.1 scoring = 4.6). **RR-2860**
- Removed detailed stack trace from exceptions in case finding a task by table name fails. (CVSS 3.1 scoring = 5.3). **RR-2859**
- Resolved security issues [CVE-2020-9488](#), [CVE-2018-10237](#), [CVE-2021-4104](#), [CVE-2018-1000844](#), [CVE-2018-1000850](#), [CVE-2021-43797](#) in various cloud connectors. **KOT-13 KOT-14 KOT-15 KOT-16 KOT-17 KOT-18**

Other Improvements

- **[DATA TRANSFORMATION]** Logs for transformation tasks are now more detailed and easy to follow. For example, executed steps are referenced by their names and each step contains extra information about tables used and produced, the number of input and output rows, etc. **RR-2965 RR-2992**
- **[DATA TRANSFORMATION]** Optimized disk space consumed by the transformation process. Depending on the size and structure of the transformation, up to 80-90% of savings can be expected. **RR-1823**
- **[DATA TRANSFORMATION]** When migrating from 12.2 to 12.3 Update 1, the existing transformation definitions will now be automatically migrated to the new format. **RR-2943**
- **[DATA TRANSFORMATION]** It is now possible to change the temporary location for transformation files and configure some further diagnostic options. **RR-2999 RR-2963**
- **[DOCKER]** Configuring Docker containers is now much easier thanks to the idiomatic usage of environment variables. Additionally, these changes result in better login performance on both Windows and Docker platform. **RR-3004**
- Various improvements, resolved issues, and improved performance of the following cloud connectors:
 - 15five **KOT-62**
 - Adobe Admin Console **KOT-99**
 - AWS Organizations **KOT-68**
 - Azure SDK **COKCON-790 KOT-2**
 - Big Query **KOT-77**
 - Docusign **KOT-78**
 - Google Cloud **KOT-90 KOT-103**
 - Intune **KOT-72**
 - Microsoft 365 **RR-3242**
 - Microsoft Azure Compute **KOT-27**
 - Salesforce **KOT-73 KOT-50 KOT-89**
 - SAP Qualtrics **KOT-82**
 - Veeva Vault **COKCON-791 COKCON-750 KOT-25**
 - VMware Airwatch **KOT-102 COKCON-767 KOT-9**
- **[DEFAULT REPORTS]** Many minor tweaks and fixes in the default set of reports. **RR-2792 RR-**

2800 RR-2850 RR-2900 RR-2912 RR-2914 RR-2947 RR-2948 RR-2934 RR-3301 RR-3153 RR-3154 RR-3137 RR-3130 RR-3125 RR-3122 RR-3118 RR-3097 RR-3089 RR-3056

- Tenant name is now displayed in the top bar next to the user name. RR-2795

- Improved handling of reboots by the agent. In this version, if the agent was rebooted during the execution of the task, it will restart the task once the reboot of the operating system is complete. [RR-2727](#)
- **[ECM CONNECTOR]** SCCM connector has been renamed to ECM. [RR-2938](#)
- While editing passwords (as parameters to cloud or on-prem connectors), it is now possible to reference variables. [RR-2950](#)
- Improved sorting of tasks for a human-friendly sorting of numbers. [RR-2951](#)
- On the login page, added a button to remember the user session. Visibility of this switch can be changed in the instance settings. [RR-2954](#)
- **[ACTIVE DIRECTORY]** Improved querying for users by the Active Directory connector. [RR-3026](#)
- **[DATA TRANSFORMATION]** Improved stability, minor improvements and resolved minor issues in the transformation editor UI. [RR-2918](#) [RR-2925](#) [RR-2926](#) [RR-2978](#) [RR-2913](#) [RR-2917](#) [RR-2924](#) [RR-2920](#) [RR-3088](#) [RR-3013](#) [RR-2979](#) [RR-2986](#) [RR-3030](#) [RR-3039](#) [RR-3053](#) [RR-3112](#)
- Added automatic clean-up of task history entries. This setting is configurable from the configuration file / docker environment variables. [RR-3041](#)
- It is now possible (although not recommended) to use SMTP servers without authentication. [RR-3105](#)
- A new option *Move to parent* has been added to the Task context menu. [RR-3092](#)
- Updating of cloud connectors is now possible without re-installing the product. This change is available for consultants and designed for better change management and testing. [RR-3160](#)
- **[CATALOG]** It is now possible to define a fixed timeout for Catalog operations. [RR-3228](#)
- Improved memory consumption of reports with huge number of sites. [RR-3191](#)
- Improved contrast and colors in USU Discovery Data Hub. [RR-3346](#) [RR-3347](#)
- Internal standard reports optimizations. [RR-3337](#)

Resolved Issues

The following issues have been resolved in this build:

- **[CATALOG]** Resolved multiple issues which may lead to catalog recognition leaving some raw data unrecognized. [RR-3172](#) [RR-3174](#) [RR-3226](#) [RR-3366](#)
- Fixed an issue with improper schedule settings (daily vs hourly). [RR-2998](#)
- **[DOCKER]** Fixed an issue where saving a report in a Docker-hosted instance would show an error. [RR-3068](#)
- **[DOCUMENTATION]** Resolved contradictory information in the User Guide. [RR-2944](#)
- Improved installation and upgrade logic of Windows Installer of the agent. [RR-2730](#)
- Improved localization and non-English UI messages. [RR-2093](#) [RR-2663](#) [RR-2744](#) [RR-2882](#) [RR-2903](#) [RR-3175](#)
- The default sorting of connectors on the Connectors page is now case insensitive. [RR-2749](#)
- **[DEFAULT REPORTS]** Internal improvements of the default reports and dashboards resulting in better performance during the importing phase. [RR-2777](#) [RR-2850](#) [RR-2960](#) [RR-2967](#) [RR-3079](#)
- **[DEFAULT REPORTS]** **[DATA TRANSFORMATION]** Various minor fixes and improvements of the default transformation. [RR-2916](#) [RR-3016](#) [RR-3017](#) [RR-3018](#) [RR-3019](#) [RR-3025](#) [RR-3033](#) [RR-3048](#) [RR-3294](#) [RR-3139](#) [RR-3123](#) [RR-3108](#) [RR-3082](#) [RR-3060](#) [RR-3055](#) [RR-3053](#) [RR-3055](#)
- **[ECM CONNECTOR]** Improved stability and resolved parsing issues in ECM (SCCM) WMI connector. [RR-2923](#)
- Improved performance of the user interface. [RR-2923](#)
- **[DOCKER]** Fixed rendering of reports and other issues on non-Windows builds. [RR-2973](#) [RR-3303](#)
- **[DOCKER]** Fixed an issue where default database log appender would write no logs in the Docker installation. [RR-3043](#)
- Fixed issues with the Query Designer editor where tables having reserved names were not properly supported. [RR-3328](#)
- **[ACTIVE DIRECTORY]** Fixed improper character escaping in LDAP queries. [RR-3155](#)
- **[ACTIVE DIRECTORY]** AD connector now returns all groups. [RR-3085](#)
- **[REST API]** Fixed an issue with encoding of special characters returned by the REST API. [RR-3256](#)
- **[DATA TRANSFORMATION]** Fixed an issue where the transformation task (executed on the

server) did not perform a proper clean-up of existing tables. **RR-3241 ZEN-19695**

Migration from Previous Versions

- This version is backward incompatible with release 12.0.
- For versions 12.1, 12.2, and 12.3, there is automated migration, which ensures that both the server and the agent can be migrated, together with user data

For detailed information about the migration process, refer to the **Installation Guide**.

Getting Data for USU ITSM Overview

This chapter describes how to get the data for the newly added USU ITSM connector. These steps should be executed after the update of the server instance to the newest version.

1. Start the import wizards "Import > From template..." in the library view.
2. Select dashboard "USU-ITSM-Overview" under Connectors section and enter the necessary data for a new task:

- `USUVALUEMATION_PNP_MATCHINGTABLE_URL = "http://www.linux-usb.org/usb.ids.gz"`
- `USUVALUEMATION_INVENTORY_DATA_TABLESTART = "Inventory"`
- `USUVALUEMATION_INVENTORY_DATA_CONNECTION = "Data Source=(local);Initial Catalog=[DataHub];Integrated Security=True"`
- `USUVALUEMATION_DISPLAYNAME_FQDN = 1`
- `USUVALUEMATION_DEVICE_IMPORTID = 1`

3. Add the variable `USUVALUEMATION_PNP_MATCHINGTABLE_URL` with value `http://www.linux-usb.org/usb.ids.gz` manually, if it is not shown in Wizard
4. Run 5 tasks in "TASKS > USU > ITSM > IMPORT" folder to generate import data.
5. Run all 22 tasks in "TASKS > USU > ITSM > EXPORT" folder to generate export CMP data.

Breaking Changes and Important Notes

- Default RayVentory tasks have now dependency on stored procedures, installed with *AsperaConnector* version **12.2.0.11458** or later. The version may be installed as a part of RayVentory server installation or separately (as a SQL file). The new version of the connector is required to use the newly added USU ITSM connector tasks.
- Some tasks and reports might need to be re-imported to benefit from changes and fixes brought by this release. This is especially valid for SQL-based tasks, where the logic is encapsulated as a SQL script in the *Task Configuration*.

- The server should be always installed with the matching version of the agent. Mixing versions (for example 12.4 Data Hub and 12.1 Data Hub Agent) is not recommended and may lead to unexpected issues.

-
- Important changes for users migrating from version 12.2 (without Service Packs)
 - We have changed the way the report table name resolution works. The previously used separator (dot) is not used anymore in favor of a minus sign.
 - This means that the tables created by 12.2 extraction tasks followed the following naming convention `dataset.tablename`, whereas the new one puts out `dataset-tablename`. The migration script included in this build should be able to convert your existing reports to the new format, but the data will only be available once all tasks are restarted. You may also do the renaming on your own.

System Requirements

Hardware Requirements

RayVentory Data Hub

Requirements when SQL Server and RayVentory Data Hub are installed on the same machine:

- Min. 4 CPU cores
- Min. 8 GB of RAM
- Min. 20 GB of disk space

Requirements when only RayVentory Data Hub is installed on the machine:

- Min. 4 CPU cores
- Min. 4 GB of RAM
- Min. 10 GB of disk space

RayVentory Data Hub Agent

- CPU: Intel Core i5
- RAM: 4GB
- Disk space: 500 MB

Software Requirements

The following are the minimum software requirements for the installation and running of RayVentory Data Hub Server:

- Microsoft Windows Server 2012 R2 or higher
- IIS 8 or higher
- Microsoft .NET 6.0 – Windows Server Hosting Bundle (<https://dotnet.microsoft.com/en-us/download/dotnet/6.0>)
- Microsoft SQL Server 2016 or SQL Server Express 2016



Note:

In order to run hosting bundles, the “Universal C Runtime” is required. Modern Windows Servers should already have it, but it may be required to download for older ones. The oldest supported OS is currently Windows Server 2012 R2. More information can be found here: <https://support.microsoft.com/en-us/help/2999226/update-for-universal-cruntime-in-windows>

The following are the minimum software requirements for the installation and running of RayVentory Data Hub Agent:

- Windows Vista SP2 / Windows Server 2008 R2 or newer
- .Microsoft .NET 6.0 – Windows Server Hosting Bundle (<https://dotnet.microsoft.com/en-us/download/dotnet/6.0>)
- Java / OpenJDK version 11 or newer is required to execute data collection from SaaS platforms

Supported Web Browsers

- Microsoft Edge version 80 and newer
- Mozilla Firefox version 74 and newer
- Google Chrome version 80 and newer

Additional Information

Visit www.raynet.de for further information on RayVentory Data Hub, and take a look at the additional resources available at the Knowledge Base: <http://raynetgmbh.zendesk.com/>.

Raynet is looking forward to receiving your feedback from your RayVentory Data Hub experience. Please contact your Raynet service partner or use our [Support Panel](#) to add your ideas or requirements to the RayVentory Data Hub development roadmap!



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