RayVentory Data Hub 12.6

12.6.5557.112 [Update 04]

Released on May 23, 2024

New features

- In this release we added five new data connectors:
  - Raynet One RR-4033 RR-4103
  - Microsoft Intune RR-3533
  - AWS Resources KOT-461
  - Google Cloud Resources KOT-395
  - ILMT License Usage KOT-519

Improvements

- Several improvements in the Catalog connector:
  - Catalog Connector now reports additional tables to store information about the vendor, license and function + their matching. This information was previously available only in the main Software table. RR-4086
  - Hardware normalization capabilities with enhanced features of the Technology Catalog connector and improved data flow for our standard data transformation, available after initial import of dashboards and reports. RR-4086 RR-4085 RR-4084 RR-4118
- Several minor improvements to existing connectors: RR-4064
  - Amazon RDS: Adjusted human-readable name. KOT-446
  - Atlassian Confluence: Added user and access data. KOT-517
  - Google Cloud Compute: Added targets and columns for projects KOT-323
  - Foreman: Added additional fields to host packages. KOT-488
  - Microsoft Azure AD: Renamed to Microsoft Entra ID. KOT-474
  - Microsoft Azure Cost Detail: Updated scope description. KOT-534
  - Microsoft Azure Compute: Added option to skip errors. KOT-426
  - Microsoft Azure Compute: Added additional image data for virtual machines. KOT-510
  - Microsoft Azure Compute Inventory: Improved performance and throughput. KOT-539 RR-4064
  - Microsoft 365: Support for Microsoft Cloud for US Government and Microsoft 365 China. KOT-451
  - Microsoft 365: Support for fetching of the last sign-in date via the additional user fields. KOT-452
  - SAP Ariba Contractworspace - Added new data field "contract amount". KOT-490
  - SAP Concur: Added New Endpoint to Fetch Line Items/Expense Itemizations. KOT-504
  - ServiceNow: Property `sysparm_display_value` is now available as user parameter. KOT-459
  - ServiceNow License Data: Added IntegrationHub usage. KOT-469
  - USU Oracle Optimization: Support Oauth2 Client credentials grant. KOT-295
  - Vmware Vrops: Use endpoints instead of `basePath`. KOT-477
- The transformation engine has been improved to handle mapping, joining, and creating unions of tables even when the columns are incompatible (for example, union of string and date, or integer and identifier). In this build, the engine uses multiple strategies to determine the actual result type, providing greater flexibility in managing data with partially incompatible values. RR-4102 ZEN-26852
- The "Query Builder" window in the reporting are has been enlarged, offering a more user-friendly experience. RR-4108

- In many cloud connectors, the settings to control certificate handling are much more granular. Where supported, it is now possible to skip hostname verification and/or trust all certificates separately - both were previously handled by a single flag. `KOT-460`
- Improved robustness of various cloud connectors. `KOT-590` `RR-4064` `KOT-430` `KOT-480` `KOT-522` `KOT-388` `KOT-433` `KOT-427` `KOT-521`
- SCCM connector now recognizes additional chassis types: IoT Gateway, Embedded PC, Mini PC and Stick PC. `RR-4117` `ZEN-27156`

Resolved issues

- Resolved an issue in the Veeva Vault connector, where the field `User ID` was erroneously reported under the name `Vault ID`. `KOT-562` `RR-4064`
- Resolved an issue where some values could be misrepresented as `NULL`, although being transformed as empty strings. `RR-4098`
- Resolved an issue where determining the column type could throw a `NullReferenceException` under certain conditions. `RR-4106`
- Resolved an issue where after or during data transformation, a constraint exception could be thrown due to the presence of unneeded duplicate ROWID value. `RR-4066` `ZEN-27095` `ZEN-26848` `ZEN-26801` `ZEN-26767`
- Resolved issues with the deduplication of data, using the `Any` strategy. `RR-4071` `ZEN-26801`
- Resolved an issue with duplicated UNSPSC keys for the software data. `RR-4133`

Known issues

- The new Intune connector and its integration with IT Visibility processes are functional for instances where the backend database is Microsoft SQL Server. Other database engines such as MariaDB are currently not supported.

12.6.5514.105 [Update 03 / Hotfix 02]

Released on `Mar 7, 2024`

Resolved issue

This release fixes a critical issue that has been present since version 12.6.5413 (RTM). A bug in the server-side processing of incoming results was causing random failures of various tasks, which were reported as incomplete with the following error: `Error calling PostUpdateTask: { "Message":"Data could not be retrieved. }`. This was also accompanied by various SQL timeout issues as reported in the log file. `ZEN-26682` `ZEN-26609`

> ⚠ This issue has been resolved by temporarily disabling the validation feature introduced in version 12.6.5413, which is logged as `RR-2958`. After applying this fix, the following features are disabled
>
> 1. The ability to view the delta results of each new task
> 2. The ability to validate data based on the number of rows added/removed.
>
> Both features will be restored in future versions once a permanent fix has been implemented.

How to apply this update / hotfix

Variant A: Complete installation

Requires: Any version of Data Hub on Windows

Simply install this Update 03 over your existing version. The upgrade is done automatically by the MSI installer.

Variant B: Hotfix (file swap)

Requires: Data Hub 12.6 Update 2 (12.6.5511) on Windows

Replace the provided four files and restart the IIS for a Windows-based installation.

Notes

- Ensure that appropriate backups are taken before proceeding with any updates or hotfix installations.
- For Docker-installations, simply pull the newest version of the image, and recreate the container.

12.6.5511.103 [Update 02 / Hotfix 01]

Released on Feb 23, 2024

Resolved issues

- In the Data Hub, within the table `cmp_cpu`, the column `cputype` was experiencing a discrepancy when attempting to apply filters. Clicking on the filter icon of the `cputype` column would display an incorrect filter, which was actually aligned with the `cpuname` column's content. Consequently, the value "x64" within the `cputype` column was not being offered as a filter criterion. RR-4030   ZEN-26261
- Resolved an issue where the Standard Transformation would crash when utilizing the ITSM connector. RR-4036   ZEN-26431

> ⚠ • Please ensure that all tables starting with "InventoryDevice" have an "ITMS" prefix added to their names. The exception is the table "InventoryDevice" itself:
>
>   - **InventoryDeviceDiskDrive > ITSMInventoryDeviceDiskDrive**
>   - **InventoryDeviceHardwareProperties > ITSMInventoryDeviceHardwareProperties**
>   - **InventoryDeviceLogicalDisk > ITSMInventoryDeviceLogicalDisk**
>
>   It is also possible to simply delete the table. The necessary tables will be recreated during the next run of the tasks.
>
>
>   This is essential for the smooth execution of transformation tasks.

12.6.5510.102 [Update 02]

Released on Feb 8, 2024

Resolved issues

- In this release we have fixed a specific issue in the transformation engine where full outer join steps could produce incorrect results if the source steps were not permanent. The previous incorrect behavior could lead to artificially empty rows being inserted in the target table. This corrected behavior affects both server-side and agent-based execution. RR-4028   ZEN-26167

12.6.5509.101 [Update 01]

Released on Dec 29, 2023

Cummulative Update and Improvements of Cloud Connectors RR-3993

In this release, cloud connectors were updated to internal version 2023.3.1, which brings the following improvements:

- New connector: Microsoft 365 Subscriptions and Microsoft Azure Resources . KOT-274   KOT-325
- IBM ILMT connector now allows HTTP protocol for the server URL. KOT-432

- Miro connector has now audit logs and basic rate limiter. `KOT-400` `KOT-369`

- In Smartsheet Platform connector, the Event endpoint was added. `KOT-398`

- In Veeva Vault connector, the Document Audit Trail was added. `KOT-423`

- Many internal changes and updates for the VMware vSphere connector. `KOT-389`

- Authority Validation was added to the `serverUrl` parameter. `KOT-413`

- A new parameter `enforceExecutionLimits` was added. `KOT-410`

- Connector BMC Discovery has been extended with a retry logic based on transient. `KOT-418`

- It is now possible to ignore certificate validation in the Kubernetes connector. `KOT-405`

- Fetching of user data from Microsoft Azure AD is now optional. `KOT-371`

- Improved URL handling. `KOT-376`

- In Microsoft 365 connector a filter for users and new endpoints has been added, sign-ins were removed. `KOT-354`

- Connector MS Azure Computer Inventory and Loganalytics now is more resillient. `KOT-412`

- Improvement and fixes of the Pipedrive connector. `KOT-422`

- Improved log formatting and error logging. `KOT-407` `KOT-381` `KOT-384` `KOT-411` `KOT-375`

More Descriptive Transformation Steps `RR-3995`

We have made several improvements to the Transformation view. The following changes make it much easier to understand the dependencies between steps:

- The Data Hub does not show the output if the output table is temporary. Previously, all temporary tables were listed.

- Instead of referring to source steps by their ID, Data Hub now uses the ID followed by the step name.

Below is a comparison between version 12.6 and 12.6 Update 1:

Because the new view is more compact, users can see about 20% more items at once.

Successful Task Runs now Show the Details of the Gathered Data `RR-2958`

Upon task completion, Data Hub now provides detailed results from the run, showcasing specific information such as data table names, row counts, and changes since the last run.

This enhancement facilitates easier tracking of each task run, enabling users to promptly identify anomalies and respond to evolving data.

Export and Import of Transformation Now Includes the Programmability Layer `RR-2961` `ZEN-24453` `ZEN-24801`

In this release, we have changed the way importing and exporting transformation files works.

- Exporting a transformation without programmability will continue to work as before, the user will receive a download of a `.json` file.
- Exporting a transformation with a programmability definition will result in the download of a .zip file that bundles together the definition of the transformation (`.json`) and the code for programmability (`.sql`).
- Importing `.sql` , `.json` , and `.zip` files is supported and handled accordingly.

This change effectively means that it is now possible to do a single click import and export, without any additional actions required for custom code / programmability.

Other improvements

- It is now possible to delete non-empty sections. In previous versions of Data Hub, the section had to be manually emptied before it could be deleted. `RR-2610`
- In the Raw Viewer section, it is now possible to enter multiple table names separated by commas (`,`). This switches the search mode to include all specified tables. `RR-3292`
- RMS UEM Connector is now more resilient and can retry API calls in case of failed attempts. `RMSC-2361`
- We have improved the performance of the Raw Data Viewer when working with large tables. The change is particularly noticeable when filtering by column - the list of available values for filtering is now loaded instantly, several orders of magnitude faster than in 12.6. `RR-3999` `ZEN-24884`
- Canceling a task is now faster, in many cases responding immediately to the user's request. This change affects the following data collectors: *Active Directory*, *RayVentory Catalog*, *Microsoft Dynamics CRM*, *RMS UEM*, *SCCM* and *Data Transformation*. `RR-3443`
- Improved handling of server-side transformation tasks, which will now be restarted if the hosting server restarts or quits unexpectedly. This is an improvement over the previous version, where such tasks were simply dropped. `RR-3846`
- The Catalog connector now sends the fingerprint "Path" value for more accurate matches. `RR-3956`
- The Raw Data viewer now seamlessly updates the URL when searching for a specific string, enabling users to quickly share or bookmark the link as it accurately reflects the currently viewed tables. `RR-3963`
- Optimized parameters for the *Software on device* report. `RR-3955`

Security improvements

- DataHub now has a stricter validation of uploaded images (profile avatars), which prevents non-image files from being uploaded. `RR-3900` `ZEN-24592`

Resolved issues

- Several issues in the transformation engine are now resolved:
    - Fixed an issue with `wrongNumberOfArguments` error when coalescing a null value. `RR-3980` `ZEN-25137`
    - Fixed an issue with invalid table join with multiple join keys. `RR-3986` `ZEN-25195`
    - Fixed an issue with ignoring the join order when using the coalesce conflict resolution method. `RR-3991` `ZEN-25291`
    - Fixed an issue with saving of conflict resolution data in case of no changes. `RR-3992` `ZEN-25291`
    - Fixed an issue, where a combination of the "Take over the remaining columns" or "Determine column type from context" setting and a `bigint` column type was treating the column as `varbinary`. `RR-3610` `ZEN-20889`
    - Fixed minor issues with logging messages. `RR-3968`
- Fixed warning message displayed when access to Data Hub (LDAP authentication only). Previously, the message was vague and could be confused with the invalid credentials warning. `RR-3960` `ZEN-24939`
- Fixed a regression in the REST API, where the endpoint `resultDatabase/table` would not properly recognize the parameters `includeDataTypes`. `RR-3738` `ZEN-23322`
- Resolved issues in cloud connectors:
    - Connector AWS EC2 is now skipping failed accounts on missing permissions. `KOT-414`
    - Connector BMC Discovery now stops paging if no data was received. `KOT-431`
    - Fixed issues with parameter relation and time interval requests in the Microsoft Azure Cost Details connector. `KOT-435`
    - Fixed rate limited and missing data in the Microsoft Intune connector. `KOT-385`
- Fixed issues with printing from the report page. `RR-3958`
- Fixed suboptimal selection of the default parameters for the Vulnerability Details report. `RR-3957`
- Various improvements of non-English UI texts. `RR-3920` `RR-3919`
- Fixed an issue with data validation of tasks returning a single table. `RR-3934`
- Fixed issues with horizontal axis in the *Dashboards > Collection > RayVentory* and *Dashboards > Collection > ECM* objects. `RR-3939` `RR-3983`
- Fixed issues with case-sensitivity of groups names, preventing the changes from being saved. `RR-3979`
- Fixed several minor issues with cloning of tenants. `RR-3825`
- Fixed missing folder icon for the *Data collection* section in Docker image. `RR-3218`
- Fixed issues related to the history of task changes when enabling or disabling schedules. `RR-3381` `RR-3707`
- Fixed issues pertaining to the clearing of temporary and cached files in instances where the temporary folder is absent. `RR-3927`
- Fixed issues with invisible scrollbar in the Import wizard. `RR-3736`
- Fixed issues with Oracle-related tasks by resolving the failure caused by the unset variable `ORACLE_REPORT_USE_ETL`. `RR-3951`
- Fixed issues involving the incomplete context menu for newly created reports, dashboards, and folders. `RR-3711`
- The occasional issue of hardware number not being checked during Data Hub activation has been fixed and is reflected in the update. `RR-4019`

Breaking changes

- Microsoft 365 connector does not deliver the sign-in information anymore. A dedicated connector has to be used to bridge this gap. `KOT-354`

12.6.5413.96 [RTM]

Released on Sep 26, 2023

More Cloud Connectors for Expanded Visibility and More Reliable Insights RR-3461   RR-3676

Even more cloud connectors – Not only have we added more connectors, we've made our existing connectors even better. Expand your cloud data gathering to include SAP Business Technology Platform, BMC Discovery, Coda, Confluence, LeanIX SMP, Tanium Asset, and USU Oracle optimization to get even more visibility, and with additional data gathering, including user and event data, deprecated device details, dynamic date calculation, updated IP output, region and project separation, you can improve the reliability and accuracy of your data and insights.
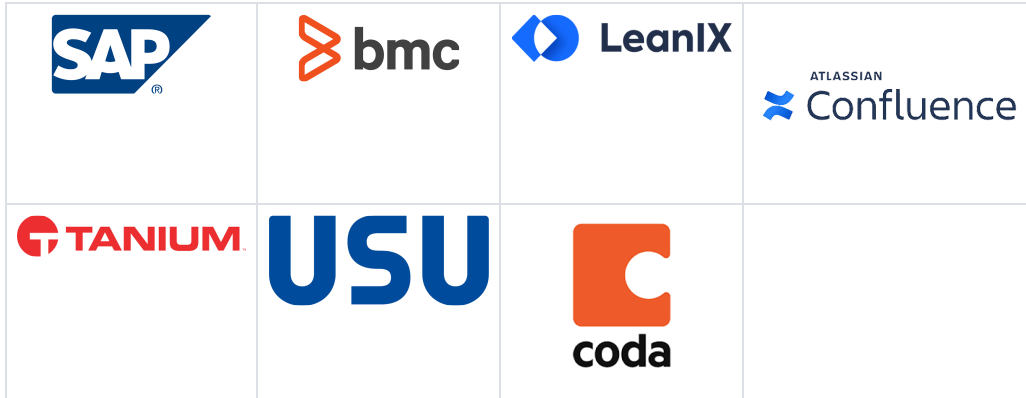
Furthermore, there are various internal stability, performance, and miscellaneous improvements. KOT-247   KOT-76   KOT-201   KOT-203   KOT-86   12.5 UPDATE 4

A New View to See Executed and Upcoming Tasks RR-2957

The list of tasks has now additional views, so that the users can get a quick overview of tasks, that have been shortly executed, and also to see a list of tasks, that are going to be executed next.


- The History section presents a list of tasks that have been recently completed. This feature is particularly useful for users who need to perform quick checks on recently completed tasks, and review them based on past performance.
    - As for the tasks currently in progress, they are included in the History results section, allowing users to promptly view and comprehend all active tasks, regardless of the agent on which they were initiated.
- The Upcoming section displays a list of tasks along with their next scheduled execution date and time. It exclusively showcases tasks that are scheduled for future execution, helping users stay ahead of upcoming tasks and schedules, and anticipate upcoming actions.

Visualize Dependencies to Get Better Insights into How Changes or Vulnerabilities Affect Your Entire Infrastructure RR-3715

In this release, two new visualisations types were added:

- Sankey diagram
- Network diagram

Sankey diagrams empower you to visualize complex data flows and relationships with ease. Whether you're tracking resource allocation, customer journeys, or any interconnected data, the Sankey Diagram simplifies the process, providing valuable insights and enhancing your reporting capabilities.
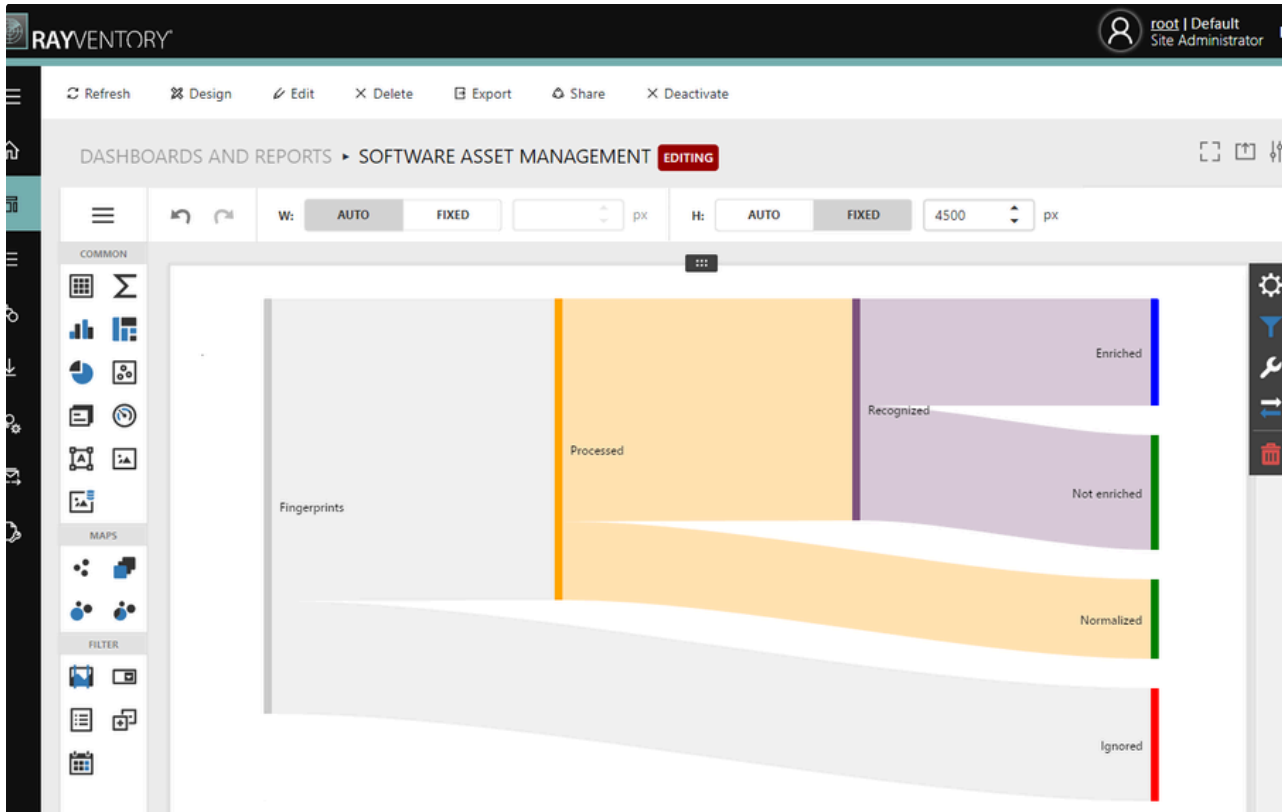

Sankey diagram

You can also visualize important structures, such as network dependencies, to get better insights into your digital infrastructure. The dashboards are fully customizable and scale to visualize infrastructures of any size and complexity. Individual structures can be represented as smaller nodes within larger structures, and you can easily scroll in to focus on specific nodes or scroll out to get the big picture.
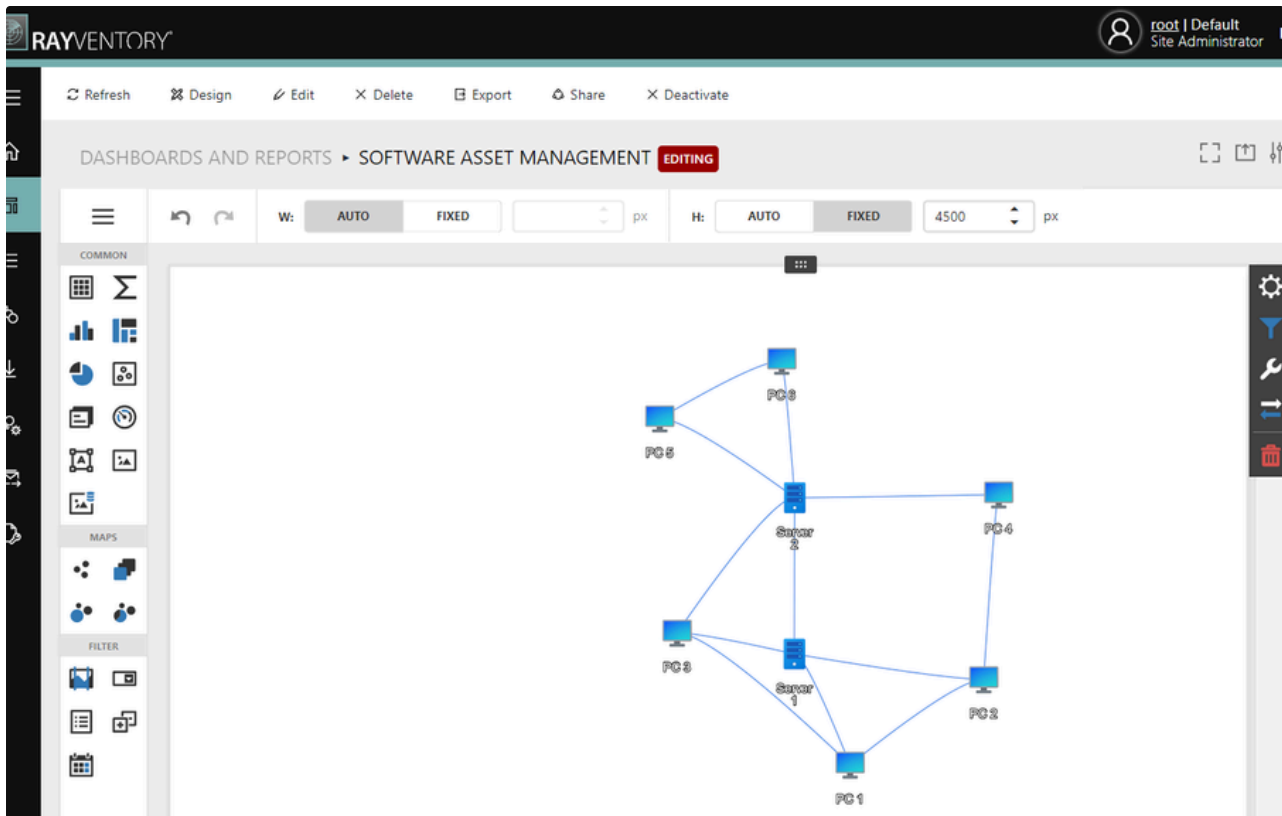
Network diagram

## New and Updated Dashboards for Better Visibility and Faster Insights RR-3756

Updated dashboards for End-of-Life and End-of-Support insights, Oracle Java, and Data Enrichment, provide better and more reliable insights about your digital landscape, including individual machines where Oracle Java is installed, recognition rates, fingerprints, products, and vendors. With these dashboards you're better armed for audits, to rationalize and optimize your software portfolio, and to keep it up to date and secure.
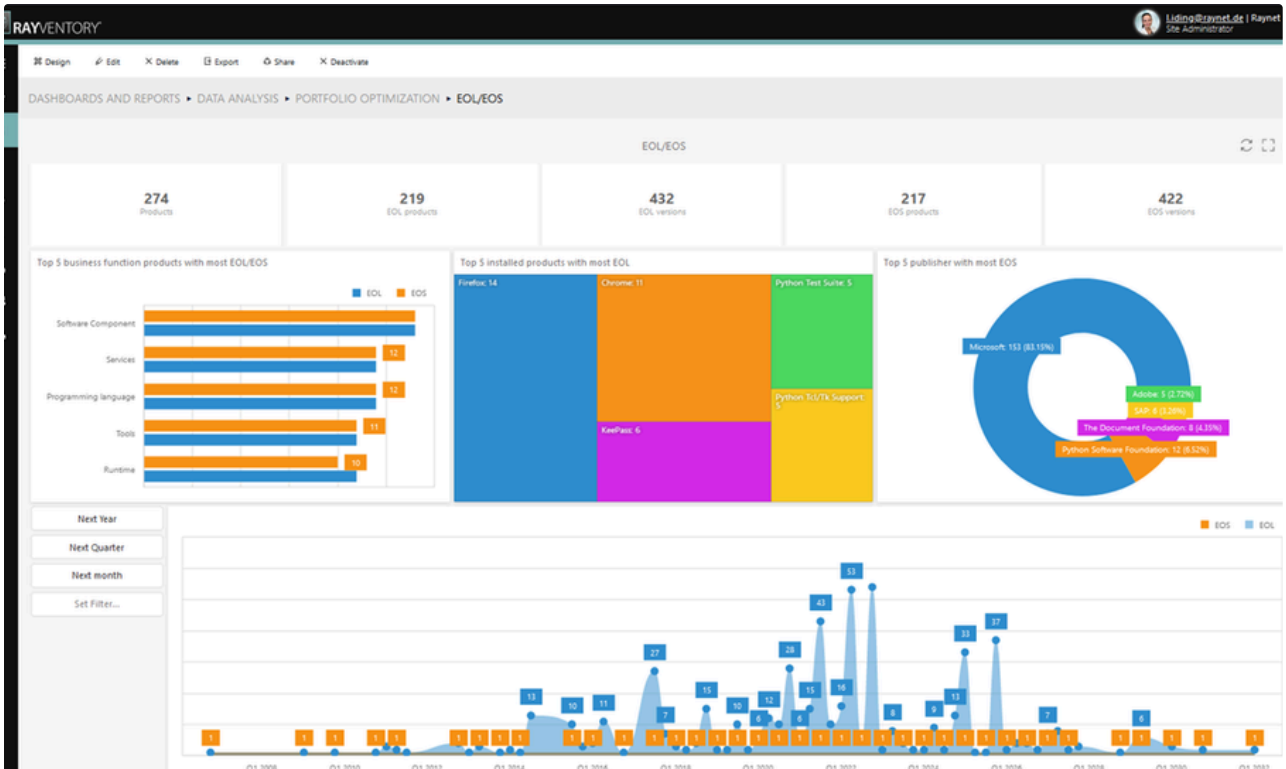
End-of-Life and End-of-Support
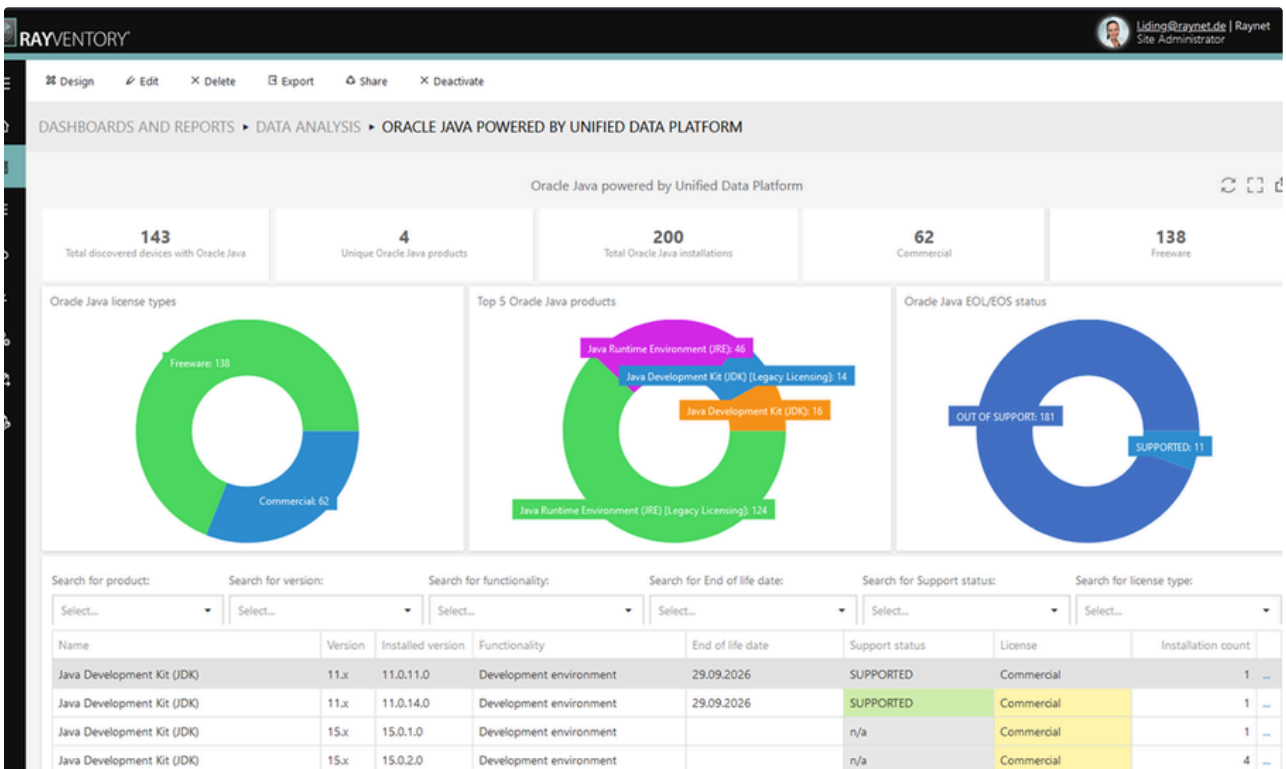
Oracle Java
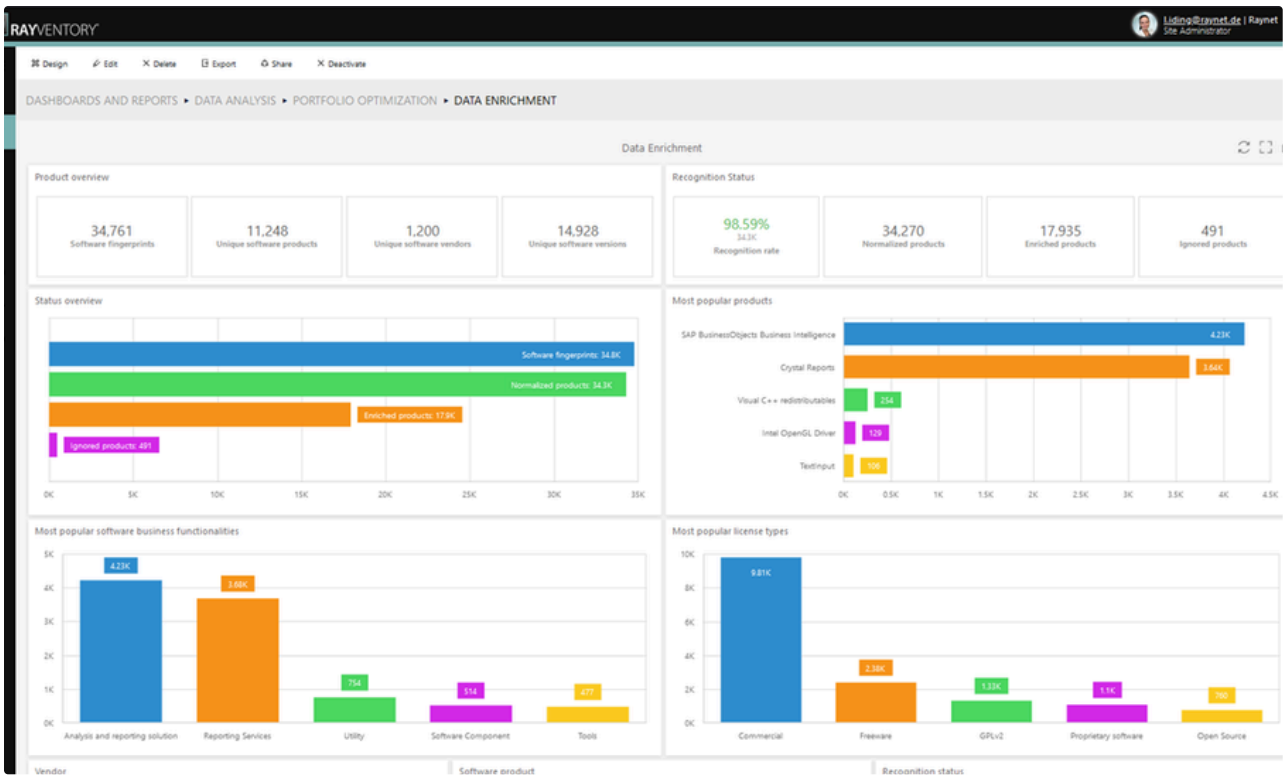
Data Enrichment powered by RayVentory Catalog

Improve Data Reliability with Validation Checks RR-3680

Customizable validation checks let you decide whether a task was successful. This gives you more control over your data outcomes, and gives you another option for ensuring the reliability of your data insights.


Setting up a validation rule to only accepts incoming data, if it produces between 80 to 120% number of the rows as compared to the previous run.

More Options For Transformation Steps

DATA TRANSFORMATION In previous versions, there were several ways of aggregating the data, one of them being "first not null" also known as "coalesce". This mode ensured, that the first value not being NULL is taken. Based on the feedback, we introduced another, similar mode, called "first not empty". RR-3557   ZEN-20984   12.5 UPDATE 1

In this mode, whitespace-only strings are also ignored, so that a chain of values NULL , <empty-string> , "A" gives the following results:

- First not null: <empty-string>
- First not empty: A
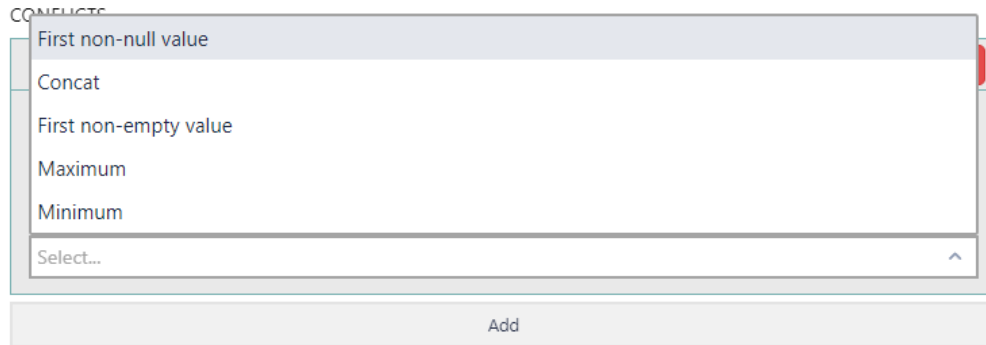
New option in the aggregation selector. This works for both join operations, as well as for column-based aggregations.

In version 12.6, we have introduced an additional property for steps, allowing you to provide more detailed descriptions. This new feature simplifies the process of including longer texts, offering helpful hints and context for each step. Users can now easily grasp the purpose and context of each step, enhancing the overall user experience. RR-3297

Improved Reports and Dashboard Link Sharing RR-3568

Sharing reports and dashboards has never been more secure and flexible. In previous versions, shared links lacked built-in controls to prevent users from altering critical parameters, potentially compromising data integrity. With this release, we've introduced an array of additional sharing options, including the ability to lock parameters within the report, ensuring data remains within the defined boundaries set by the report owner. Furthermore, users can now establish programmatic access to report parameters, guaranteeing both security and the safe transfer of values. These enhancements empower users with versatile and secure sharing options for their reporting objects.

Extended sharing dialog, showing both new options

Share

The share link was successfully generated:

http://localhost:81/external/dashboard/a5867f55-1bf6-4bd:

Copy shared link

Public key

MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEA0iz

ⓘ Use this public RSA PKCS#1 key to encrypt parameters.
You can append the encrypted parameters to the shared
link to apply these parameters. Example URL:
"https://sharedlink?
accessToken=acccdddd&params=MIIBIjANBgkqh...". The
"params" parameter contains your encrypted parameters.

Copy public key

Close

Once a link to a reporting object is shared, the user has access
to number of options, including secured access and
programmatic way of encrypting secured parameters.

Better User Interface for Improved User Experiences RR-3717

The improved design makes dashboards more compact and streamlined, eliminating unnecessary elements, and providing a more spacious viewing experience. By removing visual clutter, users can find what they're looking for faster and easier.
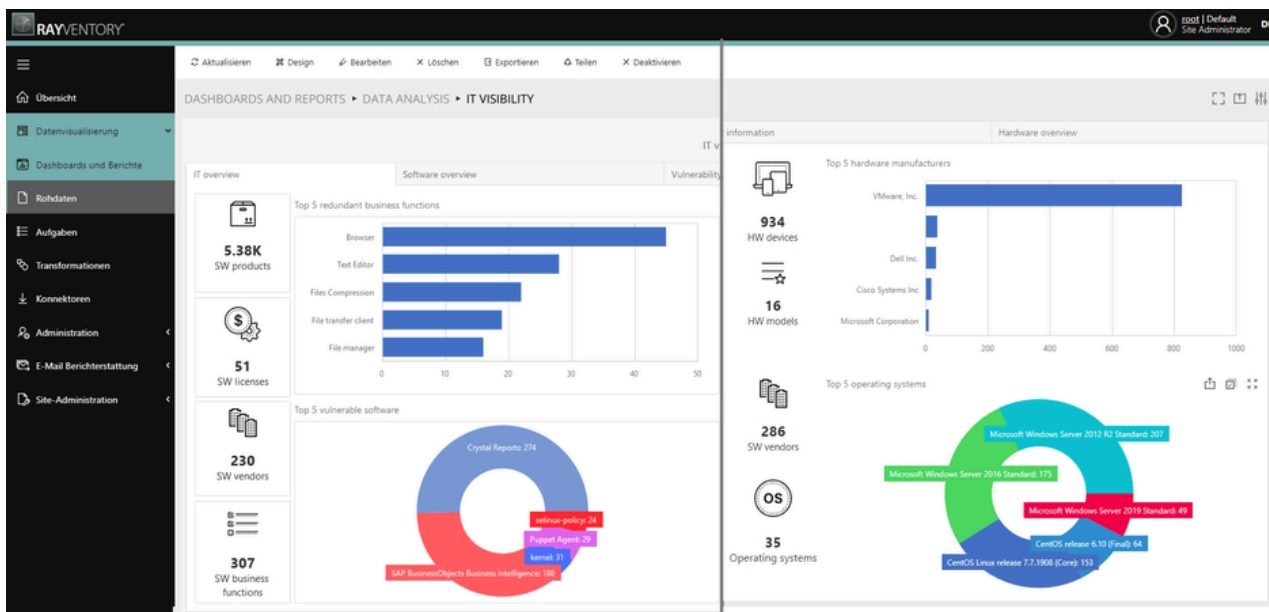
Enhanced Technology Catalog Connector RR-3230

New version of the RayVentory Catalog Connector has been rewritten ground-up, to offer better performance, additional options and streamlined experience. Part of this changes was improved data model, which is an improvement over the previous iteration, especially in terms of reporting and advanced data transformations.

Since the structure of the data has substantially changed, the current version of the Catalog connector is still there, and will continue to work like previously. For new projects and tasks, we recommend creating a copy of previously using reports and dashboards (the backup functionality) and switch to the new connector and reports.

Better Performance for Faster Insights RR-3618 RR-3600 RR-3737 ZEN-23196 RR-3805 ZEN-21536 ZEN-24156

We've made our data transformation engine even faster! With changes in the performance of the SQL Server reader/writer and transformation components, RayVentory Data Hub can transform data faster while using less CPU and RAM.

Generic changes in the SQL-Server related logic positively impact the transformation (both server- and agent-based) but also generic operations on the tenant database. As a result, inserting of data is much faster when using SQL-Server database driver.

Additionally, some data-related issues have been fixed:

- Joining on `null` values now returns results which are consistent with typical SQL joining. This also eliminates an issue with "ghost" entries, which could be produced in case of some specific combinations of `null` values in the joined tables. As a result, this version fixes an important regression introduced in the previous version (12.5 Update 3), where some joining and deduplication operations could lead to timeouts and exhaustion of free disk space. RR-3737 ZEN-23196 12.5 UPDATE 1
- The deduplication step now returns correct values for column-based deduplication if the benchmark column contains `null` values and either the *Min* or the *Max* strategy is used. RR-3640 ZEN-22707 12.5 UPDATE 1
- It is now possible to enrich a table with a fallback value only. Additionally, if the enriched column already contains a value, it is not going to be enriched anymore. This makes it possible to use enrichment steps as a placeholder and later easily add more table look-ups once they are available and needed. In previous versions, this behavior had to be simulated with a combination of specifially crafted map and enrichment steps. RR-3733 ZEN-23270 12.5 UPDATE 1

New Metadata Fields for Tasks RR-3459 RR-3460 ZEN-20947 12.5 UPDATE 2

Tasks now have two extra fields, that contain a textual description and the user who is the owner of the transformation.

Updated UI of the task editor.

Microsoft SQL Server Collector Can Now Return More Than One Table RR-3895

We are excited to introduce a new feature in Version 12.6 of the SQL Server connector that enhances your data retrieval experience. In this release, users can now receive multiple tables from the SQL Server connector, a significant improvement over the previous limitation of only returning the last table.

To enable this functionality, we have introduced a special syntax that allows you to mark the beginning of a new, named table within your SQL Server connector queries. You can achieve this by using the following syntax:

```
1  PRINT 'Table=<name>'
```

Simply replace `<name>` with the desired name for your table. This marking mechanism enables Data Hub to identify and separate multiple named tables within your query results.

With this enhancement, Data Hub now seamlessly respects these markers, and as a result, you will receive named tables as part of your query results. This feature provides greater flexibility and organization in managing your data, making it easier than ever to work with multiple tables within your SQL Server connector queries.

Online browser-based product documentation RR-3288

Offline documentation in PDF format has been phased out in favor of a web-based online documentation system. You can access the documentation either directly from within the product or by following this link: https://docs.raynet.de/rayventory/data-hub/latest/user-guide/

Other documents and guides are also available:

- Dashboards and Reports Customization Guide
- Connectors
- Installation Guide

Other Features and Improvements

- Connectors like Microsoft SQL Server and PowerShell can now hint Data Hub about the desired options for a column (for example whether it should be treated as a Primary Key, Unique or with an index). This can be achieved by returning a special suffix appended to the column name. RR-3889
- We changed the default color scheme to make bar and pie chart elements more distinguishable. RR-3538 12.5 UPDATE 1
- REPORTING Adjusted the "Hardware overview" and added a navigation link, making it easier for users to access important information. RR-3659 12.5 UPDATE 3
- RAYVENTORY CATALOG Added the ability to retrieve the value of a custom attribute set on a product/publisher from the RayVentory Catalog. Additionally, there are several other minor changes and internal improvements. RR-3660 RR-3653 12.5 UPDATE 3
- REPORTING Changed the navigation links in the Software Asset Management, making it easier for users to access important information. RR-3668 12.5 UPDATE 3
- Based on user feedback, we extended and/or clarified several sections of the product documentation, plus provided more background information for specific use cases. RR-1908 RR-3654 RR-3492 RR-3491 RR-3697 RVS-121 RVS-142 RVP-2083 RVP-2064 RVP-2068 RR-3246 RR-3604 RVP-2022 RR-3501 RR-3727 12.5 UPDATE 4
- The selection of the default tenants has been improved (KeyCloak managed sign-in). There is now a new setting `InitialTenant` which can route new users upon creation to a specific tenant. RR-3699 12.5 UPDATE 4
- Improved performance of joining the data during the transformation task. 12.5 UPDATE 5
- The default logging level on Docker-based build is now warning. This means that by default only critical errors and warning will be logged, and the other messages (including info, debug or verbose texts) will be discarded. RR-3778 12.5 UPDATE 5
- A series of changes and improvements in the following connectors:
  - Asana: Extended user and event data. KOT-209 12.5 UPDATE 4
  - Azure Compute Inventory: Adjusted default parameters. KOT-237 12.5 UPDATE 4
  - Box: Correct spelling of parameters. KOT-278 12.5 UPDATE 4
  - CrowdStrike Falcon: Upgraded deprecated device details endpoint. KOT-334 12.5 UPDATE 4
  - Google Cloud Compute: Adjusted IP output, region and project separation. KOT-165 12.5 UPDATE 4
  - IBM ILMT: new date parameter and dynamic date calculation. KOT-261 12.5 UPDATE 4
  - Kubernetes: Add Environment information for Containers. KOT-210 12.5 UPDATE 4

- Okta: Added support for `logs` endpoint. KOT-223 12.5 UPDATE 4
- Improved display names in several Microsoft, ServiceNow and VMware connectors. KOT-222 12.5 UPDATE 4
- Microsoft Azure connectors now receive `subscriptionId` for all targets. KOT-212 12.5 UPDATE 4
- Microsoft Azure Active Directory now supports `SignInActivity`. KOT-269 12.5 UPDATE 4
- Microsoft Azure Compute Inventory: Parameter workspace id has been changed to a list. KOT-221 12.5 UPDATE 4
- Microsoft Office 365: Request periods for `AppUserDetail` has been increased from 30 to 90 days. KOT-240 12.5 UPDATE 4
- Proxmox: Server table has been renamed to `Metric`. KOT-241 12.5 UPDATE 4
- SAP BTP: Endpoint `cloudCreditsDetails` now returns all phases. KOT-242 12.5 UPDATE 4
- Zoom: Support for OAuth. KOT-250 12.5 UPDATE 4
- Added the parameter `account_list` in the `aws.ec2` and `aws.rds` connectors. KOT-126 12.5 UPDATE 2
- In the connectors `aws.ec2`, `aws.rds` and `aws.s3`, AWS China is now available. KOT-110 12.5 UPDATE 2
- JAMF Pro can now report the application usage and extension attributes. Additionally, the description and the in-app help texts have been updated. KOT-176 KOT-204 KOT-171 12.5 UPDATE 2
- The `microsoft.azure.computeinventory` connector can now fetch data from multiple workspaces. KOT-124 12.5 UPDATE 2
- It is possible to ignore certificate errors in the `nutanix` connector. KOT-162 12.5 UPDATE 2
- The `kubernetes` connector now reports information about worker or master node. KOT-202 12.5 UPDATE 2
- The `microsoft.azure.compute` connector now reports dedicated hosts and host groups in the `virtual_machines` table. KOT-177 12.5 UPDATE 2
- The performance of the Microsoft Azure Computer connector has been improved. KOT-188 KOT-193 KOT-200 205 12.5 UPDATE 2
- Various improvements in the Microsoft Office 365, Microsoft Azure AQL, and Microsoft Intune connectors. KOT-169 KOT-150 KOT-178 12.5 UPDATE 2
- Updated the connector description of the `qualys` connector. KOT-187 12.5 UPDATE 2
- The `SAP.BTP` connector now reports month and year for the usage data. KOT-215 12.5 UPDATE 2
- Various improvements of the schema and descriptions of fields in the `servicenow.licensedata` and `servicenow.table` connectors. KOT-180 KOT-175 12.5 UPDATE 2
- DATA TRANSFORMATION The name of the group column for the "group" step is now optional. When omitted, this extra column is not added anymore. In previous versions, the name was required and there was no way to opt-out from the extra count column. RR-3609 ZEN-20889 12.5 UPDATE 2
- DATA API In the Data Hub API, it is now possible to get the results in the JSON format (depending on the value of the `Accept` header). RR-3584 12.5 UPDATE 2
- PREVIEW In this build, we have added support for the French localization of the user interface. This is a preview feature. RR-3476 12.5 UPDATE 2

Security Improvements

- Updated vulnerable libraries of transitive dependencies in Cloud connectors. KOT-338 RR-3723 12.5 UPDATE 4
- Updated library datatables.net to version 1.10.23+ to eliminate the potential software vulnerability CVE-2020-28458. RR-3466 ZEN-21063 ZEN-21397 12.5 UPDATE 2
- Resolved various issues with the delegation of authentication to the external identity provider. This change should have a visible change in terms of less flickering and screen changes, when the user gets authenticated. RR-3617 ZEN-21156 12.5 UPDATE 2
- Fixed a problem with possible escalation of permissions in the REST API for e-mail templates. RR-3214
- Resolved a possible SQL injection in the RAW tables API. RR-3916
- Added a password check to ensure that users choose strong passwords that meet password security requirements. RR-3629 ZEN-21156 12.5 UPDATE 3
  - This feature can be activated by editing the property `passwordFormat` in the `appsettings.json` file.

For a secure password requirement, including the minimum length, the presence of uppercase and lowercase letters, numbers, and special characters you can use the sample value: `"^(?=.?[#?!@$%^&-])(?=.[0-9])(?=.[a-z])(?=.[A-Z])[a-zA-Z0-9\\#?!@$%^&-]{8,}$"` .

ℹ Please note, that values in JSON files may not contain unescaped backslash (`\`) or quotation marks (`"`) characters; they have to be encoded as `\\` (like in the above example) and `\"` respectively.

Resolved Issues

- Fixed an issue, where the UI could freeze on the System Settings page. `RR-3134` `12.5 UPDATE 5`

- Fixed an issue, where many irrelevant errors were logged in the console during the execution of agent-based transformation. `RR-3739` `ZEN-23187` `12.5 UPDATE 5`

- Fixed an issue, where an incorrect interval was displayed for tasks, that were not assigned a scheduled execution. In this version, a placeholder `-` will be shown for tasks, that are not scheduled. `RR-3602` `ZEN-21846` `12.5 UPDATE 5`

- Fixed an issue, where a message about disabled SSL certificate check would be printed in the log file each time a request is made and the SSL ceritificate check is disabled. From this version, the message is only shown once. `RR-3728` `12.5 UPDATE 5`

- Fixed an issue with incomplete results saved to the tenant results database when using SQL Server database. `RR-3529` `ZEN-21404` `12.5 UPDATE 1`

- Fixed an issue with missing editor for standard de-duplication step with `maxValue` strategy. `RR-3558` `12.5 UPDATE 1`

- Fixed an issue, where the priority of joined columns could be lost when saving changes in the Transformation editor. `RR-3516` `ZEN-21256` `12.5 UPDATE 1`

- Fixed conversion of date (`InstallDate0`) in *ECM SQL SOFTWARE ARP* task. `RR-3558` `12.5 UPDATE 1`

- Fixed connection issues with Microsoft Azure Computer and Microsoft Azure SQL connectors. `KOT-153` `RR-3528` `KOT-194` `12.5 UPDATE 1`

- Fixed faulty parameter assertion on `apiKey` , `username` and `password` in the HCL BigFix connector. `KOT-186` `RR-3528` `12.5 UPDATE 1`

- Fixed unknown fields `parentName` and `parentId` and turned the `businessUnits` to be optional in the Salesforce Marketing Cloud. `KOT-153` `RR-3528` `12.5 UPDATE 1`

- `TRANSFORMATION` Fixed issues with join statements not supporting null columns and wrong conversion to date for columns during the transformation process. `RR-3640` `ZEN-22707` `12.5 UPDATE 3`

- `KEYCLOAK` Added missing `LogoutUrl` placeholder in the configuration file. `RR-3634` `12.5 UPDATE 3`

- `REPORTING` Fixed various issues in the default reports:

- Fixed an issue with the "Software portfolio overview redundant software" task and dashboard, ensuring that all data is displayed accurately. `RR-3649` `12.5 UPDATE 3`

- Adjusted the detailed vulnerability report to ensure that it is displaying the correct information. `RR-3607` `ZEN-22076` `12.5 UPDATE 3`

- `KEYCLOAK` Fixed an issue, where emails were not being sent to users authenticated by external identity providers. `RR-3636` `12.5 UPDATE 3`

- Fixed an error "*The size (8000) given to the parameter 'Type' exceeds the maximum allowed (4000)*" reported by MariaDB / MySQL tasks. `RR-3608` `ZEN-21753` `12.5 UPDATE 3`

- Fixed possible `NullReferenceException` when running the RayVentory Catalog task. `RR-3631` `12.5 UPDATE 3`

- Fixed minor issues with localized texts. `RR-3632` `RR-3518` `12.5 UPDATE 3`

- Fixed an issue, where task description and task owner were incorrectly represented in the UI. This change fixes the previously introduced functional update in version 12.5 Update 3. `RR-3633` `12.5 UPDATE 3`

- Added missing owner and description fields and generated migration for MySQL. `RR-3638` `ZEN-22666` `12.5 UPDATE 3`

- Fixed an issue, where certain task types were not showing a configuration UI if a multi-value (array) parameter was used by their authentication sections. This change affects several connectors, mostly AWS-related. `RR-3639` `ZEN-22683` `12.5 UPDATE 3`

- Improved the performance of OUTER JOIN queries in the transformation process. `RR-3637` `ZEN-22658` `12.5 UPDATE 3`

- Added missing relations to VMWare cluster names. `RR-3650` `ZEN-22370` `12.5 UPDATE 3`

- `TRANSFORMATION` Fixed issues with join statements not supporting null columns and wrong conversion to date for columns during the transformation process. `RR-3640` `ZEN-22707`

- `KEYCLOAK` Added missing `LogoutUrl` placeholder in the configuration file. `RR-3634`
- `REPORTING` Fixed various issues in the default reports:
  - Fixed an issue with the "Software portfolio overview redundant software" task and dashboard, ensuring that all data is displayed accurately. `RR-3649`
  - Adjusted the detailed vulnerability report to ensure that it is displaying the correct information. `RR-3607` `ZEN-22076`
- `KEYCLOAK` Fixed an issue, where emails were not being sent to users authenticated by external identity providers. `RR-3636`
- Fixed an error "*The size (8000) given to the parameter 'Type' exceeds the maximum allowed (4000)*" reported by MariaDB / MySQL tasks. `RR-3608` `ZEN-21753`
- Fixed possible `NullReferenceException` when running the RayVentory Catalog task. `RR-3631`
- Fixed minor issues with localized texts. `RR-3632` `RR-3518`
- Fixed an issue, where task description and task owner were incorrectly represented in the UI. This change fixes the previously introduced functional update in version 12.5 Update 3. `RR-3633`
- Added missing owner and description fields and generated migration for MySQL. `RR-3638` `ZEN-22666`
- Fixed an issue, where certain task types were not showing a configuration UI if a multi-value (array) parameter was used by their authentication sections. This change affects several connectors, mostly AWS-related. `RR-3639` `ZEN-22683`
- Improved the performance of OUTER JOIN queries in the transformation process. `RR-3637` `ZEN-22658`
- Added missing relations to VMWare cluster names. `RR-3650` `ZEN-22370`
- Fixed the creation of AD users under KeyCloak control. `RR-3595` `ZEN-22238` `12.5 UPDATE 4`
- Fixed possible timeouts when writing large chunks of data to the SQL Server database. `RR-3769` `RR-3640` `12.5 UPDATE 4`
- Added missing language texts for Russian languages. `RR-3647` `12.5 UPDATE 4`
- Fixed rare issues, where a duplication of indexes would be reported when running complex transformations. `RR-3725` `ZEN-23193` `12.5 UPDATE 4`
- Fixed various issues in Cloud connectors: `RR-3723` `12.5 UPDATE 4`
  - Atlassian Cloud: Deserialization issue. `KOT-282`
  - Atlassian Jira: Missing e-mail address. `KOT-281`
  - Azure Active Directory: Missing parameter employee ID. `KOT-280`
  - Azure Compute: Exception when fetching a missing resource. `KOT-185`
  - CrowdStrike Falcon: Error `HTTP 400 Bad Request` when fetching multiple pages. `KOT-290`
  - GitHub: Issues with the parameter `minutes_used_breakdown`. `KOT-231`
  - Qualys: Timeout issues. `KOT-276`
  - SAP BTP: Fixed issues with ignoring of certificates. `KOT-242`
  - SAP Concur: Resolved naming issues. `KOT-189`
  - Sophos Central: Error `HTTP 415 Unsupported Media Type`. `KOT-308`
  - Tableau: Issues with refresh tokens. `KOT-289`
  - VMware Vcenter: Fixed issues with ignoring of certificates. `KOT-275`
  - VMware vROps: Fixed incorrect descriptions of the authentication parameters. `KOT-259`
  - Fixed wrong description in the Azure AD configuration. `RR-3546` `12.5 UPDATE 2`
  - The `AWS.Athena` and `GCP.BigQuery` connectors could not fetch the data. `KOT-152` `12.5 UPDATE 2`
  - Various issues with parameter relations: `hcl.bigfix.inventory`, `ibm.ilmt`, `microsoft.azuread`, `microsoft.azure.compute`, `microsoft.azure.computeinventory`, `microsoft.azure.consumption`, `microsoft.azure.loganalytics`, `microsoft.azure.sql`, `microsoft.graph.generic`, `microsoft.intune`, `microsoft.m365.signins`, `microsoft.office365`, `salesforce`, `salesforce.soql`). `KOT-195` `12.5 UPDATE 2`
  - Wrong serialization of the e-mail field in the JAMF Pro connector. `KOT-197` `12.5 UPDATE 2`
  - Duplicate items in the `microsoft.azure.compute` connector in the `vm_skus` table. The table has duplicates though it should only have unique entries. `KOT-168` `12.5 UPDATE 2`
  - Inconsistent list and comma-separated parameters in the `aws.ec2`, `aws.rds`, `aws.s3` connectors. `KOT-167` `12.5 UPDATE 2`

- - Various issues in the Microsoft Azure Computer connector. `KOT-198` `KOT-208` `12.5 UPDATE 2`
    - Wrong file handling and overriding resources in the `aws.s3` connector. `KOT-131` `12.5 UPDATE 2`
    - Wrong usage of format and limit parameters in the `microsoft.graph.generic` connector. `KOT-211` `12.5 UPDATE 2`
    - Long runtime of the VMware AirWatch connector. `KOT-199` `12.5 UPDATE 2`
- `DATA TRANSFORMATION` Fixed issues with the LEFT and OUTER join logic of the join steps. `RR-3560` `ZEN-21502` `12.5 UPDATE 2`
- `CATALOG` Fixed an issue with the data being partially ignored by the RayVentory Catalog connector task. `RR-3621` `ZEN-22464` `12.5 UPDATE 2`
- Fixed wrong logging for tasks with timeout. `RR-3462` `12.5 UPDATE 2`
- `DATA TRANSFORMATION` Transformation steps with aggregation of the type `concat` now properly return `null` when all values are `null`. Previously, an empty string was returned. `RR-3585` `12.5 UPDATE 2`
- `KEYCLOAK` Fixed an issue with e-mail field getting an automated prefix `preferred_username` when using KeyCloak-based authentication. `RR-3542` `12.5 UPDATE 2`
- The message shown when trying to delete a group with permissions has been reworded. `RR-2511` `12.5 UPDATE 2`
- `DATA TRANSFORMATION` Fixed an issue where an incorrect source was created when switching between the `table` and `step` source. `RR-3590` `ZEN-22359` `ZEN-21741` `12.5 UPDATE 2`
- `DATA TRANSFORMATION` Fixed minor UI issues with the default standard transformation. `RR-3558` `12.5 UPDATE 2`
- `DATA TRANSFORMATION` Fixed an issue with macro handling, where in some cases the parameters could be wrongly resolved. `RR-3606` `ZEN-21871` `12.5 UPDATE 2`
- `KEYCLOAK` Fixed issues where signing out directly from the home screen was not possible without triggering a navigation. `RR-3457` `ZEN-21156` `12.5 UPDATE 2`
- Restored missing ITSM connector tasks and variables. `RR-3597` `RR-3596` `12.5 UPDATE 2`
- Fixed an issue, where a deactivated tenant could be still considered for the execution queue of its tasks. `RR-3598` `RR-3593`

Breaking Changes

When migrating from Data Hub 12.5 (RTM):

- In SAP BTP connector, `clientId` and `clientSecret` are now required. `KOT-166` `RR-3528`

When migrating from any previous version:

- This release brings substantial changes to the Technology Catalog connector, resulting in its lack of backward compatibility with version 12.5. When importing new reports that reference catalog tasks, please be aware that this operation is potentially leading to the replacement of your existing tasks and reports with the new structure, making the the old tasks obsolete. To ensure both sets of reports coexist seamlessly, it is essential to adjust the data set of the old Catalog-related task and update all references to the tables it generates before commencing the import of the new reports.
- In this release, we have made the strategic decision to discontinue support for certain legacy platforms. Although the product may remain functional on these platforms, we will no longer conduct routine testing or provide official support for them. The affected platforms primarily encompass operating systems that have reached their End-of-Support status, such as Windows Vista, as well as various web browsers, which were released years ago. For a comprehensive and up-to-date list of supported systems, we encourage you to refer to the dedicated sections in the Release Notes or the Installation Guide.

Known Issues

- On Windows, when upgrading existing version of Data Hub server, previous settings like KeyCloak connection or database settings may be lost. It is recommended to back-up the file `appsettings.json` and restore it after the installation is finished.
- Standard reports are available in the SQL-Server flavor only.
- The installer uses the SQL-Server as the default database type. In order to use MariaDB, skip the database creation step during the installation and adjust the configuration before starting the product for the first time. This does not affect the Docker-based installation, where the selection of the database type is determined by using a specific environment variable.
- The import of Excel files into container tasks does not work in combination with the MariaDB-based setup.

- Previous KeyCloak configurations will not be preserved during the migration process in the MSI-based installation. It is recommended to backup and restore your `appsettings.json`.