RAYVENTORY®

The most comprehensive
Solution for Discovery and
Inventory of Software
and Hardware

Release Notes RayVentory
12.0

•rayNET

Release Notes RayVentory

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Introduction

This new release 12.0 is a major upgrade to the previous release 11.4. It contains several new features, major product improvements and resolved issues. Simplified deployment, flexible configuration, and handful of different inventory methods wrapped in the user friendly interface of RayVentory to provide flexibility for network administrators and IT managers with minimal impact on the existing infrastructure.

RayVentory provides a complete set of products for operating system inventory, as well as Oracle database, VMware vSphere / ESX, Hyper-V and SNMP inventory. The data can be processed, visualized, and analyzed with DataHub component, and additionally enriched with help of the Catalog services. The Server component ensures, that complex architectures can be effectively scanned, using our "decentralized scanning" concept.

This software set includes components which have the following core functions:

- RayVentory Scan Engine

- RayVentory Server

- RayVentory Data Hub

- RayVentory Catalog

Additionally, a bundled edition of **EasyManual** is included to support any kind of documentation. With the intelligence and many automation possibilities, creating documentation has never been so easy and fast.

RayVentory Scan Engine

RayVentory Scan Engine 12.0 features at glance:

- Discovery and import of devices and services

- Agent based and agentless (remote execution, zero-touch) inventory

- Interfaces for communication between clients and RayManageSoft / RayVentory

- PowerShell automation library to automate daily tasks

- Task scheduler service to trigger inventories and other operations at specified intervals

RayVentory Portal is now RayVentory Scan Engine RVP-755

In order to better denote the purpose of RayVentory, the name was changed to RayVentory Scan Engine as part of the standardization and consolidation of functions. The new Scan Engine inherits the previous features and functions, yet expanding new topics and resolving the issues and inconsistencies that were detected in the previous releases of RayVentory.

What's New?

Recognition and inventory of Docker instances RVP‑414
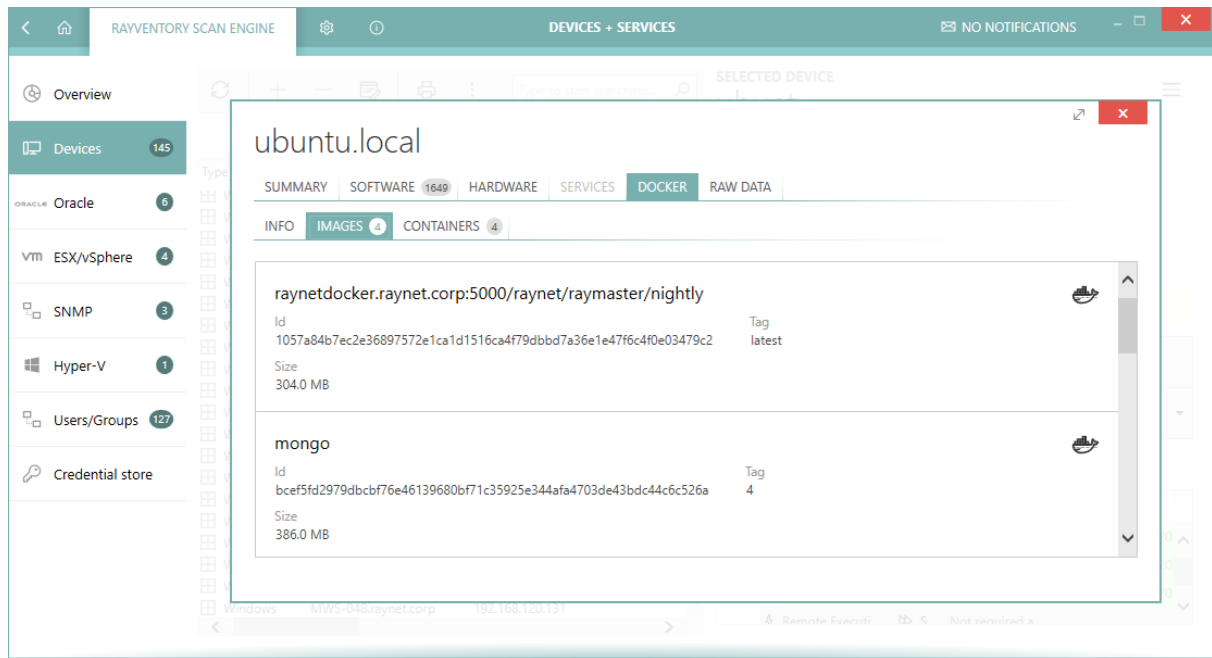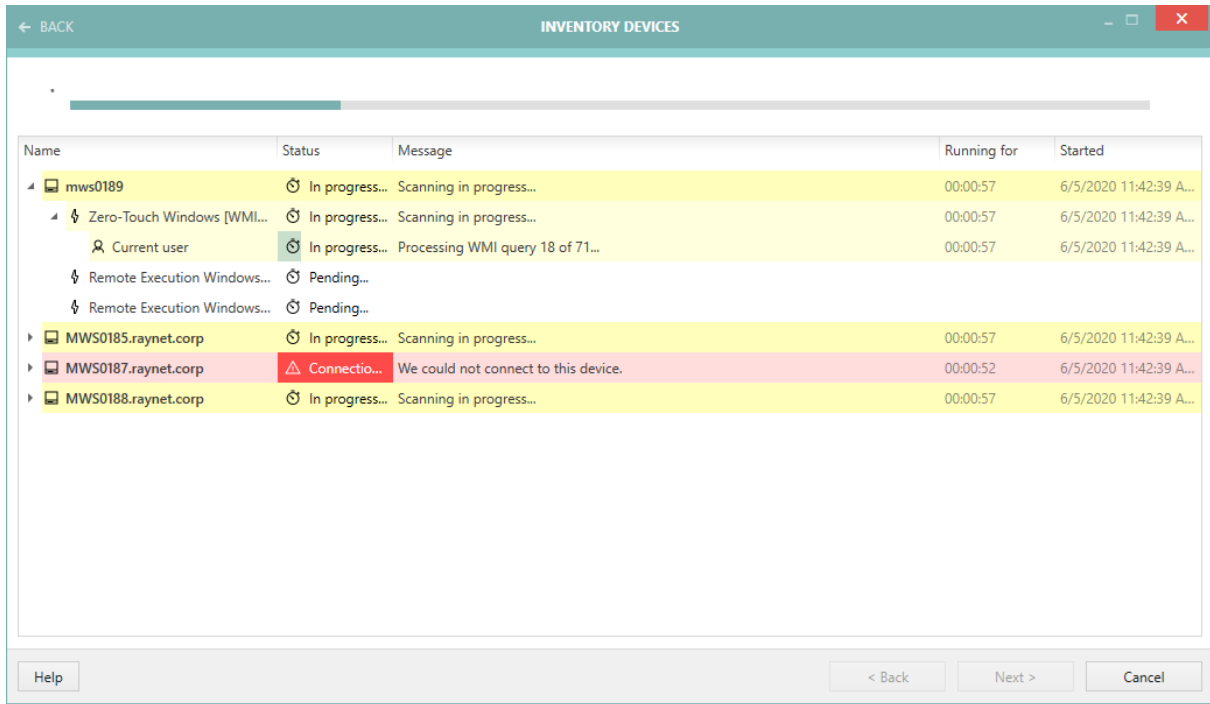
During the standard inventory scan, if evidences point to the presence of locally running Docker instance, these are collected and included in the result NDI files. Later, there is a brand new tab in the Inventory Viewer which shows the scanned objects (container, images) and meta-data. This works for Zero-Touch scans of both Windows and UNIX platforms.

Multi-language UI RVP‑646
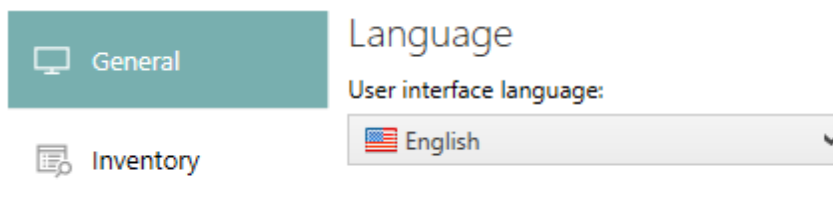
RayVentory has now a multi-language UI and supported the languages English and German.

Improved overview of the Inventory Wizard and structured inventory logging RVP-564

The inventory operation in interactive (UI) mode is now showing much more structured information, which lets you understand the current progress, potential issues with credentials and permissions and react quickly to them, without waiting for the full scan to complete. After the scan is done, you have always a one-click access to the previous inventory log, providing the same amount of information for both succeeded and failed attempts, executed both from UI or from a scheduled task or automated operation.

Custom device attributes
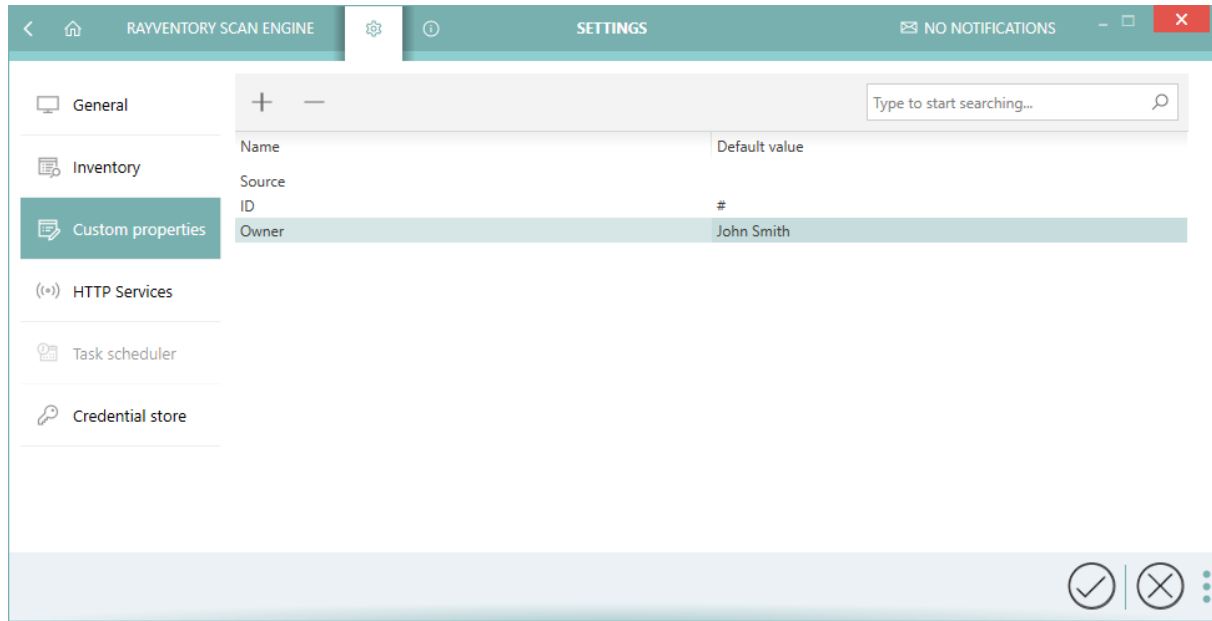
In this release, we introduced a configurable option, which can be used to "tag" or annotate devices. The type of information can vary, depending on use cases - typically, custom attributes are a great place for extra bit of information like the division, owner, comments etc. After scanning, the information is combined with the global attributes and send to the parent RayVentory server in a flat, combined view. To save time, it is possible to define a default value for each column, which will be used if the user defined no other value elsewhere.
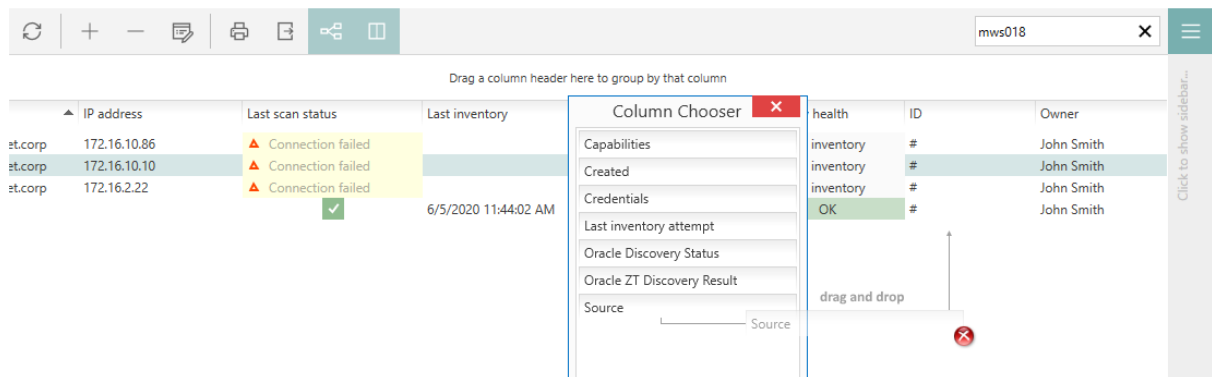
Finally, the device list received extra sorting and filtering capabilities based on the value of custom attributes. As long as the custom columns are visible (configurable via the column chooser), it is possible to filter and sort the list in order to fine-tune searching and scanning of selected group of devices, based on custom business-relevant criteria.

Configurable inventory health indicator RVP-626 RVP-752
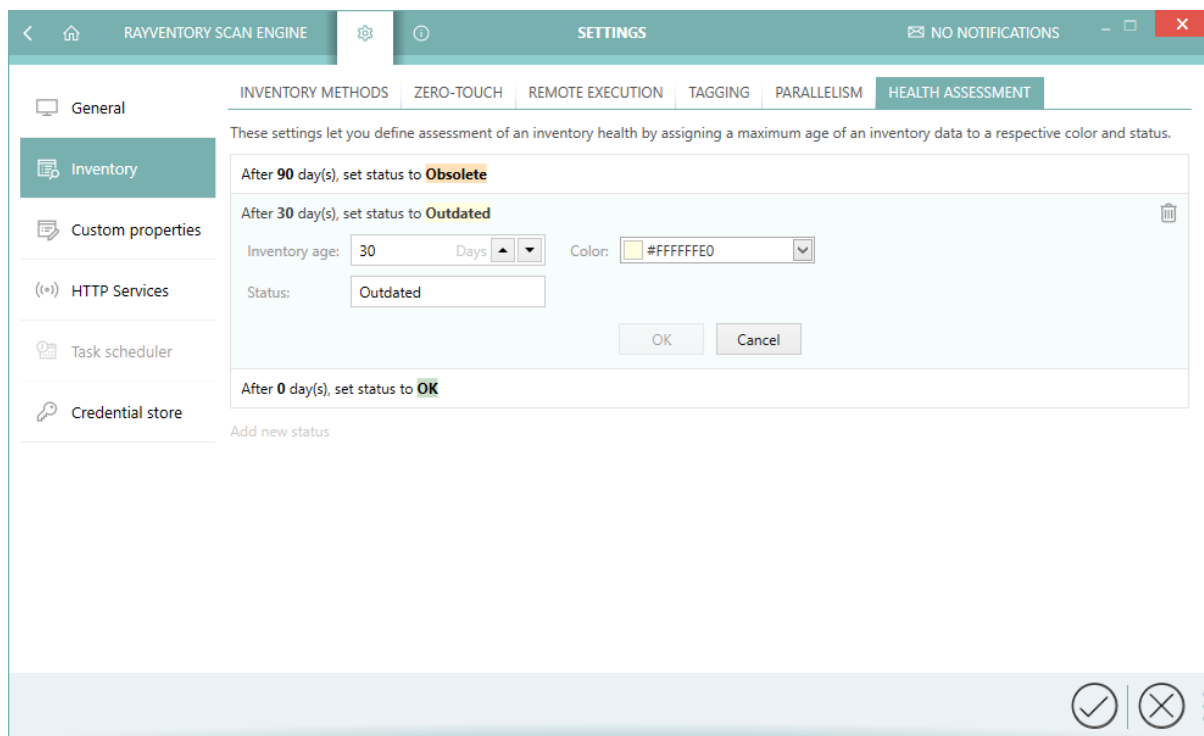
In previous versions, the overview of devices and services displayed a table with a basic counters of computer inventory files, based on their age. In this version, this concept has been expanded. Not only are the indicators configurable (for example, it is possible to define after how many days the recent scan is to be treated as not up-to-date anymore), but also the number of sub-statuses, their names and even colors are flexible and can be set-up in the product settings screen.

The status of inventory is shown in many places, which improves readability but also let the user search and filter for devices and services requiring attention or re-scanning. All possible issues and problems are displayed and visible in one place. The same set of information is also written to separate log files.

Improved inventory viewer RVP-408 RVP-411 RVP-412 RVP-413 RVP-482

The inventory viewer, which is a quick and easy way of seeing the content, services and apps installed on selected devices has been improved to show even more useful information. The list of changes is extensive, here are just some more important highlights:

- Operating system is displayed in a header, which contains the system logo and key color

- The RAW view has been improved - it is not only much faster than its predecessor, but also has a dual panel mode, with improved readability and searching

- For UNIX/Linux devices, their mount points are now shown

- Physical RAM is shown

- For Solaris devices, zones are now shown

- IP addresses are now sorted

- Some values are selectable and can be copied to the clipboard. Examples include IP addresses, MAC addresses and some more

- macOS packages (from ASPA evidence) are now shown in the Software tab

Other changes

- `RVP-226` Logging of file scan on UNIX machines for a better troubleshooting.

- `RVP-249` It is now possible to define custom timeouts separately for each inventory method type.

- `RVP-318` New context menu item **Import from Active Directory** has been added in the **New operation** view.

- `RVP-359` Default and minimum column sizes are now optimized for a better initial display and column resizing.

- `RVP-365` In the Inventory Wizard there is a slightly toned-down version of disabled tiles in case of required method being disabled.

- `RVP-402` Timeouts for JRE searching have been adjusted, so that the scanning of non-Oracle devices terminates faster and does not block the progress unnecessarily.

- `RVP-410` Solaris scan has been improved to include all virtual adapters.

- `RVP-417` The logging and error reporting is now more accurate in case of missing results from mandatory WMI queries (Zero-Touch Windows Inventory).

- `RVP-420` It is now possible to see the exact component versions and to copy them to clipboard. This diagnostic information is available from the About > Troubleshooting tab.

- `RVP-465` Various methods responsible for UNIX inventory have now adjusted timeouts, ensuring that there is enough time for the execution, yet in case of failures that the progress is not blocked for too long.

- `RVP-469` Logging for Linux/Unix Oracle Automatic Discovery and Inventory has been improved.

- `RVP-472` OracleDB inventory now retries with loopback address in case of reported network errors.

- `RVP-473` A new column and status indicating **Oracle Auto Discovery and Inventory** status have been added in the **Devices** view.

- `RVP-481` Additional SID patterns are now ignored by ORATRACK for better and cleaner results. The list is configurable from the Settings screen.

- `RVP-488` Task scheduler performance and memory consumption has been improved.

- `RVP-501` Updated OJDBC drivers for ORATRACK.

- `RVP-512` An extra check for another RayVentory instance has been added. It makes sure that it is not possible to launch more than one instance of RayVentory on the same machine. See chapter Known Issues and Breaking Changes for additional considerations.

- `RVP-520` Improved import routine of `tnsnames.ora` to support more tokens.

- `RVP-528` An extra column has been added in the Oracle view, informing about the last status of Zero-Touch discovery, including potential indication that the host may be running an OracleDB instance.

- `RVP-547` Zero Touch UNIX Inventory scanning now supports **BEA/IBM/Oracle WebLogic** packages.

- `RMS-552` Searching for Java on Linux/UNIX devices has been improved by first trying to perform a search in the elevated context.

- `RVP-555` Better handling of edge-cases for NDI lookup by Zero-Touch OracleDB scans.

- `RVP-558` Zero-Touch UNIX scan can now support symlinks.

- `RVP-559` Input values (like host name, service name, IP address etc.) are now automatically trimmed when saving the connection details.

- `RMS-563` Querying for 32-bit and 64-bit paths is now simpler to set-up. RayVentory supports reflected paths even without any manual intervention, and ensures that in case of queries which result in duplicated entries, only one is reported. This makes it much easier to write one configuration which works for both 32-bit and 64-bit machines.

- `RVP-566` Locally running **Oracle Auto Discovery and Inventory** is now possible without remote execution.

- `RVP-570` Oracle entries have now an option of specifying more host names, and the import procedure from `tnsnames.ora` importer is able to populate them.

- `RVP-579` Zero-Touch UNIX inventory now returns LPAR related data in a fashion similar to `ndtrack.exe`.

- `RVP-582` MD5 token in NDI files is now set to a dummy value if content and MD5 were disabled for a file scan.

- `RMS-586` The syntax of custom WMI queries has been extended to allow enabling and disabling of rules. After some under-the-hood optimizations, file scan now takes considerable less time and memory. Additionally, a sample file (`example.xml`) is now bundled with the product for a quick start.

- `RVP-591` Searching for **Java** has been improved. OracleDB scans should now run faster and terminate after 5 minutes if no Java instance can be found.

- `RVP-593` Task scheduler UI is now hidden if the service is not installed, Additionally, task scheduler can trigger tasks from the command line.

- `RVP-596` There is now an information added for all Oracle entries, which informs about the host name of the parent server, on which the instance was found.

- `RVP-597` For a better portability, configuration files try to use compacted paths and variables whenever possible.

- `RVP-601` A new filter option has been added in the Task Scheduler Inventory. It let users distinct unspecified device types from all device types.

- `RVP-607` **MS SQL Server 2005** has been added to the list of instances recognized by Zero-Touch Windows Inventory.

- `RVP-609` Better logging of commands by RIU module.

- `RVP-611` Internal logging of **OracleDB** operations has been improved.

- `RVP-621` Stability and handling of edge cases of **SNMP** and discovery methods have been improved.

- `RVP-622` The connection items have now a hidden information about the last update time.

- `RVP-630` Zero-Touch UNIX inventory now produces better logs.

- `RVP-633` There is now a new setting used for a granular selection of devices to be scanned, which distinguishes between scanning of all devices versus only the newly found devices.

- `RVP-634` **BEQUEATH** connections for **Oracle Database Feature Usage Scans** are now supported for remote execution scenarios.

- `RVP-635` Some WMI queries for Zero-Touch Windows scans have been improved.

- `RVP-640` It is now possible to separate Oracle ports with comma (previously, only semi-colon was accepted as a delimiter).

- `RVP-650` Recent section is now hidden if there is nothing to show.

- `RVP-663` Action center has now a reveal effect upon opening

- `RVP-675` Updated `wmitrack.ini` to include `Win32_Service` namespace.

- `RVP-691` RIW (command line) tokens can be now split with comma and semi-colon (in addition to already supported space characters).

- `RVP-693` The device overview has been improved when displaying empty data with no previous computers or results.

- `RVP-724` In case of a single host failing in the vSphere inventory scan, the other are now still reported

- `RVP-741` **Key file** has been renamed to **Open SSL key file** to avoid confusion.

- `RVP-755` Improved utilization of temporary resources.

- `RVP-756` Support for virtual adapters scan via `dladm` on Solaris 11.4 and 10.5 has been implemented in the Zero-Touch UNIX inventory.

- `RVP-759` Heavily improved the UNIX file-scan in regards of usability, efficiency and compatibility.

- `RVP-780` Improved logging of OracleDB inventory scans.

- `RVP-789` Configurable behavior of app compatibility flags for `ndtrack` on a remote system has been added.

- `RMS-369` Memory consumption and CPU thread utilization for long-running, resource-intensive operations (like bulk inventory with file scan) of Windows machines using Zero-Touch methods has been improved.

- `RMS-4343` Error messages for some edge case scenarios (for example missing libraries) have been enhanced and improved for an easier troubleshooting.

- `RMS-4426` Support for in-memory database feature has been added.

- `RSC-616` The activation dialog is now easier to use and presents the most important information about the current license directly after starting.

Resolved Issues

The following issues have been resolved in RayVentory in 12.0.

- `RVP-61` Several labels and fields were named inconsistently in the SNMP device sidebar. The issues have been fixed in this version.

- `RVP-236` Sometimes, the "Users/Groups" view was not refreshed properly after editing an item. The issue has been fixed in this version.

- `RVP-322` In case of a non-critical error when changing program settings, error dialog was shown. This has been changed to warning.

- `RVP-326` Sorting "Devices+Services" by IP address was using improper sorting algorithm, which was not respecting IP4 format. Sorting by IP address has been fixed in this version.

- `RVP-372` Remote execution inventory with help of ServiceManager/SMB local files and or WMI/SMB was returning errors on some systems. Both methods have been fixed in this version.

- `RVP-375` Adding SSH key for SSH credentials was causing display issues. The issue has been fixed in this version.

- `RVP-379` Adding a computer to the target list for the scheduled inventory was suspending subsequent status updates. The issue has been fixed in this version.

- `RVP-397` There were some minor issues with entering SNMP v3 credentials in the credentials store. They have been fixed in this version.

- `RVP-409` Zero-Touch UNIX Inventory could fail in certain scenarios involving macOS scanning with proxy enabled. The issue has been fixed in this version.

- `RVP-416` Zero-Touch UNIX Inventory of SuSE machines could report incorrect OS details. The issue has been fixed in this version.

- `RVP-418` Reverse hostname lookup could produce wrong results during the discovery. The issue has been fixed in this version.

- `RVP-434` File scan with disabled MD5 checksum was writing a placeholder, which was not compatible with RayManageSoft format. In this version, the placeholder has been changed to the one supported by RayManageSoft.

- `RVP-435` Special XML characters could be wrongly encoded by the registry scanner. The issue has been fixed in this version.

- `RVP-436` Wrong value was shown for the host name inside the inventory viewer for vSphere/ ESXi. The issue has been fixed in this version.

- `RVP-441` It was not possible to save monthly schedule for a scheduled task if some months were disabled. The issue has been fixed in this version.

- `RVP-447` After discovering an OracleDB instance, where the host name was not resolvable at the time of the scan, a wrong value could be written to the configuration, leaving the item in the state where it was not possible to trigger OracleDB inventory on it. The issue has been fixed in this version.

- `RVP-449` Remote Execution inventory was not working properly for targets in a workgroup. The issue has been fixed in this version.

- `RVP-476` Zero-Touch UNIX file scan could return errors for empty MD5 signatures. The issue has been fixed in this version.

- `RVP-483` Oracle Automatic Discovery and Inventory could incorrectly fallback to other inventory methods where it was not necessary. The issue has been fixed in this version.

- `RVP-486` On some computers, the **Library** and **Discovery** tiles were always disabled. The issue has been fixed in this version.

- `RVP-487` Some machines reported Access Denied exception when performing a Windows file scan on them. The issue has been fixed in this version.

- `RVP-507` CPUs, threads and cores were counted incorrectly for machines of Solaris SPARC architecture. The issue has been fixed in this version.

- `RVP-515` In some cases, the program could perform poorly and produce memory leaks. The issue has been fixed in this version.

- `RVP-521` In some cases, running OracleDB audit could leave the connection in a state, where all subsequent inventory attempts were failing. The issue has been fixed in this version.

- `RVP-524` For some specific CSV files, the import of devices by a scheduled task was not properly importing all entries. The issue has been fixed in this version.

- `RVP-526` Searching in the schedule grid could throw a `NullReferenceException`. The issue has been fixed in this version.

- `RVP-531` The password mask for elevation password in the **Credential editor** was having a wrong, misleading length. The issue has been fixed in this version.

- `RVP-533` Zero-Touch UNIX file scan on Linux SUSE 11 with certain NLS settings/date formats delivered no results. The issue has been fixed in this version.

- `RVP-536` OracleDB Scanner on Oracle 9i was delivering incorrect results in case of different time zones regions. The issue has been fixed in this version.

- `RVP-540` Caption and OS name were used interchangeably in the Inventory Viewer panel. In this version, the caption is generally used in places were a display value is meant. This change affects non-Windows systems.

- `RVP-545` Certain Zero-Touch WMI queries were running without proper impersonation. The issue has been fixed in this version.

- `RVP-546` JRE search on Windows was failing in case of presence of multiple instances of `java.exe` in the `PATH` environment variable. The issue has been fixed in this version.

- `RVP-548` An exception of type `NullReferenceException` could be thrown when running an SNMP inventory with SNMPv3 credentials. The issue has been fixed in this version.

- `RVP-549` SNMP inventory was failing for queries returning a different type than expected octet string. The issue has been fixed in this version.

- `RVP-554` OracleDB scanning had a faulty logic for some specific scenarios. The issue has been fixed in this version.

- `RVP-561` An exception of type `BadArgumentException` could be thrown during the SNMP discovery. The issue has been fixed in this version.

- `RVP-562` An error of type "unexpected path" could be thrown during file upload via SCP. The issue has been fixed in this version.

- `RVP-567` WMI and Win32 API registry scanners were returning incorrect `Wow6432Node` registry paths on 64-bit machines. The issue has been fixed in this version.

- `RVP-573` Zero-Touch UNIX file scan was not respecting exclusion rules for directories. The issue has been fixed in this version.

- `RVP-583` Zero-Touch UNIX file scan could return wrong creation date for newly created files,

depending on the base operating systems and some other conditions. The issue has been fixed in this version.

- RVP-585 Some Solaris machines could return an output of `ifconfig` which was not properly supported. In this version, reading the information from the output of `ifconfig` has been fixed.

- RVP-598 ORATRACK scanner was reading only the first address from `listener.ora`. In this versions, all addresses are read and populated to the instance configuration.

- RVP-600 Remote Execution UNIX Inventory on AIX7.1 was not reporting all hard disks. The issue has been fixed in this version.

- RVP-605 OracleDB inventory was not saving the credentials from the last successful scan for further use. In this version, the behavior is correct and similar to how other scan methods work.

- RVP-618 File scan during Oracle Inventory was not properly terminated after timeouts. The issue has been fixed in this version.

- RVP-619 Some valid options for parameter items in the command-line Zero-Touch UNIX scanner (RIU) were missing. The validator has been fixed to include them.

- RVP-623 Concurrency errors could be reported when an inventory task was trying to update items which had been deleted by another background activity. The issue has been fixed in this version.

- RVP-627 In some cases, populating of devices from a vSphere/ESX scan could produce duplicated devices. The issue has been fixed in this version.

- RVP-634 Exit code of SQL Plus was not properly handled by OracleDB scanner (oratrack). The issue has been fixed in this version.

- RVP-645 An exception of type `IndexOutOfBoundException` could be thrown when using Zero-Touch Windows Inventory and where the credentials were in "domain\username" format. The issue has been fixed in this version.

- RVP-647 File scan was always searching for configuration files on remote machine even if it was not required by a given discovery source configuration. In this version, file scans are executed only if actually required.

- RVP-655 Calculation of the next run time of a scheduled task could show wrong date for the tasks that used monthly recurring triggers. The issue has been fixed in this version.

- RVP-667 The icons for Debian packages in the **Inventory viewer** were incorrect. The issue has been fixed in this version.

- RVP-672 Resizing of the Scheduled task dialog could produce unnecessary blank space. The issue has been fixed in this version.

- RVP-673 In the **AD import operation** dialog, the visuals for control validation were incorrect. The issue has been fixed in this version.

- RVP-674 In the dialog for target selection for a scheduled inventory task, there was an unnecessary checkbox column. In this version, the column has been removed.

- `RVP-680` OracleDB scanner could return and error of type `NoSuchMethodError` with JRE prior to 1.6. The issue has been fixed in this version.

- `RVP-682` The word "inventory" used different casing in several places across the product. In this version, the inconsistencies have been fixed.

- `RVP-687` In the dialog for target selection for a scheduled inventory task, some columns were shown with a filter icon, although the filtering was not possible. In this version, the filtering icon is only shown in the columns were it makes sense.

- `RVP-688` When more columns were added to the target selection dialog (Scheduled task dialog), there was no horizontal scrollbar present. The scrollbar has been added in this version.

- `RVP-696` On lower resolution and window sizes, an unnecessary horizontal scrollbar was shown in the Discovery wizard. In this version, the scrollbar visibility is determined more effectively.

- `RVP-700` In the task scheduler dialogs, operations like removing, moving etc. were only applicable to the first item in case of multi-selection. The issue has been fixed in this version.

- `RVP-701` Options were wrongly persisted between opening and closing of the **Import Operation** dialog. The issue has been fixed in this version.

- `RVP-738` The action center was showing a warning about missing Java, even if the OracleDB scanning was not configured. In this version, the warning is only shown when applicable.

- `RVP-702` After importing a CSV file by a scheduled task, the device table was not properly refreshed. The issue has been fixed in this version.

- `RVP-703` Background inventory operations executed by the **Task Scheduler** were not refreshing the table view. The issue has been fixed in this version.

- `RVP-708` **Oracle Pluggable Databases** were not checked by the OracleDB Feature Usage statistics scan. The issue has been fixed in this version.

- `RVP-732` The community field for SNMPv3 credentials was always required, even in cases where its presence was optional. The issue has been fixed in this version.

- `RVP-743` Devices with multiple FQDNs were consuming a license for each FQDN instead of just one license for the actual device. The issue has been fixed in this version.

- `RVP-746` The formatting of exported CSV files with device data was suboptimal. The issue has been fixed in this version.

- `RVP-750` In the **CSV import wizard**, the button next was enabled even though no file was selected. In this version, it is not possible to go to the next page if no file is selected.

- `RVP-778` Remote execution by NDTRACK with WMI and SMB had incorrect check logic and was reported as not available on all non-UNIX devices, including Windows. The issue has been fixed in this version.

- `RVP-781` There were several invalid messages in regards to credentials usage and user/password prompts. In this version, these errors have been fixed.

- `RVP-792` There were several different issues with editing of SSH keys, which all have been fixed in this version.

Software Requirements

General Prerequisites

The following operating systems are supported for the installation and running of RayVentory at the time of release.

- Windows Vista

- Windows 7

- Windows 8

- Windows 8.1

- Windows 10

- Windows Server 2008 SP1-SP2

- Windows Server 2008 R2

- Windows Server 2012

- Windows Server 2012 R2

- Windows Server 2016

- Windows Server 2019

Required Software

- .NET Framework 4.5.2

Operating System Inventory

The following systems are supported:

- Windows XP

- Windows Vista

- Windows 7

- Windows 8

- Windows 8.1

- Windows 10

- Windows Server 2003

- Windows Server 2003 R2

- Windows Server 2008

- Windows Server 2008 R2

- Windows Server 2012

- Windows Server 2012 R2

- Windows Server 2016

- Windows Server 2019

- Linux on x86, x86_64, POWER, PowerPC and ARM architecture
    o RedHat Linux 8 and 9
    o RedHat Enterprise Linux 3, 4, 5, 6, 6.1
    o SuSE Professional/OpenSuSE 9, 10, 11
    o SuSE Enterprise Server (SLES) 9, 10, 11
    o CentOS 6.x, 7.x
    o Debian
    o Ubuntu
    o Fedora 21

- Mac OS X on x86_64 and PowerPC, 10.8+

- Solaris on SPARC since 9, 10, 11

- Solaris x86_64, since 8, 9, 10, 11

- AIX on POWER architecture since 5.3

- HP-UX on PARISC and Itanium architecture, since 11.00, 11i, 11i v2, 11iv3

Required Software

- Java SE Runtime Environment (build 1.6.0) (Mac OS X agent inventories only)

VMware ESX/ESXi Inventory

The following platforms are supported:

- VMware ESX Server 3.0 and higher

- VMware ESXi Server

- VMware vCenter Server

Oracle Inventory

The following database components are supported:

- Oracle Database 9i
- Oracle Database 10g
- Oracle Database 11g
- Oracle Database 12c
- Oracle Database 18c Enterprise
- Oracle Database 18c Standard
- Oracle Database 19c Enterprise
- Oracle Database 19c Standard
- Oracle Database 18c Standard Edition 2
- Oracle Database 19c Standard Edition 2

Required Software

- Java Runtime 1.4.2 - Java 10
- Any operating system supporting Oracle JRE

Hardware Requirements

This section lists the minimal hardware requirements for devices running RayVentory.

Minimal

- Screen resolution: 1024 x 768 pixels
- Color settings: 16 bit
- RAM: 2GB
- Disk space: 100MB

Recommended

- Screen resolution: 1280 x 1024 pixels
- Color settings: 32 bit

- RAM: 4GB or higher

- Disk space: 1GB or more

> **Note:**
> The installation of the RayVentory framework itself requires about 400MB of disk space. The amount of additional space needed depends on the size and number of incoming inventory results.

Migrating from RayVentory Portal

Preconditions

- The user must be an administrator

- Powershell version 3.0 or newer must be installed (information about the current version is contained within the `$PSVersionTable` variable)

Steps

1. Install RayVentory Scan Engine 12.0

2. Copy the migration script (see below) to a location where it can be started from a local system.

3. Open Windows PowerShell or Windows Terminal as administrator

4. Navigate to the folder where a local copy of migration script exists.

   o In case the execution of PowerShell scripts is restricted on the current system, execute additionally the following command to allow it temporarily:
   ```
   Set-ExecutionPolicy -ExecutionPolicy RemoteSigned -Scope Process
   ```

   o In case the script is blocked by your system, unblock it with the following command:
   ```
   Unblock-File -Path .\MigrateRVPtoRVSE.ps1
   ```

5. Execute the script
   ```
   .\MigrateRVPtoRVSE.ps1
   ```

6. [Optional] Check if hard-coded values in configuration nodes of `config.xml` file are set to relative paths:

   o OracleTrackerFolderPath

   o NdtrackExecutablePath

   o RIWClassesFile

Migration script

The following migration script is also available online:
https://raynetgmbh.zendesk.com/hc/en-us/articles/360045755511-RVY200601-Migrating-RayVentory-Portal-to-RayVentory-Scan-Engine-12-0-

```
<#
@Title = A script to migrate from RayVentory Portal to RayVentory Scan Engine
@Author = Raynet GmbH
@Version = 0.1
@Description = This script is supposed to adjust Config.xml files to fix obsolete
hardcoded paths
#>

# Setting up logging
Write-Host "Starting migration script"
$tempFilePath = [System.IO.Path]::Combine($env:TEMP, "RVPtoRVSEmigration.log")
Start-Transcript -Path $tempFilePath -NoClobber -Append

Write-Host "PowerShell information"
$PSVersionTable
Write-Host ""

try {
    # Extraction of RVP appdata storage from Registry
    $appdataPath = [string]::Empty;
    $programFilesPath = [string]::Empty;
    if ([Environment]::Is64BitProcess) {
        $appdataPath = Get-ItemProperty -Path "HKLM:\SOFTWARE\WOW6432Node\Raynet
\RayVentoryPortal" -Name "AppDataPath" | Select-Object -ExpandProperty "AppDataPath"
        $programFilesPath = [Environment]::ExpandEnvironmentVariables("%
ProgramFiles(x86)%")
    }
    else {
        $appdataPath = Get-ItemProperty -Path "HKLM:\SOFTWARE\Raynet\RayVentoryPortal"
-Name "AppDataPath" | Select-Object -ExpandProperty "AppDataPath"
        $programFilesPath = [Environment]::ExpandEnvironmentVariables("%ProgramFiles
%")
    }

    # Checking if configuration values are in place
    if ([string]::IsNullOrEmpty($appdataPath)) {
        Write-Warning -Message "RayVentory Portal configuration registry is missing.
No migration will be done."
        [System.Environment]::Exit(1)
    }

    $configFilePath = [System.IO.Path]::Combine($appdataPath, "Raynet",
"RayVentoryPortal", "Config", "Config.xml");
    if (!(Test-Path($configFilePath))) {
        Write-Warning -Message "Configuration file not found. No migration will be
done."
        [System.Environment]::Exit(1)
    }
    else {
        # Updating hardcoded paths
```

```
        Write-Host "Updating hardcoded paths"

        [xml]$configContent = Get-Content -Path $configFilePath -Encoding UTF8
        $oratrackPath = $configContent.Configuration.OracleTrackerFolderPath;
        $ndtrackPath = $configContent.Configuration.NdtrackExecutablePath;

        $isRiwClassesEmpty = $false;
        $riwClassesPath = $configContent.Configuration.RIWClassesFile;
        if ([string]::IsNullOrEmpty($riwClassesPath)) {
            $isRiwClassesEmpty = $true;
        }

        $isContentChanged = $false

        if (!(Test-Path $oratrackPath) -and !($oratrackPath -eq ".\Contrib\Oratrack"))
{
            Write-Warning "OraTrack configuration is invalid : $oratrackPath. Will be
reset to default: .\Contrib\Oratrack"
            $oratrackPath = ".\Contrib\Oratrack";
            $configContent.Configuration.OracleTrackerFolderPath = $oratrackPath;
            $isContentChanged = $true;
        }

        if (!(Test-Path $ndtrackPath) -and !($ndtrackPath -eq ".\Contrib\ndtrack
\ndtrack.exe")) {
            Write-Warning "NdTrack configuration is invalid : $ndtrackPath. Will be
reset to default: .\Contrib\ndtrack\ndtrack.exe"
            $ndtrackPath = ".\Contrib\ndtrack\ndtrack.exe";
            $configContent.Configuration.NdtrackExecutablePath = $ndtrackPath;
            $isContentChanged = $true;
        }

        if (!$isRiwClassesEmpty -and !(Test-Path $riwClassesPath) -and !
($riwClassesPath -eq ".\example.xml")) {
            $riwFileName = [System.IO.Path]::GetFileName($riwClassesPath);
            if ([string]::Equals($riwFileName, "example.xml")) {
                Write-Warning "Zero-Touch cusom inventory configuration file path is
invalid: $riwClassesPath. It will be reset to default: .\example.xml"
                $riwClassesPath = ".\example.xml";
                $configContent.Configuration.RIWClassesFile = $riwClassesPath;
                $isContentChanged = $true;
            }
            else {
                Write-Warning "Zero-Touch cusom inventory configuration file path is
invalid. Please manually adjust the configuration."
            }
        }

        if ($isContentChanged) {
            # Making a backup of configuration file
            $configBackupPath = $configFilePath + ".old";
            $nameNum = 1;
            $fullConfigBackupPath = $configBackupPath
            while (Test-Path $fullConfigBackupPath) {
                $fullConfigBackupPath = $configBackupPath + $nameNum;
                $nameNum += 1;
            }

            Write-Host "Making a backup of Config.xml: $fullConfigBackupPath"
            Copy-Item -Path $configFilePath -Destination $fullConfigBackupPath

            Write-Host "Writing changes back to Config.xml: $configFilePath";
```

```
            Remove-Item -Path $configFilePath -Force
            $configContent.Save($configFilePath)
            Write-Host "Migration process was performed successfully"
        }
        else {
            Write-Host "No changes made to a configuration. Nothing will be written."
        }
    }
}
catch {
    Write-Warning "Migration failed. Check the log file."
    Write-Warning $_
}
finally {
    Stop-Transcript
}
```

Known Issues

These are the breaking changes in this release. A change is considered "breaking" if it significantly changes or removed a behavior, present in one of the previous releases.

For a list known issues in RayVentory refer to the Raynet Knowledge Base. If there are any known issues, the respective information can be found here and will be kept up-to-date.

- RVP-512 This version adds an extra check during launching of RayVentory, which prevents from starting more than one instance on the same machine. Due to possible interference of dependent services (for example HTTP Upload Service and Task Scheduler Service) we decided to change RayVentory to a singleton instance. In order to start a new instance, the previous one must be closed first. There is no workaround for this breaking change.

- RVP-517 We deprecated the functionality of log encryption that was previously available for UNIX Zero Touch Inventory. There is no workaround for this breaking change.

- RVP-586 In order to improve the performance of file scan on Windows, Zero-Touch file scanner on Windows by default ignores several folders that were otherwise scanned by previous versions of 12.0. Excluded from scans are side-by-side assemblies, Global Assembly Cache, Recycle Bin and RayManageSoft Package Cache. Typically, this change should result in much faster execution of scans that recursively search the whole partition. The excluded locations are usually not relevant for inventory summary. However, should any of these directories be still part of the inventory scan, the scan must be performed with RayVentory Portal version 11.4 SP2 or older (before the change was introduced), as there is currently no way to revert to the old behavior.

- RVP-540 Caption and OS name were used interchangeably in the Inventory Viewer panel. In this version, the caption is generally used in places were a display value is meant. This change affects non-Windows systems and for affected systems may mean, that some of devices will display a different caption, even when loaded from the same data set. Note: This change affects UI only, and does not change the data and format of NDI files.

RayVentory Data Hub

RayVentory Data Hub 12.0 features at glance:

- Data preparation, data capture and visualization solution

- Reporting engine

- BI engine

- User friendly, 100% web-based report and dashboards designer

- A set of DataCollectors for additional data gathering, including SQL databases, ODBC sources, Active Directory, Saas apps etc.

- Scheduled data collection

RayVentory Server

RayVentory Server 12.0 features at glance:

- A lite version of a server, capable of receiving and sending the inventory files, designed with performance and distributed environments in mind

RayVentory Catalog

RayVentory Catalog 12.0 features at glance:

- Cloud-based catalog for software recognition, normalization and license optimization

- Daily updated database of software vulnerabilities

- Detailed information about the publisher, product category, license type, vulnerabilities and main function etc.

RayVentory 12.0 System Requirements

Hardware Requirements

Up to 5000 devices

Recommended scenario:

- RayVentory Server (RVS) + RayVentory Data Hub (RVDH) + RayVentory Scan Engine (RVSE) installed on the same server

- SQL Server on box

Hardware requirements:

- 4 cores

- 8 GB RAM

- At least one additional drive 50GB (RVS warehouse + RVSE results + database files)

5000 to 25000 devices

Recommended scenario:

- RayVentory Server (RVS) + RayVentory Data Hub (RVDH) + RayVentory Scan Engine (RVSE) installed on the same server

- SQL Server on box

Hardware requirements:

- 8 cores

- 16 GB RAM

- At least one additional drive 100GB (RVS warehouse + RVSE results + database files)

- Recommended would be two additional drives (one for RVSE results and the other for database files)

> **Note:**
> In case multi-tenancy is utilized within RayVentory Data Hub, then the database file drives may need to be increased accordingly.

Above 25000 devices

Recommended scenario:

- RayVentory Server (RVS) + RayVentory Data Hub (RVDH) + RayVentory Scan Engine (RVSE) installed on the same server

- SQL Server Standard off-box

Hardware requirements:

- 8 cores

- 16 GB RAM

- At least one additional drive 100GB (RVS warehouse + RVSE results)

Software Requirements

The following are the minimum software requirements for the installation and running of RayVentory:
- Microsoft Windows Server 2012 R2 or higher
- .NET Framework 4.6.2
- Microsoft .NET Core 3.1.2 – Windows Server Hosting Bundle (https://dotnet.microsoft.com/download/dotnet-core/current/runtime)
- IIS 7.5 or higher
- SQL Server:
  - For up to 5000 devices: SQL Server 2016 Express or higher.
  - For above 5000 devices: SQL Server 2016 Standard or higher.

> **Note:**
> In order to run hosting bundles, it requires the "Universal C Runtime", which is not shipped with older Windows Server systems. The oldest supported OS is Windows Server 2012 R2. Please check this link for more information: https://support.microsoft.com/en-us/help/2999226/update-for-universal-cruntime-in-windows

Supported web browsers

- Microsoft Internet Explorer version 9.0 and newer

- 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, 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 experience. Please contact your Raynet service partner or use our Support Panel to add your ideas or requirements to the RayVentory development roadmap!

RayVentory
is part of the
RaySuite

More information online
www.raynet.de

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