

# Technology Asset Inventory

Installation Guide RayVentory Data Hub 12.4





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Installation Guide RayVentory Data Hub RayVentory Data Hub 12.4

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# RAYVENTORY®

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# Data Hub

### Windows

The following chapter describes how to install and set-up RayVentory Data Hub on Windows.

### **Prerequisites**

# Hardware requirements

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

# Software requirements

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

- Microsoft Windows Server 2012 R2 or higher
- IIS 8 or higher
- Microsoft .NET 6.0 Windows Server Hosting Bundle (<u>https://dotnet.microsoft.com/en-us/download/dotnet/6.0</u>)
- Microsoft SQL Server 2016 or SQL Server Express 2016
- If RayVentory Data Hub Agent is installed on the same machine as the server, then all requirements of Data Hub Agent also apply

#### 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: <u>https://support.microsoft.com/en-us/help/2999226/update-for-</u>universal-cruntime-in-windows,

#### Supported web browsers

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

#### **MS SQL Server permissions**

An instance of MS SQL Server (or SQL Server Express) must be available. If installing on the same machine, permission for AppPool user should be granted.

Start Page WIN-7AJ583GB1LN (WIN-7AJ Application Pools	This page lets you vie with worker processe	w and mana s, contain or	ige the list of ap ne or more appl	plication pools on ications, and provid	the server. Application le isolation among diff	pools are associated erent applications.
	Filter:	- 3	Go 👒 🕁 Sho	w All   Group by:	No Grouping	•
	Name 📩	Status	.NET CLR V	Managed Pipel	Identity	Applications
	DefaultAppPool	Started	v4.0	Integrated	ApplicationPoolld	1
	RayPool	Started	v4.0	Integrated	LocalSystem	1

#### For example

	WIN-7AJ583GB1LN (SQL Server 14.0.1000 - WIN-7AJ	583GB1LN\/
-	📕 Databases	Login Droportion NT ALITHORITY SYSTEM
	🗉 🛑 System Databases	
	Database Snapshots     Select a pag     Select     Select a pag     Select a pag	e 🔽 Script 👻 🖸 Help
	🖃 🗑 RayDataHub 🖉 🤌 General	
	🗉 🛑 Database Diagrams 🖉 🖉 Server Ro	les Server rele is used to grant server wide serverty pixileges to a user
		ping Server role is used to grant server while security privileges to a user.
	E Views     Securable     Securable     Securable	15
		Server roles:
	🗉 📕 Synonyms	bulkadmin
	🗉 📕 Programmability	dbcreator
	🗉 📕 Service Broker	diskadmin
	🗉 📁 Storage	processadmin
	🗉 📕 Security	
	🗉 🗑 RayResult	serveradmin
=	j 📁 Security	setupadmin
	🖃 📁 Logins	✓ sysadmin
	##MS_PolicyEventProcess	
	##MS_PolicyTsqlExecution	
	BUILTIN\Users	
	NT AUTHORITY\SYSTEM Connection	
	NT Service\MSSQLSERVER Server:	
	NT SERVICE\SQLTELEMET WIN-/AJ583	JGB1LN
	NT SERVICE\SQLWriter Connection:	
	NT SERVICE\Winmgmt WIN-/AJ583	AB1LN\stillpov
	sa vi <u>View co</u>	nnection properties
	WIN-7AJ583GB1LN\s.filip	
	Server Roles	
	Credentials	
	Audits  Progress	
	E Server Audit Specifications	dy
+	Server Objects	
+	E Replication	
+	Polybase	
+	I Ivianagement	OK Cancel
+	KEVent Profiler	

#### **Minimum Permissions**

The special service account that is used must have local administrator right. In order to install the server or to create a new tenant, db\_create permissions are required. Furthermore, to be able to use RayVentory Data Hub the db\_owner role for the Result and System Data Hub database is needed.



### Installing IIS on a Windows Server

Either use the Server Manager and click on **Manage** -> **Add Roles and Features**.

🚵 Server Manager				-		×
Gerver Server	Manager • Dashboard • 🐵   🏲	Manag	c Tools	View	Help	
Dashboard	WELCOME TO SERVER MANAGER		Add Roles ar Remove Role	d Featur s and Fe	es atures	
Local Server			Add Servers Create Serve	r Group		
<ul> <li>All Servers</li> <li>File and Storage Services</li> </ul>	Configure this local server		Server Mana	ger Prop	erties	

Or search for "Turn Windows Features on or off".



A new window opens as shown below.



WIN2K16TEST

 $\times$ 

DESTINATION SERVER Select installation type Select the installation type. You can install roles and features on a running physical computer or virtual Before You Begin machine, or on an offline virtual hard disk (VHD). Installation Type Role-based or feature-based installation Server Selection Configure a single server by adding roles, role services, and features. O Remote Desktop Services installation Install required role services for Virtual Desktop Infrastructure (VDI) to create a virtual machine-based or session-based desktop deployment.

📩 Add Roles and Features Wizard

	< Previous	Next >	Install	Cancel
_				

Select **Role-based or feature-based installation** and click **Next >**.



Add Roles and Features Wiz	ard			-		×
Select destination	on server			DESTIN	ATION SER WIN2K16T	IVER TEST
Before You Begin Installation Type	Select a server or a v Select a server fr	virtual hard disk on which t	to install roles and features.			
Server Selection	<ul> <li>Select a virtual h</li> </ul>	ard disk				
Server Roles	Server Pool					
Features Confirmation	Filter:					
Results	Name	IP Address	Operating System			
	WIN2K16TEST	192.168.112.135	Microsoft Windows Server	2016 Standard		
	1 Computer(s) found	d				
	This page shows ser and that have been newly-added server	vers that are running Wind added by using the Add So s from which data collectio	lows Server 2012 or a newer r ervers command in Server Ma n is still incomplete are not sh	elease of Wind nager. Offline : hown.	lows Serv servers ar	ver, nd
		< Prev	vious Next >	Install	Cance	el

Select the Server you want the features to be installed on and click **Next >**.



Select server rol	es	WIN2K167
Before You Begin Installation Type	Select one or more roles to install on the selected server. Roles	Description
Server Selection Server Roles Features Confirmation Results	Active Directory Federation Services Active Directory Lightweight Directory Services Active Directory Rights Management Services Device Health Attestation DHCP Server DNS Server Fax Server File and Storage Services (1 of 12 installed) Host Guardian Service Hyper-V MultiPoint Services Network Policy and Access Services Print and Document Services Remote Access Remote Desktop Services Volume Activation Services Windows Deployment Services Windows Server Update Services Windows Server Update Services	Web Server (IIS) provides a reliab manageable, and scalable Web application infrastructure.

#### Select **Web Server (IIS)**. A new window is shown.

e following tools a we to be installed o	re required to manage this feature, but do not in the same server.
# Web Server (IIS) # Management [Tools] IIS	Tools Management Console
2 last de marros	ment tools (if annihable)

Click Add Features without changing anything and click Next >.





Feature configuration can be skipped, click **Next >** twice to get to the **Role Services**.



Make sure to check the services Windows Authentication and WebSocket Protocol. Leave all



other options untouched. Click **Next >** and **Install**.



#### System.Webserver/modules configuration

Open the IIS Manager and select your IIS Server. From there click on Configuration Editor (below Management)

System.Webserver/modules configuration section must be unlocked for IIS server. This is required in order to remove the WebDav-module as it is blocking access to RayVentory Data Hub.

Internet Information Services (IIS) I	Manager		– o ×
← → ¶ → WN2K16TEST	•		🖬 🖂 🔂 😡
File View Help			
Connections	Configuration Editor		Actions
a,• 🗟 🖄 🕼	Conliguration Editor		By Apply
Start Page	Section: bystem webServer/modules	•	B <sub>K</sub> Cancel
WIN2K16TEST (WIN2K16TEST	Deepest Path: MACHINE/WEBROOT/APPHOST		denerate Script
v 🗟 Sites	(Collection)	(Count=12)	Configuration
5 🔮 Default Web Site	runAllManagedModulesForAllRequests	False	Search Configuration
	runManagedModulesForWebDavRequests	False	Section .
			Unlock Section
			"(Collection)" Element
			Edit Items
			😝 Help
	(Collection)		

### Installing Web Hosting Bundle

Visit the site <u>https://dotnet.microsoft.com/en-us/download/dotnet/6.0</u> and click on the **Hosting Bundle** download link.

Execute the downloaded file to install the Web Hosting Bundle. Follow the steps as instructed by the install wizard.

Run apps - Runtime 🛈

### ASP.NET Core Runtime 6.0.3

The ASP.NET Core Runtime enables you to run existing web/server applications. **On Windows**, we recommend installing the Hosting Bundle, which includes the .NET Runtime and IIS support.

#### IIS runtime support (ASP.NET Core Module v2)

16.0.22055.3

OS	Installers	Binaries
Linux	Package manager instructions	Arm32   Arm32 Alpine   Arm64   Arm64 Alpine   x64   x64 Alpine
macOS		<u>Arm64   x64</u>
Windows	Hosting Bundle x64   x86	<u>Arm64   x64   x86</u>

### Installation

This chapter shows how to install the Data Hub on Windows.

### SQL Configuration

SQL Configuration allows to choose database default state after installation.

🕞 RayVentory Data Hub - Install	$\times$
<b>SQL Server configuration</b> Please select the configuration type to be performed by the installer.	
Install or upgrade The database and tables required by RayVentory Data Hub will be created and populated with initial data. If the database already exists, the data will be migrate the newest version (12.2.2675.1035). This is a recommended choice for most user	d to rs.
Configure later (advanced) The installer will not install or migrate your database. Only files and IIS settings will applied. If the database pointed by configured connection string already exists it to reused. Otherwise you will have to manually install or migrate it before RayVentor Hub is started for the first time.	ll be will be y Data
RayVentory Data Hub ®	ancel

#### • Install or upgrade (Recommended)

At first installation a new database is created with the necessary tables. If the product is upgraded to a newer version, the existing database is automatically migrated to the version required by the installation.

0	

#### Note:

When upgrading from previous version 12.2: The installer will adapt your schema and data if necessary. There may be some manual adjustments required in case of reports / dashboard referencing complex tables / data sets.

#### • Configure later

This option allows the user to perform the creation or migration of the database manually. See chapter Manual database update for more information.



### Database Server

Database server wizard page is shown only if **Install or Upgrade** SQL Configuration was selected on the previous page.

🛃 RayVentory Data	😸 RayVentory DataHub - Install			×
SQL Server Database Configuration Select database server and authentication method				
SQL Server / inst	ance			
Connect using: Windows auth SQL Server au SQL User	ientication credentials uthentication	of current user		
Password: Database name	••••			
RayVentoryData	аНиb ® ————	< <u>B</u> ack	<u>N</u> ext >	<u>C</u> ancel

Specify the address of the server to connect to, an authentication type, and the name of the internal database for RayVentory Data Hub. When choosing Windows authentication as the authentication method, ensure that the pool user has read and write access to the configured database.

### **IIS Web Application Configuration**

🛃 RayVentory	RayVentory DataHub - Install			×
IIS Web App Select the IIS	IIS Web Application configuration         Select the IIS configuration tasks that setup will perform.			
RayVentory DataHub requires configuration of Internet Information Services (IIS). The wizard does this for you automatically. Uncheck any or all of the following options if you wish to perform these configuration tasks later.				
App Pool:	RayVentoryDataHubPool			
Website:	RayVentoryDataHubWeb			
TCP port:	88			
Web app:	RayVentoryDataHub			
Configure IIS for RayVentory DataHub HTTP service				
RayVentory DataHub ®				
		< <u>B</u> ack	<u>N</u> ext >	<u>C</u> ancel

Configure the basic details for the IIS settings that will be used during the installation of RayVentory Data Hub.



#### Be aware:

The TCP port option is for the HTTP protocol only. The HTTPS bindings need to created after the installation using the IIS Manager.

### IIS AppPool Identity

🕞 RayVentory DataHub - Install 🛛 🛛 🕹			
IIS Application Pool Identity         Select the Application Pool Identity tasks that setup will perform.			
RayVentory DataHub requires configuration of Application Pool Identity.			
Built-in account	nt (LocalSystem)		
◯ Custom account			
User name:	Administrator		
Password:	12345		
RayVentory DataHub	8	_	
	< <u>B</u> ack <u>Next</u> <u>C</u> ancel		

Define the user on behalf of whom the server component of the RayVentory Data Hub application will run. Make sure this user has required permissions to access the database if **Windows authentication** was selected as the authentication method for the database access.

### **Migration**

This list shows migration paths and additional considerations:

#### Data Hub Backend

- Version 12.0 -> 12.4
   NOT SUPPORTED.
   Please contact Raynet for assistance.
- Version 12.1 -> 12.4
   SUPPORTED
- Version 12.2 -> 12.4
   SUPPORTED
- Version 12.3 -> 12.4
   SUPPORTED

The migration of database is supported out-of-the-box. It is recommended to uninstall the



previous version of the product (the database will stay intact) and install it again with the new installer. The database will be migrated automatically during the installation, or it can be also upgraded manually (see Manual database update for more information).

After the migration, the database will be not backward-compatible, which means that any previous instance of RayVentory Data Hub will be unable to use the same database.



Note:

During the upgrade, IIS settings will be reset to default ones. Make sure to provide the same parameters during the upgrade.

### Data Migration

Reports and dashboard are not migrated automatically, and you can continue to use them. However, new version of Data Hub often come with new features and improvements, which are only available in the newer version of their respective templates. We recommend to create a copy of existing reports (using the backup functionality, available in RayVentory Data Hub 12.3), and then to import new reports and dashboards from the library.

Data Hub Agent (formerly Data Collector up to 12.1)

It is recommended to use the same product version of Data Hub and Data Hub Agent. Failing to use matching version can lead to difficulties configuring and running your tasks. The agent must be updated on every machine that connects to the RayVentory Data Hub. You can check the version of the agent on the **Agents** page.

For more information about updating the Data Hub Agent, refer to the **Data Hub Agent / Migration** chapter.

### Manual Database Update

RayVentory Data Hub provides a database CLI tool that can be used to create a database or migrate the database to a desired version. The CLI tool can be started from [INSTALLDIR] \Raynet.Utilities.DbTool.exe.

Image: Image	yDataHub View					- 0	× ~ ?
$\leftarrow$ $\rightarrow$ $\checkmark$ $\uparrow$ 📜 $\Rightarrow$ Thi	is PC > Local Disk (C:) > Program Files (x86) > RayVe	entoryDataHub >			~ Ū	Search RayVentoryDataHub	,c
	Name	Date modified	Туре	Size			^
📌 Quick access	Ravnet.RavVentorv.DataHub.Scheduler.dll	11.03.2022 12:28	Application extension	95 KB			
📃 Desktop 🛛 🖈	Ravnet.RavVentorv.DataHub.Server.Shared.dll	11.03.2022 12:28	Application extension	211 KB			
🖊 Downloads 🛛 🖈	Ravnet.RavVentorv.DataHub.Shared.dll	11.03.2022 12:28	Application extension	163 KB			
📓 Documents 🛛 🖈	Raynet.RayVentory.DataHub	11.03.2022 12:28	XML Document	66 KB			
📰 Pictures 🛛 🖈	Raynet.RayWeb.PracticesCore.dll	11.03.2022 12:28	Application extension	199 KB			
	Raynet.Utilities.DbTool.deps.json	11.03.2022 12:28	JSON File	16 KB			
S This PC	Raynet.Utilities.DbTool.dll	11.03.2022 12:28	Application extension	309 KB			
🖆 DVD Drive (D:) SSS_X	Raynet.Utilities.DbTool	11.03.2022 12:28	Application	445 KB			
A. N. J.	Raynet.Utilities.DbTool.Lib.dll	11.03.2022 12:28	Application extension	105 KB			
Vinetwork	Raynet.Utilities.DbTool.runtimeconfig.json	11.03.2022 12:28	JSON File	1 KB			
	Raynet.Utilities.DbTool.UpgradeScripts.dll	11.03.2022 12:28	Application extension	66 KB			
	Raynet.Web.License.dll	11.03.2022 12:28	Application extension	128 KB			
	RestSharp.dll	11.03.2022 12:28	Application extension	182 KB			
	SQLitePCLRaw.batteries_v2.dll	11.03.2022 12:28	Application extension	6 KB			
	SQLitePCLRaw.core.dll	11.03.2022 12:28	Application extension	46 KB			- 6
	SQLitePCLRaw.nativelibrary.dll	11.03.2022 12:28	Application extension	6 KB			
	SQLitePCLRaw.provider.dynamic_cdecl.dll	11.03.2022 12:28	Application extension	56 KB			
	Swashbuckle.AspNetCore.Swagger.dll	11.03.2022 12:28	Application extension	12 KB			
	Swashbuckle.AspNetCore.SwaggerGen.dll	11.03.2022 12:28	Application extension	69 KB			
	Swashbuckle.AspNetCore.SwaggerUI.dll	11.03.2022 12:28	Application extension	1.774 KB			
	🗟 System.CodeDom.dll	11.03.2022 12:28	Application extension	178 KB			~
218 items							

In most cases, the tool should be started with the following command line:

Raynet.Utilities.DbTool.exe update -t 12.4.#.#

where **12.4.#.#** is the current full version of the product to be installed. The tool detects the database configuration from the parent config file (appsettings.json in the root installation folder).

The tool has a command line interface help, shown when no matching parameter is found. Command line interface has further options, for example:

- Using custom connection strings or picking a right connection string from the configuration file
- Logging
- Checking the current version

Once started, the tool ensures that the database is set-up properly. If the database configured in the connection string does not exist, it will be created. Otherwise, the database will be migrated to the version specified via the command line argument.

The tool returns exit code 0 in case of successful operation, and non-zero if something failed.

### Supported migration paths

In this version, the following scenarios are supported:

- Set-up of a new database (new version, clean install)
- Migration from version 12.1
- Migration from version 12.2
- Migration from version 12.3

### Configuration

#### Server Backend

The settings for the backend of the server are stored in the appsettings.json located in the root directory of the RayVentory Data Hub installation (by default C:\Program Files (x86) \RayVentoryDataHub directory).

#### Available settings:

- InternalDatabase connection string to RayVentory Data Hub private database.
- Connection strings the list of "DataSources" available for creating reports and dashboards. By default only one string will be available there the connection string to "Result" database.

#### Default appsettings.json

```
"Logging": {
 "LogLevel": {
   "Default": "Trace"
  }
},
"TemporaryFilesDirectory": "",
"TasksManagement": {
  "LogsDirectory": "",
 "DeleteLogFilesAfterDays": 30
},
"CsvFileProcessing": {
 "NumThreads": 3
},
"TaskDataTransformationProcessing": {
 "NumLocalThreads": 3,
 "CleanupThresholdInMb": 500
},
"TokenManagement": {
  "secret": "RayVentoryDataHubTopSecretSecret1337",
  "issuer": "Raynet GmbH",
 "audience": "RayVentory Data Hub User",
 "accessExpiration": 30,
 "refreshExpiration": 720,
  "rememberMeRefreshExpiration": 10080
```

```
},
"connectionStrings": {
    "System": "Server=(local);Database=RayVentoryDataHub;Trusted_Connection=True",
    "ReportDatabase": "Data Source=(local);Initial Catalog=master;
    Trusted_Connection=True"
},
"LdapManagement": {
    "Protocol": "LDAP",
    "Timeout": 5,
    "CustomUserFilter": "",
    "OpenLDAP_SASL_NOCANON": true,
    "OpenLDAP_AuthType": "Digest"
},
"AllowedHosts": "*"
}
```

#### Server Frontend

There is no configuration for the settings of the frontend. All necessary settings are created automatically.

#### Logging

The logging is performed using the *log4net*library. Its configuration is in the root directory of RayVentory Data Hub installation (by default C:\Program Files (x86)\RayVentoryDataHub) in a file named log4net.config.

- Logs are written to the logs directory in the root installation folder.
- By default, only warning and errors are logged.

#### Default log4net.config

```
<log4net debug="true">
  <appender name="Console" type="log4net.Appender.ConsoleAppender">
    <layout type="log4net.Layout.PatternLayout">
      <!-- Pattern to output the caller's file name and line number -->
      <conversionPattern value="%date %5level %logger.%method [%line] - MESSAGE:</pre>
        %message%newline %exception" />
    </layout>
  </appender>
  <appender name="AdoNetAppender" type="MicroKnights.Logging.AdoNetAppender,
    MicroKnights.Log4NetAdoNetAppender">
    <bufferSize value="1" />
    <connectionType value="System.Data.SqlClient.SqlConnection,System.Data.SqlClient,</pre>
      Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" />
    <reconnectonerror value="true" />
    <commandText value="INSERT INTO SystemLog ([Date], [Thread], [Level], [Logger],</pre>
      [Message], [Exception]) VALUES (@log date, @thread, @log level, @logger,
      @message, @exception)" />
    <parameter>
      <parameterName value="@log date" />
      <dbType value="DateTime" />
      <layout type="log4net.Layout.RawUtcTimeStampLayout" />
    </parameter>
```



```
<parameter>
   <parameterName value="@thread" />
   <dbType value="String" />
   <size value="255" />
   <layout type="log4net.Layout.PatternLayout">
     <conversionPattern value="%thread" />
   </layout>
 </parameter>
 <parameter>
   <parameterName value="@log level" />
   <dbType value="String" />
   <size value="50" />
   <layout type="log4net.Layout.PatternLayout">
     <conversionPattern value="%level" />
   </layout>
 </parameter>
 <parameter>
   <parameterName value="@logger" />
   <dbType value="String" />
   <size value="255" />
   <layout type="log4net.Layout.PatternLayout">
     <conversionPattern value="%logger" />
   </layout>
 </parameter>
 <parameter>
   <parameterName value="@message" />
   <dbType value="String" />
   <size value="4000" />
   <layout type="log4net.Layout.PatternLayout">
     <conversionPattern value="%message" />
   </layout>
 </parameter>
 <parameter>
   <parameterName value="@exception" />
   <dbType value="String" />
   <size value="2000" />
   <layout type="log4net.Layout.ExceptionLayout" />
 </parameter>
</appender>
<appender name="RollingFile" type="log4net.Appender.RollingFileAppender">
 <file value="logs/RayVentoryDataHubService.log" />
 <appendToFile value="true" />
 <maximumFileSize value="1000KB" />
 <maxSizeRollBackups value="2" />
 <layout type="log4net.Layout.PatternLayout">
   ****************************/ 

" />
   **********************/ 

" />
   <conversionPattern value="%date %5level %logger.%method [%line] - MESSAGE:</pre>
     %message%newline %exception" />
 </layout>
</appender>
```



```
<root>
<level value="OFF" />
<appender-ref ref="AdoNetAppender" />
<appender-ref ref="RollingFile" />
</root>
</log4net>
```



### Docker

The following chapter describes how to install and set-up RayVentory Data Hub as a docker container.

### Prerequisites

# Hardware requirements

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

# Software requirements

In order to run this container you'll need docker installed.

- <u>Windows</u>
- OS X
- <u>Linux</u>

On Windows, make sure to use Linux Containers, WSL2 is recommended.

### Usage

The default configuration consists of three containers:

- A database powered by Microsoft SQL Server Express 2019 (image mssql/server:2019-latest)
- A container with backend and frontend for Data Hub server (image raynetgmbh/ rayventory-datahub)
- A container with Agent (image raynetgmbh/rayventory-datahubagent)

The default configuration is standalone and should work out-of-the-box.

# Manual installation

DataHub Server can be installed from the following image:

raynetgmbh/rayventory-datahub

The following variables are available when creating the container from image <code>raynetgmbh/</code> rayventory-datahub:

Environment variable	Description and sample value
DataHub_ConnectionStrings_	A connection string used to connect to the program database, containing global settings and metadata.
	Example value: mydatabaseserver.local,1433;Database=datahub;Use r ID=sa;Password=Start123
DataHub_ConnectionStrings_	A base connection string to the server, where tenant databases will be stored. Bear in mind, that Data Hub takes over the creation of the database when launched for the first time.
	<b>Example value:</b> Server=mydatabaseserver.local,1433;Initial Catalog=master;User ID=sa;Password=Start123
DataHub_InitialTenantId	A GUID value, representing the default tenant ID. When started for the first time, a tenant ID with the given ID will be created. If the value is not provided, a new random GUID will be selected.
	Example value: {72ba6fc2-d5fa-49ee-8281-841e762aea05}
BASEURL	The base URL, under which the browser will access the front- end. This URL must not reference internal Docker services. You should also include a port, which is exposed by the Docker engine. The DataHub runs inside the Docker on port 80 - this port should be exposed externally, either as-is or using a different port number.
	Example value:
	nucp.//iayvencory-uacanup.rocar.ov

The following variables are available when creating the container from image <code>raynetgmbh/</code> rayventory-datahubagent:



Environment variable	Description and sample value
DataHubAgent_DataHubUrl	The URL of the Data Hub server. This may be an URL referring the internal service name, when the image is started from a docker compose file. Example value:
	http://web:80
DataHubAgent_TenantId	A GUID value, representing the tenant ID. You can get your tenant ID by opening the <b>Administration &gt; Agents</b> page, and pressing a button to install a new agent.
	Example value:
	{72ba6fc2-d5fa-49ee-8281-841e762aea05}

# Installation with docker-compose

The easiest way to run the image with reasonable default is to use docker-compose command.

- 1. Get the docker-compose.yml file from Git Hub repository <u>https://github.com/RaynetEALM/</u> <u>RayVentoryDataHub/blob/main/docker-compose.yml</u>.
  - Default compose file starts three containers: database, server and agent. It exposes internal port 80 and makes it available as port 81 to the host. Additionally, it defines a connection string using SQL authentication, with default user sa and password Start123!@#.
- 2. Adjust the content of the compose file, for example by setting custom user and password to the database. See section **Manual installation** for more information.
  - To use another SQL Server (outside of the Docker container), adjust the connection string in the web service, and drop the database service and sql\_data volume from the definition.
  - To prevent starting a Docker-based agent, drop the **agent** service from the definition.
- 3. In the folder containing the downloaded definition, run the following command: docker compose up -d.
- 4. The server will be started. This may take a while.
- 5. Login to http://localhost:81 and use the following credentials:

Login: root Password: raynet

- 6. Provide the valid license for the product.
- 7. After log-in, change your root password and create application users.

RayVentory Data Hub is available on docker hub: <u>https://hub.docker.com/r/raynetgmbh/</u> rayventory-datahub.

You can use tags 12.3 (recommended) or stable to get the last 12.3 or the last stable version respectively.

### Migration

This list shows migration paths and additional considerations:

### Data Hub Backend

- Version 12.0 -> 12.4
   NOT SUPPORTED.
   Please contact Raynet for assistance.
- Version 12.1 -> 12.4 SUPPORTED
- Version 12.2 -> 12.4
   SUPPORTED
- Version 12.3 -> 12.4
   SUPPORTED

The migration of database is supported out-of-the-box. A check and required actions are performed once the server container starts.

After the migration, the database will be not backward-compatible, which means that any previous instance of RayVentory Data Hub will be unable to use the same database.

### **Data Migration**

Reports and dashboard are not migrated automatically, and you can continue to use them. However, new version of Data Hub often come with new features and improvements, which are only available in the newer version of their respective templates. We recommend to create a copy of existing reports (using the backup functionality, available in RayVentory Data Hub 12.3), and then to import new reports and dashboards from the library.

### Data Hub Agent

It is recommended to use the same product version of Data Hub and Data Hub Agent. Failing to use matching version can lead to difficulties configuring and running your tasks. The agent must be updated on every machine that connects to the RayVentory Data Hub. You can check the version of the agent on the **Agents** page.

For more information about updating the Data Hub Agent, refer to the **Data Hub Agent /** <u>Migration</u> chapter.



### Limitations

Data Hub Agent in Docker has several limitations in comparison to its Windows counterpart:

- It is not possible to run Active Directory data collection. The collector **Active Directory** will fail with the message, saying that the platform is not supported.
- It is not possible to run PowerShell data collection. The collector **PowerShell** will fail with the message, saying that the platform is not supported.
- It is not possible to run SCCM data collection via WMI. The collector **SCCM (WMI)** will fail with the message, saying that the platform is not supported.

Docker assigns a random host name to each started container. When the agent connects to the server, it will contain this cryptic name instead of the host name.



# Data Hub Agent

The Data Hub Agent is a Windows Service which operates in the background under the name "RayVentory Data Hub Agent". This service is starting itself after installation and is automatically started after each reboot.



#### Note:

The Data Hub Agent is required in order to work with RayVentory Data Hub.

The process of setting up a data collector has the following steps:

- 1. Identify the machine, from which scanned services are available and where there are enough permissions
- 2. Check the prerequisites before installing the collector
- 3. Install the collector
- 4. Start the collector
- 5. Authorize the collector

### Windows

### Prerequisites

# Support Operating Systems

The following represents the list of supported operating systems at the time of release:

- Windows Vista SP2
- Windows 7 SP1
- Windows 8
- Windows 8.1
- Windows 10
- Windows 11
- Windows Server 2008 R2
- Windows Server 2008 SP1
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022



# Hardware requirements

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

# Software requirements

- Microsoft .NET Core 6.0.3 Windows Server Hosting Bundle (<u>https://dotnet.microsoft.com/en-us/download/dotnet/6.0</u>)
- Java / OpenJDK version 11 or newer is required to execute data collection from SaaS platforms

### Installation and Configuration

This chapter shows how to install the Data Hub Agent on Windows.

### Download

Navigate to the **Agents** page under **Administration** using the navigation menu on the left panel. The list shows all agents which have been installed so far.



To install a new agent, press the **Install...** button. A pop-up with link and quick instructions will be shown:



### Installation

Run the "RayVentory\_Data\_Hub\_Agent.msi" and follow the steps shown within the setup wizard. You will be asked for two important properties:

- The URL of RayVentory Data Hub the full URL, together with the protocol and port number, for example https://rayventorydatahub.local:8090.When in doubt what the correct URL is, check out the address bar in your browser or ask your administrator
- The tenant ID. This information is visible in the tenant selector, which is available from the login screen, settings or from tenant switcher. You can also copy the tenant ID directly from the Download pop-up

### Registration

After installing the Data Hub the agent automatically connects to the provided RayVentory Data Hub server URL.

Visit the **Agents** page and search for an agent named after the machine the Agent has been installed on.



#### Note:

If the Data Hub Agent of the machine cannot be found, make sure that the 'RayVentory Data Hub Data Hub Agent service is actively running on your machine. If it is not actively running, start it manually and visit the collector page again.

#### Authorization

Visit the agent detail page by clicking on its name in the table. Edit its settings by clicking on **Edit** in the top action bar. A side panel appears to the right. Enable the "AUTHORIZE" check box in order to authorize the agent and save your changes. This agent is now authorized to request scheduled Jobs that are assigned to it.



The agent is now ready to accept the tasks

### Configuration

### **Proxy Configuration**

You can use the installer to configure basic proxy properties (host, port and credentials). To configure proxy, make sure to use **Custom installation** type.



🖟 RayVentory Data Hub Agent - Install V	Vizard		×
Proxy settings			
Specify how the agent connects via proxy			
Use proxy			
Host		Port	
		:	
Use anonymous proxy User			_
I Password			
I			
RayPack ®			
	< Back	Next >	Cancel

If you install the agent on your own or a custom configuration is required, the changes can be done post-mortem via the configuration file.

The configuration is stored in file Raynet.RayVentory.DataHub.Agent.dll.config located in the installation folder.



The following XML Attributes can be set in the <appSettings> XML node:

Parameter	Required	Description
ProxyHost	Yes	The host of the proxy
ProxyPort	No	The port of the proxy
ProxyUsername	No	The user to be used to authenticate against the proxy
ProxyPassword	No	The password to be used to authenticate against the proxy
BypassProxyOnLocal	No	A boolean value that indicates whether to bypass the proxy server for local addresses. true to bypass the proxy server for local addresses; otherwise, false. The default value is false.
BypassList	No	Set list of wildcards that describe URLs that do not use the proxy server when accessed - separated by a pipe character ' '. You can use the following special characters for matching: • * (asterisk) - matches zero or more characters • ? (question mark) - matches exactly a single character

### Migration

This list shows migration paths and additional considerations:

#### Data Hub Agent (formerly Data Collector up to 12.1)

- Version 12.0 -> 12.3 SUPPORTED
   Simply install the new MSI over the old product.
- Version 12.1 -> 12.3
   SUPPORTED
   Simply install the new MSI over the old product.
- Version 12.2 -> 12.3 SUPPORTED

Simply install the new MSI over the old product.

### // Note:

It is <u>NOT</u> recommended <u>TO UNINSTALL</u> the previous version, but rather install a new one on top of it. The old version will be migrated to the new one, and the existing settings will be taken over. If you uninstall the previous version before installing a new one, a clean installation will be started, meaning that all required details will have to be provided again.

It is recommended to perform the upgrade with UI. This way it is possible to ensure that the previous settings were correctly detected and will be properly restored. The installer will automatically switch to **Custom installation** type if previous proxy configuration has been detected.

The installer will pick-up the previous settings (installation directory, tenant ID, URL, proxy etc.) and migrate/save them in the new location

(Raynet.RayVentory.DataHub.Agent.dll.config located in the installation folder). After the migration, the previous (now obsolete) configuration files may be deleted, depending on the location in which they were originally present.



## Docker

### Prerequisites

# Hardware requirements

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

# Software requirements

In order to run this container you'll need docker installed.

- Windows
- <u>OS X</u>
- <u>Linux</u>

On Windows, make sure to use Linux Containers, WSL2 is recommended.

### Usage

# Manual installation

DataHub Agent for Docker can be installed from the following image:

raynetgmbh/rayventory-datahubagent

The following variables are available when creating the container from image raynetgmbh/ rayventory-datahubagent:



Environment variable	Description and sample value
DataHubAgent_DataHubUrl	The URL of the Data Hub server. This may be an URL referring the internal service name, when the image is started from a docker compose file. Example value:
	http://web:80
DataHubAgent_TenantId	A GUID value, representing the tenant ID. You can get your tenant ID by opening the <b>Administration &gt; Agents</b> page, and pressing a button to install a new agent.
	Example value:
	{72ba6fc2-d5fa-49ee-8281-841e762aea05}

# Installation with docker-compose

You can install an agent from the standard Docker compose file. For more information, refer to the following chapter: <u>Usage</u>



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