



RAYVENTORY®

Technology Asset Inventory

Installation Guide RayVentry
Data Hub 12.5

•**rayNET**

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Installation Guide RayVentory Data Hub RayVentory Data Hub 12.5

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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 (<https://dotnet.microsoft.com/en-us/download/dotnet/6.0>)
- 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: <https://support.microsoft.com/en-us/help/2999226/update-for-universal-cruntime-in-windows>,

Supported Database Servers and Versions for non-Microsoft SQL Server setups:

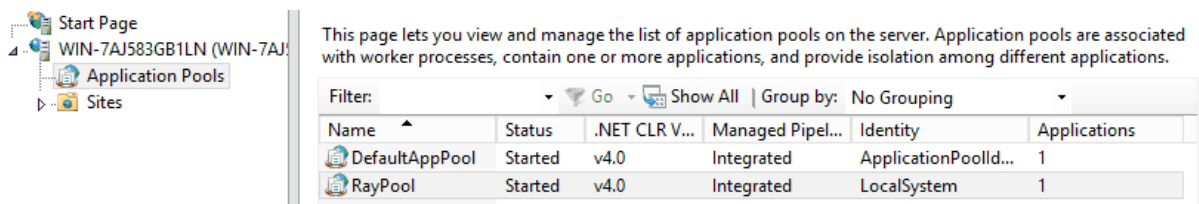
- MySQL 8.2
- MySQL 5.7
- MariaDB 10.9
- MariaDB 10.8
- MariaDB 10.7

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

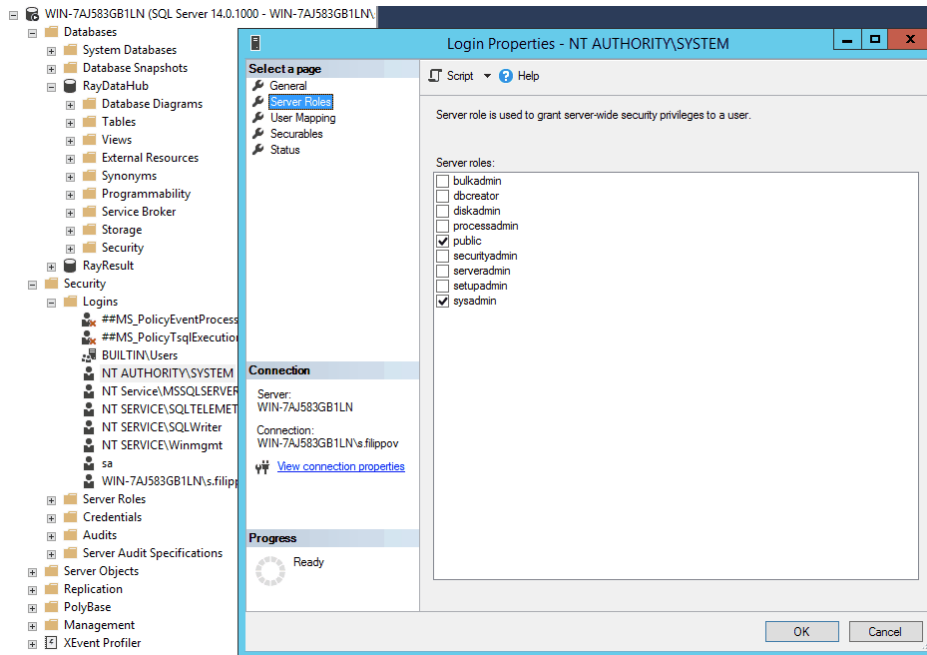
An instance of MS SQL Server (or SQL Server Express) must be available. If installing on the same machine, permission for AppPool user should be granted.



This page lets you view and manage the list of application pools on the server. Application pools are associated with worker processes, contain one or more applications, and provide isolation among different applications.

Name	Status	.NET CLR V...	Managed Pipel...	Identity	Applications
DefaultAppPool	Started	v4.0	Integrated	ApplicationPoolId...	1
RayPool	Started	v4.0	Integrated	LocalSystem	1

For example

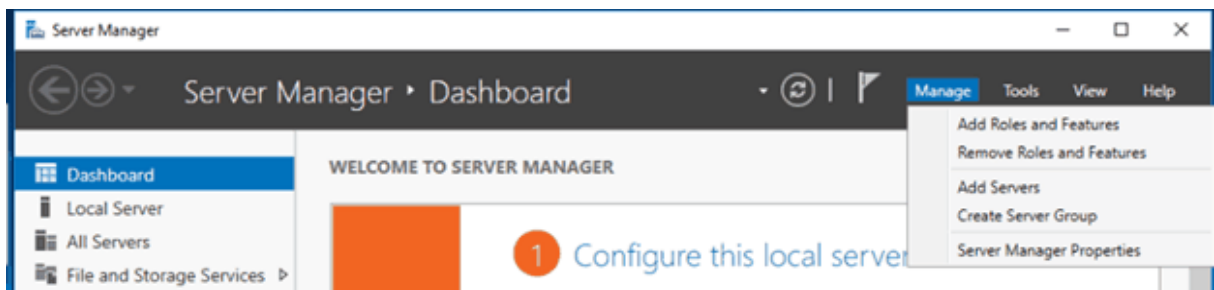


Minimum Permissions

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

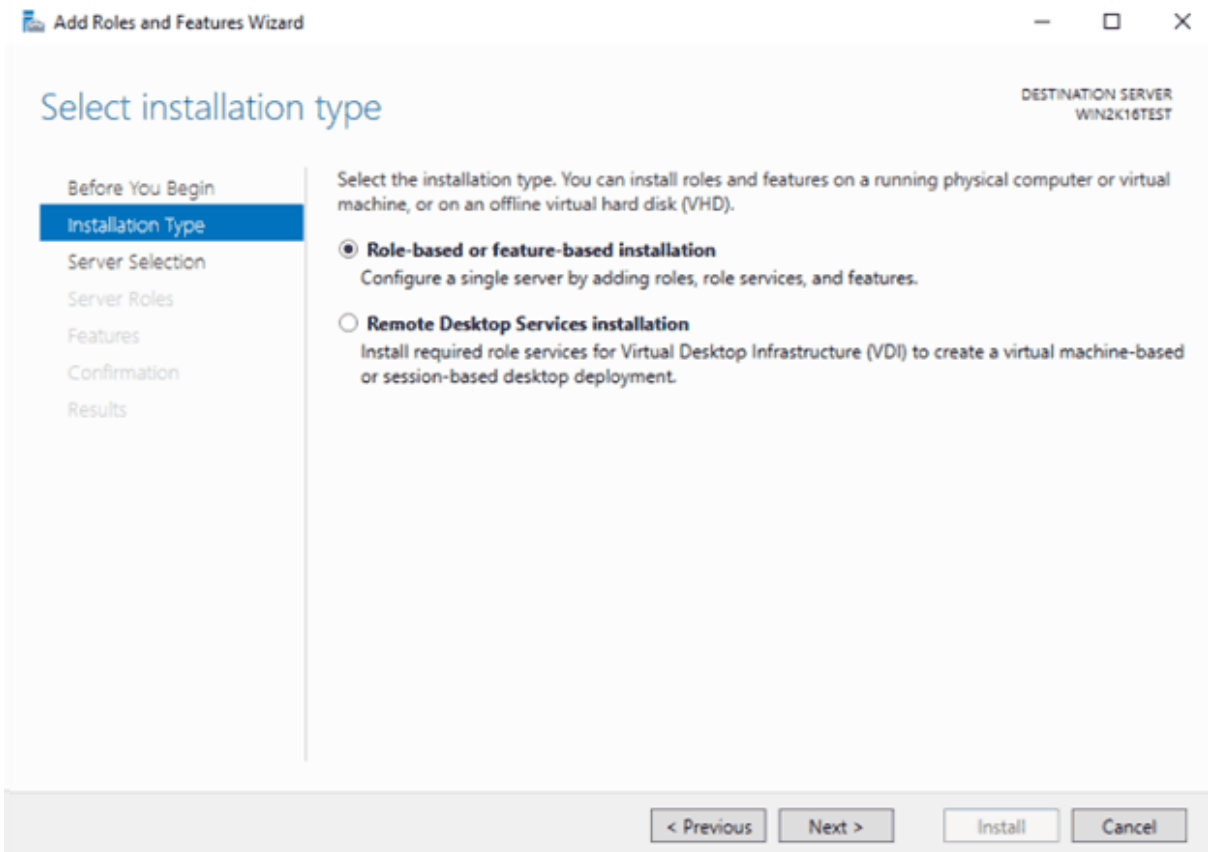
Either use the Server Manager and click on **Manage -> Add Roles and Features**.



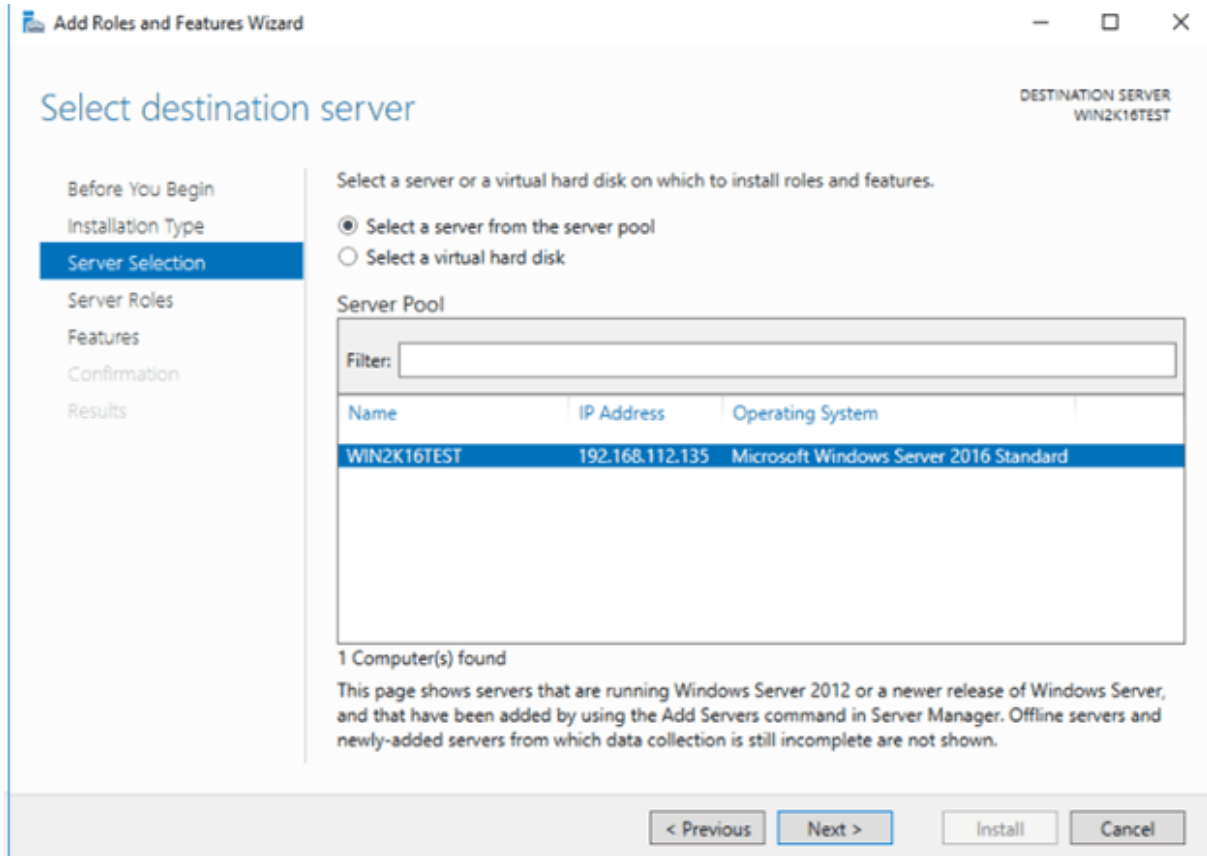
Or search for "Turn Windows Features on or off".



A new window opens as shown below.



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

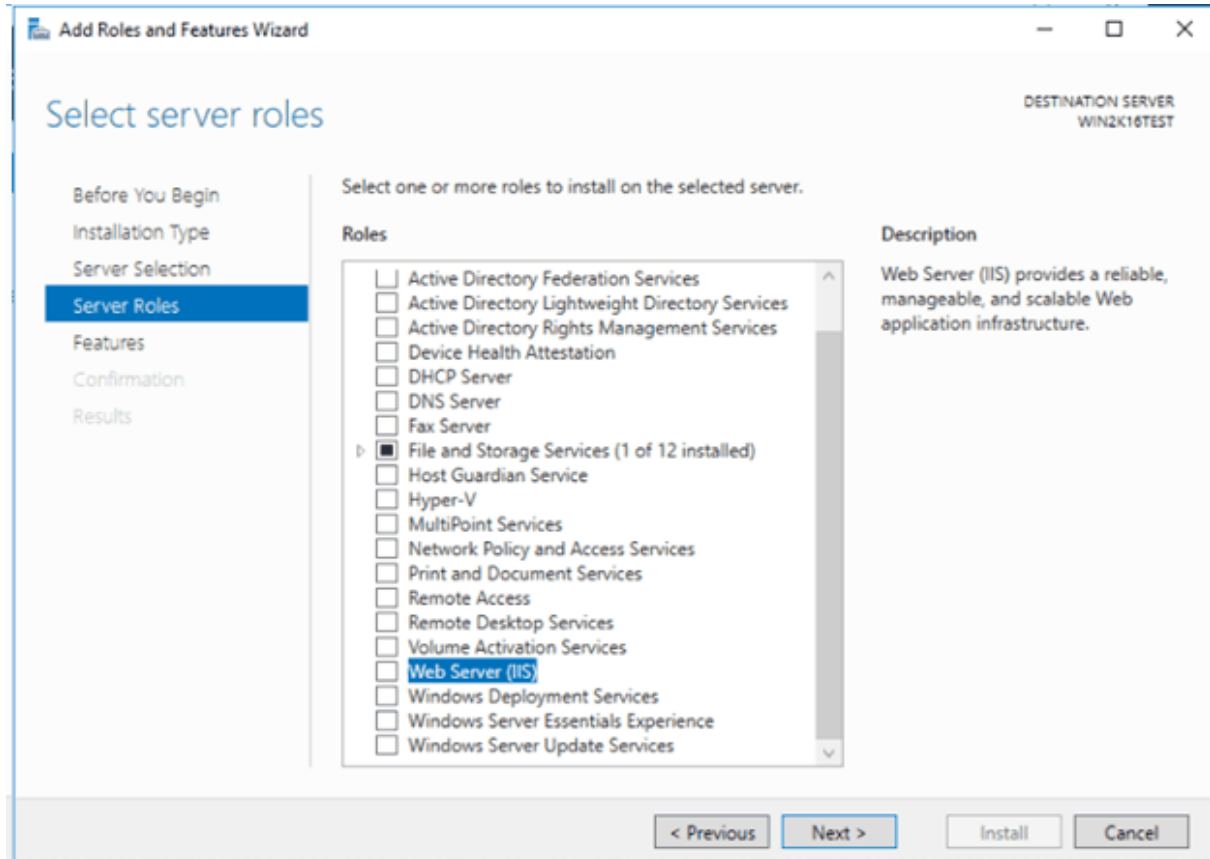


The screenshot shows the 'Add Roles and Features Wizard' window. The title bar reads 'Add Roles and Features Wizard'. The main heading is 'Select destination server'. In the top right corner, it says 'DESTINATION SERVER WIN2K16TEST'. On the left, there is a navigation pane with the following items: 'Before You Begin', 'Installation Type', 'Server Selection' (which is highlighted with a blue bar), 'Server Roles', 'Features', 'Confirmation', and 'Results'. The main content area has the instruction 'Select a server or a virtual hard disk on which to install roles and features.' Below this are two radio buttons: 'Select a server from the server pool' (which is selected) and 'Select a virtual hard disk'. Under the 'Server Pool' section, there is a 'Filter:' text box. Below the filter is a table with the following data:

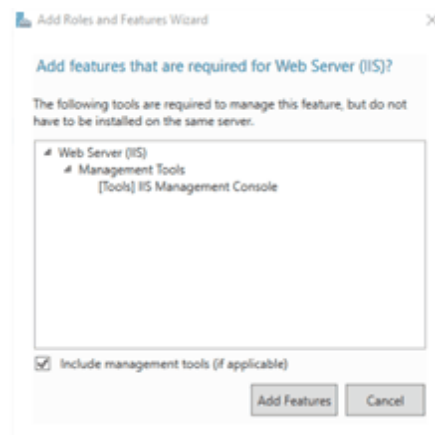
Name	IP Address	Operating System
WIN2K16TEST	192.168.112.135	Microsoft Windows Server 2016 Standard

Below the table, it says '1 Computer(s) found'. A note at the bottom of the main content area states: 'This page shows servers that are running Windows Server 2012 or a newer release of Windows Server, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.' At the bottom of the window, there are four buttons: '< Previous', 'Next >' (highlighted with a blue border), 'Install', and 'Cancel'.

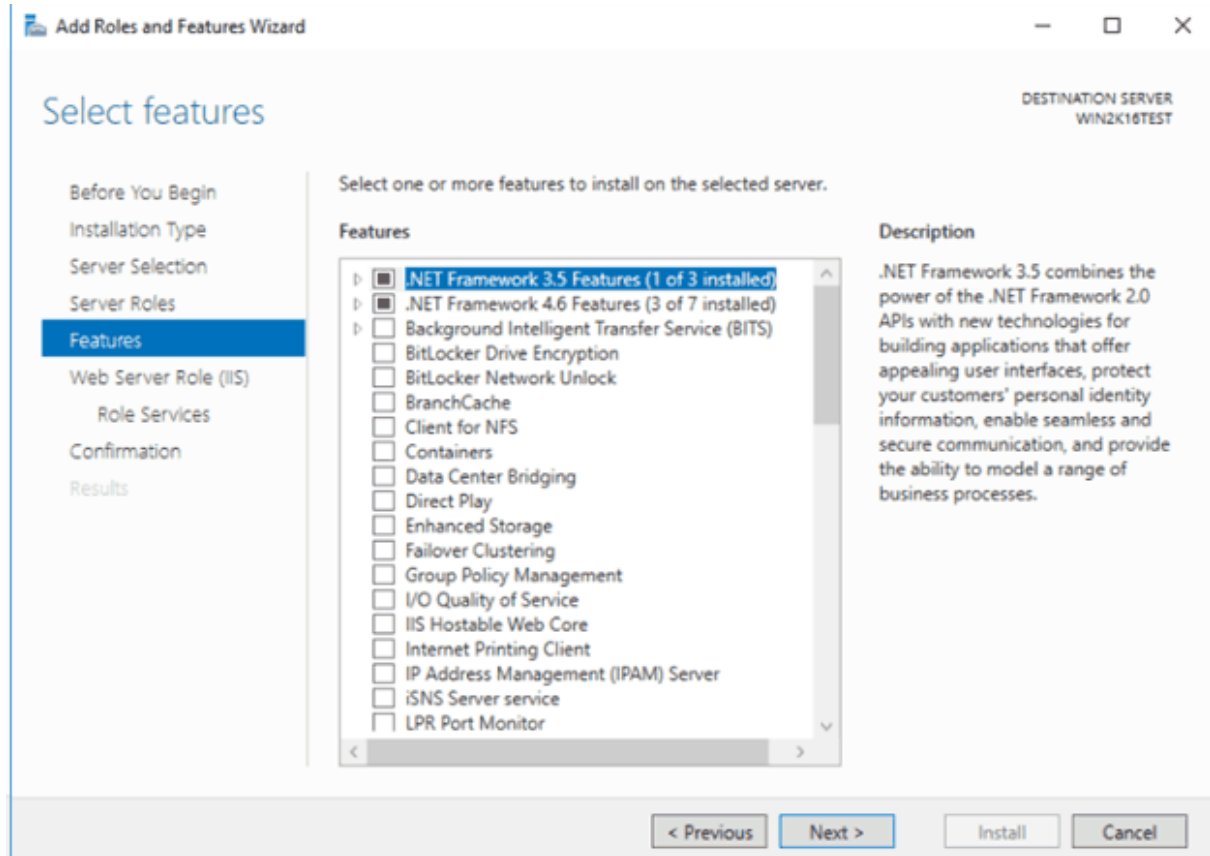
Select the Server you want the features to be installed on and click **Next >**.



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



Click **Add Features** without changing anything and click **Next >**.



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

Add Roles and Features Wizard

DESTINATION SERVER
WIN-AM1QR9R2ITG

Select role services

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Web Server Role (IIS)
Role Services
Confirmation
Results

Select the role services to install for Web Server (IIS)

Role services

- ☒ Web Server
 - ☒ Common HTTP Features
 - ☒ Health and Diagnostics
 - ☒ Performance
 - ☒ Security
 - ☒ Application Development
 - ☐ .NET Extensibility 3.5
 - ☐ .NET Extensibility 4.7
 - ☐ Application Initialization
 - ☐ ASP
 - ☐ ASP.NET 3.5
 - ☐ ASP.NET 4.7
 - ☐ CGI
 - ☐ ISAPI Extensions
 - ☐ ISAPI Filters
 - ☐ Server Side Includes
 - ☒ **WebSocket Protocol**
- ☐ FTP Server
 - ☐ FTP Service
 - ☐ FTP Extensibility
- ☒ Management Tools
 - ☒ IIS Management Console
 - ☐ IIS 6 Management Compatibility
 - ☐ IIS Management Scripts and Tools
 - ☐ Management Service

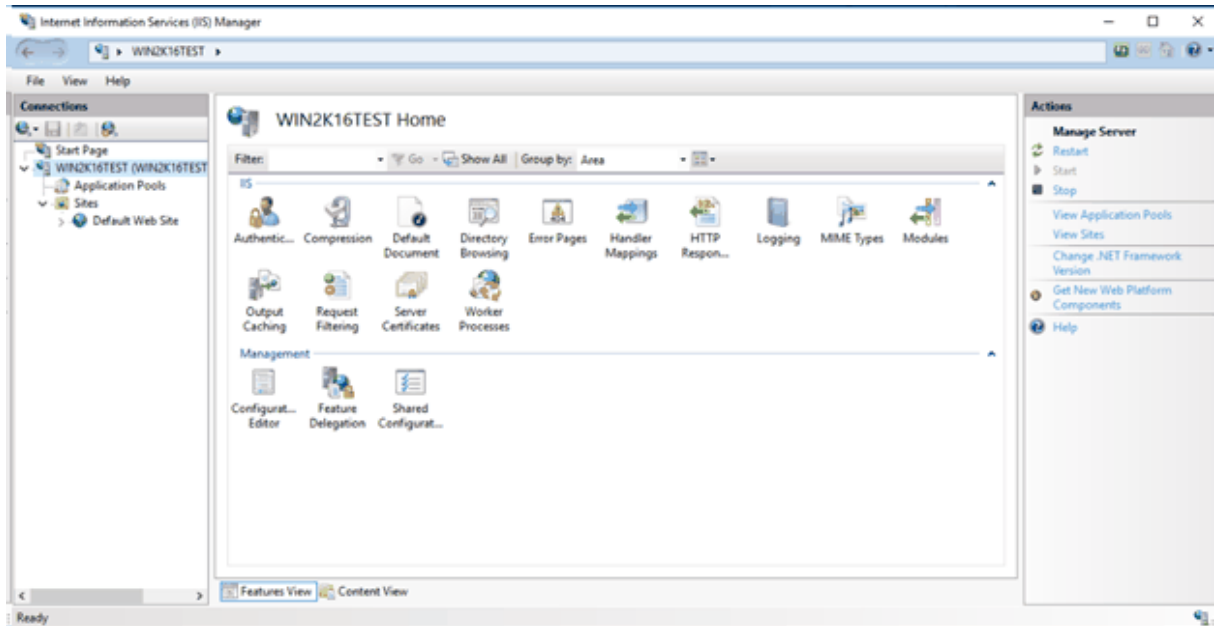
Description

IIS 10.0 and ASP.NET 4.7 support writing server applications that communicate over the WebSocket Protocol.

< Previous **Next >** Install Cancel

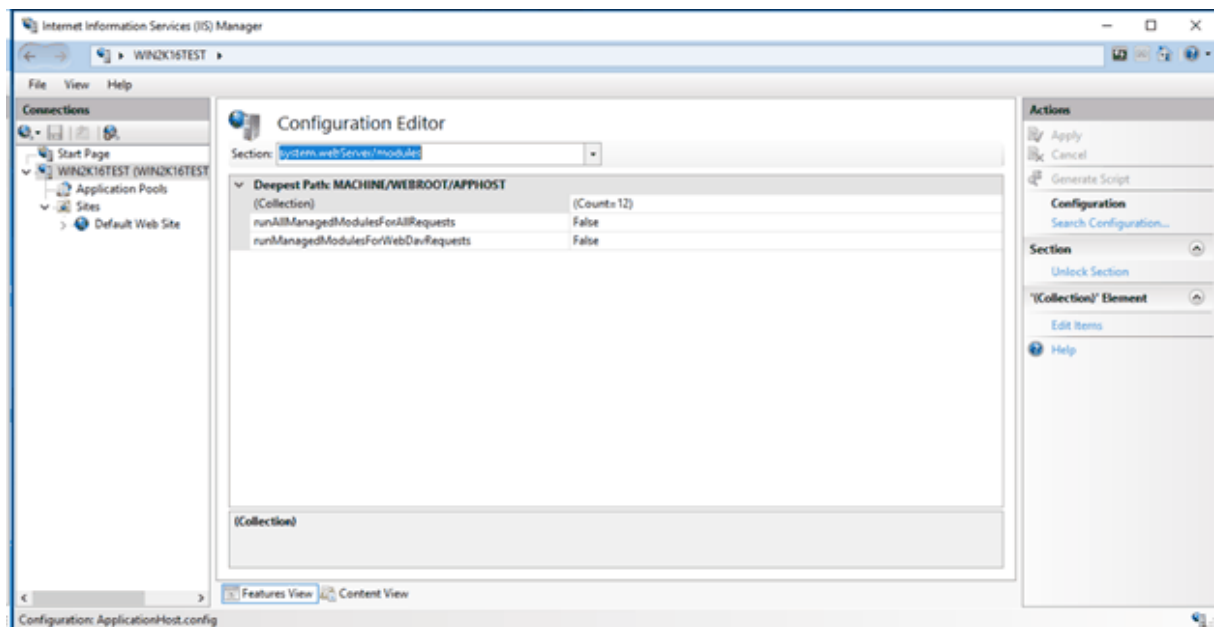
Make sure to check **WebSocket Protocol**. Leave all other options untouched. Click **Next >** and **Install**.

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.



Installing Web Hosting Bundle

Visit the site <https://dotnet.microsoft.com/en-us/download/dotnet/6.0> 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

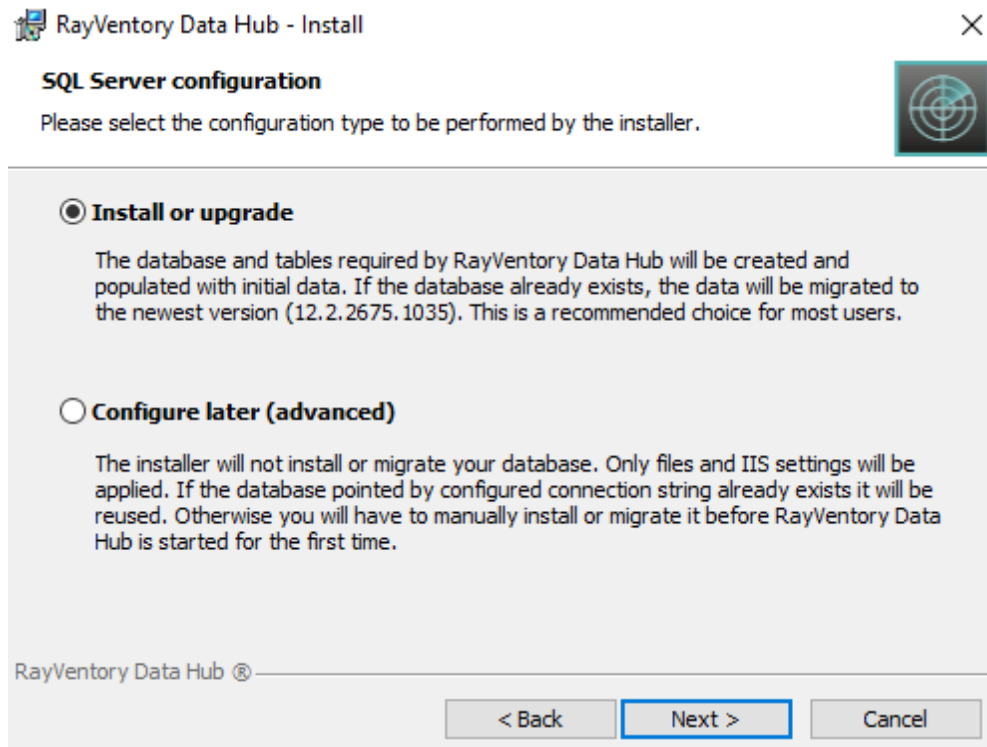
OS	Installers	Binaries
Linux	Package manager instructions	Arm32 Arm32 Alpine Arm64 Arm64 Alpine x64 x64 Alpine
macOS		Arm64 x64
Windows	Hosting Bundle x64 x86	Arm64 x64 x86

Installation

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

SQL Configuration

SQL Configuration allows to choose database default state after installation.



- **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.



Note:

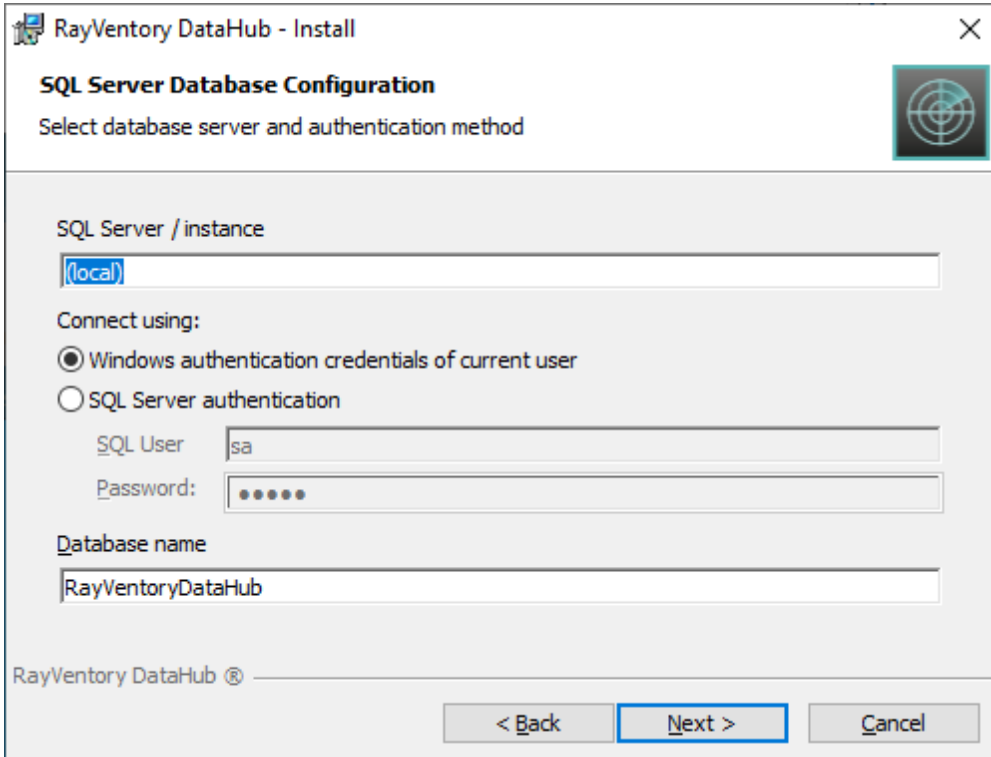
When upgrading from previous version 12.2: The installer will adapt your schema and data if necessary. There may be some manual adjustments required in case of reports / dashboard referencing complex tables / data sets.

- **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

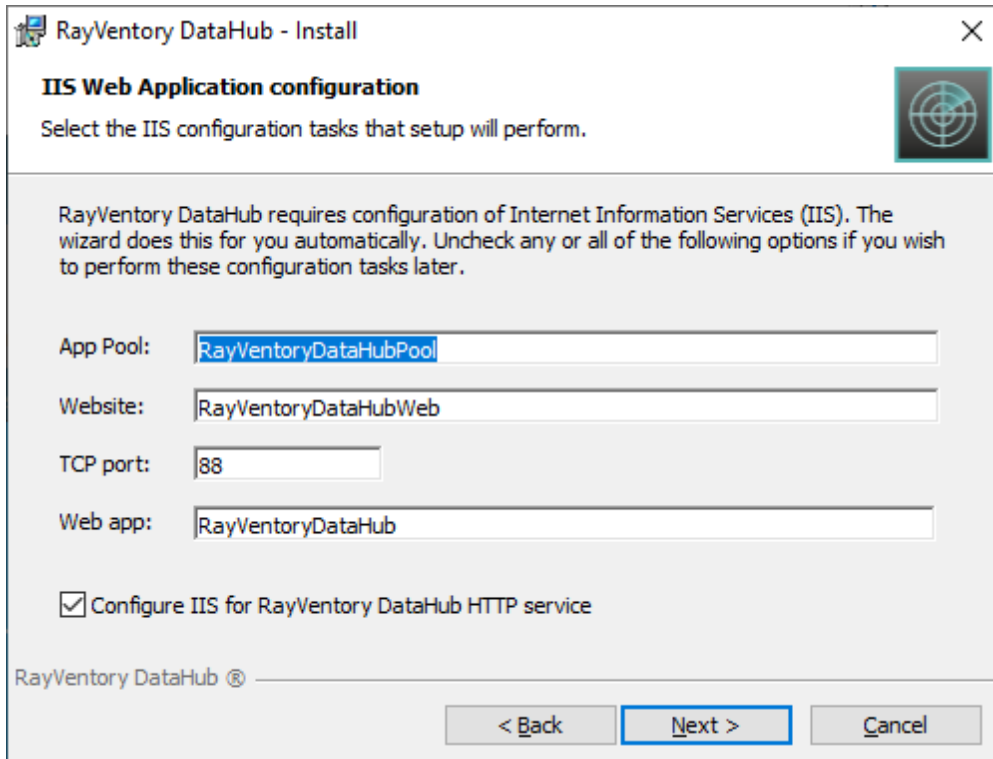
Database server wizard page is shown only if **Install or Upgrade** SQL Configuration was selected on the previous page.



The image shows a Windows-style dialog box titled "RayVentory DataHub - Install". Inside, the main heading is "SQL Server Database Configuration" with a subtitle "Select database server and authentication method". The dialog contains several input fields: "SQL Server / instance" with the text "(local)", "Connect using:" with two radio buttons (the first is selected), "SQL User" with the text "sa", "Password:" with masked characters, and "Database name" with the text "RayVentoryDataHub". At the bottom, there are three buttons: "< Back", "Next >" (highlighted with a blue border), and "Cancel". The RayVentory logo is visible in the top right corner of the dialog.

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

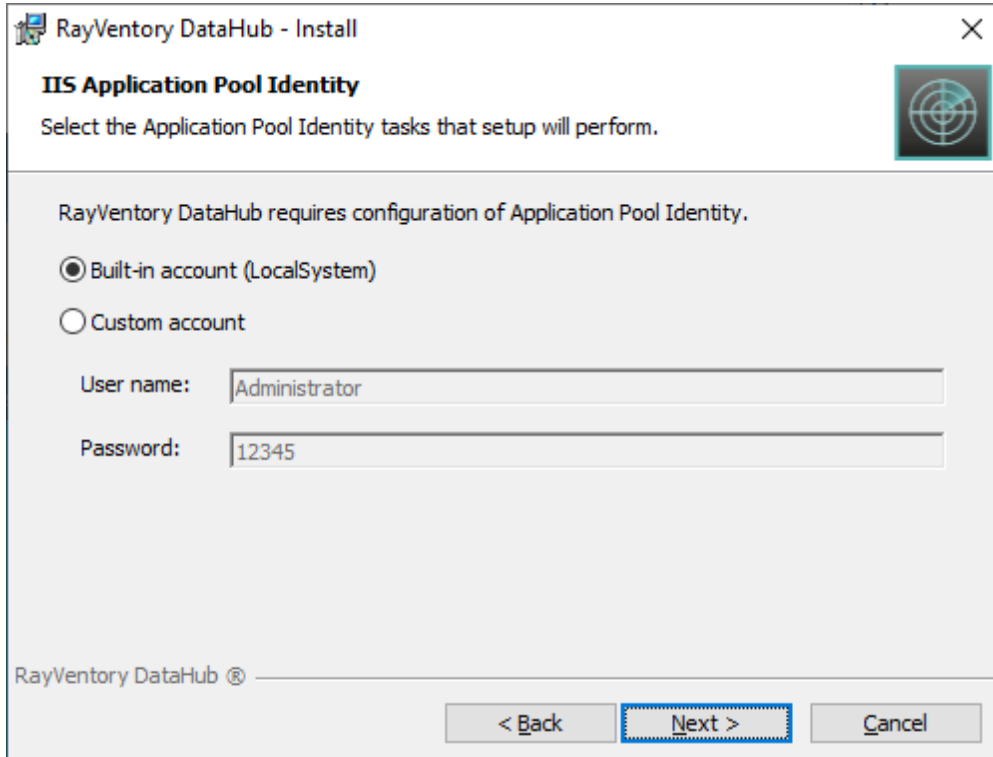


Configure the basic details for the IIS settings that will be used during the installation of RayVentory Data Hub.

**Be aware:**

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

IIS AppPool Identity



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 -> 12.5
NOT SUPPORTED.
Please contact Raynet for assistance.
- Version 12.1 -> 12.5
SUPPORTED
- Version 12.2 -> 12.5
SUPPORTED
- Version 12.3 -> 12.5
SUPPORTED
- Version 12.4 -> 12.5

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.

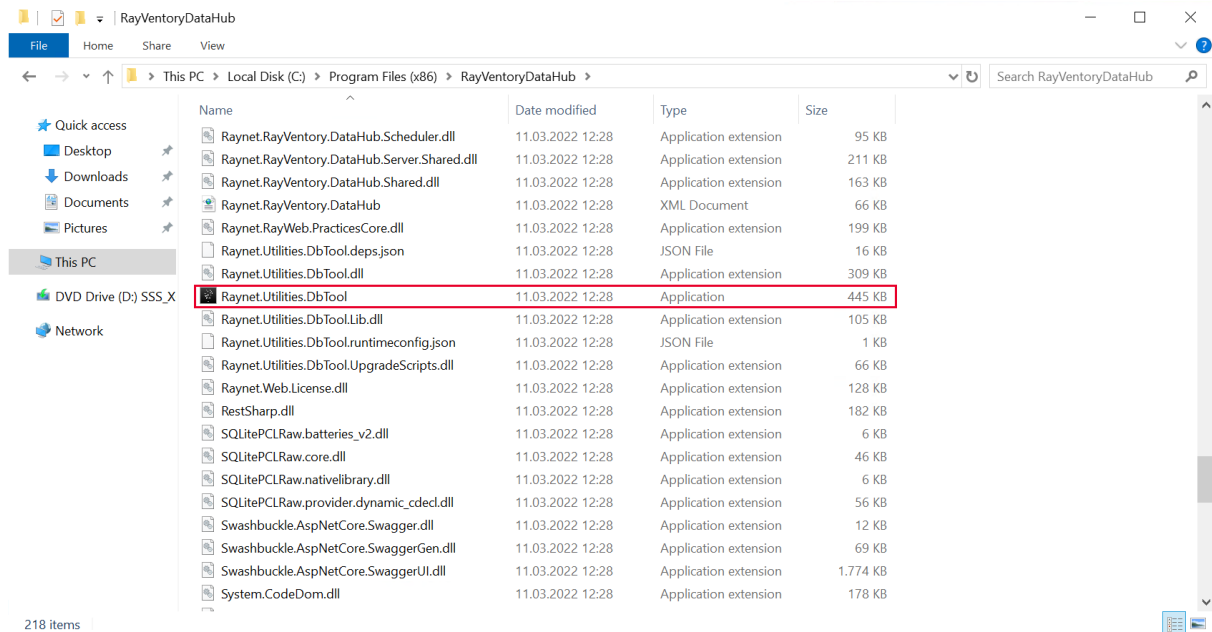
Data Hub Agent (formerly Data Collector up to 12.1)

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.



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

```
Raynet.Utilities.DbTool.exe update -t 12.5.#.#
```

where **12.5.#.#** 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
- Migration from version 12.4

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": "",
  "KotlinDirectoryPath": "",
  "TasksManagement": {
    "LogsDirectory": "",
    "DeleteLogFilesAfterDays": 30;
    "DeleteHistoryEntriesAfterDays": 90
  },
  "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
},
"reportViewerSettings": {
  "ReportDueTimeMinutes": 1,
  "ReportPeriodMinutes": 5,
  "ReportTimeToLiveMinutes": 30,
  "ReportDocumentTimeToLive": 30,
  "ReportExportedDocumentTimeToLive": 30
},
"connectionStrings": {
  "Driver": "mssql",
  "System": "Server=192.168.125.151;Database=RayVentoryDataHub;
  User Id=raynet;Password=raynet123",
  "ReportDatabase": "Data Source=192.168.125.151;Initial Catalog=master;
  User Id=raynet;Password=raynet123"
},
"LdapManagement": {
  "Protocol": "LDAP",
  "Timeout": 5,
  "CustomUserFilter": "",
  "OpenLDAP_SASL_NOCANON": true,
  "OpenLDAP_AuthType": "Digest"
},
"ExternalIdentityManagement": {
  "IsEnabled": "false",
  "LoginUrl": "https://keycloak:8443/realms/RVDH/protocol/openid-connect
/auth?response_type=code&client_id=rvdh-client",
  "ClientSecret": "XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
  "Realm": "RVDH",
  "Client": "rvdh-client",
  "AuthAPI": "https://keycloak:8443/realms/RVDH/protocol/openid-connect/token"
},
"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:
        %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,
      Version=4.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089" />
    <reconnectonerror value="true" />
    <commandText value="INSERT INTO SystemLog ([Date],[Thread],[Level],[Logger],
      [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">
    <param name="header" value="/***** LOG HEADER
    *****/ &#13;&#10;" />
    <param name="footer" value="/***** LOG FOOTER
    *****/ &#13;&#10;" />
    <conversionPattern value="%date %5level %logger.%method [%line] - MESSAGE:
    %message%newline %exception" />
  </layout>
</appender>

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

MariaDB

The following chapters describe how to set up RayVentory Data Hub using MariaDB instead of an SQL server.

Prerequisites

In order to set up a RayVentory Data Hub instance with a varying database, the following conditions must be fulfilled:

- A database tool (for example DBeaver) must be available.
- Docker Desktop must be installed.

Setup of Docker and MariaDB

If there already exists an existing MariaDB server, jump to [step 3](#).

1. Open the CMD and pull the MariaDB Docker container.

Example:

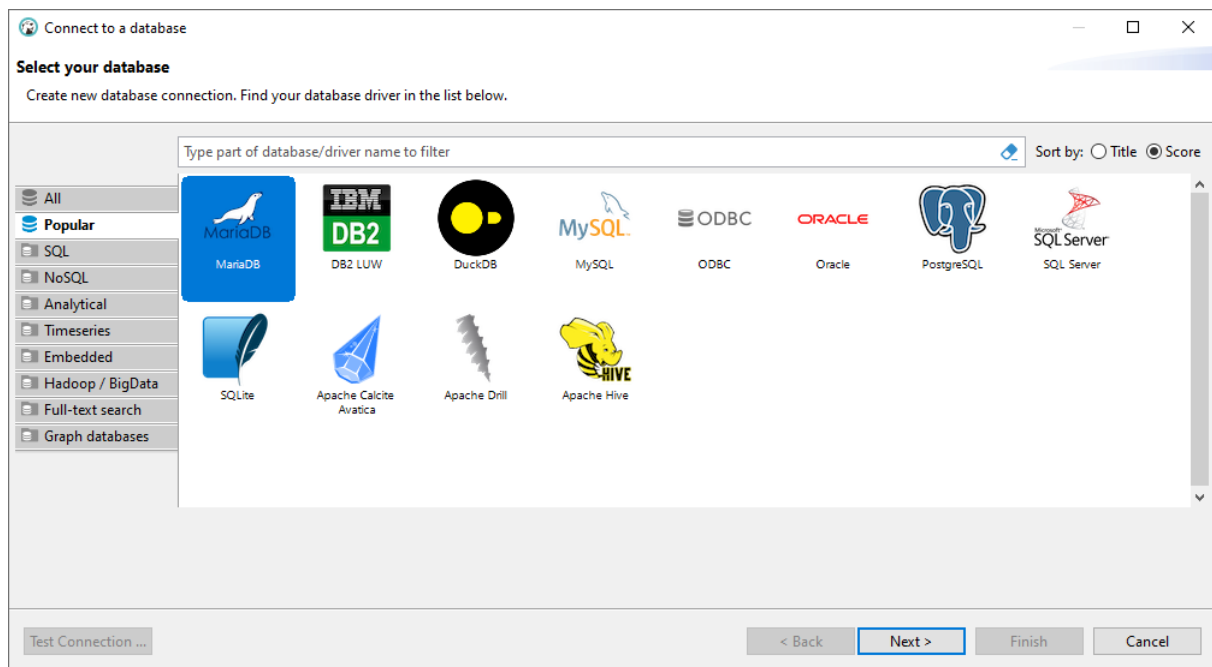
```
docker run --detach --name some-mariadb --env MARIADB_USER=example-user  
--env MARIADB_PASSWORD=my_cool_secret --env MARIADB_ROOT_PASSWORD=my-  
secret-pw mariadb:latest
```

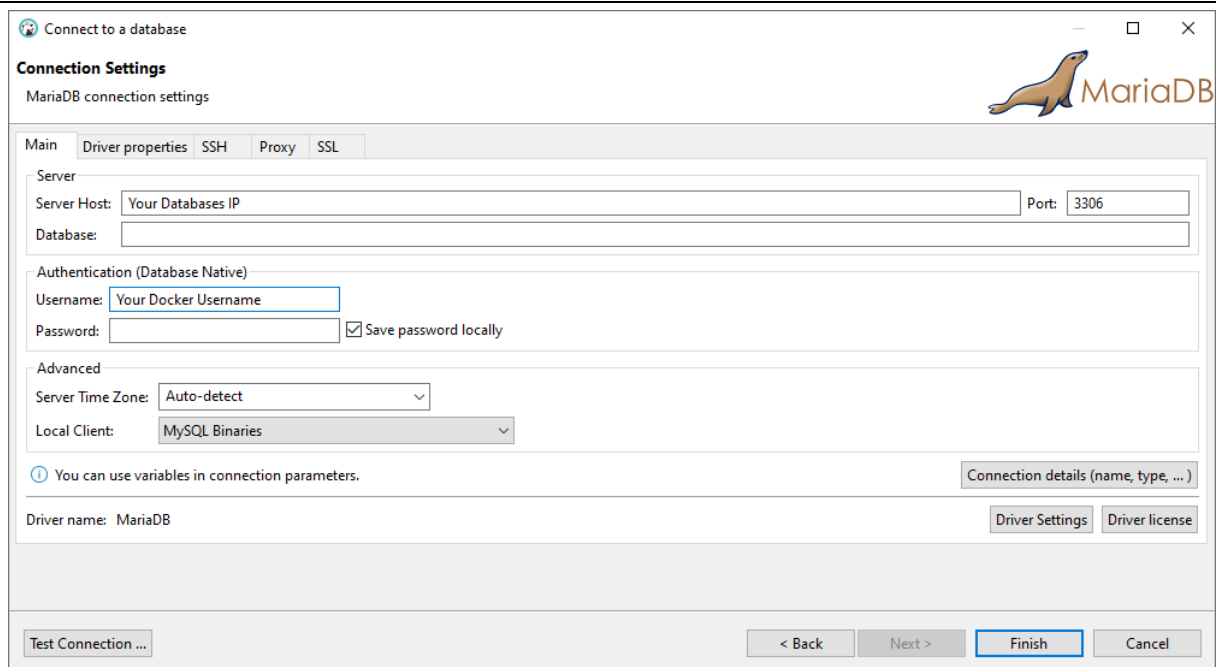


Be aware:

Remember to edit the variables!

2. Connect the container.





Connect to a database

Connection Settings
MariaDB connection settings

Main | Driver properties | SSH | Proxy | SSL

Server

Server Host: Your Databases IP Port: 3306

Database:

Authentication (Database Native)

Username: Your Docker Username

Password: ☒ Save password locally

Advanced

Server Time Zone: Auto-detect

Local Client: MySQL Binaries

Information icon You can use variables in connection parameters. [Connection details \(name, type, ...\)](#)

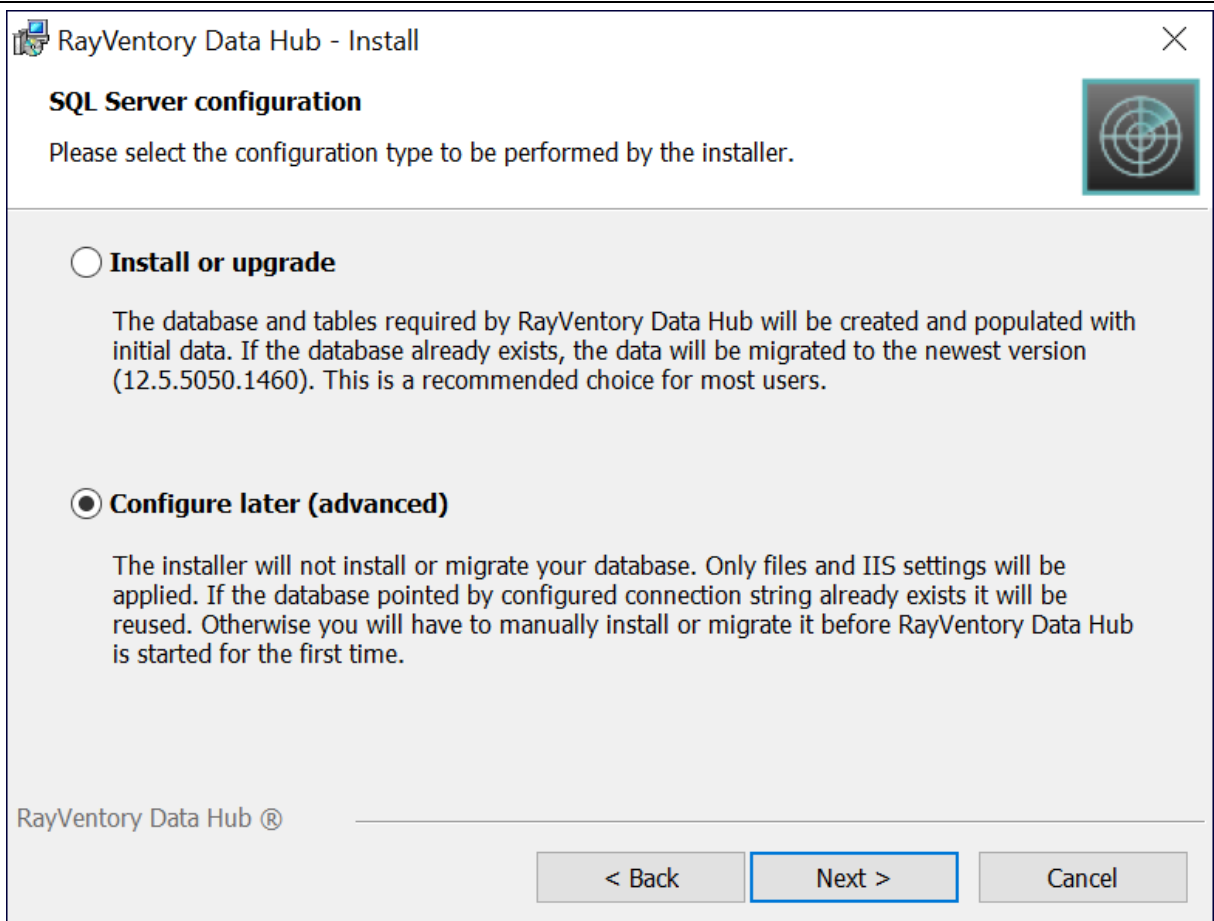
Driver name: MariaDB [Driver Settings](#) [Driver license](#)

[Test Connection ...](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

3. Create a new database with the name "RayVentoryDataHub".

Data Hub Installation

After the database for RayVentory Data Hub has been configured, install the .msi like described in the [Installation](#) chapter. In the [SQL Server Configuration](#) step choose the **Configure later (advanced)** option and finish the installation as normal.



In the [SQL Server Configuration](#) step choose the **Configure later (advanced)** option and finish the installation as normal.

Configuration

After RayVentory Data Hub has been installed, it is necessary to edit the [appsettings.json](#). The file can be found in the InstallDir, by default C:\Program Files (x86)\RayVentoryDataHub.

In the `connectionStrings` section, change the following information:

1. Change `Driver` from `mssql` to `mysql`.
2. Change `System` so that it matches with the database server that will be used. The following options need to be changed.
 - `Server`
 - `User ID`
 - `Password`
3. Copy the `System` connectionstring and replace the `ReportDatabase` connectionstring with the one that has been used for `System`.

```
},  
  "connectionStrings": {  
    "Driver": "mssql",
```

```
"System": "Server=192.168.125.151;Database=RayVentoryDataHub;  
User Id=raynet;Password=raynet123",  
"ReportDatabase": "Data Source=192.168.125.151;Initial Catalog=master;  
User Id=raynet;Password=raynet123"  
},
```

When starting RayVentory Data Hub for the first time, all necessary tables will now be created in the database.

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.

- [Windows](#)
- [OS X](#)
- [Linux](#)

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 `raynetgmbh/rayventory-datahub`:

Environment variable	Description and sample value
<code>DataHub_ConnectionStrings</code>	<p>A connection string used to connect to the program database, containing global settings and metadata.</p> <p>Example value: <code>mydatabaseserver.local,1433;Database=datahub;User ID=sa;Password=Start123</code></p>
<code>DataHub_ConnectionStrings</code>	<p>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.</p> <p>Example value: <code>Server=mydatabaseserver.local,1433;Initial Catalog=master;User ID=sa;Password=Start123</code></p>
<code>DataHub_InitialTenantId</code>	<p>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.</p> <p>Example value: <code>{72ba6fc2-d5fa-49ee-8281-841e762aea05}</code></p>
<code>BASEURL</code>	<p>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.</p>

	Example value:
--	-----------------------

	<code>http://rayventory-datahub.local:80</code>
--	---

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

Environment variable	Description and sample value
DataHubAgent_DataHubUrl	<p>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.</p> <p>Example value: http://web:80</p>
DataHubAgent_TenantId	<p>A GUID value, representing the tenant ID. You can get your tenant ID by opening the Administration > Agents page, and pressing a button to install a new agent.</p> <p>Example value: {72ba6fc2-d5fa-49ee-8281-841e762aea05}</p>

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 <https://github.com/RaynetEALM/RayVentoryDataHub/blob/main/docker-compose.yml>.
 - o 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.
 - o 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.
 - o 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: <https://hub.docker.com/r/raynetgmbh/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 / Migration** 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

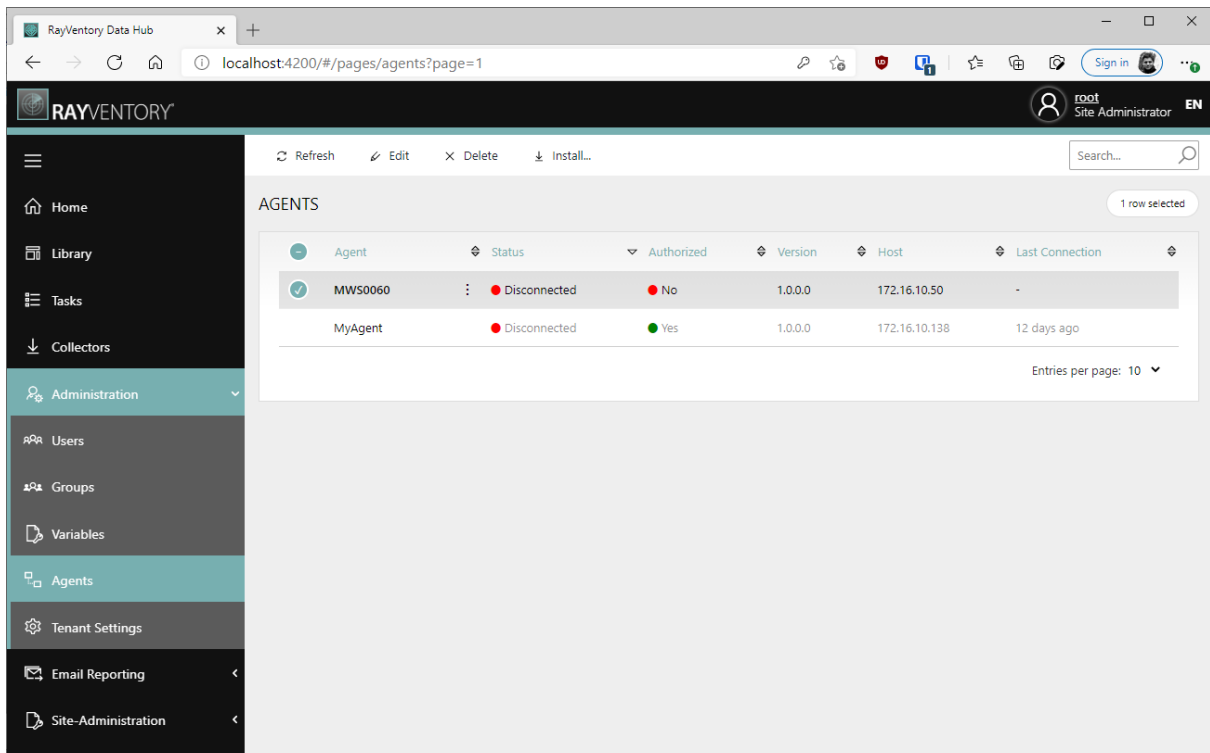
- Microsoft .NET Core 6.0.3 – Windows Server Hosting Bundle (<https://dotnet.microsoft.com/en-us/download/dotnet/6.0>)
- Java / OpenJDK version 11 or newer is required to execute data collection from SaaS platforms

Installation and Configuration

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

Download

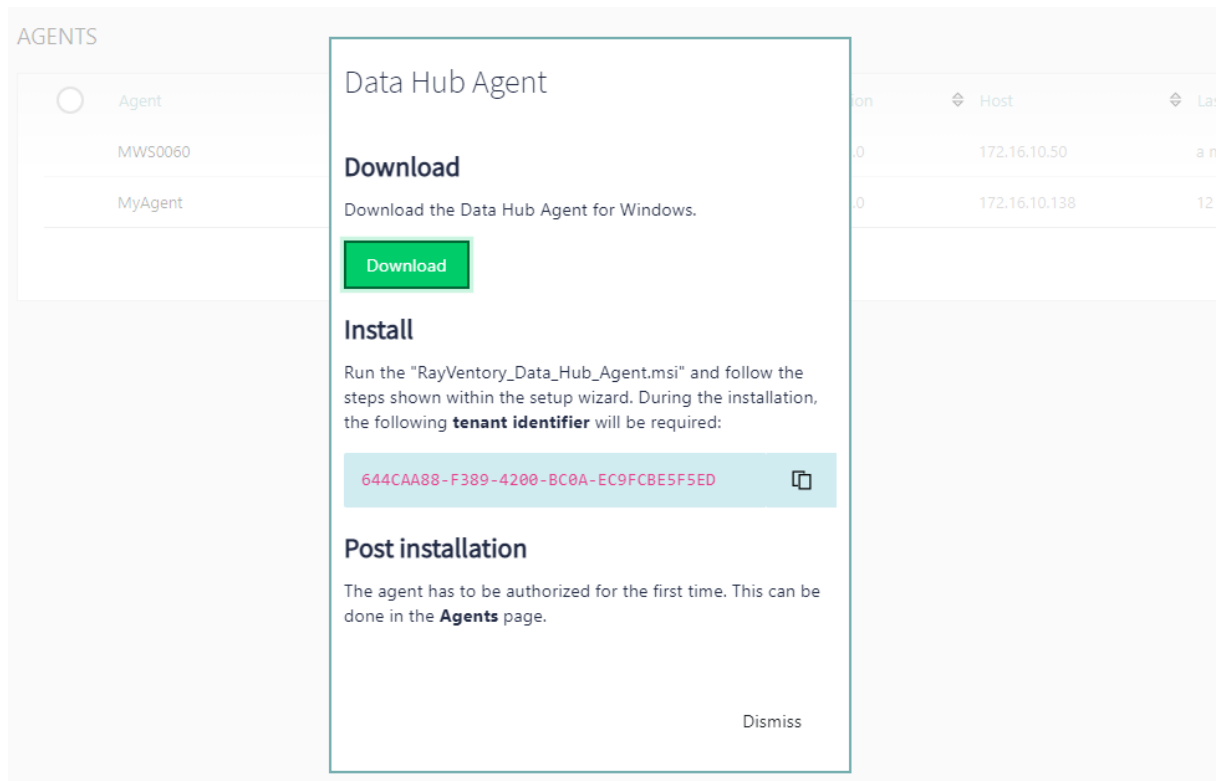
Navigate to the **Agents** page under **Administration** using the navigation menu on the left panel. The list shows all agents which have been installed so far.



The screenshot shows the RayVentory Data Hub web interface. The left sidebar contains a navigation menu with options: Home, Library, Tasks, Collectors, Administration (selected), Users, Groups, Variables, Agents, Tenant Settings, Email Reporting, and Site-Administration. The main content area displays the 'AGENTS' page. At the top of this page are buttons for Refresh, Edit, Delete, and Install... A search bar is also present. Below these is a table with columns: Agent, Status, Authorized, Version, Host, and Last Connection. The table contains two rows: 'MWS0060' with status 'Disconnected' and 'No' for Authorized, and 'MyAgent' with status 'Disconnected' and 'Yes' for Authorized. The 'MyAgent' row shows a version of 1.0.0.0, host 172.16.10.138, and a last connection 12 days ago. A '1 row selected' indicator is visible. At the bottom right of the table, it says 'Entries per page: 10'.

Agent	Status	Authorized	Version	Host	Last Connection
MWS0060	Disconnected	No	1.0.0.0	172.16.10.50	-
MyAgent	Disconnected	Yes	1.0.0.0	172.16.10.138	12 days ago

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.

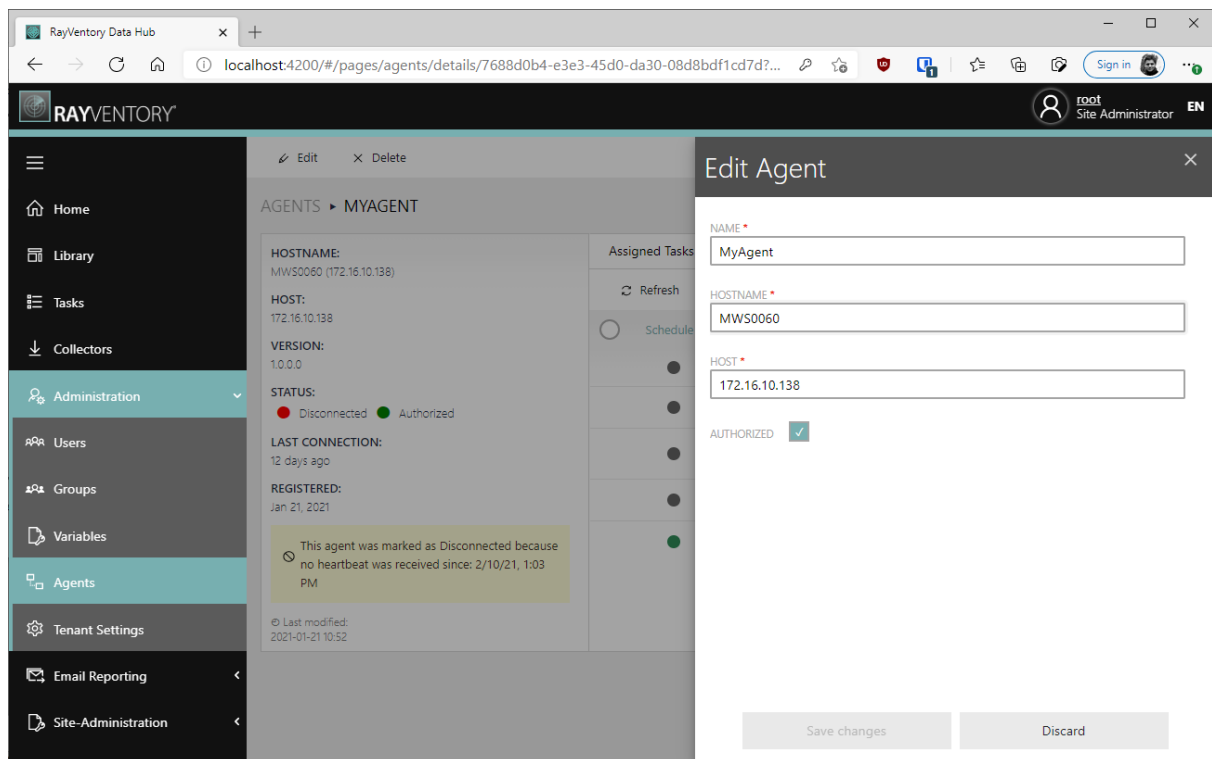
Visit the **Agents** page and search for an agent named after the machine the Agent has been installed on.


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.

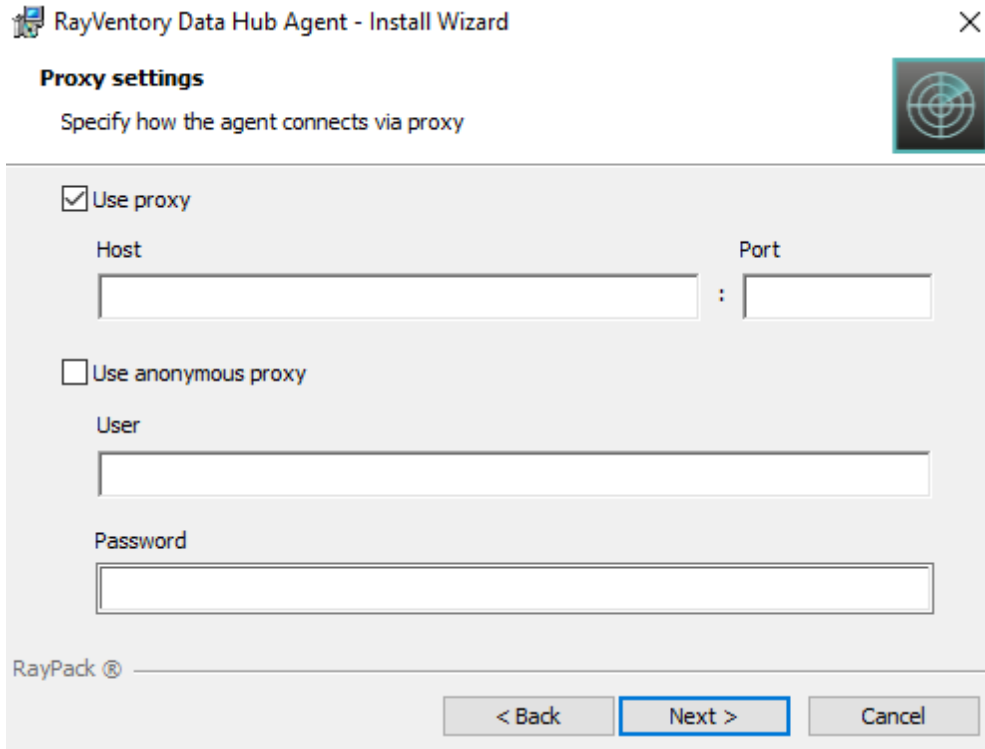


The agent is now ready to accept the tasks

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.



The image shows a Windows-style dialog box titled "RayVentory Data Hub Agent - Install Wizard". It has a close button (X) in the top right corner. Below the title bar, the text "Proxy settings" is displayed in bold, followed by the instruction "Specify how the agent connects via proxy". To the right of this text is a small icon of a target with a crosshair. The main area of the dialog contains two options: "Use proxy" (checked) and "Use anonymous proxy" (unchecked). Below "Use proxy" are two text boxes labeled "Host" and "Port" separated by a colon. Below "Use anonymous proxy" are two text boxes labeled "User" and "Password". At the bottom left, the text "RayPack ®" is visible. At the bottom right, there are three buttons: "< Back", "Next >" (highlighted with a blue border), and "Cancel".

Proxy settings
Specify how the agent connects via proxy

☒ Use proxy

Host : Port

☐ Use anonymous proxy

User

Password

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	<p>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:</p> <ul style="list-style-type: none"> • * (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 NOT recommended TO UNINSTALL 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](#)
- [OS X](#)
- [Linux](#)

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	<p>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.</p> <p>Example value: http://web:80</p>
DataHubAgent_TenantId	<p>A GUID value, representing the tenant ID. You can get your tenant ID by opening the Administration > Agents page, and pressing a button to install a new agent.</p> <p>Example value: {72ba6fc2-d5fa-49ee-8281-841e762aea05}</p>

Installation with docker-compose

You can install an agent from the standard Docker compose file. For more information, refer to the following chapter: [Usage](#)



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