

Canary Labs



[Watch the video tutorial](#) (no audio)

Summary Information

Communication Driver Name: CanaryLabs Historian

Current Version: 1.0.0.1

Implementation DLL: T.ProtocolDriver.CanaryLabs.dll

Manufacturer: CanaryLabs

System Requirements

The following requirements must be matched in order to use the CanaryLabs driver:

- Product version 9.1
- *.Net Framework 7.1* or higher

For more information on how to set up the CanaryLabs Environment, see the [Appendix](#).

Channel Configuration

Protocol Options

Protocol options are not used in this driver. The remaining channel configurations are the same as in the reference guide.

Node Configuration

Station Configuration

The station parameters are:

- **ServerName:** The name or IP address of the machine running the CanaryLabs Historian. (If the service is not running in the default port, the syntax should be: *?ComputerName??:PortNumber?* or *?IpAddress??:PortNumber?*)
- **ClientID:** Indicates the client identification that is used to make calls in the Canary service
- **ConnectionType:** Specifies the ConnectionType with the service

The options are:

- *Anonymous:* Connection using no credentials
 - *UserName:* Connection using a username/password that is defined in CanaryAdmin
 - *Windows:* Connection using Windows credentials
- **UserName:** The user name used for verification (Valid for the *Username* and *Windows* connection types)
 - **Password:** The password used for verification (Valid for the *Username* and *Windows* connection types)
 - **Views:** A list of views found in the specified ServerName. If the view is virtual, the Node will be **Read-Only**
 - **Dataset:** The name of the dataset you will connect to. (Not available when the selected view is Virtual)



Use the Test Connection button to check the connection with the Server and Database.

With a **Success!** status message, 3 features are enabled for this Driver:

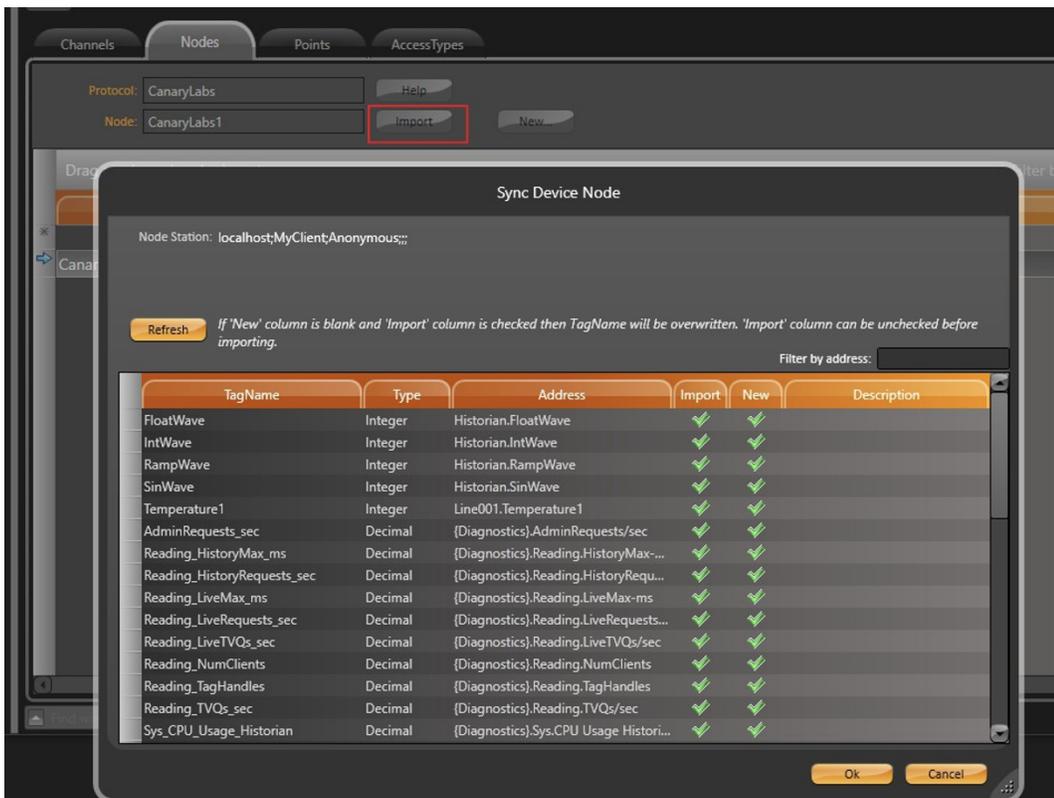
1. **Import Tool**
2. **Unified Namespace**
3. **Asset Modeling**

The Import Tool is described in this section, and the other two are detailed in the [Appendix](#).

Import Tool

You can automatically import the existing Canary Variables into your Project by clicking on the *Import* button.

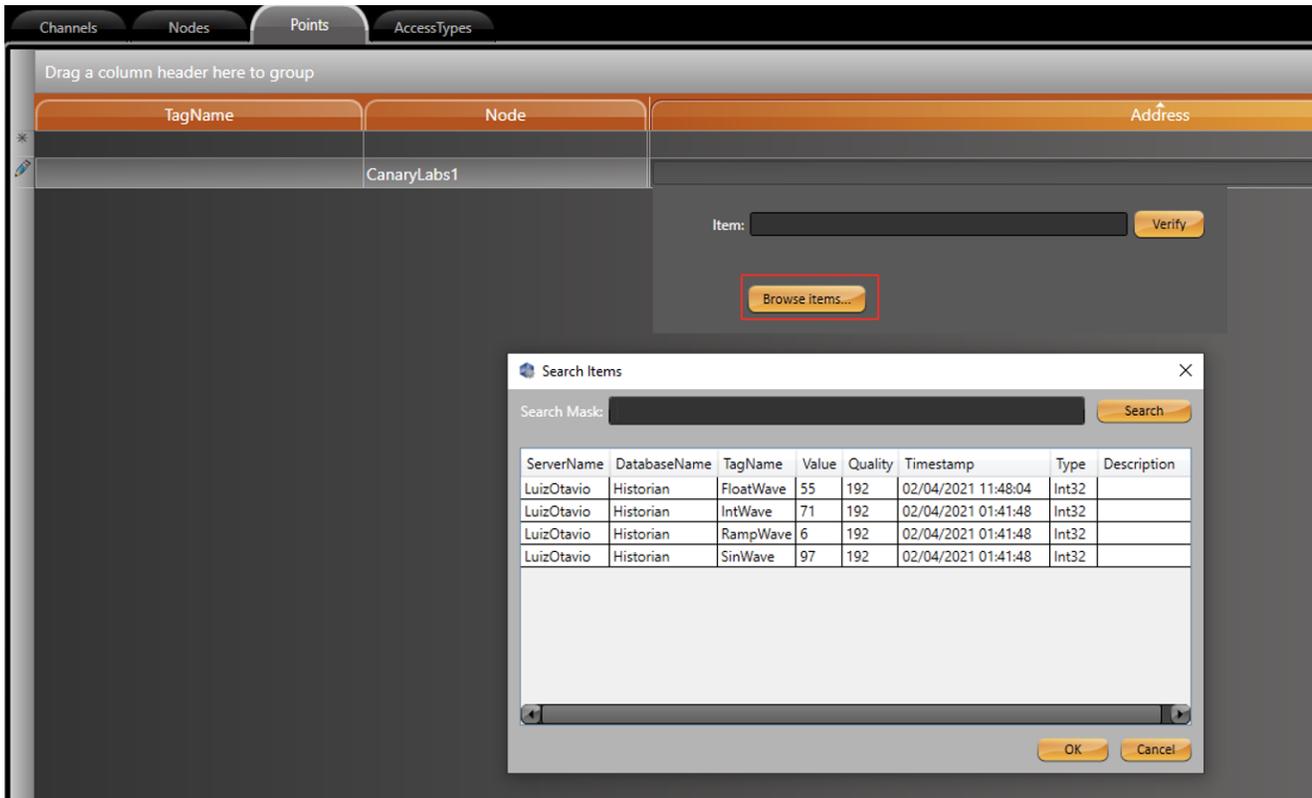
This tool allows you to choose variables, from the list, that will be imported into your project; automatically creating the Tags and Communication Points.



Point Configuration

Address

You can use the Browse button to see the available data in the CanaryHistorian database, or you can write a Tag address directly in the Item field.



For a simple Tag, use the syntax: *?DatabaseName?.?VariableName?*. E.g.:

TagName	Address
Motor1 Temperature	Motor1.Temperature
Motor1 RPM	Motor1.RPM
Motor2 Temperature	Motor2.Temperature
Motor2 RPM	Motor2.RPM

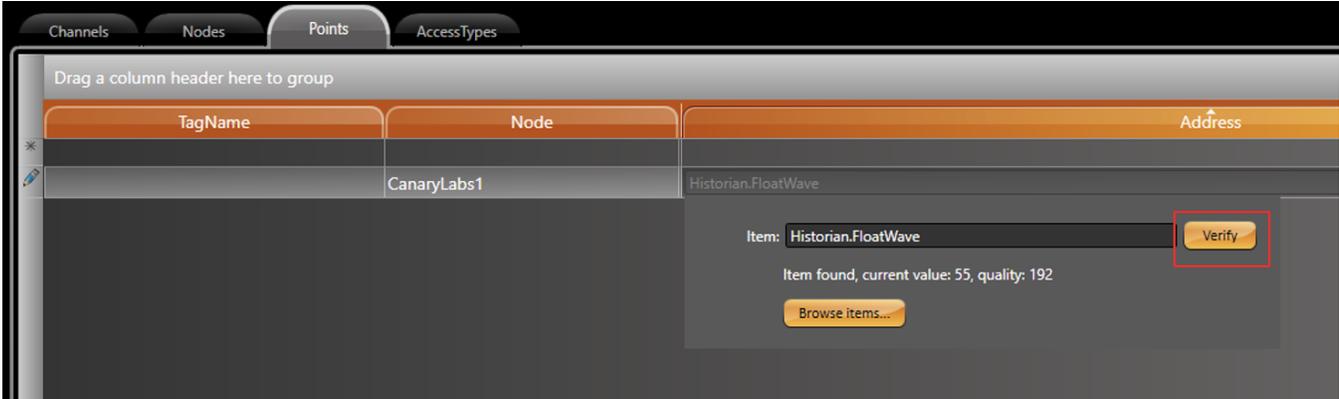
Or, you can create a Template (ex. Motor1 and Motor2), and input it into the Points list. Its members (ex. Temperature and RPM) will be mapped automatically. E.g.:

<i>Engineering Environment</i>	
TagName	Address
Motor1	Motor1
Motor2	Motor2
<i>Runtime</i>	
TagName	Address
Motor1.Temperature	Motor1.Temperature1
Motor1.RPM	Motor1.RPM
Motor2.Temperature	Motor2.Temperature1
Motor2.RPM	Motor2.RPM



Array elements are also automatically expanded in runtime.

Use the Verify button to check if a name is valid and get the current value and quality.



TagProvider

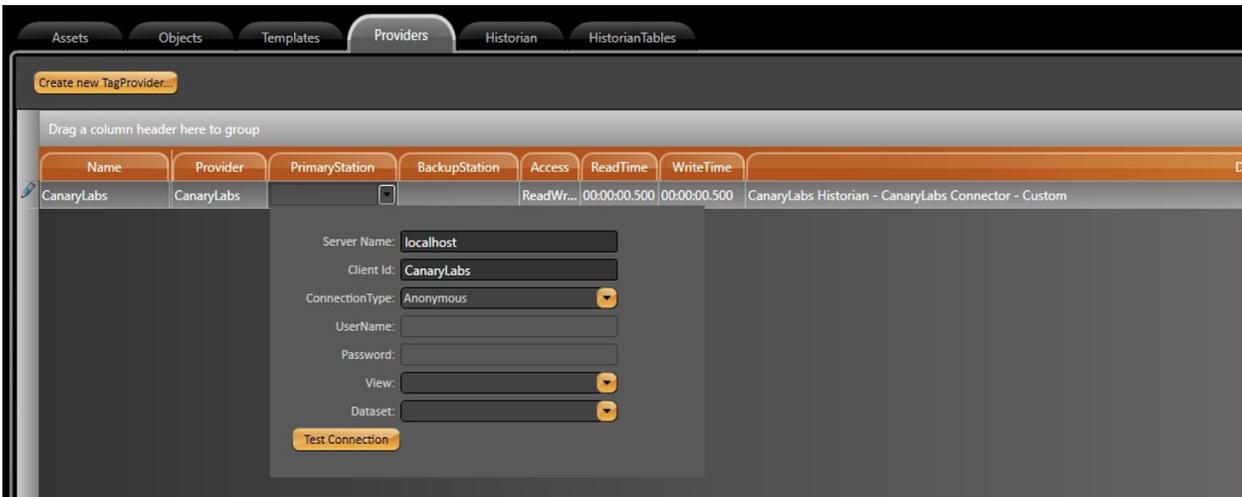
This Communication Protocol supports the TagProvider feature, which is a tool that allows you to access your Communication Device Data Model without creating project Tags.

For more information, please refer to the [TagProvider](#) document.

How to Configure

To configure the CanaryLabs protocol as a TagProvider, navigate to **Edit > Tags > Providers**, and create a new provider for the CanaryLabs protocol.

Configure the items under the **PrimaryStation** column the same way that was described in the [Node Configuration](#).



Troubleshooting

The status of the driver execution can be observed through the diagnostic tools, which are:

- Trace window
- Property Watch

- Module Information

A status value of 0 (zero) means the communication was successful. Negative values indicate an internal driver error, and positive values are the protocol's error codes.

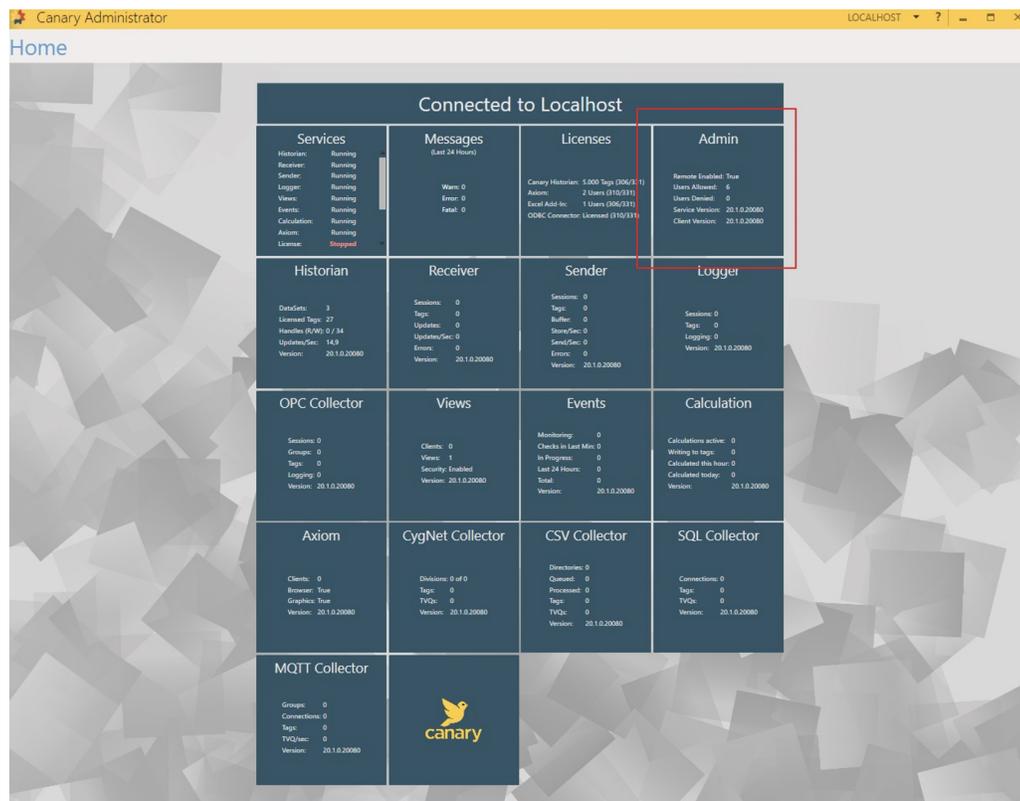
Appendix

CanaryLabs Configuration Procedure

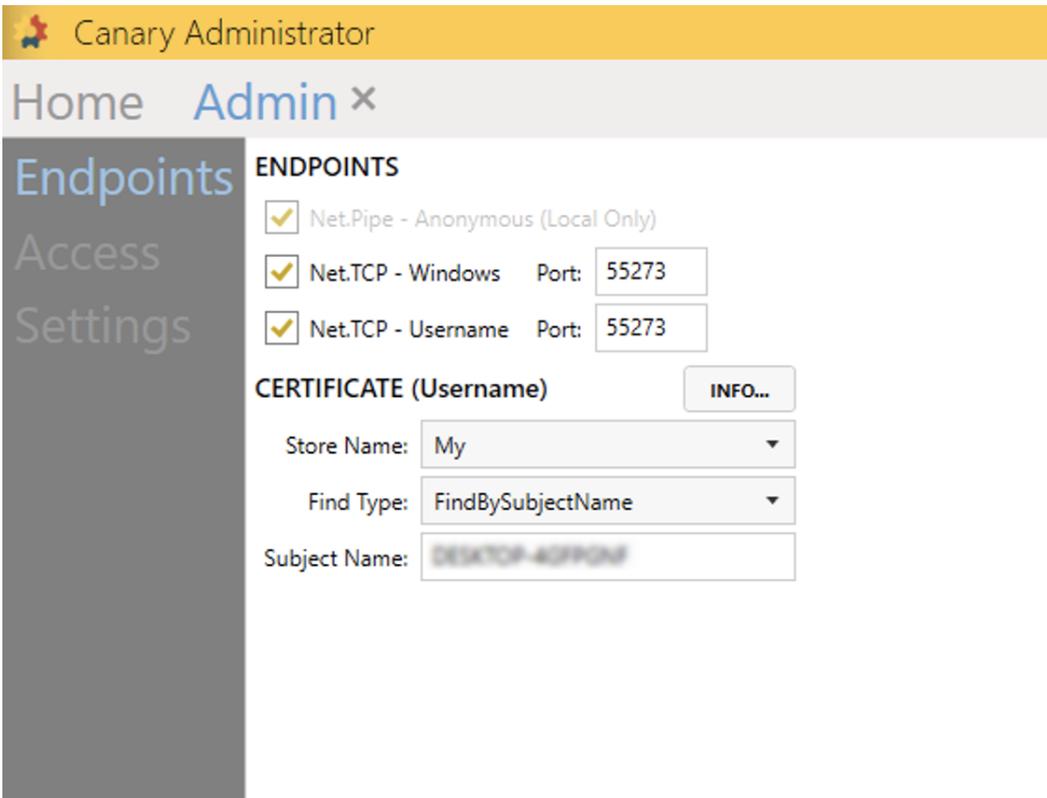
Once you have the CanaryLabs Historian software and the Canary Admin application installed, you will need to configure some permissions for the connection to work.

Admin Configuration

Open the **Admin** Tab.

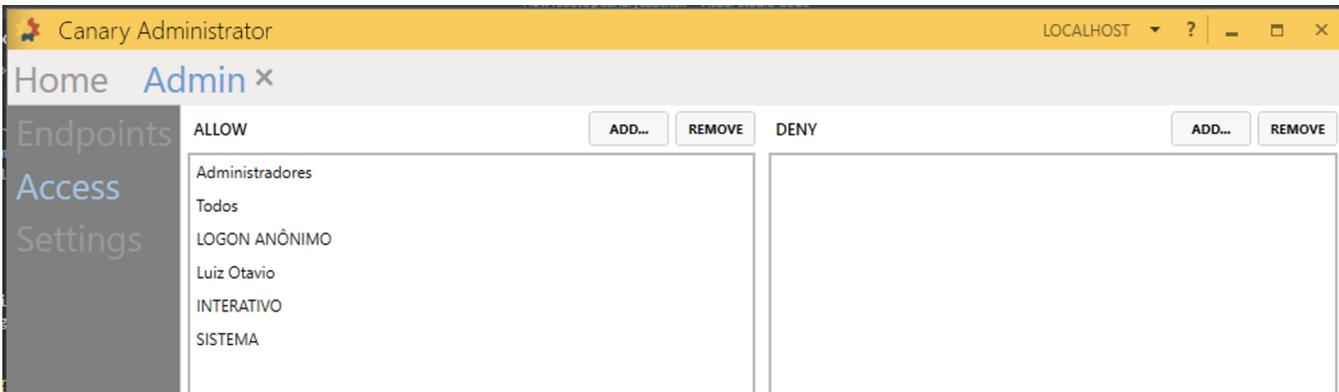


Under **Endpoints**, select every checkbox, but do not change the port numbers.

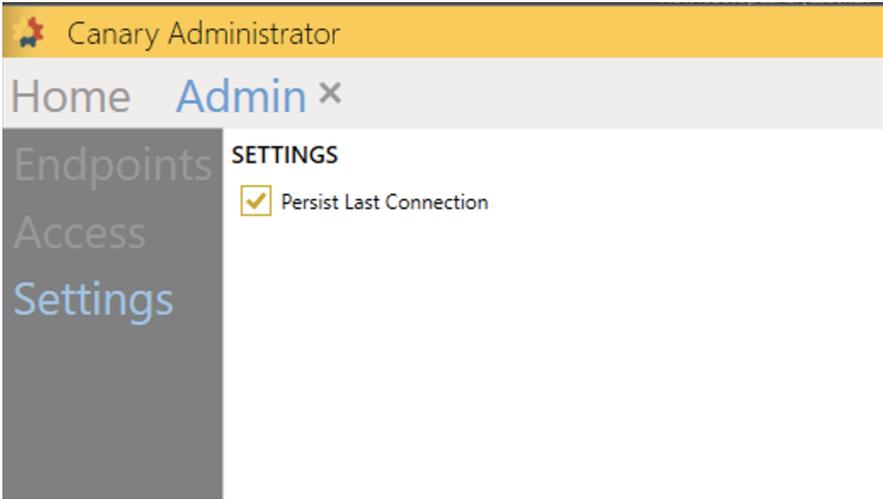


Under **Access**, add the users that will be allowed to access the CanaryAdmin programs.

- *Anonymous*
- *System*
- *Administrator*
- *Interactive*
- *Everyone*
- *? Your User?.*

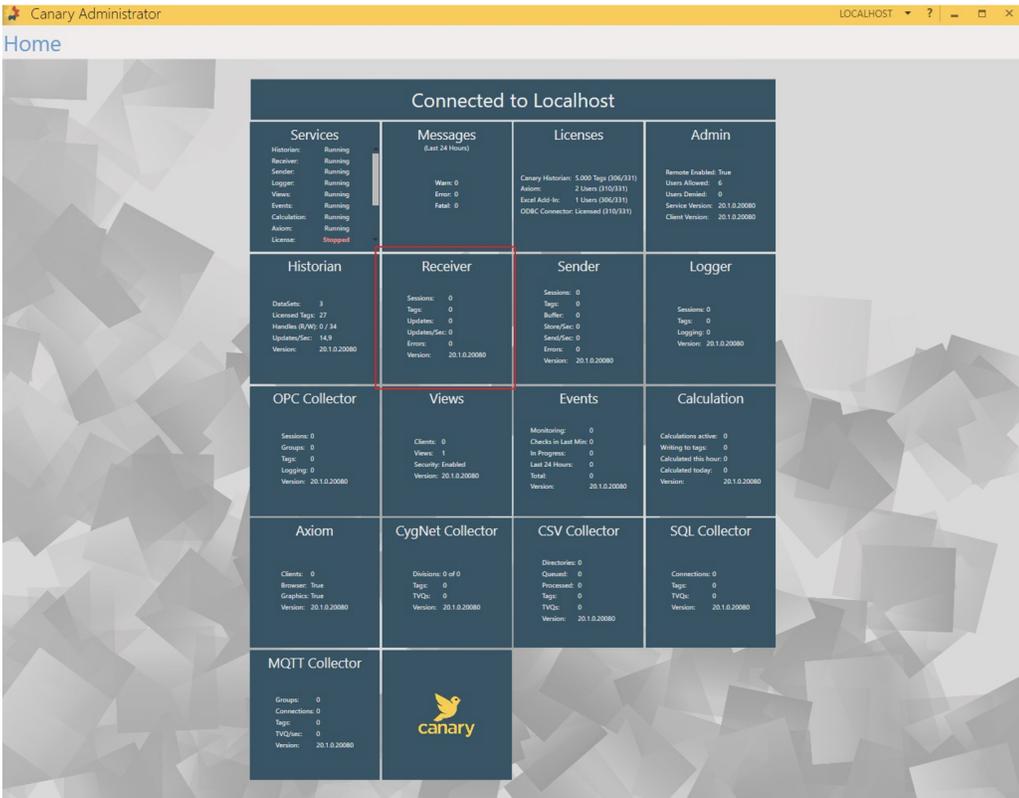


Under **Settings**, make sure the checkbox for the *Persist Last Connection* is selected.



Receiver Configuration

Open the **Receiver** Tab.



Under **Endpoints**, select every checkbox, but do not change the port numbers.

Canary Administrator

Home Receiver **x**

Endpoints

Senders

ENDPOINTS

Net.Pipe - Anonymous (Local Only)

Net.TCP - Username Port: 55256

Net.TCP - Anonymous Port: 55255

CERTIFICATE (Username)

Store Name: My

Find Type: FindBySubjectName

Subject Name: DESKTOP-40FF0M4

Sender Configuration

Open the **Sender** Tab.

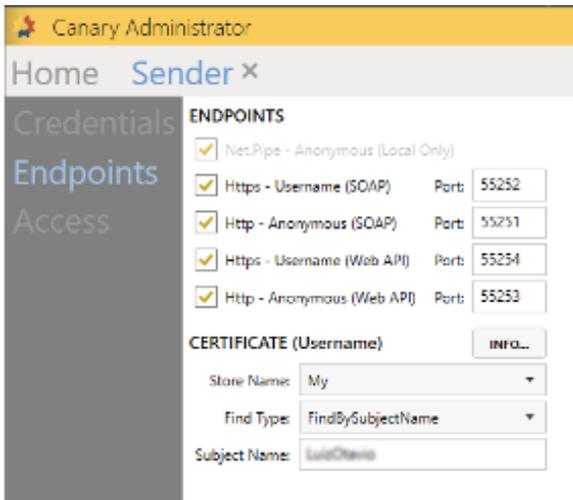
Canary Administrator LOCALHOST

Home

Connected to Localhost

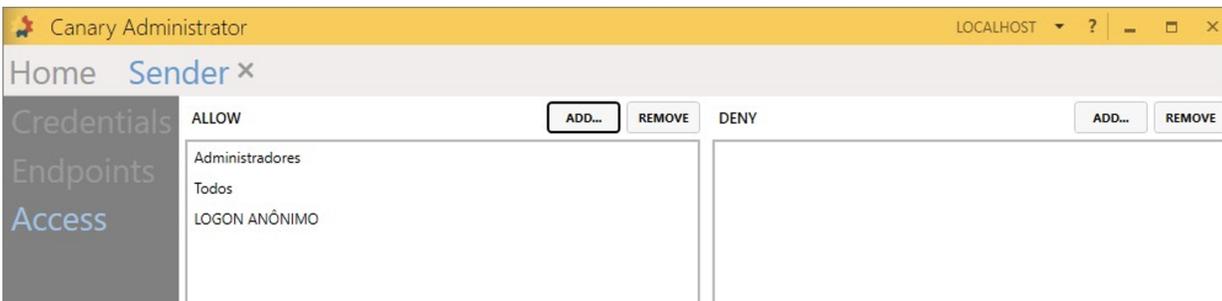
Services Historian: Running Receiver: Running Sender: Running Logger: Running Views: Running Events: Running Calculation: Running Axiom: Running License: Stopped	Messages (Last 24 Hours) Warn: 0 Error: 0 Fatal: 0	Licenses Canary Historian: 5,000 Tags (206/331) Axiom: 2 Users (110/331) Excel Add-In: 1 Users (306/331) OPC Collector: Licensed (219/331)	Admin Remote Enabled: True Users Allowed: 0 Users Disabled: 0 Service Version: 20.1.0.20080 Client Version: 20.1.0.20080
Historian DataSets: 3 Licensed Tags: 27 Handles (R/W): 0 / 34 Updates/Sec: 14.9 Version: 20.1.0.20080	Receiver Sessions: 0 Tags: 0 Updates: 0 Updates/Sec: 0 Errors: 0 Version: 20.1.0.20080	Sender Sessions: 0 Tags: 0 Buffer: 0 Store/Sec: 0 Send/Sec: 0 Errors: 0 Version: 20.1.0.20080	Logger Sessions: 0 Tags: 0 Logging: 0 Version: 20.1.0.20080
OPC Collector Sessions: 0 Groups: 0 Tags: 0 Logging: 0 Version: 20.1.0.20080	Views Clients: 0 Views: 1 Security Enabled	Events Monitoring: 0 Checks in Last Min: 0 In Progress: 0 Last 24 Hours: 0 Total: 0 Version: 20.1.0.20080	Calculation Calculations active: 0 Writing to tags: 0 In Progress: 0 Calculated this hour: 0 Calculated today: 0 Version: 20.1.0.20080
Axiom Clients: 0 Browser: True Graphics: True Version: 20.1.0.20080	CyqNet Collector Divisions: 0 of 0 Tags: 0 TVQC: 0 Version: 20.1.0.20080	CSV Collector Directories: 0 Queued: 0 Processed: 0 Tags: 0 TVQC: 0 Version: 20.1.0.20080	SQL Collector Connections: 0 Tags: 0 TVQC: 0 Version: 20.1.0.20080
MQTT Collector Groups: 0 Connections: 0 Tags: 0 TVQC: 0 Version: 20.1.0.20080			

Under **Configuration > Endpoints**, select every checkbox, but do not change the port numbers.



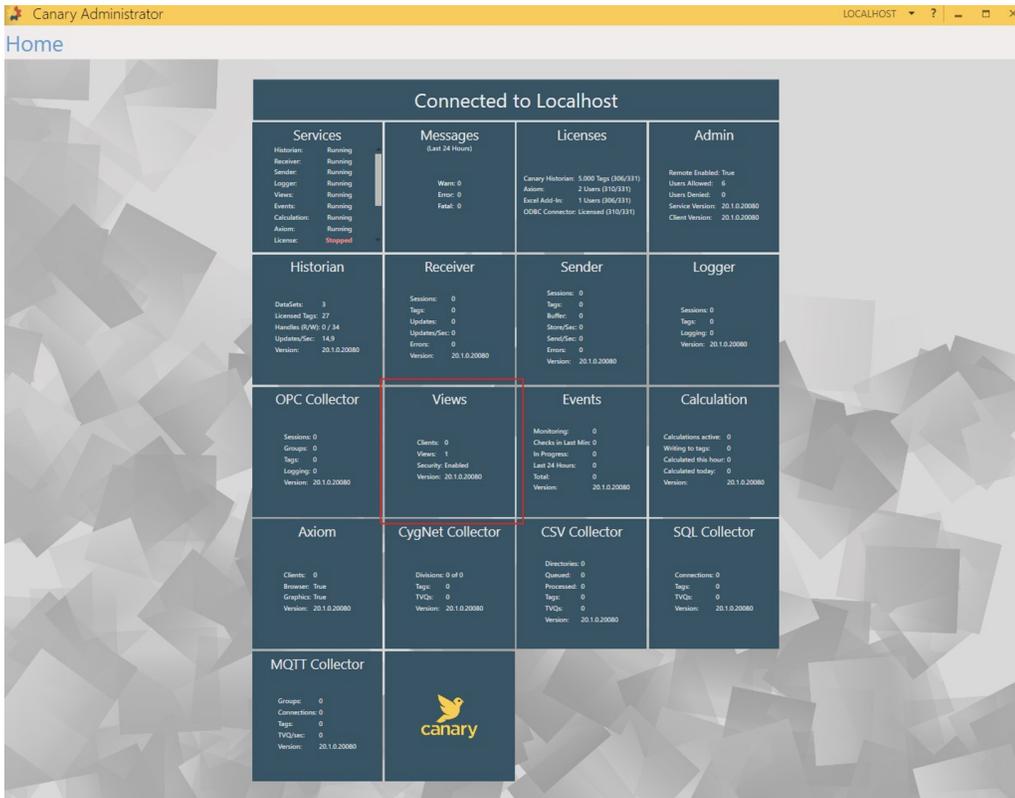
Under **Configuration > Access**, add all the users that will be allowed to write in the Canary Historian. E.g.:

- *Anonymous*
- *System*
- *Administrator*
- *Interactive*
- *Everyone*
- *?Your User?.*

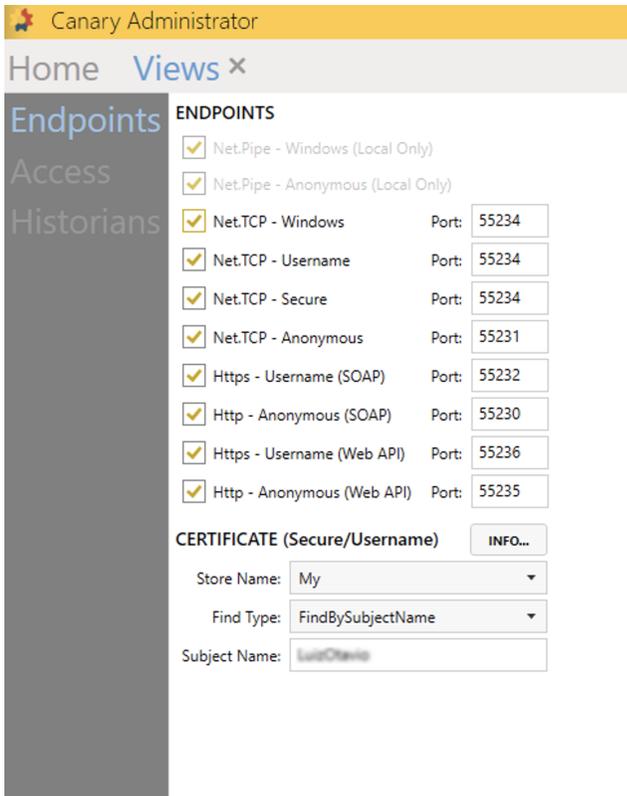


Views Configuration

Open the **Views** Tab.

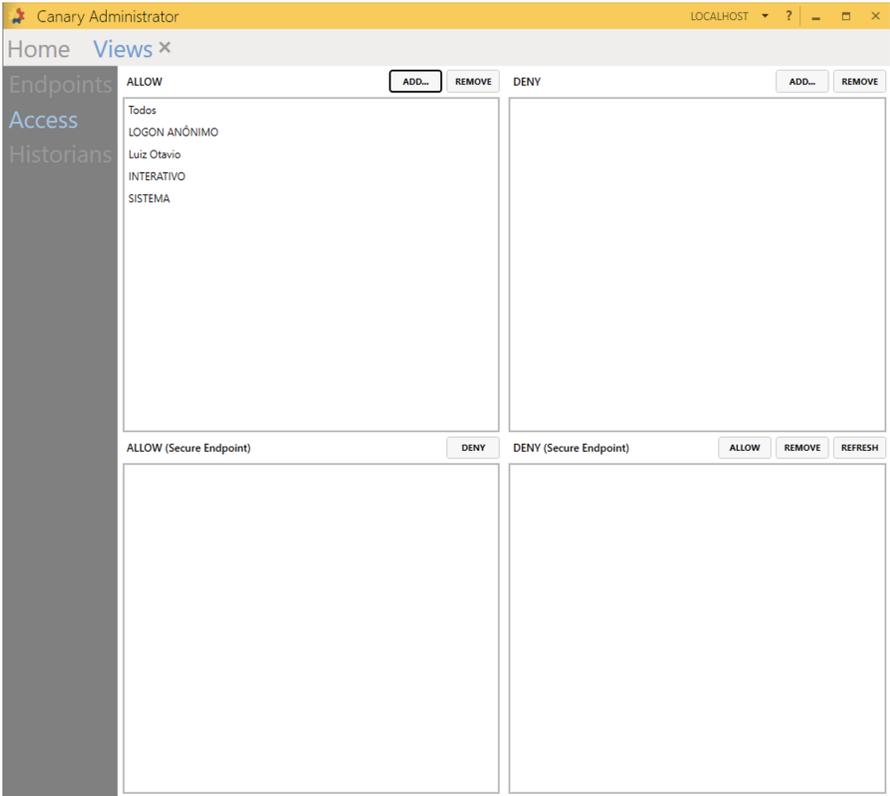


Under **Configuration > Endpoints**, select every checkbox, but do not change the port numbers.

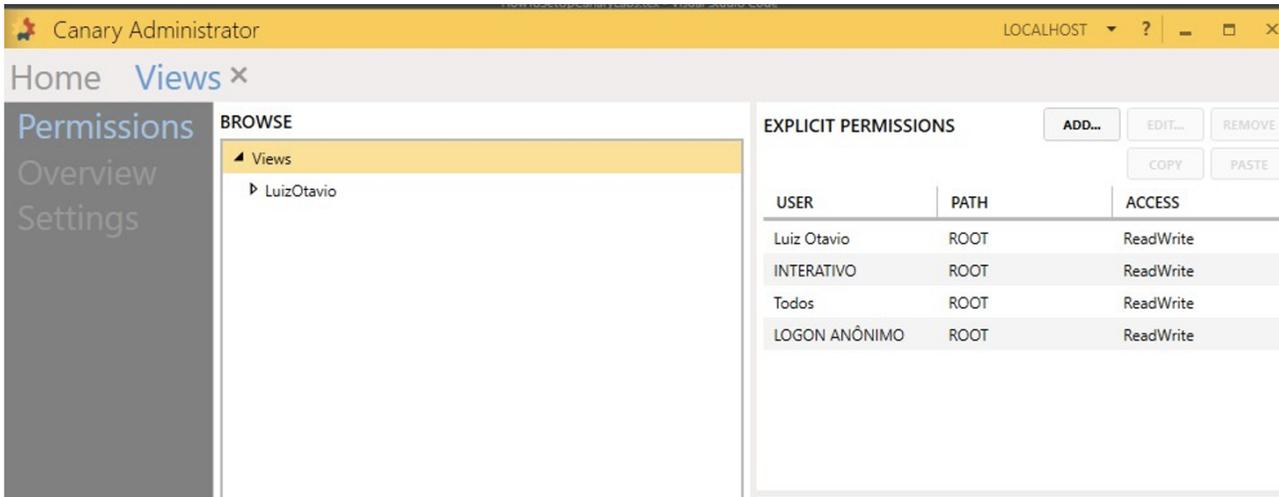


Under **Configuration > Access**, add all the users that will be allowed to write in Canary Historian. E.g.:

- *Anonymous*
- *System*
- *Administrator*
- *Interactive*
- *Everyone*
- *? Your User?.*



Under **Security > Permissions**, add the users for the Root path with the *ReadWrite* AccessType.



Under **Security > Settings**, make sure the *Security Enabled* checkbox is selected.

- Permissions
- Overview
- Settings

SETTINGS

Security Enabled