OMRON

Data Flow Controller DX-series

# Practices Guide

# SynapseSync Collector Generator

DX100-□□□□


V309-E1-01

# Revision History

| Version | Revised content | Date |
|---|---|---|
| Version 2.0 | Original production | September 26, 2025 |
| | Corrected the Dependent Modules. | February 27, 2026 |
| Version 2.1.0 | Added support for English UI display. | March 31, 2026 |

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## 1. About the SynapseSync Collector Generator Package

### 1.1.Overview

This package provides a custom component that runs with SpeeDBee Synapse (hereinafter referred to as Synapse).

By registering this package, you can use the Collector Generator.

The component automatically discovers a PLC device on the network and retrieves variable information from the PLC, enabling the automatic generation of a Synapse collector component that collects the target variables.

By using the Collector Generator, the series of tasks that were previously performed manually—from PLC connecting to collecting setting—can be automated, significantly improving the efficiency of collector setting work.

Currently, only OMRON NX-series Controllers (Ethernet/IP communication) are supported.

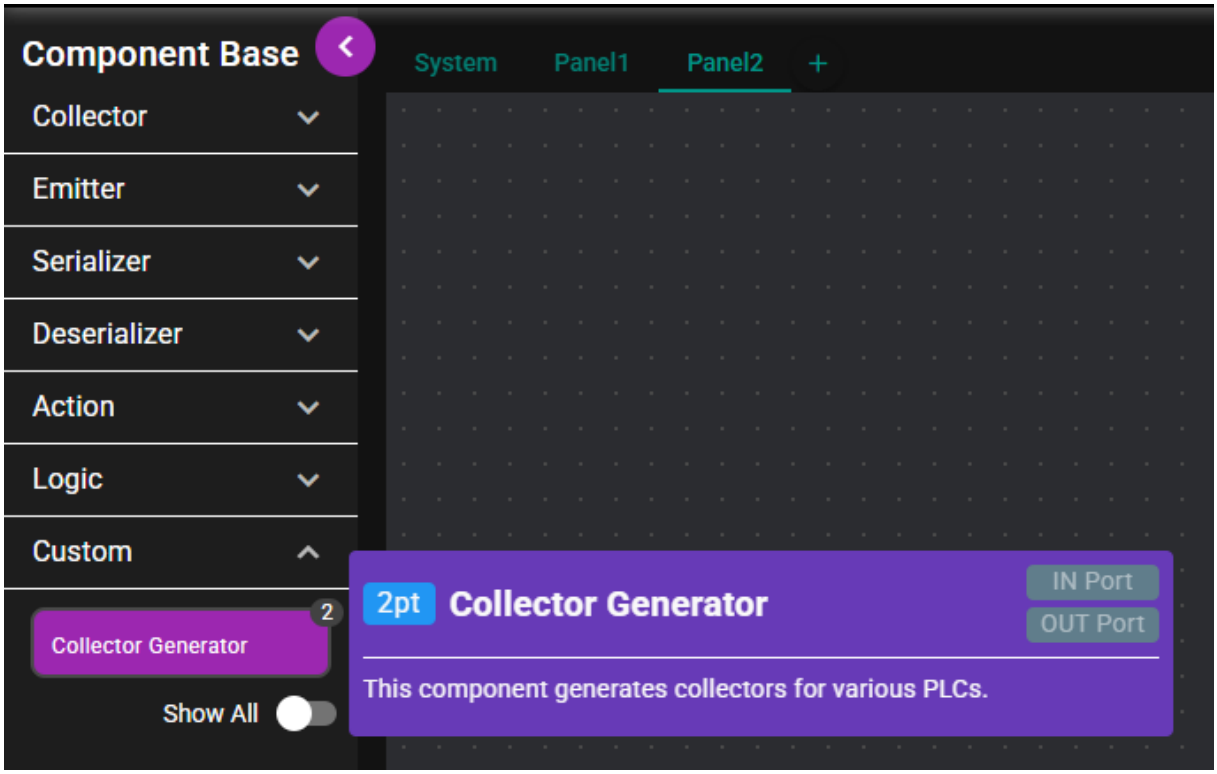
### 1.2.Basic Information About the Package

The component package provided is as follows.

| | |
|---|---|
| Package file name (*1) | synapsesync_collector_generator.sccpkg |
| Operating environment | Platforms on which Synapse 4.9.5 or later is running |
| Component to be registered | • Collector Generator (*2) |

*1 Refer to *6.2.6.4 Registering SCCPKG File in and Deleting SCCPKG File from Synapse* in the *DX-series SpeeDBee Synapse User's Manual (Cat. No. V243)* for information on registering the package.

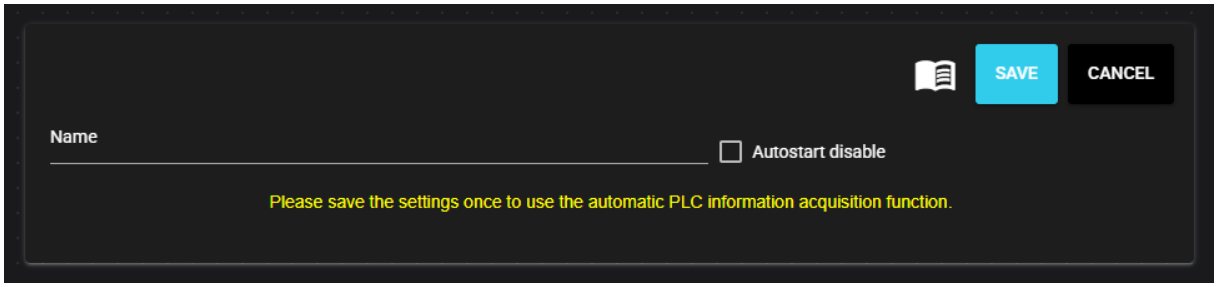
*2 The registered component will be displayed under the *Custom* category in the component list.



### 1.3.Setting Screens

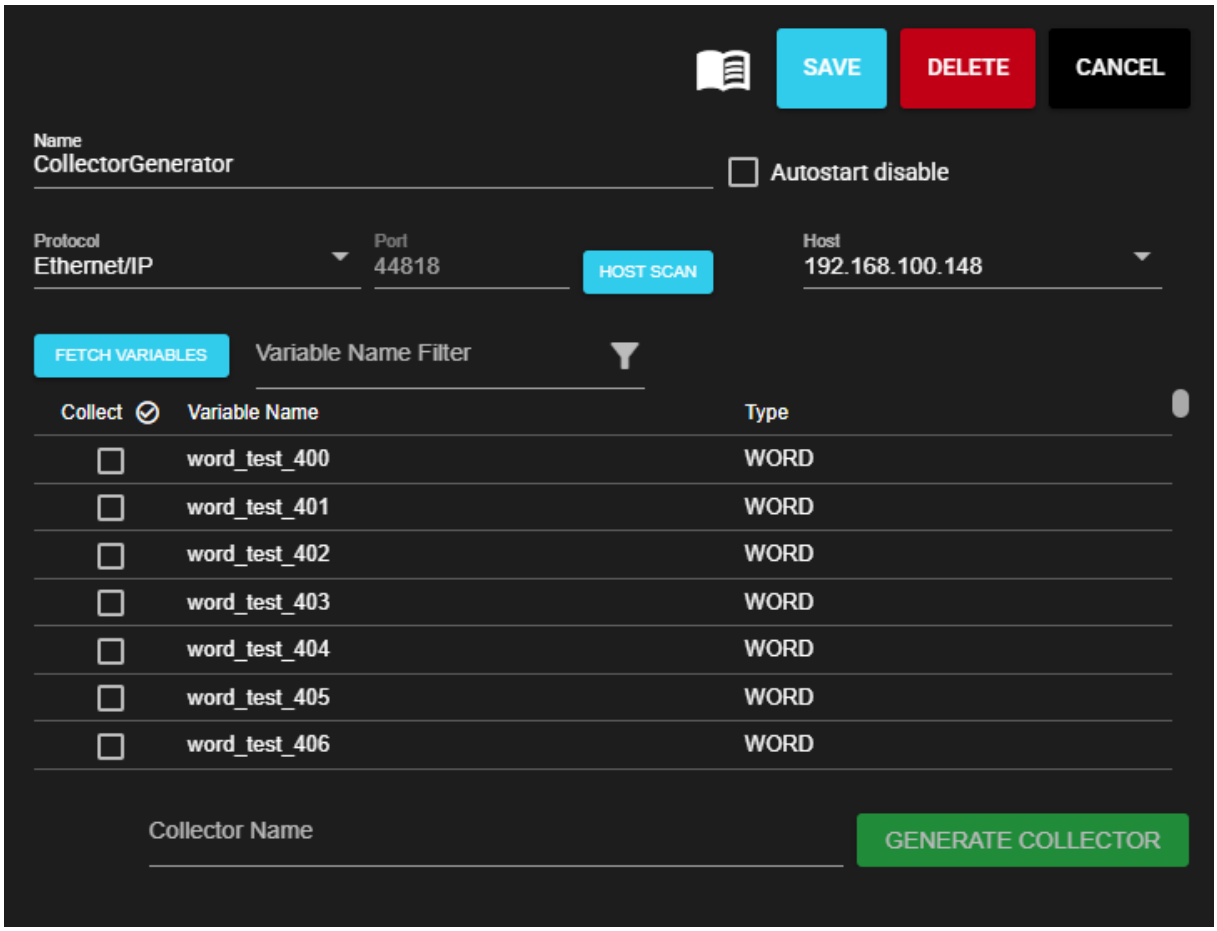
This section describes the setting items for the component.

#### 1.3.1.Settings Dialog for Initial Component Placement



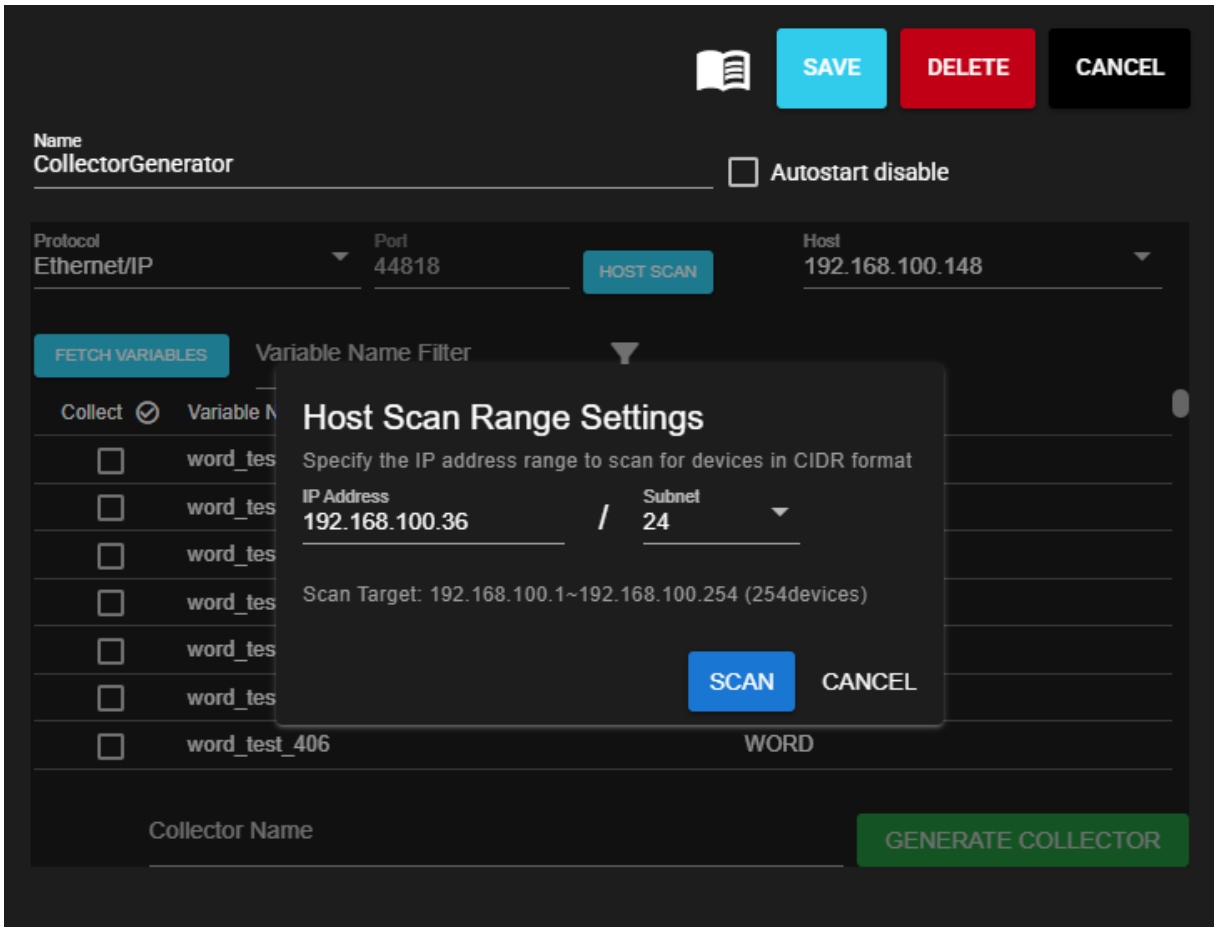

| Item | Description (Values in red are default values) |
|---|---|
| Name | Enter a component name.<br>* To use the PLC information acquisition function, the component must be placed on the panel in advance. |

#### 1.3.2.Settings Dialog After Component Placement



| Item | Description (Values in red are default values) |
|---|---|
| Protocol | Select the protocol for the PLC to be connected.<br>Ethernet/IP *Currently, only Ethernet/IP is supported. |
| Port | Enter the port for the PLC to be connected.<br>44818 *Currently, it is fixed to 44818, the default port for Ethernet/IP. |
| HOST SCAN button | Click this button to open the settings dialog to search for the PLC host. It switches to the **STOP SCAN** button during host scan. |
| Host | Enter the host of the PLC to be connected. Once the PLC is detected during host scan, it can be selected from the pulldown list. |
| FETCH VARIABLES button | Click this button to retrieve variables from the set host. It switches to the **STOP FETCHING** button during variable retrieval.<br>After variable retrieval is completed, the names and types of the variables, check boxes, and the Variable Name Filter input field are displayed. |
| Variable Name Filter | Enter a keyword to filter the retrieved variables by partial match. |
| Collection check box | Select variables to be collected by the collector. |
| Collect ✓ (Header) | A toggle to display only the selected variables. |
| Collector Name | Enter the name of the collector component to be generated. |
| GENERATE COLLECTOR button | Click this button to generate a collector component set with the specified host and target variables to collect, and place it on the Synapse panel, overlaid on this component. |

### 1.3.3.Host Scan Range Settings Dialog




| Item | Description (Values in red are default values) |
|---|---|
| IP Address | Enter the IP address to specify the network to be searched. By default, the IP address of the local device is automatically obtained. |
| Subnet | Select the subnet mask to determine the search range.<br>24 *Available options are /24, /23, and /22. |
| SCAN button | Click this button to determine the scan range based on the entered IP address and subnet, start host scan, and close the Host Scan Range Settings dialog. |
| CANCEL button | Click this button to close the Host Scan Range Settings dialog. |

### 1.4.Supplementary Information

#### 1.4.1.Dependent Modules

The packaged component depends on the following Python module.

• aphyt<=0.1.23

* A library for communicating with OMRON NX and NJ industrial PLCs and motion controllers using Ethernet/IP.

In Synapse 4.10 or later, the above module is installed automatically when the package is registered.

In Synapse 4.9 or earlier, the module is not installed automatically, so it must be installed manually.

## 2.How to Use This Component

This section describes how to use the component provided by this package. Register the package in Synapse before using the component.

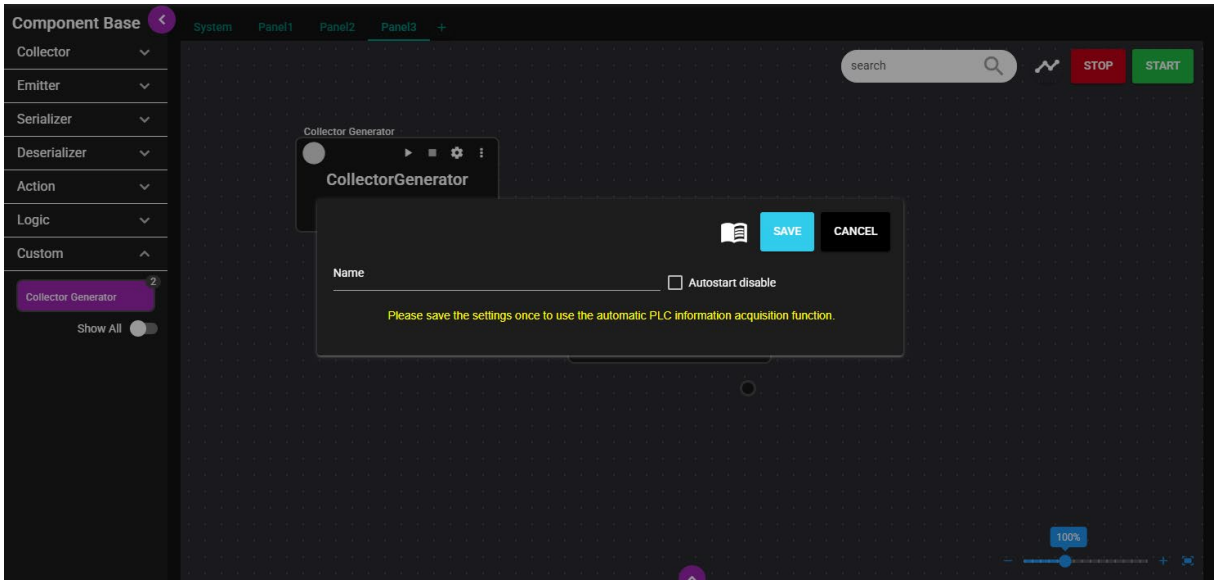
* Refer to *6.2.6.4 Registering SCCPKG File in and Deleting SCCPKG File from Synapse* in the *DX-series SpeeDBee Synapse User's Manual (Cat. No. V243)*.

- SynapseSync Collector Generator (This package)

### 2.1.Setting of Components

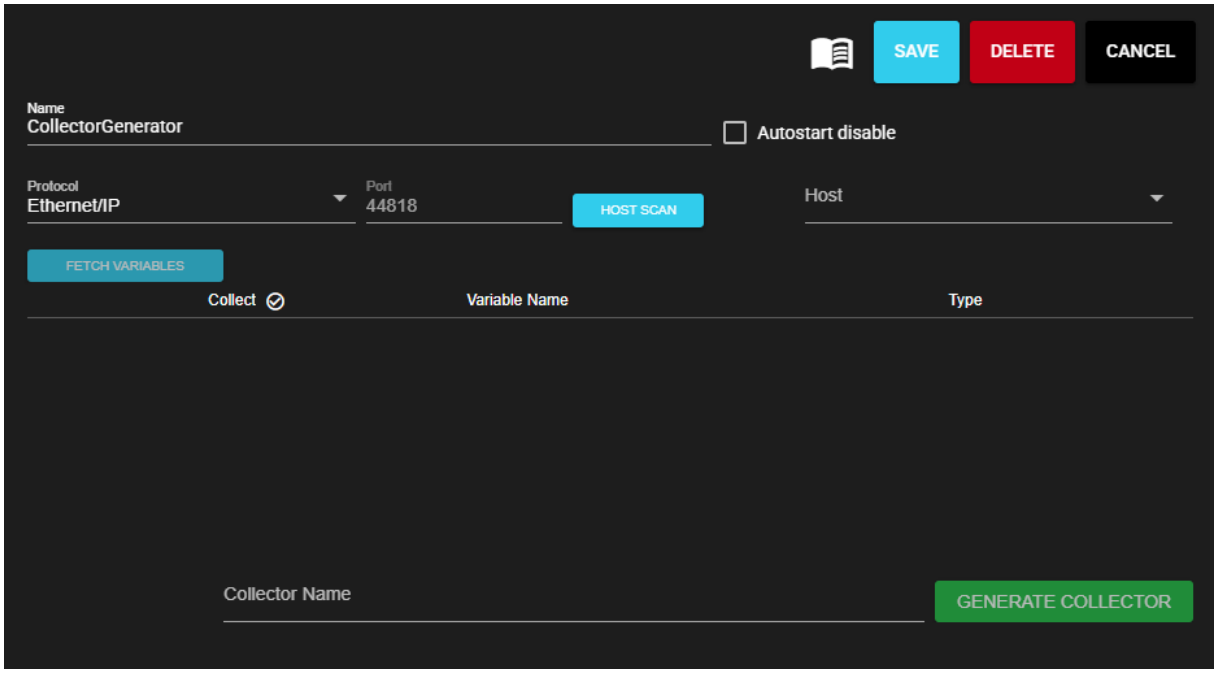
Place this component on the Synapse panel.

When the component is placed for the first time, the message *Please save the settings once to use the automatic PLC information acquisition function.* is displayed. Enter any name that does not conflict with other components and save the settings.



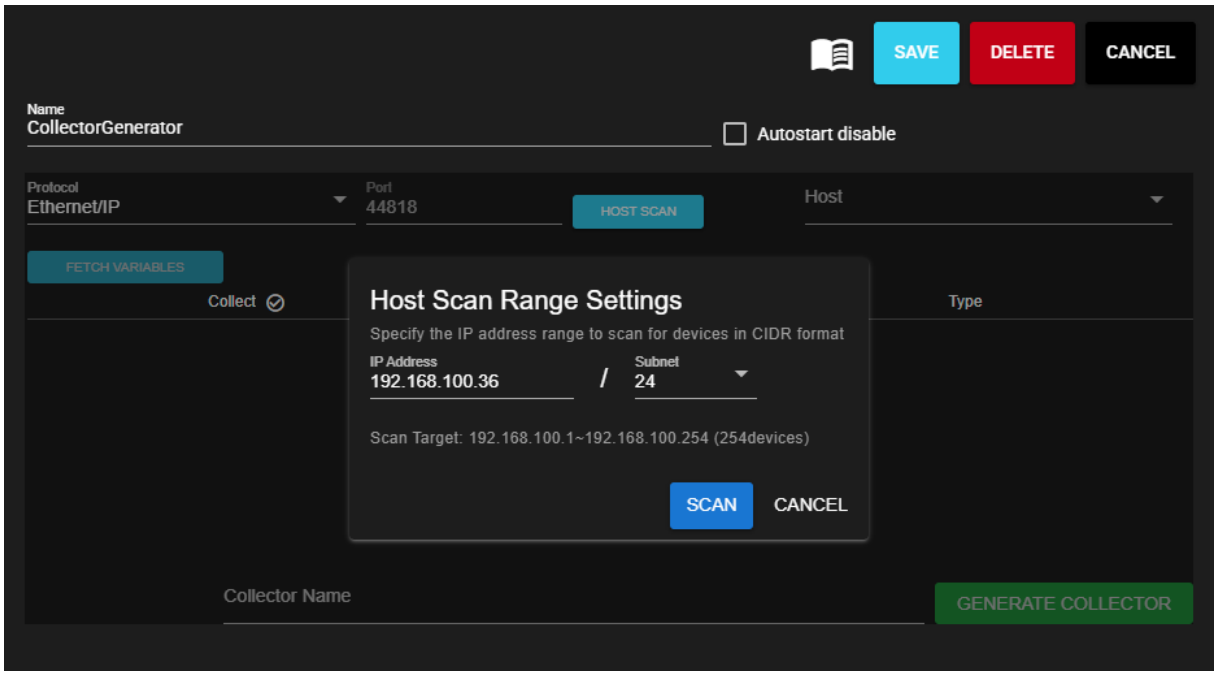
### 2.1.1.Automatic PLC Information Acquisition Settings

When you reopen the settings of the component placed on the panel, the following dialog is displayed.

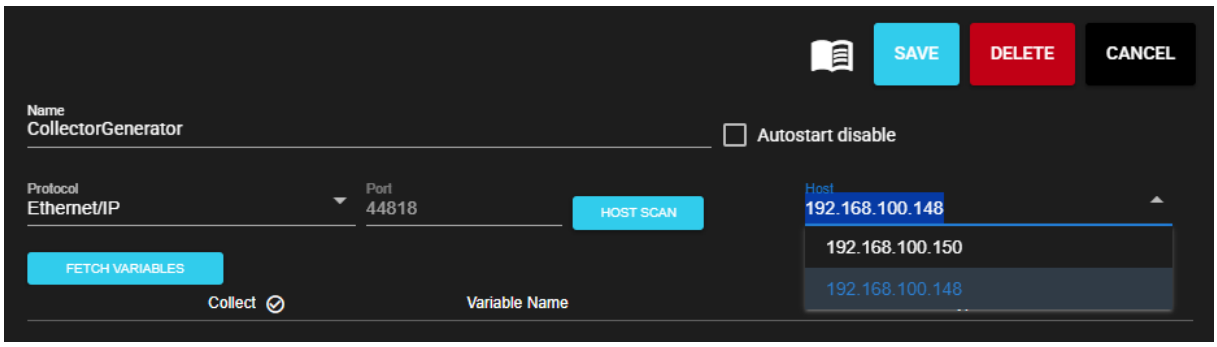



(1) With the protocol (Ethernet/IP) and port (44818) left at their default values, click the **HOST SCAN** button to open the Host Scan Range Settings dialog.

* Currently, the protocol and port cannot be changed.

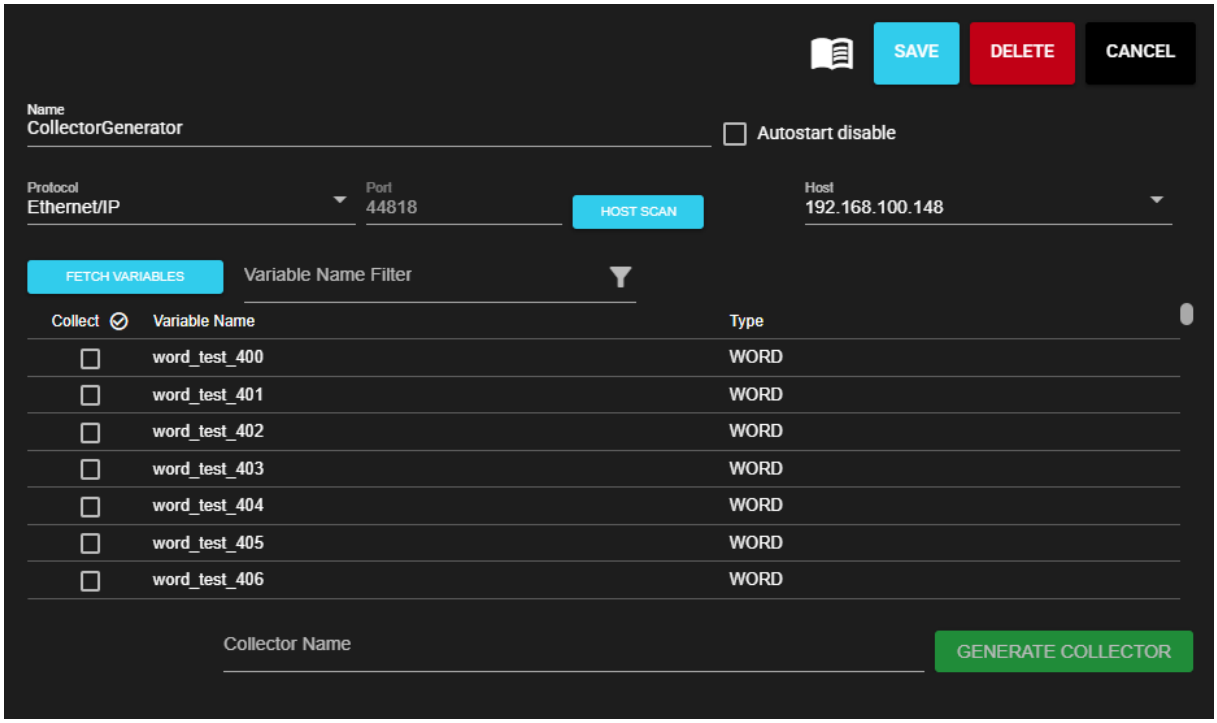


(2) Set the search range so that it includes the target PLC, then click the **SCAN** button to start host search. Once the PLC is detected, it becomes selectable from the pulldown list in the host input field.




(3) Select the host of the target PLC and click the **FETCH VARIABLES** button to start retrieving variables. When the process is completed, the variable information is displayed.

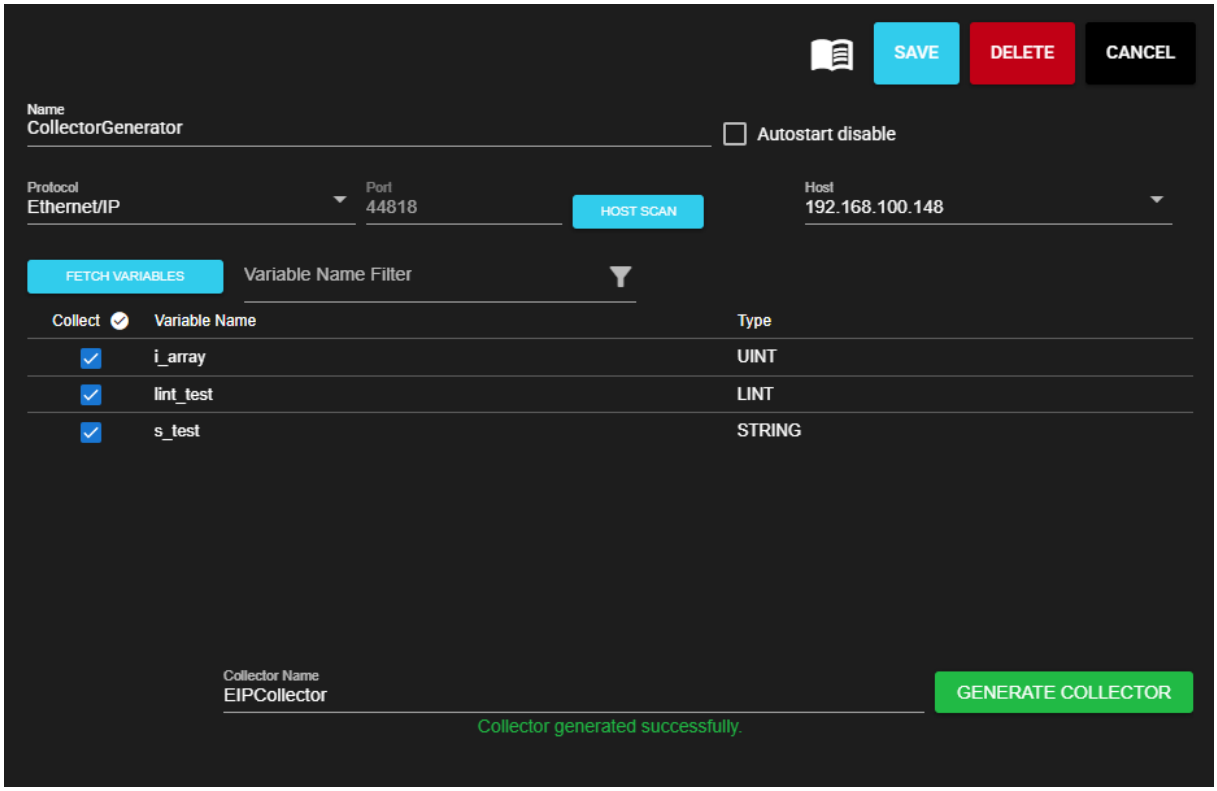
* You can also enter the host manually without using host search.



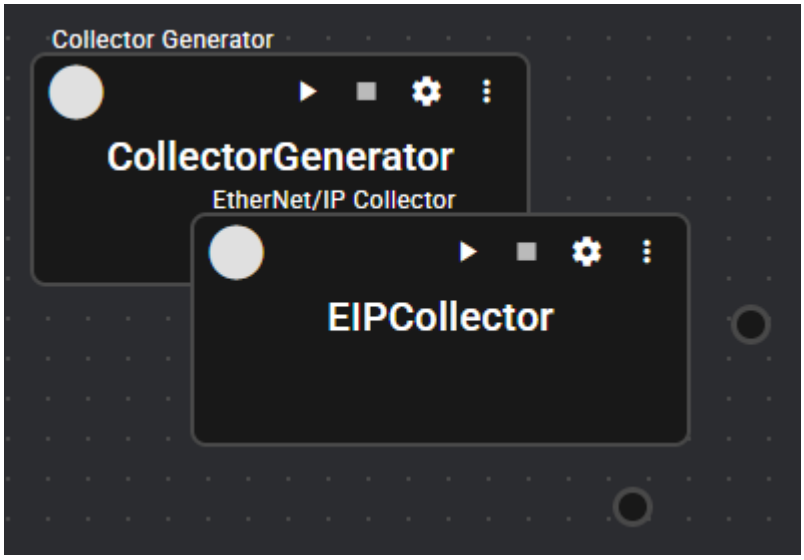
### 2.1.2.Collector Generation

(1) From the retrieved variable information, select the target variables to collect by checking the corresponding check boxes. Then, enter a desired collector name that does not conflict with other components in the Collector Name input field, and click the **GENERATE COLLECTOR** button.

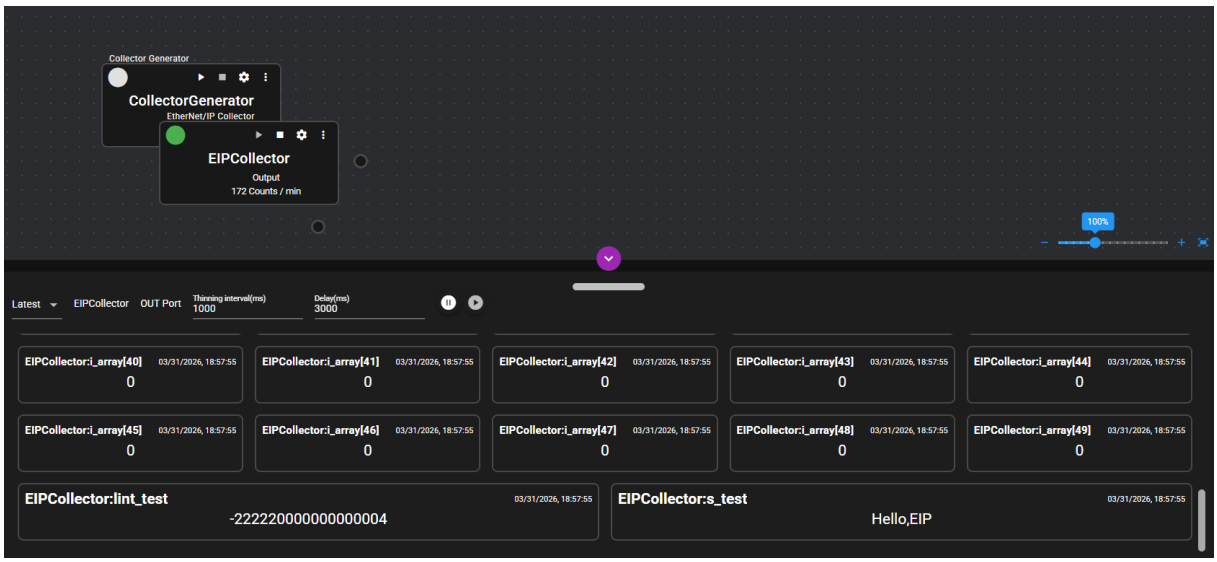
* You can confirm the variables to be collected by clicking **Collect ✓** in the header.




(2) When you close the component settings dialog, you can confirm that the collector component has been generated.



(3) Start the generated collector and left-click the output port to display the monitoring area. You can view the values of the variables set as collection targets.



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