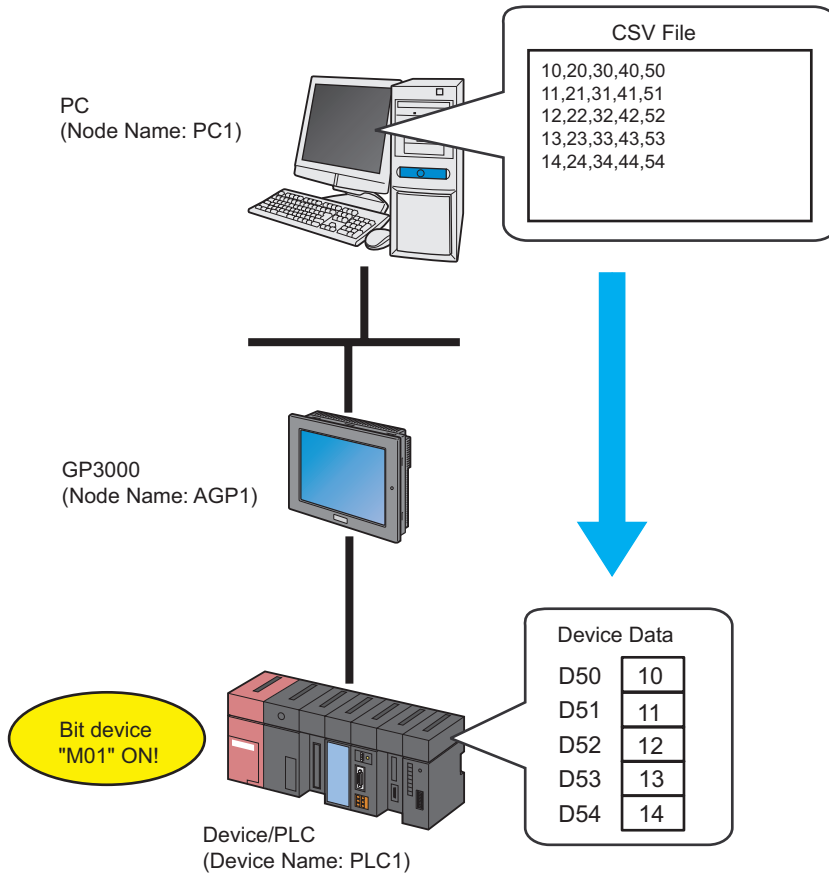


12.1 Try to Write CSV File Data in Device/PLC

[Action Example]

Detect the rising of the device (bit device: "M01") of Device/PLC and write the first column data of a CSV file on PC into the devices (word device: address "D50" to "D54") of Device/PLC.



This section describes the setting procedures for executing the above action (ACTION) as an example.

[Setting Procedure]

| | | |
|-----------|---|---|
| 1 | Creating a CSV Data File (Recipe) | This step creates a CSV data file containing a recipe to write in a Device/PLC device. |
| ↓ | | |
| 2 | Starting 'Pro-Studio EX' | This step starts 'Pro-Studio EX'. |
| ↓ | | |
| 3 | Registering Entry Nodes | This step registers the PC and the GPs as entry nodes. |
| ↓ | | |
| 4 | Registering Symbols | This step registers as a symbol the device of Device/PLC which serves as a trigger condition (trigger) and also a data write destination. |
| ↓ | | |
| 5 | Parameter Setting for Feature (ACTION) | This step sets the following items: Write Destination Readout File Readout Detail Settings |
| ↓ | | |
| 6 | Setting Trigger Conditions | This step sets conditions (trigger) for executing data write. |
| ↓ | | |
| 7 | Setting Data Received by ACTION | This step sets the device of Device/PLC where data is written. |
| ↓ | | |
| 8 | Setting ACTION Node/Process Completion Notification | This step sets the name of an ACTION node and the alert setting whether it should be tuned on or off when the ACTION is completed. |
| ↓ | | |
| 9 | Verifying Setting Result | This step verifies setting results on the setting content list screen. |
| ↓ | | |
| 10 | Saving a Network Project File | This step saves the current settings as a network project file and reloads. |
| ↓ | | |
| 11 | Transferring a Network Project File | This step transfers a saved network project file to the GP. |
| ↓ | | |
| 12 | Executing ACTION | This step verifies that CSV file data is written in the device of Device/PLC when the preset trigger condition has become effective. |

12.1.1 Creating a CSV Data File (Recipe)

1 Create a recipe sheet.

[Creation Example]

```
10, 20, 30, 40, 50  
11, 21, 31, 41, 51  
12, 22, 32, 42, 52  
13, 23, 33, 43, 53  
14, 24, 34, 44, 54
```

2 Save it on PC desktop with the file name "CSVdata.csv" after creating.

12.1.2 Starting 'Pro-Studio EX'

This step starts 'Pro-Studio EX'.

Refer to "3 Trial of Pro-Server EX" for details about starting method.

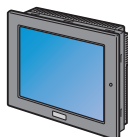
12.1.3 Registering Entry Nodes

This step registers the PC and the GP connected with network as nodes.

Refer to "29 Node Registration" for details about entry nodes.



Node Name :PC1
 IP Address :192.168.0.1



Node Name :AGP1
 IP Address :192.168.0.100

Device/PLC Information

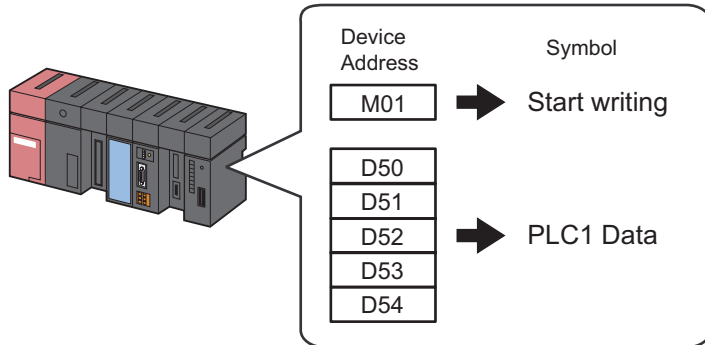
Ex.

| Entry Node | Setting item | Setting example |
|------------|--------------|-----------------|
| PC | Node Name | PC1 |
| | IP Address | 192.168.0.1 |
| GP | Type | GP3000 series |
| | Node Name | AGP1 |
| | IP Address | 192.168.0.100 |

12.1.4 Registering Symbols

This step registers as a symbol the device of Device/PLC which serves as a trigger condition (trigger) and also a data write destination.

Refer to "30 Symbol Registration" for details about entry nodes.



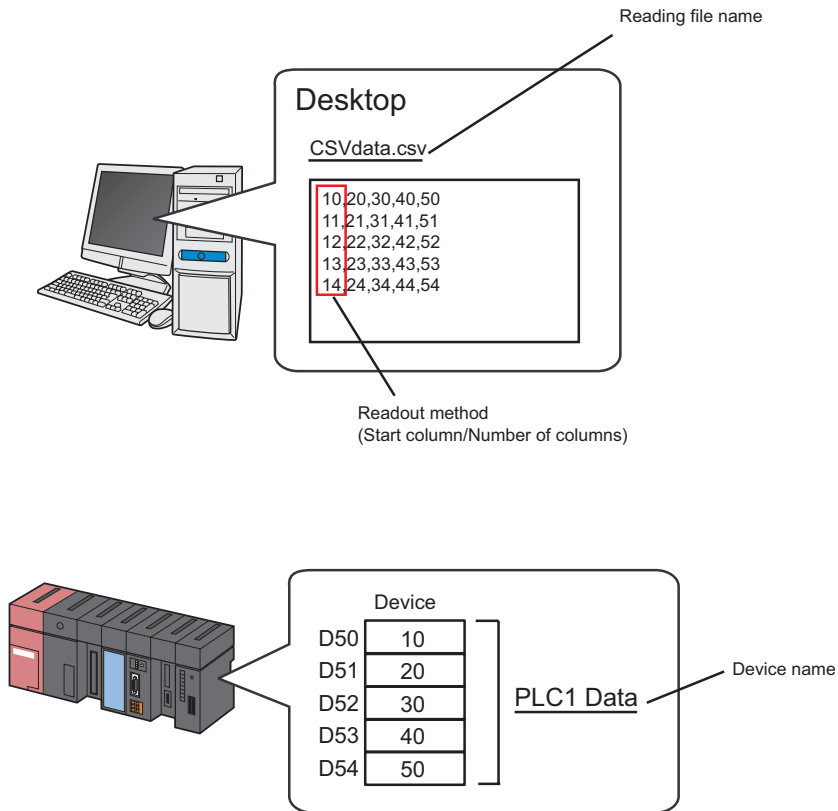
Ex.

| Setting item | Trigger (Trigger Condition) | Writing Device |
|--|-----------------------------|-------------------------------------|
| Symbol Name | Start writing | PLC1 data |
| Data Type | Bit | 16Bit (Signed) |
| Device address for symbol registration | "M01" of Device/PLC (PLC1) | "D50" to "D54" of Device/PLC (PLC1) |
| No. of Devices | 1 | 5 |

12.1.5 Parameter Setting for Feature (ACTION)

This step makes settings to write CSV file data in the device of Device/PLC. (parameter settings)

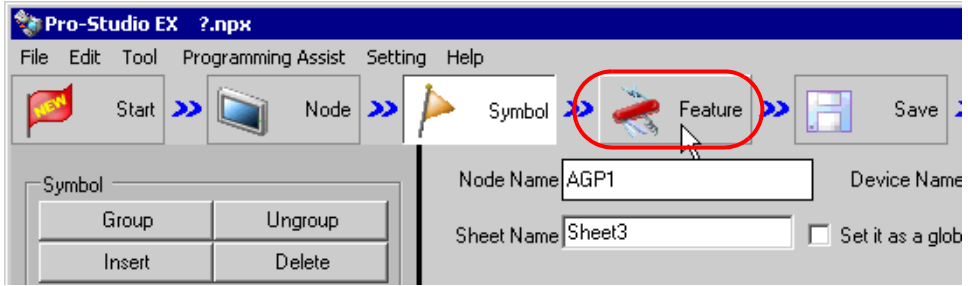
Refer to "12.2 Setting Guide" for more details about ACTION parameter.



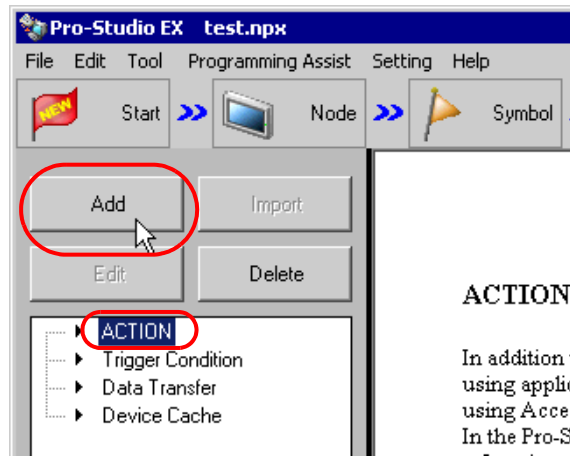
Ex.

| Setting item | | Setting content |
|-------------------|-------------------|-----------------|
| ACTION Name | | CSV download |
| Write Destination | Node Name | AGP1 |
| | Device Name | PLC1 data |
| | Data Type | 16bit (Signed) |
| Readout File | Readout File Name | CSVdata.csv |
| | Readout Method | All the Column |
| | Start Column | 1 |
| | No. of Columns | 1 |

- 1 Click the [Feature] icon on the status bar.



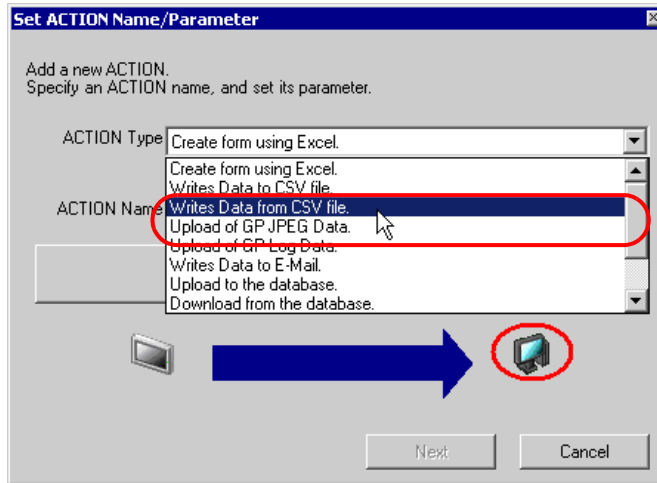
- 2 Select [ACTION] from the tree display on the left of the screen, then click the [Add] button.



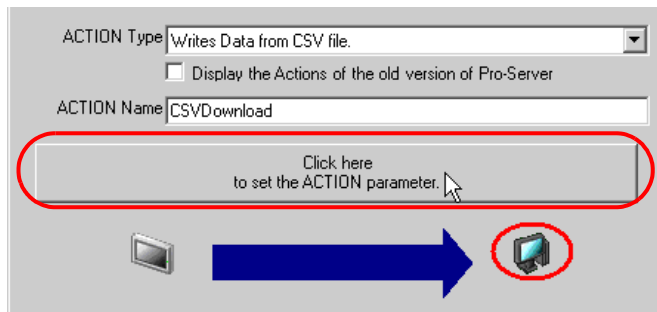
3 Click the [ACTION Type] list button, and select "Writes Data from CSV file".

Then, enter the name of ACTION to set in the [ACTION Name] field. In this example, enter "CSVDownload".

NOTE • [ACTION Name] can be an arbitrary name.

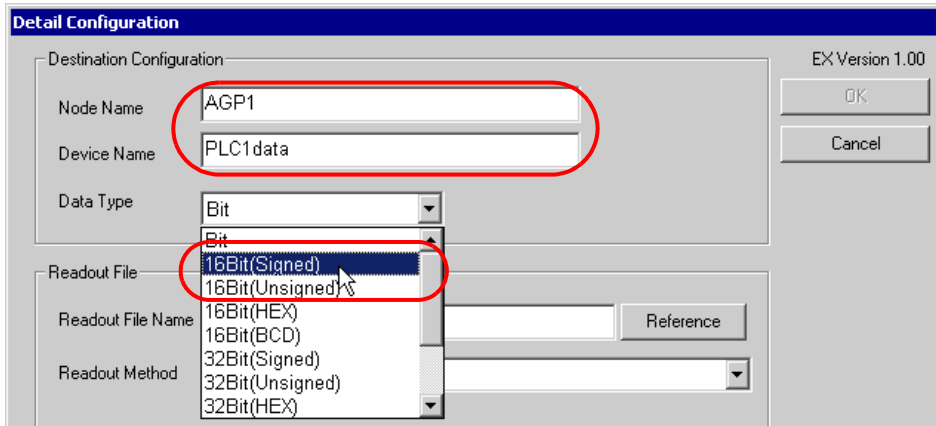


4 Click the [Click here to set the ACTION parameter] button.



5 Make settings regarding the data write destination (device of Device/PLC).

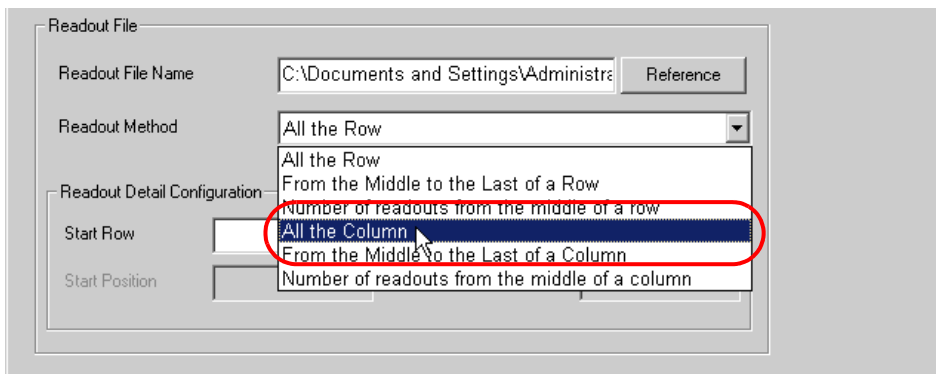
- 1) Enter the node name "AGP1" in [Node Name] for the data write destination. Also, click the [Data Type] list button, and select "16Bit(Signed)" as the data type of "PLC1 data".



- NOTE**
- Enter the node name and device name in the text box. You can directly enter the symbol name or device address in [Device Name].
 - When you specify the device address of GP3000 Series Nodes, specify the device name together. (Example) [PLC1]D0100 [#INTERNAL]LS0200 etc.
 - When you copy & paste the symbol name from the symbol sheet, copy the symbol name in the [Edit Symbol] dialog box by Ctrl + C.

6 Make settings regarding the CSV file from which data is read out.

- 1) Click the [Reference] button of [Readout File Name] and, on the "Select File" screen, specify the CSV file "CSVdata.csv" to read data from, .
- 2) Click the list button of [Readout Method] and select "All the Column".



- NOTE**
- You can choose a data read out method of CSV files among 6 types.
- ☞ " Readout Method and Detail Settings"

3) Enter "1" in [Start Column] of [Readout Detail Settings] and "1" in [No. of Columns].

The image shows a dialog box titled "Readout Detail Configuration". It contains four input fields arranged in a 2x2 grid. The top-left field is labeled "Start Row" and contains the value "1". The top-right field is labeled "Number of Rows" and also contains the value "1". The bottom-left field is labeled "Start Position" and is empty. The bottom-right field is labeled "Number of Readouts" and is empty. Red circles are drawn around the "1" in both the "Start Row" and "Number of Rows" fields.

NOTE

- Items to set in [Readout Detail Settings] vary depending on the readout method selected in procedure 2.

☞ " Readout Method and Detail Settings"

7 Click the [OK] button.

This is the end of the feature (ACTION) settings.

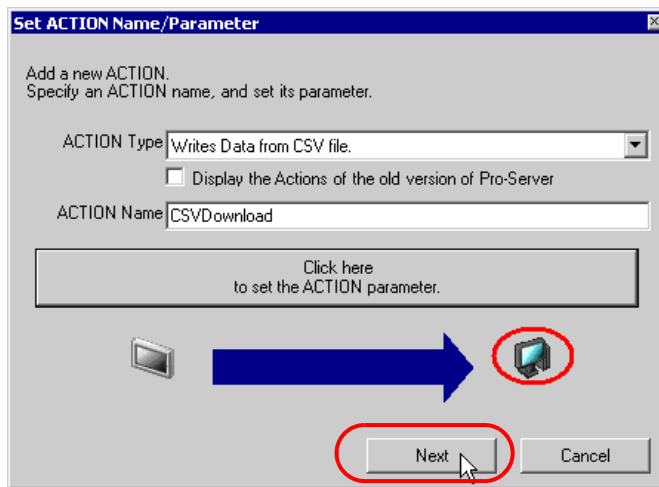
12.1.6 Setting Trigger Conditions

This step sets a trigger condition (trigger bit ON) to read out device data.
 Refer to "31 Trigger Conditions" for details about trigger conditions.

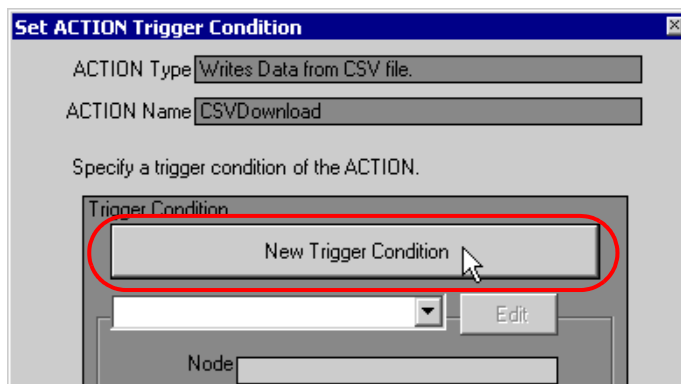
Ex.

- Trigger Condition Name: Turn on write start bit
- Trigger Condition : When "Start writing" (M01) is ON

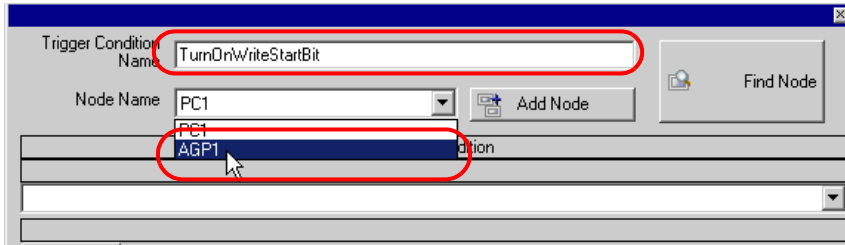
1 On the "ACTION Name/Parameter Settings" screen, click the [Next] button.



2 Click the [New Trigger Condition] button.



- 3 Enter the trigger condition name "Turn on write start bit" in [Trigger Condition Name], and select "AGP1" in [Node Name] which has the device to serve as the trigger condition (trigger).

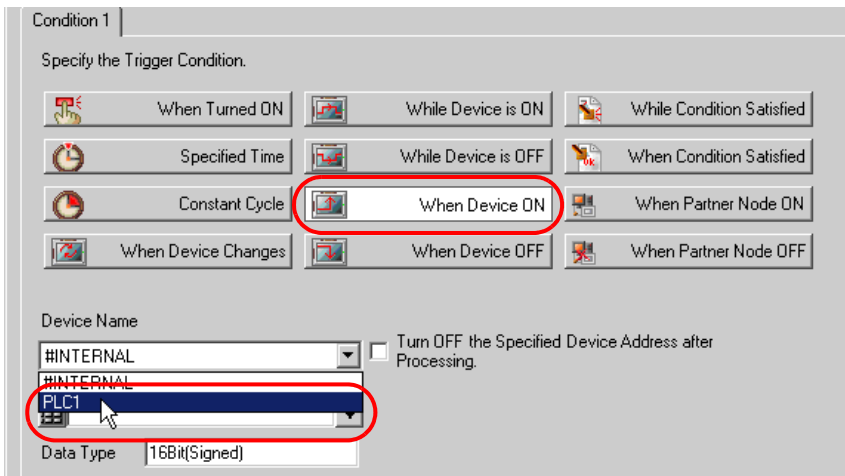


NOTE

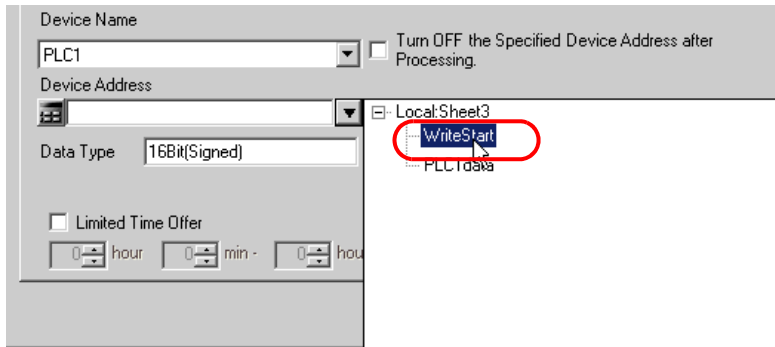
- Here, you are to specify the node having the device to be the trigger condition or having data to transfer.

☞ "31 Trigger Conditions"

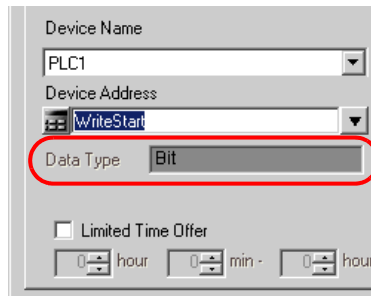
- 4 Click the [When Device ON] button in the [Condition 1] tab and select "PLC1" for the device name.



5 Click the [Device] list button and select "Start writing" for the symbol name of the device which serves as the trigger.



[Data Type] automatically appears after selection, too.



NOTE

- You can also set trigger conditions by combining 2 different types of conditions ("And" condition or "Or" condition).

☞ "31 Trigger Conditions"

6 Click the [OK] button.

This is the end of trigger condition settings.

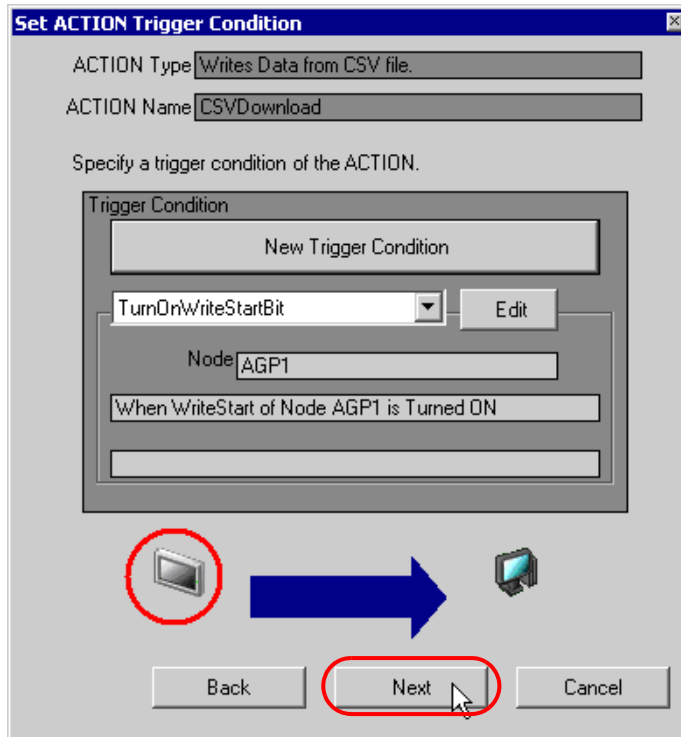
12.1.7 Setting Data Received by ACTION

This step sets data to transfer in ACTION.

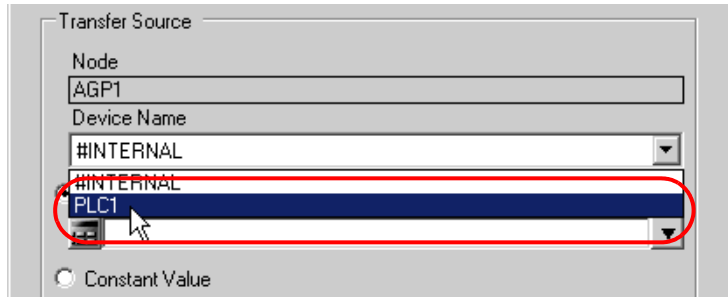
Ex.

- Device Name as Transfer Source: PLC1
- Transfer Destination Device: PLC1 symbol "PLC1 data"

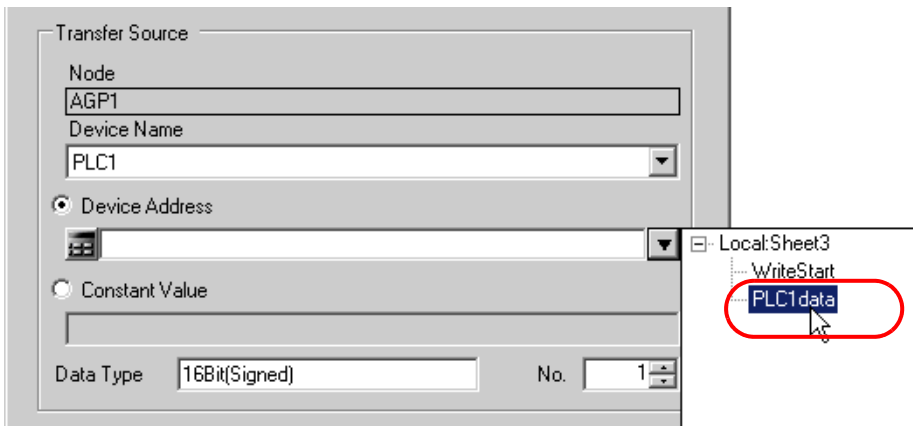
1 On the "Set ACTION Trigger Condition" screen, click the [Next] button.



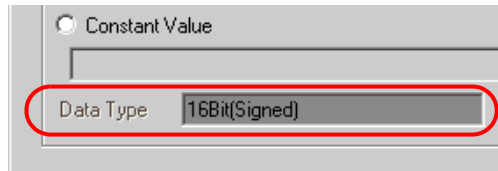
- 2 Click the list button of [Device Name] and select "PLC1" for the Device/PLC to which data is written.



- 3 Click [Device Address] and then the list button to select "PLC1 data" for the symbol name of the Device/PLC "PLC1" to which data is written.



[Data Type] automatically appears after selection, too.



NOTE • You can transfer any constant number instead of device values.

This is the end of the setting of data received by ACTION.

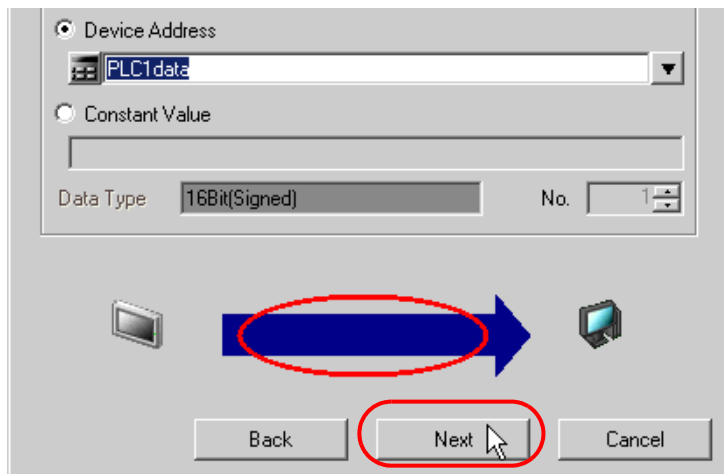
12.1.8 Setting ACTION Node/Process Completion Notification

This step sets the name of an ACTION node and the alert setting whether it should be turned on or off when the ACTION is completed.

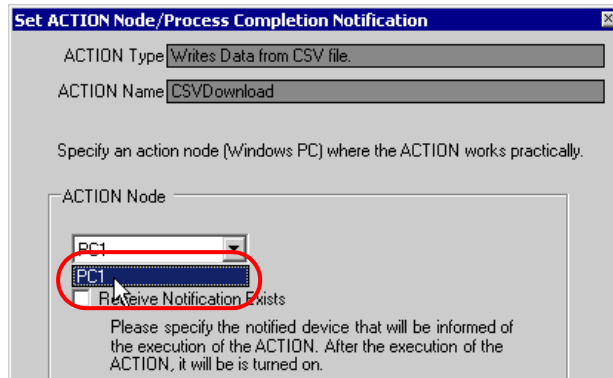
Ex.

- ACTION Node : PC1
- Receive Notification: OFF

1 On the "Set Data Received by ACTION" screen, click the [Next] button.



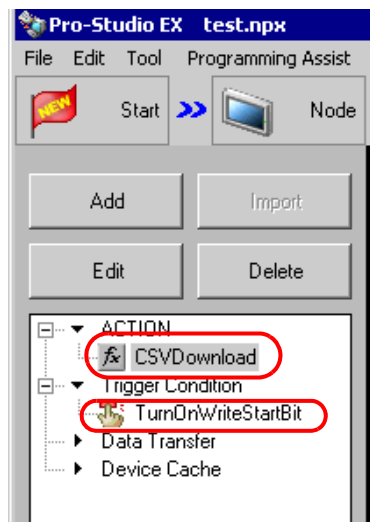
- Click the list button of [Action Node] and select "PC1" as a node where ACTION operates. Also, clear the check if [Receive Notification Exists] has been checked.



NOTE • When "Receive Notification" is turned on, the specified bit device will be turned on when the ACTION is completed. This can be used as a trigger condition (trigger) of the subsequent ACTION when you want to execute two or more ACTIONS sequentially.

☞ "31 Trigger Conditions"

- Click the [End] button.
The "ACTION Node/Process Completion Notification Settings" screen will disappear. On the left of the screen, the ACTION and trigger condition names you set will appear.

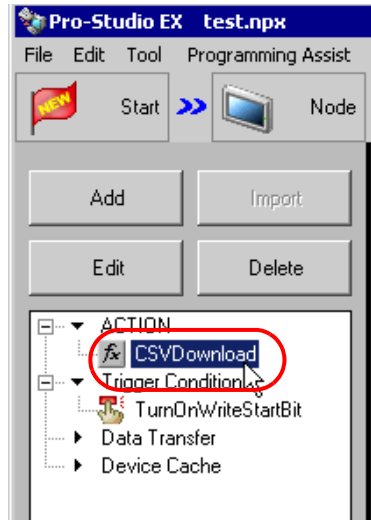


This is the end of the settings of the ACTION node and process completion notification.

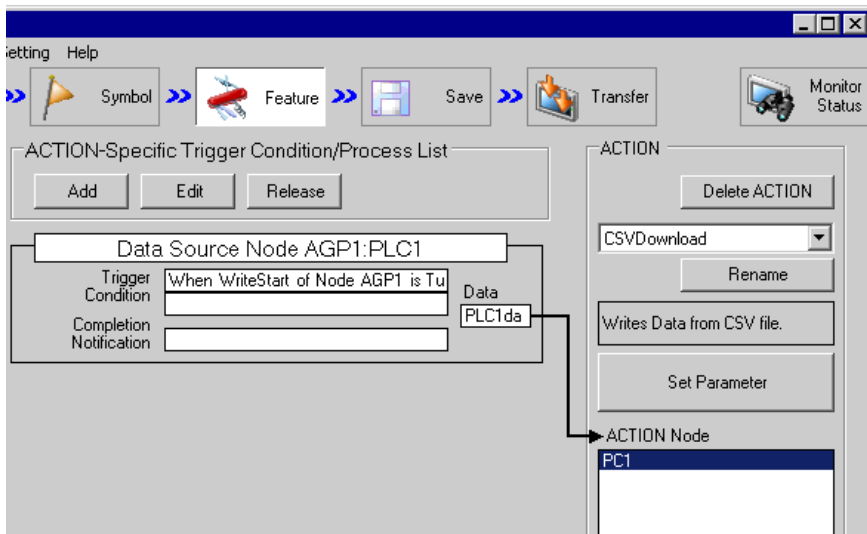
12.1.9 Verifying Setting Result

This step verifies setting results on the setting content list screen.

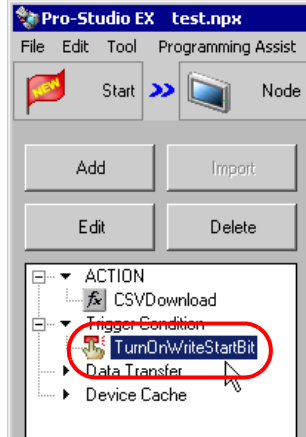
- 1 Select the ACTION name "CSV Download" from the tree display on the left of the screen.



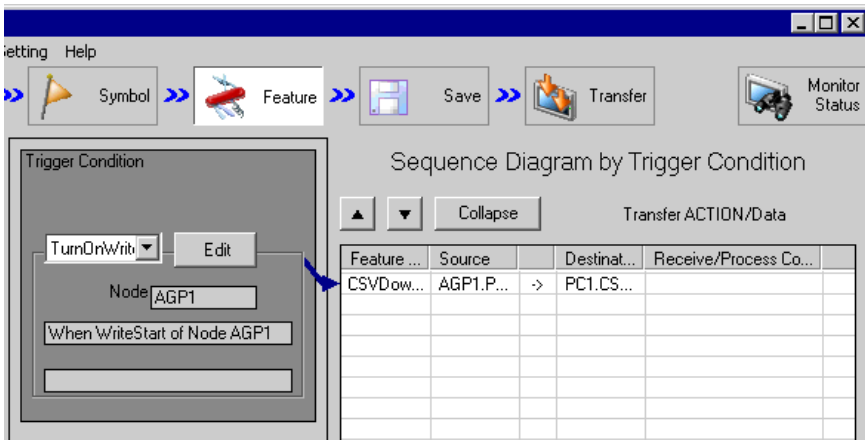
Confirm that the setting content appears on the right of the screen.



2 Select the trigger condition name "Turn on write start bit" from the tree display on the left of the screen.



Confirm that the setting content appears on the right of the screen.



This is the end of the verification of the settings.

12.1.10 Saving a Network Project File

This step saves the current settings as a network project file.

Refer to "24 Saving" for details about saving a network project file.

IMPORTANT

- 'Pro-Server EX' reads a created network project file, and then executes ACTION according to the settings in the file. The settings therefore need be saved in the network project file.
 - Be sure to reload the network project file to 'Pro-Server EX'. If not, ACTION will not work.
-

Ex.

- Path of network project file : Desktop\CSV_download.npx
- Title : CSV download action

12.1.11 Transferring a Network Project File

This step transfers a saved network project file to entry nodes.

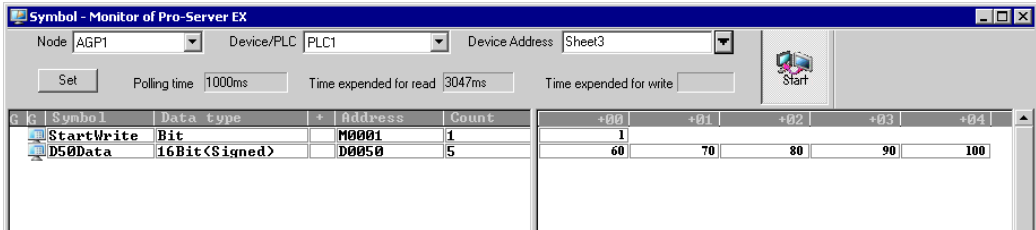
Refer to "25 Transferring" for details about transferring a network project file.

NOTE

- Be sure to transfer a network project file. If not, ACTION will not work.
-

12.1.12 Executing ACTION

This step verifies that data in the first column of a recipe sheet is written in the device of Device/PLC when the preset trigger condition has become effective.



NOTE • Check the actually written values with such function as monitor of rudder creation software.

This is the end of the explanation of this ACTION.