3 Trial of Pro-Server EX

3.1 Starting 'Pro-Studio EX' 3-2
3.2 Trial of New Form 3-10
3.3 Trial of Recipe Function 3-40
3.4 Trial of Logging Funtion 3-55
3.5 Trial of Send Mail Function 3-71

3.1 Starting 'Pro-Studio EX'

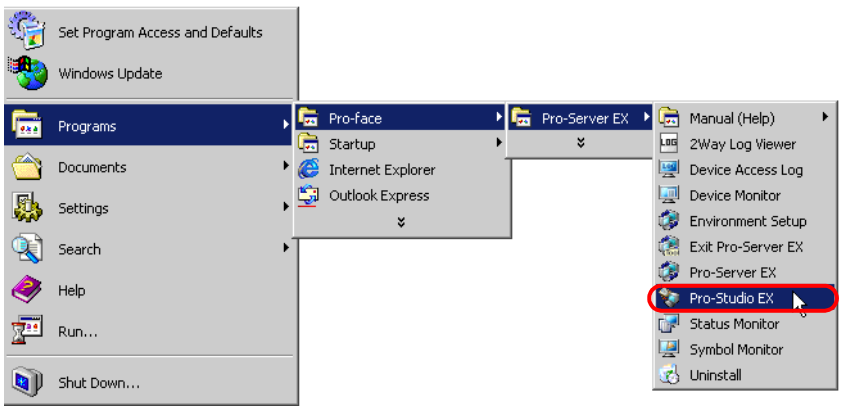
Operating the data management system using 'Pro-Server EX' requires network setting of the Device/PLCs and functions to be used (Network project file creation).
'Pro-Studio EX' is used to create a network project file.

After having set up, start 'Pro-Studio EX'.

3.1.1 Start 'Pro-Studio EX'

1 Turn on the PC power to start Windows.

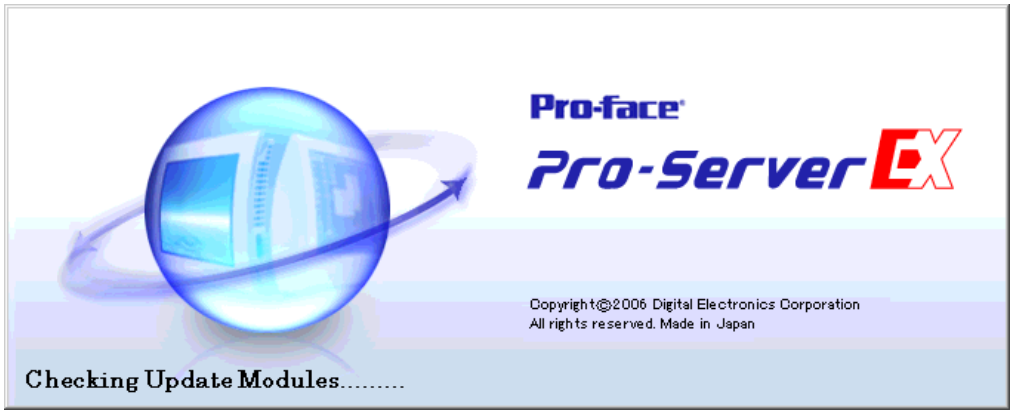
2 Click the [Start] button on the task bar. Point "All Programs" or "Programs" --- "Pro-face" --- and "Pro-Server EX", and then click "Pro-Studio EX".



'Pro-Studio EX' will start and the opening screen will appear.

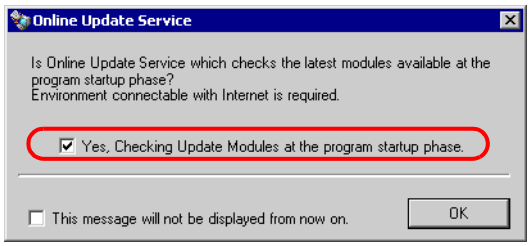
NOTE

- When you have a shortcut on the Desktop, you can also double-click the shortcut icon to start it.

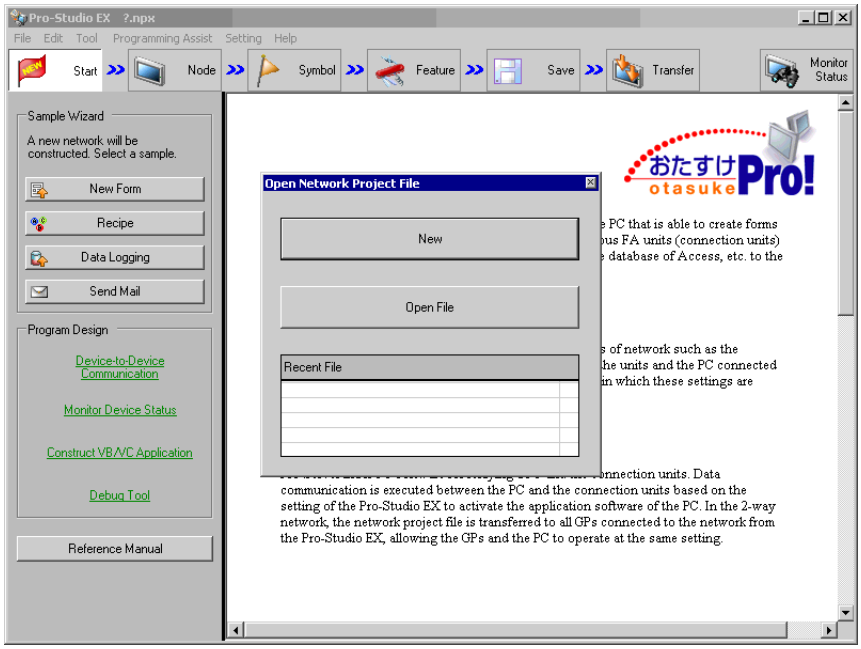


At the same time, the "Online Update Service" screen will appear.

When you receive the online update service, check "Yes, Checking Update Module at the program startup phase" and click [OK].



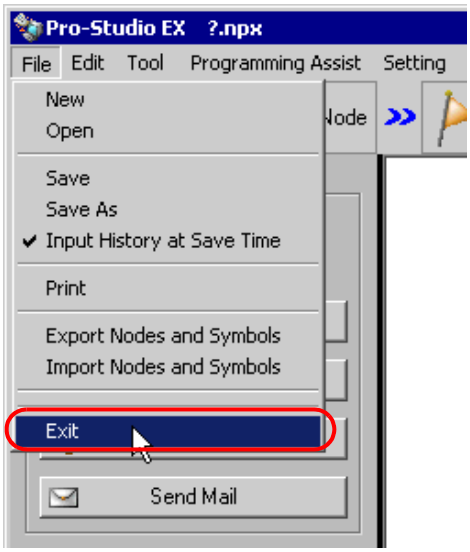
After a while, the start screen will appear with the "Open Network Project File" screen.



Then proceed to manipulate on the "Open Network Project File" screen.

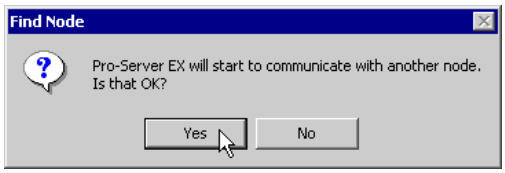
How to close 'Pro-Studio EX'

On the start screen, click "Files" on the menu bar, and select "Exit" from the pull-down menu.



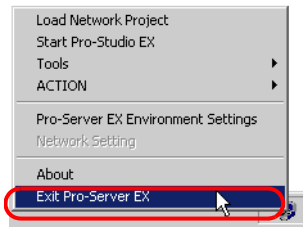
Startup of 'Pro-Server EX' (Normal Mode)

While operating 'Pro-Studio EX', if communication is required between the PC and the GP, the following message to request startup of 'Pro-Server EX' will appear.
In this case, click the [Yes] button and start 'Pro-Server EX'.



After 'Pro-Server EX' has started, the Pro-Server EX icon will appear in the task tray. 'Pro-Server EX' is always active (resident) unless you close it.

To close 'Pro-Server EX' (resident cancellation), right-click the icon in the task tray and select 'Close Pro-Server EX' from the menu.

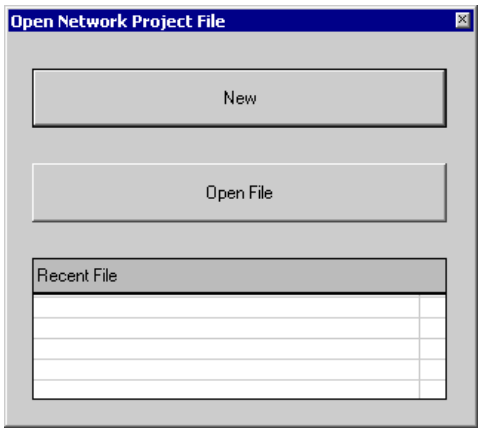


NOTE

- You can also start 'Pro-Server EX' as Windows service. Refer to "30 Starting 'Pro-Server EX' in the Service Mode" for more details.
- When you set the starting method of 'Pro-Server EX' to "Service Mode", it is different to how to close 'Pro-Server EX'. Refer to " 30.1.2 Starting and Closing 'Pro-Server EX' in the "Service Mode"" .

3.1.2 Selecting Network Project File

After the program has started, the "Open Network Project File" screen will appear in front of the start screen.



On this screen, choose whether to create a new network project file or use an existing network project file.

■ Creating New File

When you use 'Pro-Server EX' for the first time or you want to create a new network project file, click the [New] button.

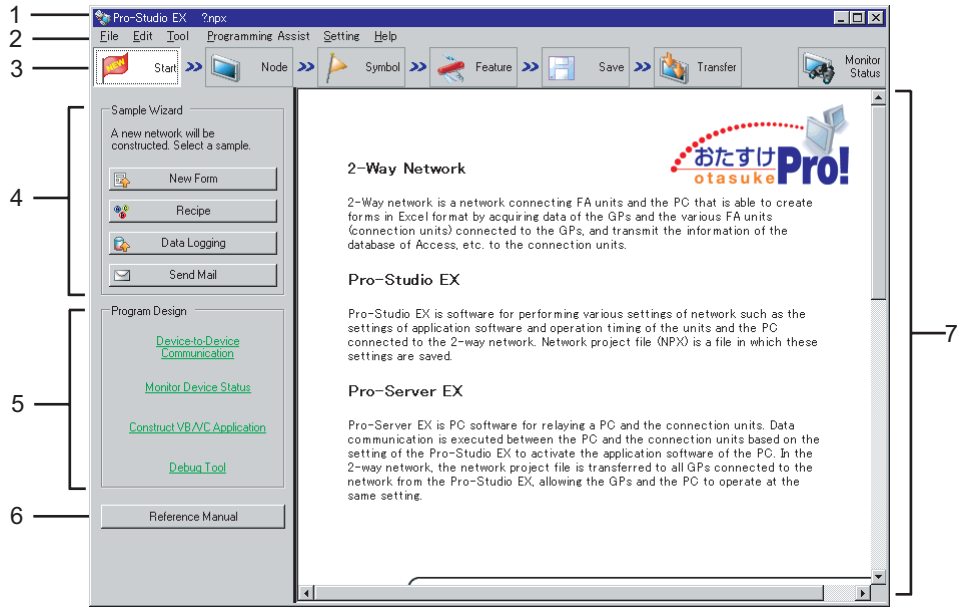
■ Using Existing File

When you want to use an existing network project file, click the [Open File], and select the file to use in the "Open Files" dialogue.
If you find the file name of the network project file you want to start on the list of "Recent File", click the file name on the list.
(Follow the same procedures above when you want to edit an existing network project file.)

The network project file you selected through the operations above will open, and the "Opening Network Project File" screen will close.

3.1.3 Start Screen of 'Pro-Studio EX'

The following explains about the start screen.



(1) Title bar

Displays the currently open network project file's name.

The file name of a new document is denoted as '? .npx'.

(2) Menu bar

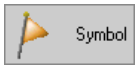
Displays the menu to be used to operate 'Pro-Studio EX'. Clicking this bar displays the pull-down menu.

(3) Status bar

Displays necessary setting items for creating a network project file in a form of icon. Clicking the icon displays the corresponding setting screen.

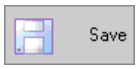
Clicking this icon displays the start screen. At an initial startup, the start screen will appear without clicking this icon.

Clicking this icon displays the entry nodes setting screen. You can register or delete entry nodes on this screen.



Clicking this icon displays the symbol setting screen. You can register, delete or group symbols on this screen.

Clicking this icon displays the feature setting screen. You can register or set an ACTION item and content of data transfer, as well as register cache on this screen.



Clicking this icon displays the save setting screen. You can save the network project file you set on this screen.

Clicking this icon displays the transfer setting screen. You can transfer the network project file you set to the GP from this screen.

Clicking this icon displays the monitoring setting screen. You can monitor the current status of the PC and the Device/PLCs on this screen.

(4) [Sample Wizard]

'Pro-Server EX' has built-in "Sample Wizard" that allows you to learn how to set frequently used ACTION items such as form creation and recipe.

Clicking each item button activates the 'Sample Wizard' corresponding to the clicked item, and the "Sample Wizard" screen will appear.

Pointing each item button with mouse cursor will display a guide to the wizard of the pointed item in the task area (7).

(5) [Program Design]

Displays a guide to setting items and operation procedures of useful features in programming.

Pointing each item button with mouse cursor will display a guide to the pointed item in the task area (7).

Clicking each item button displays a detailed guide to the clicked item.

(6) [Reference Manual]

Displays the 'Pro-Server EX Reference Manual' (this manual).

(7) Task Area

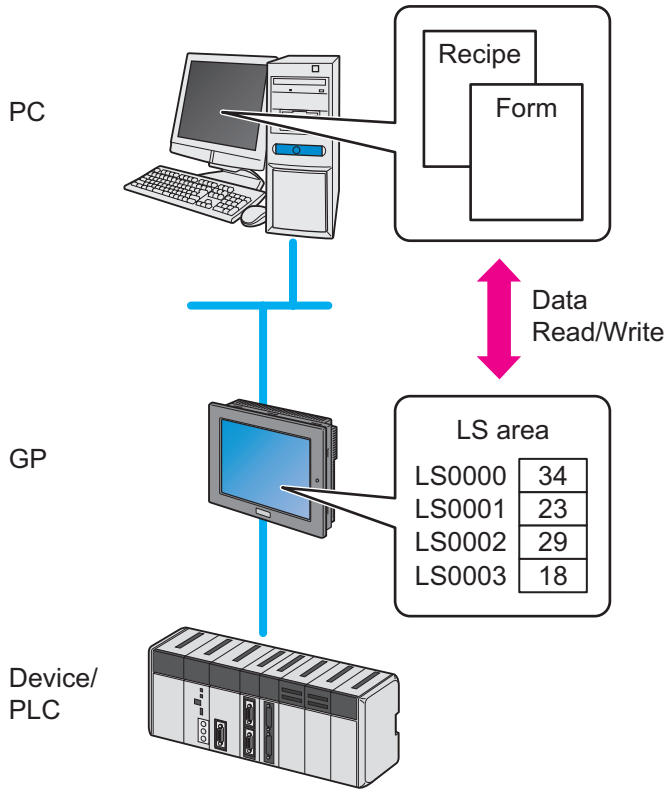
Displays the guide to each item pointed by mouse cursor. On the setting screen, this area is used as a setting area.

3.1.4 Before Learning

Device data to use in "Sample Wizard"

The "Sample Wizard" does not use device data of the Device/PLCs. Instead, it accesses to the memory space in the GP (referred to as "LS area") and performs read/write.

Before learning with the "Sample Wizard", ensure that the PC in which 'Pro-Server EX' is installed is connected to the GP as shown below.



NOTE You can use each menu to edit the contents set in the "Sample Wizard" after the wizard ends.

- Node --- "Node" Menu
- Symbol ---- "Symbol" Menu
- Trigger Condition, Feature (ACTION) --- "Feature" Menu

3.2 Trial of New Form

3.2.1 What is a New Form Function?

Pro-Server EX allows creating various forms including a management chart and a report according to the purpose by writing production data and measurement data read from the Device/PLCs into the pre-created form template in 'Excel'.

'Pro-Studio EX' is provided with approximately 30 kinds of form formats as "Form Templates".
These formats allow you to easily create various forms. The following shows one of those forms.

■ Production Management Chart (Tabular form)

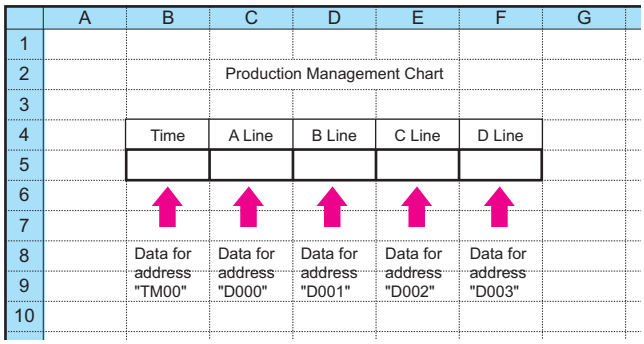
Production Management Board (per Day)

Time	Cumulative Planned Num.	Cumulative Result Num.	Result Num./H	Difference/H	Problems
Early Morning					
9	100				
10	200				
11	300				
12	400				
13	500				
14	600				
15	700				
16	800				
17	900				
Overtime					

You can edit the format of "Form Templates" as you desire using 'Excel'. You can also create a new template and add it to the existing templates.
For more details, see "5 Creating a Form Using Excel".

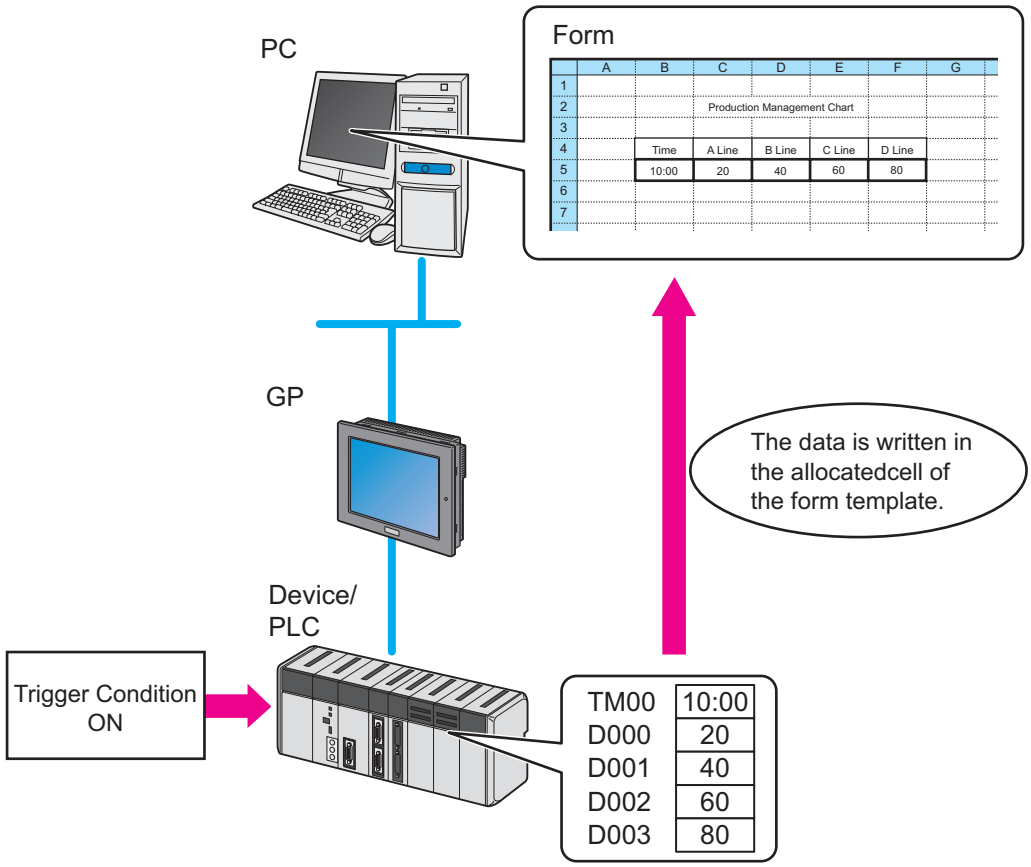
Flow of Form Creation

(1) Decide which device address data in the Device/PLC should be written in each cell of the form template in 'Excel'. Allocate each cell for the data beforehand.



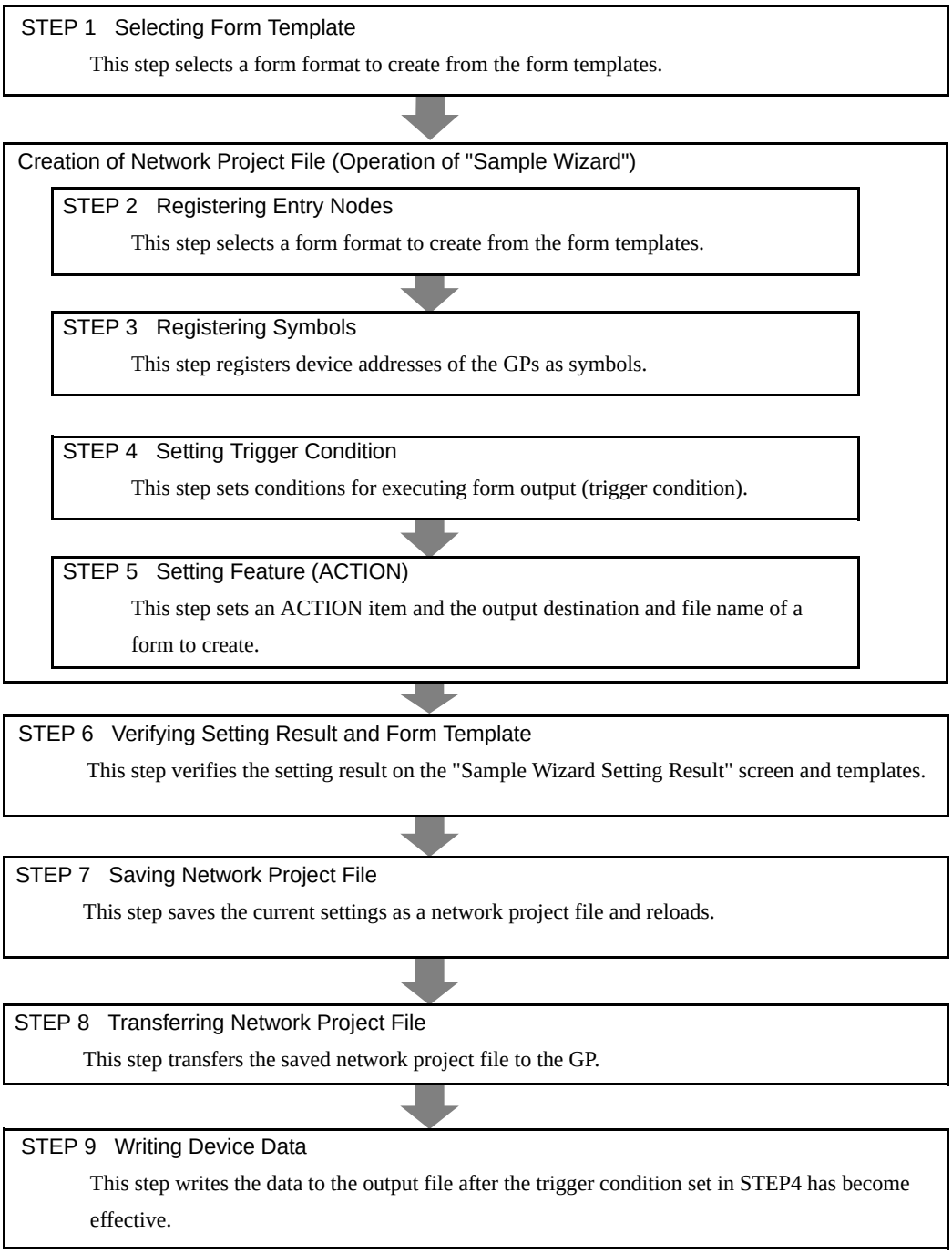
(2) Using 'Pro-Studio EX', execute action setting of the form creation function, including setting data of the device address to output and requirements for outputting forms.

(3) At a specific timing or at a specific interval, the data of each device address of the Device/PLC is written in the allocated cell of the form template.



3.2.2 Workflow from Settings to Form Creation

The following explains about the operation flow from setting to creating a sample form using the "Form Creation" wizard.



3.2.3 For 'Microsoft Excel 2007' Users

When using 'Microsoft Excel 2007', refer to the following notes.

■ Notes on Excel's Version Compatibility

In the "Form Creation" wizard, a template file is created with the extension (xls or xlt) for 'Microsoft Excel 2003' or older.

To use a function supported only by 'Microsoft Excel 2007' during edition of the template file created based on the "Form Creation" wizard, you need to save the template file as xlsx (xlsm) or xltx (xltm).

Save the template file again according to the following steps, since you cannot specify the extension to save it in the Form Creation Action.

1 Close the Excel Form Creation Action.

2 Check the template file with the following two points.

- Whether it includes the macro program or not
- File format (Book or Template)

3 Open the template file with 'Microsoft Excel 2007' and save it again using the extensions based on the table below.

Template File		Extensions used for saving	
Macro	File Format	With Excel 2007 functions	Without Excel 2007 functions
Not included	Book Format	Extension for the template: xlsx	Extension for the template: xls
		Extension for the output book: xlsx	Extension for the output book: xls
	Template Format	Extension for the template: xltx	Extension for the template: xlt
		Extension for the output book: xlsx	Extension for the output book: xls
Included	Book Format	Extension for the template: xlsm	Extension for the template: xls
		Extension for the output book: xlsm	Extension for the output book: xls
	Template Format	Extension for the template: xltm	Extension for the template: xlt
		Extension for the output book: xlsm	Extension for the output book: xls

4 Again, specify the file which has been saved again in step 3 as the template file in the Excel Form Action editing.

5 Set the extension for the output file according to the extension types above.

6 Edit the template file and save the Action.

NOTE

- Use the compatibility check function of 'Microsoft Excel 2007' to check that the form which has been created using the function only supported by 'Microsoft Excel 2007' can be opened with 'Microsoft Excel 2003' or older.
  Refer to "5.8 Compatibility between 'Microsoft Excel 2007' and 'Microsoft Excel 2003' or Older" for more details.

■ Notes on File Format

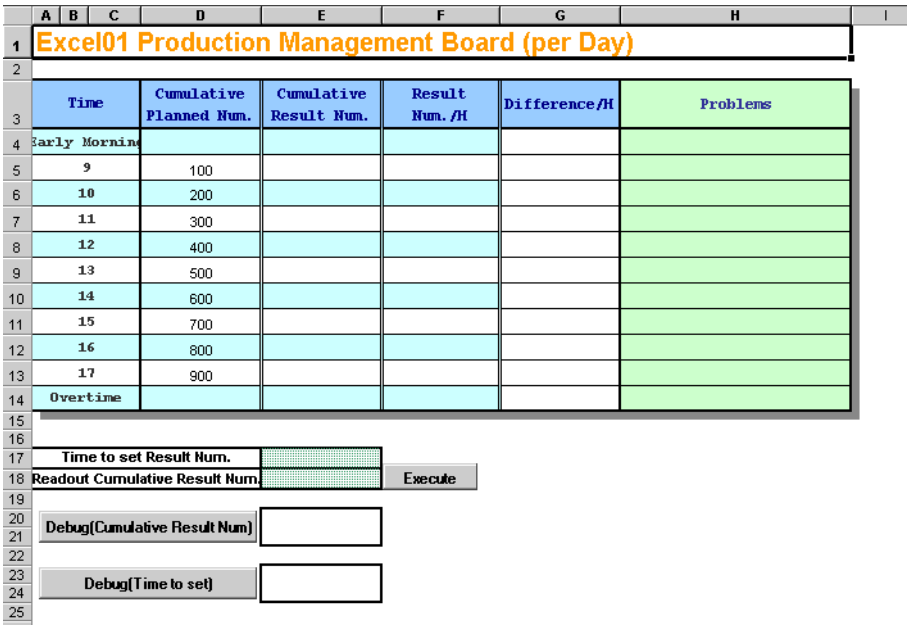
When using the following sample wizards with 'Microsoft Excel 2007' including the functions specific to 'Microsoft Excel 2007', you need to specify "xlsm" (book file format with macro enabled) as the extension for the output book.

- Setup Work Planning and Result Management Board
- Setup Work Transition Graph
- Monthly Equipment Short-Time Stop Transition Graph (daily/weekly/monthly/yearly)
- First Run Rate Transition Graph (daily/weekly/monthly/yearly)
- Reduction of Man-hour Transition Graph
- Production Process Stock Days Transition Graph
- Reduction of Production Cost Transition Graph

3.2.4 Creating a Form

This section helps you to learn necessary settings efficiently for creating a form by simply following the instructions of the "Form Creation" wizard of the "Sample Wizard" to actually create a sample form.

Example of Sample Form Created with this Wizard



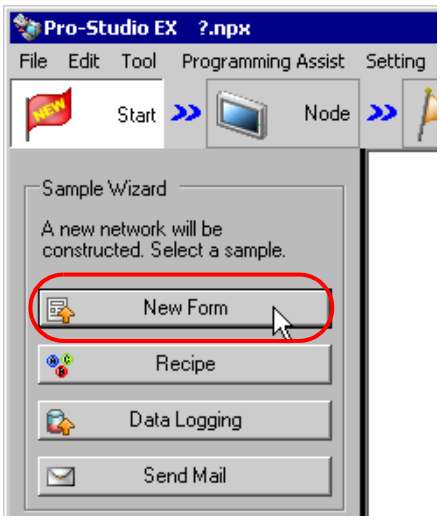
IMPORTANT

- Form creation needs 'Excel' preinstalled on the PC. Before getting started, ensure that 'Excel' is installed on the PC.

STEP 1 Selecting Form Template

This step selects a form template to create.

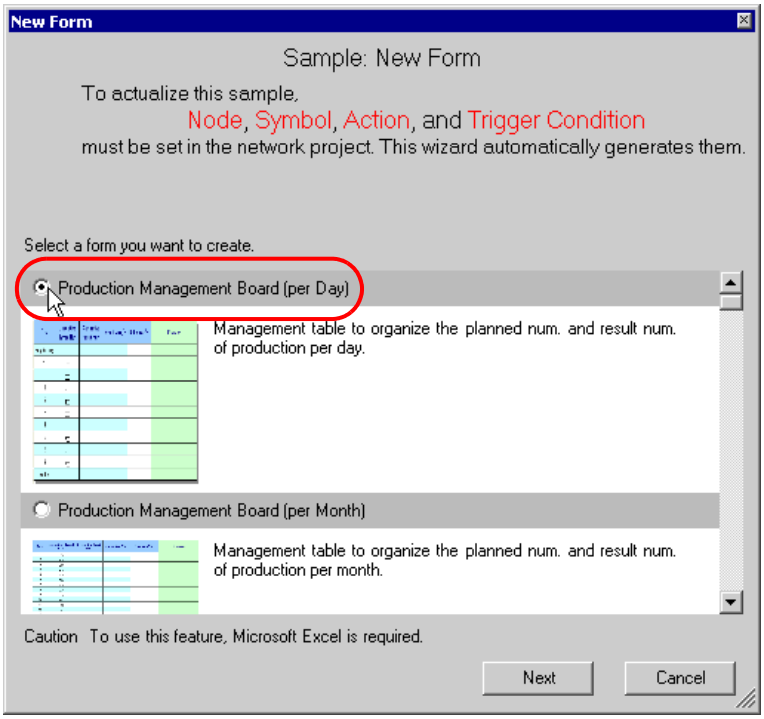
1 On the start screen, click the [New Form] button in the [Sample Wizard].



NOTE

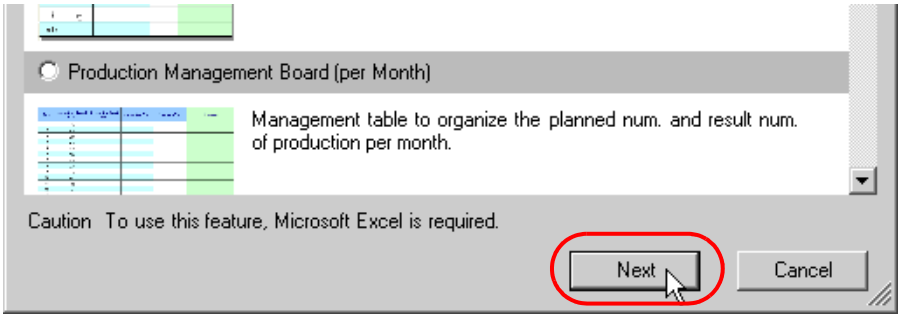
- Pointing each item button in the "Sample Wizard" with mouse cursor will display an explanation to the wizard of the pointed item in the task area.

2 The "New Form" wizard starts. The form template selection screen will appear. Scroll the screen by moving the scroll bar and select the form format you want to output.
In this example, select the "Production Management Per Day".



NOTE
- Clicking the form thumb nail display will enlarge the format on the monitor.

Click the [Next] button.



This is the end of selecting a form template. The entry nodes setting screen will appear.

NOTE

- It is necessary to set which device data should be written in which cell in Excel; however, this is preset in this wizard. You do not need to execute data allocation.

Proceed to "STEP 2 Registering Entry Nodes".

STEP 2 Registering Entry Nodes

This step registers the PC and the GPs as entry nodes in 'Pro-Studio EX' to allow the PC to read the data.

What is Entry Node?

In order to read and write the data of the Device/PLCs using 'Pro-Server EX', the information of the PC and the GPs connected via network must be registered in the network beforehand.
The PC and the GPs registered are referred to as an "Entry node".

- Pro-Server EX Node

Register the PC to be used for execution of various features of 'Pro-Server EX'.

- GP4000 Series Node

Register the GP4000 series displays and the Device/PLCs connected to the GPs to be used for data write/read. Up to four models (protocols) can be registered per one GP4000 series node. Up to 32 units of the connection units can be registered per one protocol (depending on the protocol).

- GP3000 Series Node

Register the GP3000 series displays and the Device/PLCs connected to the GPs to be used for data write/read. Up to four models (protocols) can be registered per one GP3000 series node. Up to 32 units of the connection units can be registered per one protocol (depending on the protocol).

- GP Series Node

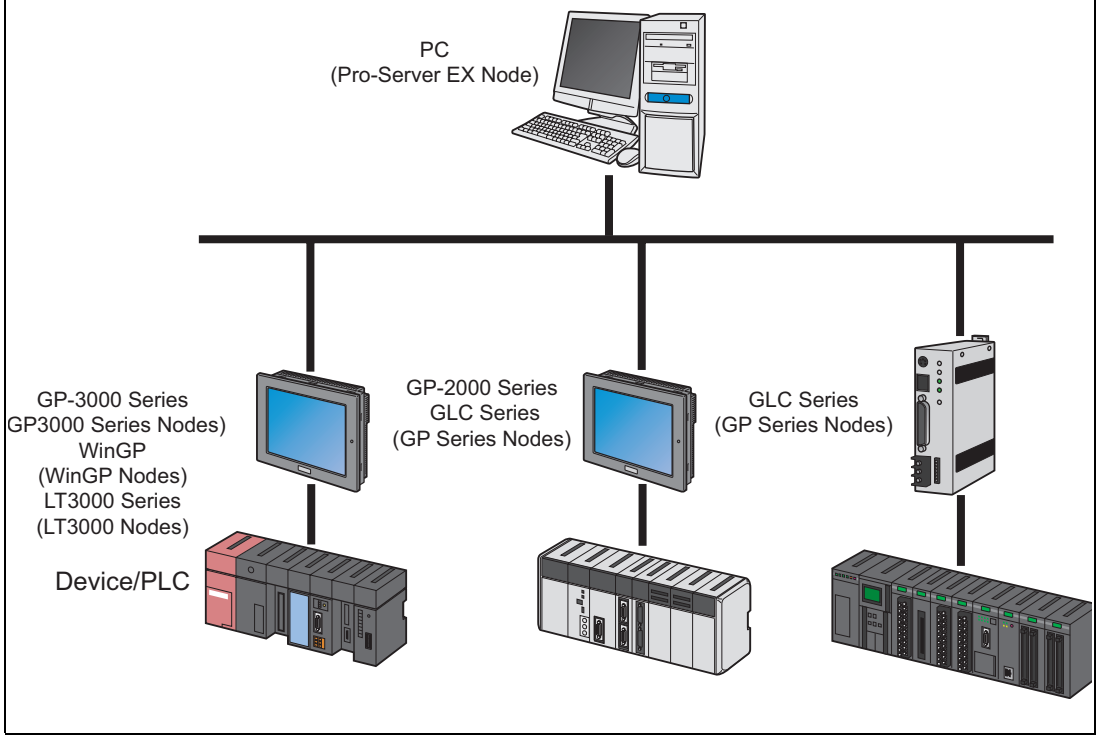
Register the GP2000 series displays, GLC series displays, and Factory Gateway to be used for data write/read. One model (protocol) can be registered per one GP series node.

- WinGP Node

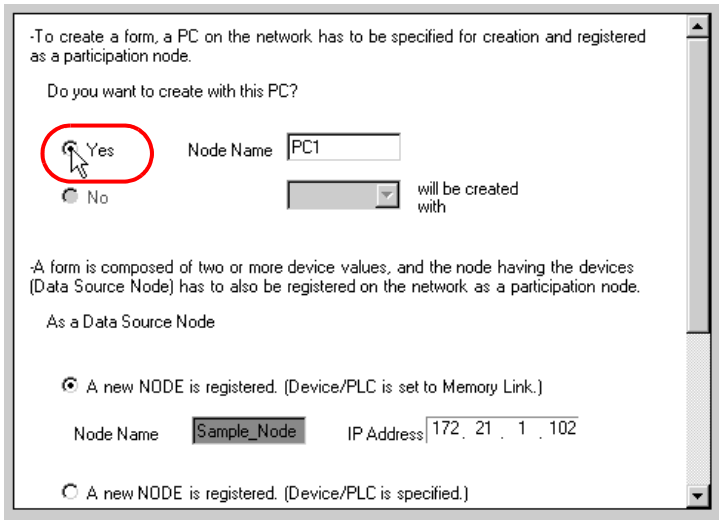
Register the WinGP series displays and the Device/PLCs connected to the IPC to be used for data write/read. Up to four models (protocols) can be registered per one WinGP series node. Up to 32 units of the connection units can be registered per one protocol (depending on the protocol).

- LT3000 Node

Register the LT-3000 series displays and the connection units connected to the LTs to be used for data write/read. Up to four models (protocols) can be registered per one LT3000 node. Up to 32 connection units can be registered per one protocol (depending on the protocol).

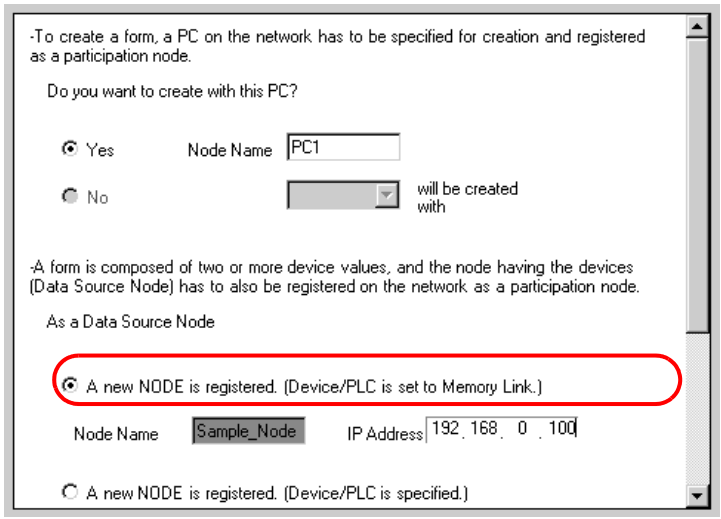


1 Register the PC currently used (PC for creating a form) as an "Action Node".
In this wizard, select [Yes].



The PC currently used is set as an "Action Node", named as "PC1".

2 Register the GP being connected as a "Data Source Node".
Select the [A new NODE is registered. (Device/PLC is set to Memory Link)], and enter the IP address of the GP.

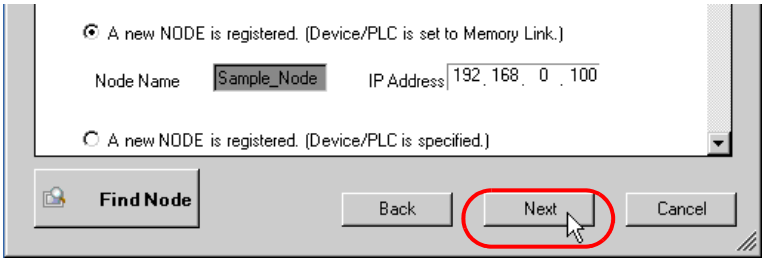


NOTE

- For how to check IP address set in the GP, see "2.4 Setting GP Network".
- If you select a Device/PLC other than Memory Link, select [A new NODE is registered. (Device/PLC is specified.)].

The "Data Source Node" is set to the address above.

3 Click the [Next] button.



This is the end of registering entry nodes necessary for creating a form.

Proceed to "STEP 3 Registering Symbols".

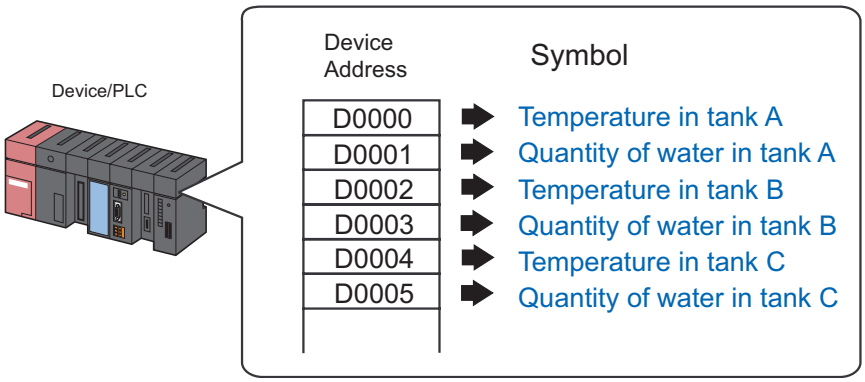
STEP 3 Registering Symbols

This step registers a device address including data necessary for creating a form as a "Symbol".

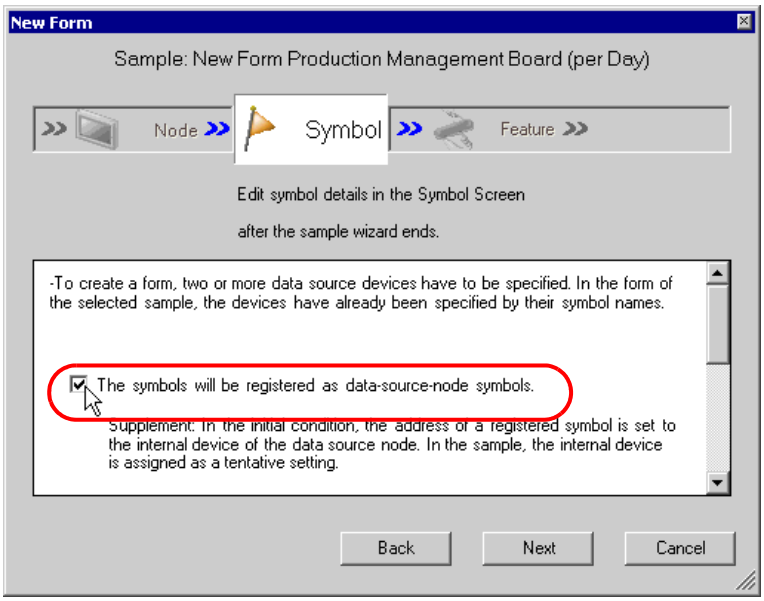
In this wizard, the memory space ("LS area") in the GP is symbol-registered.

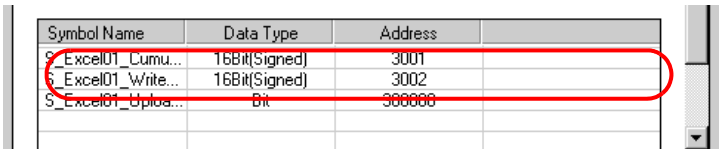
What is Symbol?

In controllers such as PLCs, an area to store data is referred to as a "Device address". Each company adopts its original code such as "D0001" and "DM001" to the device address.
'Pro-Studio EX' controls these addresses by naming the address (referred to as a "Symbol").
By registering the address as a symbol, you can access to the device by the symbol name.
The symbol could be a name such as "Valve A" and "Tank A_Temperature", which will ease access to the device in a more understandable way.



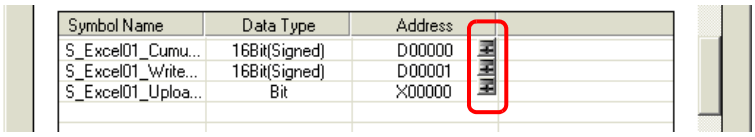
1 Check the [The symbols will be registered as data-source-node symbols.] check box, and then enlarge or scroll the screen to confirm the preset symbol.



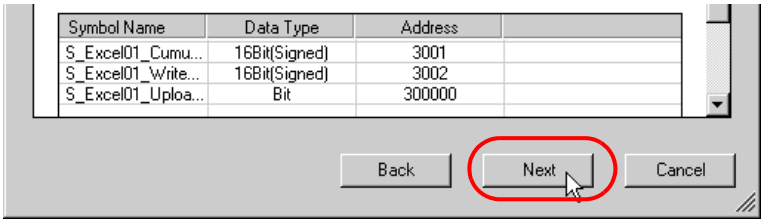


NOTE

- If you select a Device/PLC other than memory link, a temporary address is set.Click on the calculator icon and change it to the actual address.



2 Click the [Next] button.



This is the end of registering symbols necessary for creating a form. The trigger condition setting screen will appear.

Proceed to "STEP 4 Setting Trigger Condition".

STEP 4 Setting Trigger Condition

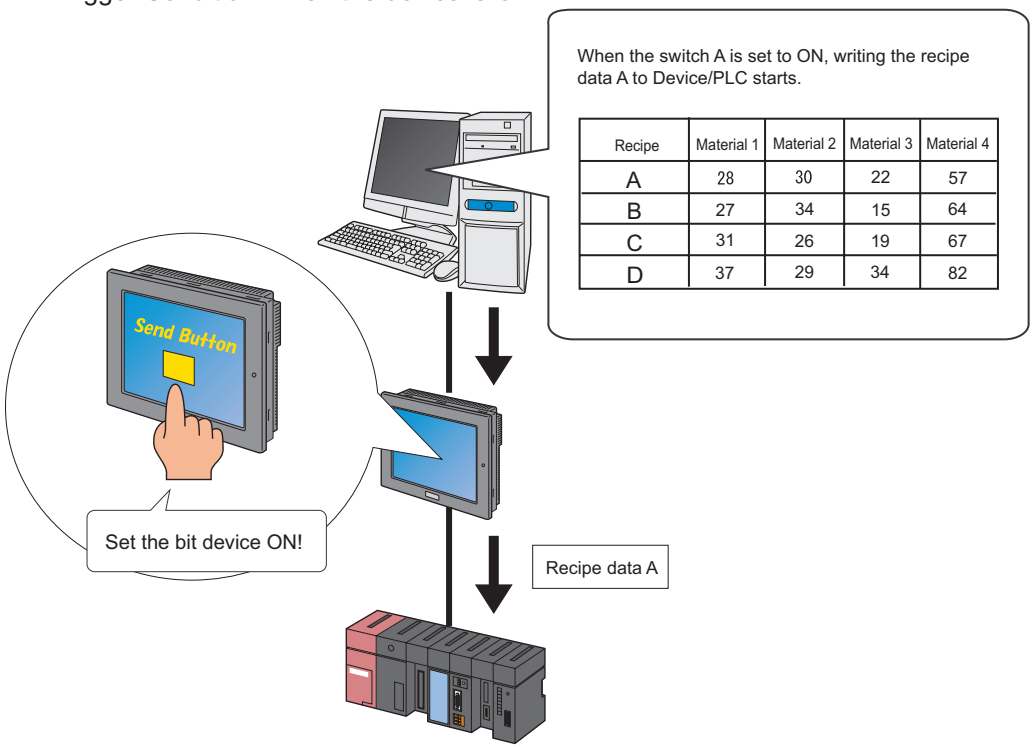
This step sets conditions for executing form output (trigger condition).

In this wizard, the trigger condition of detecting a rise of "Upload Start_BIT" is preset.

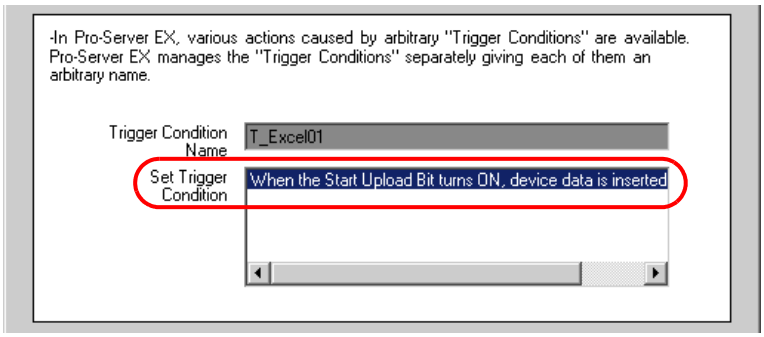
What is Trigger Condition?

'Pro-Server EX' allows executing various operations at a specific timing.
This timing is referred to as a "Trigger condition".
Presetting the trigger condition corresponding to ACTION, data transfer, etc. allows the operation to start when the preset trigger condition is satisfied.

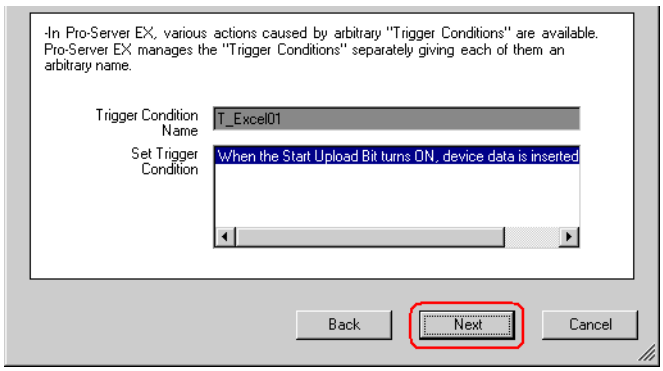
Trigger Condition: when the device is ON



1 Confirm the content of the trigger condition in the [Set Trigger Condition].



2 Click the [Next] button.



This is the end of setting a trigger condition necessary for creating a form. The ACTION setting screen will appear.

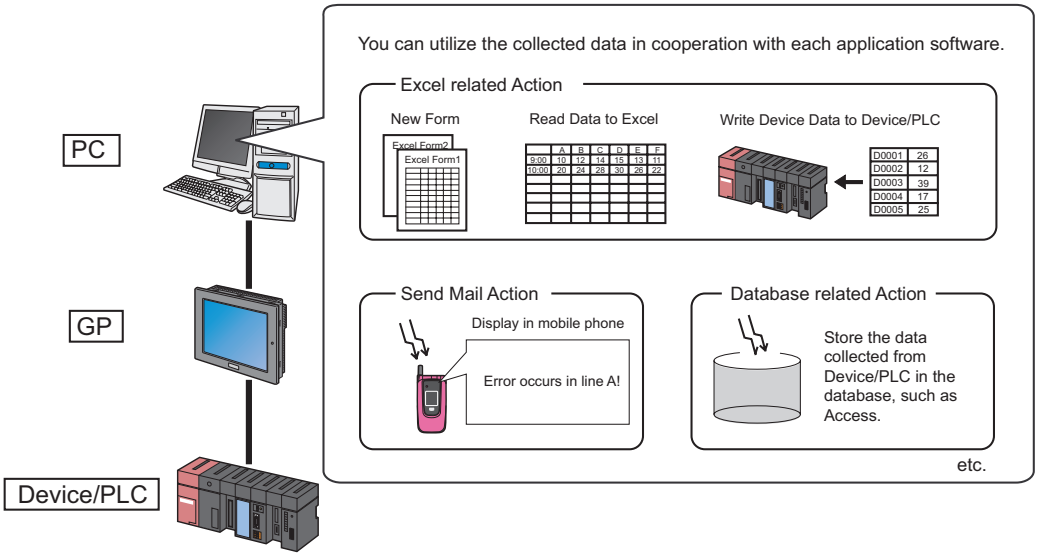
Proceed to "STEP 5 Setting Feature (ACTION)".

STEP 5 Setting Feature (ACTION)

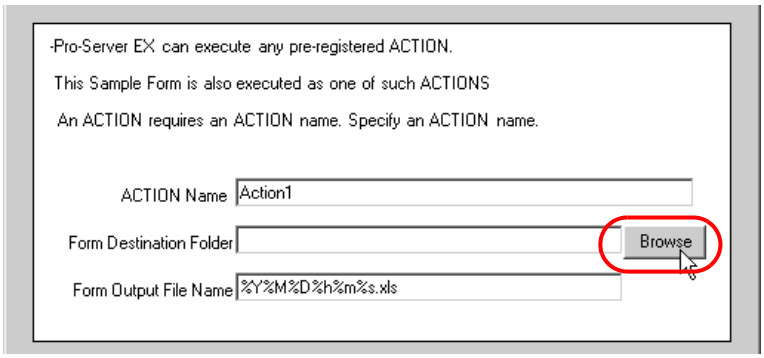
This step sets functions (ACTION) to use. This step sets an ACTION item and the output destination folder and file name of a form to create.

What is ACTION?

In addition to the access to the devices, 'Pro-Server EX' allows advanced processing using application software, for example creating a form using 'Excel' and creating a database using 'Access'.
In the 'Pro-Server EX', the advanced processing in the PC using application software is referred to as "ACTION".



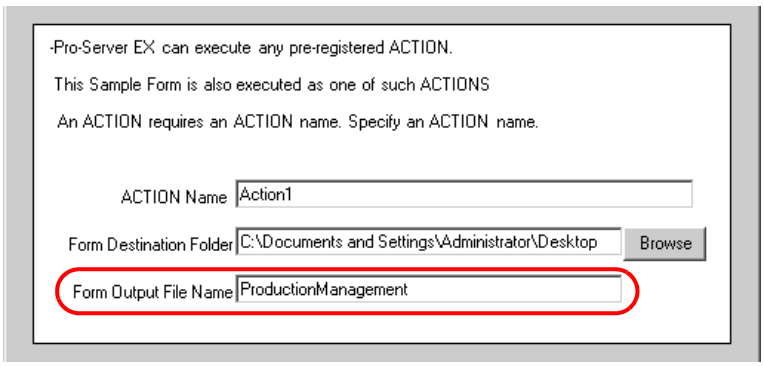
1 Enter the output destination (folder) of the file of a form to create in the [Form Destination Folder] field.
Click the [Browse] button. On the "Refer to Folder" screen, specify the output destination folder.



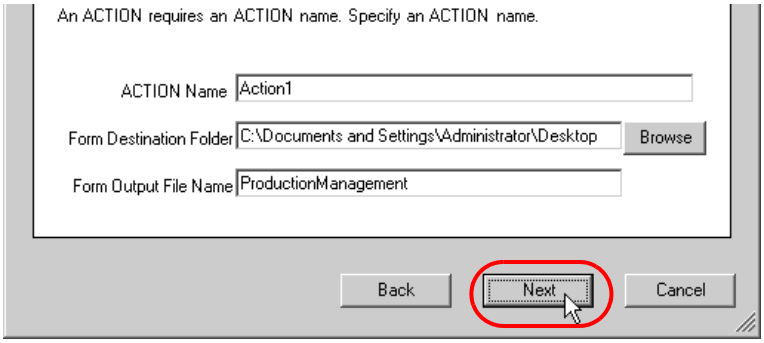
IMPORTANT • The ACTION name can be an arbitrary name. However, in this wizard the name is preset. Changing this name in this trial may cause discrepancies. Accept the default provided by this wizard.

* You can type the folder name. In this case, begin the name with a drive name of the PC, e.g. "C:\My Documents".

2 Enter the output file name in the [Form Output File Name] field.
In this trial, enter "Production Management".

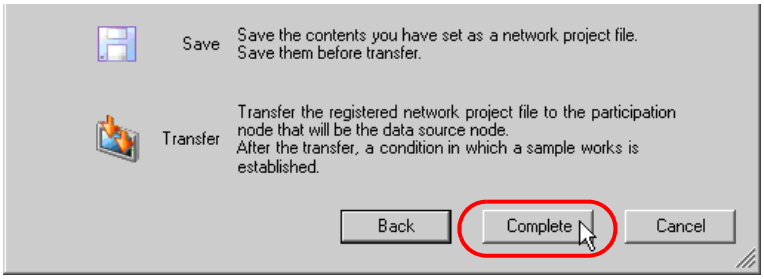


3 Click the [Next] button.



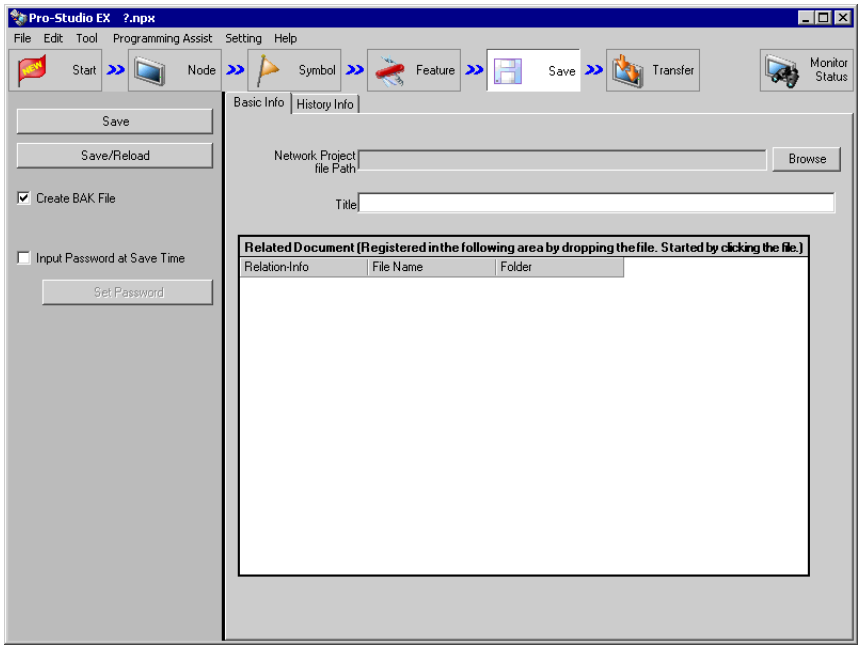
This is the end of setting an ACTION item necessary for creating a form. The screen that explains the procedures to follow (saving and transferring network project file) will appear. You can read the explanations how to save and transfer the network project file on the screen.

4 Click the [Complete] button.



This completes the "Sample Wizard".

Then the save setting screen will appear.



At this time, the "Sample Wizard Setting Result" screen and the form template file (ProduceManagementPerDay.xlt) in Excel format are also created.

NOTE

- The "Sample Wizard Setting Result" screen is of an HTML file. Starting this screen needs 'Microsoft Internet Explorer' preinstalled on the PC.

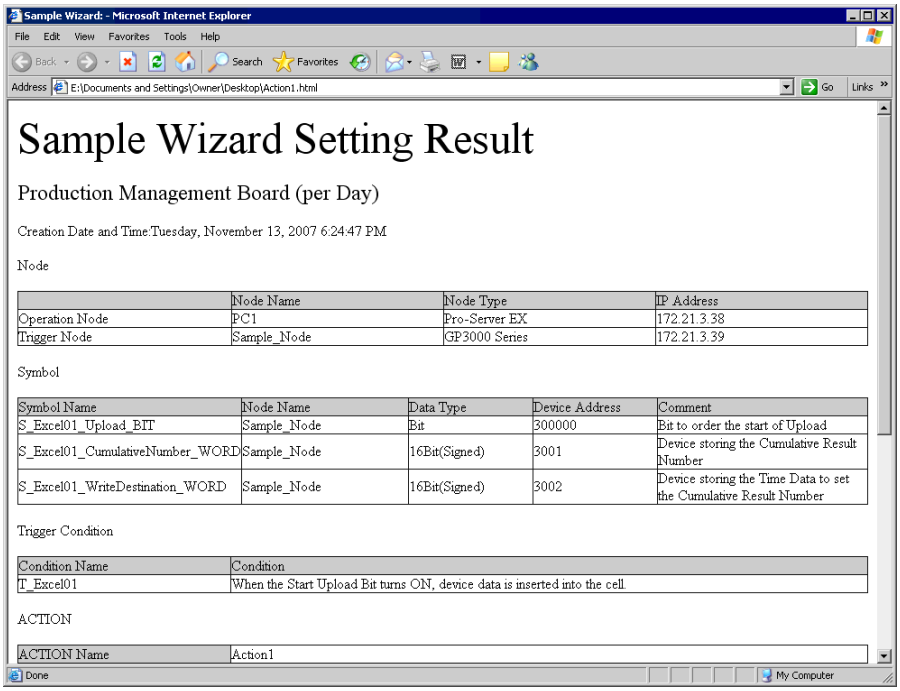
Proceed to "STEP 6 Verifying Setting Result and Form Template".

STEP 6 Verifying Setting Result and Form Template

This step opens the "Sample Wizard Setting Result" screen to verify the setting result.

1 Click the "Sample Wizard" in the task bar of the PC.

The "Sample Wizard Setting Result" screen will appear.



2 Scroll the screen and verify that the settings have been correctly entered.

NOTE

- Scroll down the "Sample Wizard Setting Result" screen and look for the [Sequence]. The content of action is shown here.

3 After having verified, click the [x] (close) button to close the screen and click the [-] (minimize) button to minimize the screen.

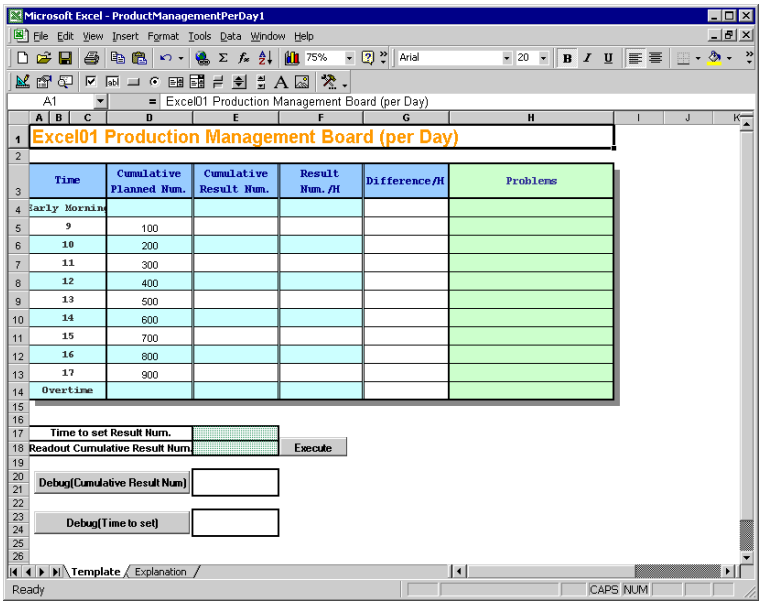
NOTE

- When created, the "Sample Wizard Setting Result" file will be automatically saved in the output destination folder set in procedure 1 of "STEP 5 Setting Feature (ACTION)". The file name is "(the ACTION name set in procedure 1 of STEP 5).html".

Proceed to opening the form template in 'Excel' to verify the setting result.

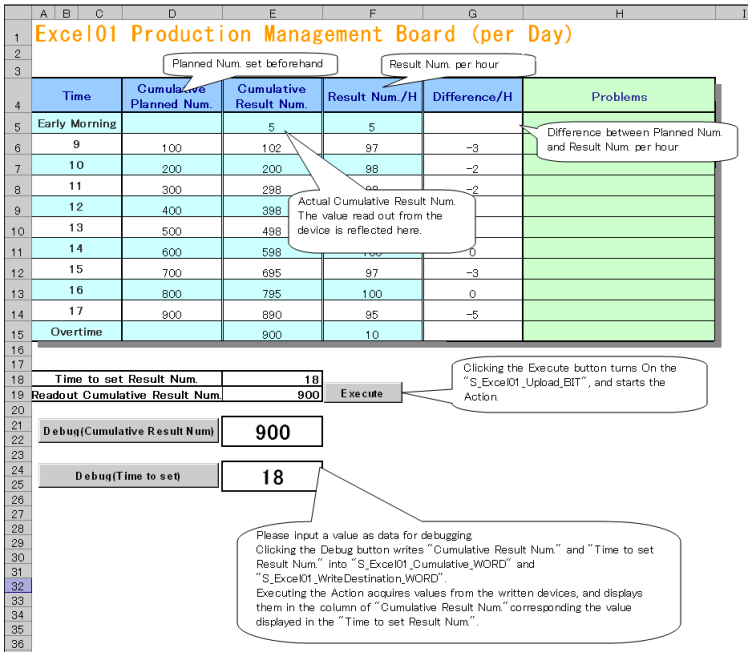
4 Open the form output destination folder set in procedure 1 of "STEP 5 Setting Feature (ACTION)" and double-click the Excel form template (ProductManagementPerDay.xlt).

Verify that the correct form template selected in "STEP 1 Selecting Form Template" is created.



NOTE

- You can read the explanations how to use the template by clicking the [Explanation] tab.

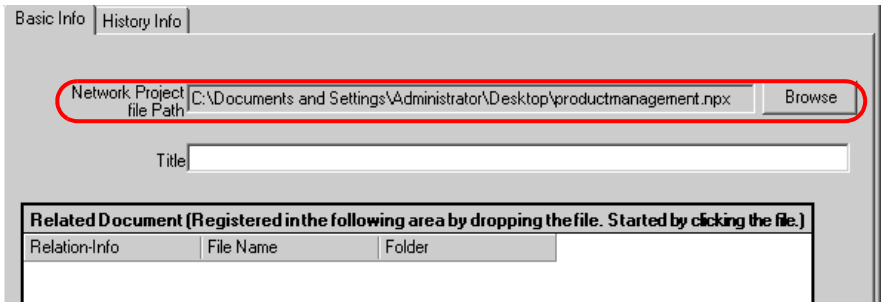


Proceed to "STEP 7 Saving Network Project File".

STEP 7 Saving Network Project File

This step saves the current settings as a network project file and reloads to 'Pro-Server EX'.

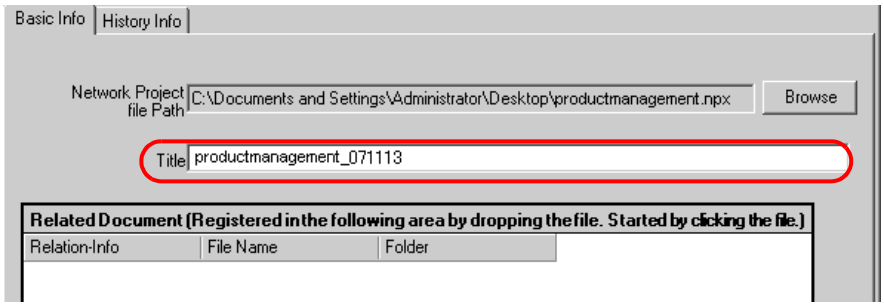
1 Enter a save destination folder and a save file name in the [Network Project file Path] field.
Click the [Browse] button to specify the save destination folder. On the "Save As" screen, enter the save file name in the [File Name] field, and then click the [Save] button.



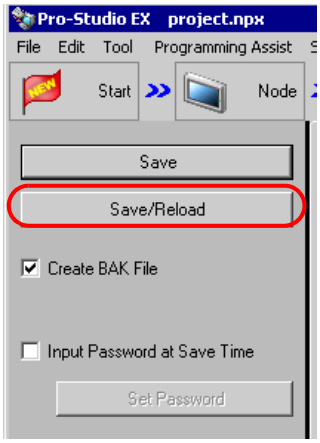
NOTE

- The extension of network project file (.npx) will be affixed to the file name automatically.

2 Enter the title of the network project file in the [Title] field.



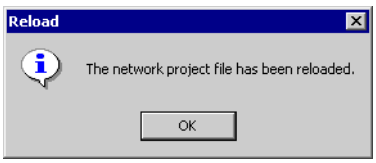
3 Click the [Save/Reload] button.



The setting result is saved as a network project file.

What is Reload?

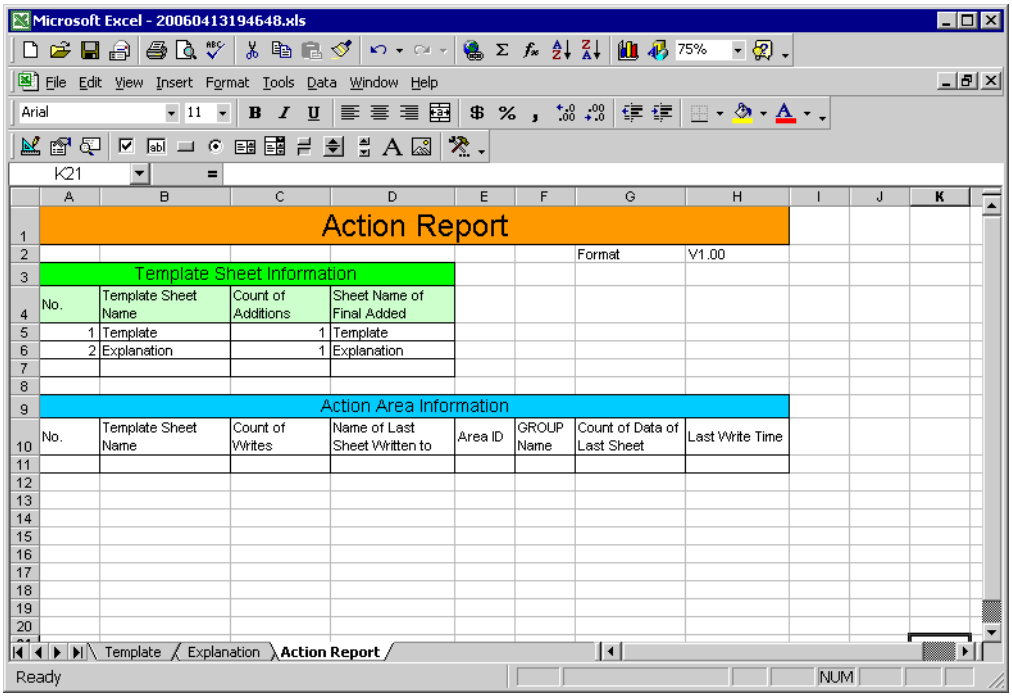
'Pro-Server EX' performs data read/write, etc according to the settings of the network project file. Reload is an operation to make 'Pro-Server EX' recognize the created network project file.
Clicking the [Save/Reload] button activates 'Pro-Server EX', execute reload, and display the screen below.



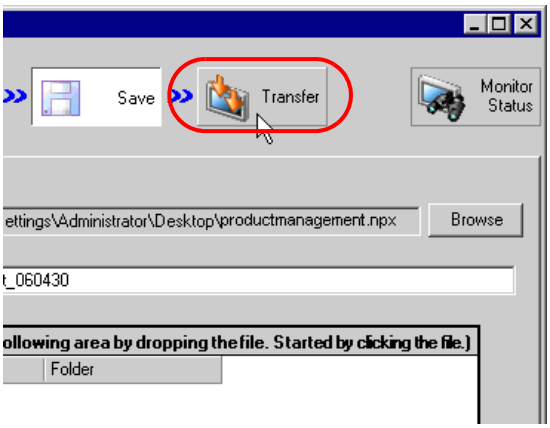
Click the [OK] button.

At the same time, the "Action Report" screen will appear.

In this screen, working history such as how this ACTION output to the output file is always recorded.



4 Click the [Transfer] button.



The transfer setting screen will appear.

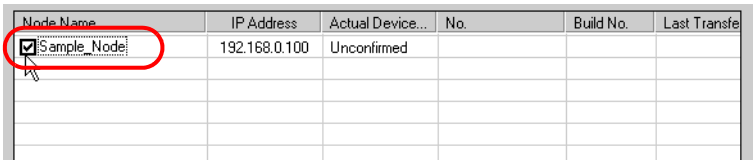
Proceed to "STEP 8 Transferring Network Project File".

STEP 8 Transferring Network Project File

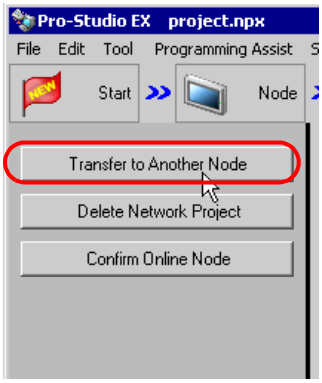
This step transfers the saved network project file to the GP.

1 Turn on the check box of the entry node to which the network project file will be transferred.

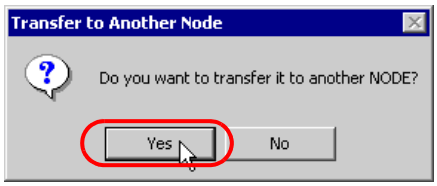
In this wizard, check "Sample_Node", which is the data source node set in procedure 2 of "STEP 2 Registering Entry Nodes".



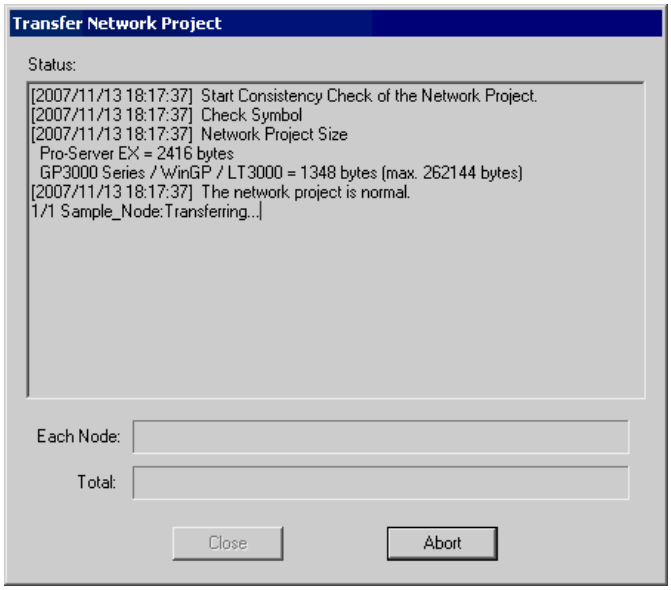
2 Click the [Transfer to Another Node] button.



3 On the "Transfer to Another Node" screen, click the [Yes] button.



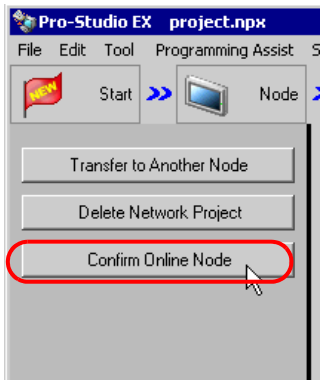
The "Transfer Network Project" screen will appear, transferring the network project file to the entry node checked in procedure 1.



Click the [Close] button to close the "Transfer Network Project" screen.

NOTE

- The network project file cannot be transferred if each entry node is not in on-line status (if communication is not active). Before transfer, always click the [Confirm Online Node] button and confirm each node is in on-line status.



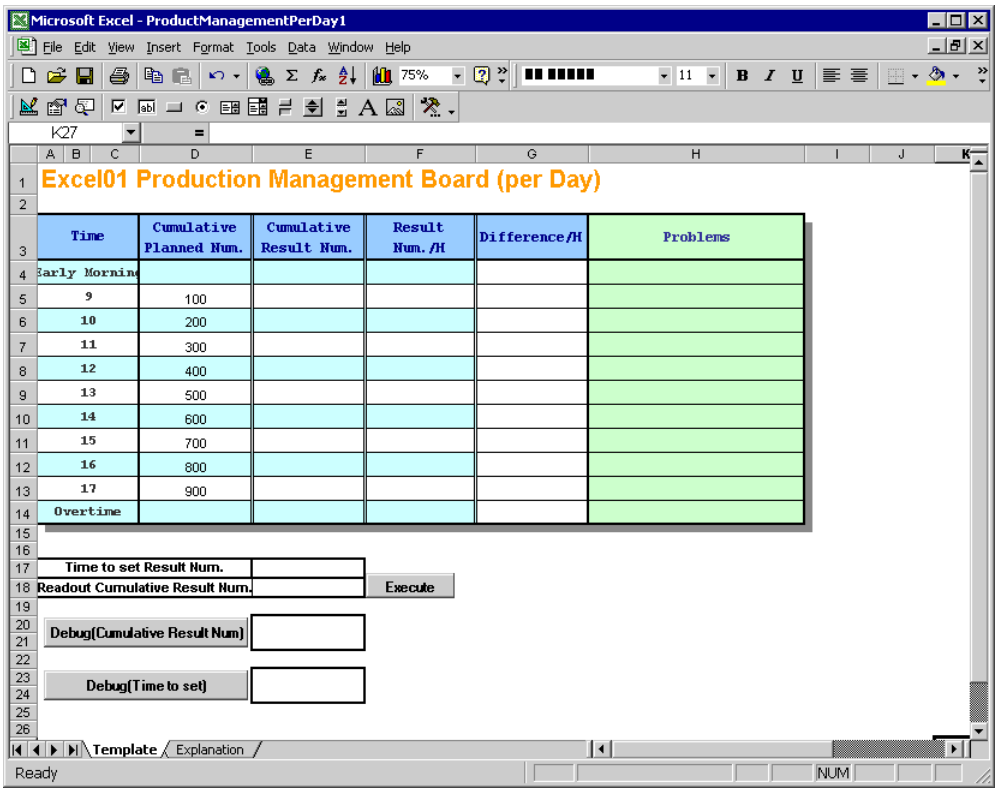
Proceed to "STEP 9 Writing Data to Forms".

STEP 9 Writing Data to Forms

This step writes the data to the output file after the trigger condition set in "STEP 4 Setting Trigger Condition" has become effective.

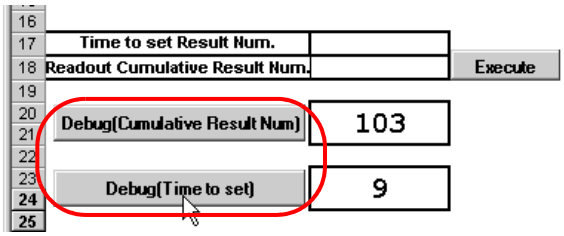
In this trial, you can confirm that the data will be written to the output file.

1 Open the output destination folder of the form set in procedure 1 of "STEP 5 Setting Feature (ACTION)" and then open the Excel file whose file name set in procedure 2 .



2 Store the values for debugging in the memory spaces in the GP, "S_Excel01_Accum Qty_WORD" and "S_Excel01_Write Destination_WORD".

In this trial, enter any reasonable values in the "Debug (Cumulative Result Num)" and "Debug (Time to set)" and then click the each debug button. The values will then be stored in the memory spaces "S_Excel01_Accum Qty_WORD" and "S_Excel01_Write Destination_WORD" of the GP, respectively.



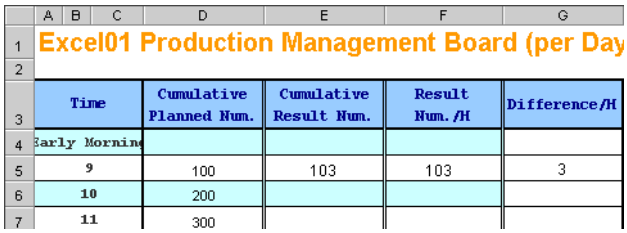
NOTE
- The values to input the Debug (Time to Set) field should be from 9 to 17. This value is used to specify the row to which the accumulative quantity will be written.

3 Click the [Execute] button.

Trigger Condition bit "T_Excel01" is automatically turned ON.

That allows Trigger Condition to set and New Form ACTION to operate, and then the output file is created.

The values stored in the memory spaces "S_Excel01_Accum Qty_WORD" and "S_Excel01_Write Destination_WORD" of the GP will be written in Excel form. Verify that the cell of the accumulative quantity at 9 o'clock shows "103".



4 After having verified the form, click the [x] (close) button.

This is the end of creating a sample form using the "Sample Wizard".

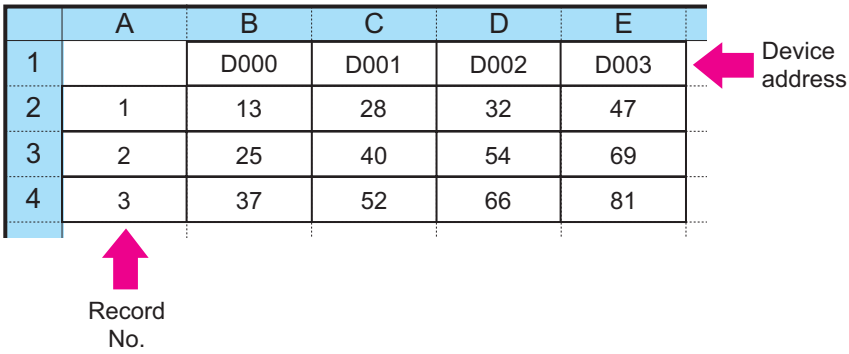
3.3 Trial of Recipe Function

3.3.1 What is a Recipe Function?

'Pro-Server EX' allows writing data created beforehand using application software such as 'Excel', or data in CSV format to an arbitrary device of the Device/PLC.

Flow of Recipe Creation

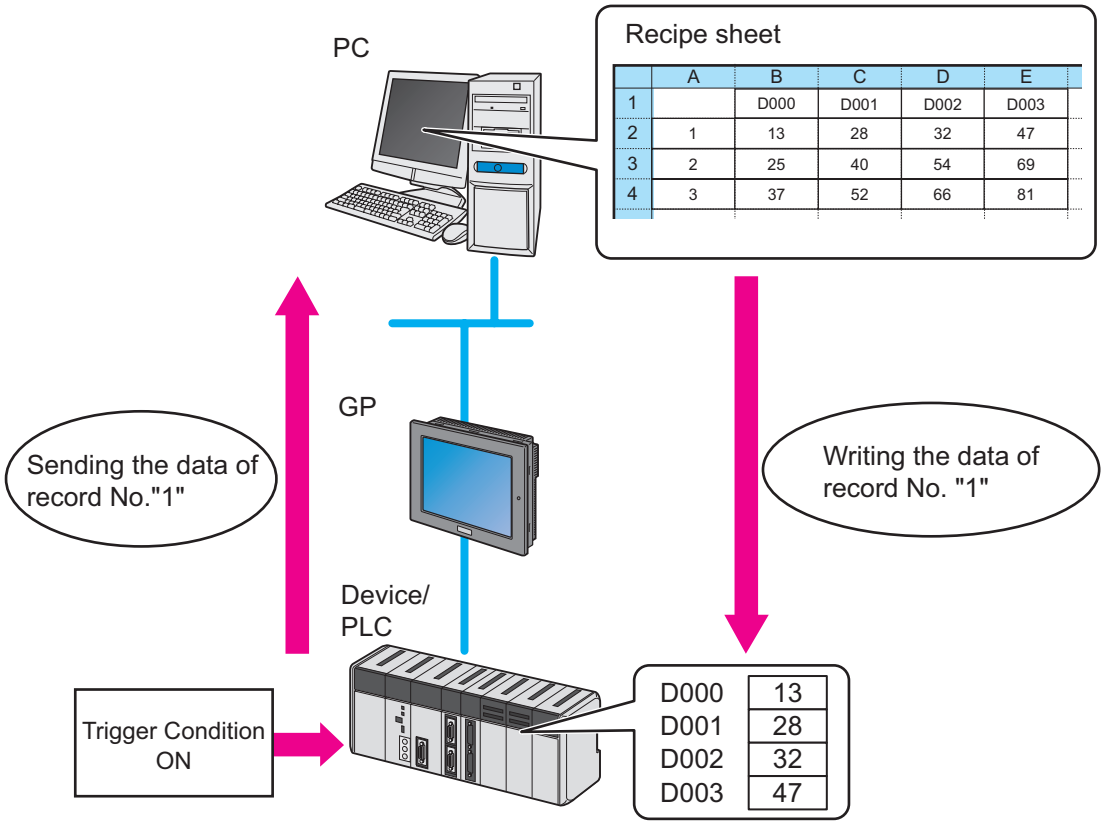
(1) Create a sheet (recipe sheet) of data to be written to the Device/PLC in Excel format.



(2) Execute action setting of the recipe function, for example setting a write destination of data and requirements for writing data using 'Pro-Studio EX'.

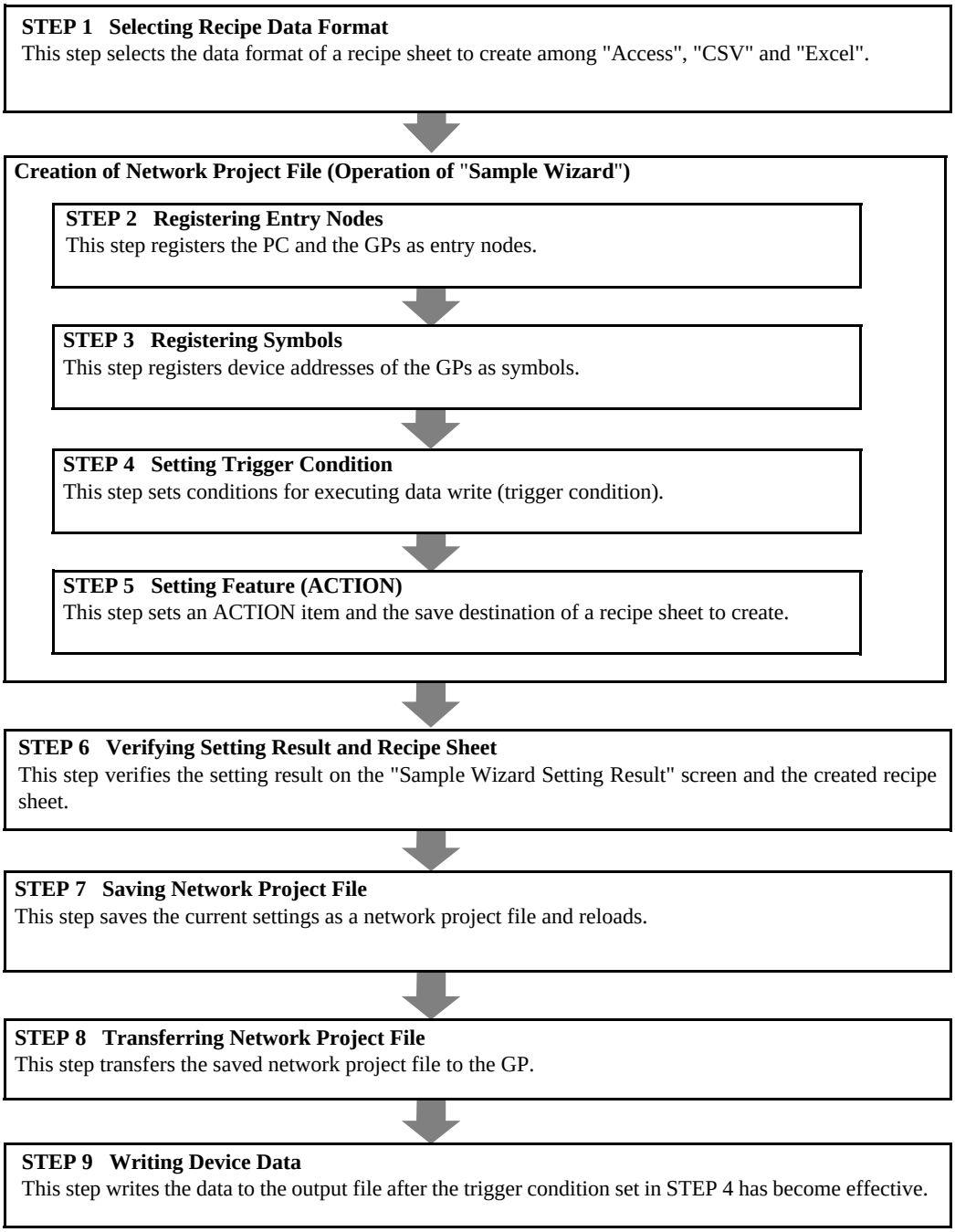
(3) At a specific timing or at a specific interval, the data of preset record No. in the recipe sheet is written to the device address of the Device/PLC.

(Example) Writing the data of record No. "1" of the recipe sheet to the device addresses "D000" to "D003".



3.3.2 Workflow from Settings to Write Data

The following explains about the operation flow from setting to device data write using the "Recipe" wizard.



3.3.3 Writing the Device Data

This section helps you to learn necessary settings efficiently for writing data by simply following the instructions of the "Recipe" wizard of the "Sample Wizard" to actually write data to the GP.

IMPORTANT
- Recipe sheet creation in Access format or Excel format needs 'Access' or 'Excel' preinstalled on the PC.
  Before getting started, ensure that necessary software is installed on the PC.

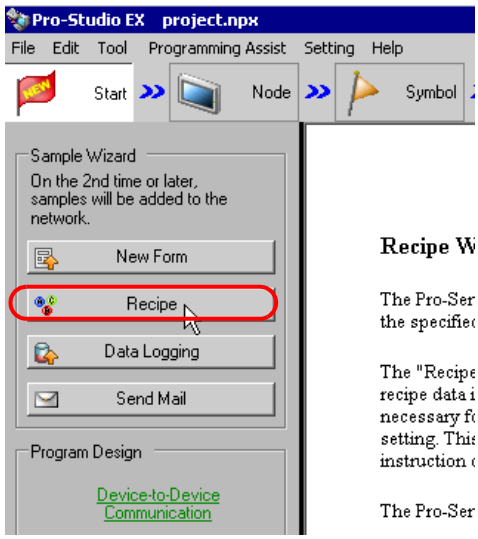
STEP 1 Selecting Data Format of Recipe Sheet

This step selects the data format of a recipe sheet to create.

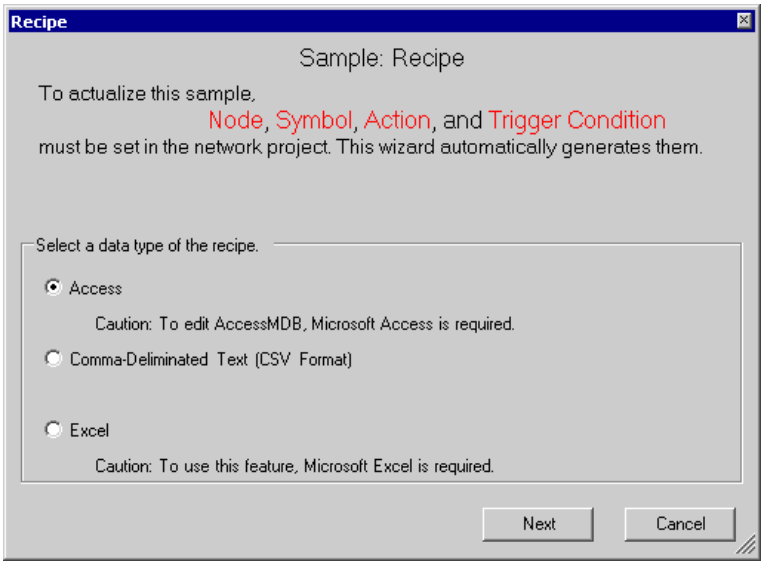
In this trial, create a recipe sheet in 'Excel' format.

> **Creating Recipe Sheet (Sample)**
>
> Before using the recipe function, you must create a recipe sheet on which device data to be written to the Device/PLC are entered. In this wizard, the sample recipe sheet will be automatically created and stored in the folder specified by the wizard.

1 On the start screen, click the [Recipe] button in the [Sample Wizard].

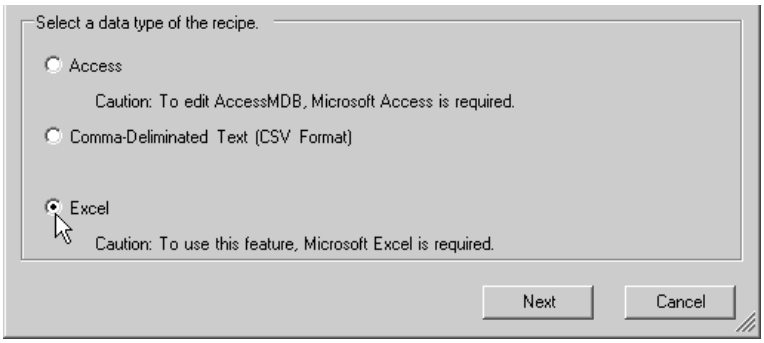


The "Recipe" wizard starts. The data format selection screen will appear.

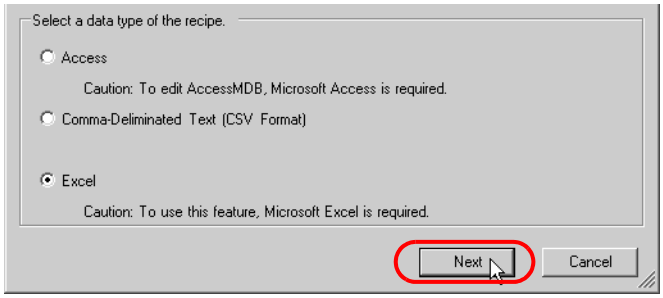


2 Select the data format of a recipe sheet to create.

In this trial, select "Excel".



Click the [Next] button.



This is the end of selecting a data format. The entry nodes setting screen will appear.

NOTE

- The following explanation assumes that "Excel" is selected on the data format selection screen. Note that if "Comma-Deliminated Text (CSV Format)" or "Access" is selected, the screens and settings are different from the followings.

Proceed to "STEP 2 Registering Entry Nodes".

STEP 2 Registering Entry Nodes

The setting items are the same as those in the "New Form" wizard above.
See "STEP 2 Registering Entry Nodes" in "3.2.4 Creating a Form".
If you have tried another wizard and registered entry nodes already, you can skip this procedure.
Click the [Next] button and proceed to "STEP 3 Registering Symbols".

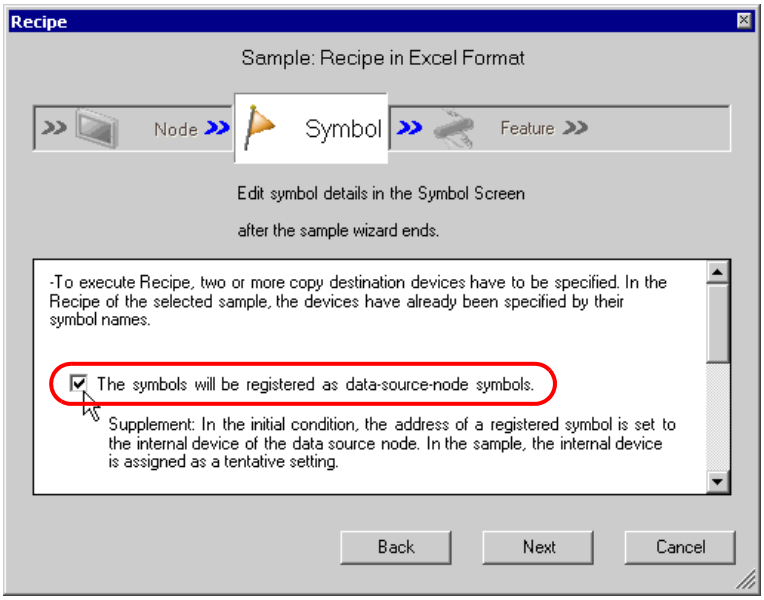
Proceed to "STEP 3 Registering Symbols".

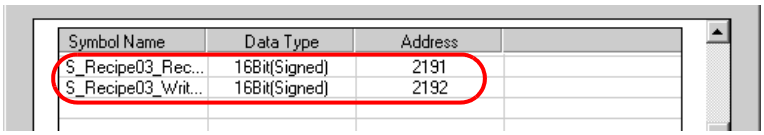
STEP 3 Registering Symbols

This step registers the device address to which data will be written as a "Symbol".

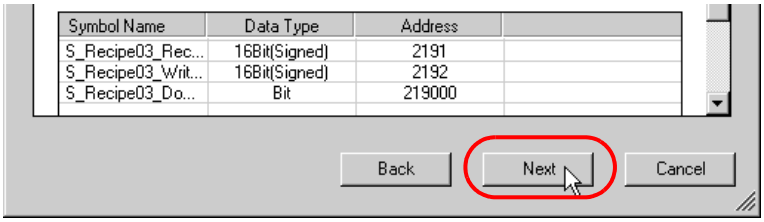
In this wizard, the symbol is preset in the device ("LS area") of the GP.

1 Check the [The symbols will be registered as data-source-node symbols.] check box, and then enlarge or scroll the screen to confirm the preset symbol.





2 Click the [Next] button.



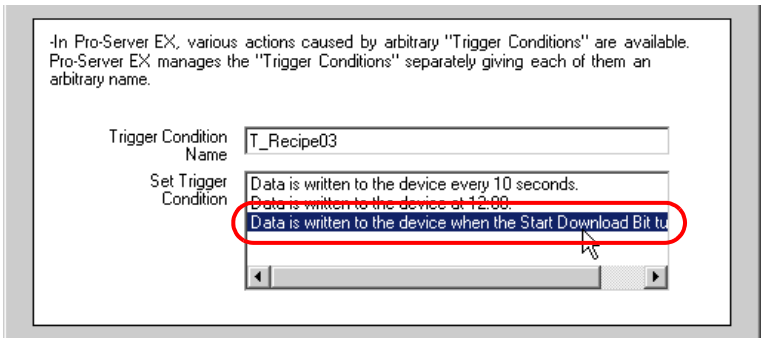
This is the end of registering symbols necessary for data write. The trigger condition setting screen will appear.

Proceed to "STEP 4 Setting Trigger Condition".

STEP 4 Setting Trigger Condition

This step sets conditions for executing data write (trigger condition).

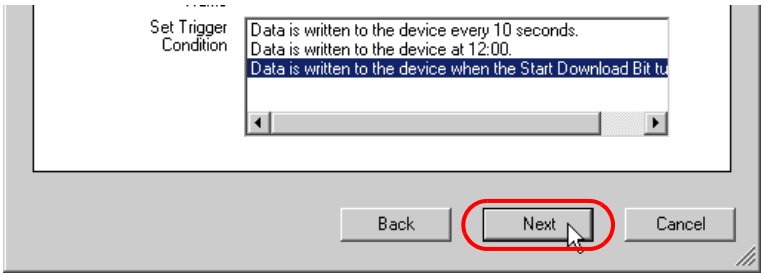
1 Select a trigger condition in the [Set Trigger Condition] field. Here, select "Data is written to the device when the Start Download Bit turns ON".



IMPORTANT

- The name of the trigger condition can be an arbitrary name. However, in this wizard the name is preset. Changing this name in this trial may cause discrepancies. Accept the default provided by this wizard.

2 Click the [Next] button.



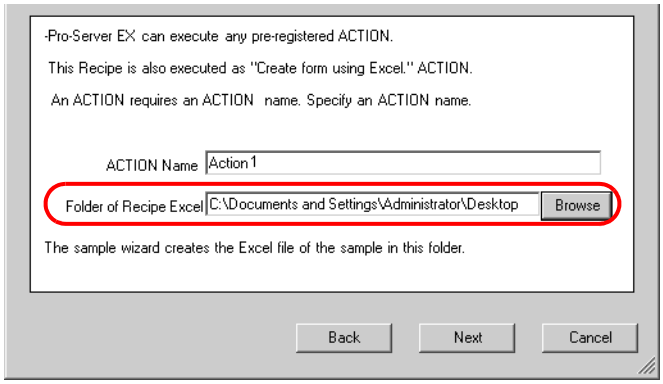
This is the end of setting a trigger condition necessary for data write. The ACTION setting screen will appear.

Proceed to "STEP 5 Setting Feature (ACTION)".

STEP 5 Setting Feature (ACTION)

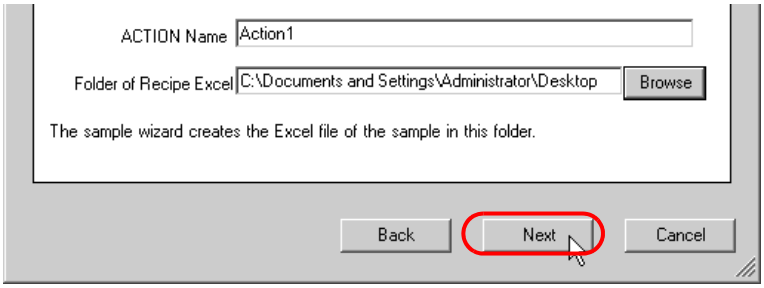
This step sets functions (ACTION) to use. Specifically, this step sets the name of ACTION to use and the save destination of a recipe sheet to create as a sample.

1 Enter the folder of save destination of a recipe sheet in the [Folder of Recipe Excel] field.



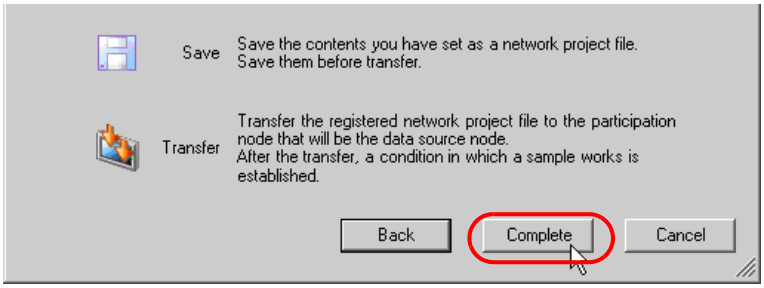
IMPORTANT • The ACTION name can be an arbitrary name. However, in this wizard the name is preset. Changing this name in this trial may cause discrepancies. Accept the default provided by this wizard.

2 Click the [Next] button.



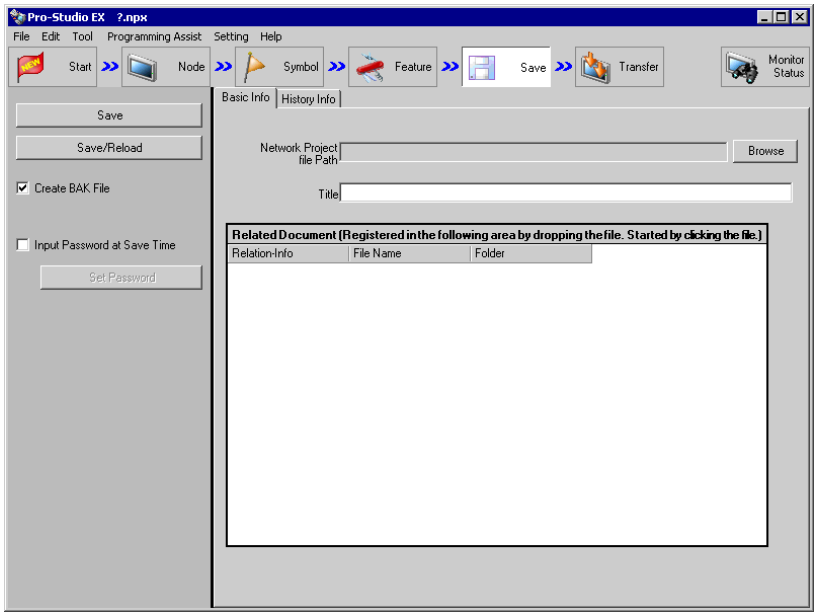
This is the end of setting an ACTION item necessary for data write. The screen that explains the procedures to follow (saving and transferring network project file) will appear. You can read the explanations how to save and transfer the network project file on the screen.

3 Click the [Complete] button.



This completes the "Sample Wizard".

Then the save setting screen will appear.



At this time, the "Sample Wizard Setting Result" screen and the recipe sheet file (Recipe_Excel.xlt) in Excel format are also created.

NOTE

- The "Sample Wizard Setting Result" screen is of an HTML file. Starting this screen needs 'Microsoft Internet Explorer' preinstalled on the PC.

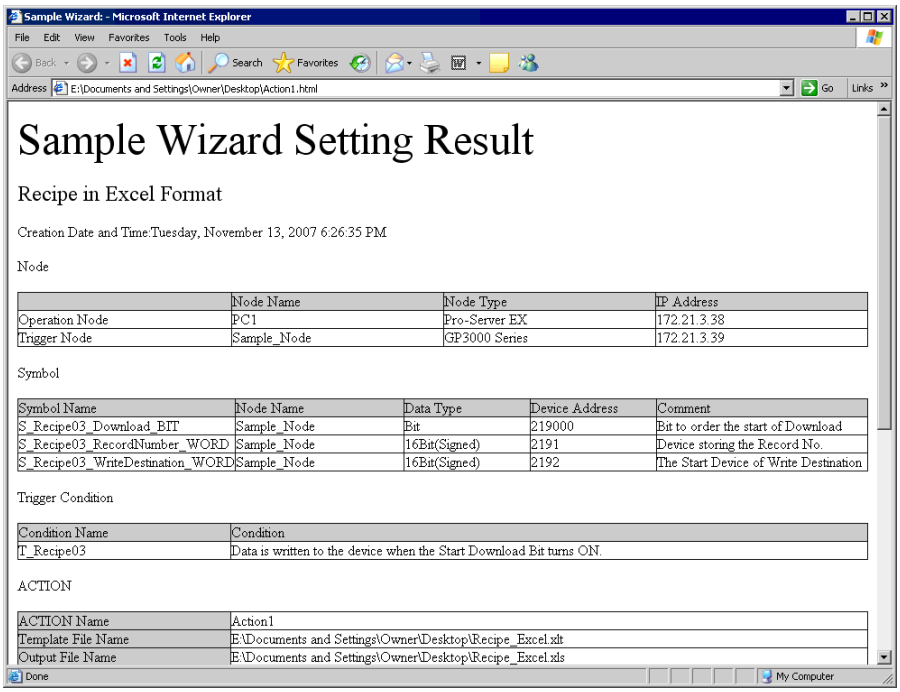
Proceed to "STEP 6 Verifying Setting Result and Recipe Sheet".

STEP 6 Verifying Setting Result and Recipe Sheet

This step opens the "Sample Wizard Setting Result" screen to verify the setting result.

1 Click the "Sample Wizard" in the task bar of the PC.

The "Sample Wizard Setting Result" screen will appear.



2 Scroll the screen and verify that the settings have been correctly entered.

NOTE

- Scroll down the "Sample Wizard Setting Result" screen and look for the [Sequence]. The content of action is shown here.

3 After having verified, click the [x] (close) button to close the screen and click the [-] (minimize) button to minimize the screen.

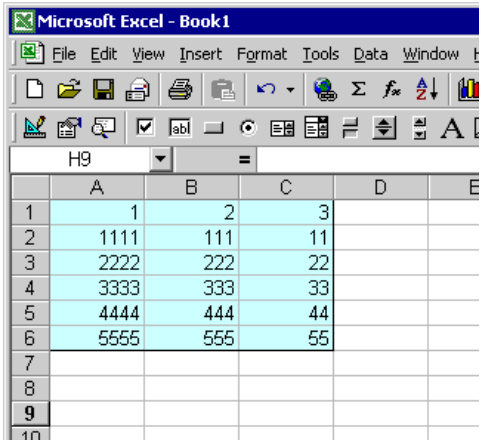
NOTE

- When created, the "Sample Wizard Setting Result" file will be automatically saved in the save destination folder of the recipe sheet set in procedure 2 of "STEP 5 Setting Feature (ACTION)". The file name is "(ACTION name).html".

Proceed to opening the recipe sheet in 'Excel' to verify the setting result.

4 Open the save destination folder of the recipe sheet set in procedure 1 of "STEP 5 Setting Feature (ACTION)" and double-click the recipe sheet (Recipe_Excel.xlt) in 'Excel'.

Verify that the recipe sheet is created.



Proceed to "STEP 7 Saving Network Project File".

STEP 7 Saving Network Project File

This step saves the current settings as a network project file and reloads to 'Pro-Server EX'.

> The setting items are the same as those in the "New Form" wizard above.
> See "STEP 7 Saving Network Project File" in "3.2.4 Creating a Form".

Proceed to "STEP 8 Transferring Network Project File".

STEP 8 Transferring Network Project File

This step transfers the saved network project file to the GP.

> The setting items are the same as those in the "New Form" wizard above.
> See "STEP 8 Transferring Network Project File" in "3.2.4 Creating a Form".

Proceed to "STEP 9 Writing Device Data".

STEP 9 Writing Device Data

This step writes the device data into the GP after the trigger condition set in "STEP 4 Setting Trigger Condition" has become effective.

In this trial, you can confirm that the data will be written to the GP.

1 Turn on the download start bit to effect the trigger condition.

NOTE

You can turn ON the download start bit by:

- turning on the bit from the screen of the GP; or
- turning on the bit on the "Device Monitor" or "Symbol Monitor".

For more details, see 'GP-Pro EX Reference Manual' or "28 Simply Confirming On-site Status".

2 When Trigger Condition is enabled, check that the recipe sheet data corresponding to the record number stored in "S_Recipe_ record number _WORD" is written in "S_Recipe03_Write Destination_WORD".

This is the end of writing recipe data using the "Sample Wizard".

3.4 Trial of Logging Funtion

3.4.1 What is a Data Logging Function?

'Pro-Server EX' allows logging (continuously read) of data that has been collected in Device/PLCs over a period of time and at an arbitrary timing and writing the logged data in application software such as 'Excel'.

Flow of Data Logging

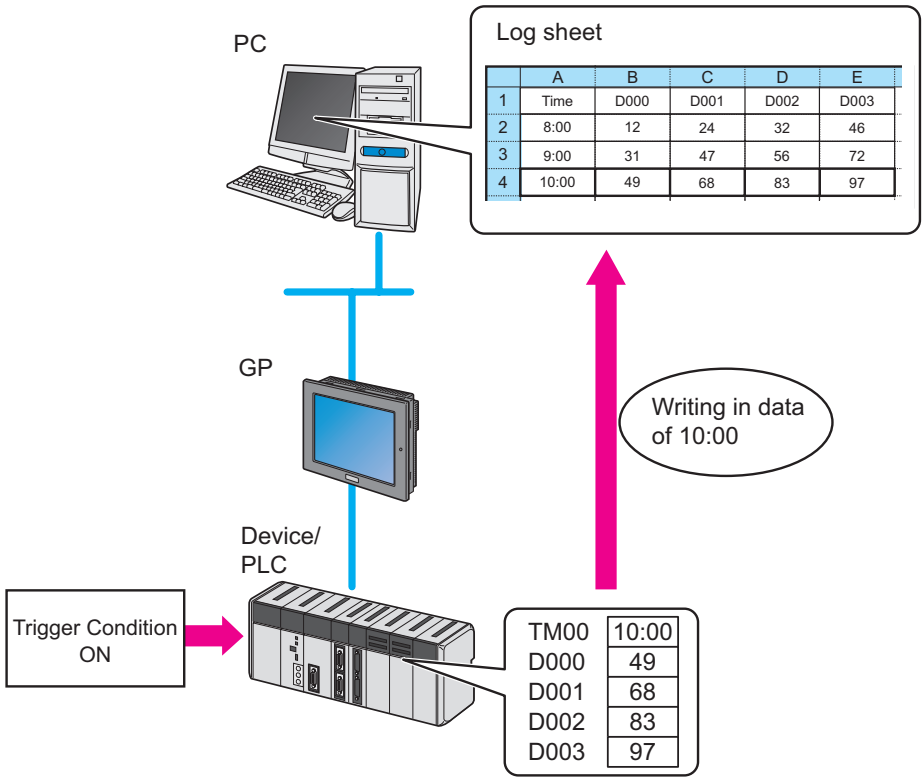
(1) Create a sheet (log sheet) in Excel format to which logged data will be written.

	A	B	C	D	E
1	Time	D000	D001	D002	D003
2	9:00				
3	10:00				
4	11:00				
5	12:00				

(2) Execute action setting of the data logging function, for example setting of a write destination of data and requirements for logging using 'Pro-Studio EX'.

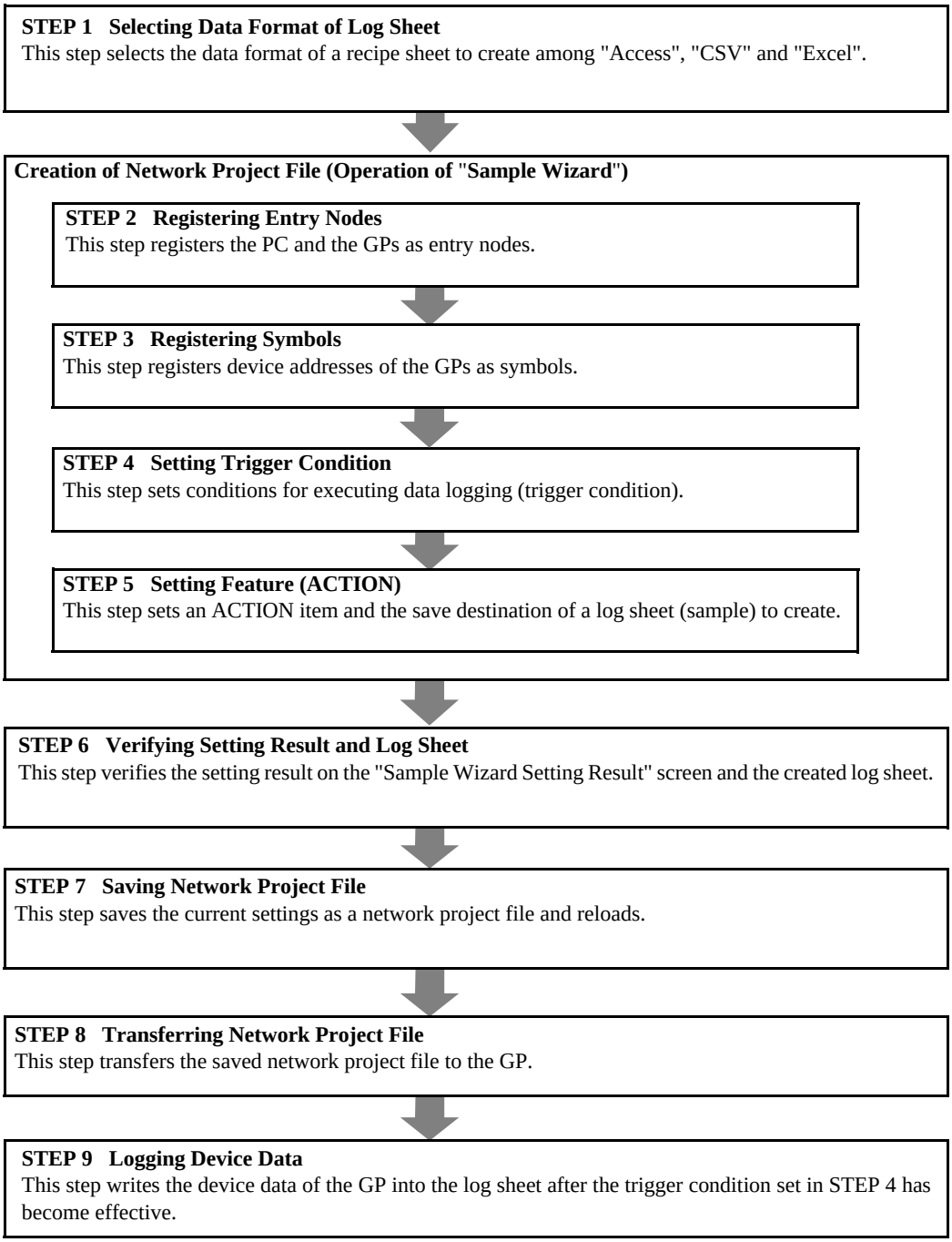
(3) At a specific timing or at a specific interval, data logging is executed and the data of the Device/PLC are written onto the log sheet.

(Example) Logging the data of the device addresses, "D000" to "D003" of the Device/PLC every one hour.



3.4.2 Workflow from Settings to Data Logging

The following explains about the operation flow from setting to data logging using the "Data Logging" wizard.



3.4.3 Logging the Device Data

This section helps you to learn necessary settings efficiently for logging the data of the GP by simply following the instructions of the "Data Logging" wizard of the "Sample Wizard" to actually log the data of the GP.

IMPORTANT
- Log sheet creation in Access format or Excel format needs 'Access' or 'Excel' preinstalled on the PC. Before getting started, ensure that necessary software is installed on the PC. Before getting started, ensure that necessary software is installed on the PC.

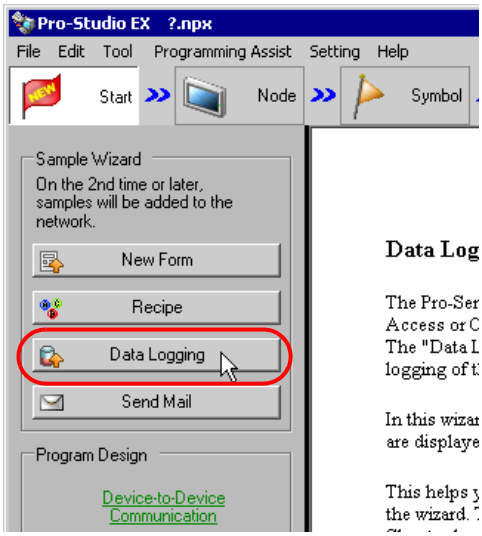
STEP 1 Selecting Data Format of Log Sheet

This step selects the data format of a log sheet to create.

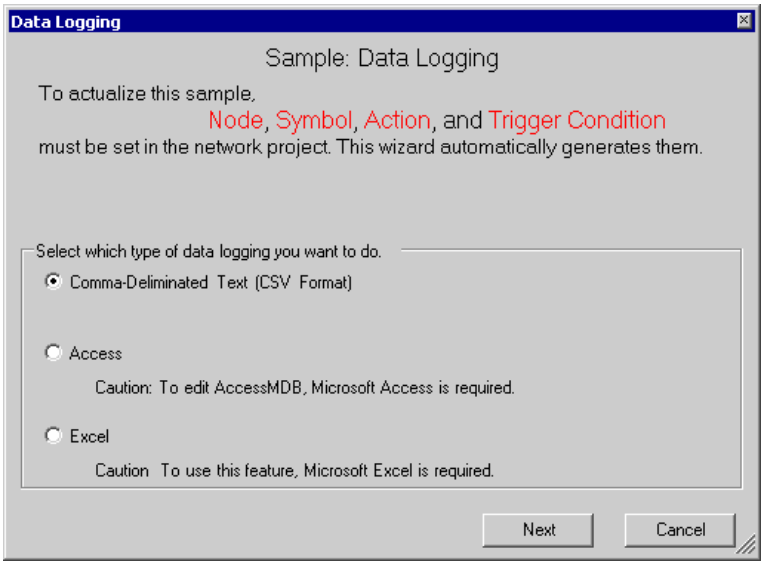
In this trial, create a log sheet in Excel format.

> Creating Log Sheet (Sample)
>
> Before using the recipe function, you must create a log sheet on which device data or logging time are entered. In this wizard, the sample log sheet will be automatically created and stored in the folder specified by the wizard.

1 On the start screen, click the [Data Logging] button in the [Sample Wizard].

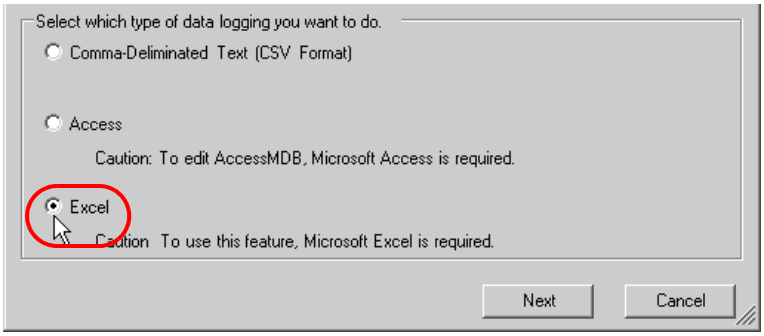


The "Data Logging" wizard starts. The data format selection screen will appear.

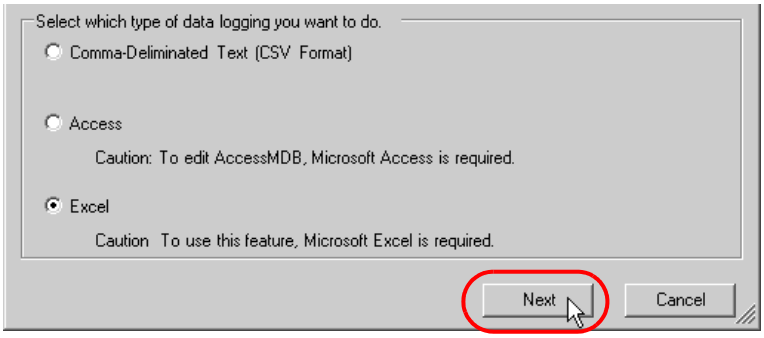


2 Select the data format of a log sheet to create.

In this trial, select "Excel".



Click the [Next] button.



This is the end of selecting a data format. The entry nodes setting screen will appear.

NOTE

- The following explanation assumes that "Excel" is selected on this screen.
  Note that if "Comma-Deliminated Text (CSV Format)" or "Access" is selected, the screens and settings are different from the followings.

Proceed to "STEP 2 Registering Entry Nodes".

STEP 2 Registering Entry Nodes

The setting items are the same as those in the "New Form" wizard above.
See "STEP 2 Registering Entry Nodes" in "3.2.4 Creating a Form".
If you have tried another wizard and registered entry nodes already, you can skip this procedure.
Click the [Next] button and proceed to "STEP 3 Registering Symbols".

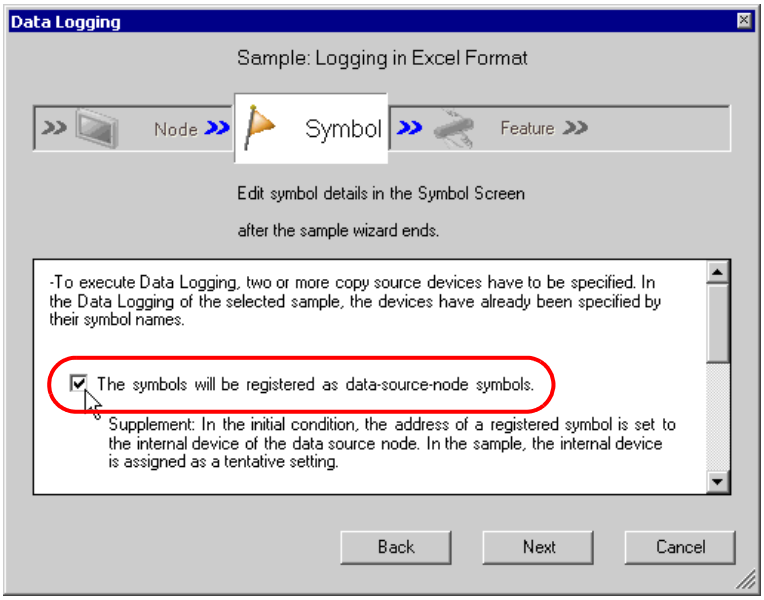
Proceed to "STEP 3 Registering Symbols".

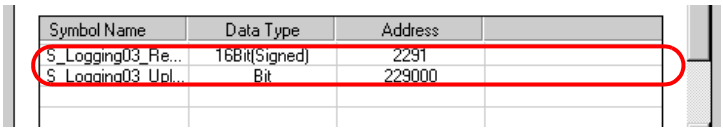
STEP 3 Registering Symbols

This step registers the device address from which data will be read as a "Symbol".

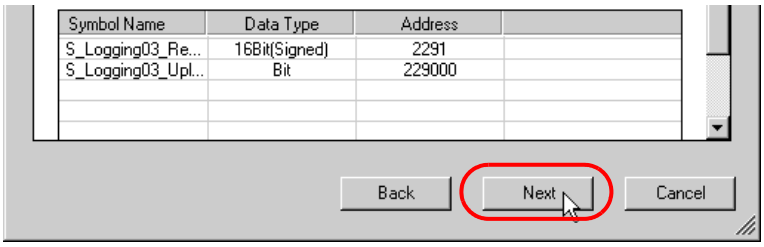
In this wizard, the symbol is preset in the device ("LS area") of the GP.

1 Check the [The symbols will be registered as data-source-node symbols.] check box, and then enlarge or scroll the screen to confirm the preset symbol.





2 Click the [Next] button.



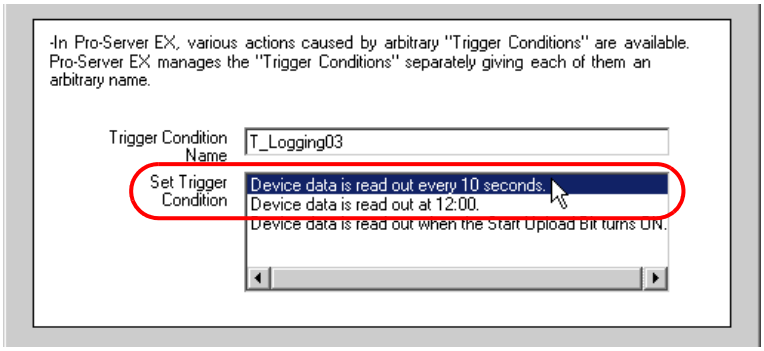
This is the end of registering symbols necessary for data logging. The trigger condition setting screen will appear.

Proceed to "STEP 4 Setting Trigger Condition".

STEP 4 Setting Trigger Condition

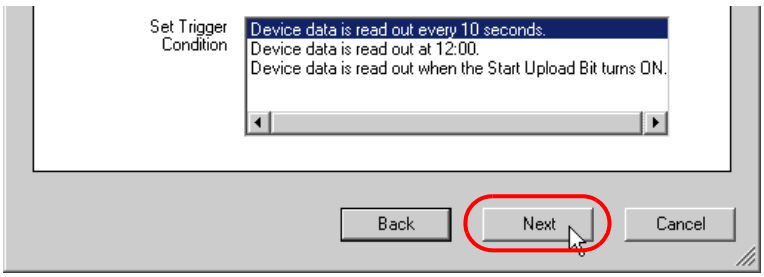
This step sets conditions for executing data logging (trigger condition).

1 Select a trigger condition in the [Set Trigger Condition] field. Here, select "Device data read out every 10 seconds".



IMPORTANT
- The name of the trigger condition can be an arbitrary name. However, in this wizard the name is preset. Changing this name in this trial may cause discrepancies. Accept the default provided by this wizard.

2 Click the [Next] button.



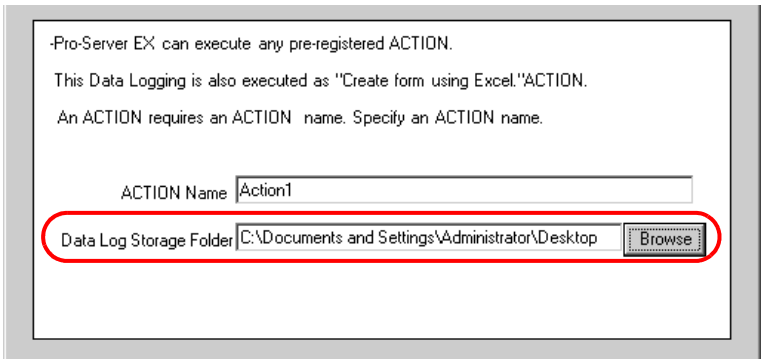
This is the end of setting a trigger condition necessary for data logging. The ACTION setting screen will appear.

Proceed to "STEP 5 Setting Feature (ACTION)".

STEP 5 Setting Feature (ACTION)

This step sets functions (ACTION) to use. This step sets functions (ACTION) to use. Specifically, this step sets the name of ACTION to use and the save destination of a log sheet to create as a sample.

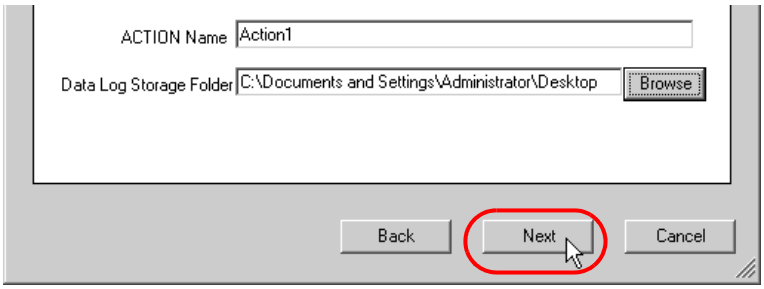
1 Enter the folder of save destination of a log sheet in the [Data Log Storage Folder] field.



IMPORTANT

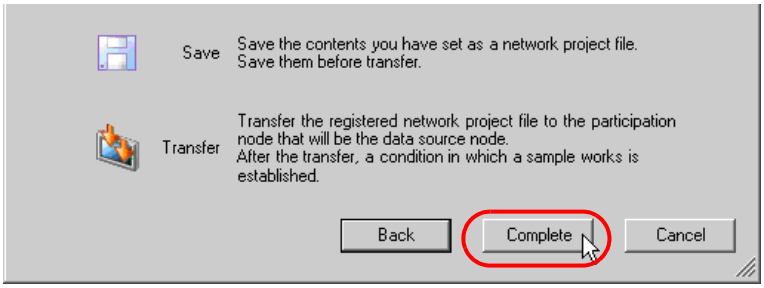
- The ACTION name can be an arbitrary name. However, in this wizard the name is preset. Changing this name in this trial may cause discrepancies. Accept the default provided by this wizard.

2 Click the [Next] button.



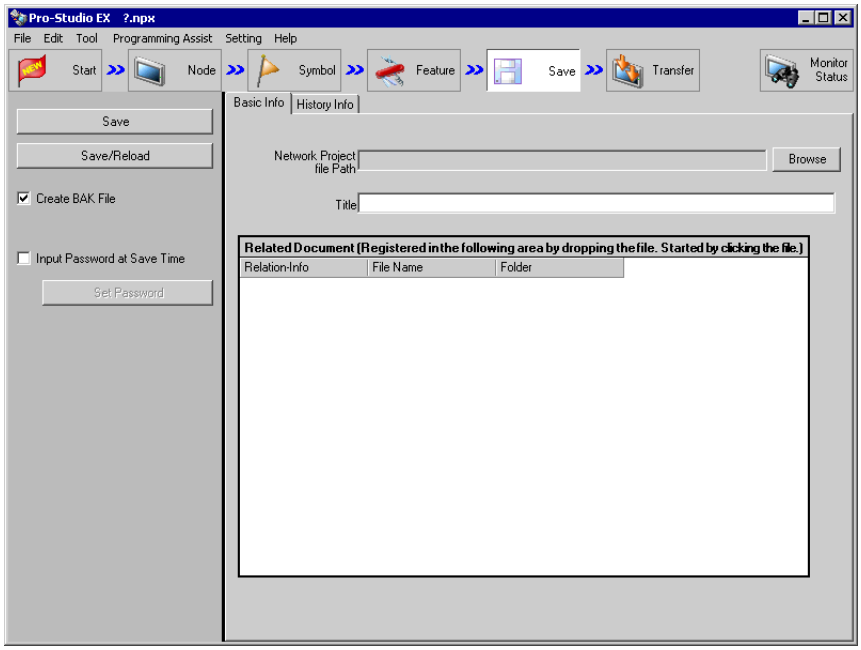
This is the end of setting an ACTION item necessary for data logging. The screen that explains the procedures to follow (saving and transferring network project file) will appear.

3 Click the [Complete] button.



This completes the "Sample Wizard".

Then the save setting screen will appear.



At this time, the "Sample Wizard Setting Result" screen and the log sheet file (Logging_Excel) in Excel format are also created.

NOTE

- The "Sample Wizard Setting Result" screen is of an HTML file. Starting this screen needs 'Microsoft Internet Explorer' preinstalled on the PC.

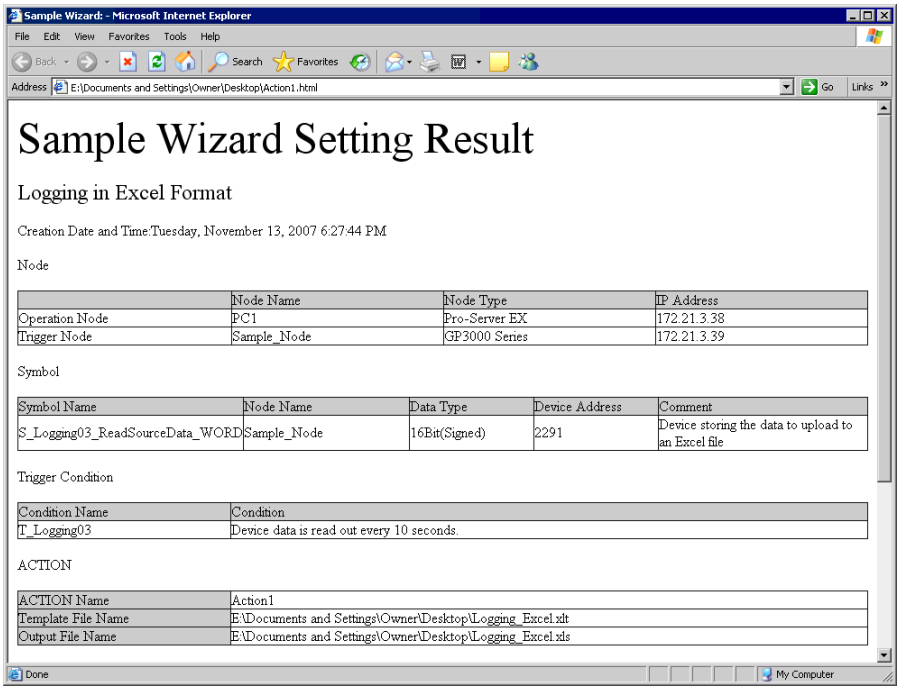
Proceed to "STEP 6 Verifying Setting Result and Log Sheet".

STEP 6 Verifying Setting Result and Log Sheet

This step opens the "Sample Wizard Setting Result" screen to verify the setting result.

1 Click the "Sample Wizard" in the task bar of the PC.

The "Sample Wizard Setting Result" screen will appear.



2 Scroll the screen and verify that the settings have been correctly entered.

NOTE

- Scroll down the "Sample Wizard Setting Result" screen and look for the [Sequence]. The content of action is shown here.

3 After having verified, click the [x] (close) button to close the screen and click the [-] (minimize) button to minimize the screen.

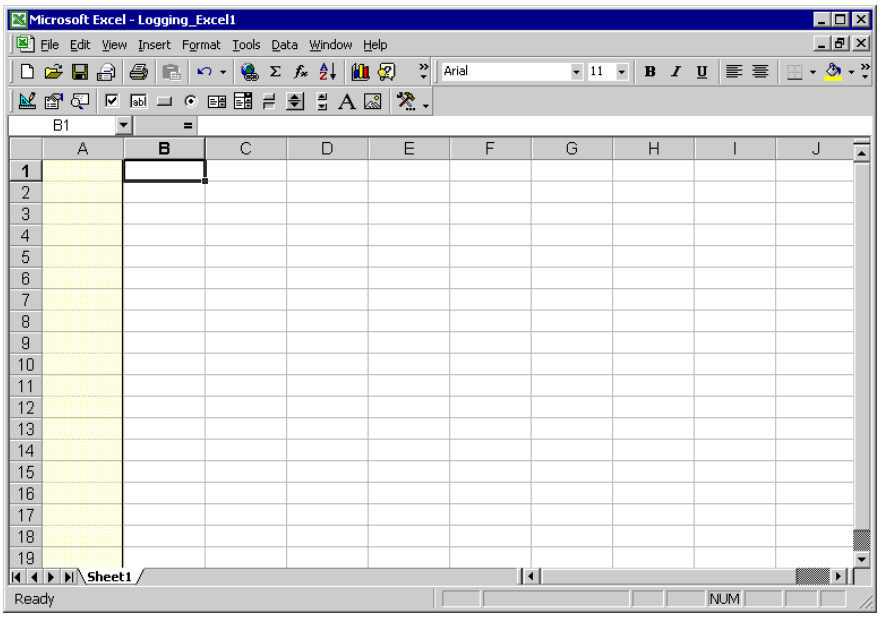
NOTE

- When created, the "Sample Wizard Setting Result" file will be automatically saved in the save destination folder of the recipe sheet set in procedure 2 of "STEP 5 Setting Feature (ACTION)". The file name is "(the ACTION name set in procedure 1 of STEP 5).html".

Proceed to opening the log sheet in 'Excel' to verify the setting result.

4 Open the save destination folder of the log sheet set in procedure 1 of "STEP 5 Setting Feature (ACTION)" and double-click the log sheet (Logging_Excel.xlt) in 'Excel'.

Verify that the log sheet is created.



Proceed to "STEP 7 Saving Network Project File".

STEP 7 Saving Network Project File

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

> The setting items are the same as those in the "New Form" wizard above.
> See "STEP 7 Saving Network Project File" in "3.2.4 Creating a Form".

Proceed to "STEP 8 Transferring Network Project File".

STEP 8 Transferring Network Project File

This step transfers the saved network project file to the GP.

> The setting items are the same as those in the "New Form" wizard above.
> See "STEP 8 Transferring Network Project File" in "3.2.4 Creating a Form".

Proceed to "STEP 9 Logging Device Data".

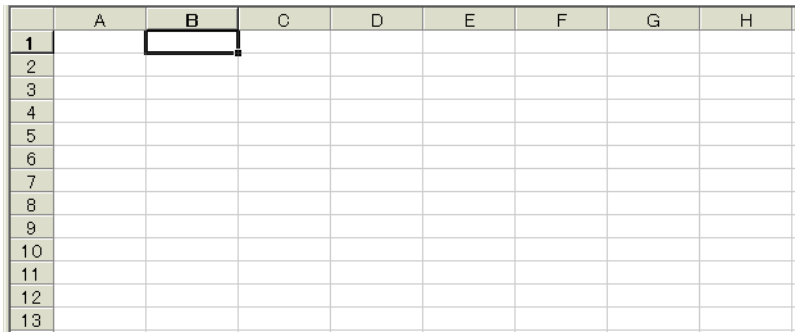
STEP 9 Logging Device Data

This step starts data logging after the trigger condition set in "STEP 4 Setting Trigger Condition" has become effective.

In this trial, you can confirm that the data will be logged at a preset interval in the log sheet.

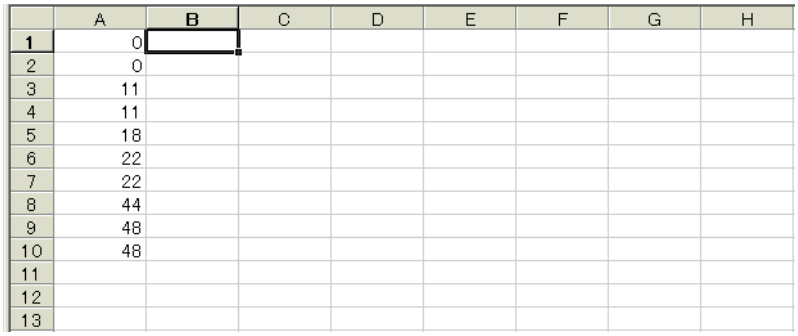
1 Open the Data Log Check Destination Folder set in step 1 of "STEP 5 Setting Feature (ACTION)".

2 When 10 seconds elapse after transferring the Network Project File, the preset Trigger Condition becomes enabled, and the log sheet of the Excel file in which the data stored in "S_Logging03_Reading Source Data_WORD" is written is created.



	A	B	C	D	E	F	G	H
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								

At every 10 seconds, new data will be written onto the log sheet.



	A	B	C	D	E	F	G	H
1	0							
2	0							
3	11							
4	11							
5	18							
6	22							
7	22							
8	44							
9	48							
10	48							
11								
12								
13								

3 After having verified the log sheet, click the [x] (close) button.

This is the end of data logging using the "Sample Wizard".

3.5 Trial of Send Mail Function

3.5.1 What is a Send Mail Function?

Pro-Server EX allows e-mailing a preset message to a specific mail address when a preset event occurs such as change in data or trouble. You can send mail messages by:

- Sending a same message all the time;
- Sending a message created on the Device/PLC; and
- Sending a message preset on the Excel sheet.

Flow of Mail Send

(Example) E-mailing a massage preset on the Excel sheet.

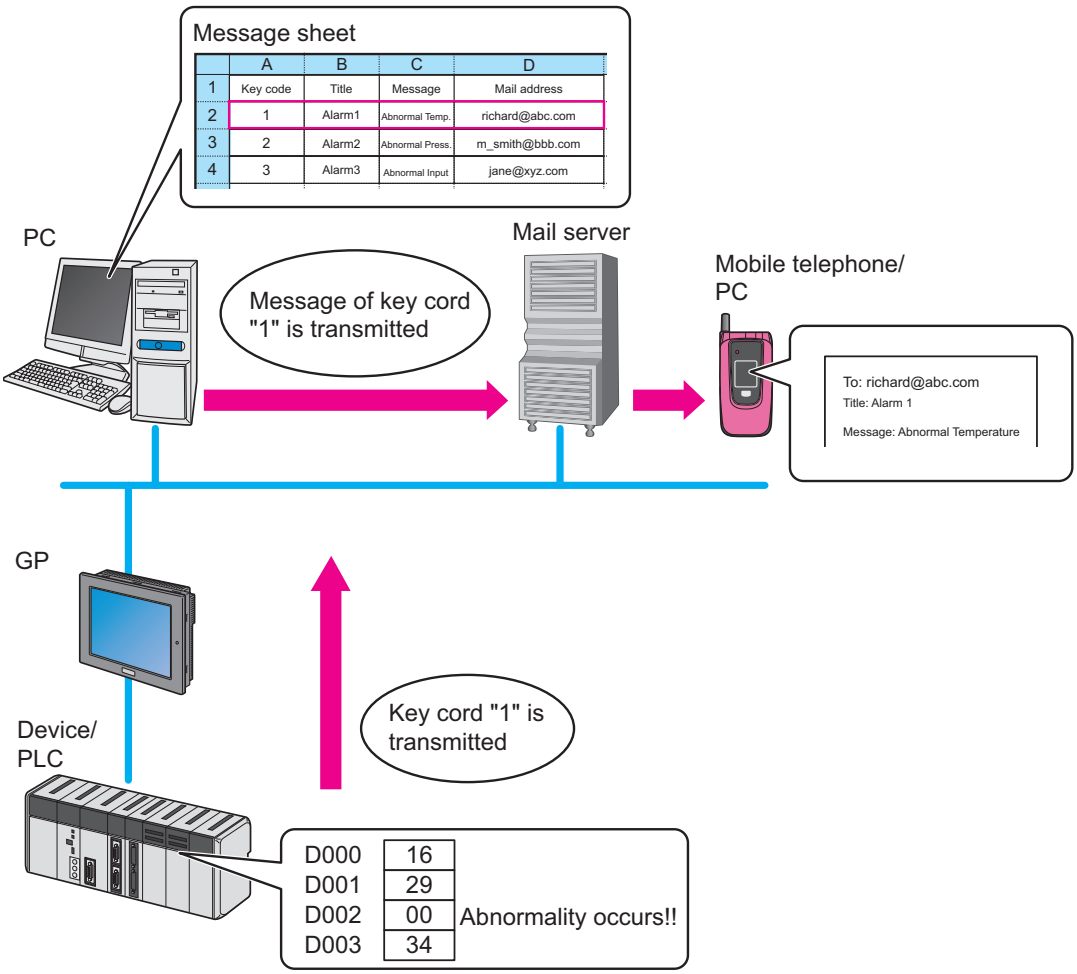
(1) Create an Excel sheet (message sheet) in which messages to send and the mail addresses of send destinations are entered.

	A	B	C	D
1	Key code	Title	Message	Mail address
2	1	Alarm1	Abnormal Temp.	richard@abc.com
3	2	Alarm2	Abnormal Press.	m_smith@bbb.com
4	3	Alarm3	Abnormal Input	jane@xyz.com

(2) Execute action setting of the Mail send function, for example setting of a mail server name and requirements for e-mailing using 'Pro-Studio EX'.

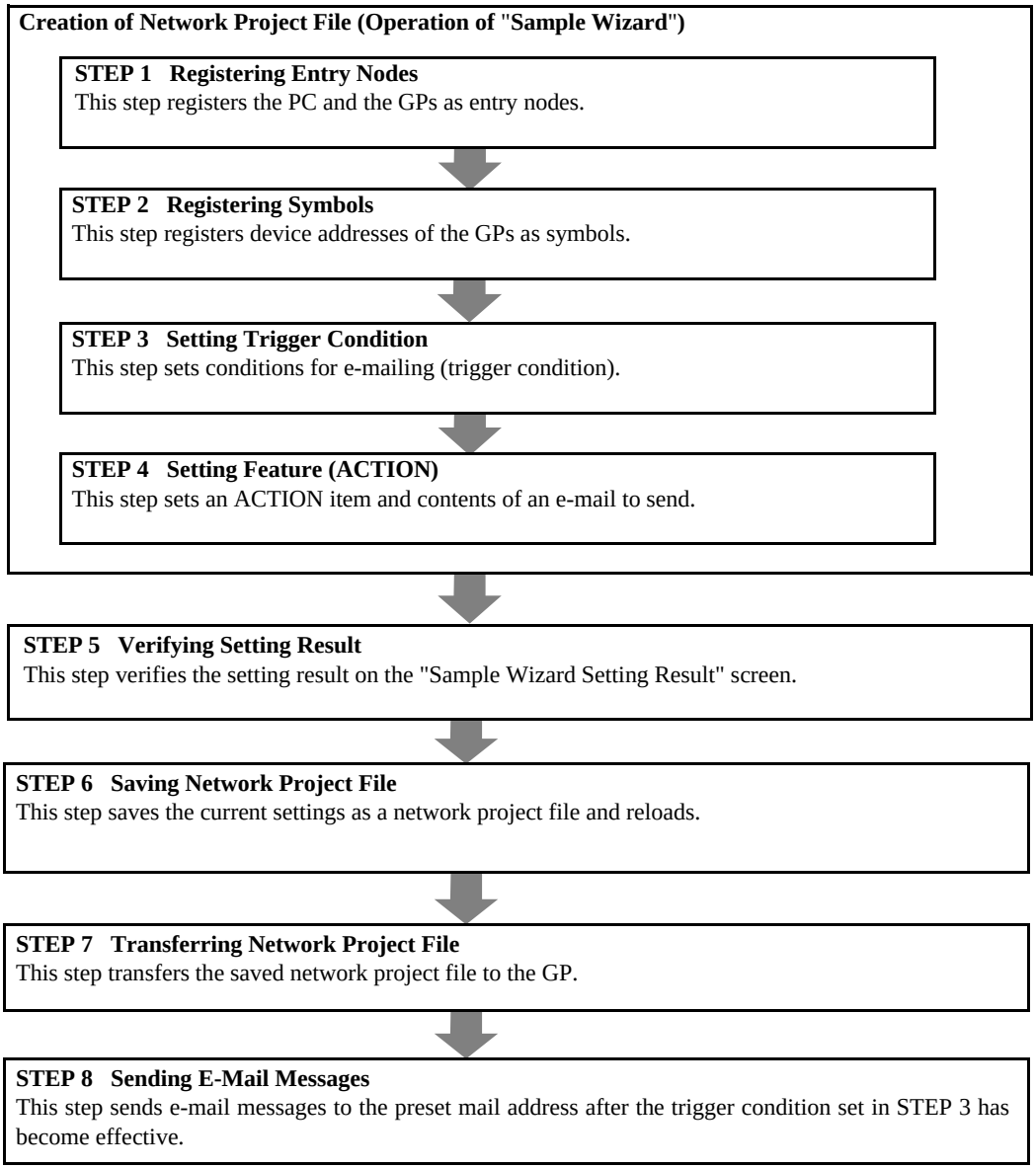
(3) When a preset event has occurred, the message of the key code corresponding to the occurred event on the message sheet will be sent to the recipient such as a cellular phone or a PC via the mail server.

(Example) Transmitting the content of "Alarm 1 Abnormal Temperature" of the key code "1" on the message sheet



3.5.2 Workflow from Settings to Send Mail

The following explains about the operation flow from setting to e-mailing using the "Mail Send" wizard.



3.5.3 Sending a Message

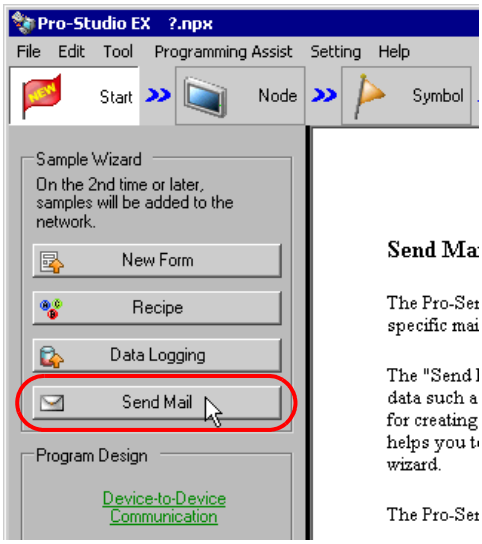
This section helps you to learn necessary settings efficiently for sending mail messages by simply following the instructions of the "Mail Send" wizard of the "Sample Wizard" to actually send an e-mail message.

NOTE

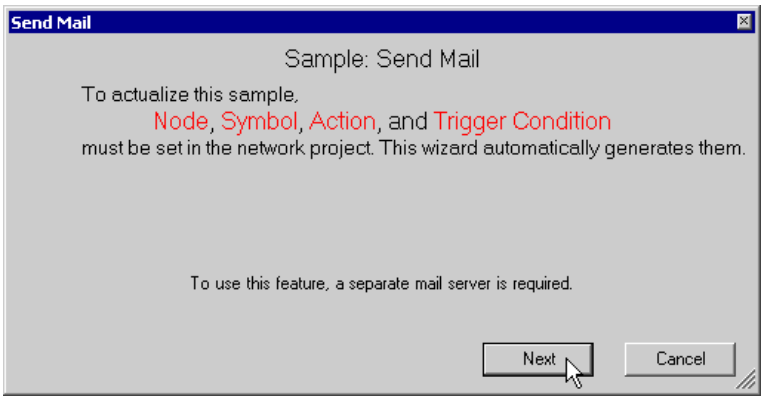
- An e-mail message cannot be sent if the PC is not connected to a mail server (SMTP server) via a network. Before getting started, confirm the connection environment of the PC.

STEP 1 Registering Entry Nodes

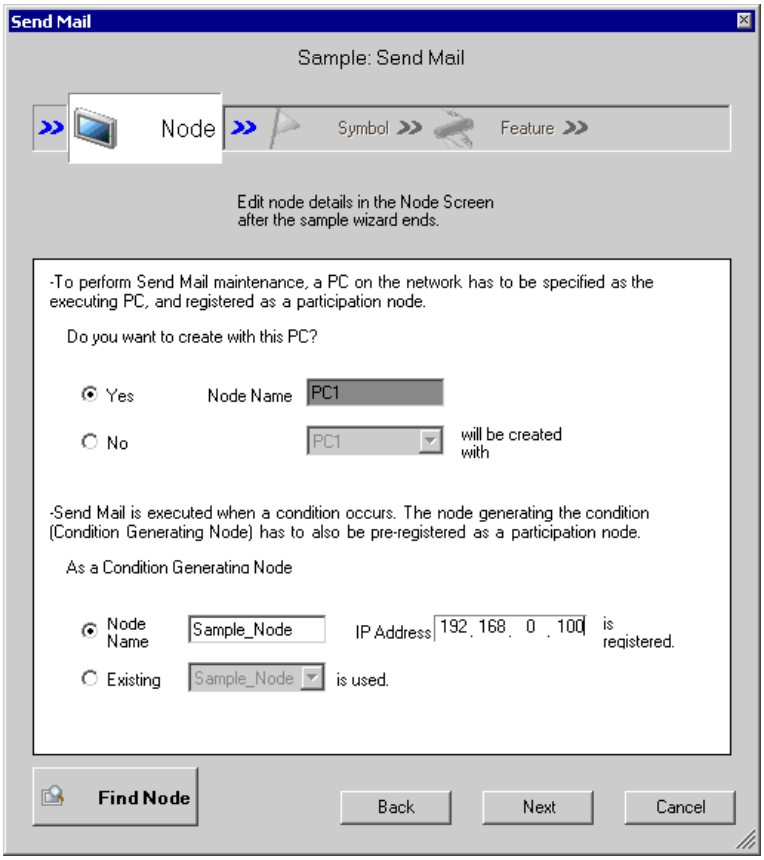
1 On the start screen, click the [Send Mail] button in the [Sample Wizard].



2 Click the [Next] button.



The entry node setting screen will appear.



The setting items are the same as those in the "Form Creation" wizard above.
See "STEP 2 Registering Entry Nodes" in "3.2.4 Creating a Form".
If you have tried another wizard and registered entry nodes already, you can skip this procedure.
Click the [Next] button and proceed to "STEP 2 Registering Symbols".

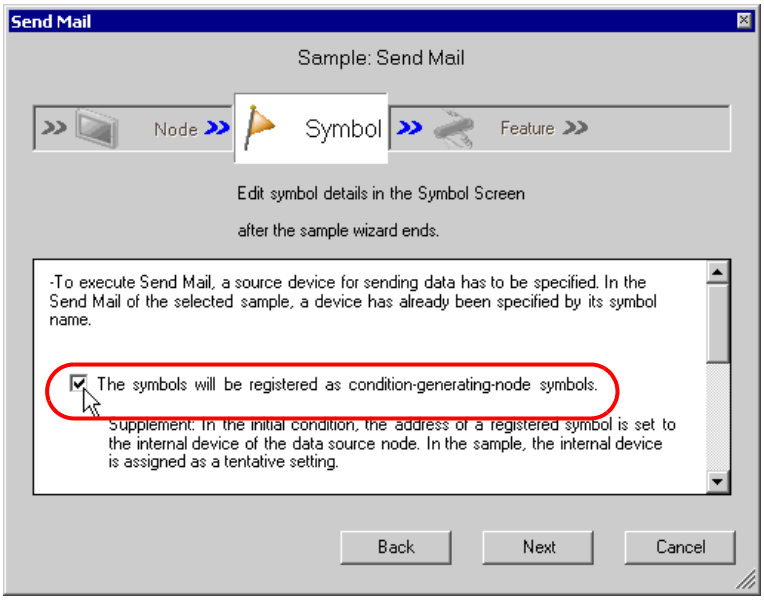
Proceed to "STEP 2 Registering Symbols".

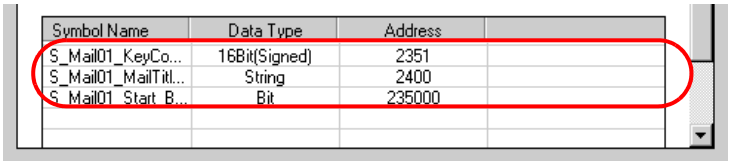
STEP 2 Registering Symbols

This step registers the device address from which data will be read as a "Symbol".

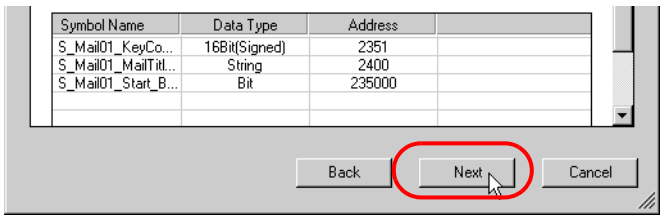
In this wizard, the symbol is preset in the device ("LS area") of the GP.

1 Check the [The symbols will be registered as condition-generating-node symbols.] check box, and then enlarge or scroll the screen to confirm the preset symbol.





2 Click the [Next] button.



This is the end of registering symbols necessary for data write. The trigger condition setting screen will appear.

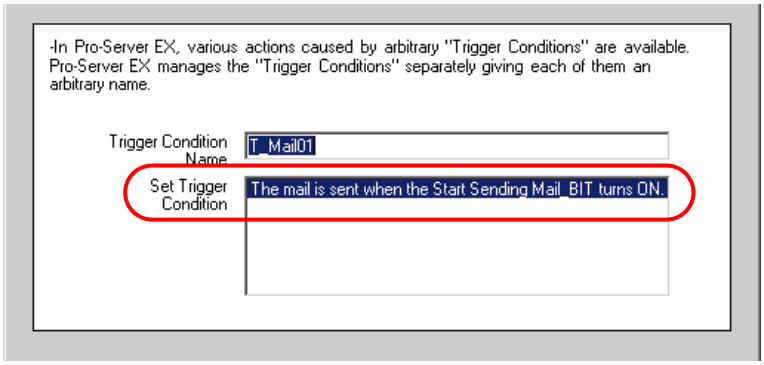
Proceed to "STEP 3 Setting Trigger Condition".

STEP 3 Setting Trigger Condition

This step sets conditions for executing data send (trigger condition).

In this wizard, the trigger condition of detecting a rise of "Mail Send Start_BIT" is preset.

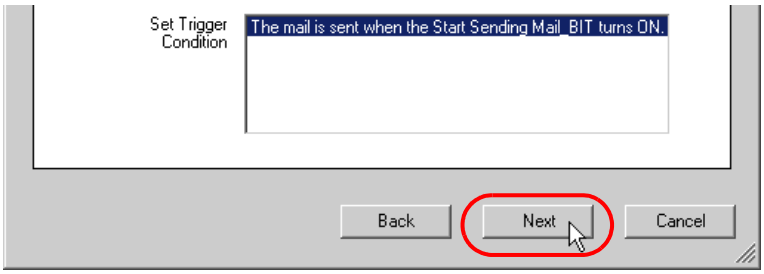
1 Confirm the content of the trigger condition in the [Set Trigger Condition].



2 Click the [Next] button.

IMPORTANT

- The name of the trigger condition can be an arbitrary name. However, in this wizard the name is preset. Changing this name in this trial may cause discrepancies. Accept the default provided by this wizard.



This is the end of setting a trigger condition necessary for mail send. The ACTION setting screen will appear.

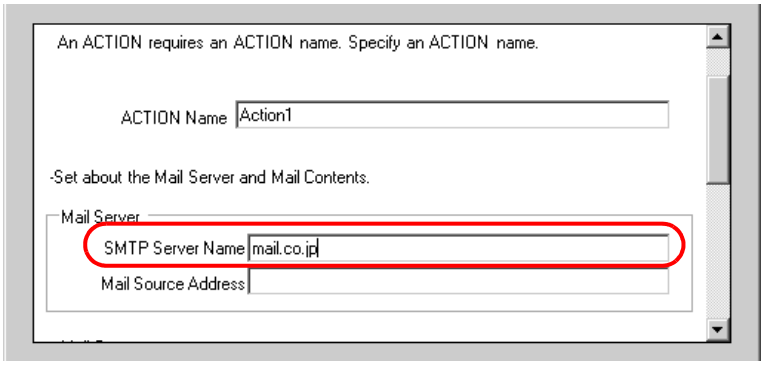
Proceed to "STEP 4 Setting Feature (ACTION)".

STEP 4 Setting Feature (ACTION)

This step sets functions (ACTION) to use. Specifically, this step sets the name of ACTION to use and the save destination of a message sheet to create as a sample.

1 Execute setting of mail server

Enter the name of the currently connected server for mail send (e.g. Mail.xxxx.co.jp) in the [SMTP Server Name] field in single-byte characters.



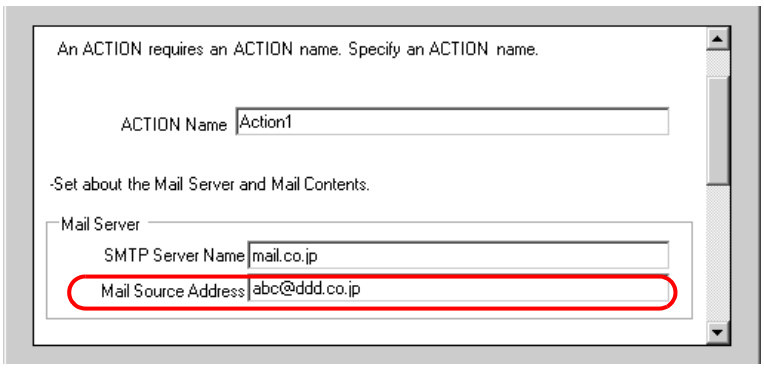
IMPORTANT

- The ACTION name can be an arbitrary name. However, in this wizard the name is preset. Changing this name in this trial may cause discrepancies. Accept the default provided by this wizard.

SMTP Server

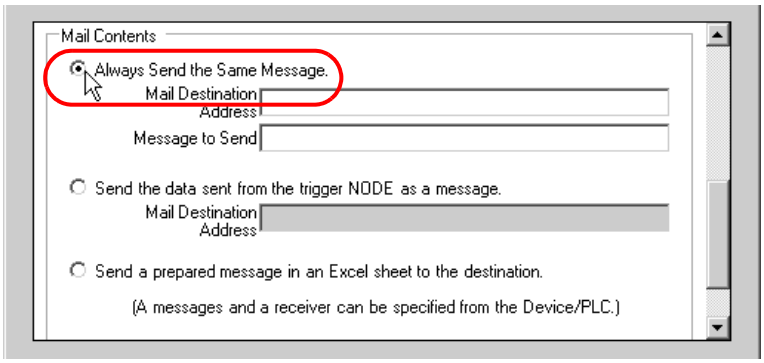
A server for delivering e-mail messages complying with SMTP (Simple Mail Transfer Protocol), a mail transfer protocol (standard for data communication). E-mail messages are sent or received through a computer called "Server" that is always on the Internet. There are two types of serves: for sending and for receiving. SMTP server is typically used to send messages from a mail client to a mail server.

Enter the mail address of the currently using PC (PC saved as an entry node in "STEP1 Registering Entry Nodes") in the [Mail Source Address] field.



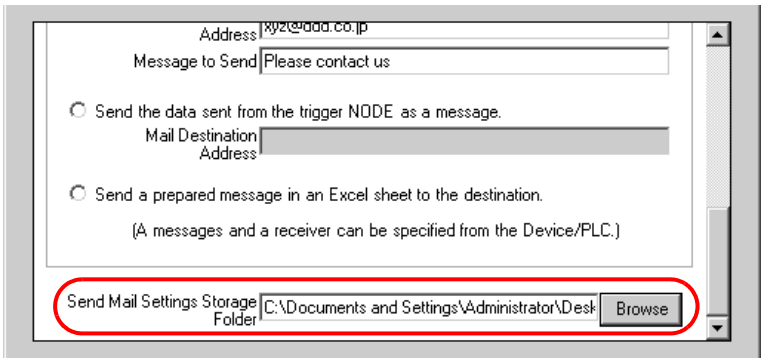
2 Execute setting for mail message

Select the [Always Send the Same Message] to send the message preset in this wizard.

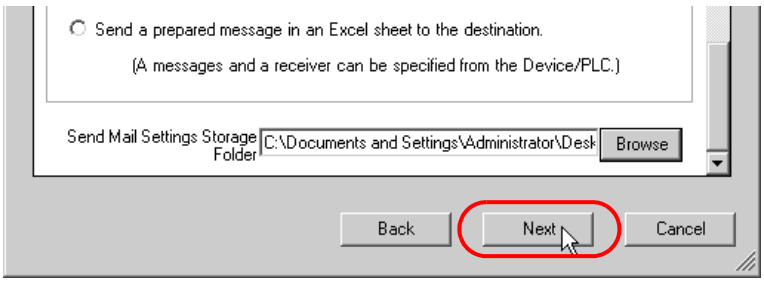


Enter the mail address of the recipient (PC or cellular phone) in the [Mail Destination Address] field, and a message you want to send in the [Message to Send] field in single-byte characters.

3 Enter the save destination folder of the message sheet in the [Send Mail Setting Storage Folder] field.

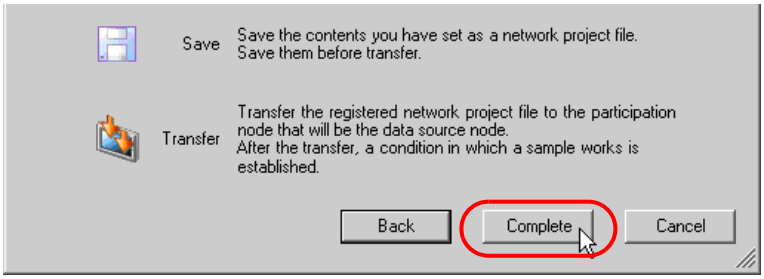


4 Click the [Next] button.



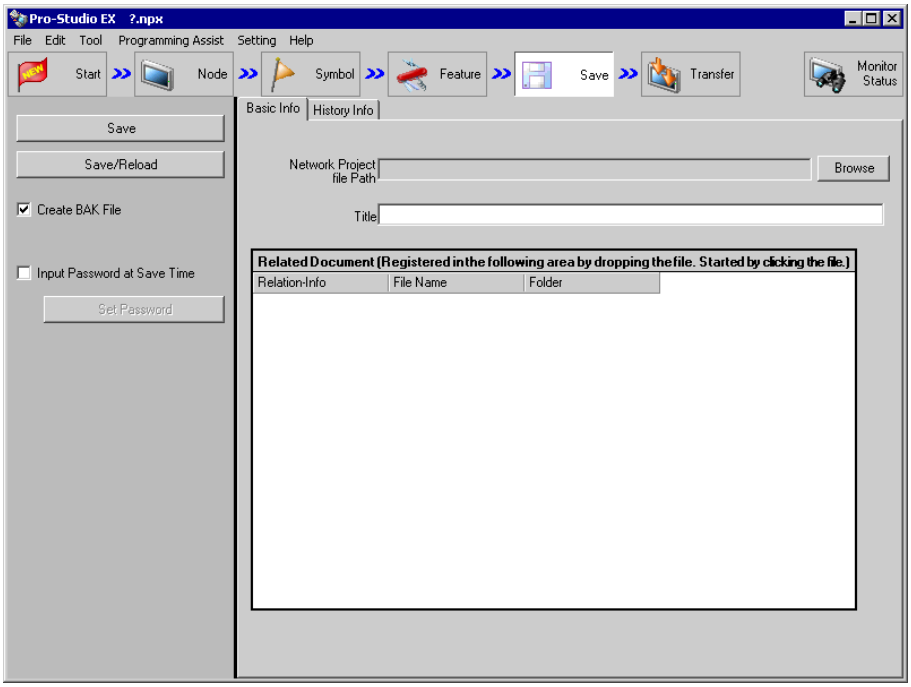
This is the end of setting an ACTION item necessary for mail send. The screen that explains the procedures to follow (saving and transferring network project file) will appear.

5 Click the [Complete] button.



This completes the "Sample Wizard".

Then the save setting screen will appear.



At this time, the "Sample Wizard Setting Result" screen is also created.

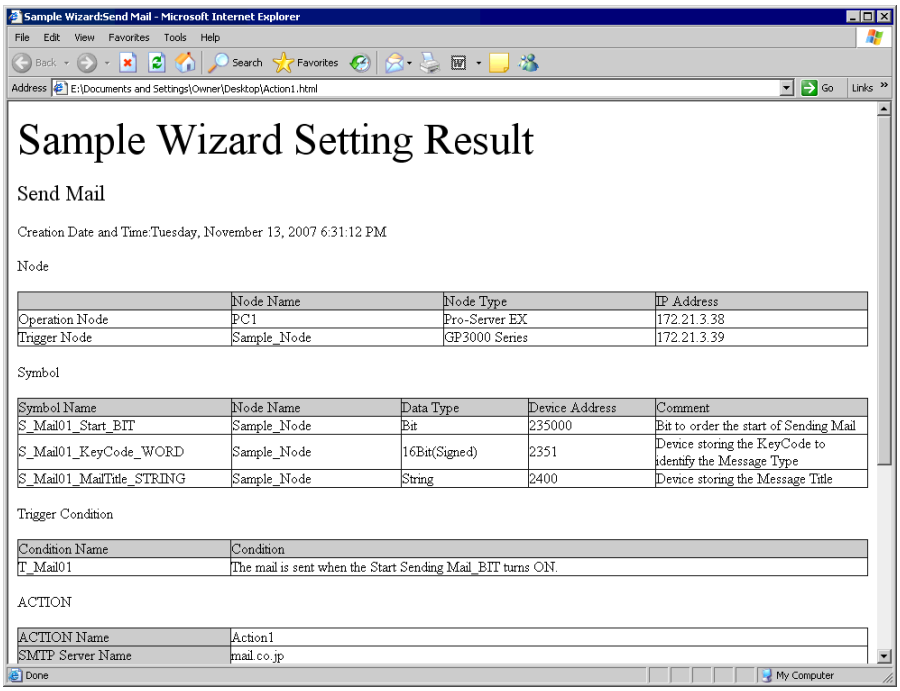
Proceed to "STEP 5 Verifying Setting Result".

STEP 5 Verifying Setting Result

This step opens the "Sample Wizard Setting Result" screen to verify the setting result.

1 Click the "Sample Wizard" in the task bar of the PC.

The "Sample Wizard Setting Result" screen will appear.



2 Scroll the screen and verify that the settings have been correctly entered.

3 After having verified, click the [x] (close) button to close the screen and click the [-] (minimize) button to minimize the screen.

Proceed to "STEP 6 Saving Network Project File".

STEP 6 Saving Network Project File

This step saves the current settings as a network project file and reloads to 'Pro-Server EX'.

> The setting items are the same as those in the "New Form" wizard above.
> See "STEP 7 Saving Network Project File" in "3.2.4 Creating a Form".

Proceed to "STEP 7 Transferring Network Project File".

STEP 7 Transferring Network Project File

This step transfers the saved network project file to the GP.

> The setting items are the same as those in the "New Form" wizard above.
> See "STEP 8 Transferring Network Project File" in "3.2.4 Creating a Form".

Proceed to "STEP 8 Sending E-Mail Messages".

STEP 8 Sending E-Mail Messages

When the trigger condition set in "STEP 3 Setting Trigger Condition" has become effective, the e-mail message set in the wizard will be sent to the specified mail address.
In this trial, you can confirm that an e-mail message will be sent to the specific mail address.

1 Turn on the mail send start bit to effect the trigger condition.

NOTE You can turn ON the mail send start bit by:

- turning on the bit from the screen of the GP; or
- turning on the bit on the "Device Monitor" or "Symbol Monitor".

For more details, see 'GP-Pro EX Reference Manual' or "28 Simply Confirming On-site Status".

2 When the trigger condition becomes effective, the content of the [Message to Send] field set in the procedure 3 of the "STEP 4 Setting Feature (ACTION)" will be transmitted.

This is the end of sending e-mail messages using the "Sample Wizard".