Chapter 2

Status observation

Table of contents

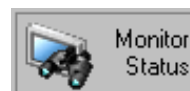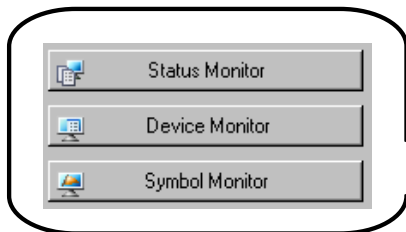Chapter 2 Status monitor

Image of status observation

解説

By using the status observation tool, status of participating node and the data of PLC device can be monitored in PC when the basic setup (participating node, symbol registration and NPX save) is done.

Refer to the Reference Manual "Chapter 27 Field status to be confirmed easily" for each details.

Here, above mentioned three monitors will be used for practical work.
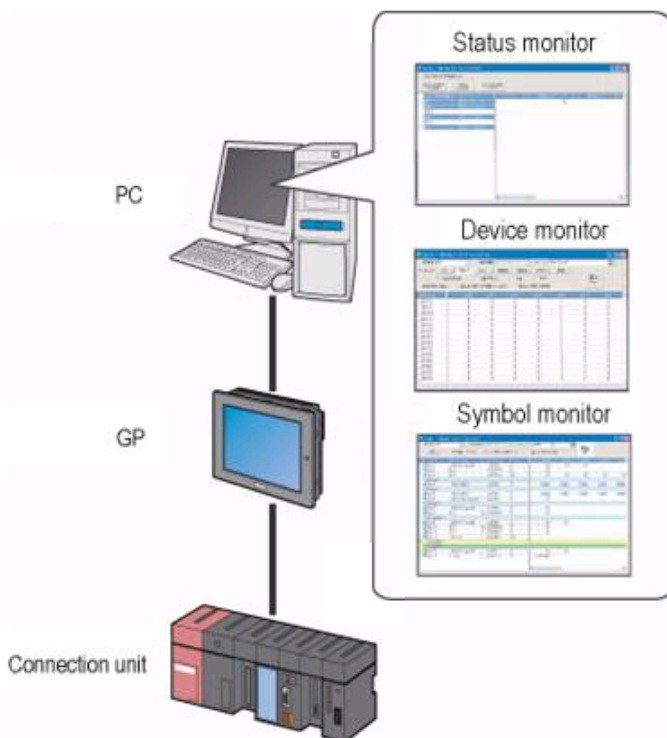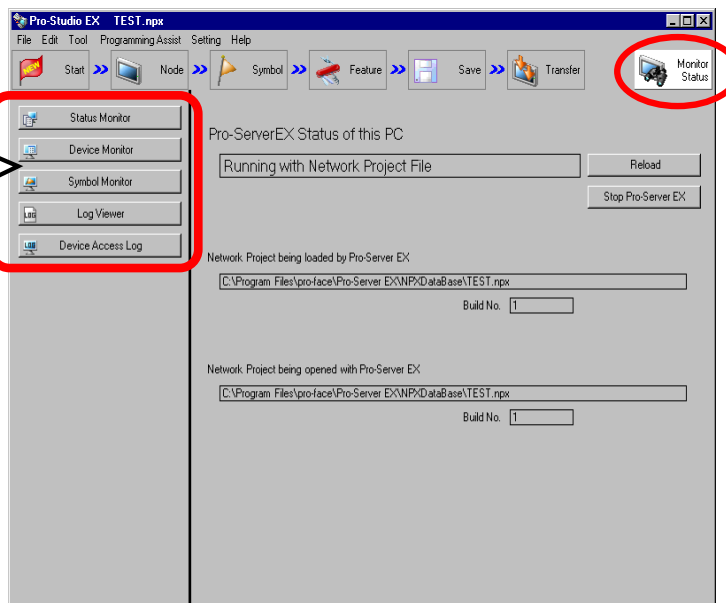
One point

Use as a debug tool

The device monitor and symbol monitor can also be used as a debug tool.
Since On-off of bit and change of numerical data are possible from/in PC without using PLC ladder tool, debug of display indicator screen and network project file (NPX) is possible.

Otauske Pro-Server EX !

Status monitor

Status of each participating node is monitored.

① Click the [Status monitor].
② The window of "Status-Monitor of Pro-Server EX" is displayed.
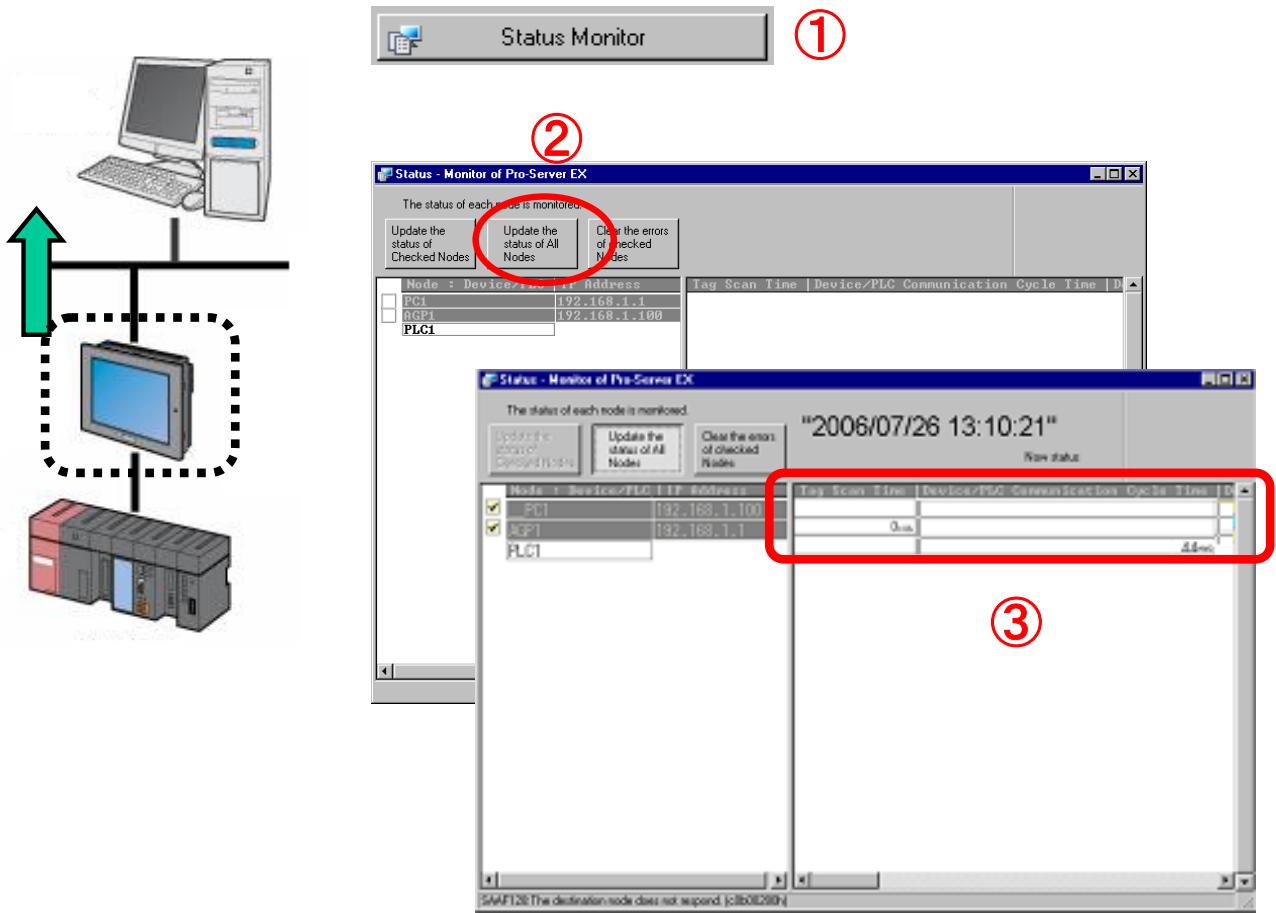   Click the "Update the information of all nodes".
③ The status of each display item on the right-hand side of the
   window is updated.

The following items are displayed.

Tag scan time, Device communication cycle time, Device communication error
count, Device communication error number, Error time, 2WAY error number,
System version, 2WAY version, Protocol version, Model.

⭐ **One point**

When NPX is not yet saved, save it by the following procedure.

Start Pro-Server EX

To execute Start Pro-Server EX, you must save the network project. Do you want to save?

① Yes   No
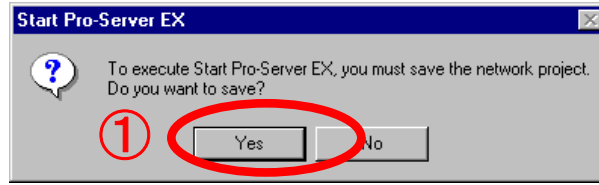
① If the message as shown above is displayed, click [Yes].

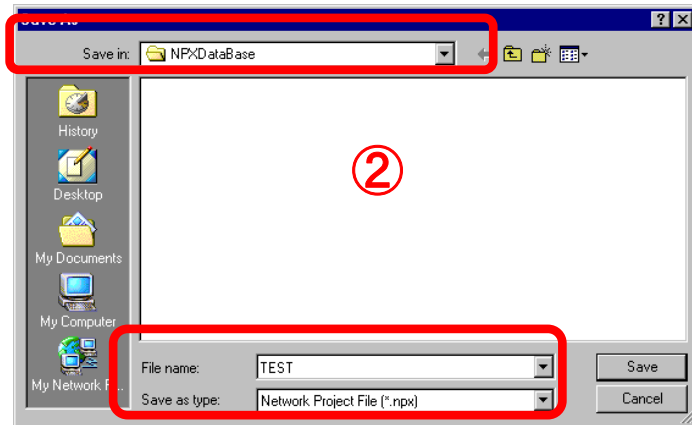② Enter the place and the file name to be saved, and save NPX.
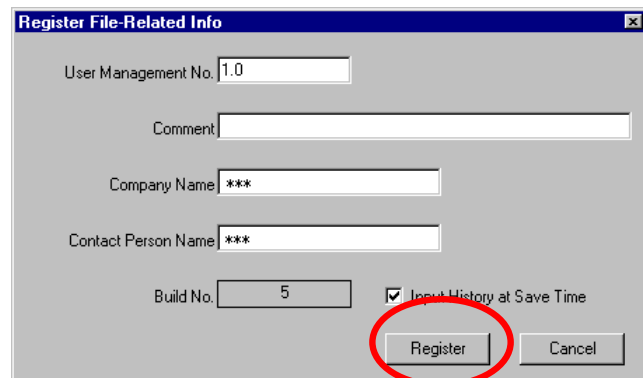
※In practical work, save it as a "TEST.NPX".

Save As

Save in: NPXDataBase

②

History
Desktop
My Documents
My Computer
My Network P..

File name: TEST   Save
Save as type: Network Project File (*.npx)   Cancel

③ Click [OK].

At the time of reload,start the Pro-Server EX, the icon will display in task tray.

Start Pro-Server EX

Pro-Server EX has started.

OK
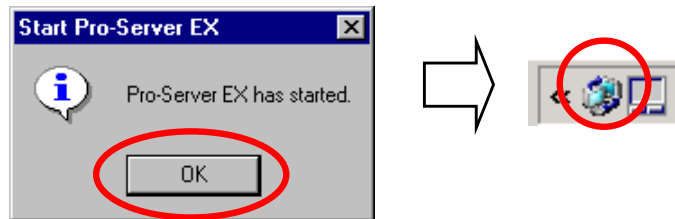
③

④ In "Register file related information", enter as follows and click the [Register].

| User management number: 1.0 |
| Comment : No |
| Company name: *** |
| (As per PC setup) |
| Contact person name: *** |
| (As per PC setup) |

Register File-Related Info

User Management No. 1.0

Comment

Company Name ***

Contact Person Name ***

Build No.   5   ☑ Input History at Save Time

Register   Cancel

④

Device monitor

実習

Data of PLC device address is monitored.
From the symbol sheet created to each participating node, the data of the continuous following addresses can be read and written by specifying the first address.

① If Device monitor is clicked, the window of "Device-Monitor of Pro-Server EX" is displayed.
② Select participating node.
③ Select connection unit.
④ Select first device from symbol sheet.
⑤ Data of continuous address will be displayed in the window.

⑥ If display cell of each data is double clicked, the window as shown in the right figure will be displayed and the data can be written.

※ Refer to the appendix for the details regarding the screen for practical work.

⭐ **One point**

・The size of a window can be changed and it can be made in easily viewable form.

The frame of a box will drag and the number of devices to be monitored and the direction of view can be changed by changing the size.

Multiple data can be written in lump sum to continuous address.

In this portion …

Example) If symbol is selected and the following is written

100　150　250　180　200　・・・　(press [ENTER] key)

Single byte space

Written as

| Address:	D50	D51	D52	D53	D54	・・・・
	‖	‖	‖	‖	‖	
Input value:	100	150	250	180	200	・・・・

Symbol monitor

実習

Data of PLC device address is monitored in the same way as Device monitor.
In symbol monitor, only the registered data of symbol sheet can be displayed
and only the items which are to be displayed from discontinuous device can be
displayed by selecting them.
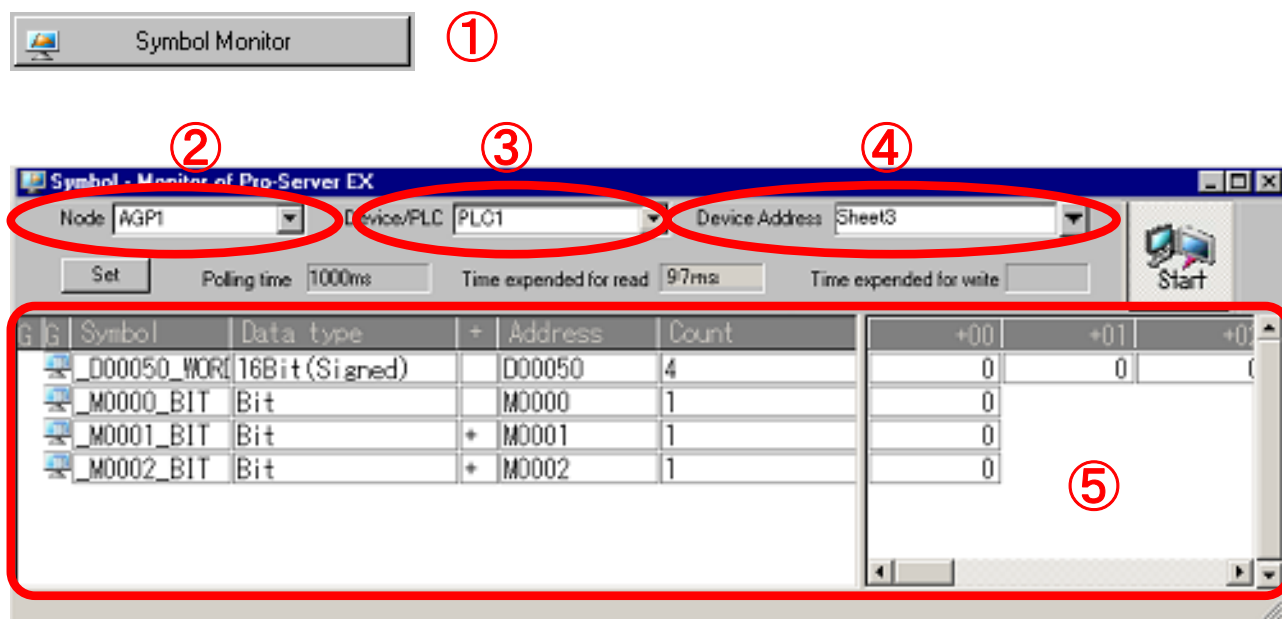
① If symbol monitor is clicked, the window of "Symbol-Monitor of Pro-Server EX" will be displayed.
② Select the participating node.
③ Select the connection unit.
④ Select the symbol sheet.
⑤ The data for each symbol will be displayed in window.

⑥ If display cell of each data is double-clicked, the window as shown in the right figure will be displayed and the data can be written.
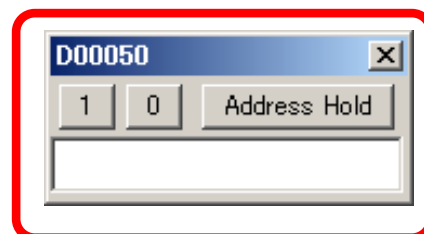
※ Refer to the appendix for the details regarding screen for practical work.
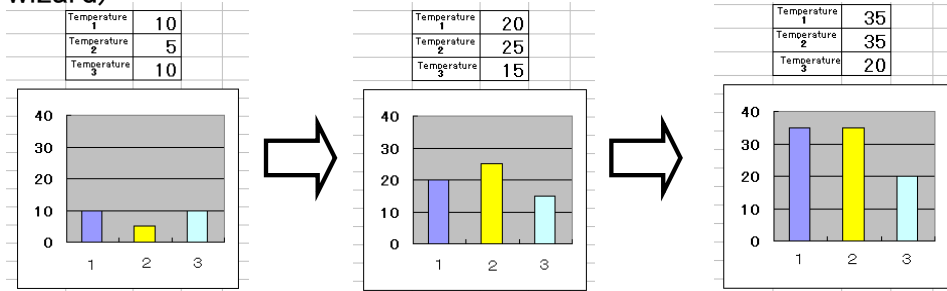
⭐ **One point**

Regarding DDE monitor

The device data of connection unit can be read on the Microsoft Excel sheet. The sheet for various monitors can be created by using the features such as functions and graph display provided by Excel.
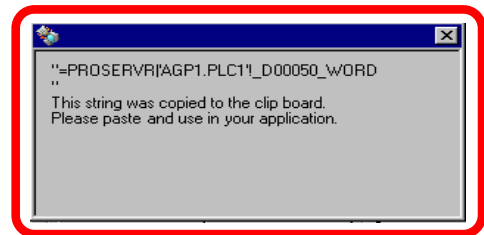
Example） The result in which data is **calculated by function**,will display.

Output 1	100
Output 2	120
Output 3	130
Output 4	150
Output 5	180
Total	=SUM(C2:C6)

Weight A	Weight B	Standard	OK or NG
50	80	100	=IF(B3+C3 >D3," OK "," NG ")
40	20	150	NG
50	500	180	OK
60	30	150	NG
10	40	170	NG

Example）Observe the real time change in/by moving graph.(Created with Excel graph wizard)

① Right click the device which is monitoring DDE from symbol sheet,point out it in order of "Make symbol macro" and "EXCEL" and click the "DDE".
② Created DDE function will be stuck on the cell of a cell from a clip board.

⭐ **One point**

What is DDE (Dynamic Data Exchange) ?

The application software on Windows is the structure which exchanges the data.
A user does not need to do any special operation and the software will transfer
the data automatically. The side which demands data is called as DDE client
and the side which provides the data is called as DDE server.
If DDE function is set up by Pro-StudioEX, Pro-Server EX will consider as DDE
server automatically, and Excel will consider as DDE client. (Data can not be
written in Excel without DDE server feature.)
In DDE monitor, data is observed in Excel sheet which is always opened.

Image of data flow

Polling

In PC

Microsoft Excel	Pro-Server EX

Connection unit

Windows OS