31 Node Registration

| 31.1 | Registration and Deletion of Entry Nodes | 31-2 |
|------|---|-------|
| 31.2 | Searching Nodes | 31-8 |
| 31.3 | Getting Data from a Screen Project File (PRX) | 31-16 |
| 31.4 | Getting Data from the Screen Project File (PRX) Transferred to the display unit | 31-22 |
| 31.5 | Setting Guide | 31-26 |
| 31.6 | Restrictions | 31-35 |

31.1 Registration and Deletion of Entry Nodes

To use 'Pro-Server EX', you must first register the PC and display unit connected on the network as entry nodes. You set the node name, communication information like IP addresses, and Device/PLC type as registration information.

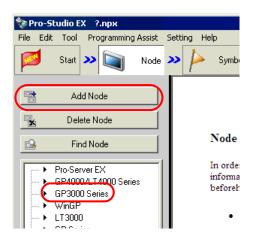
This section describes the procedure to register and delete entry nodes.

31.1.1 Registration of Entry Nodes

1 Click the [Node] icon on the status bar.

| 🎕 Pro-Studio EX 🛛 AGP.npx | |
|--|------------------------------|
| File Edit Tool Programming | Assist Setting Help |
| Start 🗡 🞑 | Node 🕨 눧 Symbol . |
| Sample Wizard On the 2nd time or later, samples will be added to the network. | |
| New Form | Construct |
| 🍄 Recipe | The "Pro-Se application : |
| 💫 Data Logging | Various typ |
| Send Mail | Various API |

2 Select a node type from the tree display on the left of the screen and click [Add Node].



3 Enter [Node Name] and [IP Address]. (Enter [Node Name], [IP Address], and [Subnet Mask] in the "GP Series". Also enter [Gateway], if required.)

| Add Node | | د |
|------------------------------|----------------------|----------------------------|
| Node Type | | |
| C Pro-Server EX | GP4000/LT4000 Series | GP3000 Series |
| C WinGP | C LT3000 | C GP Series |
| | | |
| Node Name | IP Address | |
| AGP1 | 192,168,0,1 | 00 |
| 🔲 Link between Device Info a | nd Sumbol Info | |
| Project File | | Browse 🗖 Auto Update |
| | | Auto opdate |
| C Read Info Online | Update | |
| L | 4.115 | |
| | Add De | vice/PLC Delete Device/PLC |
| Device/PLC 1 | | |
| Maker | Device Type | _ |
| Port Type | Set Port Max | Text Mode 1 🛨 |
| Delete | | |
| Device Name | Device Configuration | |
| | | |
| | | |
| System Area | | Sustan Area |
| Device | <u></u> | System Area |
| | | Register Cancel |
| | _ | |

4 Click the list buttons of [Maker], [Device Type] and [Port Type], and set these items related to Device/PLC. (When you select "GP Series" as the node type, set [Device Type] only.)

| Device/PLC 1 | Add Device/PLC Delete Device/PLC |
|---|--|
| Maker (Mitsubishi E Port Type (Delete Device Name | ectric Cc Device Type |
| System Area Device | System Area Start Device Register Cancel |

- **NOTE** The following items are automatically determined according to the selection of Device/PLC type. To change the setting, please follow the steps given below.
 - Please correspond the registered information of Device/PLC to that of the actual Device/PLC of the display unit. If the setting is incorrect, proper operation is not expected.
 - Depending on the type of device/PLC you selected, you cannot change the setting of each item.

5 Click [\blacktriangle] or [\blacktriangledown] button of [Text Mode] to specify the text mode adopted by Device/PLC.

| Device/PLC 1 | | Add Device | /PLC D | elete Device/PLC |
|---------------------|------------------------|--------------------------|--------------------------------|------------------|
| Maker Port Type | Mitsubishi Electric Cc | Device Type iet Port Max | A Series CP | |
| Delete Device N | ame | Device Configura | ation | |
| PLC1 | | Series=AnA Serie | 15 | Þ |
| System Are Devic | a PLC1 | • | System Area DO Start Device | 000 |
| | | | Register | Cancel |

NOTE

• Text mode is automatically set when [Device Type] or [Port Type] is selected. This step is necessary only when you wish to change this setting.

6 Click [Device Name] field and enter a Device/PLC name.

| Device/PLC 1 | Add Device/PLC Delete Device/PLC |
|--|---|
| Maker Mitsubishi Electr Port Type COM Delete | ic Cc V Device Type A Series CPU Direct V Set Port Max 1 Text Mode 2 |
| Device Name | Device Configuration Series=AnA Series |
| System Area PLC1 | System Area D0000 |
| | Register Cancel |

• Please make sure to totally conform the device name, type and setting to the data specified in 'GP-Pro EX'. Inconsistency may cause access to unauthorized devices.

7 Click [Device Configuration] field to set a device.

| Device Co | nfiguration | |
|------------|-------------------|--|
| Series=An4 | A Series | Series O AnA Series O AnN Series The range of the address is different according to the series. |
| • | System Area D0000 | Please reconfirm all of address settings that you are using if you have changed the series. |
| | Register Cancel | OK Cancel |

8 Click [System Area Device] drop down list to select the Device/PLC to assign the system address.

| Device | PLC 1 | | | Add D | evice/PLC | Delete D |)evice/PLC | |
|--|--------|-----------------|----------|----------------------|-----------|----------------|------------|--|
| Make | er | Mitsubishi Eler | etrie Co | ▼ Device | Type A S | eries CPU Dire | ect 💌 | |
| Port [*] | Гуре | СОМ 💌 | S | et Port | Max 1 | Fext Mode | 2 🗧 | |
| [| Delete | | | | | | | |
| | Device | Name | | Device Configuration | | | | |
| • | PLC1 | | | Series=AnA Series | | | | |
| | | | | | | | Þ | |
| System Area PLC1 System Area D0000 III | | | | | | | | |

9 Enter the first device address of the assigned system area in [System Area Start Device].

Enter the address directly or click the Calculator icon to enter it on the device address input screen.

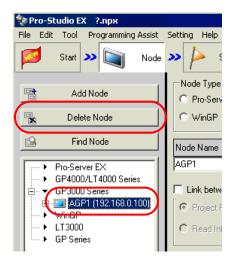
| Device/PLC1 | Add Device/PLC Delete Device/PLC | | | |
|--|--|----|------|-----|
| Maker Mitsubishi Electric C Port Type COM 💌 | C Device Type A Series CPU Direct Set Port Max 1 Text Mode 2 + | | | |
| Delete | | | | |
| Device Name | Device Configuration | | | |
| PLC1 | Series=AnA Series | | | |
| <u> </u> | | | | |
| System Area PLC1 | System Area D0000 | 0 | | |
| | Back | | C | Clr |
| | Register Cancel A B C | 7 | 8 | 9 |
| | D E F | 4 | 5 | 6 |
| | | 1 | 2 | 3 |
| | | 0 | E | nt |
| | ОК | Ca | ncel | |

10 Click [Register].

The entry node is now registered with the set contents.

31.1.2 Deletion of Entry Nodes

1 Select the entry node you wish to delete from the node list on the left of the screen, and Click [Delete Node].



2 The following message appears confirming the deletion. Click [Yes].

| Delete Node 🛛 🔀 | | | | |
|---|---|----|--|--|
| AGP1 (196.168.0.100) will be deleted. Is that OK? | | | | |
| Ye | 5 | No | | |

The selected node is now deleted.

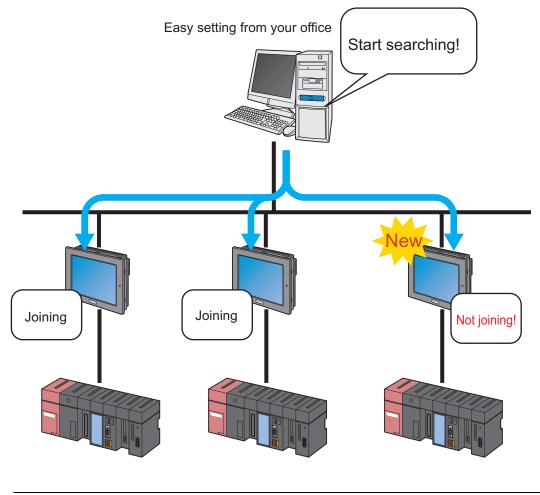
• Note deletion may cause inconsistency in the contents specified on the feature screen. Please check the contents of a network project file to confirm the consistency before reloading and transferring it.

31.2 Searching Nodes

31.2.1 What is "Searching Nodes"?

You can register the PC and display units that are active on the network, individually as a node, and also detect and register any node that is not in the network project file by using the search function.

It allows you to register network nodes easily, without confirming on the spot the Ethernet setting of each display unit.



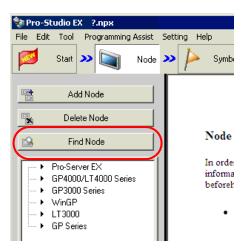
• The search area (where nodes can be found) covers the nodes having the same class ID as that of the IP address of the PC to search. You cannot search the nodes located in the different class or over the router.

This section describes how to use the search function and register entry nodes.

1 Click [Node] icon on the status bar.



2 Click [Find Node].

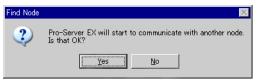


The search of entry nodes now starts and the "Find Node" screen appears.

The "Find Node" screen shows the number of the entry nodes currently connected on the network (detected nodes) and the number of those not registered (Non-Prticipant nodes).

| | Node | ind Node | _ | | おたる | まけ N | ro! | |
|------|---------------------------|------------------|------------------|--------------------|---|----------|-------------------------------------|---|
| | In order to | Participan | IP Address | Node Name | Device Type | Node | ne | |
| | informatior beforehand | NonParticip | 172.21.1.82 | PC1 | | Pro-Se | | |
| - 11 | • Pri | | | | | | | |
| - 11 | Reş | | | | | | er 🔰 | |
| | EX | | | | | | | |
| Fi | nd Node | | | | | | × | 1 |
| | U To add an no | nparticipation n | | rk project, select | the node and click C type is Pro-Serve | | utton. d it, change the settings | |
| T | GP | | | | | | | - |
| | | | | | Elap | sed Time | | |
| | • Wi Reg be one | Select a Add | node you want to | add to the netwo | ork. | <u> </u> | to er | |
| | pro_ | - | | | | | - | |

NOTE • To perform the node search function, 'Pro-Server EX' should be operated. If 'Pro-Server EX' is not running, the following dialog message appears.



Clicking [Yes] activates 'Pro-Server EX' and starts searching entry nodes. Clicking [No] stops the node search.

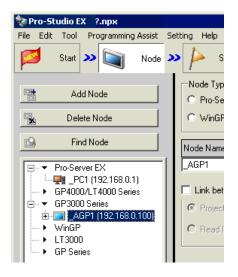
3 Click [OK] after checking the message.

| Find Node | X |
|------------|--|
| i) | Search Complete Found Nodes: 1, nonparticipation Nodes: 1 To add an nonparticipation node to the network project, select the node and click the [Add] button. Caution An unknown node has a node name of _GP? and its PLC type is Pro-Server EX. To add it, change the settings properly. |

4 Select [NonParticipant Status] on the "Find Node" screen, and then click [Add].

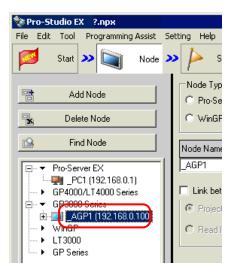
| nd Node | | | | 2 |
|-------------|------------------|------------------|-------------|------------|
| Participan | IP Address | Node Name | Device Type | Node |
| NonParticip | 172.21.1.82 | PC1 | | Pro-S |
| | | | | |
| • | | | | ŀ |
| | | | El | apsed Time |
| Select a | node you want to | add to the netwo | ork. | 00:07 |

The selected non-participant node is registered as an entry node and indicated in the node list with a temporary name.



| NOTE • To select more than one node at one time, click the non-entry nodes while pressing the [Shift] key |
|--|
| • Depending on the type of device/PLC you selected, you cannot change the setting of each item. |
| Import Project File |
| Do you want to also import the Symbol Info of the GP3000 node? |
| <u>Yes</u> <u>N</u> o |
| To import the symbol data of the screen project file simultaneously, click [Yes]. If you wish not, click [No]. |

5 Click a node name in the node list.



The details of the selected entry node are displayed on the right of the screen.

| % Pro-Studio EX 🤅 ?.r | | | | | | |
|-----------------------|--------------------------|--|-----------------------|--------------------------------------|-----------------------------------|-------------------|
| w | ramming Assist Se | etting Help | | | | |
| Start >> | Node > | ► | ≷ Feature > | Save 🔉 | > 🆄 Transfer | Monitor Status |
| Add Nod | | Node Type C Pro-Server EX C WinGP | C GP/ C LT3 | 4000/LT 4000 Series | GP3000 Series | |
| Find Nod | e | Node Name | | IP Address | | |
| | 2.168.0.1) 000 Series | AGP1 Link between Device Project File Read Info Online | Info and Symbol Info | 192,168, 0 | | Auto Update |
| GP Series | | Device/PLC 1 | | Add | Device/PLC Delete | Device/PLC |
| | | Maker Mits | subishi Electric Cc 🔻 | Device Type 🛛 🗛 | Series CPU Direct | |
| | | Port Type CO | <u> </u> | ▼ Set Port | Max 1 Text Mode | 2 2 |
| | | Device Name PLC1 | | vice Configuration ies=AnA Series | | |
| Tree List | | System Area PL Device | C1 | - | System Area D0000 Start Device | ₫ |
| | | | | | | |

6 Set the items related to Device/PLC.

Refer to "31.1.1 Registration of Entry Nodes" for more details about the setting items.

| NOTE | • | To change the node name, move the cursor to the text box of [Node Name] and enter a new name. |
|------|---|---|
| | | |

7 Click [Register].

The entry node is now registered with the set contents.

NOTE

• There are 2 types of display formats of a node list: "Tree format" and "List format". (Normally, nodes are displayed in a tree format.)

In a tree format, the top layer shows a node type and the lower layers indicate a node name and a Device/PLC name respectively.

In a list format, node names and IP addresses are indicated .

| | I | Node _AGP1 _PC1 | IP Address 192.168.0.100 192.168.0.1 |
|-------------|---|-----------------------|--|
| | | | |
| | | | |
| | | | |
| Tree List | | Tree List | |
| Tree format | - | | List format |

• You can change the display format by clicking the tab at the bottom of the node list.

31.2.2 Countermeasure Against Unrecognized Nodes

When no entry node is recognized by the search function, please check the following items.

(1) Cable and LAN hub

Check if the Ethernet cable is not disconnected.

(2) Network setting on the PC and display unit side

Check if the IP address and subnet mask are specified properly.

• Confirmation of display unit setting

"2.4 Set the network of display unit"

Confirmation of PC setting

"2.3 Setting PC Network"

NOTE • You can check the setting of the IP address and subnet mask by the following method.

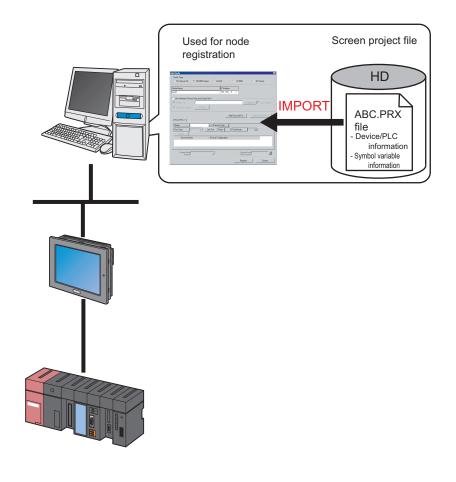
- (1) From the [Start] button in Windows, select [All Programs] [Accessory] [Command Prompt].(2) Enter "ipconfig" on the command prompt screen.
- (3) The following screen appears, displaying [IP Address] and [Subnet Mask].



31.3 Getting Data from a Screen Project File (PRX)

This feature allows you to obtain (import) the Device/PLC information and symbol information from a screen project file (*.PRX) made by a screen creation application like 'GP-Pro EX'.

By utilizing a screen project file made by a screen creation application, it is possible to register the accurate data of entry nodes for a short time.



• The information that can be imported from a screen project file is that of Device/PLC and of symbols. Import of data saves the effort of inputting the same data to 'Pro-Studio EX'. You can also import data from a screen project file (*.PRW) made by the 'GP-PRO/PBIII for Windows' as well. You can also get information from a "GP-Pro/PB III for Windows" screen project file (*.PRW).

1 Click the [Node] icon on the status bar.



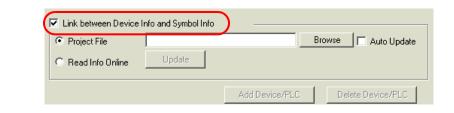
2 Select a node type from the tree display on the left of the screen and click [Add Node].

| 🂱 Pro-Studio EX 🛛 ?.npx | |
|---|--------------------------------|
| File Edit Tool Programming Assist | Setting Help |
| Start 🔊 🟹 Node . | 🍛 눧 Symbi |
| Add Node | |
| 😼 Delete Node | |
| 🚱 Find Node | Node |
| Pro-Server EX GP4000/LT4000 Series GP3000 Series WinGP LT3000 | In orde: informa beforek |

3 Enter [Node Name] and [IP Address]. (Enter [Node Name], [IP Address], and [Subnet Mask] in the GP Series. Also enter [Gateway], if required.)

| A | dd Node | | × |
|---|----------------------------|----------------------|----------------------|
| | Node Type | | |
| | C Pro-Server EX | GP4000/LT4000 Series | GP3000 Series |
| | C WinGP | O LT3000 | O GP Series |
| | Node Name | IP Address | |
| (| AGP1 | 192,168,0 | .100 |
| | 🔲 Link between Device Info | and Symbol Info | |
| | Project File | | Browse 🗖 Auto Update |
| | C Read Info Online | Update | |

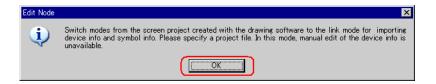
4 Check [Link between Device Info and Symbol Info].



NOTE • When [Auto Update] is checked, the screen project file that has been imported is automatically updated if there is any change to it.

^(@) "31.5 Setting Guide"

The confirmation screen for data import appears. Click [OK].



The mode is switched to the link mode that allows the data import.

NOTE • When [Link between Device Info and Symbol Info] is unchecked, the confirmation screen of linkmode cancellation appears.

Click [OK] to cancel the link mode.



• Depending on the type of device/PLC, you cannot edit the device information manually even if [Link between Device Info and Symbol Info] is cleared.

5 Select [Project File] and click [Browse].

| Link between Device Project File Read Info Online | Info and Symbol Info | Browse Auto Update |
|---|----------------------|----------------------------------|
| | | Add Device/PLC Delete Device/PLC |

The "Open" dialog box appears.

| Open | | | | | ? × |
|--|----------------|----------------------|---|---------|--------|
| Look in: | 🔁 NPXDataBas | e | • | 🗢 🗈 💣 🎫 | |
| iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii | imonitor.prx | | | | |
| Desktop My Documents | | | | | |
| My Computer | | | | | |
| | File name: | monitor.prx | | • | Open |
| My Network P | Files of type: | Project File (*.prx) | | • | Cancel |

6 Select your target screen project file (*.prx) and click [Open].

| Open | | | | | ? × |
|--------------|----------------|----------------------|-------|-------|--------|
| Look in: | 🔁 NPXDataBase | • |] 🗢 🖻 |) 📥 🎟 | • |
| | monitor.prx | | | | |
| Desktop | | | | | |
| My Documents | | | | | |
| My Computer | | | | | |
| My Network P | File name: | monitor.prx | | • | Open |
| | Files of type: | Project File (*.prx) | | • | Cancel |

The "Import Project File" screen appears. Click [OK].

| Import Pr | Import Project File 🛛 🗙 | | |
|-----------|--|--|--|
| • | Error 0 symbols Registered 0 symbols. | | |
| | ок | | |

The Device/PLC data set in the screen project file is displayed in each item in the [Device/PLC] tab.

| Link between Device Info and Symbol | Info |
|-------------------------------------|---|
| Project File C:\Program Fil | es\Pro-face\Pro-Server EX\NPXDataBas Browse 🗖 Auto Update |
| O Read Info Online Update | Last Link Date and Time 2005-10-14 14:44:42 |
| | Add Device/PLC Delete Device/PLC |
| Device/PLC 1 | |
| Maker Mitsubishi Electric C | C Device Type A Series CPU Direct |
| Delete | |
| Device Name | Device Configuration |
| PLC1 | Series=AnA Series |
| | |
| | |
| System Area Device PLC1 | System Area D0000 |
| | Register Cancel |

7 Click [Register].

The entry node is now registered with the set contents.

NOTE

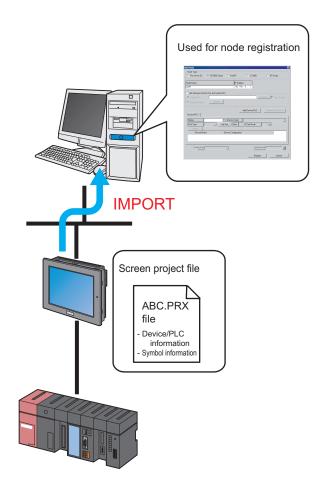
• Imported variables (variable format) of the logic program are registered in a new symbol sheet named "Node name_LOGIC".

| e Edit Tool Programming Assist Setting | Help | | | | | |
|--|-----------------|---------------|-----------------|------------------|-------------|------------|
| 🗾 Start ン 🟹 Node ン 🛛 | Symbol ン 💐 | 🕈 Feature ン 🔡 | Save 🔉 | Trans | ifer 🛛 | Mor St. |
| Symbol | Node Name _AG | 7 | Device Na | me #INTERNAL | | |
| Group Ungroup | Sheet Name _AGE | | titas a dobi | al symbol sheet. | | |
| Insert Delete | Sheet Hameje | 1. 30 | A K GS G GIODA | ar symbol shoot. | | |
| Copy Cut Paste | Symbol | Data Type | Consec utive | Device Address | No. of Data | Cor |
| Symbol Sheet | Switch | Bit | M | 0000 | 1 | _ |
| Add Delete | Lamp_01 | Bit | м | _0001 | 1 | |
| Add Delete | Switch_01 | Bit | M | _0002 | 1 | |
| Check Duplication/List Used Addresses | Switch_02 | Bit | М | _0003 | 1 | |
| Check Dupication/Elst Osed Addresses | Lamp_02 | Bit | М | _0004 | 1 | |
| Global Constant Setting Screen | Switch_03 | Bit | M | _0005 | 1 | |
| | Lamp_03 | Bit | М | _0006 | 1 | |
| Pro-Server EX | Switch_04 | Bit | M | _0007 | 1 | |
| #INTERNAL:Sheet1 | Lamp_04 | Bit | M | _0008 | 1 | |
| GP3000 Series | Switch_05 | Bit | M | _0009 | 1 | |
| 🖻 🔄 _AGP1 (192.168.0.100) | Lamp_05 | Bit | M | _0010 | 1 | |
| #INTERNAL:Sheet2 | Switch_06 | Bit | M | _0011 | 1 | |
| #MEMLINK:Sheet3 Memory Linl X #INTERNAL:_AGP1_LOGIC | Lamp_06 | Bit | М | _0012 | 1 | |
| WinGP | Switch_07 | Bit | M | _0013 | 1 | |
| - ► LT3000 | Lamp_07 | Bit | M | _0014 | 1 | |
| → GP Series | Stop_01 | Bit | М | _0015 | 1 | |
| Global Symbol | Stop_02 | Bit | М | _0016 | 1 | |
| | Stop_03 | Bit | | _0017 | 1 | |
| | Stop_04 | Bit | M | _0018 | 1 | |
| | Stop_05 | Bit | M | _0019 | 1 | |

31.4 Getting Data from the Screen Project File (PRX) Transferred to the display unit

You can obtain (import) via the network the Device/PLC data and symbol data from the screen project file (*.PRX) transferred to the display unit.

By utilizing a screen project file made by a screen creation application, it is possible to register the accurate data of entry nodes for a short time.



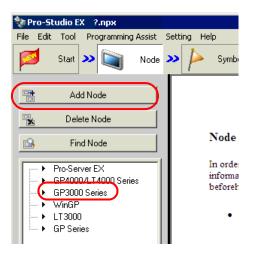
• The information that can be imported from a screen project file in the display unit is that of Device/ PLC and of symbols. Import of data saves the effort of inputting the same data to 'Pro-Studio EX'. This function is available on display units (except those set up as GP Series nodes).

This section describes the setting required for importing the data of a screen project file (PRX) from each display unit on the network.

1 Click the [Node] icon on the status bar.

| 🃚 Pro-Studio EX 🛛 ?.npx | |
|--|-------------------------------|
| File Edit Tool Programming Assist | Setting Help |
| Start Node | >> 🔑 Symbol . |
| Sample Wizard | |
| A new network will be constructed. Select a sample. | |
| 🛱 New Form | New Forr |
| 😵 Recipe | The Pro-Ser |
| | Excel format |
| 💁 Data Logging | The "New F |
| Send Mail | in Excel forr items and co |

2 Select a node from the tree display on the left of the screen and click [Add Node].



3 Enter [Node Name] and [IP Address]. (Enter [Node Name], [IP Address], and [Subnet Mask] in the GP Series. Also enter [Gateway], if required.)

| Add Node | | x |
|--------------------------|------------------------|----------------------|
| Node Type | | |
| C Pro-Server EX | C GP4000/LT4000 Series | GP3000 Series |
| C WinGP | C LT3000 | C GP Series |
| | | |
| Node Name | IP Address | |
| AGP1 | 192,168, 0 | .100 |
| 🔲 Link between Device In | fo and Symbol Info | |
| Project File | | Browse 🗖 Auto Update |
| C Read Info Online | Update | |
| | | |

4 Check [Link between Device Info and Symbol Info].

| C Link between Device I | nfo and Symbol Info | \supset —— | |
|-------------------------|---------------------|----------------|----------------------|
| Project File | | | Browse 🔲 Auto Update |
| C Read Info Online | Update | | |
| | | Add Device/PLC | Delete Device/PLC |

The confirmation screen for data import appears. Click [OK].

| Edit Node | × |
|-----------|---|
| ٩ | Switch modes from the screen project created with the drawing software to the link mode for importing device info and symbol info. Please specify a project file. In this mode, manual edit of the device info is unavailable. |
| | OK |

The mode is switched to the link mode that allows the data import.

• When the [Link between Device Info and Symbol Info] check box is cleared, a confirmation box for link-mode cancellation appears. Click [OK] to cancel link mode.

| Edit Node | X |
|-----------|---|
| i) | Release the link mode and allow you to manually edit device settings. |
| | (OK |

• Depending on the type of device/PLC, you cannot edit the device information manually even if the [Link between Device Info and Symbol Info] check box is cleared.

5 Select [Read Info Online] and click [Update].

| 🔽 Link between Device Info and Symbol Info | |
|--|----------------------------------|
| O Project File | Browse 🗖 Auto Update |
| Read Info Online Update | |
| | Add Device/PLC Delete Device/PLC |

The "Read Info Online" dialog box appears and starts communication with the display unit whose IP address you entered in Step 4. Without going online, the display unit runs an online read.

| tead Info | Online | | | | |
|------------|-------------|-----------------------|-------------|--|--|
| Retrieving | g PLC and s | mbol info of I | Node(AGP1). | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

NOTE

If "Transfer password" is set for the display unit, the "Transfer password entry" screen appears. Enter the password and click the [OK] button.

6 When the communication is completed, the Device/PLC data set in the screen project file is displayed in each item in the [Device/PLC] tab.

| 🔽 Link between Device Info and Symbol Ir | nfo |
|--|----------------------------------|
| C Project File | Browse 🗖 Auto Update |
| Read Info Online Update | |
| | Add Device/PLC Delete Device/PLC |
| Device/PLC1 | |
| Maker Mitsubishi Electric Co | Device Type A Series CPU Direct |
| Port Type COM 🔽 Se | et Port Max 1 Text Mode 2 |
| Delete | |
| Device Name | Device Configuration |
| ► PLC1 | Series=AnA Series |
| | |
| | |
| System Area Device | System Area D0000 |
| | Register Cancel |

7 Click [Register].

The entry node is now registered with the set contents.

NOTE

• You can click the [Confirm Nodes online] button on the transfer setting screen to confirm if the screen project file (PRX) transferred to the display unit matches the imported information.Refer to "26 Transferring" for more details.

31.5 Setting Guide

31.5.1 Pro-Server EX Node

This section explains the settings on the screen displayed on the conditions below:

- 1) When you select "Pro-Server EX" from the node list and click [Add Node]; or
- 2) When you click a node name from the node list.

| Node Type | | |
|---------------|------------------------|-----------------|
| Pro-Server EX | C GP4000/LT4000 Series | C GP3000 Series |
| ⊂ WinGP | C LT3000 | C GP Series |
| Node Name | IP Address | |
| PC1 | 192,168, 0 | 1 |
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| Setting item | Setting content | | |
|--------------|---|--|--|
| Node Type | "Pro-Server EX" is selected. NOTE • When the node type is changed, the following dialog box appears. Change Node Type Change the node type. Is that OK? Yes No | | |
| | Clicking the [Yes] button deletes the set data of the Device/PLC and of symbols. | | |
| Node Name | Enter the node name to be registered. Example) PC_1 NOTE Restrictions on a node name are as follows: Must be entered at maximum 32 single-byte characters. Cannot begin with a number. Is distinguished between uppercase and lowercase letters, hiragana and katakana. | | |
| IP Address | Enter the IP address of the entry node. | | |

31.5.2 GP4000/LT4000 Series, GP3000 Series, WinGP, and LT3000 nodes

This section explains the settings on the screen displayed on the conditions below:

1) When you select "GP4000/LT4000 Series", "GP3000 Series", "WinGP", or "LT3000" from the node list and click the [Add Node]; or

2) When you click a node name from the node list.

| Add Node | | x |
|-------------------------|------------------------|-----------------------------|
| Node Type | | |
| O Pro-Server EX | C GP4000/LT4000 Series | GP3000 Series |
| C WinGP | C LT3000 | C GP Series |
| Node Name | IP Address | |
| AGP1 | 192,168,0, | 100 |
| 🔲 Link between Device I | Info and Symbol Info | |
| Project File | | Browse 🗖 Auto Update |
| C Read Info Online | Update | |
| | Add D | evice/PLC Delete Device/PLC |
| Device/PLC 1 | | |
| Maker | Device Type | <u></u> |
| Port Type | Set Port Ma | x Text Mode 1 |
| Delete | | |
| Device Name | Device Configuration | |
| | | |
| | | |
| System Area Device | | System Area |
| | | Register Cancel |

| Setting item | Setting content |
|--------------|---|
| Node Type | "GP4000/LT4000 Series", "GP3000 Series", "WinGP", or "LT3000" is selected. NOTE • When the node type is changed to "Pro-Server EX" or "GP Series", the following dialog box appears. Change Node Type Change the node type. Is that OK? Change the node type. Is that OK? Clicking the [Yes] button deletes the set information of the Device/PLC and of symbol variables. |

| Setting item | Setting content | | |
|---|---|--|--|
| Node Name | Enter the node name to be registered. Example) AGP_1 NOTE • Restrictions on a node name are as follows: • Must be entered at maximum 32 Unicode characters. • Cannot begin with a number. • Is distinguished between uppercase and lowercase letters. | | |
| IP Address | Enter the IP address of the entry node. | | |
| Link between Device Info and Symbol Info | Import the Device/PLC information or symbol variable information from a screen project file (*.PRX). NOTE • Import of data saves the effort of inputting the same data to 'Pro-Studio EX'. | | |
| Project File | Select a screen project file in a folder on the PC. | | |
| Browse | The "Open" screen appears. Select the screen project file you wish to use on this screen. | | |
| Auto Update | | | |
| Read Info Online | Select this to import the Device/PLC information or symbol variable information in the screen project file that has been transferred online from display unit which is registered as a entry node. | | |
| Update | Read the data of a screen project file online. | | |

| Setting item | Setting content | | |
|-------------------|---|--|--|
| Add Device/PLC | Add Device/PLCs. You can add Device/PLCs up to 4 drivers. Added Device/PLCs are displayed in each tab. | | |
| | node. | | |
| Delete Device/PLC | Delete the Device/PLC currently displayed. The message "Delete xxx (Device/PLC name). Continue?" appears. Click the [Yes] button to delete it. | | |
| Maker | Select the name of the manufacturer of Device/PLC. | | |
| Device Type | Select the type of Device/PLC. | | |
| Port Type | Select the type of port that connects display unit and Device/PLC. | | |
| Set Port | Set the details of communication. For further information, please refer to "Communication Setup" for the corresponding manufacturer in 'GP-Pro EX Device/PLC Connection Manual'. | | |
| Max. | Displays the maximum number of Device/PLCs that can be connected. NOTE • No change can be made. | | |
| Text Mode | Specify the text mode of Device/PLC. Refer to "■ Text Mode" for more details. | | |
| Device Name | Enter the name of Device/PLC which is connected. Restrictions on its name are as follows: Must be entered at maximum 32 Unicode characters. Cannot begin with a number. NOTE As for the Device/PLC data, please confirm the contents set on 'GP-Pro EX', and specify the set items to meet such contents. If there is inconsistency in the set contents like the device name, communication is not established. | | |

| Setting item | Setting content | |
|-----------------------------|--|--|
| Device Configuration | Set up the Device/PLC. NOTE The set contents may vary according to the Device/PLC. For further information, please refer to "Communication Setup" for the corresponding manufacturer in 'GP-Pro EX Device/PLC Connection Manual'. When the GP4000/LT4000 Series node is set, in the [Tag Data] you can select [View]. Refer to "■ Tag List" for more details. | |
| System Area Device | Select the Device/PLC where the system area is assigned. NOTE By default, displays the device name set in [System Area Device] on the "System Area Setting" screen (accessible from [Main Unit Setting] on "System setup window" in 'GP-Pro EX'). 'GP-Pro EX Reference Manual' | |
| System Area Start Device | Enter the device address where system area is assigned. Enter the address directly or click the Calculator icon to enter it on the device address input screen. NOTE By default, displays the device set in [System Data Area] on the "System Area Setting" screen (accessible from [Main Unit Setting] on "System setup window" in 'GP-Pro EX (GP-Pro EX Reference Manual') | |
| Register | An entry node is registered with the set contents. | |

Tag List

You can check the device/PLC tag information imported into a GP-Pro EX project file. A "Tag" is a name associated with a device address. The "Tag" is also known as a "variable" or "symbol", depending on the device/PLC manufacturer.

For the list of supported drivers, refer to "■ Supported Driver".

| ng Data type Name | Data type | Address | Comment | |
|-------------------|-----------|------------------|---------|--|
| DB1 | DB1 | DB00001.DBB00000 | | |
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| Setting item | Setting content |
|---------------|---|
| Tag Data Name | Displays the device/PLC tag data name imported to the GP-Pro EX project file (.prx). |
| Data Type | Select a data type to display. Displays tags with the selected data type only. |
| Usage | Select the tags to display from [All], [Use], and [Unused]. |
| Update | Update the display list after changing the [Data Type] and [Usage] conditions. |
| List | [Tag] and [Data Type] tabs change the display list content. Displayed information varies depending on the tag. [Tag]: Displays the list of information for each tag. [Data Type]: Displays the list of data types in a project. NOTE Click [Expand All] or [Collapse All] in the [Data Type] tab to expand or collapse the lists's diplay information in one step. |
| Import | |
| Export | |
| Expand All | • In Pro-Server EX, you cannot edit or add tags. To edit or add tags, use GP-Pro EX and |
| Collapse All | update the project file (.prx). For more details, in the "GP-Pro EX Reference Manual', |
| Add | refer to "7.8 Using Device/PLC Tags". |
| Edit | |
| Delete | |

Supported Driver

| Manufacturer | Series | Tag Data | |
|--------------|-----------------------|----------------------|--|
| Siemens AG | SIMATIC S7 MPI Direct | Project file (*.S7P) | |
| | SIMATIC S7 Ethernet | | |

31.5.3 GP Series Node

This section explains the settings on the screen displayed on the conditions below:

- 1) When you select "GP Series" from the node list and click the [Add Node]; or
- 2) When you click a node name from the node list.

| ld Node | | | | 2 |
|----------------------------|----------------|---------------|--------------------|-----------------|
| Node Type | | | | |
| O Pro-Server EX | C GP4000/L | T4000 Series | C GP3000 Serie: | s |
| C WinGP | ○ LT3000 | | GP Series | |
| Node Name | | IP Address | Subnet Mask | Gateway |
| GP1 | | 192,168,0,100 | | |
| Link between Device Info a | nd Symbol Info | | | |
| Project File | | | Browse | 🗖 🗖 Auto Update |
| | | | | |
| | | | | |
| | | | | |
| Device Type | | | Text Mod | le 1 🕂 |
| | | Correct In | consecutive Addres | sses -1 🛨 |
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| | | | | |
| | | | Register | Cancel |

| Setting item | Setting content | |
|--------------|---|--|
| Node Type | "GP Series" is selected. NOTE • When the node type is changed, the following dialog box appears. Change Node Type Change the node type. Is that OK? Yes Clicking the [Yes] button deletes the set information of the Device/PLC and of symbol | |
| Node Name | Enter the node name to be registered. Example) GP_1 NOTE Restrictions on a node name are as follows: Must be entered at maximum 32 Unicode characters. Cannot begin with a number. Is distinguished between uppercase and lowercase letters, hiragana and katakana. | |
| IP Address | Enter the IP address of the entry node. | |
| Subnet Mask | Enter the subnet mask value of the network on which the node is connected. | |

| Setting item | Setting content | | |
|---|--|--|--|
| Gateway | Enter the IP address of the gateway when accessing the node via the gateway. | | |
| Link between Device Info and Symbol Info | Import the Device/PLC information or symbol variable information from a screen project file (*.PRX). NOTE Import of data saves the effort of inputting the same data to Pro-Studio EX'. When Auto Update is not checked, a screen project file (*.PRX) needs to be updated manually after editing. Specify the edited file and click the [More] button to import the data again. | | |
| Screen Project File | Select a screen project file in a folder on the PC. | | |
| Browse | The "Open File" screen appears. Select the screen project file you wish to use on this screen. | | |
| Auto Update | The screen project file that has been imported is automatically updated if there is any change to it. The following dialog box appears to indicate updating occurrence, if any. Automatic Update of Device/PLC Info/Symbol Info Image to it. The following dialog box appears to indicate updating occurrence, if any. Automatic Update of Device/PLC Info/Symbol Info Image to it. The following dialog box appears to indicate updated. Automatically import it? Image to it. The following messages also appear indicating the link status. Click the [Yes] button when you want to import the updated data. The following messages also appear indicating the link status. • When Auto Update has been successful: "The link has been updated. The latest link date: yyyy/mm/dd hh:mm:ss" • When a link error has occurred: "Failed to update. The latest link date: yyyy/mm/dd hh:mm:ss" • When [Cancel] has been selected in the Update dialog box: "Canceled to update. The latest link date: yyyy/mm/dd hh:mm:ss" | | |
| Device Type | Select the type of Device/PLC. | | |
| Text Mode | Specify the text mode of Device/PLC. Refer to " Text Mode " for more details. | | |
| Correction of Inconsecutive Addresses | Specify the data number of protocol communication to be optimized. In the case of "-1", the maximum data number supported by the protocol is adopted and optimization is executed. In the case of "0", optimization is not performed. Address spaces having 1-address space between each other are regarded as non-sequential. Please use it under the circumstance that holds a device which causes trouble when accessed. NOTE • Enter the number in the range of -1 to 255. | | |
| | An entry node is registered with the set contents. | | |

31.5.4 Text Mode

The order of the characters in a string can vary according to the manufacturer of Device/PLC. Please check the Device/PLC you are using, and select the storage order of the characters in a string from the following table to set the text mode.

- (I) Device storage order of data
- (II) Byte LH/HL storage order in Word
- (III) Word LH/HL storage order in Double-Word
- Display unit and 'Pro-Server EX' do not match, the string that is read in will be different, and therefore cannot be processed as text.
 Please set the text mode of the display unit in the character string data mode on the "Device/PLC Setting" screen (accessible from [System Setup Window] in 'GP-Pro EX').

List of Text Mode

| (I) Device storage order of data | (II) Byte LH/HL storage order in Word | (III) Word LH/HL storage order in Double-Word | Text mode |
|-------------------------------------|--|--|-----------|
| | LH | LH | 4 |
| Store from the front data | | HL | 2 |
| | HL | LH | 5 |
| | IIL | HL | 1 |
| | LH | LH | 6 |
| Store from the end data | LII | HL | 7 |
| | HL | LH | 8 |
| | nL. | HL | 3 |

Example) When the character string is "ABCDEFGHIJ", the following patterns are available.

Character string A B C D E F G H I J

AB CD EF GH IJ Text mode 4 BA DC FE HG JI Text mode 2 CD AB GH EF IJ Text mode 5 DC BA HG FE JI Text mode 1 IJ GH EF CD AB Text mode 6 JI HG FE DC BA Text mode 7 GH IJ CD EF AB Text mode 8 HG JI DC FE BA Text mode 3

31.6 Restrictions

- Note on importing the symbol information from a screen project file, or the display unit, to which a screen project file has been transferred
 - When you import a screen project file of 'GP-Pro EX' or 'GP-PRO/PBIII for Windows', the data type of word symbol is "Unknown". Please set the data type on 'Pro-Studio EX' again.
 - When specifying "Unknown" one more time, you cannot set the bit type.
 - The real variable R_xxxx cannot be imported.
 - You cannot import if the character string of the device address exceeds 255.

Notes on importing a variable created with a logic program

• When you import a variable created with a logic program, you cannot edit the symbol sheet including the imported contents.

To edit them, copy the imported contents on the symbol sheet to another symbol sheet. You can edit the contents on the symbol sheet copied once.

- A timer variable, counter variable, date variable, time variable and PID variable are imported as a group.
- For an alignment variable, the number of alignment elements is replaced with the number of data.
- Maximum number of alignment elements is 4096. If it exceeds the number of symbol data specified by 'Pro-Server EX', symbols are divided and registered on a symbol sheet.

Variable categories and the maximum number of data that can be handled in 'Pro-Server EX' are follows:

| Variable category | Maximum number of data |
|----------------------|------------------------|
| Bit variables | 255 |
| Integer variables | 510 |
| Float variables | 510 |

Example) When importing the integer valuable "Pump" including 2000 elements

| First symbol | Pump |
|---------------|----------------|
| Second symbol | Pump_510_1019 |
| Third symbol | Pump_1020_1539 |
| Fourth symbol | Pump_1540_1999 |

Notes on importing

- All the preset Device/PLC information, symbol variable information and symbol variable information for searching the node are deleted, and replaced with the imported information.
- If you import a file with global constants settings, all the preset global constants are deleted, and replaced with the imported global constants.

Notes on "Link between Device Info and Symbol Info"

Under "Link between Device Info and Symbol Info" in the Node Settings, device and symbol information cannot be imported from a screen project file in the following cases:

- If a PRX file is set under the Device/PLC name that starts from the numeral value in 'GP-Pro EX'
- If a PRX file as mentioned above has been transferred to the display unit

Please change the PRX file name using a Device/PLC name that starts from something other than the numeral value in 'GP-Pro EX'.