Programmable Terminal NA-series

Practices Guide
NJ/NX Troubleshooter
For the Intermediate Level

NA5-15[]101[]
NA5-12[]101[]
NA5-9[]001[]
NA5-7[]001[]

SYSMAC
always in control

V420-E1-01

■ Introduction

This guide provides reference information for the use of NJ/NX troubleshooter. It does not provide safety information.
Be sure to obtain the NA-series Programmable Terminal User's Manuals, read and understand the safety points and other information required for use, and test sufficiently before actually using the equipment.

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1 Related Manuals

The following manuals are related to this manual.

Cat. No.	Model	Manual name
W500	NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ-series CPU Unit Hardware User's Manual
W501	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series CPU Unit Software User's Manual
W506	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series CPU Unit Built-in EtherNet/IP™ Port User's Manual
W505	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series CPU Unit Built-in EtherCAT® Port User's Manual
W504	SYSMAC-SE2□□□	Sysmac Studio Version 1 Operation Manual
W502	NX701-□□□□ NJ501-□□□□ NJ301-□□□□ NJ101-□□□□	NJ/NX-series Instructions Reference Manual
0969584-7	W4S1-05□ W4S1-03B	[Instruction Sheet] W4S1 Switching Hub (ENG/JPN)
V117	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Hardware User's Manual
V118	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Software User's Manual
V119	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Device Connection User's Manual
V120	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Startup Guide
E429	E3NW-ECT	E3NW-ECT EtherCAT® Digital Sensor Communication Unit Operation Manual

2 Precautions

(1) When building an actual system, check the specifications of the component devices of the system, use within the ratings and specified performance, and implement safety measures such as safety circuits to minimize the possibility of an accident.
(2) For safe use of the system, obtain the manuals of the component devices of the system and check the information in each manual, including safety precautions, precautions for safe use.
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Precautions for Safe Use

Indicates precautions on what to do and what not to do to ensure safe usage of the product.

Precautions for Correct Use

Indicates precautions on what to do and what not to do to ensure proper operation and performance.

Additional Information

Additional information to read as required.
This information is provided to increase understanding or make operation easier.

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3 Introduction

The NJ/NX troubleshooter has the ability to monitor and reset the following events that are monitored with the NJ/NX event function on the NA screen; events occurred in the Controller, events defined to the Controller by the user, and these event logs.

The troubleshooter has the following main functions.

- Monitors and resets events (active events).
- Monitors and clears event logs.
- Moves to the NA user page associated with user error.
- Captures the page for active events/event logs.
- Outputs event logs in CSV file.

3-1 Architecture

You can check the active errors and event logs with the NJ/NX troubleshooter.

1. Controller error, Controller information

This is an error or information that is monitored by the NJ/NX-series Controller.
This can not be edited by the user.
You can monitor errors in the CPU Unit, NX slave terminal, EtherCAT slave, and CJ Unit on the NA screen.

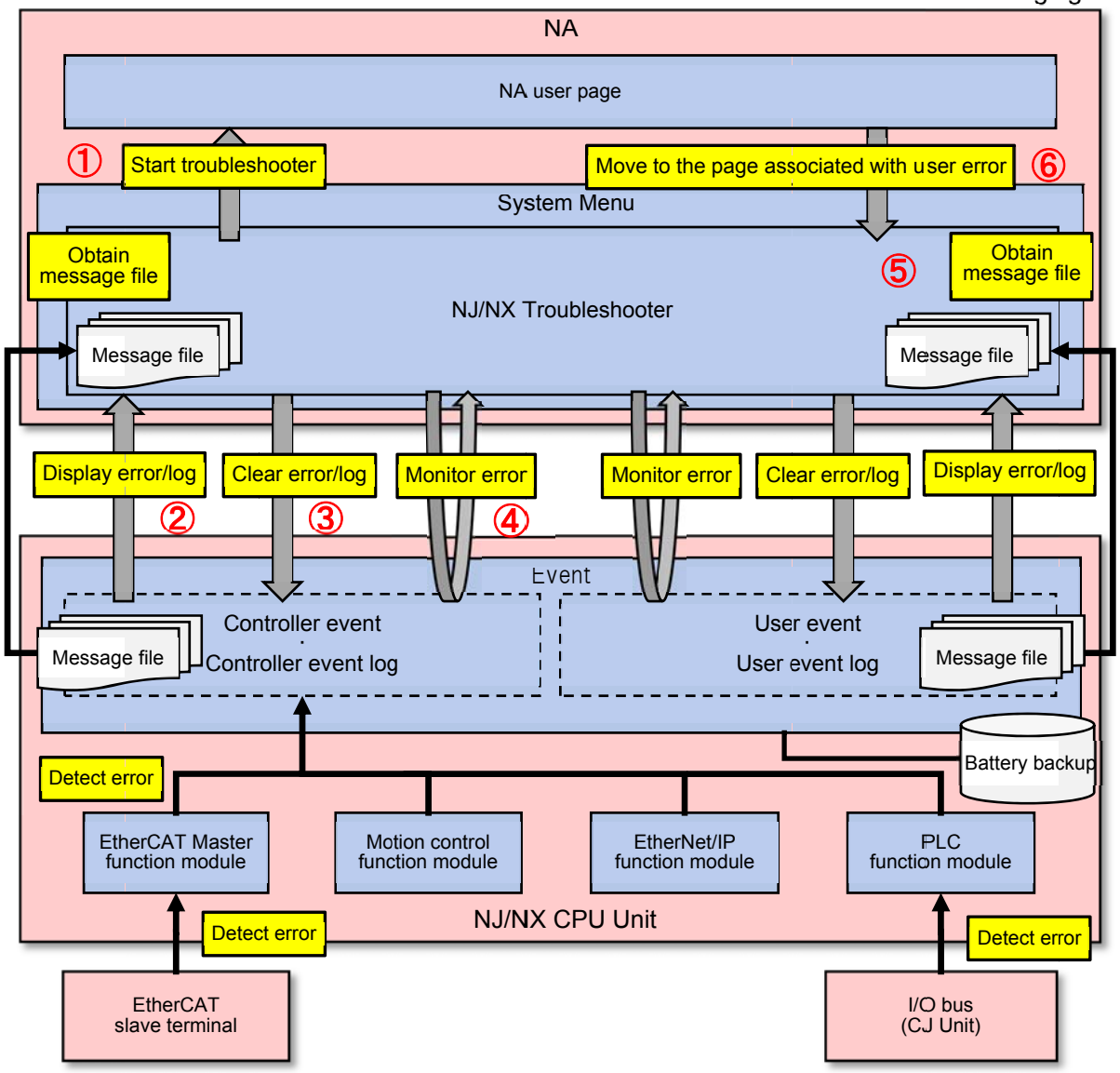
2. User error, User information

This is an error or information that can be difined by the user with the Sysmac Studio.
Detailed Information such as a troubleshooting method can be set.
You can monitor user errors that are generated with “instruction to generate user errors (SetAlarm)”.
You can monitor user information that is generated with “instruction to generate user information (SetInfo)”, but only as an event log (be discussed later).
The Sysmac Studio is used to set user errors/user information (refer to Section 8-1).
User errors can be transferred to the associated NA user page with the Sysmac Studio (same as NS function).

3. Controller event log, User event log

You can monitor the occurred controller error/controller information as a controller event log. You can also monitor the occurred user error/user information as a user event log.
These event logs are retained until the user clears the logs or memory. If the number of logs exceeds the maximum limit, the oldest log will be cleared.

The relation between the NJ/NX troubleshooter and Controller is shown in the following figure.



No	Function	Description
①	Start troubleshooter	• You can start the NJ/NX troubleshooter from the NA user page or system page.
②	Display error/log	• Obtains errors/event logs from the CPU Unit and displays them on the troubleshooter page.
③	Clear error/log	• Resets the active errors in the CPU Unit. • Clears event logs in the CPU Unit.
④	Monitor error	• Always monitors the error status.
⑤	Obtain message file	• A message file for each language is sored in the built-in memory of the CPU Unit. • When the NJ/NX troubleshooter first makes a transition, it obtains the message file for controller events/user events from the CPU Unit, in order to acceralate the display of the events at the next transition. (Obtaining the message file of the currently set-system language.)
⑥	Move to the page associated with user error	• You can associate the user events to the NA user page with the Sysmac Studio, and move to the associated NA user page from the NJ/NX troubleshooter.

Additional Information

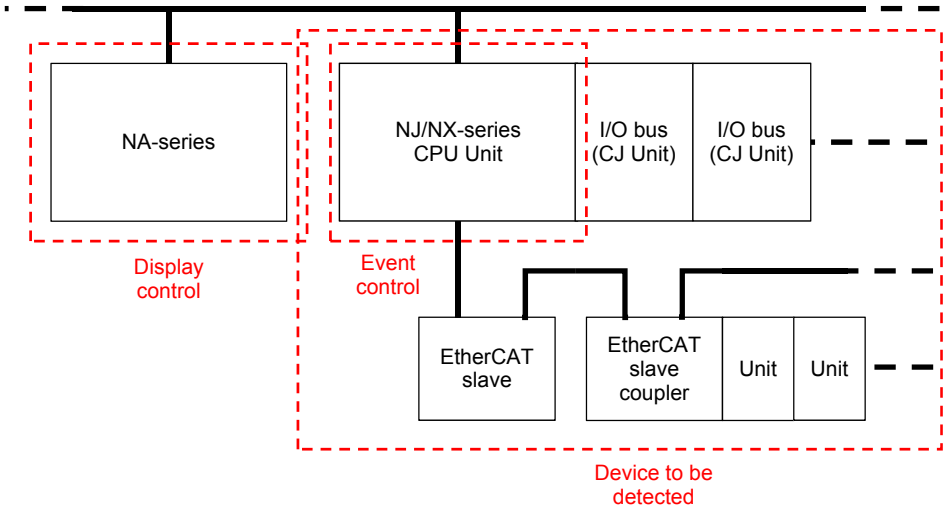
Information of active events and event logs occurred in each function module, EtherCAT slave terminal, or IO bus is retained in the battery-backup memory (non-volatile memory) of the CPU Unit.

Additional Information

Only NJ-series can connect Units to I/O bus.

3-2 System Configuration

The main hardware configuration using the NJ/NX troubleshooter is shown in the following figure.



Additional Information

Only NJ-series can connect Units to I/O bus.

4 External Specification

4-1 Data Sheet of NJ/NX Troubleshooter

The items related to the NJ/NX troubleshooter during the NA operation are given below.

Function			CPU Unit			
			NX701-□□□□	NJ501-□□□□	NJ301-□□□□	NJ101-□□□□
Max. no of event logs	Controller event log	System log	2048 logs	1024 logs	512 logs	512 logs
		Access log				
	User event log		2048 logs	1024 logs	512 logs	512 logs
Support language	System resource		9 languages for NA			
	Controller event log		Japanese, English			
	User event log		Up to 9 languages (9 patterns)			
Area to obtain controller error	PLC	Common	-	-		
		IO Bus Master	Unable to connect	-		
		IO Bus Unit *1	Unable to connect	Rack No. 0 to 3 Slot No. 0 to 9		
	Motion control	Common	-	-		
		Axis	No. 0 to 255	No. 0 to 63		
		Axis group	No. 0 to 63	No. 0 to 31		
	EtherNet/IP	Communication port *2	Port 1 ,Port 2	Port 1		
		CIP *3	Port 1 ,Port 2	Port 1		
		TCP appli	-	-		
	EtherCAT	Common	-	-		
		Master	-	-		
		Slave *4	Node No. 1 to 512	Node No. 1 to 192		

*1 Event logs in the CJ Unit of FINS2102 can not be monitored /cleared.

*2 When a NX701-[][][][] is connected and controller errors are occurring in the EtherNet/IP communication port, the controller errors can be filtered for each port, for instance,“Communication port1” and ”Communication port2”.

*3 When a NX701-[][][][] is connected and controller errors are occurring in the EtherNet/IP CIP, the controller errors can be filtered for each port, for instance, “CIP1” and ”CIP2”.

*4 When a controller error is occurring in the EtherCAT slave, the controller errors can be filtered for each node, for instance, “[001]Slave” and ”[002]Slave”.

The items related to the NJ/NX troubleshooter in the Sysmac Studio are given below.

Item			Function
Multiview Explorer	Troubleshooter	Automatic Launch	Sets to automatically launch the NJ/NX troubleshooter when an event occurs.
		Security Settings	Sets an authority for each access level to execute specific operations of the NJ/NX troubleshooter.
		Language Mapping	Assigns a NA project language to a user event language of the NJ/NX project.
		Target device for screen capture and exported files	Sets the target device to save the screen capture and output of CSV file that are performed by the NJ/NX troubleshooter.
	User event		The user event set in the Controller can be associated with the NA user pages.

The supported devices and troubleshooter functions (NX-series)

System configuration		Troubleshooter function			
		Error display	Error reset	Event log display	Event log reset
NX-series CPU Unit		Supported			
EtherCAT slave (Sysmac device)		Supported			
EtherCAT slave terminal	EtherCAT Coupler Unit	Supported			
	NX Unit	Supported	Supported *1	Supported	

*1: A safety program may be required to reset errors for Safety Control Unit. For information on error reset in the Safety Control Unit, refer to the “NX-series Safety Control Unit User’s Manual (Z930-E1-07)”.

The supported devices and troubleshooter functions (NJ-series)

System configuration		Troubleshooter function			
		Error display	Error reset	Event log display	Event log reset
CPU rack	NJ-series CPU Unit	Supported			
	CJ Unit	Supported		Percially not supported *1	
EtherCAT slave (Sysmac device)		Supported			
EtherCAT slave terminal	EtherCAT Coupler Unit	Supported			
	NX Unit	Supported	Supported *2	Supported	

*1: The events (upper 4 digits of event the code are 0000Hex), which are error logs in the CJ-series Special Unit connected to the NJ-series CPU Unit, can not be neither displayed or deleted.

*2: A safety program may be required to reset errors for Safety Control Unit. For information on error reset in the Safety Control Unit, refer to the “NX-series Safety Control Unit User’s Manual (Z930-E1-07)”.

4-2 Differences from the NS-series Troubleshooter

The NJ/NX troubleshooter for NA-series is designed based on the NJ/NX troubleshooter for NS-series.

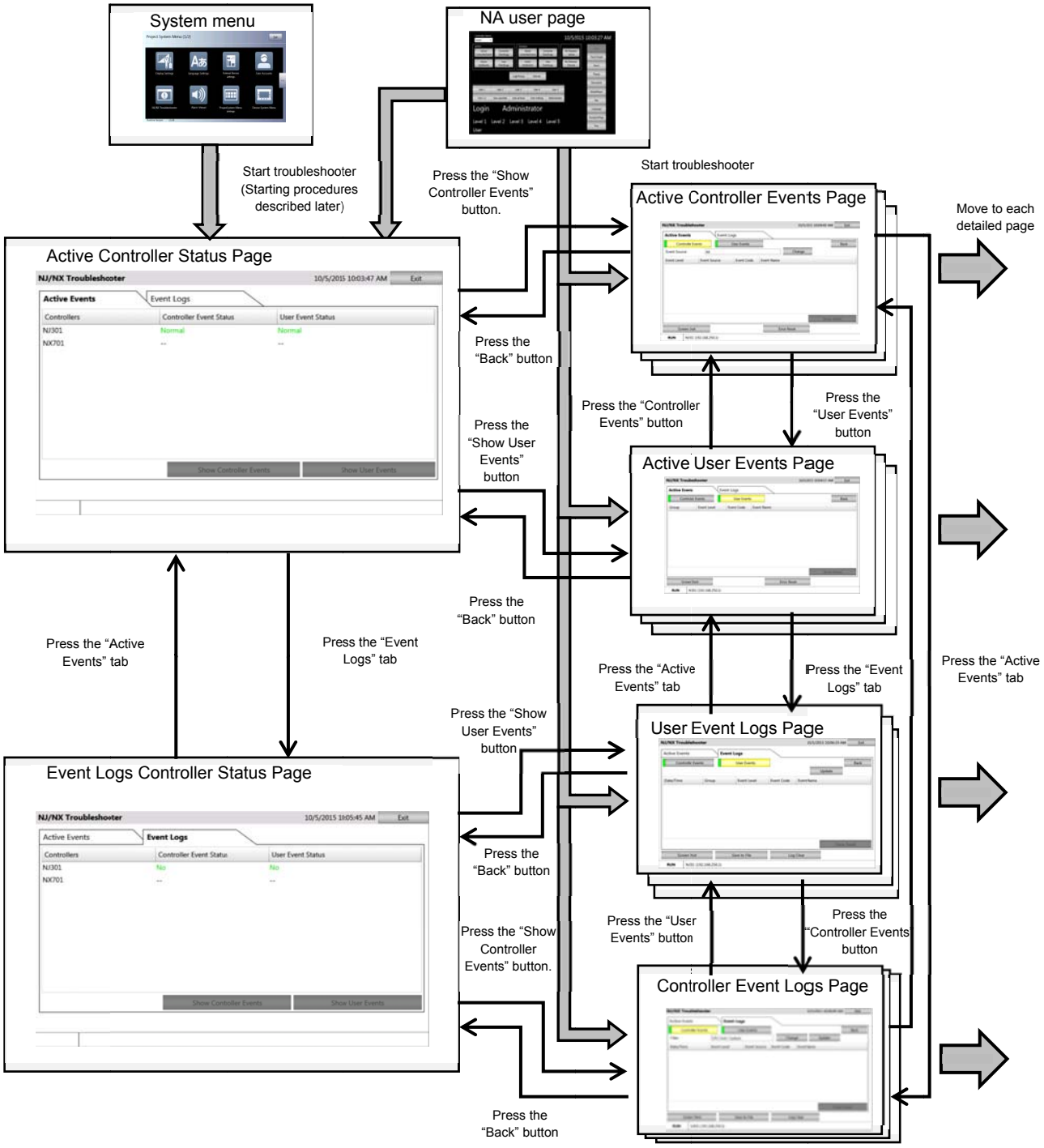
The following table shows the major differences from the NS-series NJ/NX troubleshooter.

Item	Description
Area to obtain controller errors	The scope of displaying and resetting controller errors is expanded in NA-series in comparison to NS-series. Errors in the NX Unit of the EtherCAT slave terminal can be displayed and reset. Event logs can be displayed and cleared.
Filtering of controller errors	The NS-series displays controller errors for each function module, while the NA-series can display controller errors for all function modules at a time.
Filtering of controller event logs	The NA-series filters controller event logs by “Event log source” and “Log Type”.

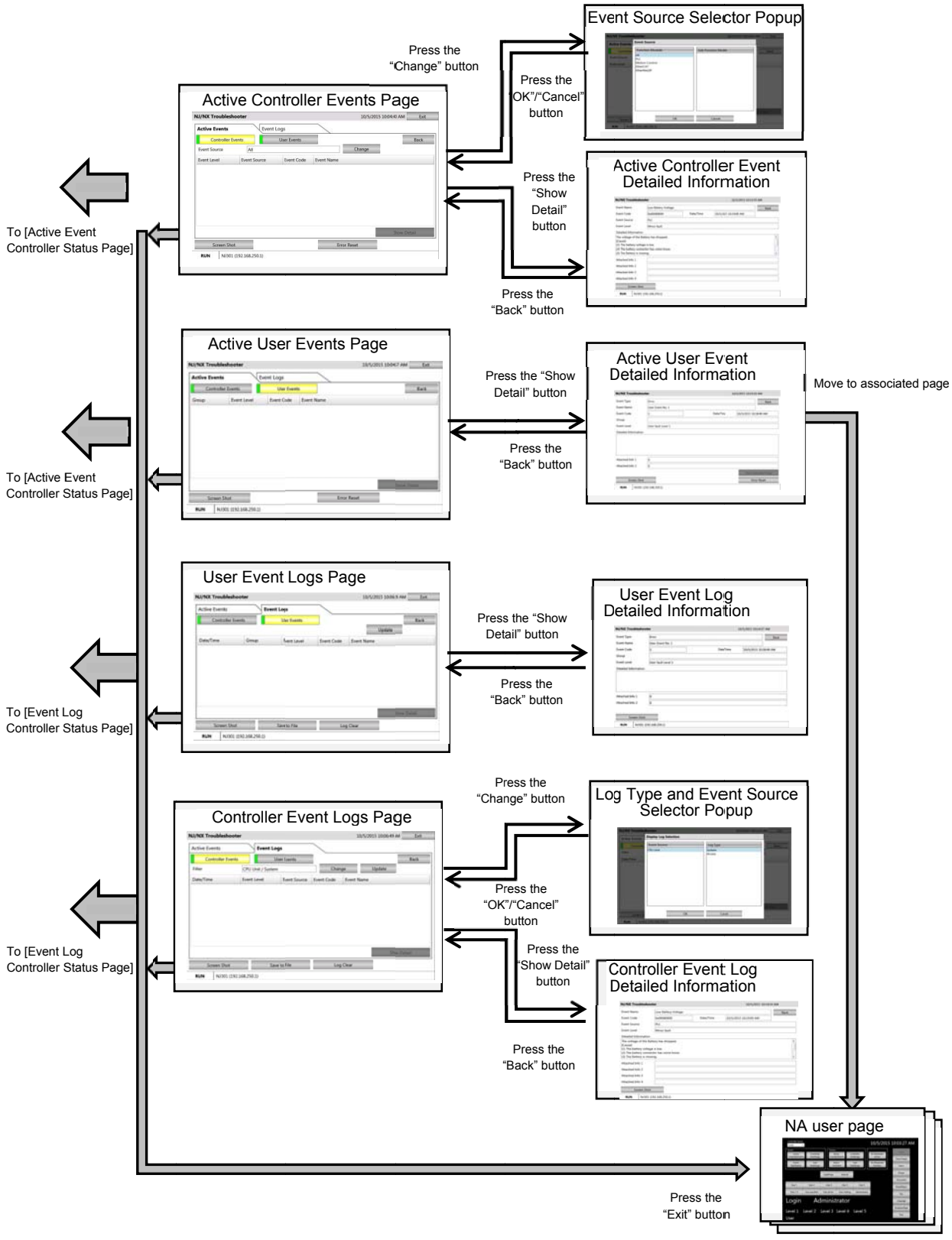
5 Each Page

This section describes each page of the NJ/NX troubleshooter.

5-1 Transition Flow of Startup Page



5-2 Transition Flow of Detailed Page

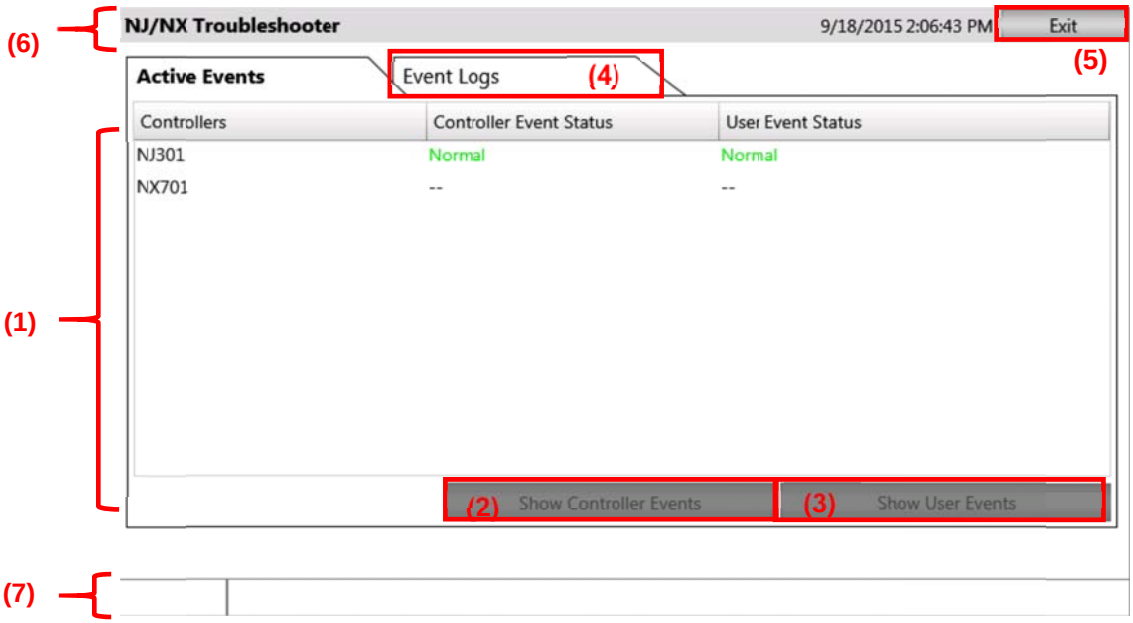


The NJ/NX troubleshooter has the following pages.

Page name	Description
Active Events Controller Status Page	Shows the status of active errors of the connected controller. This is the initial page when the NJ/NX troubleshooter makes a transiton.
Active Controller Events Page	Shows the active controller errors of the selected Controller.
Event Source Selector Popup	You can filter the active controller errors by event source.
Active Controller Event Detailed Information	Shows the details of the selected controller error.
Active User Events Page	Shows the active user errors of the selected Controller.
Active User Event Detailed Information	Shows the details of the selected user error.
Event Logs Controller Status Page	Shows if there is an event log of the connected controller.
Controller Event Logs Page	Shows the controller event logs of the selected Controller.
Log Type and Event Source Selector Popup	You can filter the controller event logs by “event source” and “log type” (system log/access log).
Controller Event Log Detailed Information	Shows the details of the selected controller event log.
User Event Logs Page	Shows the user event log of the selected Controller.
User Event Log Detailed Information	Shows the details of the selected user event log.

5-3 Active Events Controller Status Page

This page shows if there is an active event in the Controller connected to the NA.
This is the initial page after the NJ/NX troubleshooter has started.

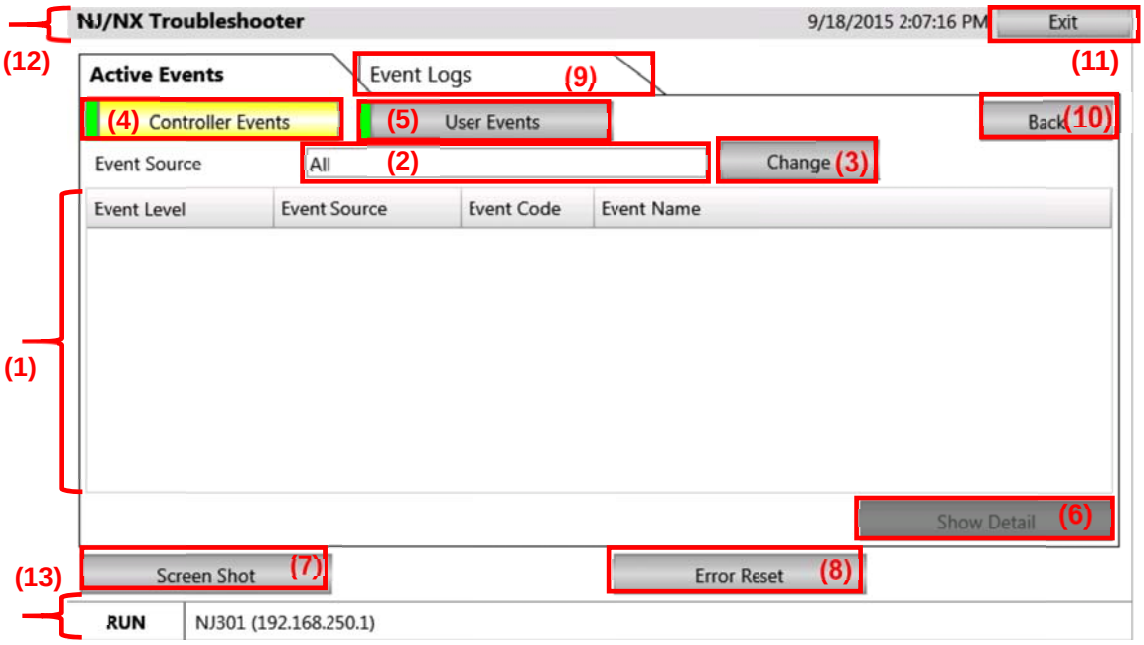


No	Name	Description
1	Status	• Shows a list of Controllers set in the NA. • The set controller names are displayed in the “Controllers” Column. • The status of control error is displayed in the “Controller Event Status” Column. “Normal” is displayed in green if there is no controller error, “Error” in red if there is an error, “—“ in black if the status cannot be read due to a communications error or others. • The status of user error is displayed in the “User Event Status” Column. “Normal” is displayed in green if there is no user error, “Error” in red if there is an error, “—“ in black if the status cannot be read due to a communications error or others. • If you click on a Controller, the line will be selected. • The operation mode, controller name, and IP address of the selected Controller are displayed in the status bar by selecting a Controller. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page. • The polling and refreshing intervals for a controller status are 1 second or so.
2	“Show Controller Events” button	• This button is enabled only when a Controller is selected in the list. • You can move to [Active Controller Events Page] by clicking this button.
3	“Show User Events” button	• This button is enabled only when a Controller is selected in the list. • You can move to [Active User Events Page] by clicking this button.
4	“Event Logs” tab	You can move to [Event Logs Controller Status Page] by selecting this tab page.

5	“Exit” button	The troubleshooter exits by clicking this button, and moves to the system menu or to the user page of right before the troubleshooter startup.
6	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
7	Status bar	• Shows the operation mode of the selected Controller. RUN” appears in RUN mode and ”PROGRAM” in PROGRAM mode. • Shows the selected controller name and IP address.

5-4 Active Controller Events Page

This page shows the active controller events in the selected Controller.

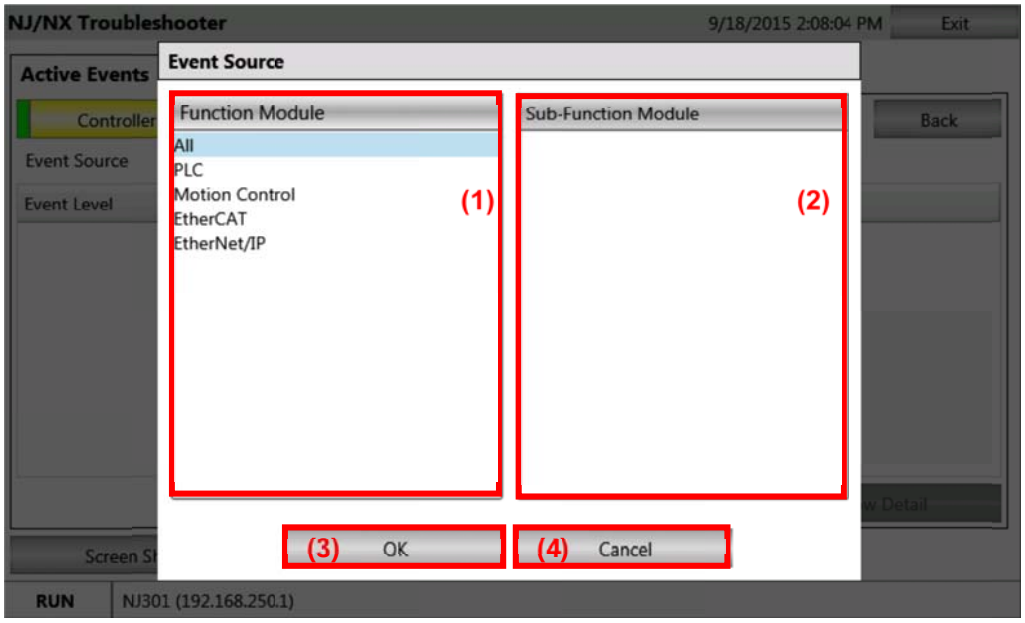


No	Name	Description
1	Event	• Shows a list of active controller errors of the selected Controller. • You can filter the events by event source. • Event level of the active controller error is displayed in the “Event Level” Column. • Event source of the active controller error is displayed in the “Event Source” Column. • Event code of the active controller error is displayed in the “Event Code” Column. • Event name of the active controller error is displayed in the “Event Name” Column. • If you click on an event, the line will be selected. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page. • The polling and refreshing intervals for the list are 10 seconds or so.
2	Event Source	• Shows the event source used for filtering. • The setting in [Event Source Selector Popup] is reflected here.
3	“Change” button	Shows [Event Source Selector Popup] by clicking this button and filters the listed controller errors by event source.
4	“Controller Events” button/indcator	• The button is highlighted in yellow to notify the user that the displayed errors are controller events. • The indicator to the left side of the button is lit in red if there is an active controller event, and lit in green if there is no controller event.

		• The polling and refreshing intervals for the indicator are 1 second or so.
5	“User Events” button/indcator	• You can move to [Active User Events Page] by clicking this button. • The indicator to the left side of the button is lit in red if there is an active user event, and lit in green if there is no user event. • The polling and refreshing intervals for the indicator are 1 second or so.
6	“Show Detail” button	• This button is enabled only when a controller event is selected in the list. • You can move to [Active Controller Event Detailed Information] by clicking this button.
7	“Screen Shot” button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • A confirmation dialog box is displayed before and after saving the screen.
8	“Error Reset” button	• All of the listed controller events are reset by clicking this button. If the cause of error still persists, the error will be detected again. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • A confirmation dialog box is displayed before and after resetting the event.
9	“Event Logs” tab	You can move to [Controller Event Logs Page] by selecting this tab page.
10	“Back” button	You can move to [Active Events Controller Status Page] by clicking this button.
11	“Exit” button	The troubleshooter exits by clicking this button, and moves to the system menu or to the user page of right before the troubleshooter startup.
12	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
13	Status bar	• Shows the operation mode of the selected Controller. RUN” appears in RUN mode and ”PROGRAM” in PROGRAM mode. • Shows the selected controller name and IP address.

5 - 4 - 1 Event Source Selector Popup

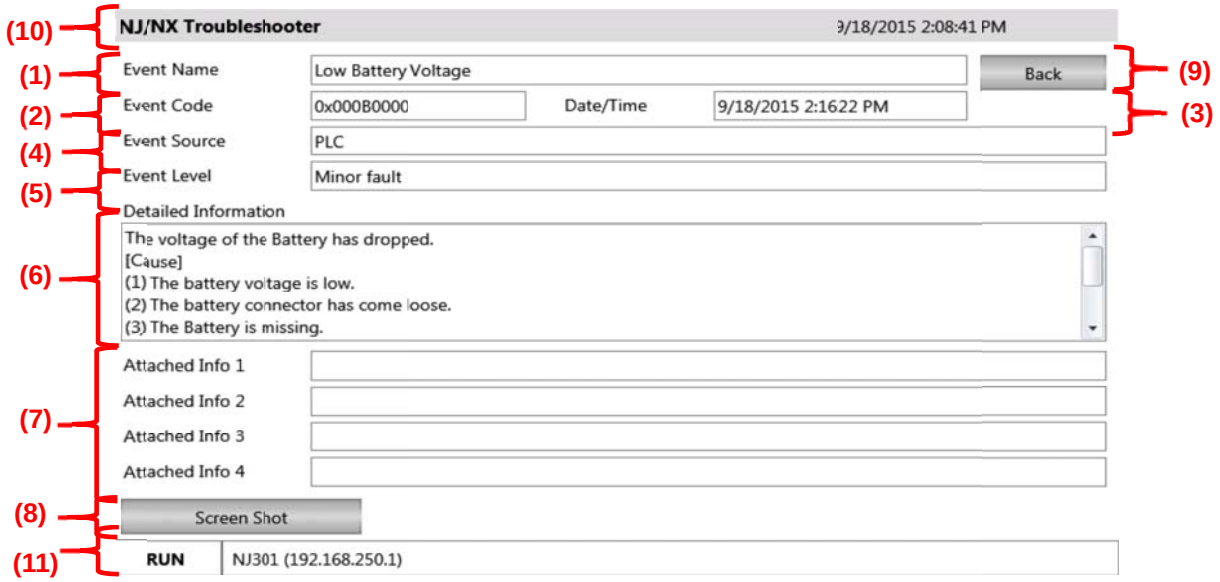
This page is used to filter the active controller events by event source.



No	Name	Description
1	Function Module	• Shows a list of the function modules that can be used in the selected Controller. • If you click on a function module, the item will be selected. • The listed sub function module is updated by selecting a function module.
2	Sub-Function Module	• Shows the detailed event source (sub function module) in the list when a controller error is occurring in the selected function module. • If you click on a sub function module, the item will be selected. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page. • Shows only the sub function modules detecting an error. • When the list is on display, the listed items are not automatically updated. To update the items, select different function module.
3	“OK” button	Closes the pop-up, and filters [Active Controller Events Page] by the item you selected.
4	“Cancel” button	Closes the pop-up without filtering.

5 - 4 - 2 Active Controller Event Detailed Information

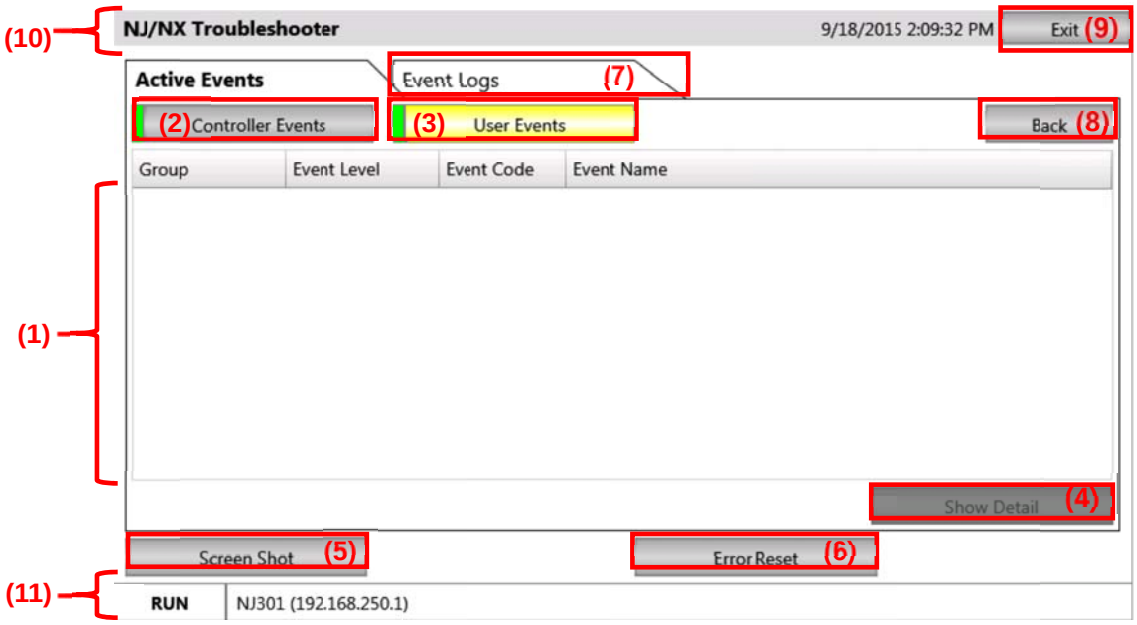
This page shows the details of the active controller event that you selected in [Active Controller Events Page].



No	Name	Description
1	Event Name	• Shows a name of the selected controller event. • This item is written in the NA system language.
2	Event Code	Shows an event code of the selected controller event.
3	Date/Time	• Shows the occured date/time of the selected controller event. • Date/Time is written in the current project language.
4	Event Source	• Shows an event source of the selected controller event. • This item is written in the NA system language. • Shows ”event source - details” if any detailed event source exists.
5	Event Level	• Shows an event level of the selected controller event. • This item is written in the NA system language.
6	Detailed Information	• Shows the detailed information of the selected controller event. • This item is written in the NA system language.
7	Attached Info 1 to 4	Shows the attached information of the selected controller event.
8	“Screen Shot” button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • A confirmation dialog box is displayed before and after saving the screen.
9	“Back” button	You can move to [Active Controller Events Page] by clicking this button.
10	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
11	Status bar	• Shows the operation mode of the selected Controller. RUN” appears in RUN mode and ”PROGRAM” in PROGRAM mode. • Shows the selected controller name and IP address.

5-5 Active User Events Page

This page shows the active user events in the selected Controller.

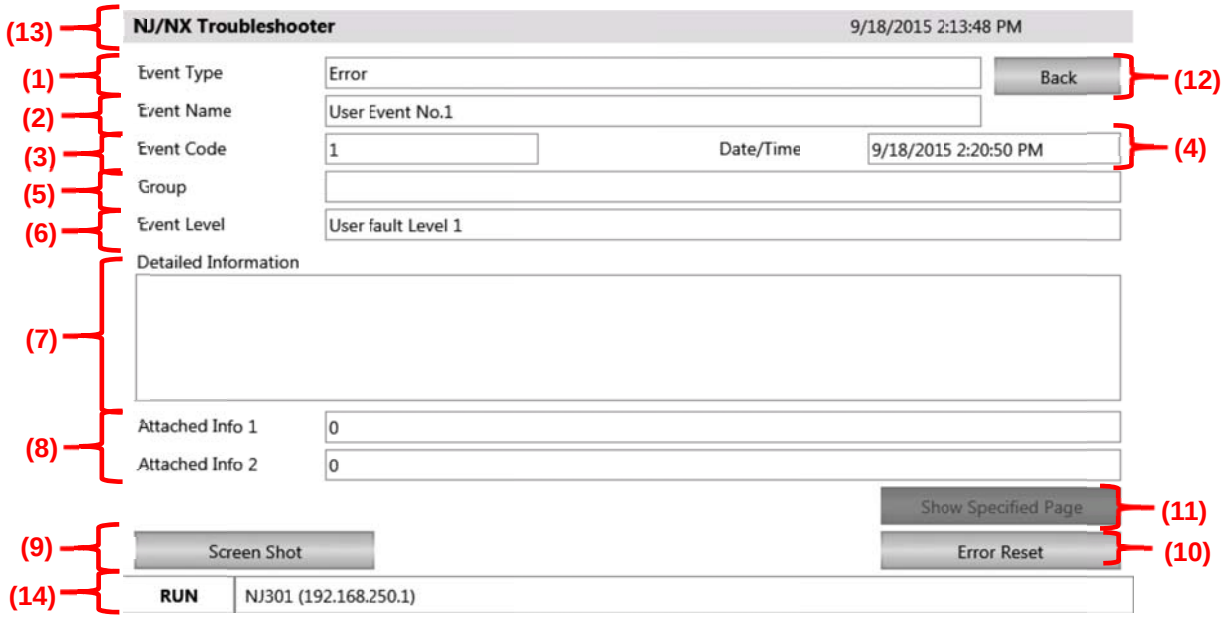


No	Name	Description
1	Event	• Shows a list of active user errors of the selected Controller. • Group names of active user events are displayed in the “Group” Column. • Event level of active user events is displayed in the “Event Level” Column. • Event codes of active user events are displayed in the “Event Code” Column. • Event names of active user events are displayed in the “Event Name” Column. • If you click on an event, the line will be selected. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page. • The polling and refreshing intervals for the list are 10 seconds or so.
2	“Controller Events” button/indcator	• You can move to [Active Controller Events Page] by clicking this button. • The indicator to the left side of the indicator is lit in red if there is a controller event, and lit in green if there is no controller event. • The polling and refreshing intervals for the indicator are 1 second or so.
3	“User Events” button/indcator	• The button is highlighted in yellow to notify the user that the displayed errors are user events. • The indicator to the left side of the indicator is lit in red if there is a user event, and lit in green if there is no user event. • The polling and refreshing intervals for the indicator are 1 second or so.
4	“Show Detail” button	• The button is enabled only when a user error is selected from the list. • You can move to [Active User Event Detailed Information] by clicking this button.
5	“Screen Shot” button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format.

		• Access level can be set to this button. This button is enabled only when the set access level matches with the user's access level. • A confirmation dialog box is displayed before and after saving the screen.
6	"Error Reset" button	• The entire listed user events are reset by clicking this button.In case the error cause still persists, the error will be detected again. • Access level can be set to this button. This button is enabled only when the set access level matches with the user's access level. • A confirmation dialog box is displayed before and after resetting the event.
7	"Event Logs" tab	You can move to [User Event Logs Page] by selecting this tab page.
8	"Back" button	You can move to [Active Events Controller Status Page] by clicking this button.
9	"Exit" button	The troubleshooter exits by clicking this button, and moves to the system menu or to the user page of right before the troubleshooter startup.
10	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
11	Status bar	• Shows the operation mode of the selected Controller. RUN" appears in RUN mode and "PROGRAM" in PROGRAM mode. • Shows the selected controller name and IP address.

5 - 5 - 1 Active User Event Detailed Information

This page shows the details of the active user events that you selected in [Active User Events Page].

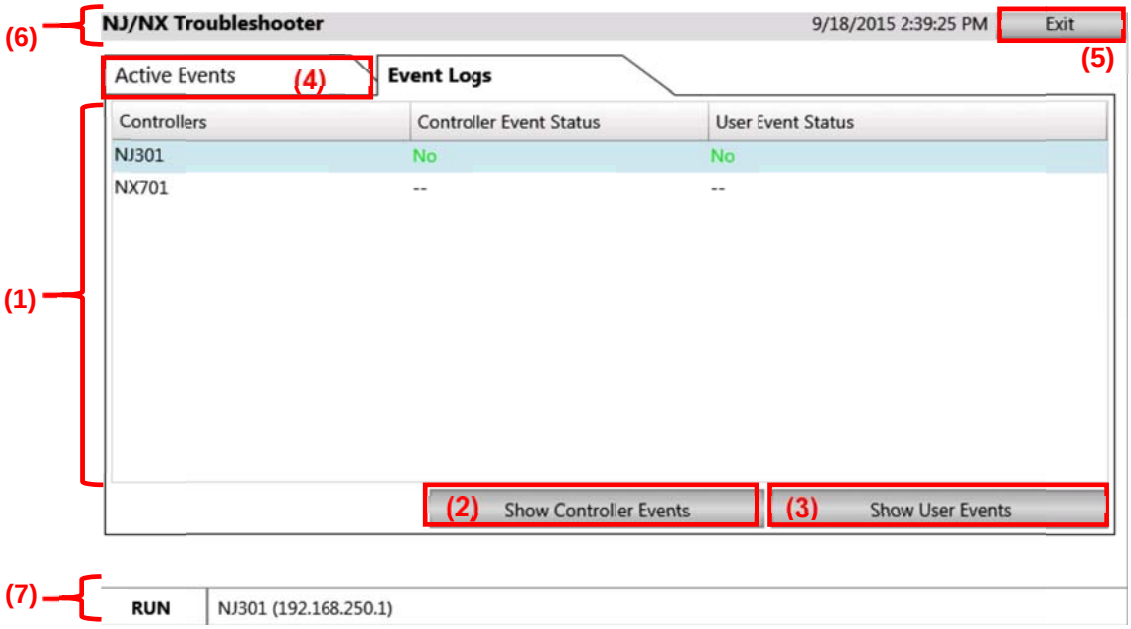


No	Name	Description
1	Event Type	• Shows a type of the selected user event (error/information). • This item is written in the NA system language.
2	Event Name	• Shows a name of the selected user event. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
3	Event Code	Shows an event code of the selected user event.
4	Date/Time	• Shows the occured date/time of the selected user event. • Date/Time is written in the current project language.
5	Group	• Shows a group name of the selected user event. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
6	Event Level	• Shows an event level of the selected user event. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
7	Detailed Information	• Shows the detailed information of the selected user event. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
8	Attached Info 1 to 2	Shows the attached information of the selected user event.
9	“Screen Shot” button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • A confirmation dialog box is displayed before and after saving the screen.

10	“Error Reset” button	• Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • The selected user events are reset by clicking this button. • A confirmation dialog box is displayed before and after resetting the event.
11	“Show Specified Page” button	Moves to the user page associated with the selected user event by clicking this button.The Sysmac Studio is used to associate with the user pages.
12	“Back” button	You can move to [Active User Events Page] by clicking this button.
13	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
14	Status bar	• Shows the operation mode of the selected Controller. RUN” appears in RUN mode and ”PROGRAM” in PROGRAM mode. • Shows the selected controller name and IP address.

5-6 Event Logs Controller Status Page

This page shows if there is an event log in the Controller connected to the NA.

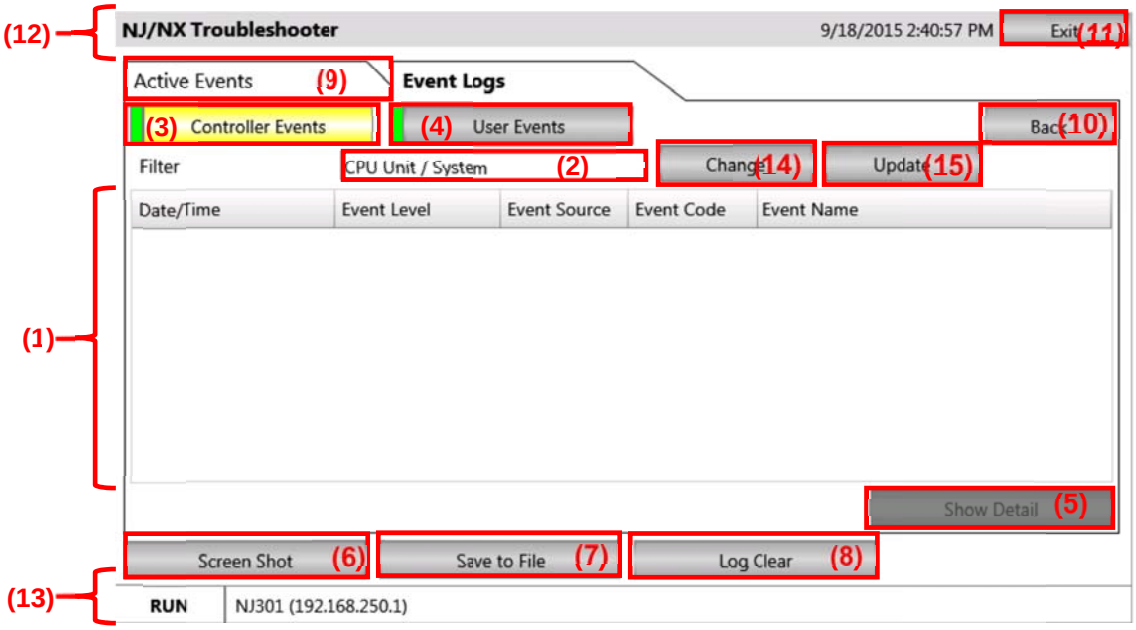


No	Name	Description
1	Status	• Shows a list of Controllers set in the NA. • The set controller names are displayed in the “Controllers” Column. • The presence of controller event logs is displayed in the “Controller Event Status” Column. “No” is displayed in green if no controller event log exists, “Yes” in red if a log exists, “—“ in black if the status cannot be read due to a communications error or others. • The presence of user event log is displayed in the “User Event Status” Column. “No” is displayed in green if no user event log exists, “Yes” in red if a log exists, “—“ in black if the status cannot be read due to a communications error or others. • If you click on a Controller, the line will be selected. • The operation mode, controller name, and IP address of the selected Controller are displayed in the status bar by selecting a Controller. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page. • The polling and refreshing intervals for a controller status are 1 second or so.
2	“Show Controller Events” button	• This button is enabled only when a Controller is selected from the list. • You can move to [Controller Event Logs Page] by clicking this button.
3	“Show User Events” button	• This button is enabled only when a Controller is selected from the list. • You can move to [User Event Logs Page] by clicking this button.
4	“Active Events” tab	You can move to [Active Events Controller Status Page] by selecting this tab

		page.
5	“Exit” button	The troubleshooter exits by clicking this button, and moves to the system menu or to the user page of right before the troubleshooter startup.
6	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
7	Status bar	• Shows the operation mode of the selected Controller. RUN” appears in RUN mode and ”PROGRAM” in PROGRAM mode. • Shows the selected controller name and IP address.

5-7 Controller Event Logs Page

This page shows the controller event logs of the selected Controller.

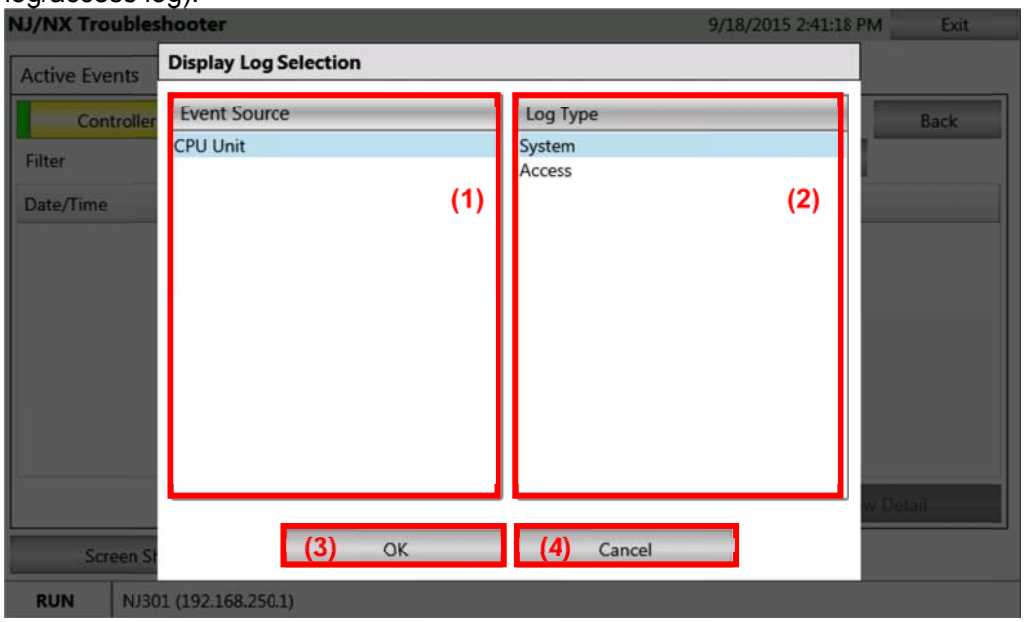


No	Name	Description
1	Event Log	• Shows a list of controller event logs of the selected Controller. • Filter the event logs by “event source” and “log type”. • Shows the occured date/time of the event is displayed in the “Date/Time” Column. • Information in the “Event Level”, ”Event Source”, ”Event Code”, and ”Event Name” Columns is the same as that in [Active Controller Events Page]. • If you click on a controller event log, the item will be selected. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page.
2	Log Type	Shows the displayed event sorce and log type.
3	“Controller Events” button/indcator	• This button is highlighted in yellow to notify the user that the displayed error is the controller event log. • The indicator to the light side of the button is lit in red if there is a controller event log, and lit in green if there is no controller event log. • The polling and refreshing intervals for the indicator are 1 second or so.
4	“User Events” button/indcator	• You can move to [User Event Logs Page] by clicking this button. • The indicator to the light side of the button is lit in red if there is a user event log, and lit in green if there is no user event log. • The polling and refreshing intervals for the indicator are 1 second or so.
5	“Show Detail” button	• This button is enabled only when a controller event log is selected from the list. • You can move to [Controller Event Log Detailed Information] by clicking this button.

6	“Screen Shot” button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • A confirmation dialog box is displayed before and after saving the screen.
7	“Save to File” button	• Saves the listed controller event logs to the specified location in a CSV file by clicking this button. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • A confirmation dialog box is displayed before and after saving the screen.
8	“Log Clear” button	• The entire listed controller event log is cleared by clicking this button. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • Shows a confirmation dialog box before and after clearing the logs.
9	“Active Events” tab	You can move to [Active Controller Events Page] by selecting this tab page.
10	“Back” button	You can move to [Event Logs Controller Status Page] by clicking this button.
11	“Exit” button	The troubleshooter exits by clicking this button, and moves to the system menu or to the user page of right before the troubleshooter startup.
12	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
13	Status bar	• Shows the operation mode of the selected Controller. RUN” appears in RUN mode and ”PROGRAM” in PROGRAM mode. • Shows the selected controller name and IP address.
14	“Change” button	Shows [Log Type and Event Source Selector Popup] by pressing this button. Filters the listed controller event logs by “event source” and “log type”.
15	“Update” button	You can update the contents of the list by clicking this button.

5 - 7 - 1 Log Type and Event Source Selector Popup

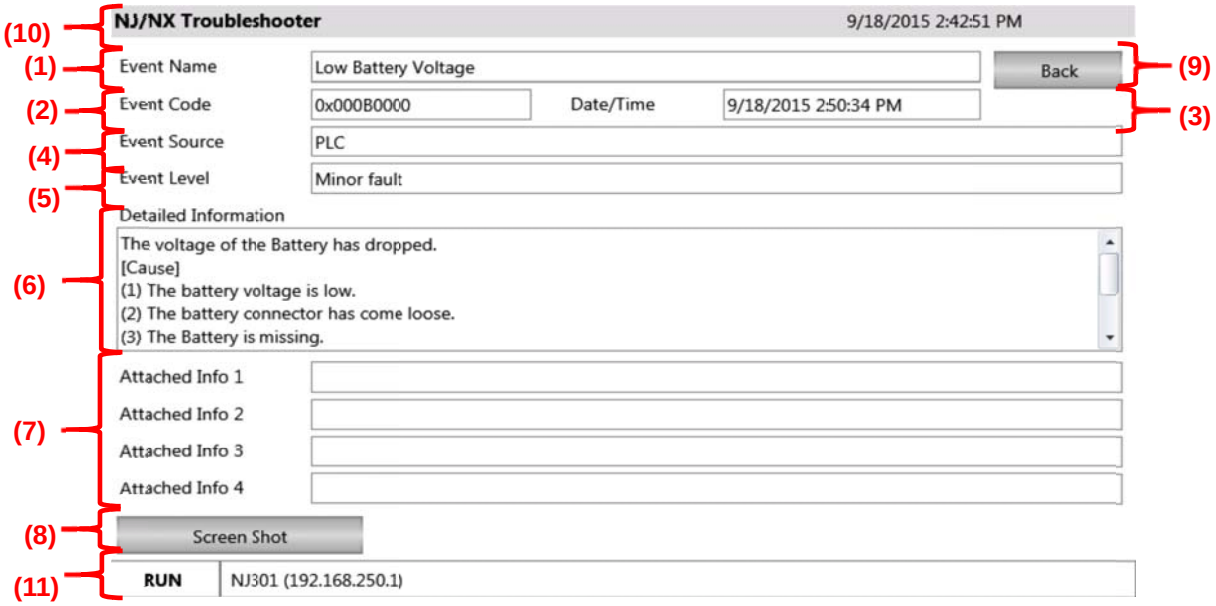
This page is used to filter the controller event logs by “event source” and “log type” (system log/access log).



No	Name	Description
1	Event Source	• Shows a list of the selected Controller (CPU Unit) and EtherCAT slaves that are communicated to the Controller. • If you click on an event source, the line will be selected. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page. • A log type (system or access) for event source is displayed in the “Log Type” List by selecting an event source.
2	Log Type	• Shows a log type (system or access). • If you click on a log type, the line will be selected.
3	“OK” button	Closes the pop-up, and filters [Controller Event Logs Page] by the item you selected.
4	“Cancel” button	Closes the pop-up without filtering.

5 - 7 - 2 Controller Event Log Detailed Information

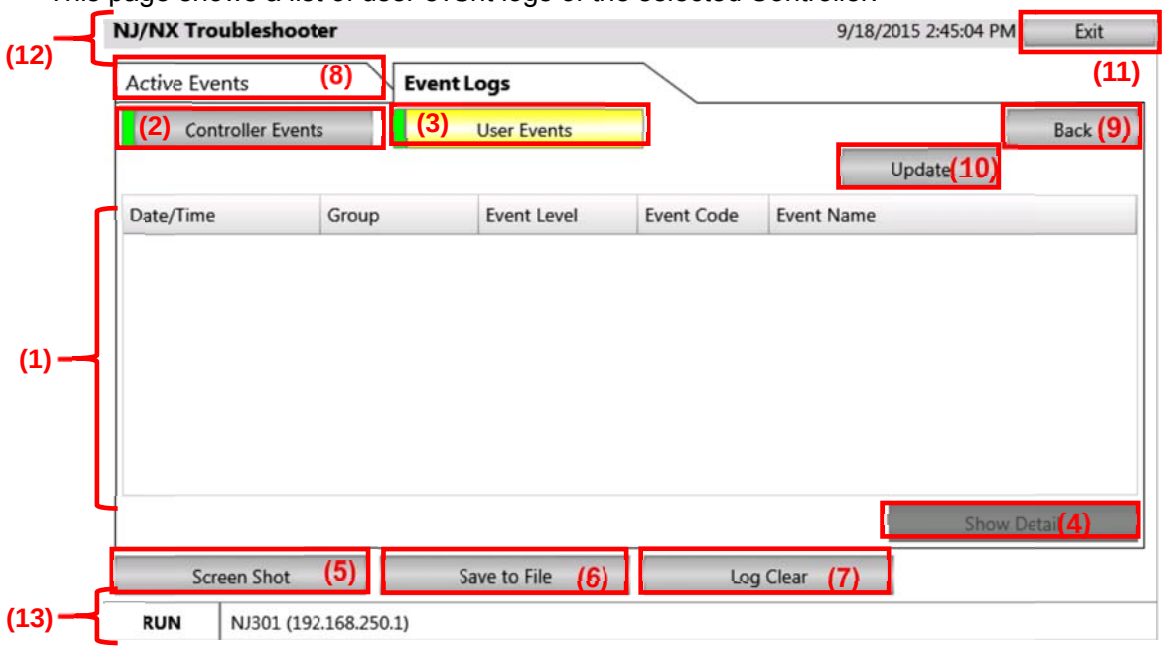
This page is used to show the details of the controller event logs selected in [Controller Event Logs Page].



No	Name	Description
1	Event Name	• Shows an event name of the selected controller event log. • This item is written in the NA system language.
2	Event Code	Shows an event code of the selected controller event log.
3	Date/Time	• Shows the occured date/time of the selected controller event log. • Date/Time is written in the current project language.
4	Event Source	• Shows an event source of the selected controller event log. • This item is written in the NA system language. • Shows"event source - details" if any detailed event source exists.
5	Event Level	• Shows an event level of the selected controller event log. • This item is written in the NA system language.
6	Detailed Information	• Shows the detailed information of the selected controller event log. • This item is written in the NA system language.
7	Attached Info 1 to 4	Shows the attached information of the selected controller event log.
8	"Screen Shot" button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format. • Access level can be set to this button. This button is enabled only when the set access level matches with the user's access level. • A confirmation dialog box is displayed before and after saving the screen.
9	"Back" button	You can move to [Active Controller Events Page] by clicking this button.
10	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
11	Status bar	• Shows the operation mode of the selected Controller. RUN" appears in RUN mode and "PROGRAM" in PROGRAM mode. • Shows the selected controller name and IP address.

5-8 User Event Logs Page

This page shows a list of user event logs of the selected Controller.

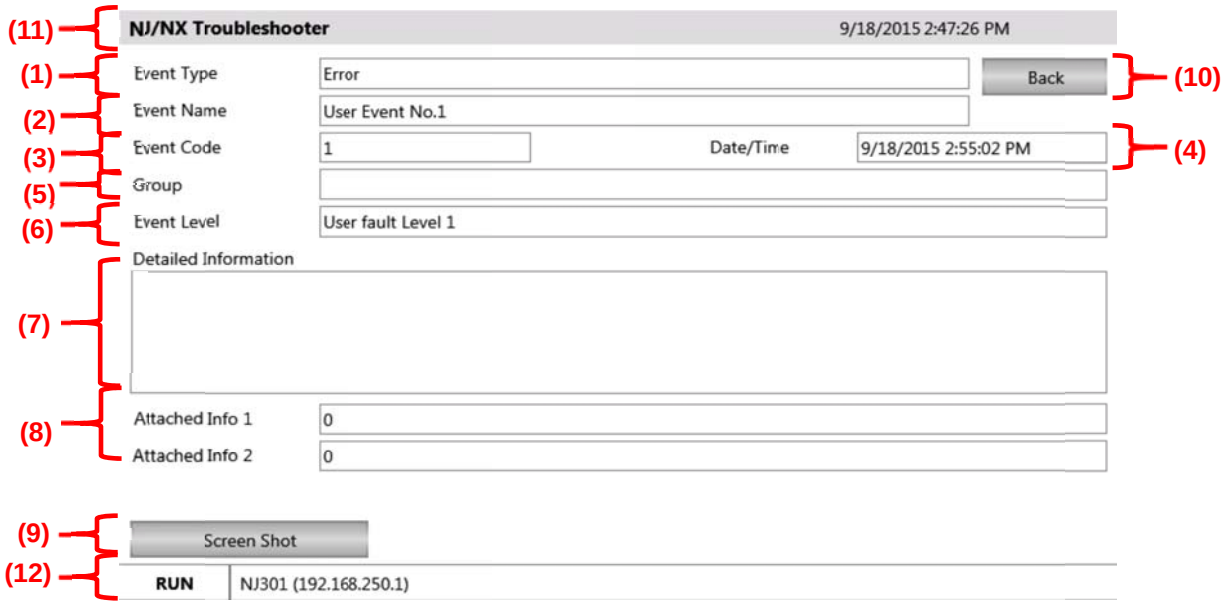


No	Name	Description
1	Event Log	• Shows a list of user event logs of the selected Controller. • Shows the occured date/time of the event is displayed in the “Date/Time” Column. • Information in the “Group”, ”Event Level”, ”Event Code”, and ”Event Name” Columns is the same as in [Active User Events Page]. • If you click on a user event log, the line will be selected. • If there are too many items in the list and not fit on the screen, you can scroll the list to view the non-displayed items.To scroll the list, drag or flick the scroll bar displayed on the right side of the list or the listed page.
2	“Controller Events” button/indcator	• You can move to [Controller Event Logs Page] by clicking this button. • The indicator to the left side of the button is lit in red if there is a controller event log, and lit in green if there is no controller event log. • The polling and refreshing intervals for the indicator are 1 second or so.
3	“User Events” button/indcator	• The button is highlighted in yellow to notify the user that the displayed error is the user event log. • The indicator to the left side of the button is lit in red if there is a user event log, and lit in green if there is no user event log. • The polling and refreshing intervals for the indicator are 1 second or so.
4	“Show Detail” button	• This button is enabled only when a user event log is selected from the list. • You can move to [User Event Log Detailed Information] by clicking this button.
5	“Screen Shot” button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format. • Access level can be set to this button. This button is enabled only when the

		set access level matches with the user's access level. • A confirmation dialog box is displayed before and after saving the screen.
6	"Save to File" button	• Saves the listed controller user logs to the specified location in a CSV file by clicking this button. • Access level can be set to this button. This button is enabled only when the set access level matches with the user's access level. • A confirmation dialog box is displayed before and after saving the log.
7	"Log Clear" button	• The entire listed user events are reset by clicking this button. • Access level can be set to this button. This button is enabled only when the set access level matches with the user's access level. • A confirmation dialog box is displayed before and after clearing the log.
8	"Active Events" tab	You can move to [User Event Logs Page] by selecting this tab page.
9	"Back" button	You can move to [Active Events Controller Status Page] by clicking this button.
10	"Update" button	You can update the contents of the list by clicking this button.
11	"Exit" button	The troubleshooter exits by clicking this button, and moves to the system menu or to the user page of right before the troubleshooter startup.
12	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
13	Status bar	• Shows the operation mode of the selected Controller. RUN" appears in RUN mode and "PROGRAM" in PROGRAM mode. • Shows the selected controller name and IP address.

5 - 8 - 1 User Event Log Detailed Information

This page shows the details of the user event logs selected in [User Event Logs Page].



No	Name	Description
1	Event Type	• Shows a type of the selected user event log (error/information). • This item is written in the NA system language.
2	Event Name	• Shows an event name of the selected user event log. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
3	Event Code	Show an event code of the selected user event log.
4	Date/Time	• Shows the occured date/time of the selected user event log. • Date/Time is written in the current project language.
5	Group	• Shows a group name of the selected user event log. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
6	Event Level	• Shows an event level of the selected user event log. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
7	Detailed Information	• Show the detailed information of the selected user event log. • Shows the item set in the user event language (Language1 to 9) mapped to the NA project language.
8	Attached Info 1 to 2	Shows the attached information of the selected user event log.
9	“Screen Shot” button	• The displayed screen is captured by clicking this button and stored in the set device in PNG format. • Access level can be set to this button. This button is enabled only when the set access level matches with the user’s access level. • A confirmation dialog box is displayed before and after saving the screen.
10	“Back” button	You can move to [User Event Logs Page] by clicking this button.

11	Title bar	Shows the current date and time set in the NA. The display format depends on the current project language.
12	Status bar	• Shows the operation mode of the selected Controller. RUN" appears in RUN mode and "PROGRAM" in PROGRAM mode. • Shows the selected controller name and IP address.

6 NJ/NX Troubleshooter Function

This section describes the function of the NJ/NX troubleshooter.

- How to start the NJ/NX troubleshooter
- Support language
- Security settings
- Screen capture
- Exporting event logs

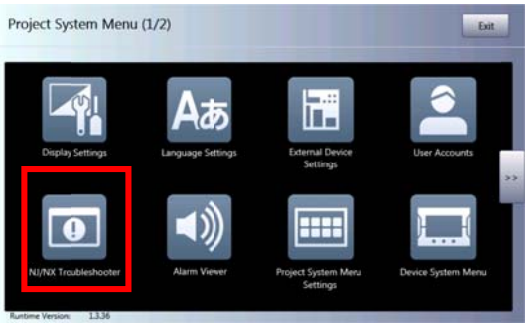
6-1 How to Start the NJ/NX Troubleshooter

Use one of the following four procedures to start the NJ/NX troubleshooter.

Staring from the System Menu

Select the"NJ/NX Troubleshooter" icon on the "Project System Menu" page.

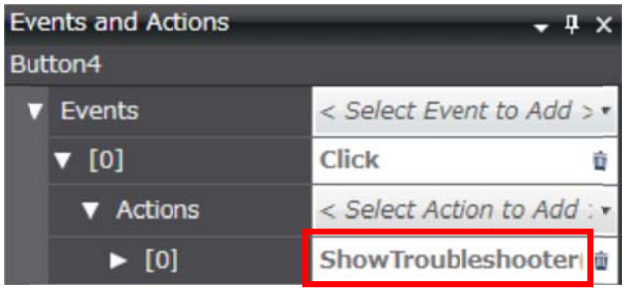
[Active Events Controller Status Page] appears.



Starting from Actions

Press "ShowTroubleshooter" under Actions in "Events and Actions".

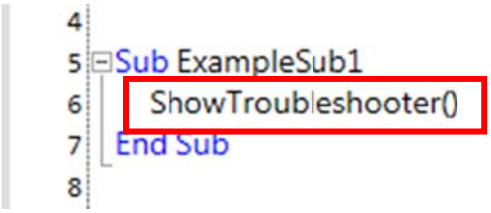
You can specify a page to display.



Srating with function.

Use"ShowTroubleshooter" function within the Visual Basic code and exrcute the subroutine.

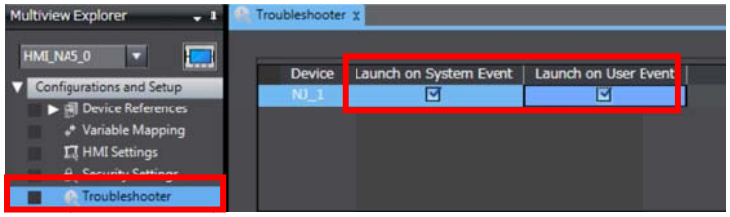
You can specify a page to display.



Auto-starting triggered by error

When the "Launch on System Event"checkbox /"Launch on User Event"checkbox are selected on the "Troubleshooter" tab page;

If a user error occurs, [Active User Event Page] appears.
If a controller error occurs, [Active Controller Events Page] appears.



6-2 Support Language

This section describes the languages supported by the NJ/NX troubleshooter.

- System resource

The system resource of the NJ/NX troubleshooter supports the following nine languages that are the NA system languages.

System Languages
English (United States)
French (France)
German (Germany)
Italian (Italy)
Japanese (Japan)
Chinese (Simplified)
Chinese (Traditional)
Korean (Korea)
Spanish (Spain)

If you change a NA system language, the language on the button or label of the NJ/NX troubleshooter will change according to the language that you selected.

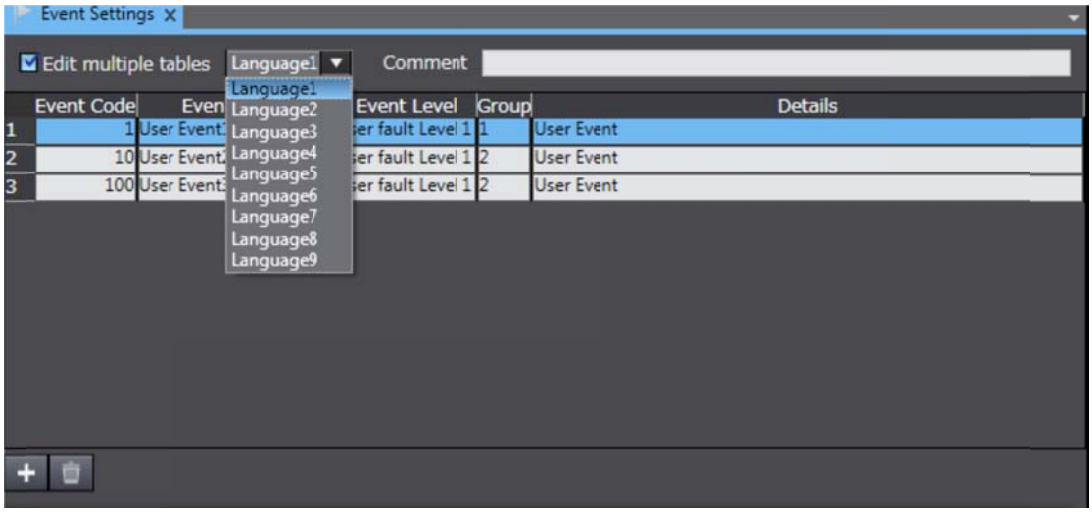
- Controller error/Controller event log

Japanese and English are supported.

The errors and logs are displayed in Japanese when the NA system language is set to Japanese, otherwise, displayed in English.

- User error/User event log

You can set up to 9 languages (9 patterns) to the same event code by selecting [Multiview Explorer]->[Configurations and Setup]->[Event Settings] on the NJ/NX project.

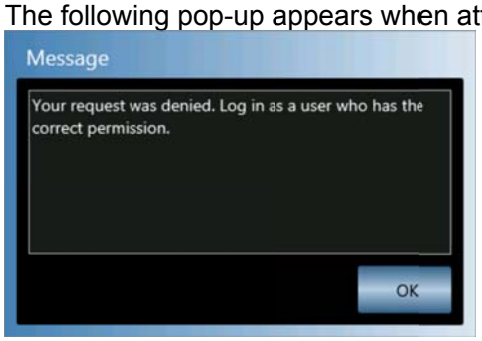


You associate the user event language with NA project language by selecting [Multiview Explorer]->[Configurations and Setup]->[Troubleshooter] on the NA project (procedure is described later).

6-3 Security Settings

You can set an authority for each access level to execute specific operations on the “NJ/NX Troubleshooter” page.

The following pop-up appears when attempting to execute an unauthorized function.

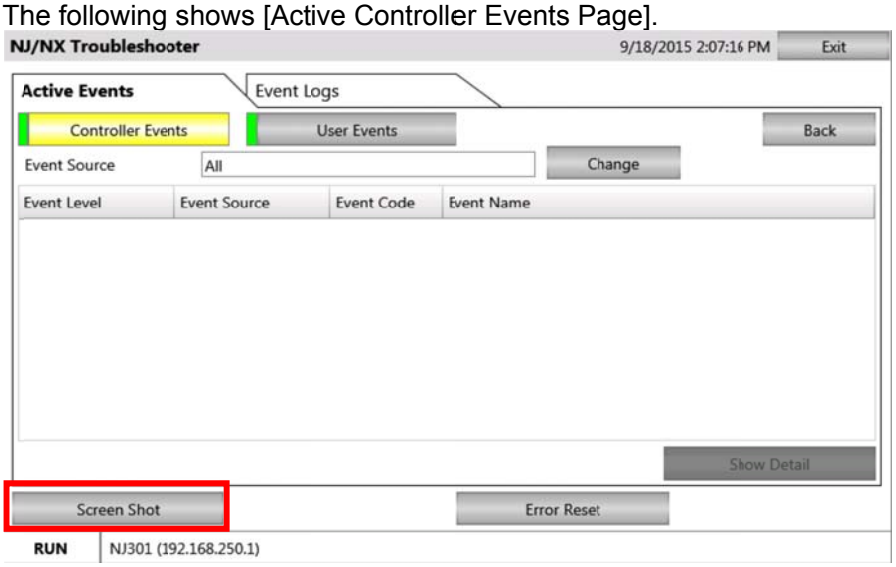


6-4 Screen Capture

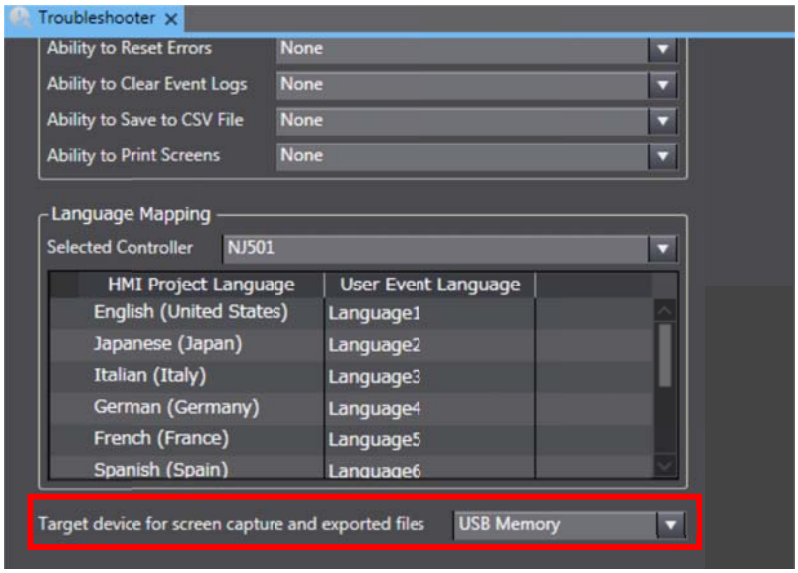
You can capture the displayed screen by pressing the ”Screen Shot” button on the “NJ/NX Troubleshooter” page.

- Active Controller Events Page
- Active Controller Event Detailed Information
- Active User Events Page
- Active User Event Detailed Information
- Controller Event Logs Page
- Controller Event Log Detailed Information
- User Event Logs Page
- User Event Log Detailed Information

The following shows [Active Controller Events Page].



You need to pre-set the target device to save the screen capture (SD card or USB memory) by selecting [Multiview Explorer]->[Configurations and Setup]->[Troubleshooter] on the NA project.

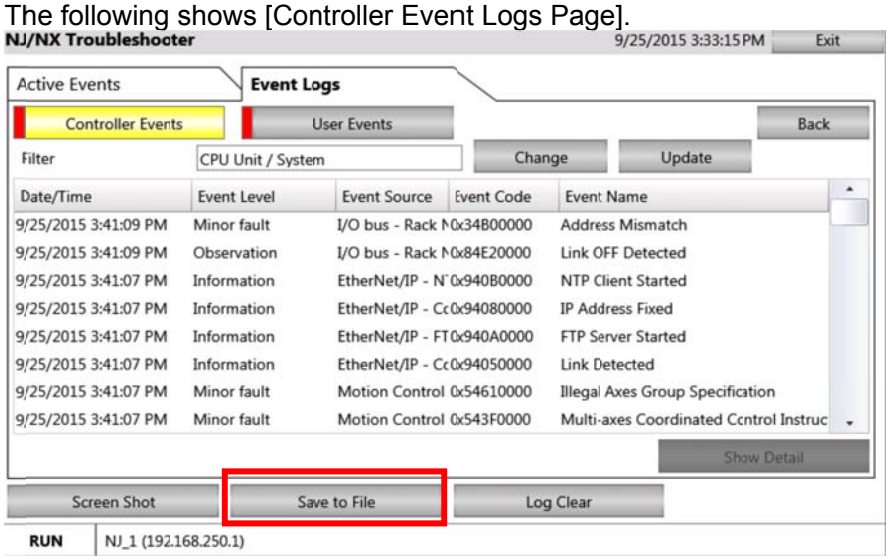


6-5 Exporting Event Logs

You can export the displayed event logs in CSV file by pressing the “Save to File” button on the “NJ/NX Troubleshooter” page.

- Controller Event Logs Page
- User Event Logs Page

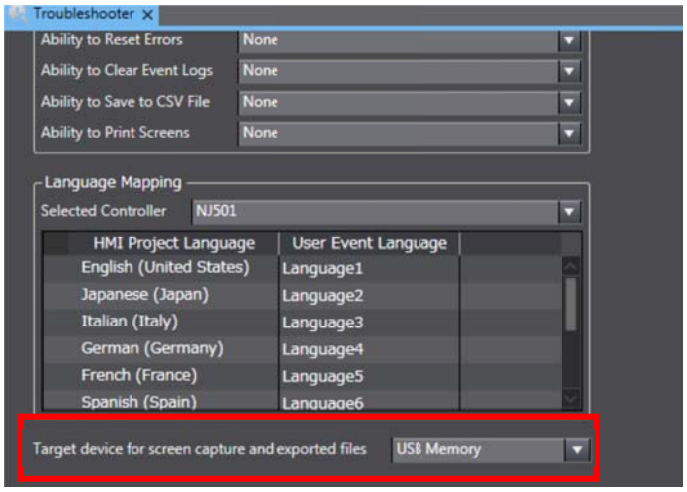
The following shows [Controller Event Logs Page].



The following shows an Excel fille opened form the saved CSV file.

	A	B	C	D	E	F	G	H	I	J	K
1	Entry	Time	Level	Source	Source De	Event Nam	Event Cod	Attached ir	Attached ir	Attached ir	Attached ir
2	61	2015/9/25 15:41	Minor fault	I/O bus	Rack No. 0	Address Mi	0x34B00000				
3	60	2015/9/25 15:41	Observatio	I/O bus	Rack No. 0	Link OFF D	0x84E20000				
4	59	2015/9/25 15:41	Informatior	EtherNet/I	NTP	NTP Client	0x940B0000				
5	58	2015/9/25 15:41	Informatior	EtherNet/I	Communica	IP Address	0x94080C0	0xC0A8FA01			
6	57	2015/9/25 15:41	Informatior	EtherNet/I	FTP	FTP Serve	0x940A0000				
7	56	2015/9/25 15:41	Informatior	EtherNet/I	Communica	Link Detec	0x94050000				
8	55	2015/9/25 15:41	Minor fault	Motion Cor	Common	Illegal Axes	0x54610000				
9	54	2015/9/25 15:41	Minor fault	Motion Cor	Axes Grou	Multi-axes	0x543F0000				
10	53	2015/9/25 15:41	Minor fault	Motion Cor	Axis 0	Target Vel	0x54220000				
11	52	2015/9/25 15:41	Informatior	PLC		Operation S	0x90130000				
12	51	2015/9/25 15:41	Minor fault	I/O bus	Rack No. 0	Invalid Con	0x14840000				
13	50	2015/9/25 15:41	Informatior	PLC		Power Turi	0x90110000				
14	49	2015/9/25 15:40	Informatior	PLC		Power Inte	0x90120000				
15	48	2015/9/25 15:40	Minor fault	I/O bus	Rack No. 0	Invalid Con	0x14840000				
16	47	2015/9/25 15:40	Minor fault	I/O bus	Rack No. 0	Address Mi	0x34B00000				
17	46	2015/9/25 15:40	Observatio	I/O bus	Rack No. 0	Link OFF D	0x84E20000				
18	45	2015/9/25 15:40	Informatior	EtherNet/I	NTP	NTP Client	0x940B0000				

You need to pre-set the target device to save the screen capture (SD card or USB memory) by selecting [Multiview Explorer]->[Configurations and Setup]->[Troubleshooter] on the NA project.



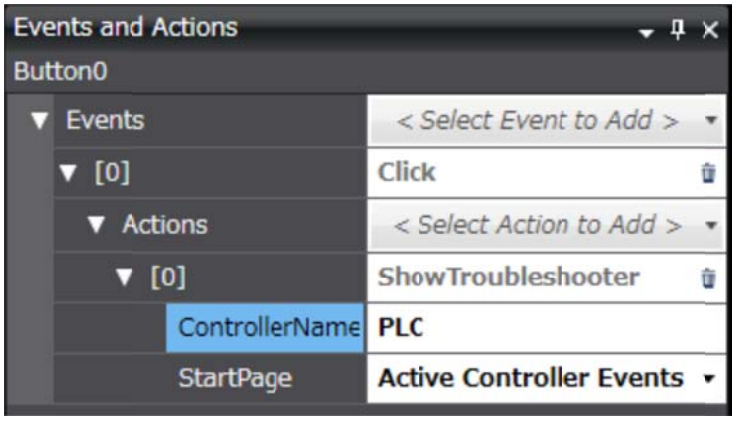
7 Related Actions and Functions

This section describes actions and functions related to the NJ/NX troubleshooter.

7-1 Events and Actions

You can start the NJ/NX troubleshooter with the ”ShowTroubleshooter” action in “Events and Actions”.You can set the target Controller in “ControllerName”, and set a page to display in ”StartPage”.

The following shows a setting example when you want to display [Active Controller Events Page] of “PLC (controller name)” at startup of the NJ/NX troubleshooter.



- Directly input a text string in “ControllerName”.
- Select a drop-down menu for “StartPage”.
- A drop-down menu of “StartPage” can be selected after setting “ControllerName”.
- If you don’t set “ControllerName”,”Active Controller Status Page” is displayed at startup.

7-2 Functions

The following functions are provided as a Visual Basic function specifically for the NA. You can start the NJ/NX troubleshooter by specifying a page.

Function name	Parameter	Supported data ype	Description
ShowTroubleshooter (ControllerName, PageName)	1. Controller name	1. String 1. String Variable	Start the NJ/NX troubleshooter. You can set a page at startup with parameter. If you don' set a parameter, [Active Event Controller Status Page] is displayed.
	2. Page name	2. _eHMI_TROUBLESHOOTER_PAGE	

Example

```
2
3
4   '「PLC」というコントローラのActiveControllerEventsPageに遷移する
5   Sub Example
6       ShowTroubleshooter("PLC", _eHMI_TROUBLESHOOTER_PAGE.ActiveControllerEvents)
7   End Sub
8
9
```

Controller name　Data type name　Enumerated data type

8 Data Type

The following enumerated data types are provided as the system-defined data type for the NJ/NX troubleshooter.

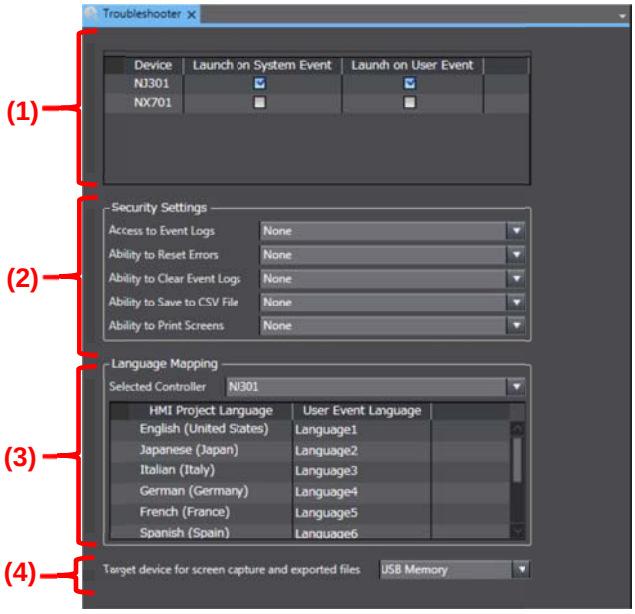
Data type name	Enumerated data type	Description
_eHMI_TROUBLESHOOTER_PAGE	ActiveControllerEvents = 0 ActiveUserEvents = 1 ControllerEventLogs = 2 UserEventLogs = 3	A data type that lists page names in the NJ/NX troubleshooter.

9 Sysmac Studio Setup

This section describes settings of the NJ/NX troubleshooter with the Sysmac Studio.

9-1 Multiview Explorer - Troubleshooter

You can make the following settings of the troubleshooter by selecting [Multiview Explorer]->[Configurations and Setup]->[Troubleshooter].

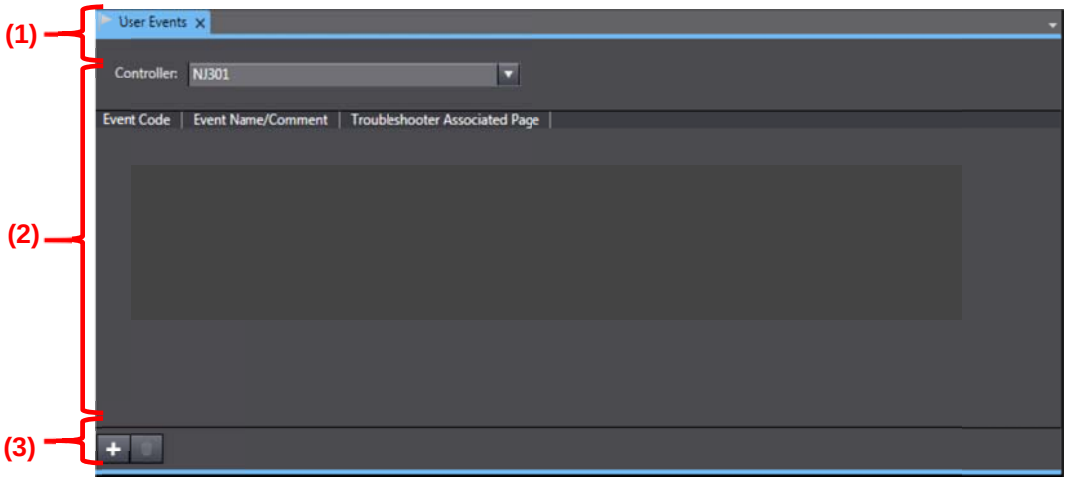


No	Name	Description
1	Automatic Launch	• You can set to automatically launch the NJ/NX troubleshooter when a controller error/user error occurs. • You can set the automatic launch upon “Launch on system event”/ “Launch on user event”. • If the selected error occurs while the NA user page is displayed, the NJ/NX troubleshooter automatically starts, moving to a screen where the cossresponding error is displayed. • The detected error will not be detected again unless the cancellation is detected or the NA is re-started.
2	Security Settings	• You can set an authority for each access level to execute specific operations on the “NJ/NX Troubleshooter” page. • “Access to Event Logs” can restrict the transition to [Controller Event Logs Page] and [User Event Logs Page]. • “Ability to Reset Errors” can restrict the reset of active controller errors/user errors. • “Ability to Clear Event Logs” can restrict the clear of controller event logs/user event logs.

		• “Ability to Save to CSV file” can restrict the CSV output for controller event log and user event log. • “Ability to Print Screens” can restrict the screen capture on the “NJ/NX Troubleshooter” page.
3	Language Mapping	• You can assign a NA project language to a user event language (Language1 to 9) set in the Controller.
4	Target device for screen capture and exported files	• You can set a target device to save the screen capture and output of CSV file that are performed by the NJ/NX troubleshooter. • The saved location can be selected from “SD card” or ”USB memory”.

9-2 Multiview Explorer - Controller Event

You can associate the user error with NA user page by selecting [Multiview Explorer]->[HMI]->[Controller Events].



No	Name	Description
1	Controller Setting	• You can select a Controller to set. • The internal device and external device (NJ/NX) are displayed in the drop-down menu.
2	List view	• You can associate the user page for each event code. • You enter the event code that is defined in the Event Settings on the NJ/NX project of the Controller in the “Event Code” Column. • If an internal device is selected in the controller setting, you cannot make an entry because an error name of the corresponding event code is displayed in the ”Event Name/Comment” Column. • If an external device is selected in the controller setting, you can make an entry as desired in the ”Event Name/Comment” Column. • You enter the NA user page to associate in the “Troubleshooter Associated Page” Column. You can move to the associated page from the detailed screen of corresponding event of the NJ/NX troubleshooter.
3	“Add/delete” button	You can add/ delete settings.

10 How to Pre-set the Troubleshooter

This section describes five settings that you need to make before using the troubleshooter.

- How set user errors/user information
- How to set the pages associated with user errors
- How to set the user error notifucation of major fault
- How to set the automatic launch of the troubleshooter
- How to set the Language mapping

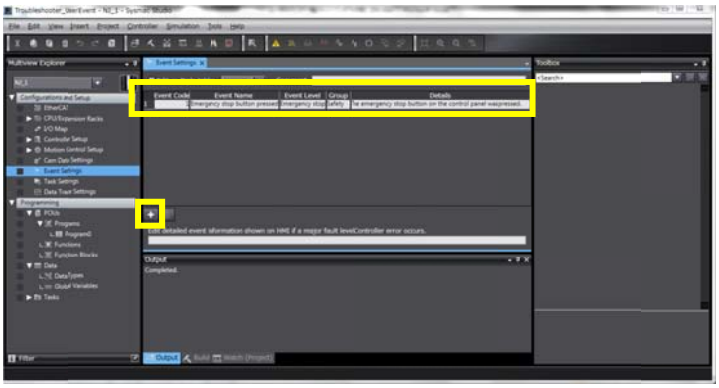
10-1 How to Set User Errors/User Information

To generate any error/information by the user, each user error/user information to display in the NJ/NX troubleshooter needs to be set with the Sysmac Studio.
Perform the following procedure about “how to set user errors/user information” and “how to create a program to generate user error/user information”.

1. Click [Multiview Explorer]->[Configurations and Setup]->[Event Settings] on the NJ/NX project, and double-click (or right-click-> Edit) to open the “Event Settings “ table.

2. Click the + button in the lower left of the “Event Settings” table.
Now you can set the “Event Code/Event Name/Event Level/Group/Details” Columns.

・Event Code: 1
・Event Name: Emergency stop button pressed.
・Event Level: Emergency stop
・Group: Safety
・Detailed Information: The emergency stop button on the control panel was pressed.

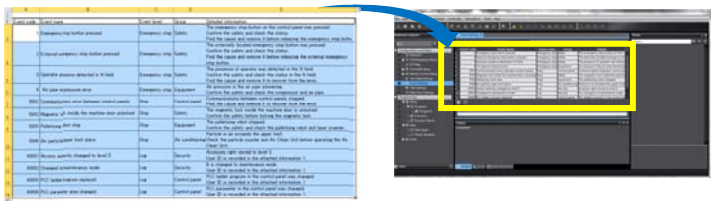


3. If creating an Excel file as shown on the right, you can register the information in the “Event Settings “ Tab Page by directly copying and pasting data from the Excel file.

Note) Do not include the heading when copying.
(e.g.Event Code/Event Name)

Event code	Event name	Event level	Group	Detailed information
1	Emergency stop button pressed	Emergency stop	Safety	The emergency stop button on the control panel was pressed. Confirm the safety and check the status. Find the cause and remove it before releasing the emergency stop button.
2	External emergency stop button pressed	Emergency stop	Safety	The externally located emergency stop button was pressed. Confirm the safety and check the status. Find the cause and remove it before releasing the external emergency stop button.
3	Operator presence detected in N field	Emergency stop	Safety	The presence of operator was detected in the N field. Confirm the safety and check the status in the N field. Find the cause and remove it to recover from the error.
4	Air pipe air pressure error	Emergency stop	Equipment	Air pressure in the air pipe islowering. Confirm the safety and check the compressor and air pipe.
5001	Communications error between control panels	Stop	Control panel	Communications between control panels stopped. Find the cause and remove it to recover from the error.
5002	Magnetic lock inside the machine door unlocked	Stop	Safety	The magnetic lock inside the machine door is unlocked. Confirm the safety before locking the magnetic lock.
5003	Palletizing robot stop	Stop	Equipment	The palletizing robot stopped. Confirm the safety and check the palletizing robot and laser scanner.
5004	Air particle upper limit alarm	Stop	Air conditioning	Particle in air exceeds the upper limit. Check the particle counter and Air Clean Unit before operating the Air Clean Unit.
40001	Access authority changed to level 5	Log	Security	Accesses right moved to level 5. User ID is recorded in the attached information 1.
40002	Changed to maintenance mode	Log	Security	It is changed to maintenance mode. User ID is recorded in the attached information 1.
40003	PLC ladder program replaced	Log	Control panel	PLC ladder program in the control panel was changed. User ID is recorded in the attached information 1.
40004	PLC parameter area changed	Log	Control panel	PLC parameter in the control panel was changed. User ID is recorded in the attached information 1.

4. Copy data from the Excel and paste it to the “Event Settings“ table.



5. You can generate the created event by using”SetAlarm” or ”SetInfo”.

Use”SetAlarm” to generate a “user events”, and use”SetInfo” to generate a ”user information”.

Input
Code: Event Code (UINT)
Info1: Attached information 1 (Data type other than STRING)
Info2: Attached information 2 (Data type other than STRING)

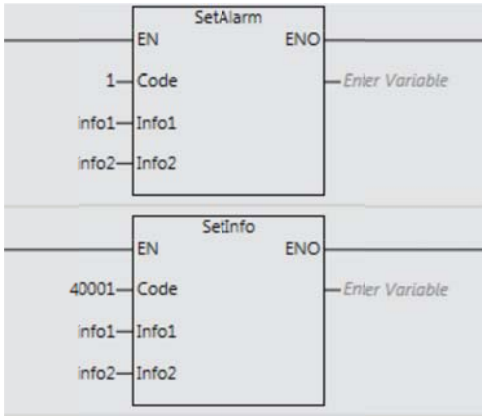
*The valid code range is 1 to 40000 for SetAlarm, and 40001 to 60000 for SetInfo.

Output
Return value: Always TRUE

Written with ST

```
SetAlarm(1, info1, info2);
         Code  Info1  Info2
SetInfo(40001, info1, info2);
         Code   Info1  Info2
```

Written with Ladder



Additional Information

The event level of user error/user information is determined by the event code you set. The following table shows the correspondence between event code and event level.

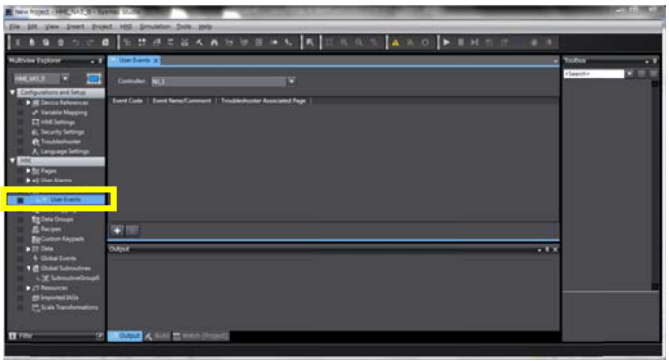
Event type	Event level	Classification of event level	Range of corresponding event code	Description
User error	High	User fault Level 1	1 to 5000	Select from 8 levels.
		User fault Level 2	5001 to 10000	
		User fault Level 3	10001 to 15000	
		User fault Level 4	15001 to 20000	
		User fault Level 5	20001 to 25000	
		User fault Level 6	25001 to 30000	
		User fault Level 7	30001 to 35000	
	Low	User fault Level 8	35001 to 40000	
User information	Lowest	User Information	40001 to 60000	Event level whose event type is classified in “user information”.

10-2 How to Set the Pages Associated with User Errors

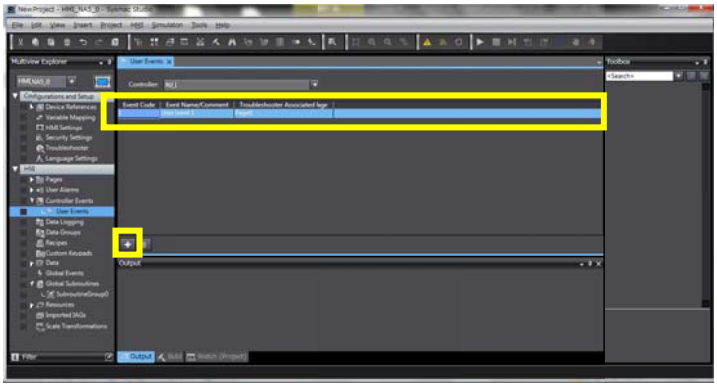
From the detailed user event page, you can move to the associated NA user page that you pre-set in the NJ/NX troubleshooter.

Perform the following procedure to associate a page with a user error.

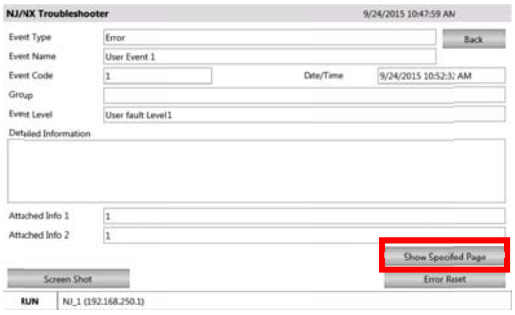
1. Select [Multiview Explorer]->[HMI]->[Controller Events]->[User Events] on the NA project, and double-click (or right-click-> Edit) to open the ”User Events” table.



2. Click the button in the lower left of the “User Events ” table. Now you can set the “Event Code/Event Name/Comment/Troubleshooter Associated Page” Columns.
   ·Event Code: 1
   ·Event Name/Comment: User Event 1 (Error name set in Controller)
   ·Troubleshooter Associated Page: Page0



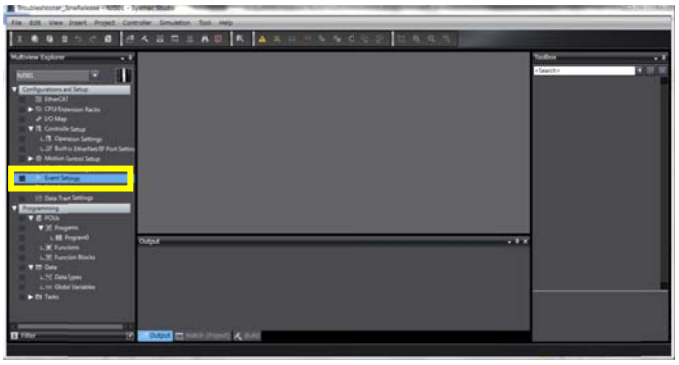
3. After transferring the NA project, if the user event set in step 2 occurs, the ”Show Specified Page” button in [Active User Event Detailed Information] of the NJ/NX troubleshooter becomes enabled. You can move to the page set in step 2 by clicking the button.



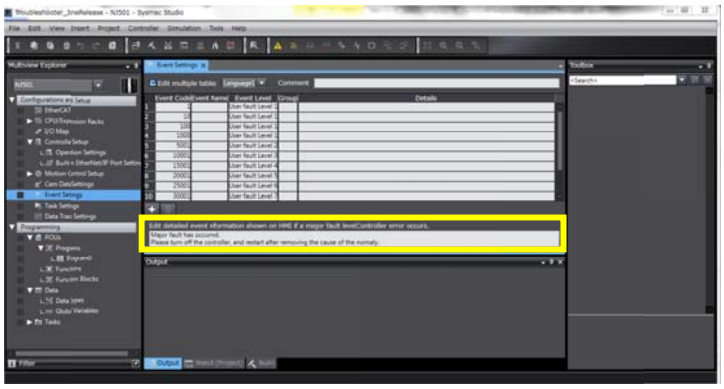
10-3 How to Set the User Error Notifucation of Major Fault

You can display the error notification in the list of [Active User Events Page] when a major fault controller error occurs in the Controller.
Perform the following procedure to display a notification of major fault error in [Active User Events Page].

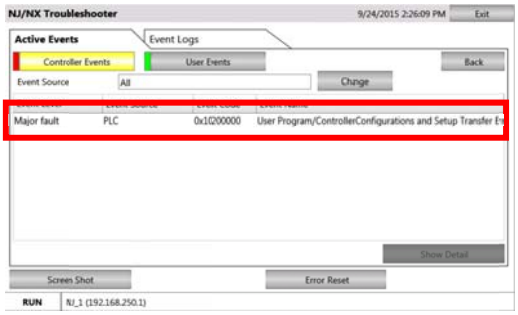
1. Click [Multiview Explorer]->[Configurations and Setup]->[Event Settings] on the NJ/NX project, and double-click (or right-click-> Edit) to open the “Event Settings “ table.



2. Enter a text, which you want to display as an event detail when a major fault occurs, in an entry field as shown in the frame.



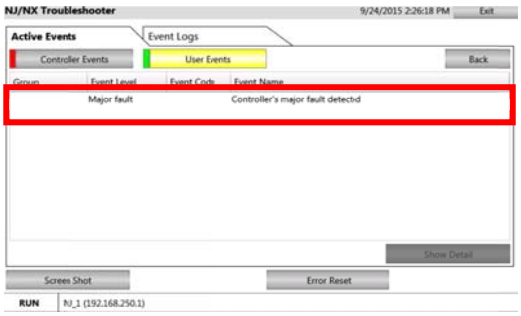
3. After transferring the NJ/NX project, generate a major fault in the Controller.



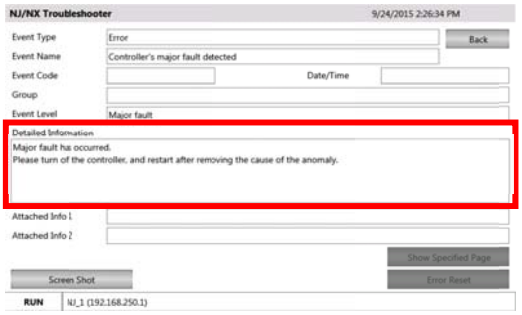
4. After moving to [Active User Events Page], the notification of major fault is diaplayed in the list.

The following are differences from when a regular user error occurs:

- The indicator of the ”User Events” button doesn’t change.
- The display of [Active Events Controller Status] doesn’t change.
- Not retained as user event log
- After resetting the cause of major fault, it dissapers.

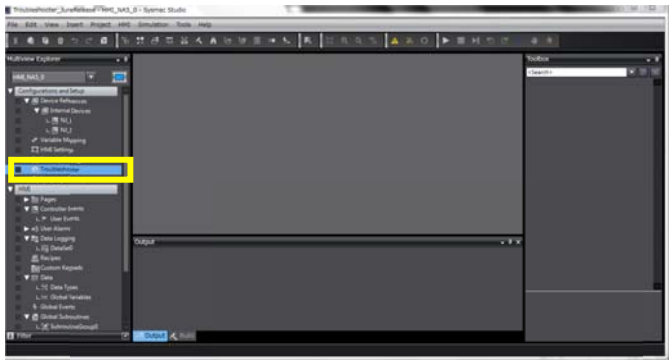
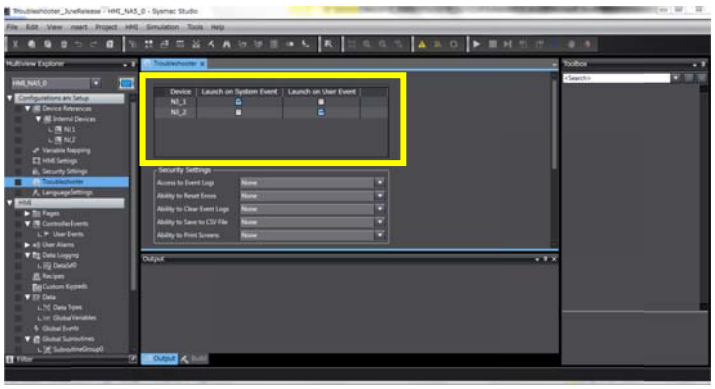
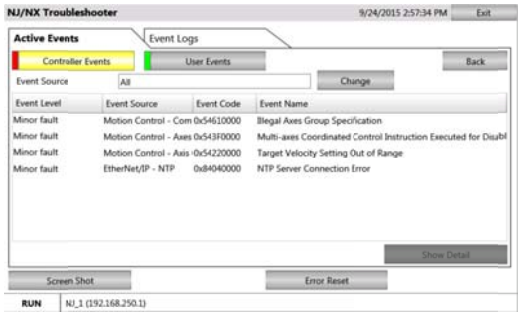


5. Move to [Active User Event Detailed Information] by clicking the ”Show Detail” button while the notification of major fault is being selected, the text you set in step 2 is displayed in the ”Detailed Information” Column.



10-4 How to Automatically Launch the Troubleshooter when Error Occurs

You can automatically launch the NJ/NX troubleshooter when a controller error/user error occurs in the Controller.
Perform the following procedure to automatically launch the NJ/NX troubleshooter.

1. Select [Multiview Explorer]->[Configurations and Setup]->[Troubleshooter] on the NA project, and double-click (or right-click-> Edit) to open the ”Troubleshooter” table.	
2. Select check boxes of “Launch on system event”/ “Launch on user event” for the Controller to automatically launch the troubleshooter when an error occurs. In this example, the troubleshooter automatically starts when a controller error occurs in “NJ_1” and, the user-defined error in “NJ_2”.	
3. After transferring the NA project, if an error you set in step 2 occurs, the NJ/NX troubleshooter automatically starts. If the trigger is a controller error, [Active Controller Events Page] of corresponding Controller is displayed. If the trigger is a user error, [Active User Events Page] is diaplyed.	

Additional Information

Uncheck all check boxes if you don’t want to automatically launch the troubleshooter.

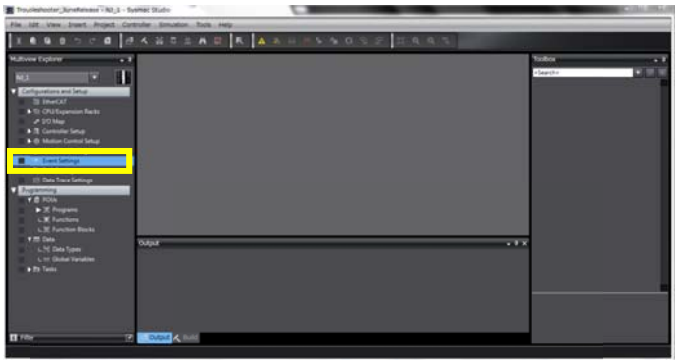
Additional Information

In this automatic launch function, a page to display cannot be set by the user.

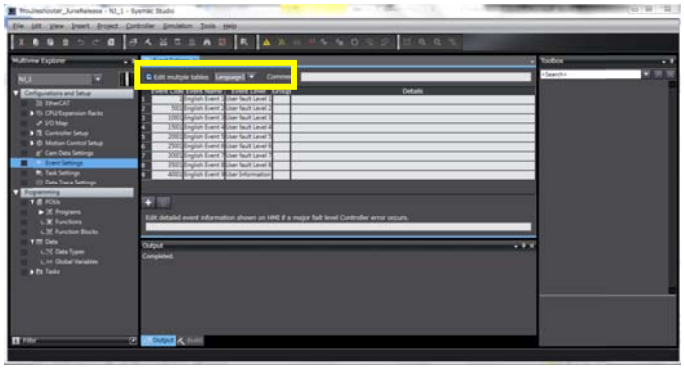
10-5 How to Map the Language

To use user errors in multi languages, you need to map the user event language, which is set in the"Event Settings" table on the NJ/NX project, to NA project language.
Perform the following procedure to map the user event language to NA project language.

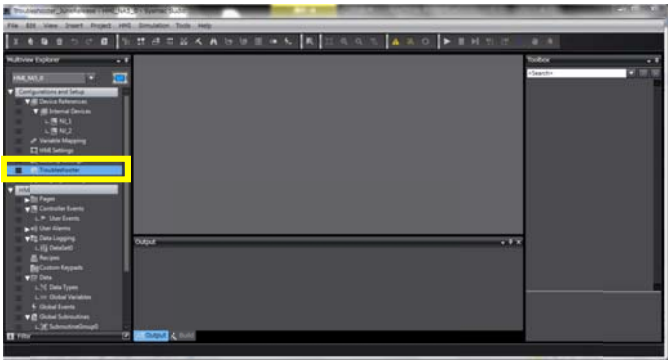
1. Click [Multiview Explorer]->[Configurations and Setup]->[Event Settings] on the NJ/NX project, and double-click (or right-click-> Edit) to open the "Event Settings " table.



2. Select the "Edit multiple tables" check box so that "Language1" to "Language9" can be chosen from the drop-down. Different text can be set for each event in the table.

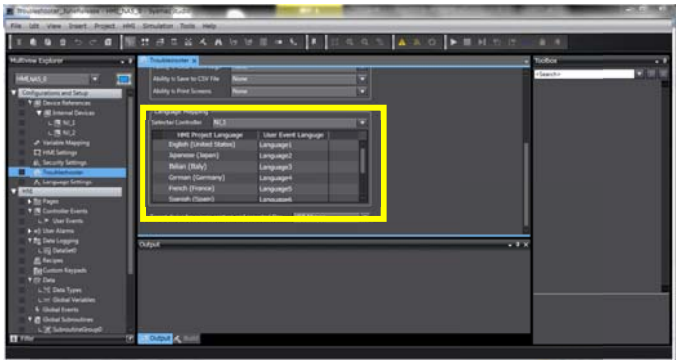


3. Select [Multiview Explorer]->[Configurations and Setup]->[Troubleshooter] on the NA project, and double-click (or right-click-> Edit) to open the "Troubleshooter" table.

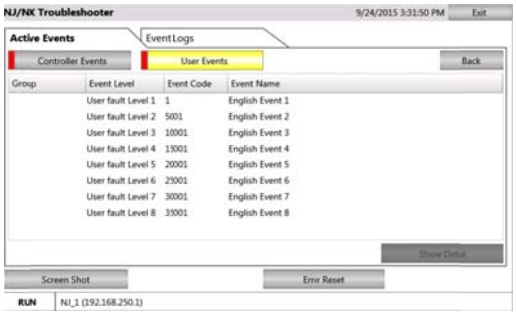


4. You can set a language in the bottom of the "Troubleshooter" table.
Select a controller name from the drop-down, and map the NA project language to user event language (language1 to 9).

   You can map the multiple project languages to the same user language.



5. After transferring the NA project, start the NJ/NX troubleshooter, and generate a user error. Then, a text set in a user event language mapped to the NA project language is displayed.



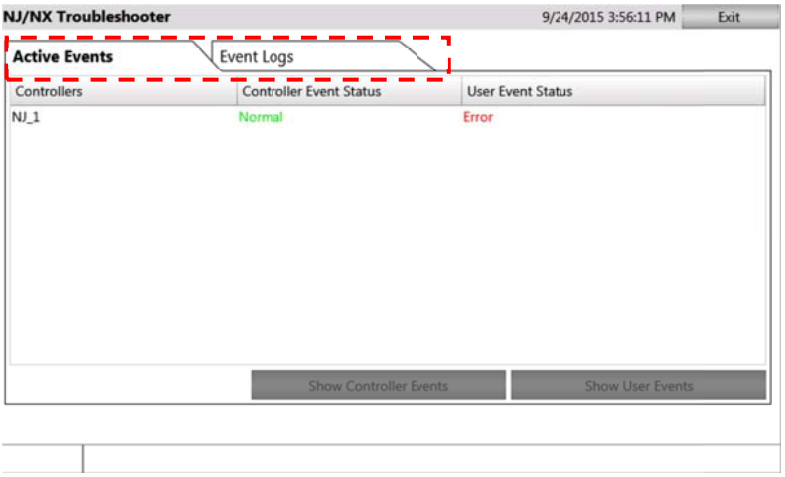
11 Pages and Procedure when Error Occurs

This section describes functions and procedures of the [Active Events/event logs] page.

- Active events and event logs
- How to check and reset active events
- How to check and clear event logs

11-1 Active Events and Event Logs

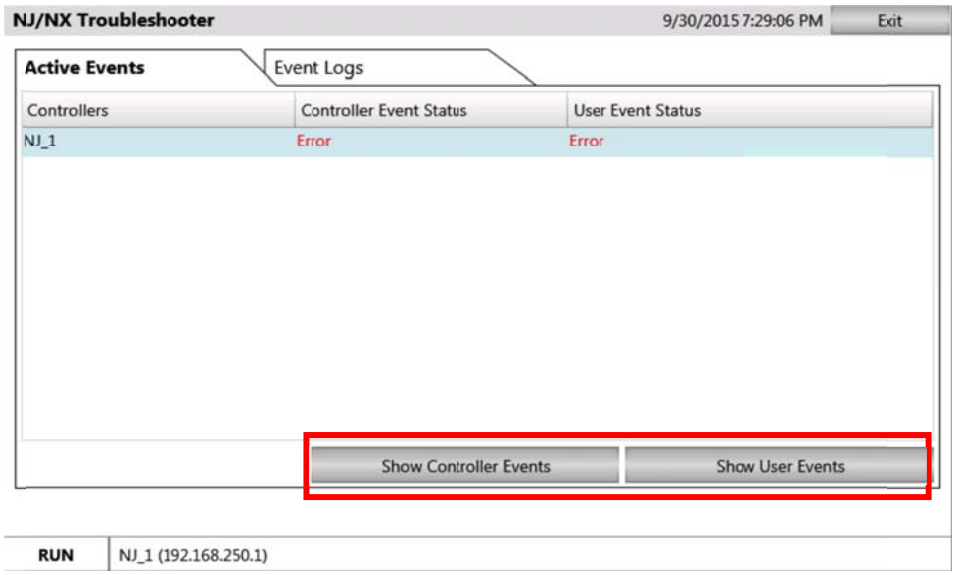
The following page is displayed when the NJ/NX Troubleshooter screen is started.
You can switch between ”Active Events” and ”Event Logs” pages by selecting the tabs shown in [ ].



11-2 How to Check and Reset Active Events

The following page is displayed in the troubleshooter when a “controller event” and ”user event” occurs.

When an error is occurring, ”Error” is displayed.
When there is no error, ”Normal” is displayed.

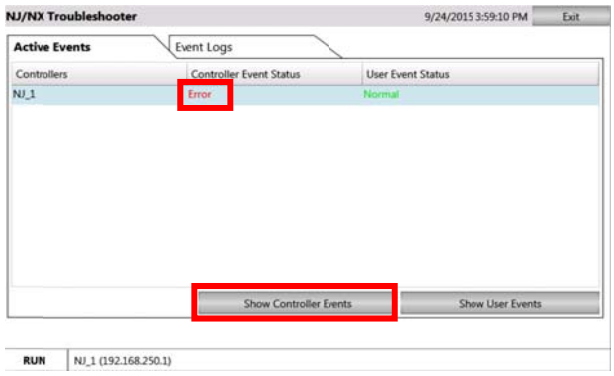


A list of active controller events, user errors, detailed information, and the procedure to reset errors are given in the following pages.

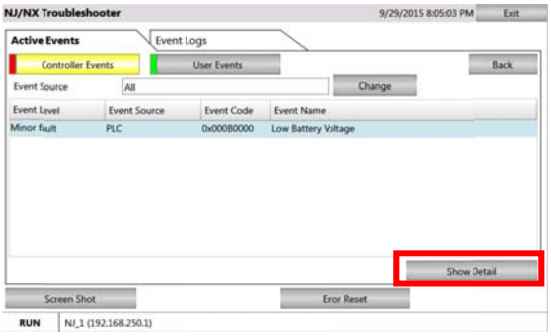
1 1 - 2 - 1　Active Events - Show Controller Events

If Error is displayed in the ”Controller Events” Column in [Active Events Controller Status Page], a controller error is occurring in the Controller.
Perform the following procedure to check the active error.

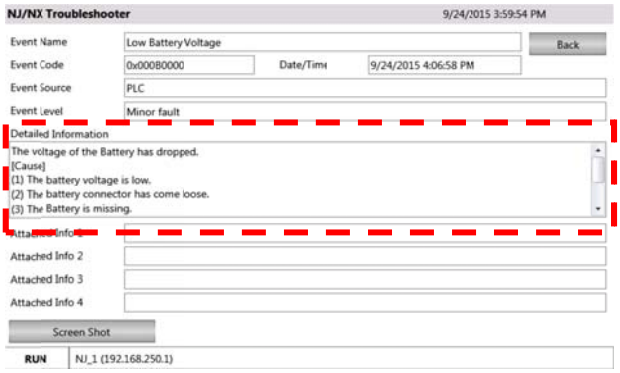
1. If Error is displayed in the ”Controller Event Status” Column in [Active Events Controller Status Page], click the ”Show Controller Events” button.



2. [Active Controller Events Page] is displayed. A list of active controller events is displayed. Select the error that you want to check, and click the ”Show Detail” button.

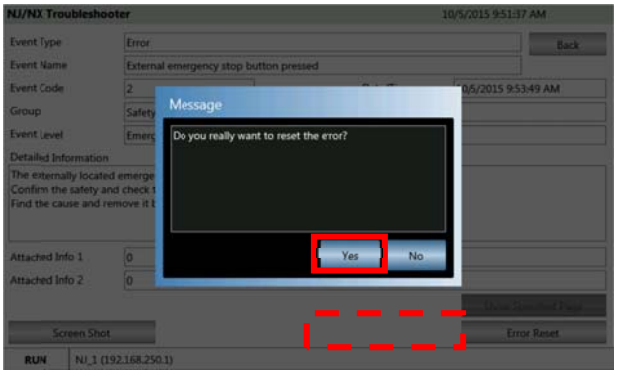


3. The details of ”Controller Event Status” that you set in step2 are displayed.
The error infromation and cause are shown in the “Detailed Information” Column.

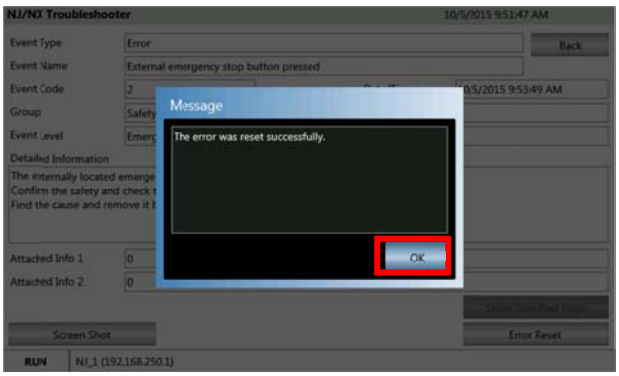


4. The active controller error can be reset by clicking the ”Error Reset” button in [Active Controller Events Page].

   The message on the right appeas after removing the cuase of controller error, and by clicking the “Error Reset” button.
   Press the ”Yes” button.

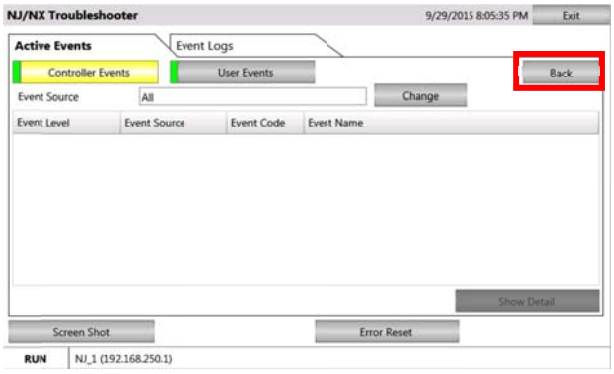


5. After the controller error is reset, the message on the right appears. Presses the “OK” button.

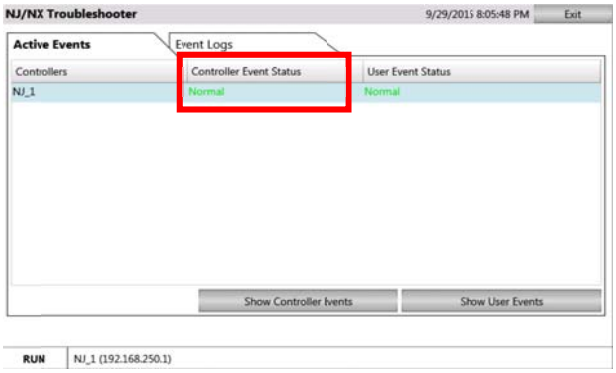


6. [Active Controller Events Page] is displayed. Make sure that the controller error has been reset.

Press the “Back” button to display [Active Events Controller Status Page].



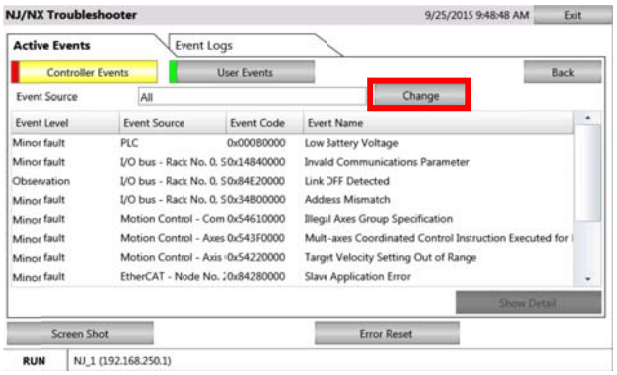
7. Make sure that ”Error” in step1 is changed to ”Normal” in the ”Controller Events Status” Column.



１１-２-２　Filtering of Active Events-Show Controller Events

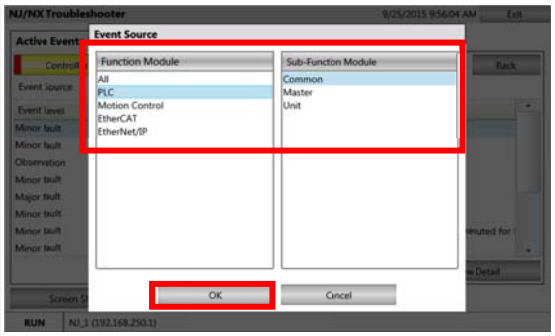
You can filter event source of active events, which is displayed in [Active Controller Events Page], for Sub function module.

1. Press the “Change” button in [Active Controller Events Page].

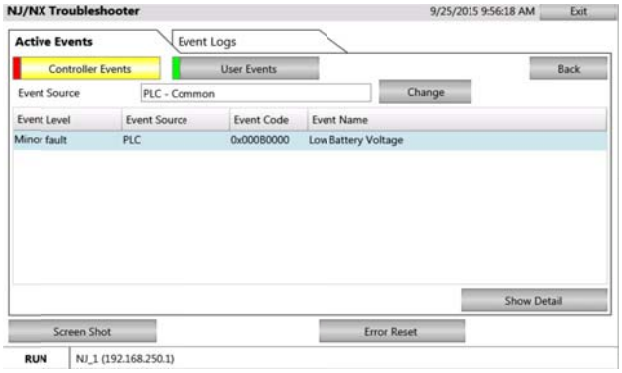


2. “Event Source Selector Popup” is displayed. Select a function module and sub function module, and Click the “OK”button.

   * In this example, sub function module”Common” is selected for function module”PLC”.



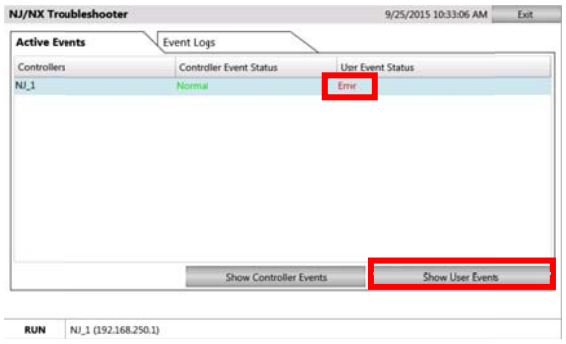
3. Only the controller error of event source that you selected in step 2 is displayed.



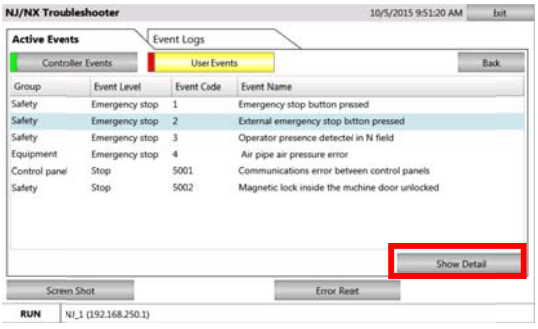
11-2-3 Active Events-Show User Events

If Error is displayed in the ” User Event Status” Column in [Active Events Controller Status Page], a user error that is generated in Section 8-1 is occurring.
Perform the following procedure to check the user error.

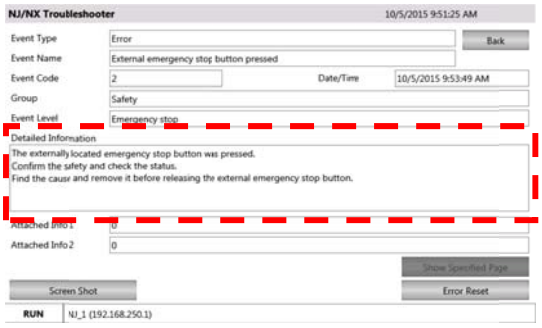
1. When Error is displayed in the ” User Event Status” Column in [Active Events Controller Status Page], click the ”Show User Events” button.



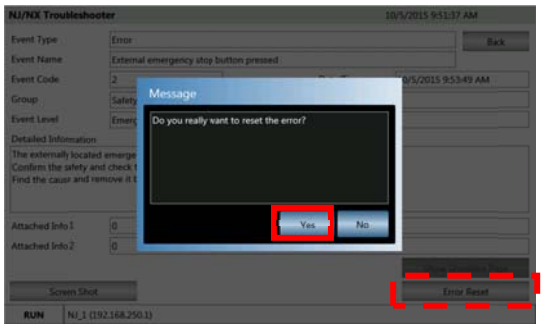
2. [Active User Events Page] is displayed.
A list of active user events is displayed. Select the user event that you want to check, and click the ”Show Detail” button.



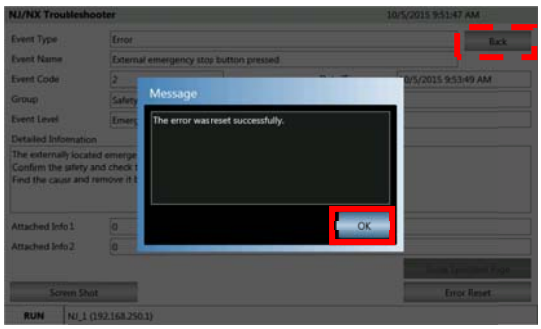
3. The details of ” User Event Status” that you set in step2 are displayed.
The text you set with the Sysmac Studio is shown in the “Detailed Information” Column.



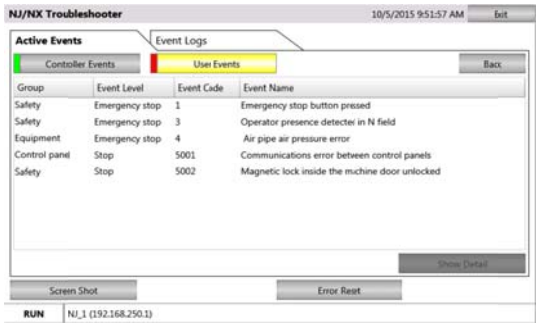
4. For “User Event Status”, the selected user event can be reset individually by clicking the ” Error Reset ” button in [Active User Event Detailed Information].
The message on the right appeas after removing the cause of controller event, and by clicking the “Error Reset” button.
Press the ”Yes” button.



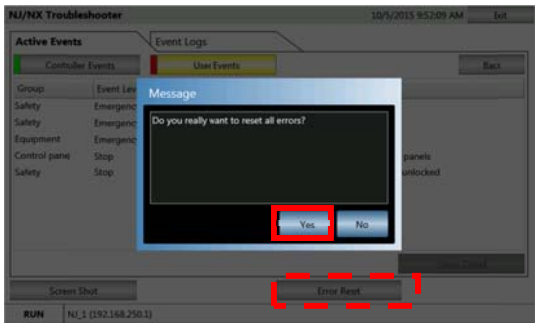
5. After the user event is reset, the message on the right appears. Presses the “OK” button.



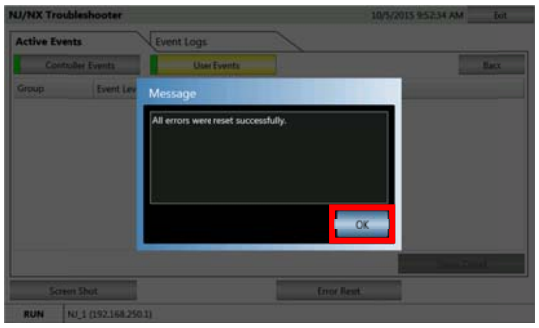
6. [Active User Events Page] is displayed. Make sure that the user event has been deleted.



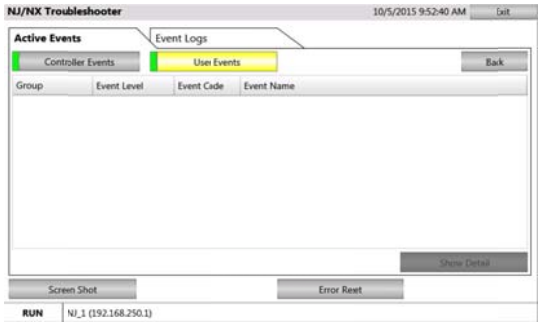
7. The active user event can be reset by pressing the ” Error Reset ” button in [Active User Events Page].
The message on the right appears by clicking the “Error Reset” button.
Press the ”Yes” button.



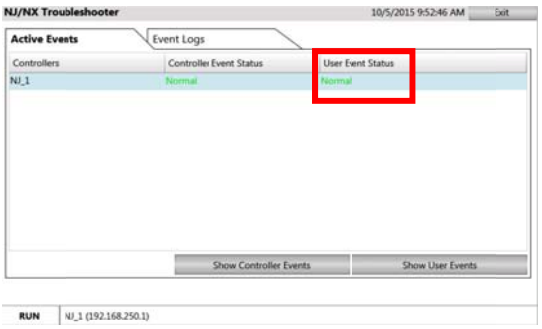
8. After the user event is reset, the message on the right appears.
Click the “OK” button.



9. [Active User Events Page] is displayed. Make sure that the user event has been reset.
Press the “Back” button to display [Active Events Controller Status Page].



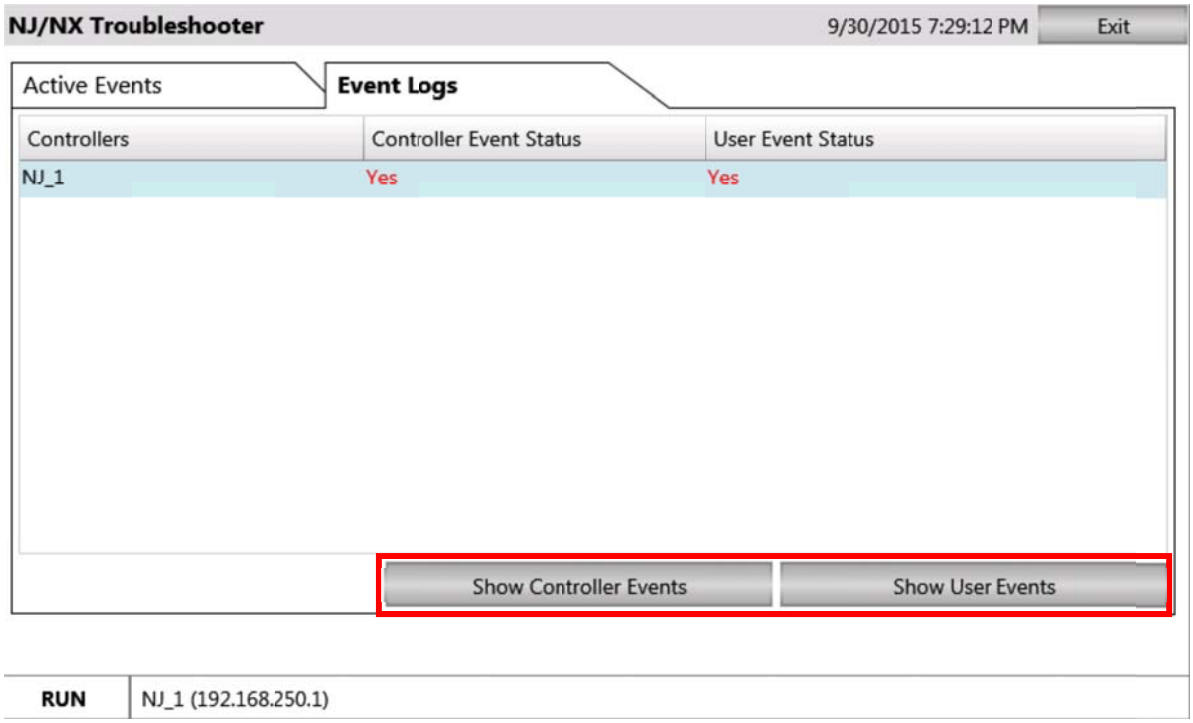
10. Make sure that ”Error” in the”User Event Status” Column in step1 is changed to ”Normal”.



11-3 How to Check and Clear Event Logs

The following page is displayed in the troubleshooter if “controller event” and “user event” have been occurred.

”Yes” is displayed if there is an event log.
”No” is displayed if there is no event log.

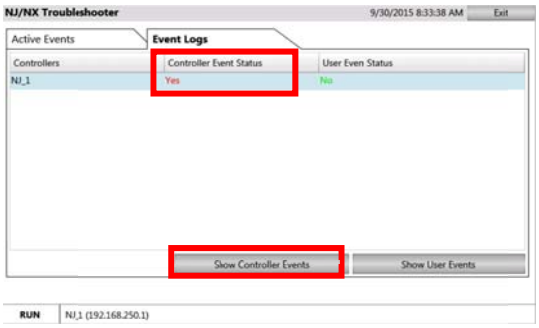


A list of event logs, detailed information, and procedure to clear logs are given in the following pages.

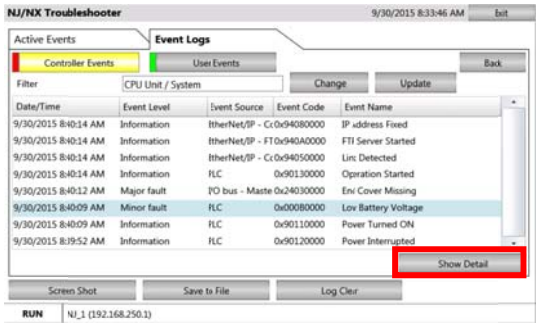
1 1 - 3 - 1　Event logs-Show Controller Events

"Yes" is displayed in the " Controller Event Status" Column in the [Event Logs Controller Status Page] if there is a controller event log.
Perform the following procedure to check the log.

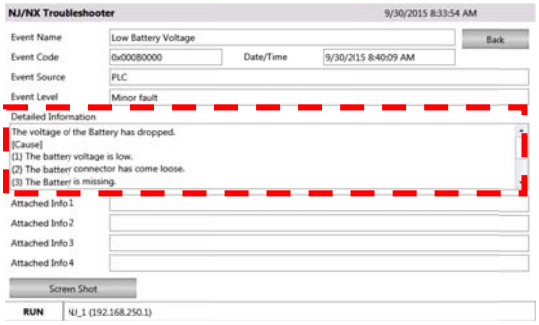
1. If "Yes" is displayed in the" Controller Event Status" Column in [Event Logs Controller Status Page], click the "Show Controller Events" button.



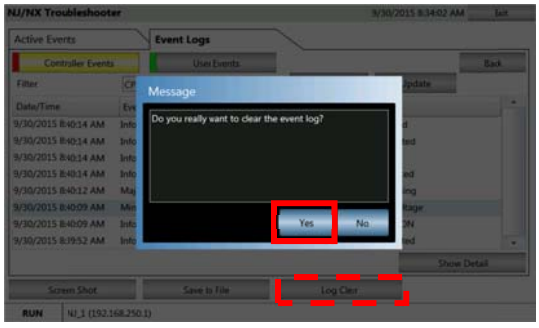
2. [Controller Event Logs Page] is displayed. A list of controller event logs is displayed. Select the controller event log that you want to check, and click the"Show Detail" button.

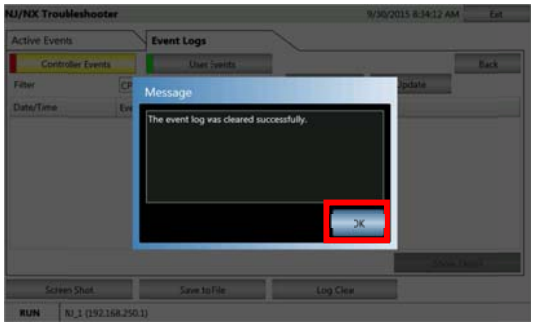
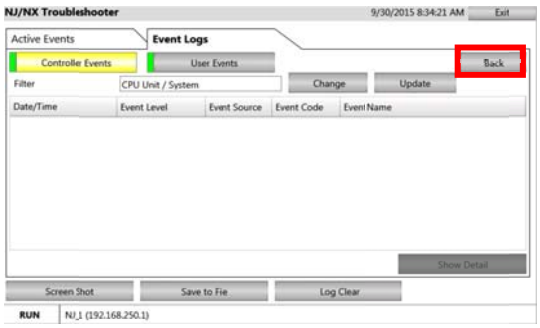
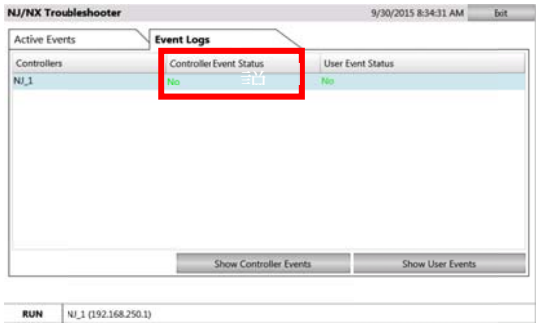


3. The details of selected controller event log that you set in step 2 is shown.
The error infromation and cause are shown in the "Detailed Information" Column.



4. The controller event logs can be cleared by pressing the "Log Clear" button in [Controller Event Logs Page]. The message on the right appears by clicking the "Log Clear" button.
Press the "Yes" button.

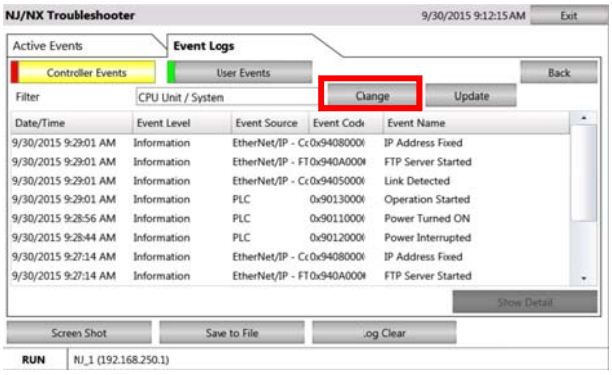


5. After the controller event log is cleared, the message on the right appears. Click the“OK”button.	
6. [Controller Event Logs Page] is displayed. Makes sure that the controller event log has been cleared. Click the “Back” button to display [Event Logs Controller Status Page].	
7. Make sure that ”Yes” in step1 is changed to ” No ” in the ”Controller Event Status” Column.	

1 1 - 3 - 2　Selecting the Log Type for Event Logs

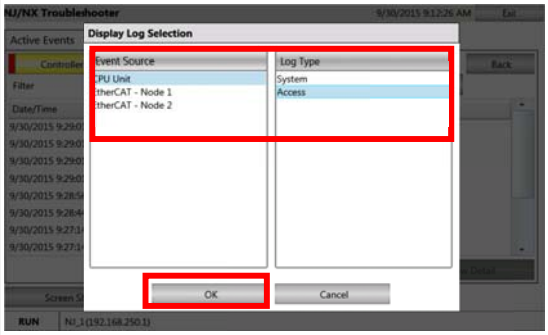
You can filter the controller event logs displayed in [Controller Event Logs Page] by event source. Either a CPU Unit or EtherCAT slave can be selected as an event source to perform the filtering.

1. Click the “Change” button in [Controller Event Logs Page].

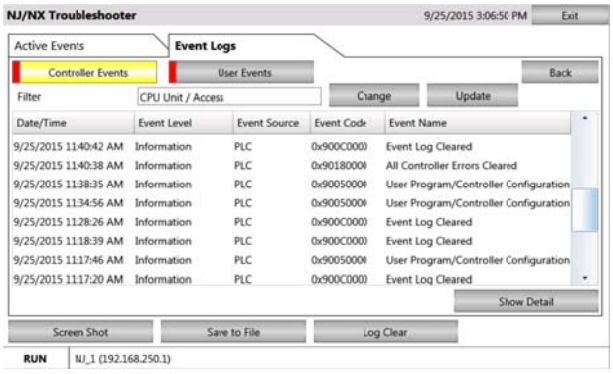


2. [Log Type and Event Source Selector Popup] is displayed. Select “Event Source” and “Log Type, and click the “OK” button.

   *In this setting example, ”Access log” occurred in the ”CPU Unit”.



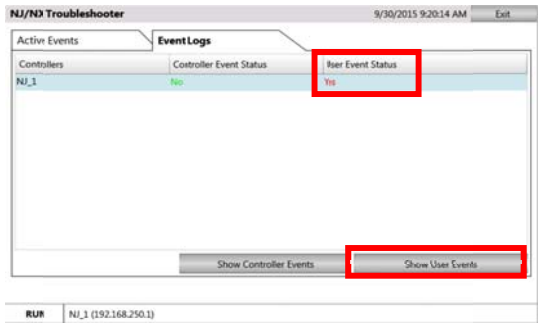
3. Access logs that are recorded in the selected event source are displayed.



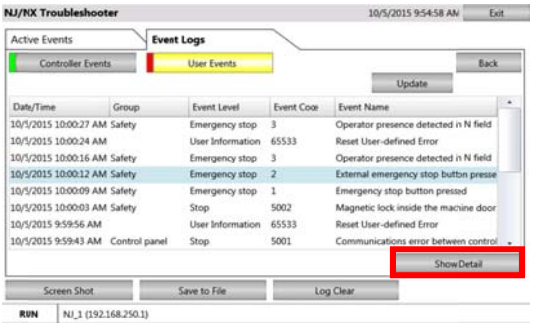
1 1 - 3 - 3　Event Logs-Show User Events

“Yes” is displayed in the ”User Event Status” Column in the [Event Logs Controller Status Page] if there is a user event log.
Perform the following procedure to check the log.

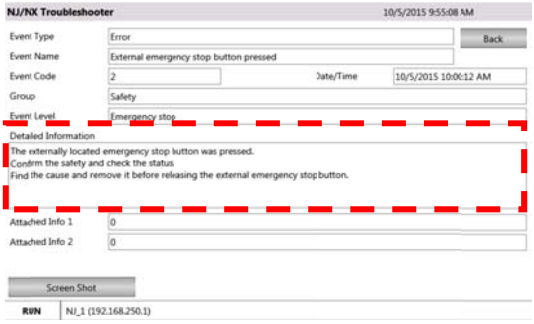
1. If “Yes” is displayed in the ”User Event Status” Column in the [Event Logs Controller Status Page], click the ”Show User Events” button.



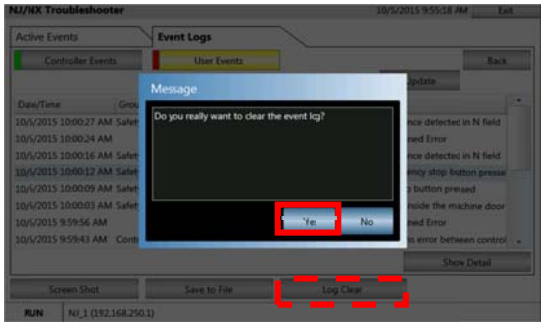
2. [User Event Logs Page] is displayed. A list of active controller events is displayed. Select the user event log that you want to check, and click the ”Show Detail” button.

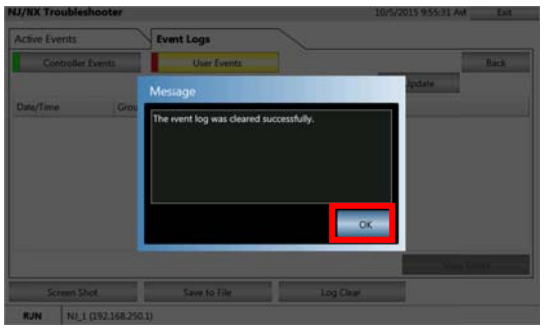
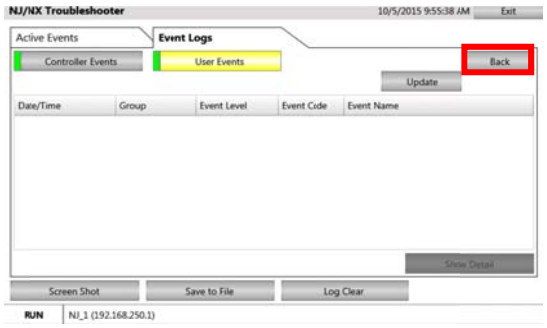
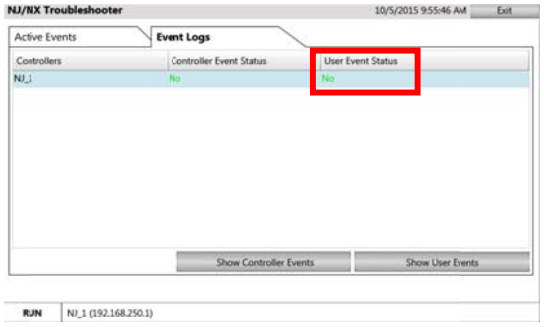


3. The details of user event log that you set in step2 is displayed.
The text you set with the Sysmac Studio is shown in the “Detailed Information” Column.



4. The user event log can be cleared by clicking the ”Log Clear” button in [User Event Logs Page].
The message on the right appears by clicking the “Log Clear” button.
Click the ”Yes” button.



5. After the event log has been cleared, the message on the right appears. Click the “OK” button.	
6. [User Event Logs Page] is displayed. Make sure that the user event log has been cleared. Click the “Back” button to display [Event Logs Controller Status Page].	
7. Make sure that ”Yes” in step1 is changed to ” No ” in the ”User Event Status” Column.	

Revision History

Revision code	Date	Revised content
01	November 2015	Original production

Note: Do not use this document to operate the Unit.

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