P3AM-5262-01ENZ0

ETERNUS LT20 S2
(LT20S2JNXU)
ETERNUS LT40 S2
(LT40S2JNXU)
ETERNUS LT60 S2
(LT60S2JNXU)

Tape Library

User's Guide
-Monitoring Software Setup Procedure-

FUJITSU

FOR SAFE OPERATION

This manual contains important information regarding the use and handling of this product. Read this manual thoroughly. Pay special attention to the section "FOR SAFE OPERATION" Use the product according to the instructions and information available in this manual. Keep this manual handy for further reference.

Fujitsu makes every effort to prevent users and bystanders from being injured or damage to their property. Use the product according to this manual.

ABOUT THIS PRODUCT

This product is designed and manufactured for use in standard applications such as office work, personal devices and household appliances. This product is not intended for special uses (atomic controls, aeronautic or space systems, mass transport controls, medical devices for life support, or weapons firing controls) where particularly high reliability requirements exist, where the pertinent levels of safety are not guaranteed, or where a failure or operational error could threaten a life or cause a physical injury (hereafter referred to as "mission-critical" use). Customers considering the use of these products for mission-critical applications must have safety-assurance measures in place beforehand. Moreover, they are requested to consult our sales representative before embarking on such specialized use.

TRADEMARKS ACKNOWLEDGEMENTS

- Microsoft, Windows,and MS are registered trademarks of Microsoft Corporation in the United States or certain other countries.
- All other corporation names and product names mentioned herein are the trademarks or registered trademarks of their respective owners.

RADIO FREQUENCY INTERFERENCE STATEMENT

The following notice is for EU users only.

WARNING: This is a product which meets Class A of EN55022. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

The following notice is for USA users only.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Measures against instantaneous voltage drop

The LT20 S2/LT40 S2/LT60 S2 may be affected by instantaneous voltage drop due to lightning strikes or other factors. To protect the LT20 S2/LT40 S2/LT60 S2 against instantaneous voltage drop, the user should preferably provide an AC uninterruptible power supply or the like for the LT20 S2/LT40 S2/LT60 S2.

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P3AM-5262-01ENZ0

Revision History

(1/1)

Edition	Date	Revised location (type) (*1)	Revision
01	June, 2011	–	–

*1 Items in the "Revised location" column refer to the latest edition unless the item is marked with an asterisk. An asterisk indicates an item in an older edition.

Preface

Thank you for your purchasing the ETERNUS LT20 S2/LT40 S2/LT60 S2 Tape Library.

To ensure the proper handling of this product, read this manual, the other manuals supplied with this product, and the manuals supplied with the server and software thoroughly and carefully before using it.

This manual explains the settings for using monitoring software "ETERNUS SF Storage Cruiser" with the ETERNUS LT20 S2/LT40 S2/LT60 S2 Tape Library.

The purpose of this manual is to explain in detail how to set SNMP for this library (hereafter called "tape library," "library," or "this device"), how to set up "ETERNUS SF Storage Cruiser," and how to confirm SNMP trap sending with this device.

This manual is intended for users who have a basic knowledge of magnetic tape libraries and the usage of the tape libraries in computer systems. The organization of the manuals related to this device and the coverage of this manual are shown in "Manual Organization" provided later in this manual. Use other manuals as well when necessary.

The organization and contents of this manual are explained below. This information is followed by the symbols for alert messages with their meanings.

Organization and contents of This Manual

This manual has four chapters below.

Chapter 1 Setting up SNMP

Explains how to set up SNMP with this device.

Chapter 2 Setting up Monitoring Software

Explains how to set up monitoring software "ETERNUS SF Storage Cruiser."

Chapter 3 Confirming the SNMP Trap Settings

Explains how to send SNMP traps with this device.

Chapter 4 Event List

Explains the events that are reported by SNMP of this device.

Abbreviation

In this manual, the product names are abbreviated as follows:

Long title	Abbreviation	
Microsoft® Windows® XP Professional operating system	Windows XP	
Microsoft® Windows® XP Home Edition operating system		
Microsoft® Internet Explorer®	Internet Explorer	IE

Note on Safety

Safety Precautions

Read thoroughly this manual to use this product safely and correctly.

Use the unit correctly according to this manual so that damage should not reach the human body and your property.

Keep this Monitoring Software Setup Procedure at hand for quick reference at anytime necessary.

In this User's Guide, the following indications are used to use the product safely and correctly. Thoroughly understand the meaning of the indication before using this product.

Warning	Failure to heed this sign could result in serious injury or death.
Caution	Failure to heed this sign could result in personal injury or damage to properties.

Precautions and notices against hazards are presented with one of the following symbols.

	Indicates that improper use may cause fumes or fire.
	Indicates that improper use may cause explosion.
	Indicates that improper use may cause an electric shock.
	Indicates that improper use may cause personal injury due to toxic material.
	Indicates that improper use may cause hands or fingers to be caught.
	Indicates a general prohibited action or warning that cannot be specifically identified.

	Indicates that the disassembling and modification of the product is inhibited.
	Indicates that the user is inhibited to touch the product.
	Indicates a general mandatory action or warning that cannot be specifically identified.
	Indicates an instruction to unplug the power cord from the outlet and turn off the circuit breaker of power distribution panel.

Manual Organization

ETERNUS LT20 S2 LTO Library Installing, Starting Up and Maintaining (P3AM-5382)	1. Preface 2. Product Description 3. Installing the Tape Library 4. Operating the LTO Library 5. Troubleshooting 6. Servicing 7. Packaging before Transportation 8. Technical Specifications 9. Recycling and Disposal 10. Regulatory Information
ETERNUS LT40 S2/ LT60 S2 LTO Library Installing, Starting Up and Maintaining (P3AM-5392)	1. Preface 2. Product Description and Features 3. Installing the Tape Library 4. Operating the Tape Library 5. Troubleshooting 6. Servicing the Tape Library 7. Technical Specifications 8. Packaging Before Transportation 9. Recycling and Disposal 10. Regulatory Information
ETERNUS LT20 S2/ LT40 S2/LT60 S2 Tape Library User's Guide -Monitoring Software Setup Procedure- (P3AM-5262) <This manual>	1. Setting up SNMP 2. Setting up Monitoring Software 3. Confirming the SNMP Trap Settings 4. Event List

Contents

Preface i

Note on Safety iii

Manual Organization v

Chapter 1 Setting up SNMP 1-1

1.1 SNMP Function 1-2
1.2 Notes on Setting SNMP 1-2
1.3 SNMP Setting Procedure 1-2

Chapter 2 Setting up Monitoring Software 2-1

2.1 Monitoring function 2-2
2.2 Notes on using ETERNUS SF Storage Cruiser 2-2
2.3 ETERNUS SF Storage Cruiser Setup Procedure 2-3
2.3.1 When using SAS interface 2-3
2.3.1.1 This device connected directly to the server 2-3
2.3.2 When using Fibre channel interface 2-9
2.3.2.1 This device connected through a fibre channel switch 2-9
2.3.2.2 This device connected directly to the server 2-16

Chapter 3 Confirming the SNMP Trap Settings 3-1

3.1 Confirming the Monitoring Setting 3-2
3.2 Confirming the setting by sending a test trap from the remote Management 3-2
3.3 Procedure for Recovery to the Normal Status 3-4
3.3.1 Procedure for recovery from the resource management window 3-4
3.3.2 Procedure for recovery from the Manual Embedding Window 3-5

Chapter 4 Event List 4-1

4.1 Event List 4-2
4.1.1 Information Events 4-2
4.1.2 Warring Events 4-3
4.1.3 Critical Events 4-5
4.1.4 Configuration Events 4-7

Illustrations

Tables

Table 1.1 SNMP setting items 1-5

Table 4.1 Information Events List 4-2
Table 4.2 Warning Events 4-3
Table 4.3 Critical Events 4-5
Table 4.4 Configuration Events 4-7

Chapter 1 Setting up SNMP

1.1 SNMP Function

1.2 Notes on Setting SNMP

1.3 SNMP Setting Procedure

This chapter explains the settings of the simple network management protocol (SNMP) that can be used with this device and how to set up SNMP.

1.1 SNMP Function

This device has the functions for sending SNMP traps and collecting MIB information via SNMP. If you set up our monitoring software "ETERNUS SF Storage Cruiser" in this device, you can receive SNMP traps.

1.2 Notes on Setting SNMP

Make the SNMP settings from the remote management.

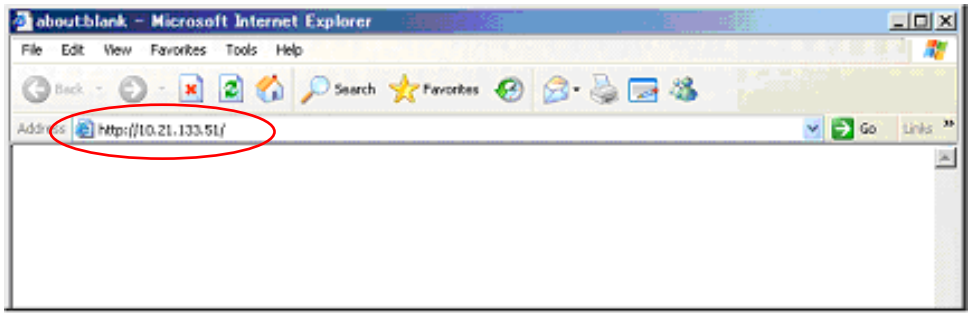
Operations with the remote management require the following environment:

- 10BASE-T or 100BASE-TX Ethernet network
- IP address that can be used for the remote management
- Use Internet Explorer 7.x or Internet Explorer 8.x. (Windows XP, or later)

1.3 SNMP Setting Procedure

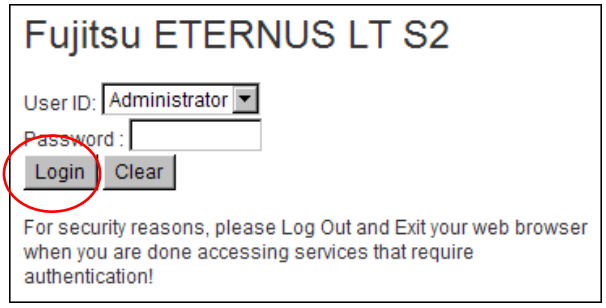
This section explains the SNMP setting procedure.

1) Start the Web browser on a terminal connected to the network.
2) As shown in the figure below, enter the IP address (default: 192.168.2.1) set for this device as a URL to start the remote management.

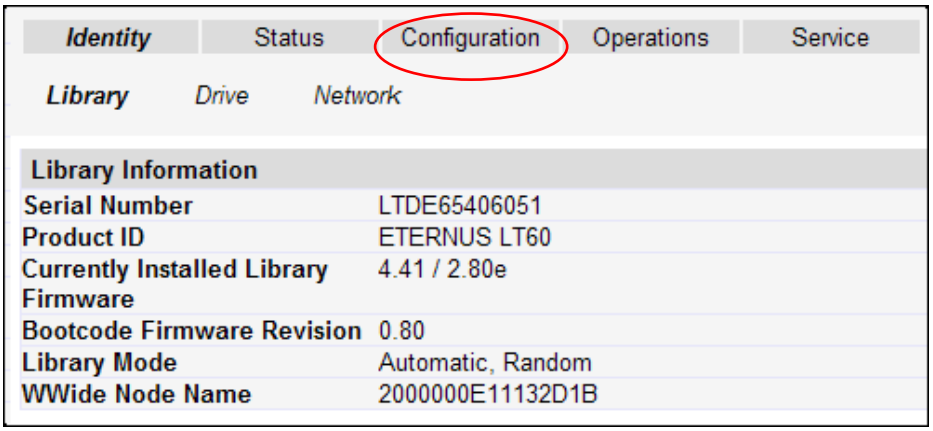


3) In the login window, select "Administrator," enter the password, and then click the "Login" button.

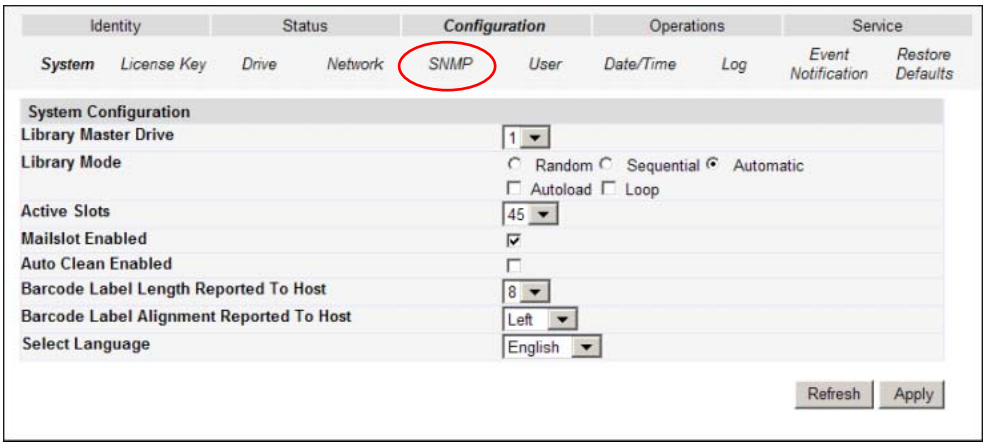
[Initial value] User : Administrator
Password: adm001



4) When you log in to the remote management, the initial window "Library Information" shown below appears. Click the "Configuration" tab to display the "Configuration" window.



5) The "System Configuration" window shown below appears. Click the "SNMP" tab to display the "SNMP Configuration" window.



6) The "SNMP Configuration" window is displayed. Table 1.1 lists the contents of the items required for setting SNMP. Referring to Table 1.1, enter the required data for the items in the "SNMP Configuration" window.

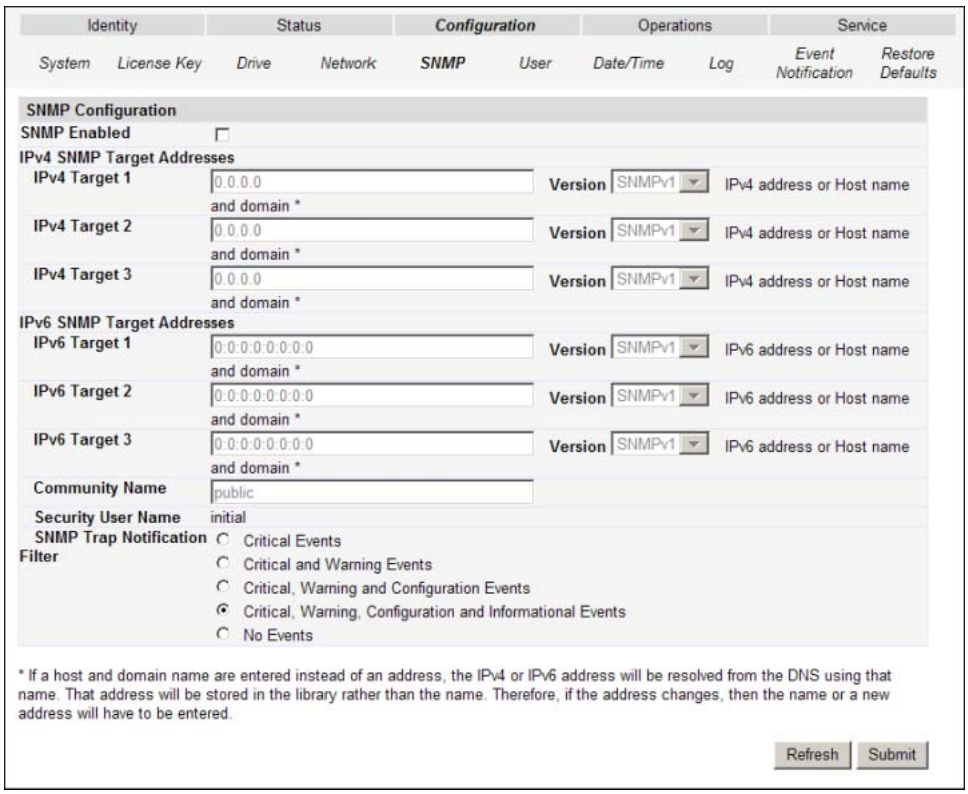


Table 1.1 SNMP setting items

	Item	Setting
(1)	Community Name	Set the community name of SNMP. - Initial value: public (for this device, the setting is initial value only.)
(2)	SNMP Enable	Set Enabled or Disabled for the SNMP function. - If you check this, you can manage this device from other computers running the SNMP management software. According to the "Protocol Version" selected in the "Network" tab in the "Configuration" window, either or both of the "IPv4 SNMP Target Address" field and "IPv6 SNMP Target Address" field are enabled for entry. - Initial value: not checked.
(3)	IPv4 SNMP Target Address (SNMP Trap notification destination)	- Up to three Target Addresses can be set. - Set the IP address of the SNMP Trap destination in the XXX.XXX.XXX.XXX format (in decimal). - Initial value: 0.0.0.0 (entry is disabled.)
(4)	IPv6 SNMP Target Address (SNMP Trap notification destination)	not supported (cannot be used) - Up to three Target Addresses can be set. - Set the IP address of the SNMP Trap destination in the xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx:xxxx format (in hexadecimal). - Initial value: 0:0:0:0:0:0:0:0 (entry is disabled.)
(5)	Version	Set the Version of SNMP. - This can be set for each Target Address. - If "ETERNUS SF Storage Cruiser" is used, select "v1."
(6)	SNMP Trap Notification Filter (SNMP notification level setting)	Set the event type for which the SNMP Trap notification is sent. You can choose to use one of the four types: "Critical Events," "Critical and Warning Events," "Critical, Warning and Configuration Events," and "Critical, Warning, Configuration and Information Events." * The initial value is "Critical, Warning, Configuration and Information Events."

7) After entering data for all items, click the "Submit" button.

Chapter 2 Setting up Monitoring Software

2.1 Monitoring function

2.2 Notes on using ETERNUS SF Storage Cruiser

2.3 ETERNUS SF Storage Cruiser Setup Procedure

This chapter explains the settings for monitoring software "ETERNUS SF Storage Cruiser" that can be used with this device and how to set up the monitoring software.

2.1 Monitoring function

To set the monitoring function with this device (LT20 S2, LT40 S2 and LT60 S2), you have to set up monitoring software "ETERNUS SF Storage Cruiser" in the monitoring server. After setting ETERNUS SF Storage Cruiser, register this device (LT20 S2, LT40 S2 and LT60 S2) as a manual embedding device.

2.2 Notes on using ETERNUS SF Storage Cruiser

When using ETERNUS SF Storage Cruiser for monitoring, note the following:

- Version: Use ETERNUS SF Storage Cruiser 14.1 or later.

2.3 ETERNUS SF Storage Cruiser Setup Procedure

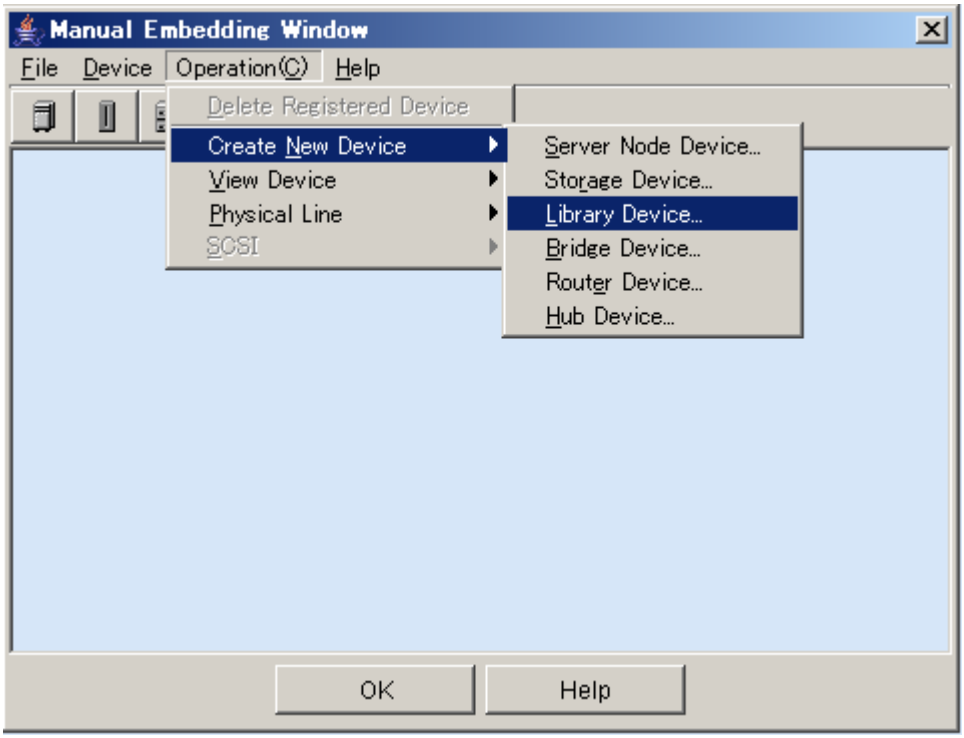
This section explains this device registration procedures in manual embedding mode.

2.3.1 When using SAS interface

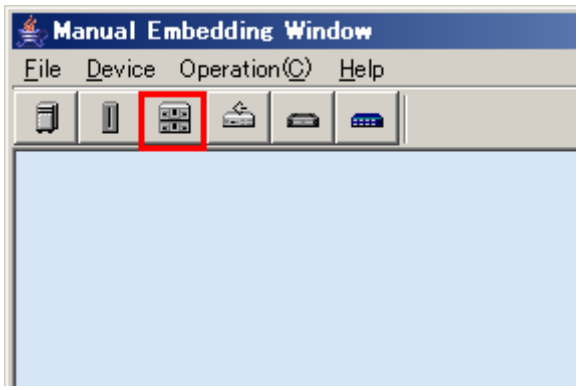
2.3.1.1 This device connected directly to the server

1) Start the Manual Embedding Window.
2) From the menu of the Manual Embedding Window, select [Operation] - [Create New Device] - [Library Device]. You can also perform this step by selecting the relevant icon from the toolbar.

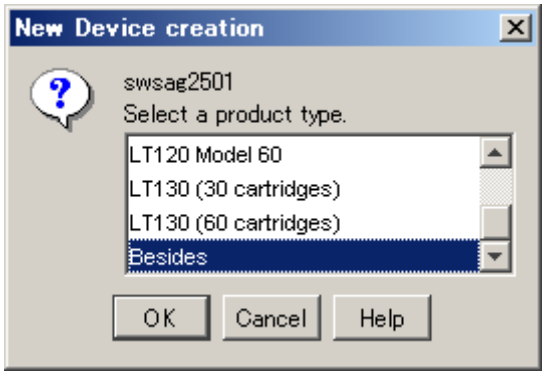
- When selecting from the menu:



- When selecting using the icon



3) The "New Device creation" dialog box is displayed. For this device, select "Besides," and then click the "OK" button.



4) The "New Library device creation" dialog box is displayed. Select the "Embedding Information (Required)" tab and then enter necessary information (*1).

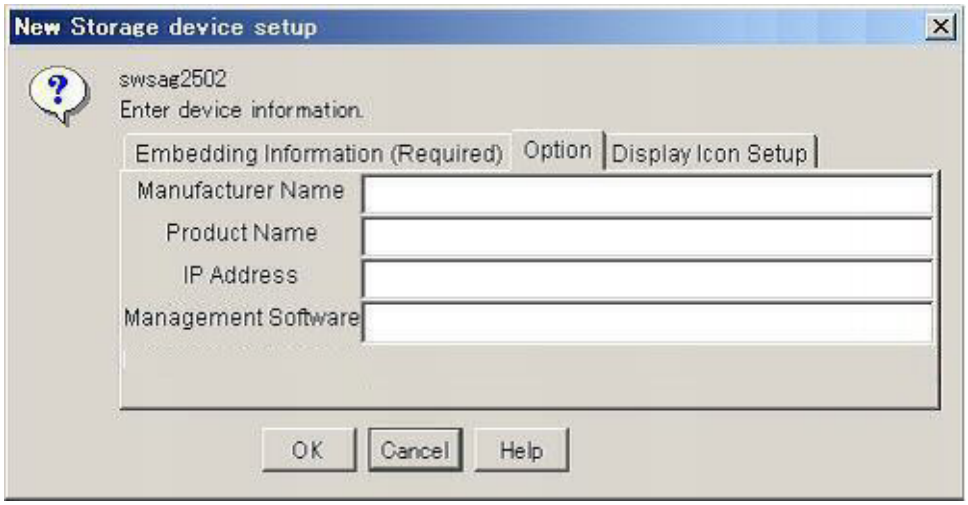
*1 For the information to enter, see "Register a device as a manually embedded device" in the ETERNUS SF Storage Cruiser User's Guide.

- Embedding Information (Required) tab:



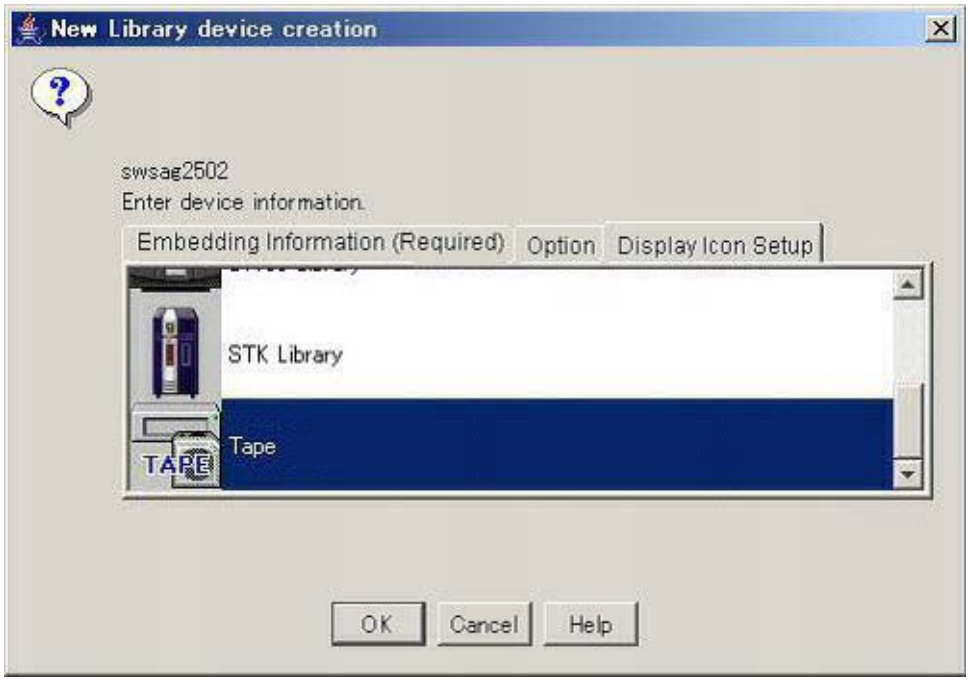
Option tab:

Enter the required information. To monitor this device, an address must be entered in "IP Address."



Display Icon Setup tab

Select "Tape" for the device icon.

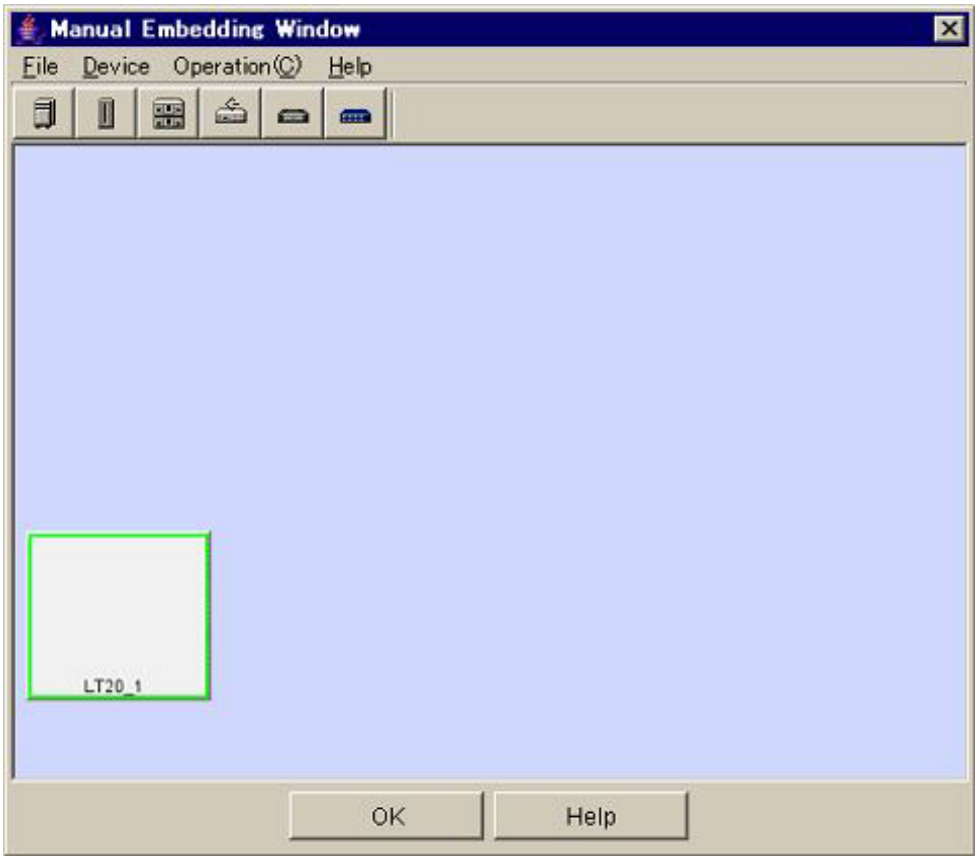


5) After entering the required information, click "OK" to create the device.

6) A dialog box indicating the completion of embedding is displayed.



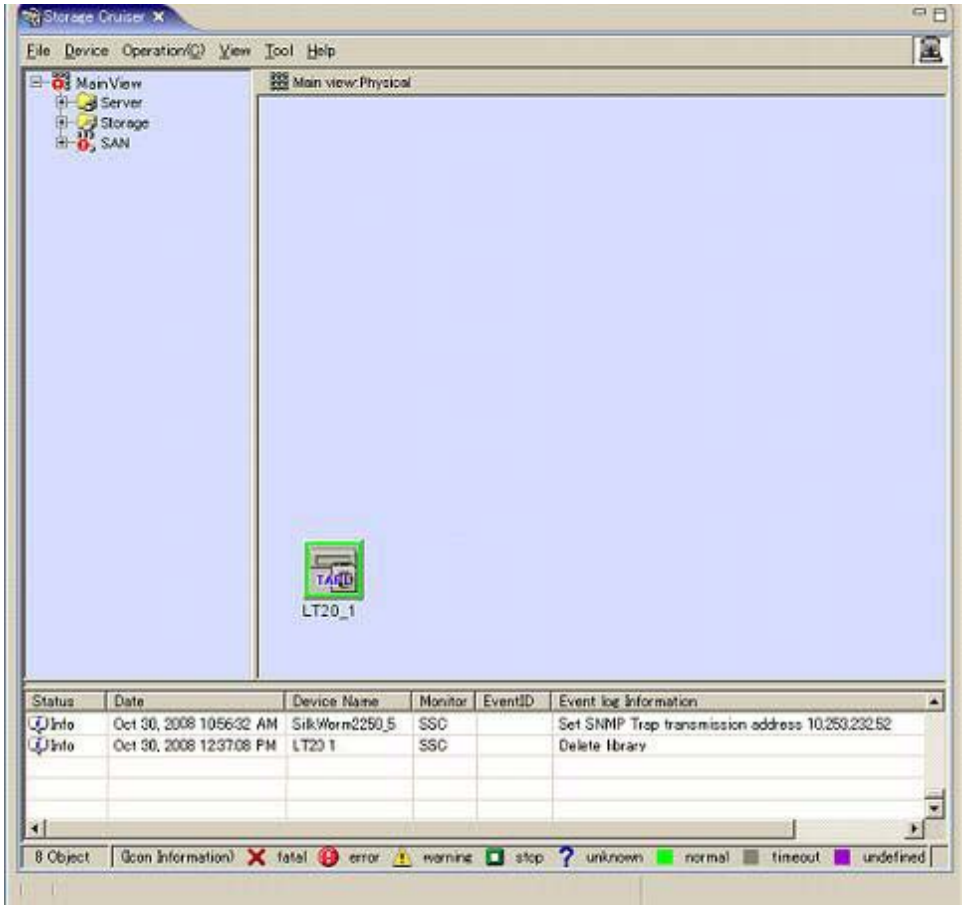
7) After the above dialog box appears, the created device is then displayed in the Manual Embedding Window as shown below:



8) Manual embedding is complete. Exit the Manual Embedding Window. The "Refresh" dialog box is then displayed. Click "OK" to update the information.



9) The LT20 is displayed in the Main View. This completes the setup of ETERNUS SF Storage Cruiser.

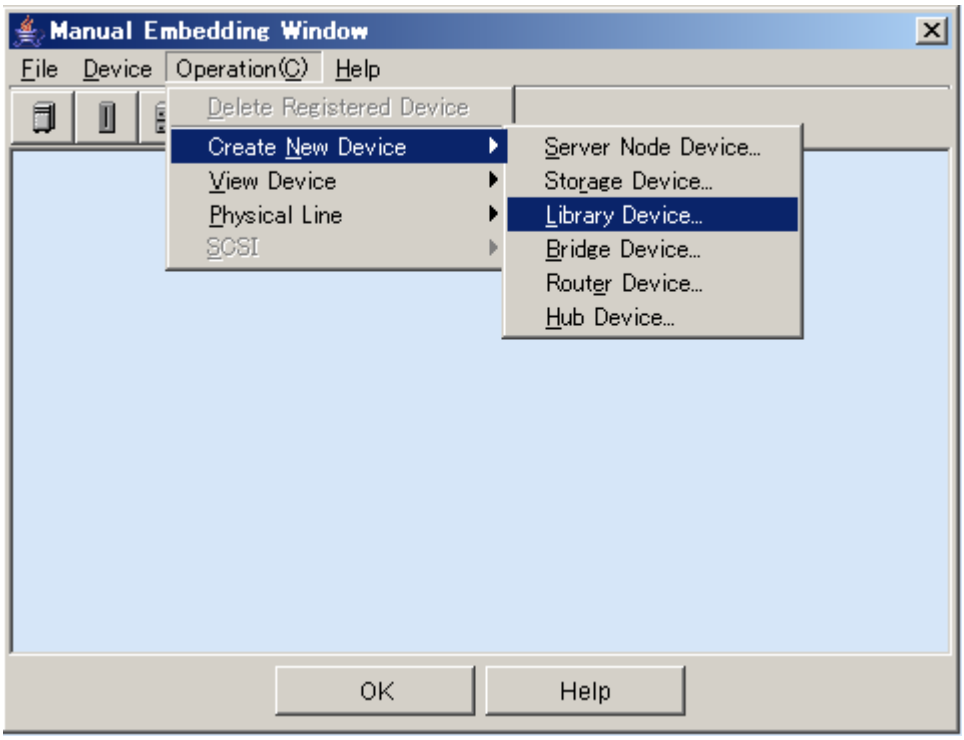


2.3.2 When using Fibre channel interface

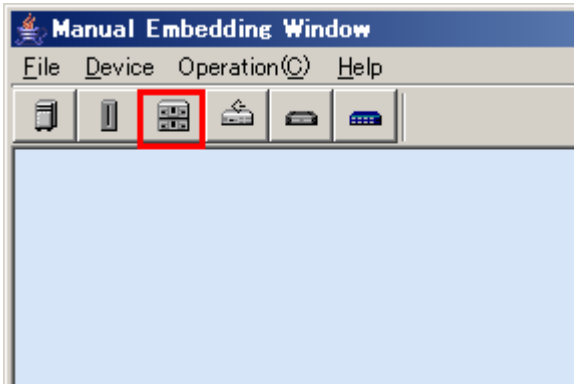
2.3.2.1 This device connected through a fibre channel switch

1) Start the Manual Embedding Window.
2) From the menu of the Manual Embedding Window, select [Operation] - [Create New Device] - [Library Device]. You can also perform this step by selecting the relevant icon from the toolbar.

- When selecting from the menu:

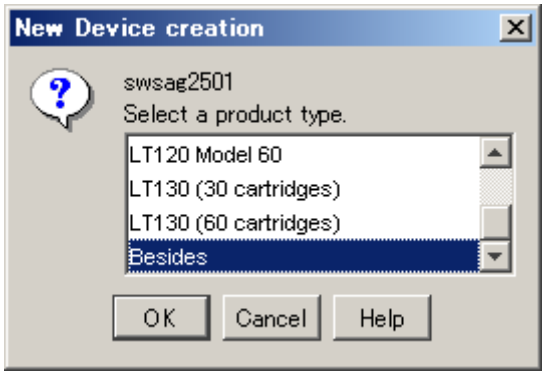


- When selecting using the icon



3) The "New Device creation" dialog box is displayed.

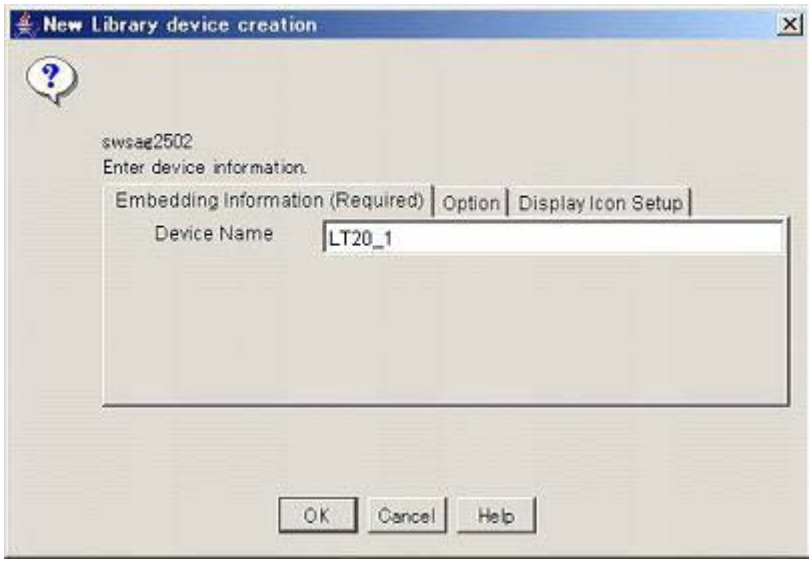
   Because this device is LT20 S2/LT40 S2/LT60 S2, select "Besides" and then click the "OK" button.



4) The "New Library device creation" dialog box is displayed. Select the "Embedding Information (Required)" tab and then enter necessary information (*1).

   *1 For the information to enter, see "Register a device as a manually embedded device" in the ETERNUS SF Storage Cruiser User's Guide.

- Embedding Information (Required) tab:

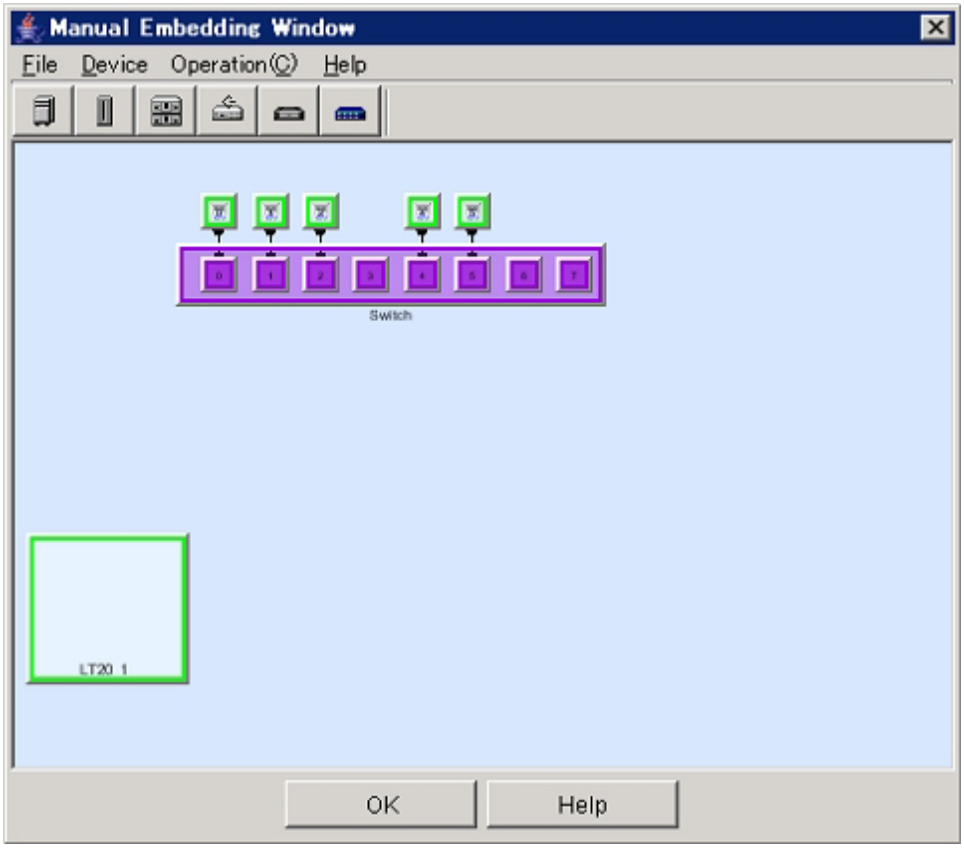


5) After entering the required information, click "OK" to create a device.

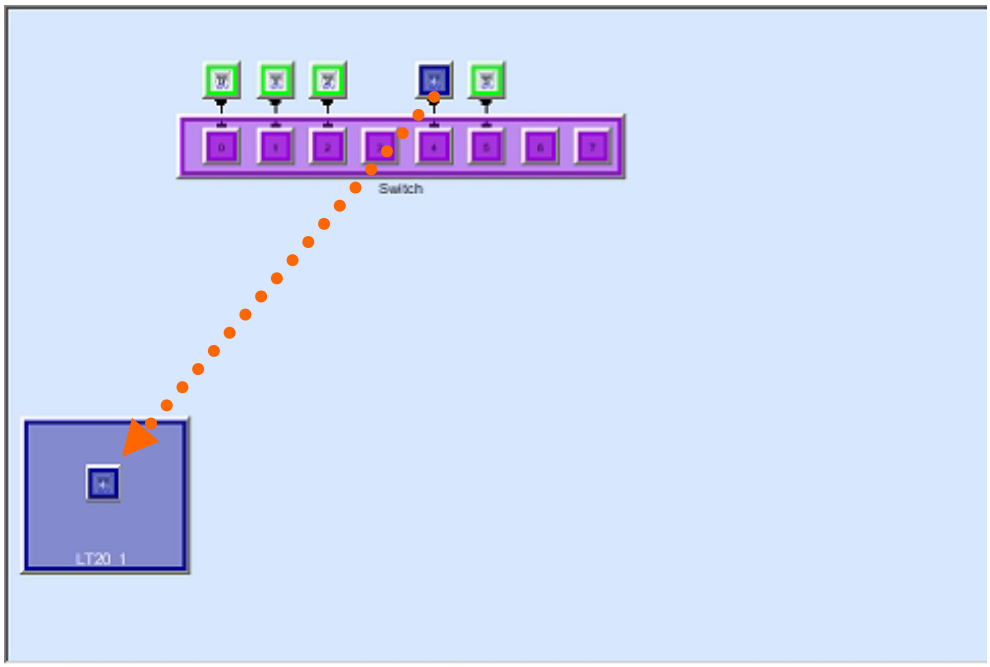
6) A dialog box indicating the completion of embedding is displayed.



7) After the above dialog box appears, the created device is then displayed in the Manual Embedding Window as shown below:



8) Select the Unknown FC port of the fibre channel switch to which this device is connected, and then drag and drop it onto the created LT20 S2/LT40 S2/LT60 S2.



9) The "New Storage device setup" dialog box is displayed. Select the "Embedding Information (Required)" tab and then set information on a drive in this device.

⚠ Caution

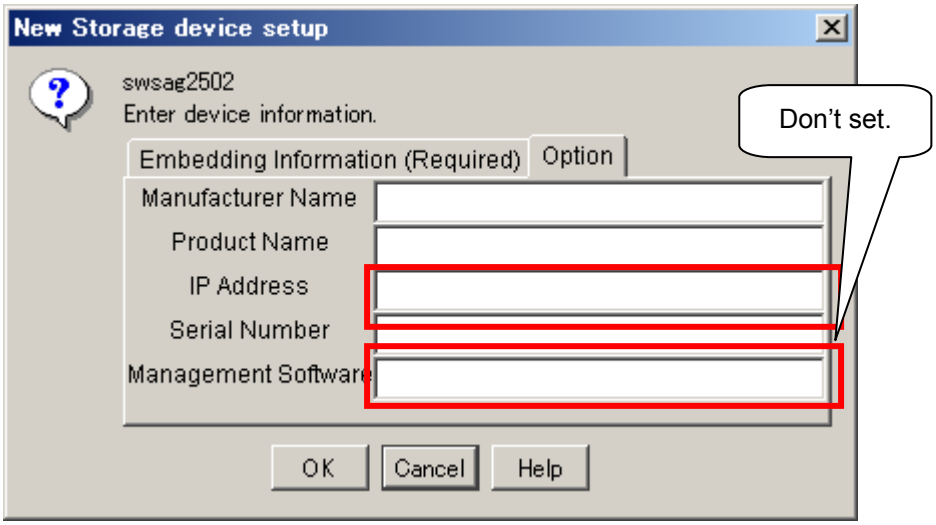
Operation failure
For "Device Name," specify a name that is different from the device name of the created LT20 S2/LT40 S2/LT60 S2.



10) Select the "Option" tab in the "New Storage device setup" dialog box, and then set information on a drive in this device.

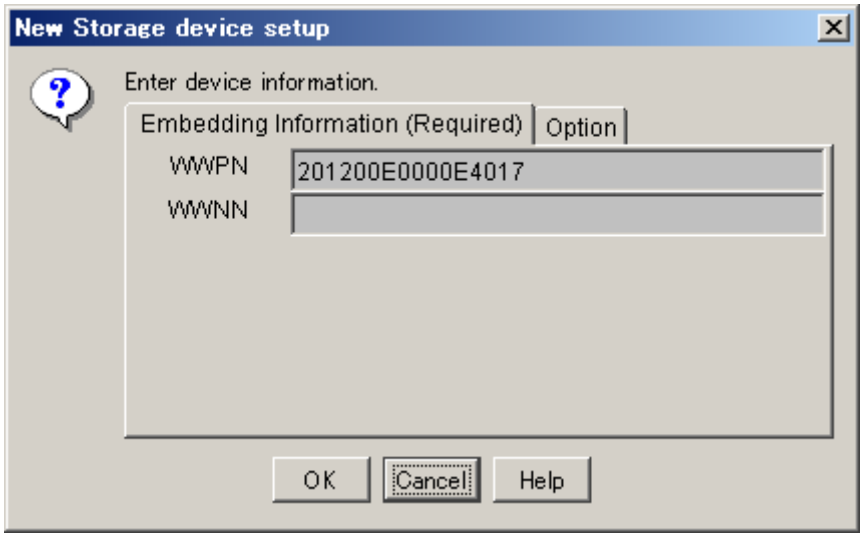
⚠ Caution

Operation failure
Do not set any information in the "IP Address" and "Management Software" fields.

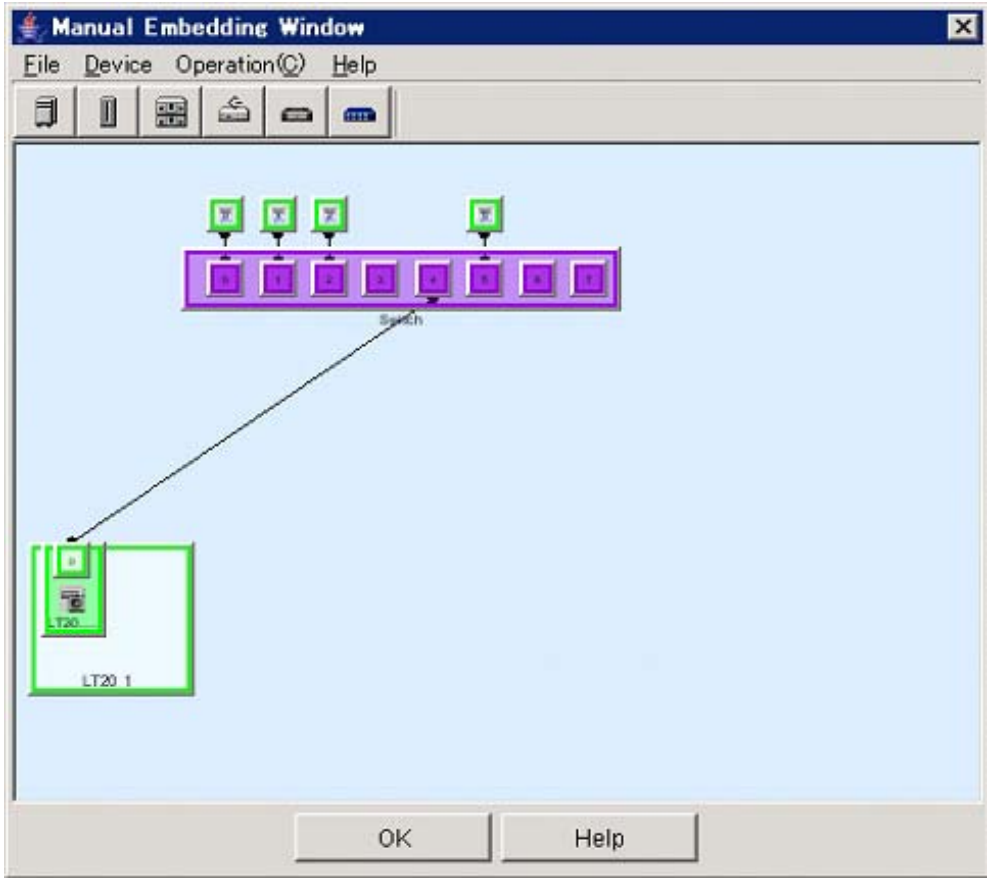


11) After entering the required information, click "OK."

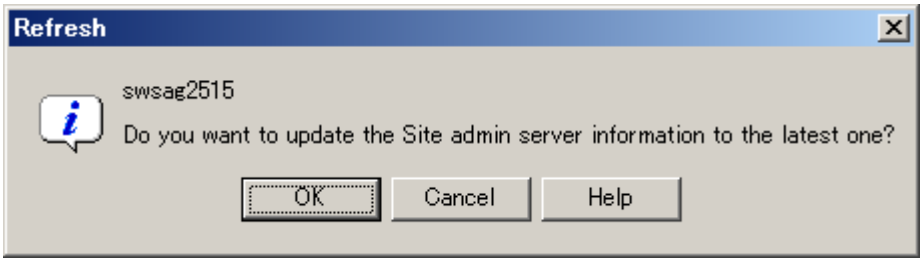
12) The dialog box shown below is displayed. Click "OK" and set the drive information.



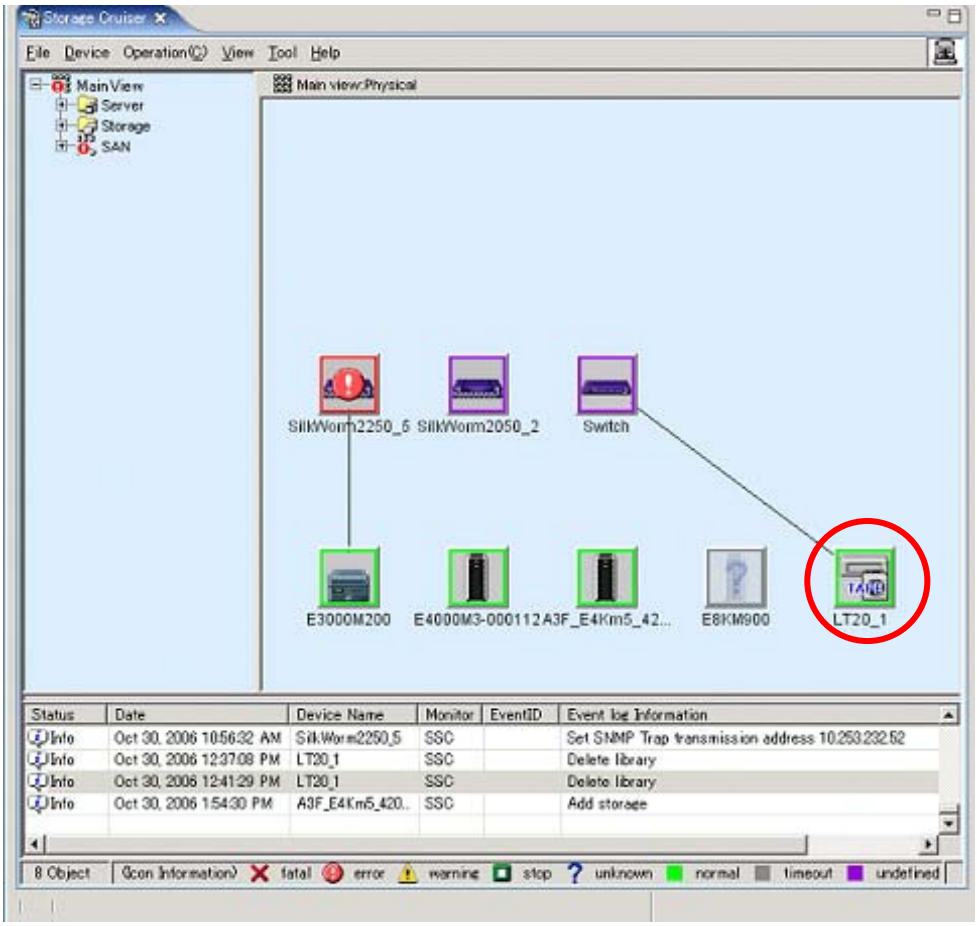
13) The fibre channel switch and this device are connected by a physical line as shown in the figure below.



14) Manual embedding of this device is complete. Exit the Manual Embedding Window. The "Refresh" dialog box is displayed. Click "OK" to update information.



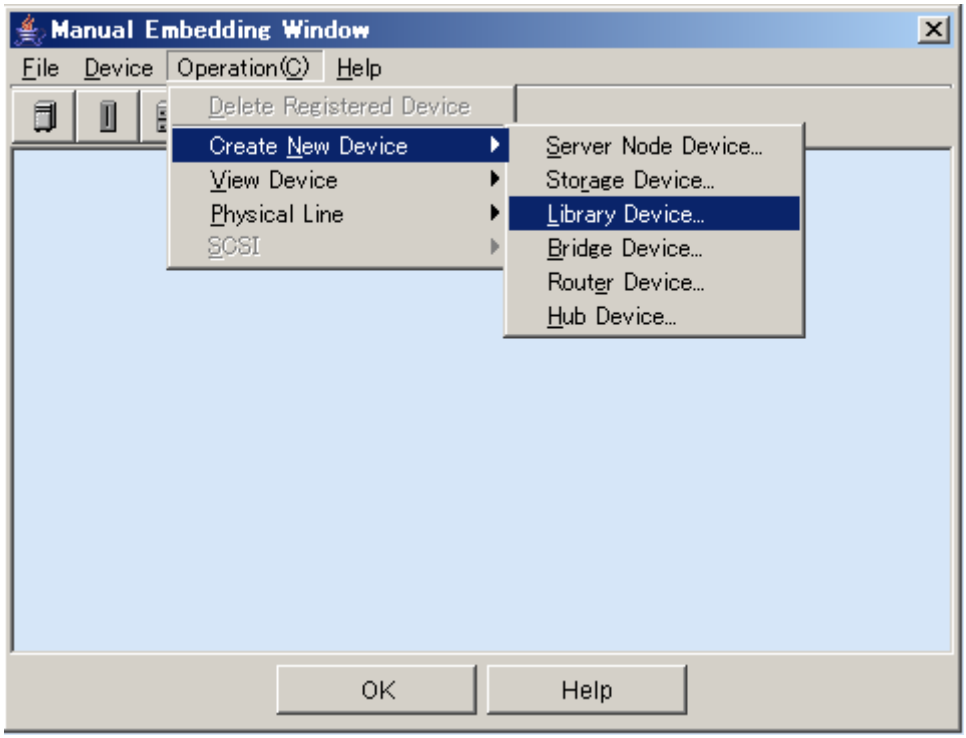
15) This device connected to the fibre channel switch by a physical line is displayed in the Main View. This completes the setup of ETERNUS SF Storage Cruiser.



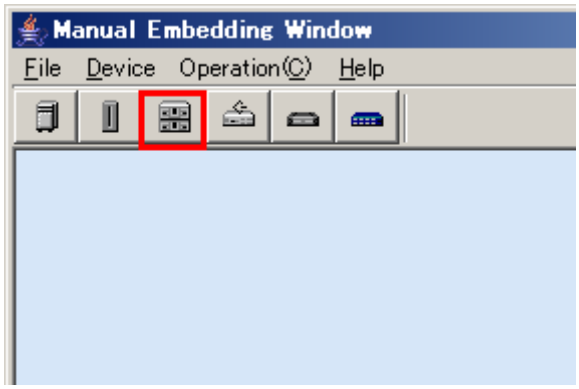
2.3.2.2 This device connected directly to the server

1) Start the Manual Embedding Window.
2) From the menu of the Manual Embedding Window, select [Operation] - [Create New Device] - [Library Device]. You can also perform this step by selecting the relevant icon from the toolbar.

- When selecting from the menu:

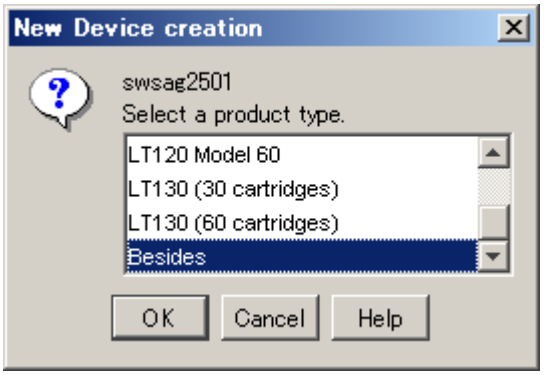


- When selecting using the icon



3) The "New Device creation" dialog box is displayed.

   Because this device is LT20 S2/LT40 S2/LT60 S2, select "Besides" and then click the "OK" button.



4) The "New Library device creation" dialog box is displayed. Select the "Embedding Information (Required)" tab and then enter the required information (*1).

   *1 For the information to enter, see "Register a device as a manually embedded device" in the ETERNUS SF Storage Cruiser User's Guide.

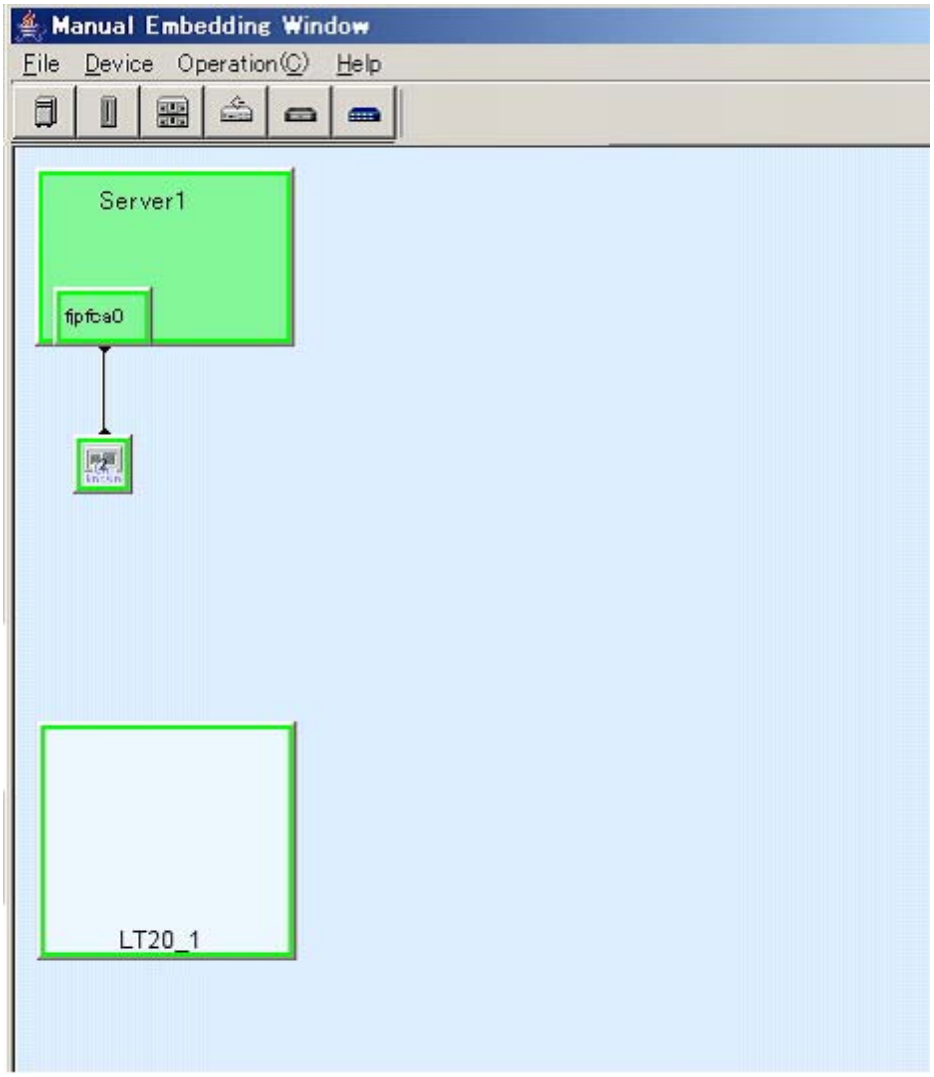


5) After entering the required information, click "OK" to create a device.

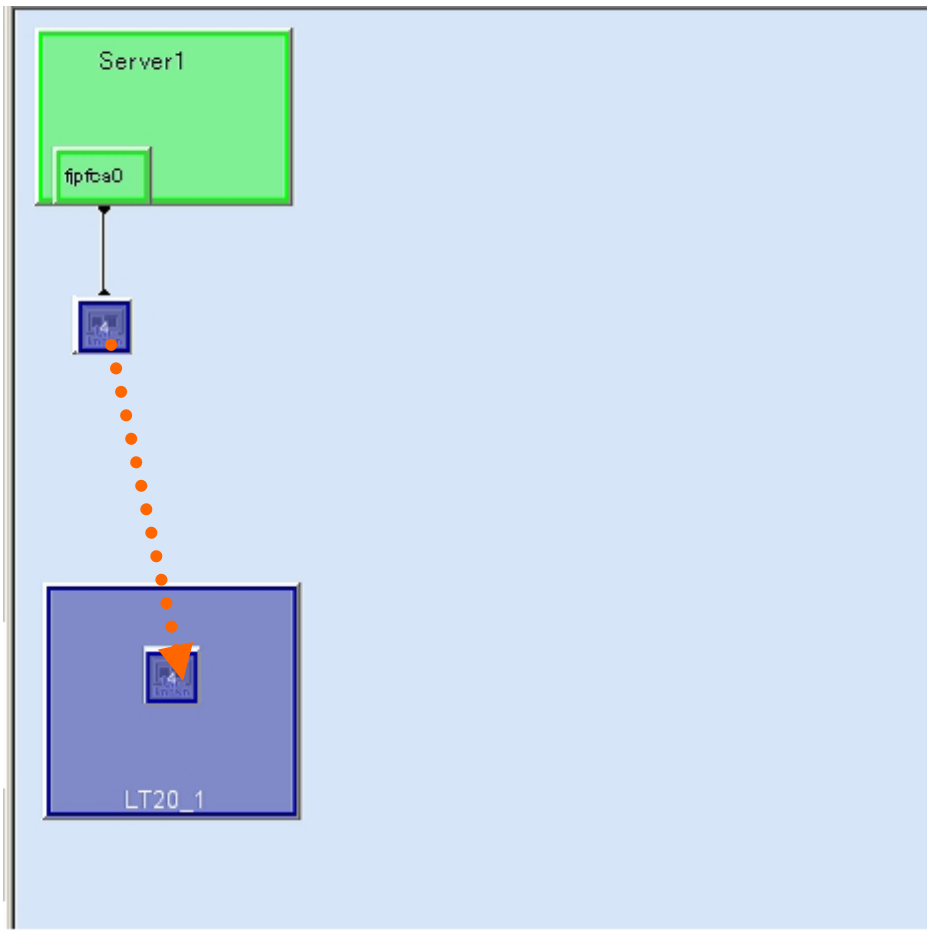
6) A dialog box indicating the completion of embedding is displayed.



7) After the above dialog box appears, the created device is then displayed in the Manual Embedding Window as shown below:



8) Click the Unknown FC port of the server to which this device is connected, and then drag and drop it onto the created LT20 S2/LT40 S2/LT60 S2.



9) The "New Storage device setup" dialog box is displayed. Select the "Embedding Information (Required)" tab and then set information on a drive in this device.

Caution

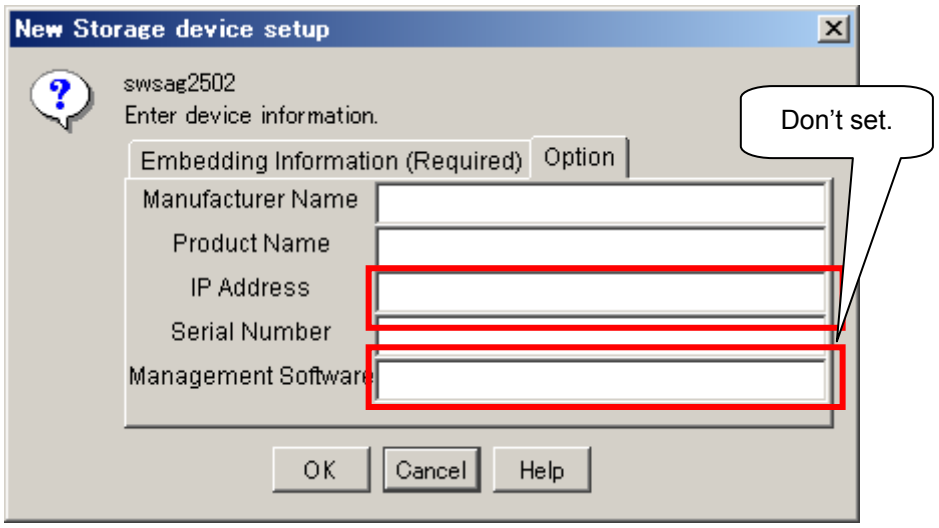
Operation failure
For "Device Name," specify a name that is different from the device name of the created LT20 S2/LT40 S2/LT60 S2.



10) Select "Option" in the "New Storage device setup" dialog box, and then set information on a drive in this device.

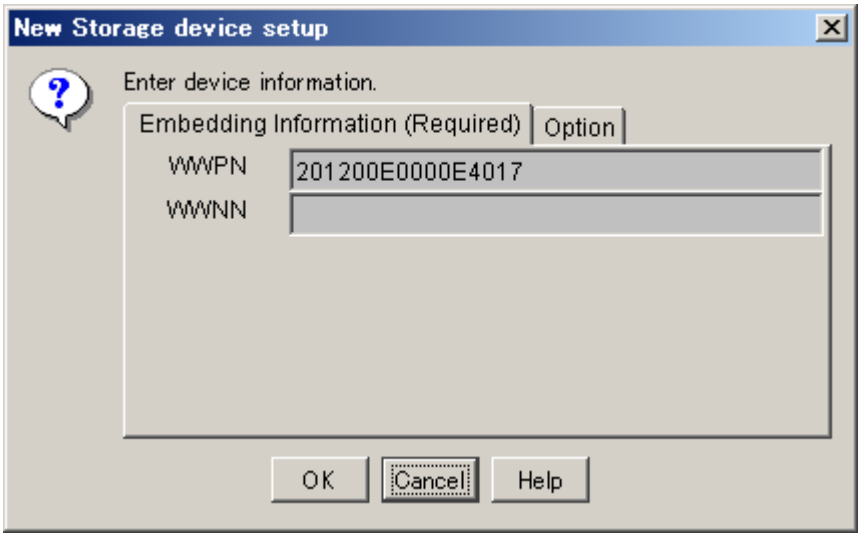
⚠ Caution

Operation failure
Do not set any information in the "IP Address" and "Management Software" fields.

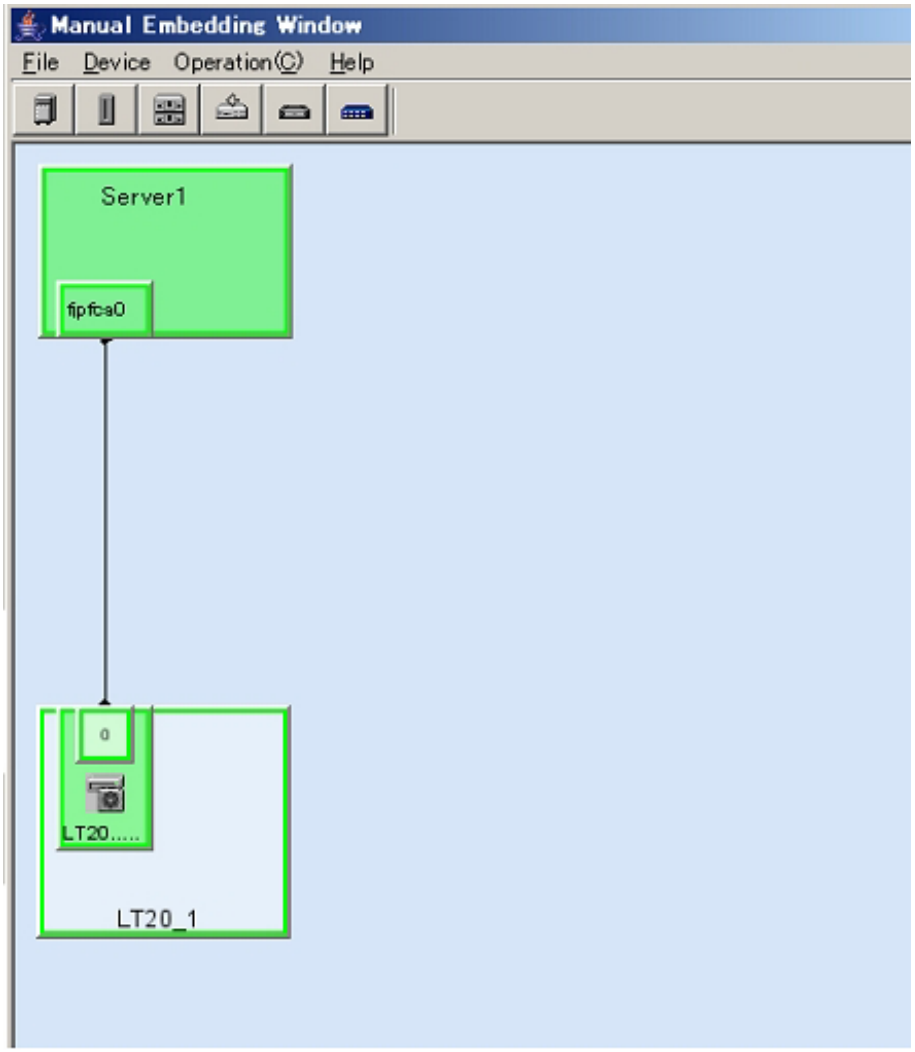


11) After entering the required information, click "OK."

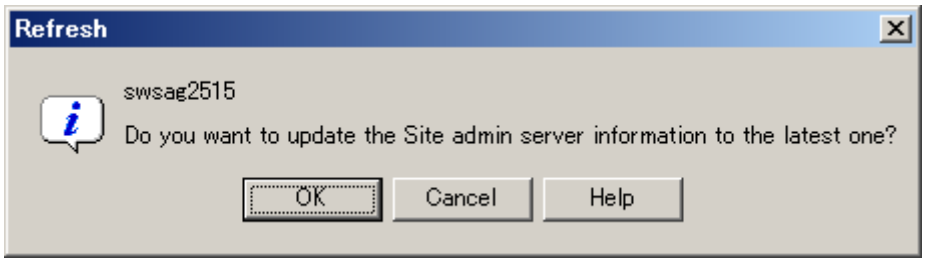
12) The dialog box shown below is displayed. Click "OK" and then set the drive information.



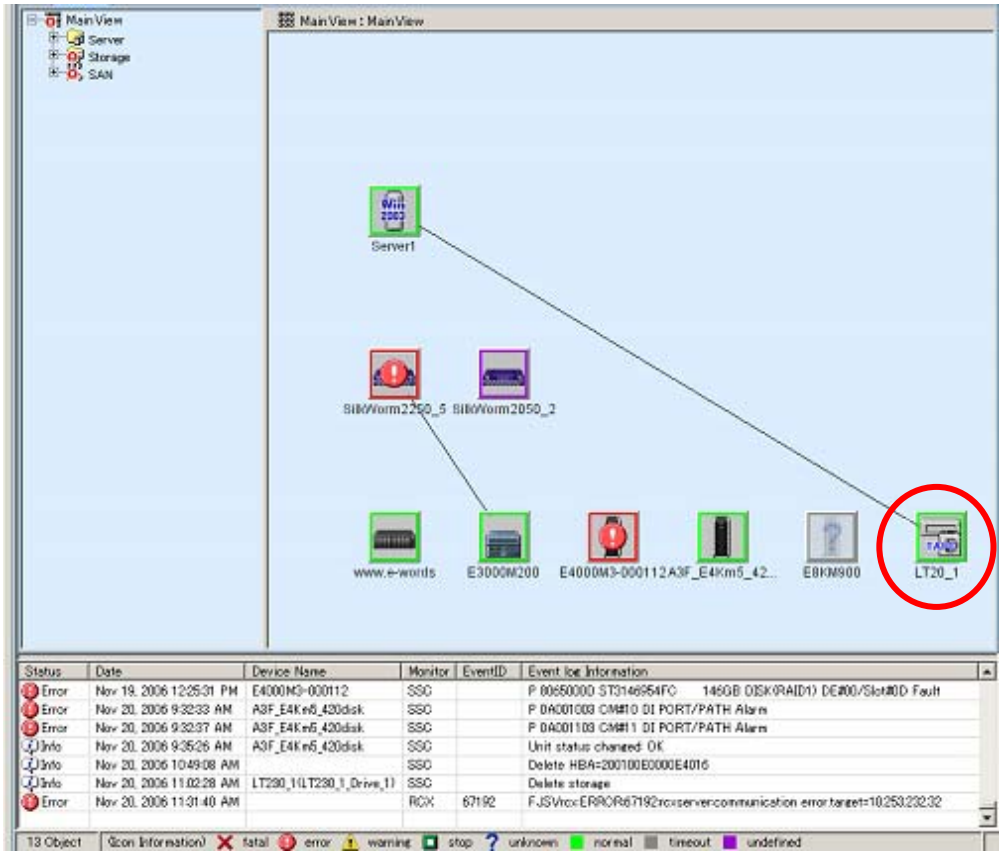
13) The server and this device are connected by a physical line as shown in the figure below.



14) Manual embedding of this device is complete. Exit the Manual Embedding Window. The "Refresh" dialog box is then displayed. Click "OK" to update information.



15) This device connected to the server by a physical line is displayed in the Main View. This completes the setup of ETERNUS SF Storage Cruiser.



Chapter 3 Confirming the SNMP Trap Settings

3.1 Confirming the Monitoring Setting

3.2 Confirming the setting by sending a test trap from the remote management

3.3 Procedure for Recovery to the Normal Status

After monitoring software "ETERNUS SF Storage Cruiser" is set up, the monitoring server receives SNMP traps (events) sent by this device. This chapter explains how to check whether the monitoring server receives traps normally.

3.1 Confirming the Monitoring Setting

Check whether the monitoring server normally receives SNMP traps (events) sent by this device after monitoring software "ETERNUS SF Storage Cruiser" is set up. Do this by taking the following steps in the order given:

Send a test trap from this device. Check whether the monitoring server receives the corresponding event.

3.2 Confirming the setting by sending a test trap from the remote Management

This section explains how to send a test trap from the "SNMP Setting" window of the remote management of this device to confirm the monitoring setting.

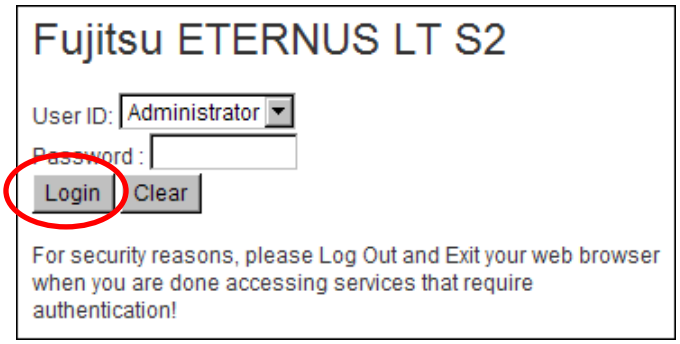
For details of remote management setup and operations, see Section 1.3, "SNMP Setting Procedure."

1) Start the Remote Management

2) Log in with administrator authority.

   In the login window, select the "Administrator", enter your password (Password), and then click the "Login" button.

   [Default values] User: Administrator
   Password: adm001

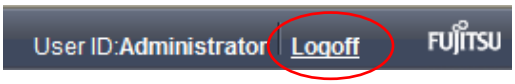


3) In the "Home" Window, click [Configuration] - [SNMP] to display the "SNMP Setting" window.

4) Enter the required information, such as the Community name.

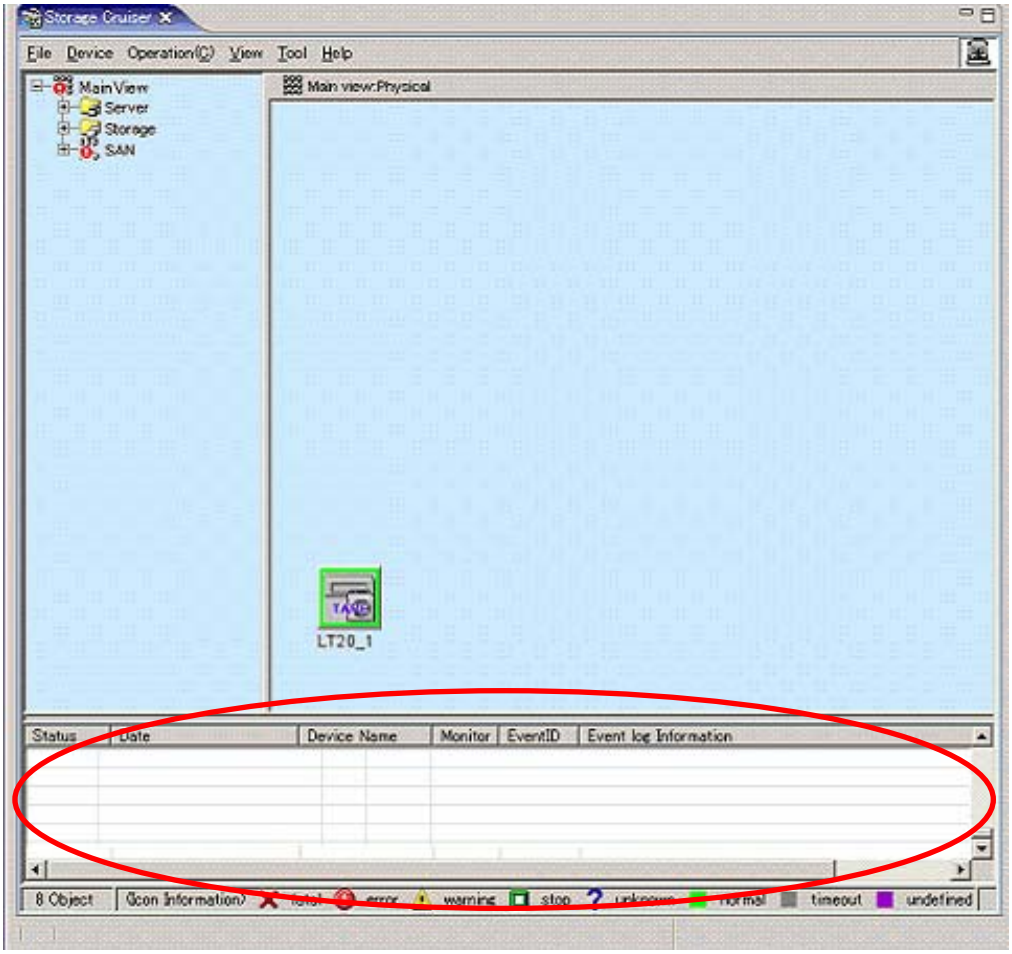
5) Check "Critical, Warning, Configuration and Information Events" for SNMP Trap Notification Filter.

6) Click the "Logoff" button.



7) The event information for the test trap is sent to ETERNUS SF Storage Cruiser on the monitoring server.

Confirm that the event information is displayed in the "ETERNUS SF Storage Cruiser" window.



At this time, "Error" should be displayed as the status of this device in the "ETERNUS SF Storage Cruiser" window. After completing the confirmation, proceed to the appropriate procedure in Section 3.3, "Procedure for Recovery to the Normal Status," for recovery to the normal status.

3.3 Procedure for Recovery to the Normal Status

This section explains two methods for using ETERNUS SF Storage Cruiser for recovery to the normal status. Either method is suitable.

1) Recovery from the resource management window
2) Recovery from the Manual Embedding Window

3.3.1 Procedure for recovery from the resource management window

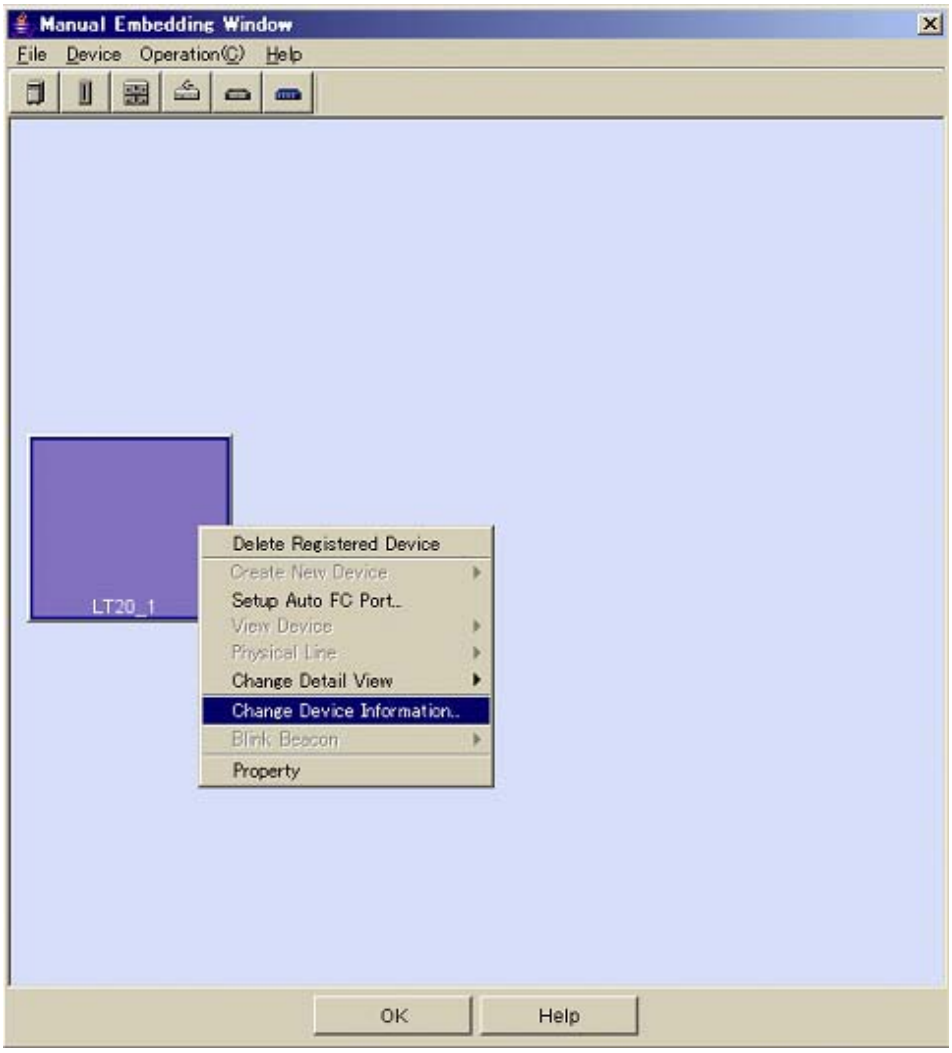
1) Start ETERNUS SF Storage Cruiser.
2) ETERNUS SF Storage Cruiser opens the resource management window. In this window, select and right-click the icon of the device. From the pop-up menu, select [Property].
3) The device properties are displayed.
4) In the property window, click the "Change" button for the device status. The "Change Device Status" dialog box is displayed.
5) Select "normal" from the selection list, and then click the "OK" button.
6) The "Device Status Is Being Changed" dialog box is displayed.
7) In the property window, click "OK" to close the window. The device icon turns green, and the device status changes to "normal."

This completes the procedure for recovery to the normal status from the resource management window.

3.3.2 Procedure for recovery from the Manual Embedding Window

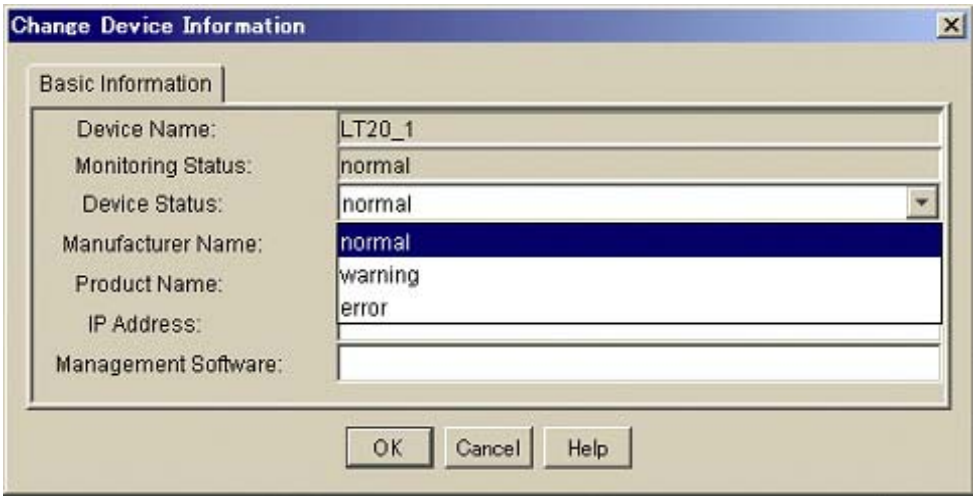
1) Open the Manual Embedding Window of ETERNUS SF Storage Cruiser.

2) In the Manual Embedding Window, select and right-click the icon of the device. From the pop-up menu, select "Change Device Information."

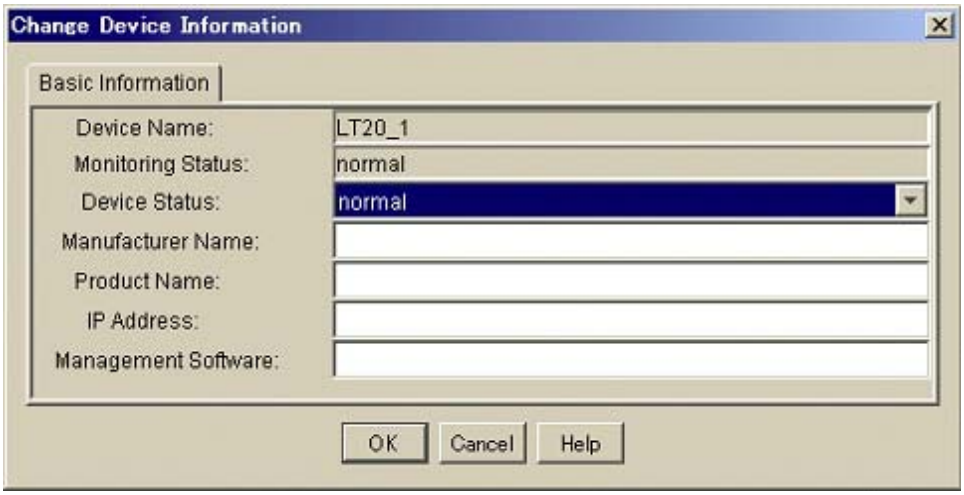


3) "Change Device Information" dialog is displayed.

A choice in Device Status is 'normal', 'warning' and 'error'.



4) Select 'normal'.



5) The device icon turns green, and the device status changes to "normal."

This completes the procedure for recovery to the normal status from the Manual Embedding Window.

Chapter 4 Event List

4.1 Event List

This chapter explains the events that are reported by SNMP of this device.

4.1 Event List

The table below lists the events reported by SNMP. Displayed character strings may be changed as a result of firmware revision.

4.1.1 Information Events

Table 4.1 Information Events List

Events	Events Code	Description
Move Element	0x01	Move Element command
Inventory rescan	0x02	Inventory rescan
Drive Clean	0x03	Drive Cleaning Process
Mailslot Open	0x04	Open Mailslot command
Mailslot Close	0x05	Close Mailslot
Magazine Remove	0x06	Magazine remove Event
Magazine Reinsertion	0x07	Magazine insertion Event
Power On	0x08	Power On Event
Power Off	0x09	Power Off Event
User Login	0x0A	User login at interface (RMU, OCP)
User Logout	0x0B	User logout at interface (RMU, OCP)
System Test Run	0x0C	System test result
Wellness Test Run	0x0D	Wellness test result
Bus Reset occurred	0x0E	Bus reset has occurred
Device Reset	0x0F	Device Reset command
Abort	0x10	SCSI task aborted
Drive tape alert flag	0x11	Drive reported informational tape alert flag

4.1.2 Warring Events

Table 4.2 Warning Events (1/2)

Events	Events Code	Description
SCSI invalid opcode	0x30	SCSI invalid opcode
invalid element address	0x31	invalid element address
invalid field in CDB	0x32	invalid field in CDB
invalid SCSI ID message	0x33	invalid SCSI ID message
invalid LUN	0x34	invalid LUN
invalid drive specified	0x35	invalid drive specified
SEND DIAG: invalid test number	0x36	SEND DIAG: invalid test number
command sequence error	0x37	command sequence error
invalid boot code	0x38	invalid boot code
invalid personality	0x39	invalid personality
invalid checksum	0x3A	invalid checksum
parameter length error	0x3B	parameter length error
parameter list: invalid field	0x3C	parameter list: invalid field
parameter list: invalid value	0x3D	parameter list: invalid value
invalid parameter value	0x3E	invalid parameter value
saving parameters not supported	0x3F	saving parameters not supported
destination element full	0x40	destination element full
transport element full	0x41	transport element full
no cartridge in slot	0x42	no cartridge in slot
source slot or drive empty	0x43	source slot or drive empty
magazine not accessible	0x44	magazine not accessible
drive media removal Prevented	0x45	drive media removal prevented
library media removal Prevented	0x46	drive media removal prevented
drive not enabled	0x47	drive not enabled
mailslot not enabled	0x48	mailslot not enabled
bad status library Controller	0x49	bad status library controller
source not ready	0x4A	source not ready
destination not ready	0x4B	destination not ready
reservation failed	0x4C	reservation failed
wrong drive type	0x4D	wrong drive type
invalid robotic request	0x4E	invalid robotic request
robotic not initialized	0x4F	robotic not initialized
parity error	0x50	parity error
err log overflow	0x51	err log overflow

Table 4.2 Warning Events (2/2)

Events	Events Code	Description
invalid cartridge	0x60	invalid cartridge
invalid upgrade Cartridge	0x61	invalid upgrade cartridge
invalid cleaning cartridge	0x62	invalid cleaning cartridge
cleaning tape installed	0x63	cleaning tape installed
cleaning failed	0x64	cleaning failed
cleaning tape expired	0x65	cleaning tape expired
echo buffer overwritten	0x6A	echo buffer overwritten
SCSI message error	0x70	SCSI message error
SCSI parity error	0x71	SCSI parity error
SCSI invalid message	0x72	SCSI invalid message
overlapped command Attempt	0x73	overlapped command attempt
SCSI invalid opcode	0x74	SCSI invalid opcode
invalid element address	-	invalid element address
invalid field in CDB	-	invalid field in CDB
overlapped command Attempt	-	overlapped command attempt
Move Retry	0x80	Movement Retry
Fan Alert	0x81	Fan alert
Clean Request	0x82	Clean request from drive
Media Attention	0x83	Media attention
Drive tape alert flag	0x84	Drive reported warning or critical tape alert flag
Network problem	0x85	-
Autoclean media warning	0x86	Not enough media present to autoclean
Drive not supported	0x87	Drive automatically disabled because not allowed to use in this library
Drive FW unchanged after Upgrade	0x88	Drive FW unchanged after Upgrade
Drive FW unchanged after Upgrade	0x89	Power Supply Fan Failed
Power Supply Failed	0x8A	Power Supply Failed
No Power Good Signal	0x8B	No Power Good Signal from PS
Invalid Robotic FW	0x8C	Invalid Robotic FW Detected (Auto Upgrade)

4.1.3 Critical Events

Table 4.3 Critical Events (1/2)

Events	Events Code	Description
BCR Failure	0x80	HE: bar code reader init. failed
BCR Failure	0x81	HE: no response from BCR
Hardware Error	0x82	HE: no response from EEPROM
Robotic Error	0x83	HE: robotic controller error
Rob. HW Error	0x84	HE: gripper pic control failure
Rob. HW Error	0x85	HE: slider pic control failure
Rob. HW Error	0x86	HE: elevator pic control failure
Rob. HW Error	0x87	HE: rotation pic control failure
Rob. HW Error	0x88	HE: sled pic control failure
Mechanical Block	0x89	HE: gripper blocked
Mechanical Block	0x8A	HE: slider blocked
Mechanical Block	0x8B	HE: elevator blocked
Mechanical Block	0x8C	HE: rotation blocked
Mechanical Block	0x8D	HE: sled blocked
Robotic Failure	0x8E	HE: cannot find gripper block
Robotic Failure	0x8F	HE: cannot find slider block
Robotic Failure	0x90	HE: cannot find elevator block
Robotic Failure	0x91	HE: cannot find rotation block
Robotic Failure	0x92	HE: cannot find sled block
Robotic Failure	0x93	HE: gripper outside range
Robotic Failure	0x94	HE: slider outside range
Robotic Failure	0x95	HE: elevator outside range
Robotic Failure	0x96	HE: rotation outside range
Robotic Failure	0x97	HE: sled outside range
Robotic Failure	0x98	HE: cartridge detection failed
Robotic Failure	0x99	HE: slider home not found
Robotic Failure	0x9A	HE: rotation home not found
Robotic Failure	0x9B	HE: sled position not found
Robotic Failure	0x9C	HE: invalid gripper range
Robotic Failure	0x9D	HE: invalid slider range
Robotic Failure	0x9E	HE: invalid elevator range
Robotic Failure	0x9F	HE: invalid rotation range
Robotic Failure	0xA0	HE: invalid sled range
Mailslot failure	0xA1	HE: failed to open mailslot
Robotic Failure	0xA2	HE: failed to lock elevator (8U)
Rob. Comm.-Error	0xB0	HE: robotic response timeout
Rob. Comm.-Error	0xB1	HE: NACK received from robotic
Rob. Comm.-Error	0xB2	HE: robotic communication failed
Robotic Stopped	0xB3	HE: robotic emergency stop
Transp. Failed	0xB4	HE: cartridge movement failed
Rob. Comm.-Error	0xB5	HE: robotic no response

Table 4.3 Critical Events (2/2)

Events	Events Code	Description
Network Failure	0xC0	HE: network init
Network Failure	0xC1	HE: telnet interface
Network Failure	0xC2	HE: webserver
Net HW Failure	0xC3	HE: EEPROM parameter
Net HW Failure	0xC4	HE: cannot init LanCard
Net HW Failure	0xC5	HE: write data to EEPROM fail
Network Failure	0xC6	HE: ping (target not reached)
Upgrade failed	0xC7	HE: cannot upgrade from USB
Hardware Error	0xD0	HE: ROM Error
Hardware Error	0xD1	HE: RAM Error
Hardware Error	0xD2	HE: NVRam Error
Hardware Error	0xD3	HE: UART Error
Hardware Error	0xD4	HE: display error
Hardware Error	0xD5	HE: display error
Hardware Error	0xD6	HE: memory Error
System Error	0xD7	HE: fatal system error
System Error	0xD8	HE: data base error
SCSI HW Error	0xD9	HE: no SCSI IC detected
Invalid Barcode	0xDA	HE: different barcode labels
Hardware Error	0xDB	HE: Fan Failure
Hardware Error	0xDC	HE: Internal I2C Bus Error
Hardware Error	0xDF	HE: Power Supply has Failed
Drive Overtemp.	0xF0	HE: drive over-temperature
Drive Comm.-Err.	0xF1	HE: drive communication error
Drive Sled Miss.	0xF2	HE: drive sled not present
Drive Broken	0xF3	HE: drive broken: needs repair
Load Timeout	0xF4	HE: drive load timeout
Unload Timeout	0xF5	HE: drive unload timeout

4.1.4 Configuration Events

Table 4.4 Configuration Events

Events	Events Code	Description
Drive SCSI changed	0x41	Drive SCSI ID has changed
Library SCSI changed	0x42	Library SCSI ID changed (Note)
Drive Enable	0x43	Drive was enabled
Drive Disable	0x44	Drive disabled
Master Drive assigned	0x45	Drive Master assigned
Drive Sled added	0x46	Drive Sled added
Drive Sled removed	0x47	Drive Sled removed
Library Mode changed	0x48	Library Mode changed (Sequential, Random)
Element address	0x49	Element address changed
Net Parameter	0x4A	Network parameter have changed
Slots reserved	0x4B	Slots reserved
Mailslot support	0x4C	Mailslot support
Admin Password	0x4D	Admin Password has changed
Date/Time set	0x4E	Date and Time of RTC set
Barcode Format	0x4F	Barcode format alignment changed
Default Config set	0x50	Default configuration set
FW Upgrade Library	0x51	FW upgrade Library
FW Upgrade Drive	0x52	FW Upgrade Drive
Autoclean Feature set	0x53	Autocleaning switched on or off
Drive FC parameters	0x54	Drive Fibre channel parameters changed

Note: Only available in Dual SCSI configuration

ETERNUS LT20 S2/LT40 S2/LT60 S2 Tape Library
User's Guide
-Monitoring Software Setup Procedure-

P3AM-5262-01ENZ0
Date of issuance: June 2011
Issuance responsibility: FUJITSU LIMITED

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