

***[X-path related parts  
REPLACEMENT  
PROCESSING (Skip Restore) -  
RXSR]***

**NOTICE:** The procedure for blocking (selecting [Block]) the X-path related parts connected to HSNBX-x to be replaced and skipping the restoration (selecting [Skip Restore]) is shown below. In the following procedure, restoration of X-path-related parts (X-path cable, Interconnect Channel Board, and Interconnect Switch) which are connected to the target HSN Box is not performed.  
To continuously perform restoration of X-path-related parts, perform the procedure from "[6. Connecting the Maintenance PC](#)".

1. Connecting the Maintenance PC

Connect the Maintenance PC to the SSVP, and then log in to the SVP.

- "Attachment/Removal Procedure of Maintenance PC" ([INST\(IN\)13-02-10](#))
- "Connection to the SVP" ([SVP01-30](#))

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2. Starting the SVP window

From the menu of Web Console, click [Maintenance Components] - [Maintenance Other Components].

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3. Changing the operation mode

Change the mode to [View Mode].

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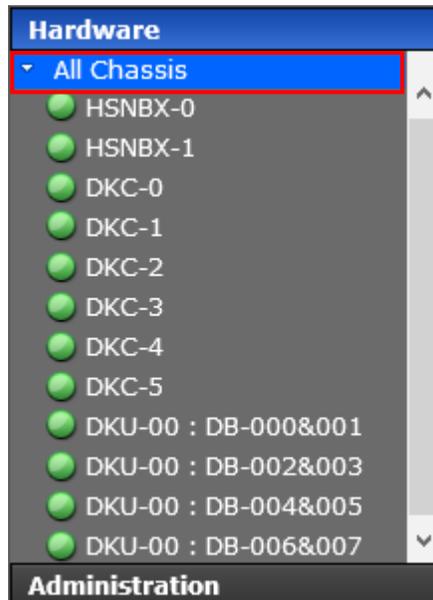
4. Starting Maintenance Utility

In the SVP window, click [Maintenance Utility]. (See "Starting Maintenance Utility" ([MU01-10](#)).)

## 5. Selecting replacement parts by Maintenance Utility.

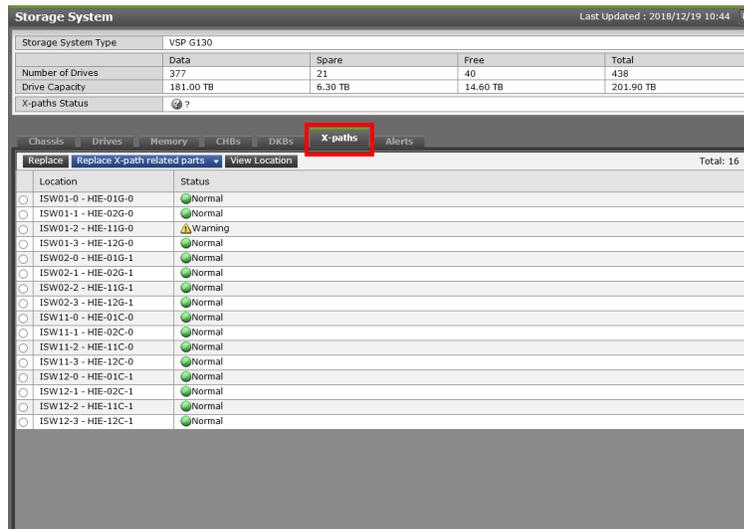
## (1) &lt;Main window&gt;

Select [All Chassis] in the main window.



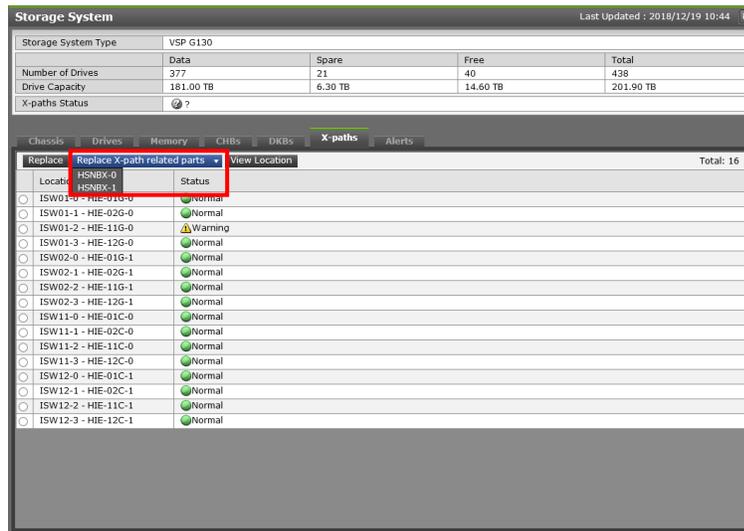
## (2) &lt;Storage Systems window&gt;

In the Storage Systems window, click the [X-paths] tab to display the statuses of the X-path cables (ISWxx-x - HIE-xxx-x). For the statuses, see “Alert Display Related to FRU (Field Replacement Unit)” (MU02-10).



## (3) &lt;Select HSNBX-x&gt;

Click [Replace X-path related parts], and then select HSNBX-x to be replaced.



## (4) &lt;Blocking X-path related parts connected to HSNBX-x&gt;

### CAUTION

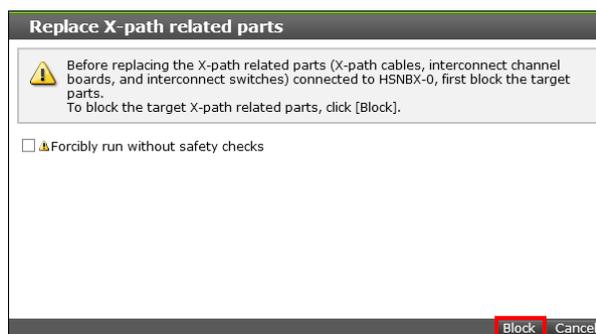
About "Forcibly run without safety checks":

If you check this checkbox and execute the maintenance, the system may go down. Do not check it unless instructed by the message, the manual or the contact described in the manual.

Check that the X-path related parts (X-path cable, Interconnect Channel Board, and Interconnect Switch) which are connected to the HSNBX-x to be replaced are correct, and then click [Block]. If a message other than the described is displayed, refer to Message Section (MSG00-00).

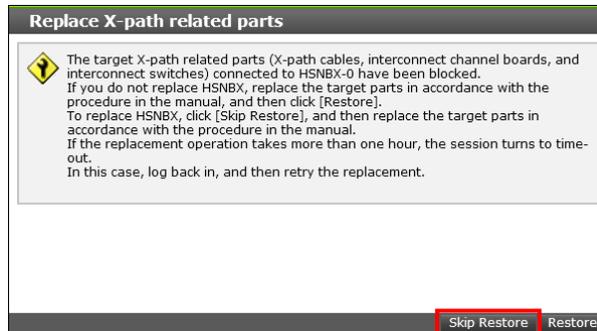
NOTE : The error list window is displayed if multiple errors are detected by the prior check.

If it is displayed, click the text of "Error Code" and recover the failures or the blockade in accordance with the details of the displayed errors.



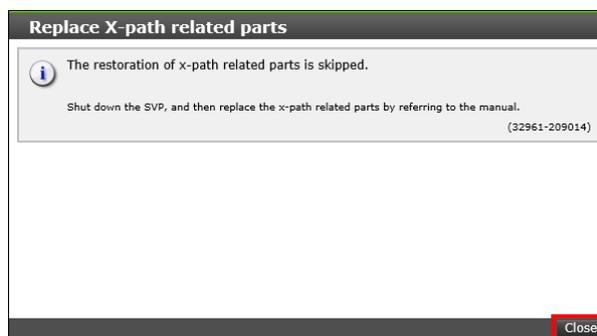
- (5) <Confirming that the preparation for the replacement of the X-path related parts connected to HSNBX-x is completed>

Check that the X-path related parts connected to HSNBX-x are blocked and that the preparation for the replacement of the X-path related parts connected to HSNBX-x is completed.



- (6) <Checking the Replace X-path related parts message>

Check that the message shown below is displayed, and then click [Close].



- (7) <Powering off the SVP>

Press the SVP PS ON/OFF switch on the SVP, and then check that the SVP POWER LED goes off. If the SVP POWER LED does not go off even after about three minutes have passed since you pressed the SVP PS ON/OFF switch, hold down the SVP PS ON/OFF switch for five seconds or more (forced power off) to check that the SVP POWER LED goes off (LOC03-30).

- (8) <Powering on the SVP>

Press the SVP PS ON/OFF switch on the SVP to power on the SVP (LOC03-30).

6. Connecting the Maintenance PC  
Display the SVP initial screen (See “How to Operate the SVP (PC)” ([SVP01-10](#))).

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7. Starting the SVP window  
From the menu of Web Console, click [Maintenance Components] - [Maintenance Other Components].

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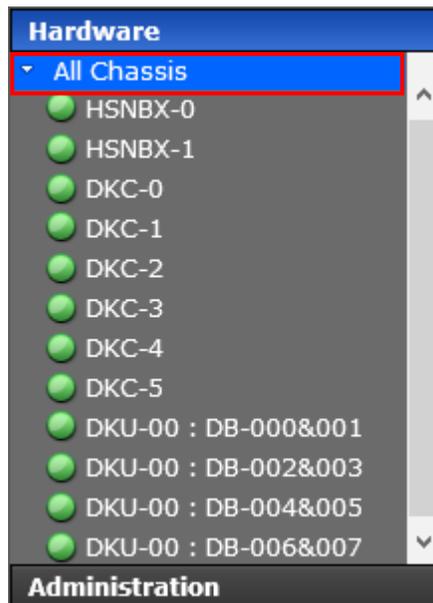
8. Changing the operation mode  
Change the mode to [View Mode].

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9. Starting Maintenance Utility  
In the SVP window, click [Maintenance Utility] (See “Starting Maintenance Utility” ([MU01-10](#))).

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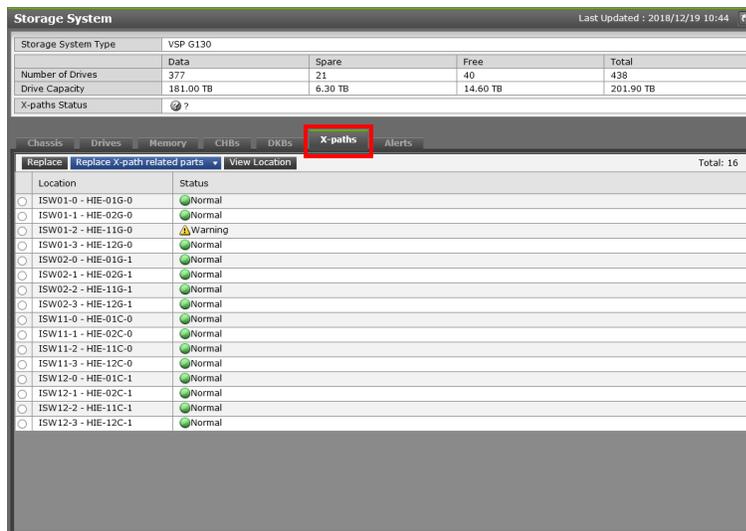
10. Selecting replacement parts by Maintenance Utility.
  - (1) <Main window>  
Select [All Chassis] in the main window.



## (2) &lt;Storage Systems window&gt;

In the Storage Systems window, click the [X-paths] tab to display the statuses of the X-path cables (ISWxx-x - HIE-xxx-x). For the statuses, see “Alert Display Related to FRU (Field Replacement Unit)” (MU02-10).

NOTE: For HIE port and ISW port failures among reported SIM reference codes and action codes (ACC), perform recovery procedures according to the codes. For X-path cable failures, perform the following recovery procedure.



Storage System (Last Updated: 2018/12/19 10:44)

Storage System Type	VSP G130			
Number of Drives	Data	Spare	Free	Total
377	181.00 TB	21	40	438
Drive Capacity	181.00 TB	6.30 TB	14.60 TB	201.90 TB
X-paths Status	?			

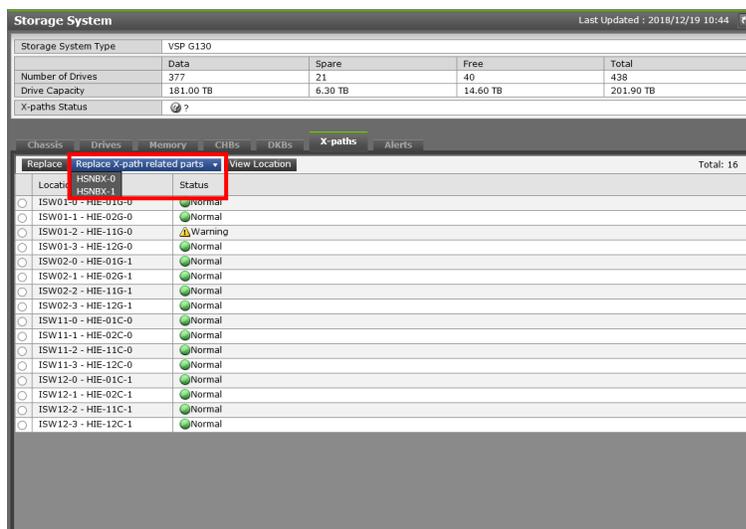
Chassis | Drives | Memory | CHBs | DKBs | **X-paths** | Alerts

Replace | Replace X-path related parts | View Location | Total: 16

Location	Status
<input type="radio"/> ISW01-0 - HIE-01G-0	Normal
<input type="radio"/> ISW01-1 - HIE-02G-0	Normal
<input type="radio"/> ISW01-2 - HIE-11G-0	Warning
<input type="radio"/> ISW01-3 - HIE-12G-0	Normal
<input type="radio"/> ISW02-0 - HIE-01G-1	Normal
<input type="radio"/> ISW02-1 - HIE-02G-1	Normal
<input type="radio"/> ISW02-2 - HIE-11G-1	Normal
<input type="radio"/> ISW02-3 - HIE-12G-1	Normal
<input type="radio"/> ISW11-0 - HIE-01C-0	Normal
<input type="radio"/> ISW11-1 - HIE-02C-0	Normal
<input type="radio"/> ISW11-2 - HIE-11C-0	Normal
<input type="radio"/> ISW11-3 - HIE-12C-0	Normal
<input type="radio"/> ISW12-0 - HIE-01C-1	Normal
<input type="radio"/> ISW12-1 - HIE-02C-1	Normal
<input type="radio"/> ISW12-2 - HIE-11C-1	Normal
<input type="radio"/> ISW12-3 - HIE-12C-1	Normal

## (3) &lt;Select HSNBX-x&gt;

Click [Replace X-path related parts], and then select HSNBX-x to be replaced.



Storage System (Last Updated: 2018/12/19 10:44)

Storage System Type	VSP G130			
Number of Drives	Data	Spare	Free	Total
377	181.00 TB	21	40	438
Drive Capacity	181.00 TB	6.30 TB	14.60 TB	201.90 TB
X-paths Status	?			

Chassis | Drives | Memory | CHBs | DKBs | **X-paths** | Alerts

Replace | **Replace X-path related parts** | View Location | Total: 16

Location	Status
<input type="radio"/> HSNBX-0	Normal
<input type="radio"/> ISW01-0 - HIE-01G-0	Normal
<input type="radio"/> ISW01-1 - HIE-02G-0	Normal
<input type="radio"/> ISW01-2 - HIE-11G-0	Warning
<input type="radio"/> ISW01-3 - HIE-12G-0	Normal
<input type="radio"/> ISW02-0 - HIE-01G-1	Normal
<input type="radio"/> ISW02-1 - HIE-02G-1	Normal
<input type="radio"/> ISW02-2 - HIE-11G-1	Normal
<input type="radio"/> ISW02-3 - HIE-12G-1	Normal
<input type="radio"/> ISW11-0 - HIE-01C-0	Normal
<input type="radio"/> ISW11-1 - HIE-02C-0	Normal
<input type="radio"/> ISW11-2 - HIE-11C-0	Normal
<input type="radio"/> ISW11-3 - HIE-12C-0	Normal
<input type="radio"/> ISW12-0 - HIE-01C-1	Normal
<input type="radio"/> ISW12-1 - HIE-02C-1	Normal
<input type="radio"/> ISW12-2 - HIE-11C-1	Normal
<input type="radio"/> ISW12-3 - HIE-12C-1	Normal

## (4) &lt;Blocking X-path related parts connected to HSNBX-x&gt;

 **CAUTION**

About “Forcibly run without safety checks”:

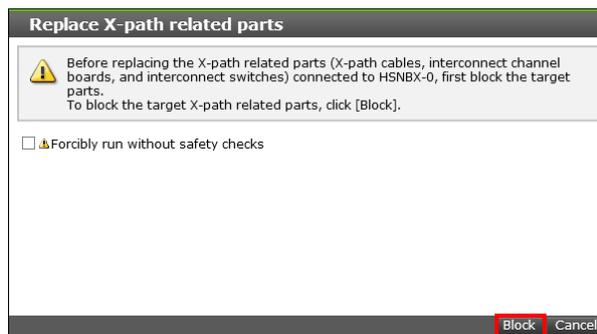
If you check this checkbox and execute the maintenance, the system may go down. Do not check it unless instructed by the message, the manual or the contact described in the manual.

Check that the X-path related parts (X-path cable, Interconnect Channel Board, and Interconnect Switch) which are connected to the HSNBX-x to be replaced are correct, and then click [Block].

If a message other than the described is displayed, refer to Message Section [\(MSG00-00\)](#).

NOTE : The error list window is displayed if multiple errors are detected by the prior check.

If it is displayed, click the text of “Error Code” and recover the failures or the blockade in accordance with the details of the displayed errors.

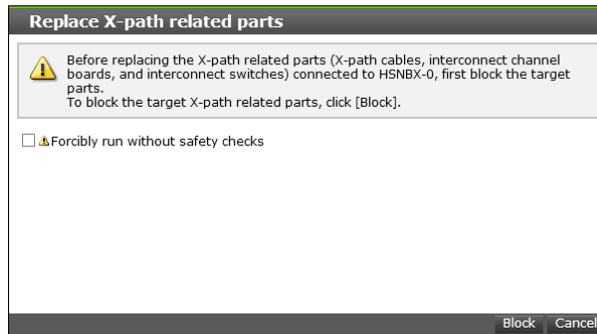


- (5) <Confirming that the preparation for the replacement of the X-path related parts connected to HSNBX-x is completed >

Check that the X-path related parts connected to HSNBX-x are blocked and that the preparation for the replacement of the X-path related parts connected to HSNBX-x is completed.

NOTE : Do not click [Restore] at this time.

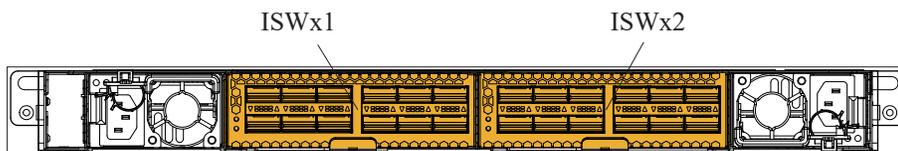
Click [Restore] after completing the replacement work.



### 11. ISW Replacement Processing

Replace both ISWx1 and ISWx2.

Location	Function Name of Component	Part Name
Rear of HSNBX	1 ISW	ISW

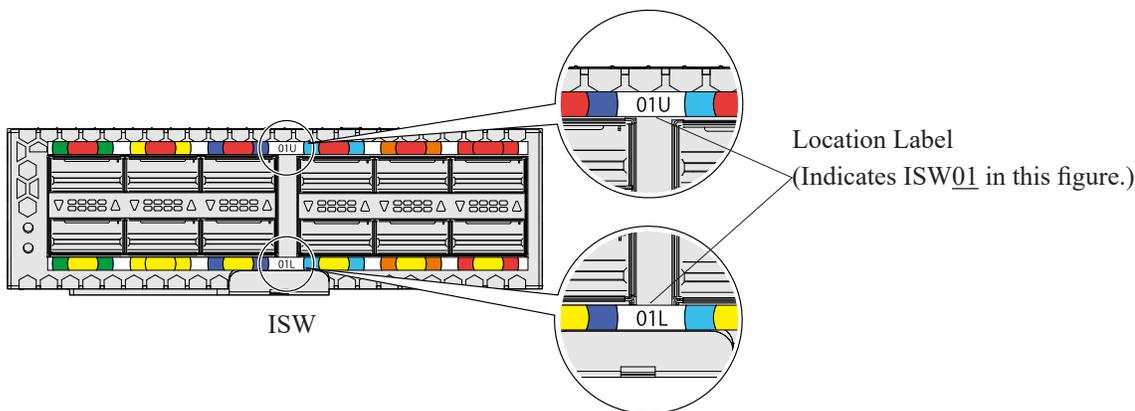


Rear view of HSNBX

**NOTICE:** To prevent part failures caused by static electrical charge built up on your own body, be sure to wear a wrist strap connected to the Storage System before starting and do not take it off until you finish. See "Note on Installing and Removing Parts" (REP(GE)01-30).

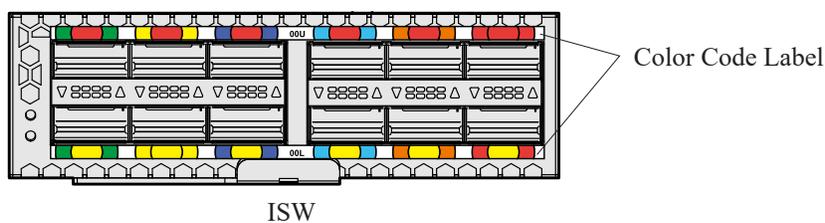
- (1) Check the location of the ISW to be replaced in the Maintenance Utility window, and verify the location labels of the ISW.

Figure 1-1 Locations of Location Labels



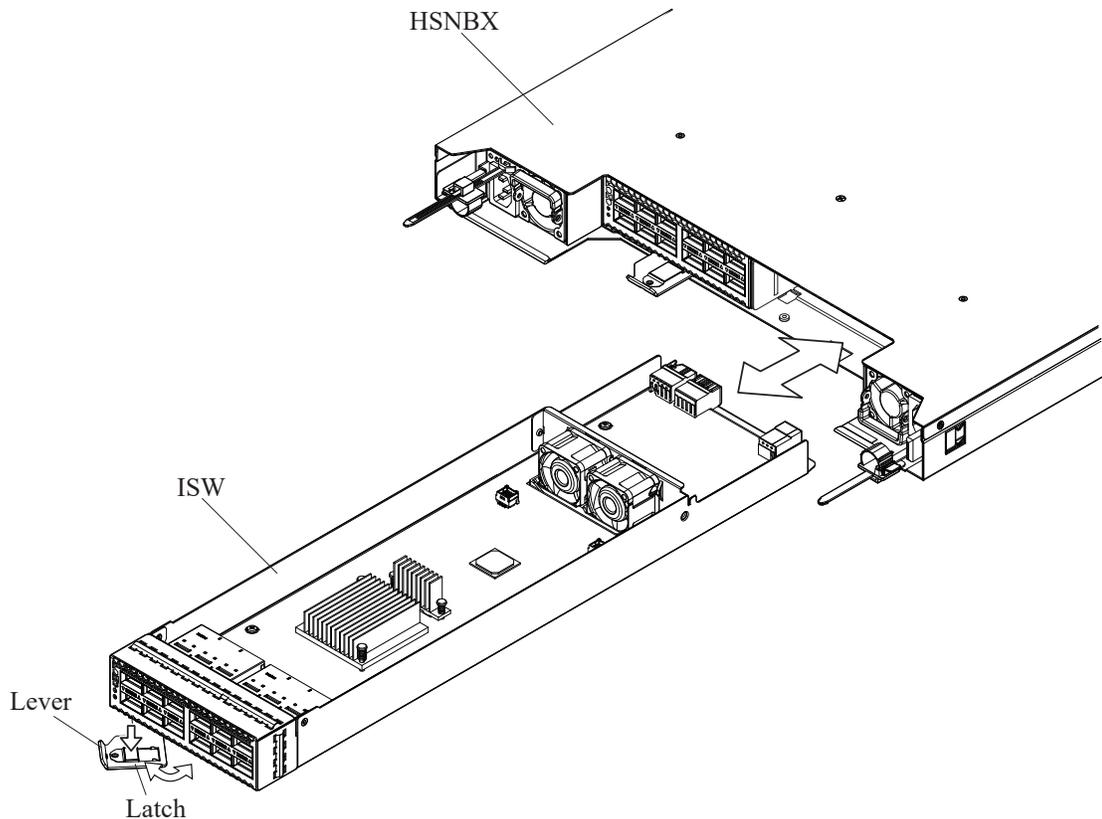
- (2) Remove all the cables connected to the ISW.
- (3) Attach the color code label of the same color as that for the ISW to be replaced to the new ISW.

Figure 1-2 Attaching Color Code Label



- (4) Replacing the ISW
  - (a) Open the lever while pressing its latch securing the ISW.
  - (b) Open the lever completely until the ISW is pulled out toward you.
  - (c) Remove the ISW by pulling it out while holding it with your hands.
  - (d) Open the lever on the new ISW completely toward you.
  - (e) Insert the ISW fully and push the lever until the latch on the lever clicks and is locked.

Figure 1-3 Replacing the ISW

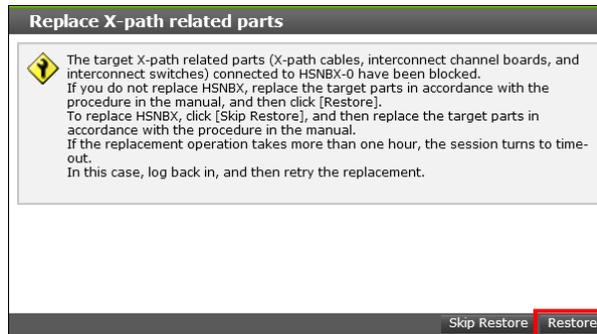


- (5) Connect the cables to the new ISW.

## 12. Restoring replacement parts by Maintenance Utility

### (1) <Restore replacement parts>

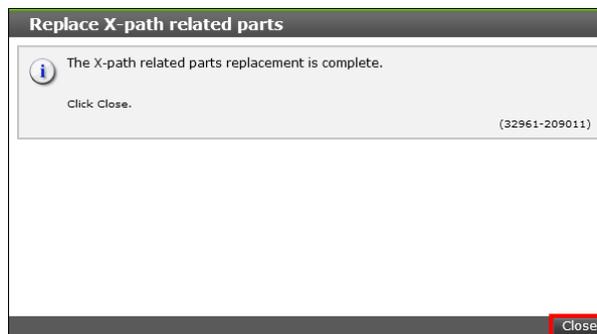
Click [Restore].



### (2) <Check replacement parts restoration>

Check that the following message is displayed and click [Close].

If a message other than the described is displayed, refer to Message Section [\(MSG00-00\)](#).



- (3) <Checking that the X-path cable (ISW<sub>xx-x</sub> - HIE-xxx-x) is restored>  
 In the Storage Systems window, click the [X-paths] tab, and check that the status of the newly installed X-path cable (ISW<sub>xx-x</sub> - HIE-xxx-x) is “Normal”.

The screenshot shows the 'Storage System' management interface. At the top, it displays 'Storage System Type: VSP G130' and 'Last Updated: 2018/12/19 10:44'. Below this is a summary table:

	Data	Spare	Free	Total
Number of Drives	377	21	40	438
Drive Capacity	181.00 TB	6.30 TB	14.60 TB	201.90 TB
X-paths Status	Normal			

Below the summary table, there are tabs for 'Chassis', 'Drives', 'Memory', 'CHBs', 'DKBs', 'X-paths', and 'Alerts'. The 'X-paths' tab is selected and highlighted with a red box. Underneath, there is a table with columns for 'Location' and 'Status'. The 'Status' column is also highlighted with a red box. The table contains 16 rows, all with a status of 'Normal'.

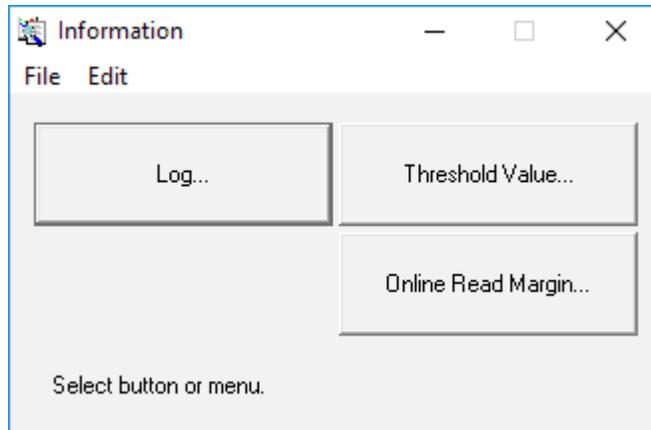
Location	Status
<input type="radio"/> ISW01-0 - HIE-01G-0	Normal
<input type="radio"/> ISW01-1 - HIE-02G-0	Normal
<input type="radio"/> ISW01-2 - HIE-11G-0	Normal
<input type="radio"/> ISW01-3 - HIE-12G-0	Normal
<input type="radio"/> ISW02-0 - HIE-01G-1	Normal
<input type="radio"/> ISW02-1 - HIE-02G-1	Normal
<input type="radio"/> ISW02-2 - HIE-11G-1	Normal
<input type="radio"/> ISW02-3 - HIE-12G-1	Normal
<input type="radio"/> ISW11-0 - HIE-01C-0	Normal
<input type="radio"/> ISW11-1 - HIE-02C-0	Normal
<input type="radio"/> ISW11-2 - HIE-11C-0	Normal
<input type="radio"/> ISW11-3 - HIE-12C-0	Normal
<input type="radio"/> ISW12-0 - HIE-01C-1	Normal
<input type="radio"/> ISW12-1 - HIE-02C-1	Normal
<input type="radio"/> ISW12-2 - HIE-11C-1	Normal
<input type="radio"/> ISW12-3 - HIE-12C-1	Normal

### 13. Closing Maintenance Utility

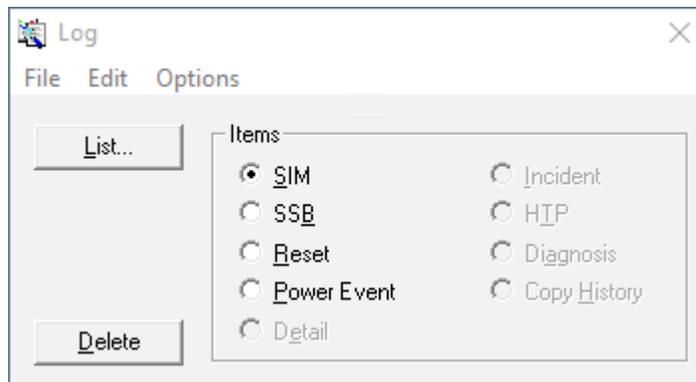
- (1) Click [Logout] to close the window.
- (2) <Get the error information>  
 Collect small system dumps by referring to “Dump/Auto Dump” ([SVP02-09-10](#)).
- (3) Refer to the “Use of OnlineDumpTool” ([SVP02-21-10](#)), please upload the error information.

## 14. Completing the SIM log

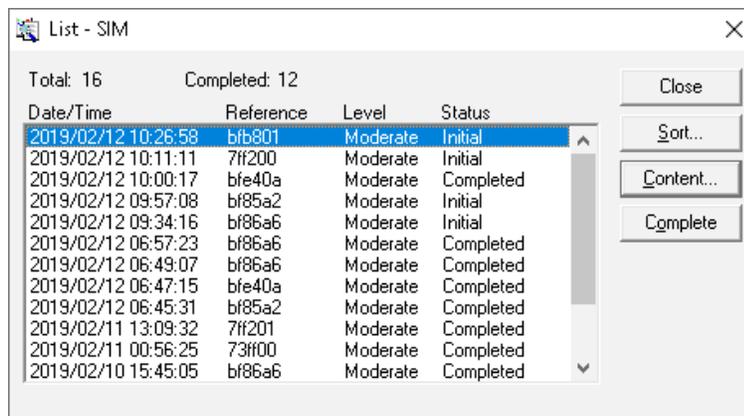
- (1) Change the mode to [Modify Mode], and then select [Information].
- (2) In the Information window, click [Log...].



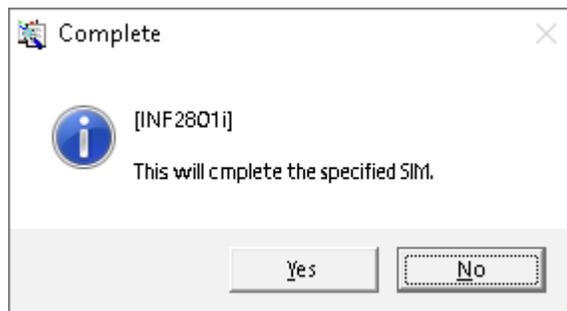
- (3) In the Log window, select [SIM] and then [List...].



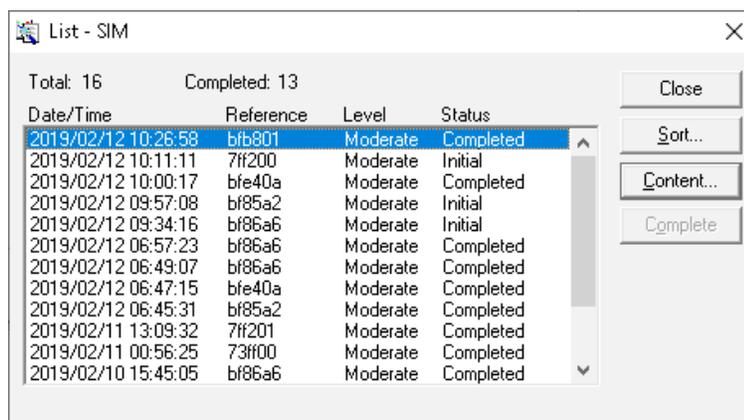
- (4) In the List-SIM window, select the data for which you end the process, and then click [Complete].



- (5) In the Complete window, click [Yes].



- (6) In the List-SIM window, confirm that the “Status” of the data has become “Completed”.



- (7) In the List-SIM window, click [Close].

Close the Log window, then the Information window.

Change the mode from [Modify Mode] to [View Mode].

NOTE: If the MESSAGE LED is lit on the HSNPANEL after you complete all SIMs, display SIMs to check that SIM statuses are “Completed”. If SIM statuses are not “Completed”, wait for five minutes, and then perform the procedure for completing the SIM log again.

## 15. Checking Normality

Perform the normality check according to “Checking Normality (TRBL02-06-10)”.