

[HSNBX REPLACEMENT PROCESSING - HSNB]

NOTICE: The following is the procedure for blocking (selecting [Block]) the X-path related parts connected to HSNBX-x to be replaced and restoring (selecting [Restore]) them. Restore the X-path related parts (X-path cable, Interconnect Channel Board, and Interconnect Switch) which are connected to the target HSN Box according to the procedure below.

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](#))

2. Starting the SVP window

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

3. SVP Switching

When the SVP High Reliability Kit is installed and the SVP in the HSNBX to be replaced is the Master SVP (check the SVP STATUS LEDs on the SSVP ([LOC03-40](#))), switch the SVP to the Standby SVP (see “SVP Switching” ([SVP02-14-10](#))).

When the SVP High Reliability Kit is not installed, skip this step, and go to Step 4.

4. Changing the operation mode

Change the mode to [View Mode].

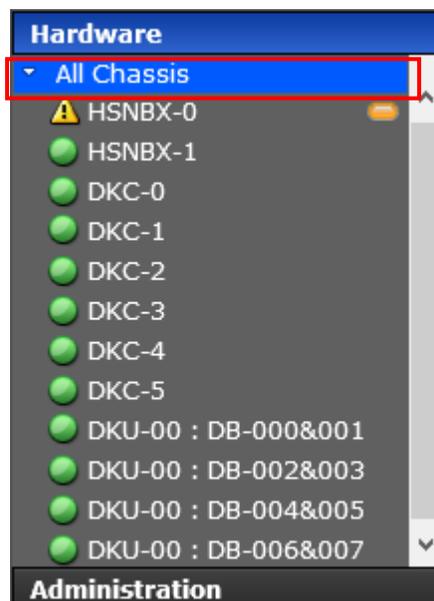
5. Starting Maintenance Utility

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

6. Selecting replacement parts by Maintenance Utility.

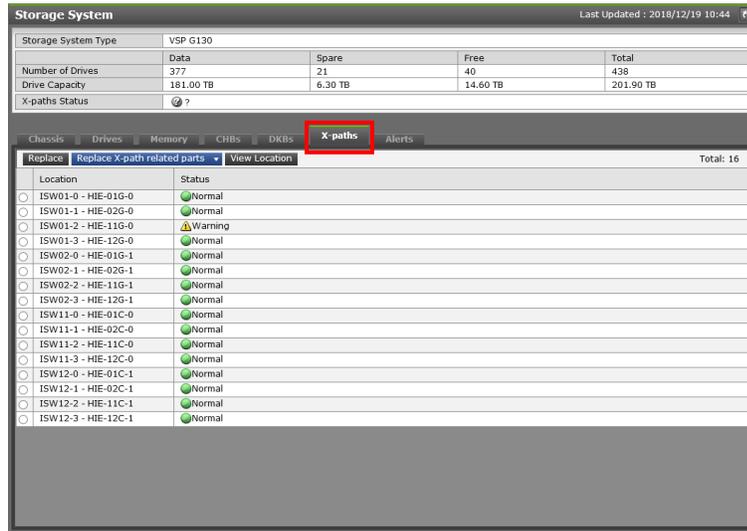
(1) <Main window>

Select [All Chassis] in the main window.



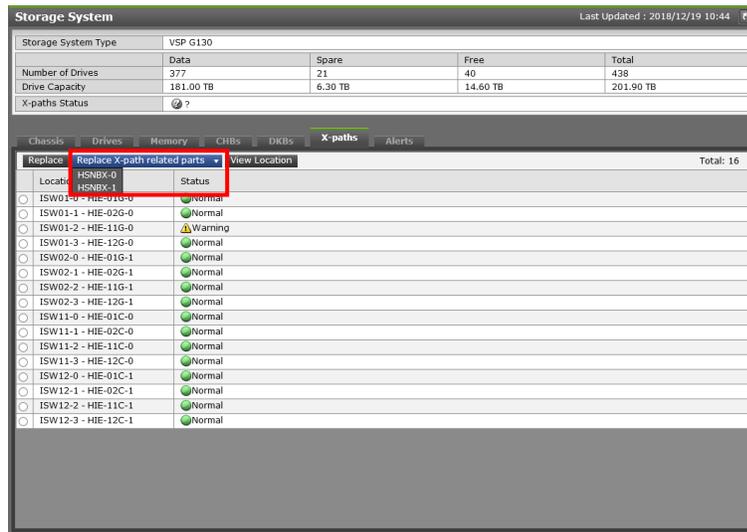
(2) <Storage Systems window>

In the Storage Systems window, click the [X-paths].



(3) <Select HSNBX-x>

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



(4) <Blocking X-path related parts connected to HSNBX-x>

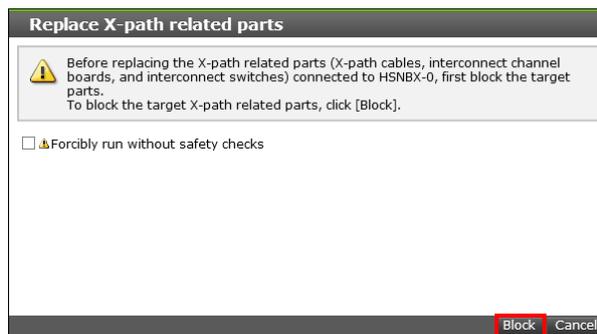
 CAUTION

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.

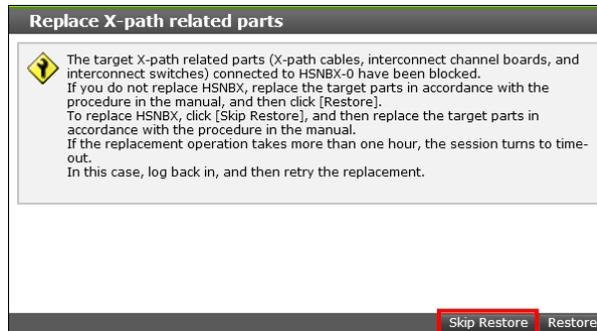
Check that the X-path related parts (X-path cable, Interconnect Channel Board, and Interconnect Switch) which are connected to the HSNBX-x to be replaced are correct, and then click [Block]. If a message other than the described is displayed, refer to Message Section [\(MSG00-00\)](#).

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.



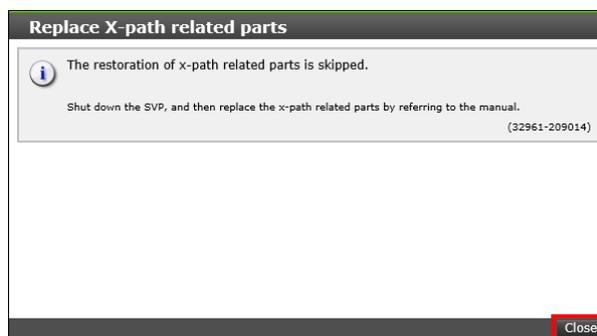
- (5) <Confirming that the preparation for the replacement of the X-path related parts connected to HSNBX-x is completed >

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].



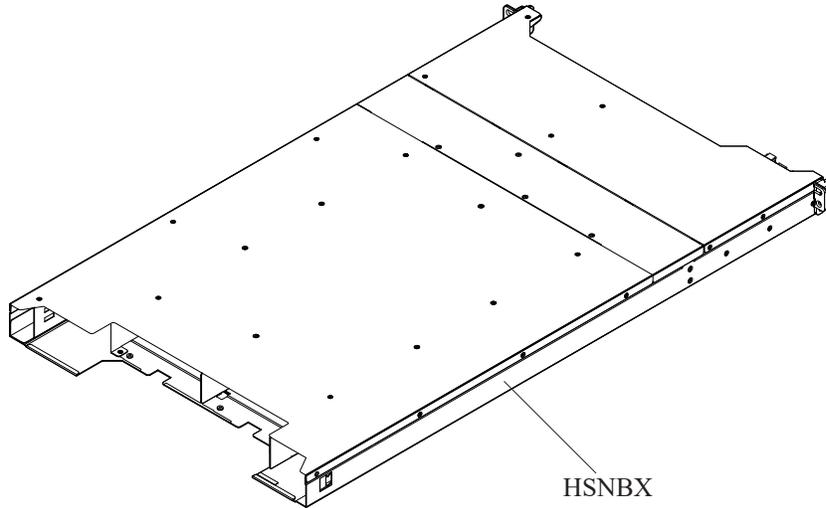
- (7) <Turn ON the SVP RAS switch #1 of the SSVP>

Turn ON the SVP RAS switch #1 of the SSVP. (See [\(LOC03-40\)](#))

- (8) <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 (see [\(LOC03-30\)](#)).

Location	Function Name of Component		Part Name
Rack	1	HSNBX	HSNBX Chassis

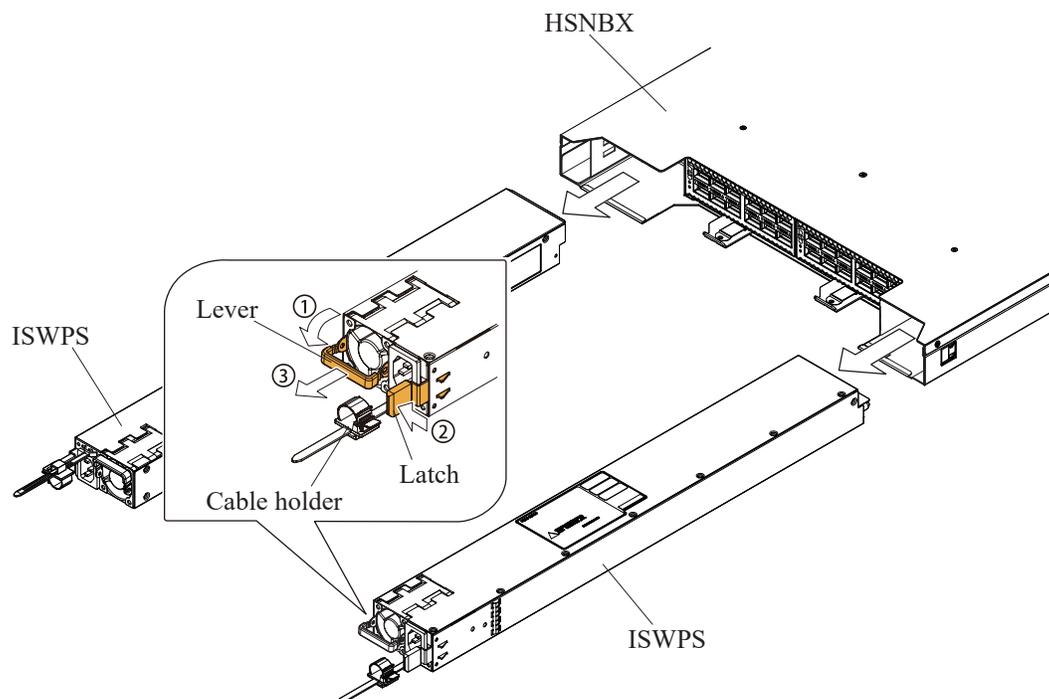


NOTICE: To prevent part failures caused by static electrical charge built up on your own body, be sure to wear a wrist strap connected to the Storage System before starting and do not take it off until you finish. See “Note on Installing and Removing Parts” ([REP\(GE\)01-30](#)).

7. Removing the ISWPS

- (1) Remove the power cable from the cable holder on the ISWPS, and then disconnect the power cable from the ISWPS.
- (2) Tilt down the lever toward you (①).
- (3) Pull the lever (③) while pressing the latch inward (②).
- (4) Pull out the ISWPS while holding it with your hands to remove it.
- (5) Remove the other ISWPS in the same way.

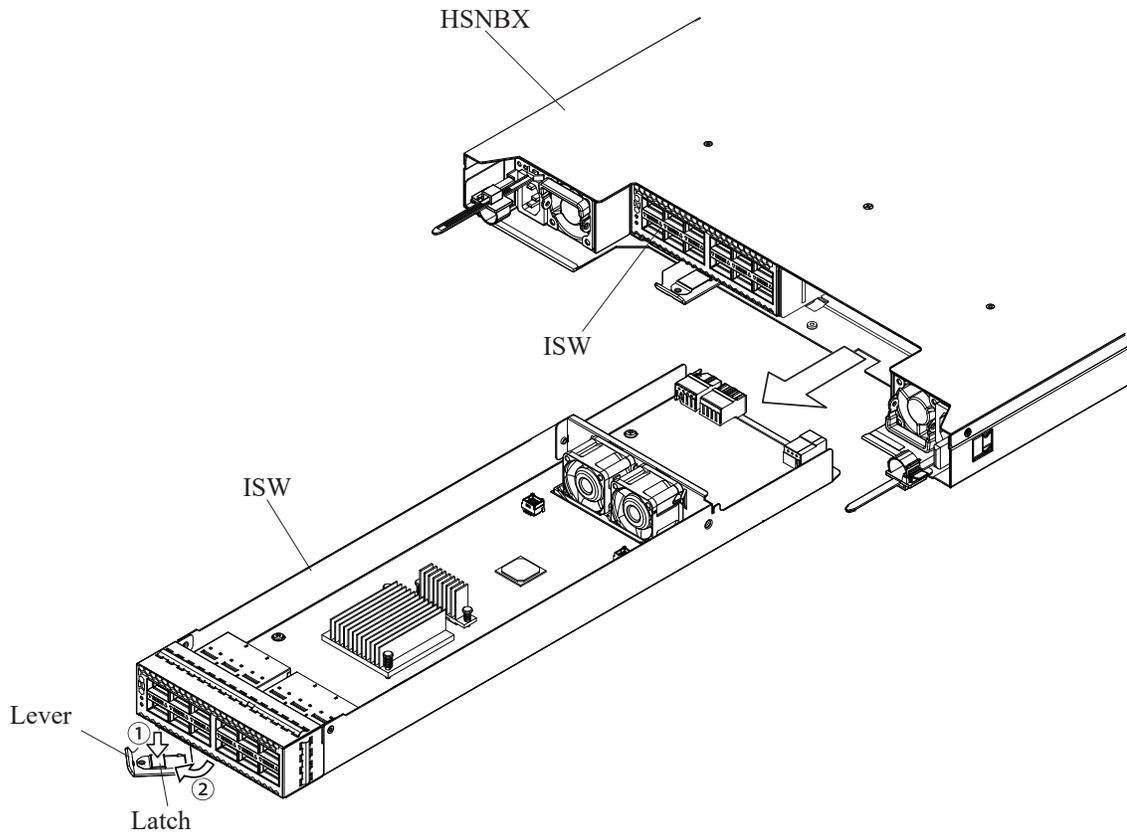
Figure 1-1 Removing the ISWPS



8. Removing the ISW

- (1) Remove all the X-path cables connected to the ISW.
- (2) Open the lever while pressing its latch securing the ISW.
- (3) Open the lever completely until the ISW is pulled out toward you.
- (4) Remove the ISW by pulling it out while holding it with your hands.
- (5) Remove the other ISW in the same way.

Figure 1-2 Removing the ISW



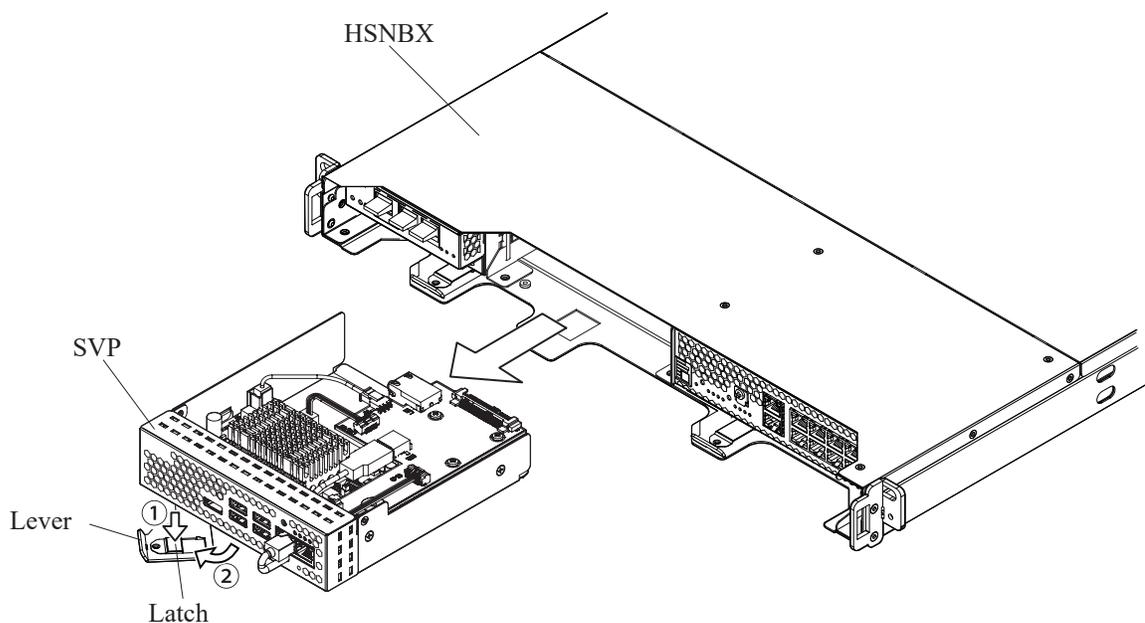
9. Remove the Front Bezel.

- (1) Remove the Front Bezel from the HSNBX. (Refer to “How to Attach/Remove Front Bezel” (REP(GE)08-10).)

10. Removing the SVP

- (1) Remove all the cables connected to the SVP.
- (2) Open the lever while pressing its latch securing the SVP.
- (3) Open the lever completely until the SVP is pulled out toward you.
- (4) Remove the SVP by pulling it out while holding it with your hands.

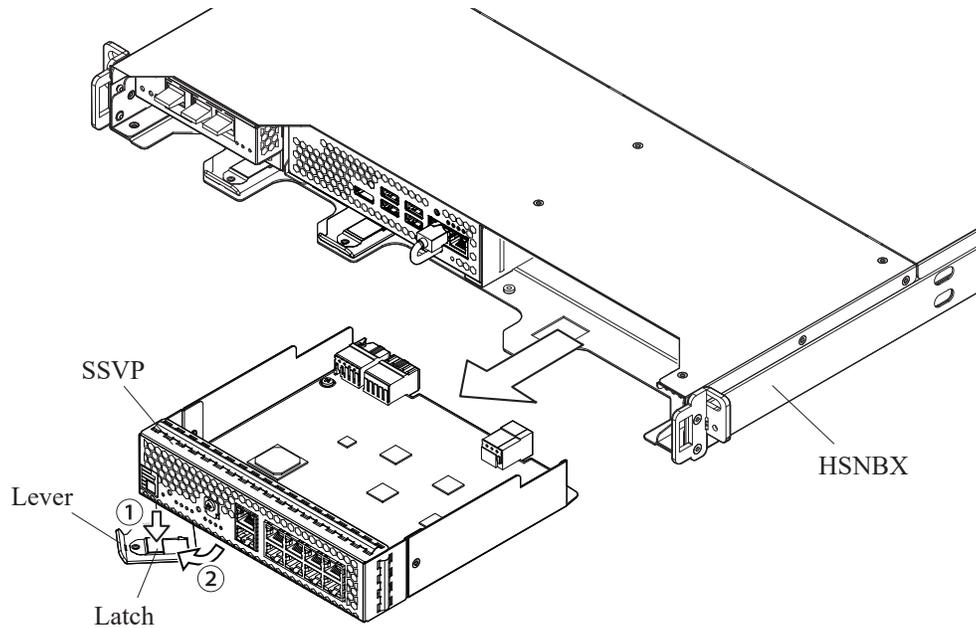
Figure 1-3 Removing the SVP



11. Removing the SSVP

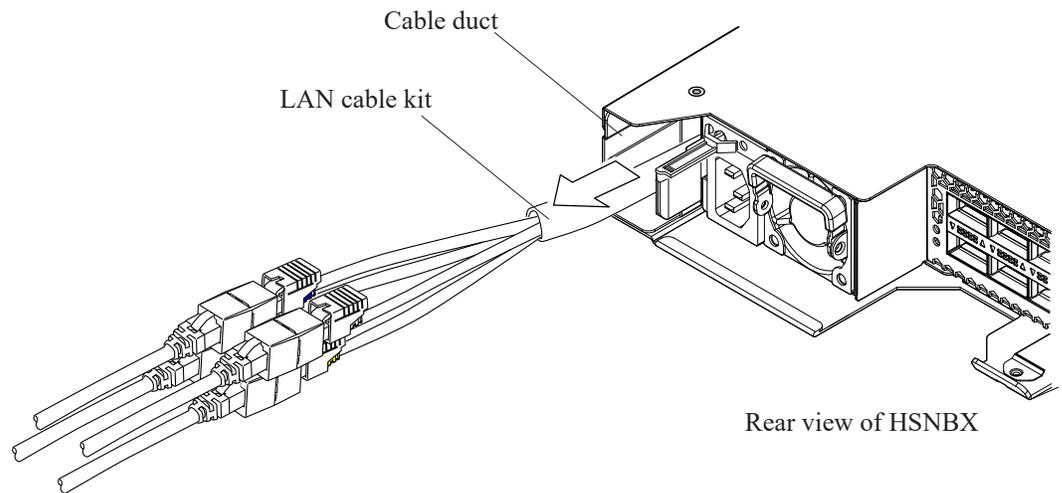
- (1) Remove all the LAN cables connected to the SSVP.
- (2) Open the lever while pressing its latch securing the SSVP.
- (3) Open the lever completely until the SSVP is pulled out toward you.
- (4) Remove the SSVP by pulling it out while holding it with your hands.

Figure 1-4 Removing the SSVP



- (5) Remove the LAN cable kit by pulling it out from the cable duct opening on the rear side of the HSNBX.

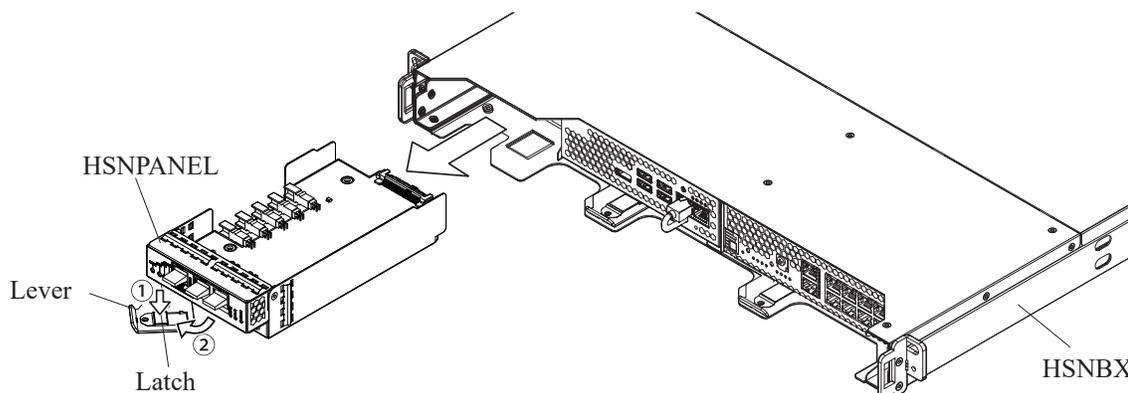
Figure 1-5 Removing LAN cable kit



12. Removing the HSNPANEL

- (1) Open the lever while pressing its latch securing the HSNPANEL.
- (2) Open the lever completely until the HSNPANEL is pulled out toward you.
- (3) Remove the HSNPANEL by pulling out it while holding it with your hands.

Figure 1-6 Removing the HSNPANEL



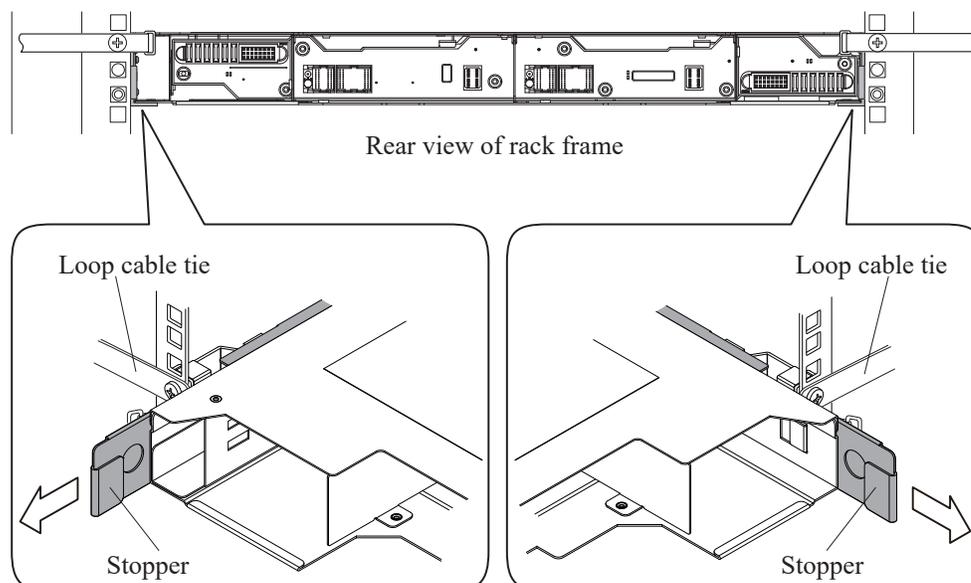
13. Removing the HSNBX

⚠ CAUTION

If the chassis falls, you might be injured. When pulling the chassis beyond the red line marked on the top surface of the chassis, hold it tight with your hands.

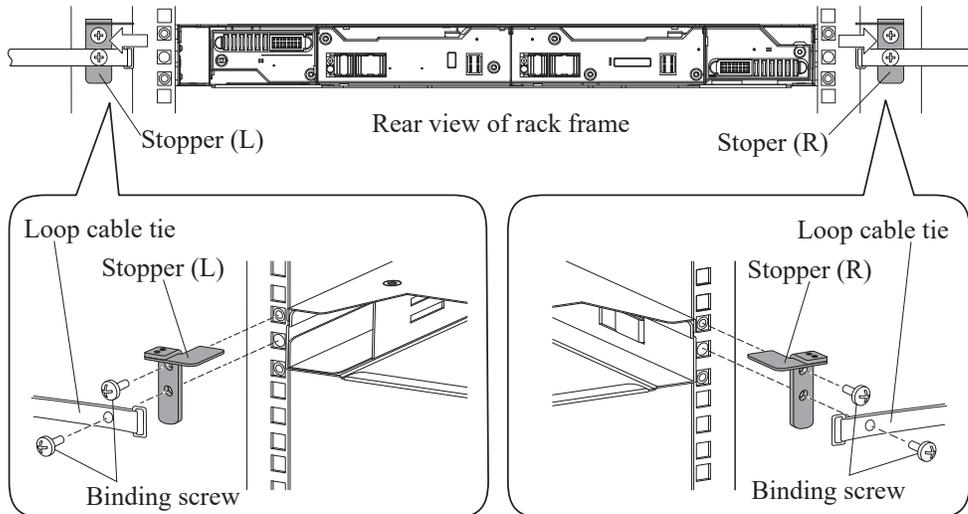
- (1) For the rail type without a stopper, go to [Step \(2\)](#).
For the rail type with a stopper, pull the right and left stoppers on the rear side of the rack toward you.
Go to [Step \(3\)](#).

Figure 1-7 Pulling Stoppers (for Rail Type with a Stopper)



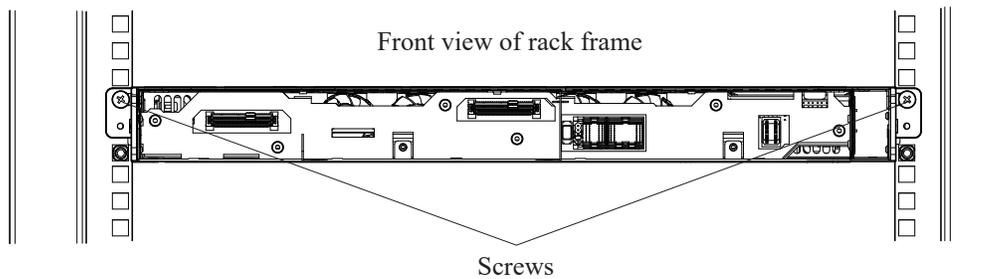
- (2) Remove the stopper (R), the stopper (L), and the binding screws (two for each stopper) fixing the loop cable ties from the rear side of the rack.

Figure 1-8 Removing Stoppers



- (3) Remove the two screws securing the HSNBX on the right and left sides.
- (4) Remove the HSNBX from the front side of the rack.

Figure 1-9 Removing the HSNBX



14. Attach the nameplate.

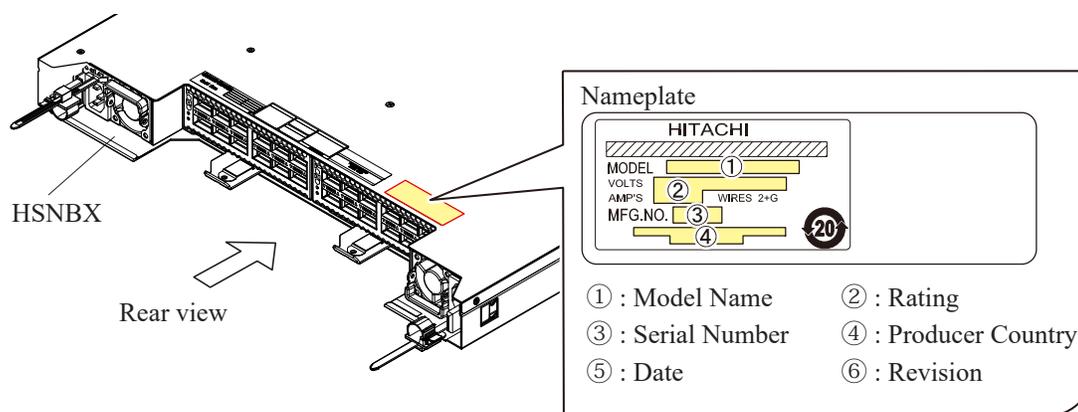
Take out the nameplate in which the same model name as the removed HSNBX is described from the nameplates attached to the spare HSNBX. Write down the same serial number as the removed HSNBX in the nameplate, and then affix the nameplate to the spare HSNBX.

When the nameplate in which the same model name as the removed HSNBX is described is not attached, take out the nameplate in which the same rating and producer country as the removed HSNBX are described and which the model name is not described.

Write down the same model name and serial number as the removed HSNBX in the nameplate, and then affix it to the spare HSNBX.

To fill in the nameplate, use the RoHS-compliant marker pen.

Figure 1-10 Attachment of Nameplate



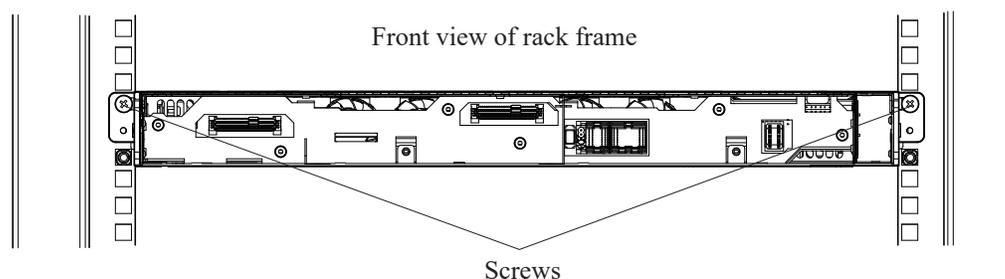
15. Installing the HSNBX

⚠ CAUTION

If the chassis falls, you might be injured. When pulling the chassis beyond the red line marked on the top surface of the chassis, hold it tight with your hands.

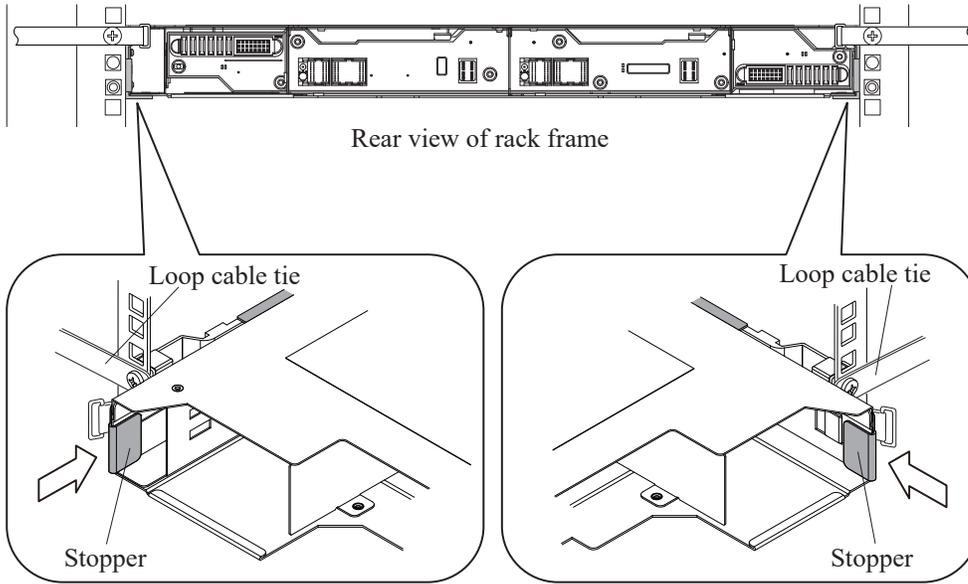
- (1) Install the new HSNBX to the front side of the rack.
- (2) Tighten the two screws to secure the HSNBX on the right and left sides.

Figure 1-11 Installing the HSNBX



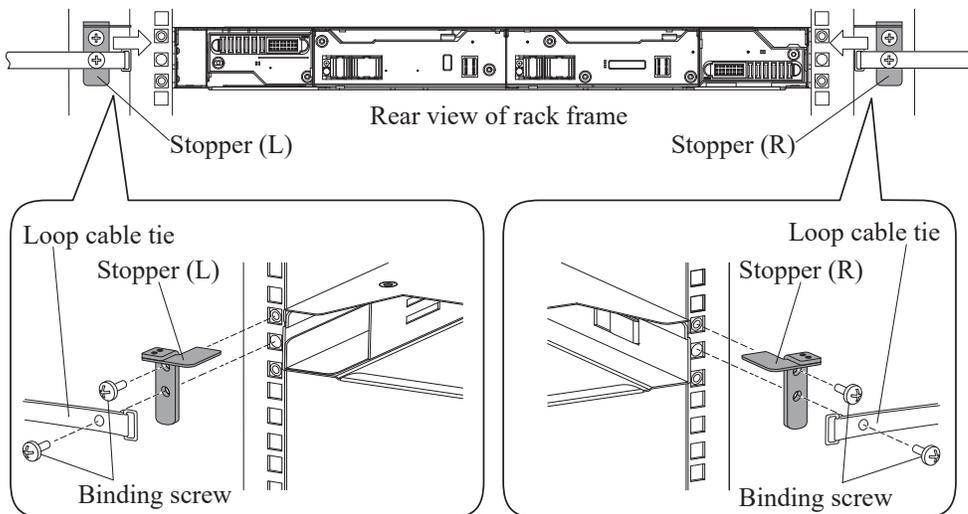
- (3) For the rail type without a stopper, go to **Step (4)** to install the stoppers.
For the rail type with a stopper, push the stoppers to secure the right and left sides of HSNBX.

Figure 1-12 Pushing Stoppers (for Rail Type with a Stopper)



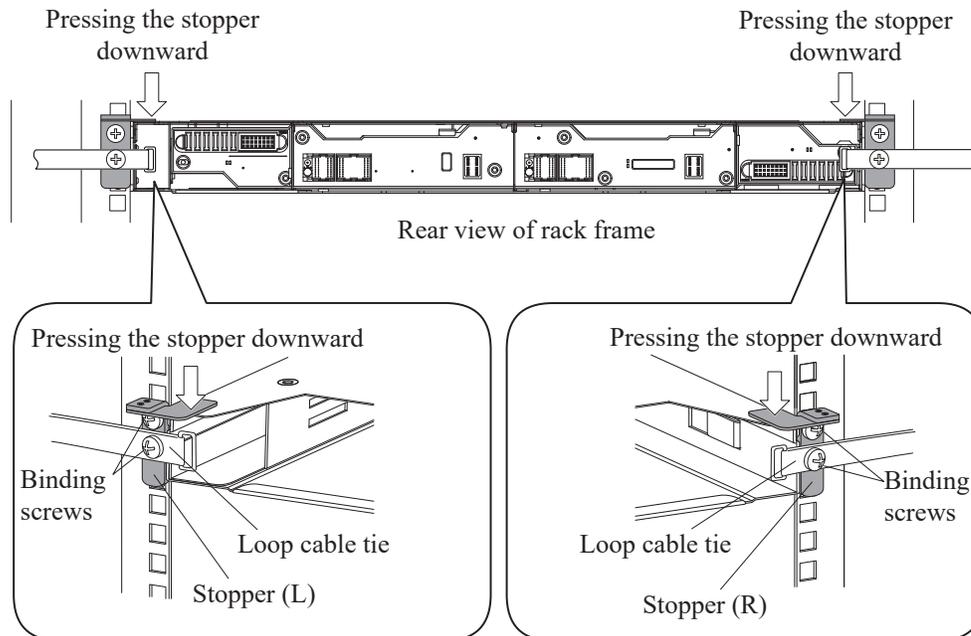
- (4) Fix the stopper (L) and loop cable tie with the two binding screws temporarily.
- (5) Fix the stopper (R) and loop cable tie with the two binding screws temporarily.

Figure 1-13 Installing Stoppers



- (6) Fix the stopper (L) with the two binding screws while pressing it downward.
- (7) Fix the stopper (R) with the two binding screws while pressing it downward.

Figure 1-14 Fixing Stoppers



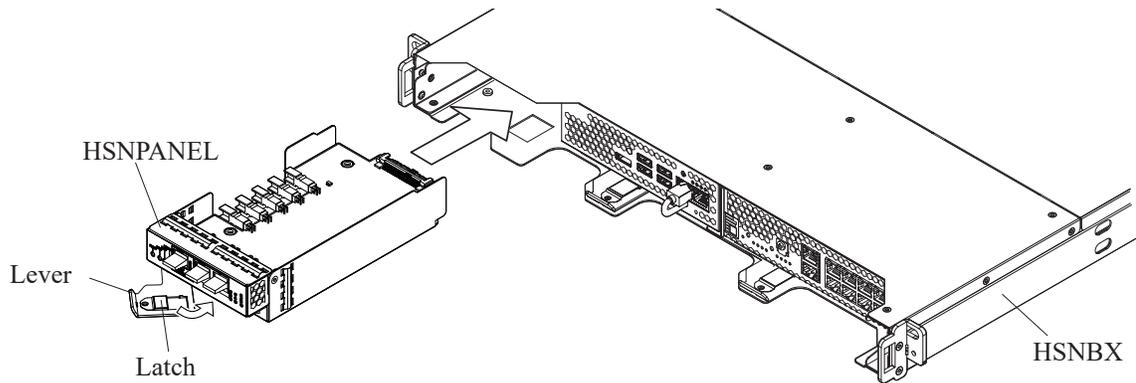
- (8) Check that the top surface of the Controller Chassis is fit on the stopper (L) and the stopper (R) without gaps.
(The stoppers might be rotated and raised by tightening the binding screws.)

NOTE: When the installation of the stoppers is difficult because the space between the Controller Chassis and the Chassis above it is too narrow, contact the Technical Support Division to resolve the problem.

16. Installing the HSNPANEL

- (1) Open the lever on the HSNPANEL completely toward you.
- (2) Insert the HSNPANEL fully and push the lever until the latch on the lever clicks and is locked.

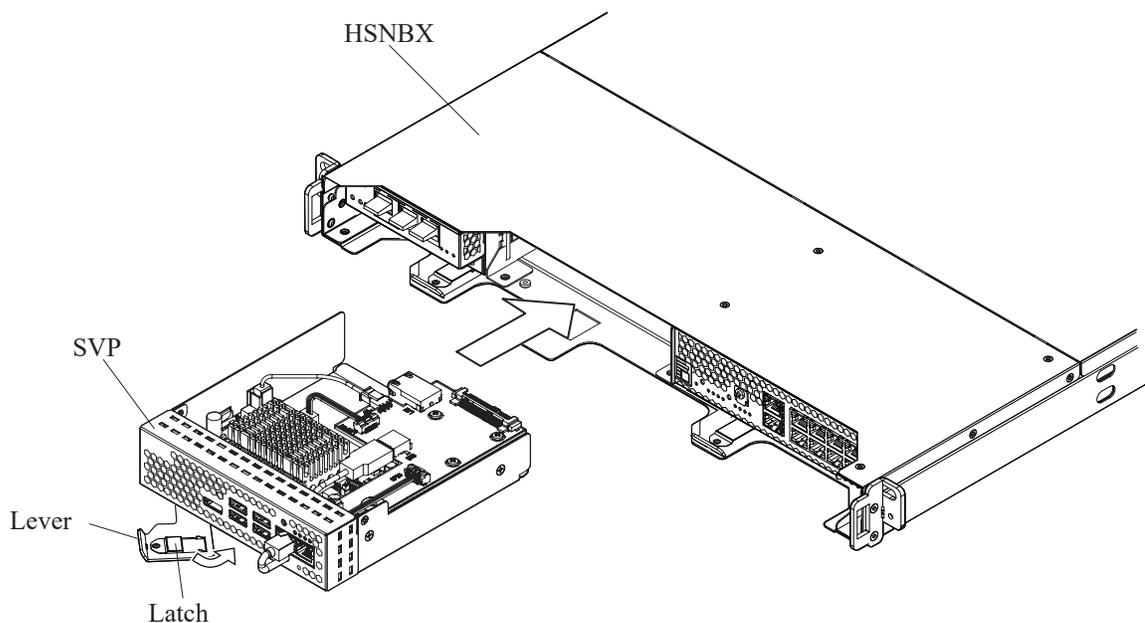
Figure 1-15 Installing the HSNPANEL



17. Installing the SVP

- (1) Open the lever on the SVP completely toward you.
- (2) Insert the SVP fully and push the lever until the latch on the lever clicks and is locked.
- (3) If you have removed the cables in [Step 10](#), connect all the cables.

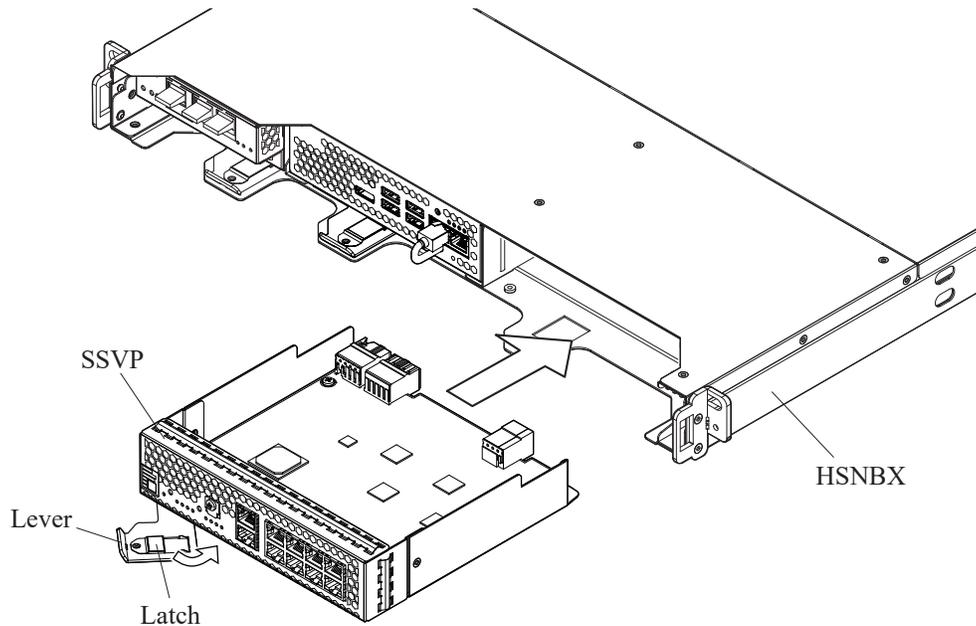
Figure 1-16 Installing the SVP



18. Installing the SSVP

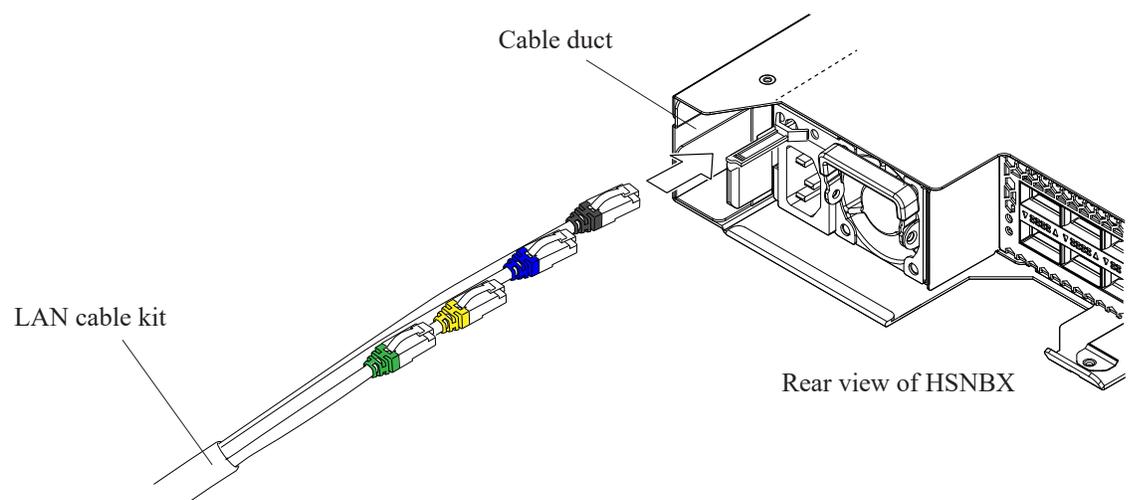
- (1) Open the lever on the SSVP completely toward you.
- (2) Insert the SSVP fully and push the lever until the latch on the lever clicks and is locked.
- (3) Turn OFF the SVP RAS Switch #1.

Figure 1-17 Installing the SSVP



- (4) Pass the LAN cable kit through the cable duct in the left corner of the back side of the HSNBX to the front side.

Figure 1-18 Passing LAN cable kit



- (5) Connect all the connectors of the LAN cable kit to the LAN ports on the SSVP.
Connect the LAN cables ([INST\(IN\)09-03-10](#)).

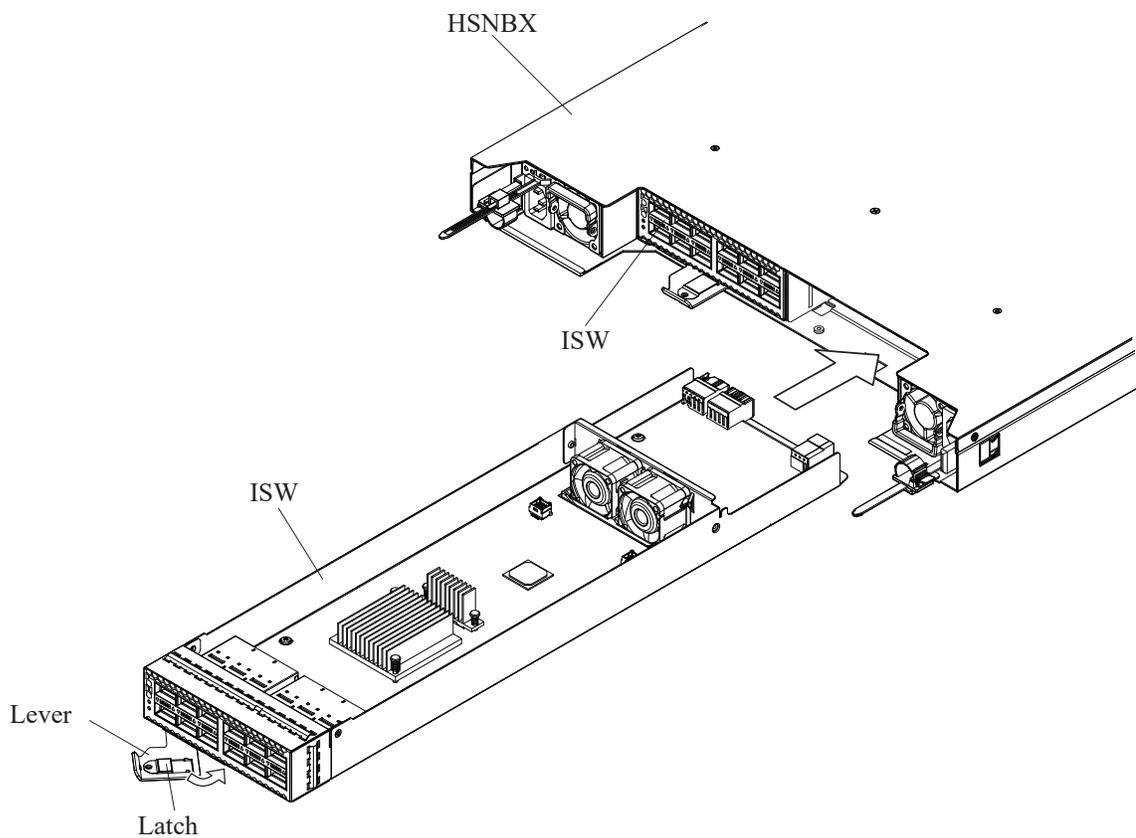
19. Installing the ISW

- (1) Completely open the lever on the ISW to be installed toward you.
- (2) Insert the ISW fully and push the lever until the latch on the lever clicks and is locked.
- (3) Install the other ISW in the same way.
- (4) Connect the X-Path cables to the new HIE.

Connect the X-path cables according to “X-path Cable Diagram” ([LOC05-70](#)).

- NOTE:
- Check that the latches clicks and the cables are firmly connected.
 - When connecting an X-path cable, be careful not to damage the edge of the cable (see “Precautions when Connecting X-Path Cables” ([INST\(IN\)09-02-10](#))).

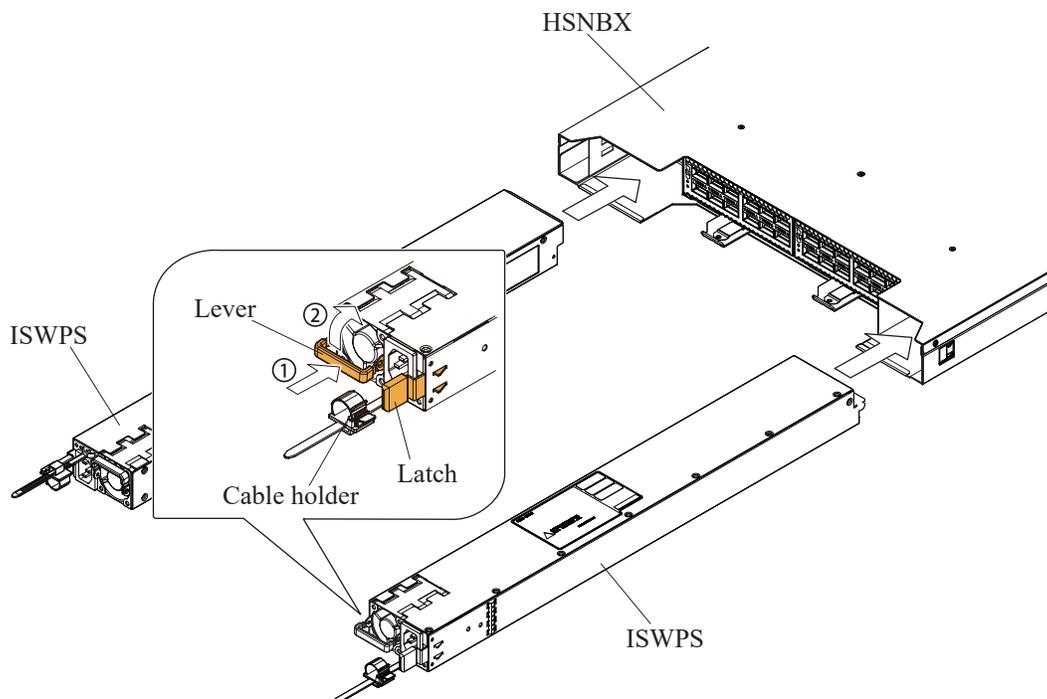
Figure 1-19 Installing the ISW



20. Installing the ISWPS

- (1) Pull up the latch on the cable holder on the ISWPS to release the lock, and then pull out the cable holder toward you.
- (2) Insert the ISWPS into the slot with the lever tilt down toward you completely.
- (3) Insert the ISWPS up to the shield finger.
- (4) Insert the ISWPS slowly until the latch on the cable holder clicks and is locked.
- (5) Tilt up the lever completely.
- (6) Install the other ISWPS in the same way.
- (7) Connect the power cables to both the ISWPS, and then secure the power cables with the cable holders.

Figure 1-20 Installing the ISWPS



21. Attach the Front Bezel.

Attach the Front Bezel to the HSNBX. (See “How to Attach/Remove Front Bezel” ([REP\(GE\)08-10](#).)

22. Check that the POWER LED on the SVP lights up in green.

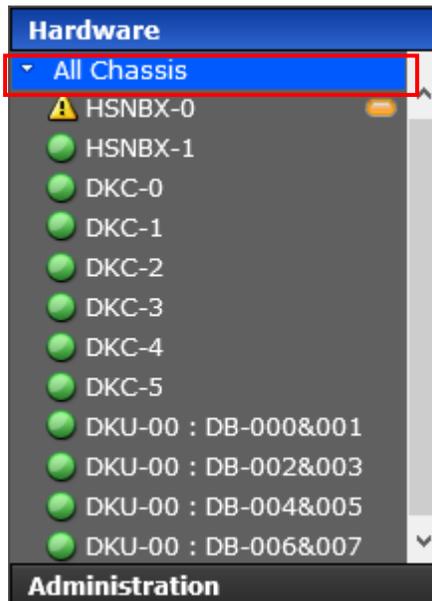
23. Starting Maintenance Utility

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

24. Selecting replacement parts by Maintenance Utility.

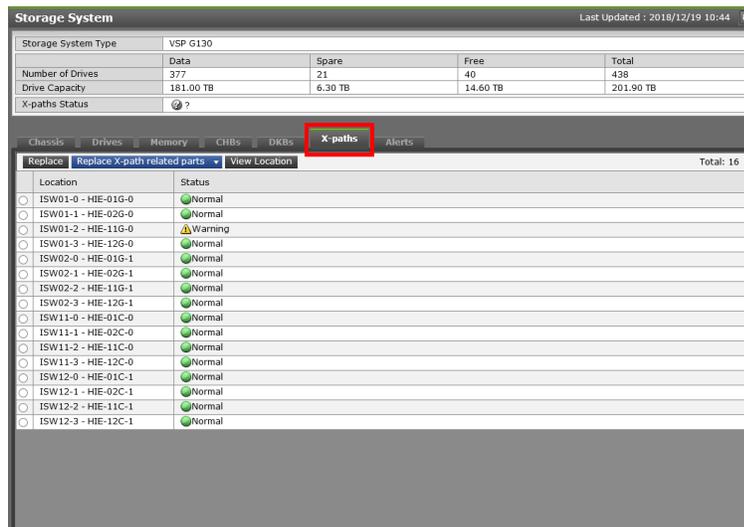
(1) <Main window>

Select [All Chassis] in the main window.



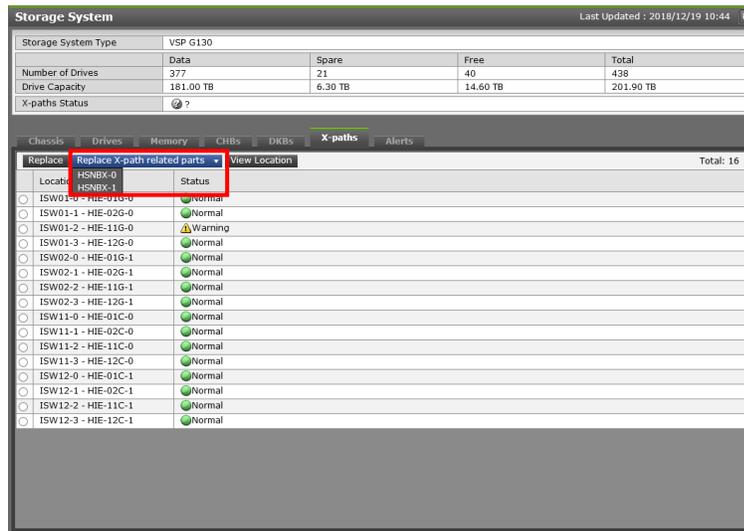
(2) <Storage Systems window>

In the Storage Systems window, click the [X-paths].



(3) <Select HSNBX-x>

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



(4) <Blocking X-path related parts connected to HSNBX-x>

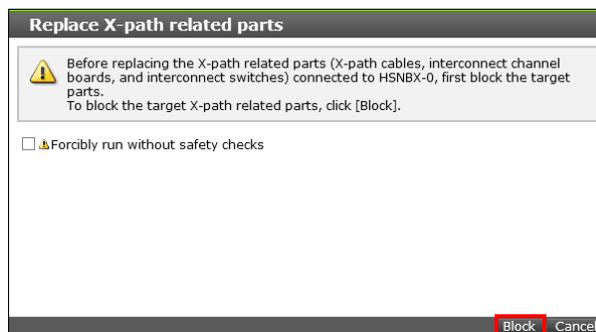
⚠ CAUTION

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).

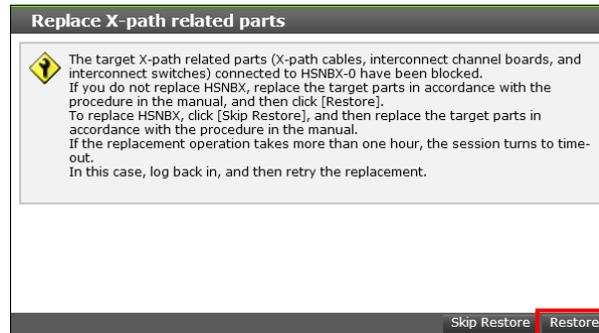
NOTE : The error list window is displayed if multiple errors are detected by the prior check. If it is displayed, click the text of "Error Code" and recover the failures or the blockade in accordance with the details of the displayed errors.



25. Restoring replacement parts by Maintenance Utility

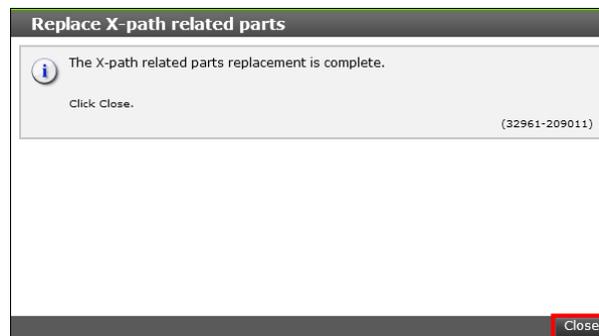
(1) <Restore replacement parts>

Perform the dummy replacement of both ISWs in the newly installed HSNBX for replacement with the X-path cables connected to the ISWs, and then click [Restore]. The dummy replacement of the SVP and the SSVP is not necessary.



(2) <Check replacement parts restoration>

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



(3) Check that the restoration is completed successfully using Maintenance Utility.

26. Check that the READY LED on the front side of the HSNPANEL lights up in green.

27. Closing Maintenance Utility

(1) Click [Logout] to close the window.

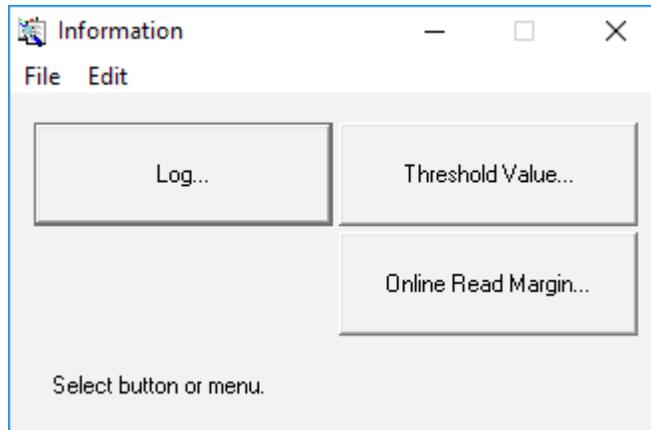
(2) <Get the error information>

Collect small system dumps by referring to [\(SVP02-09-10\)](#) in SVP SECTION.

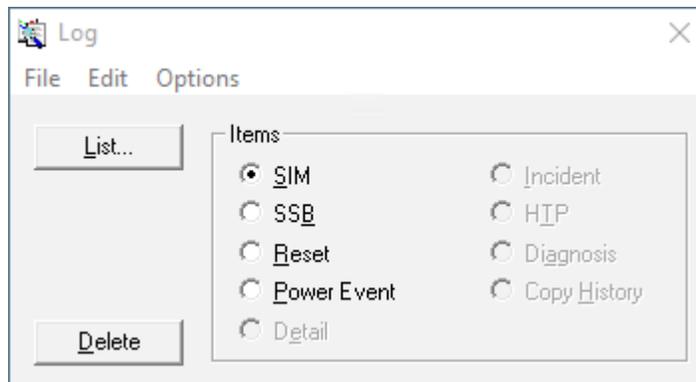
(3) Refer to the SVP SECTION [\(SVP02-21-10\)](#), please upload the error information.

28. Completing the SIM log

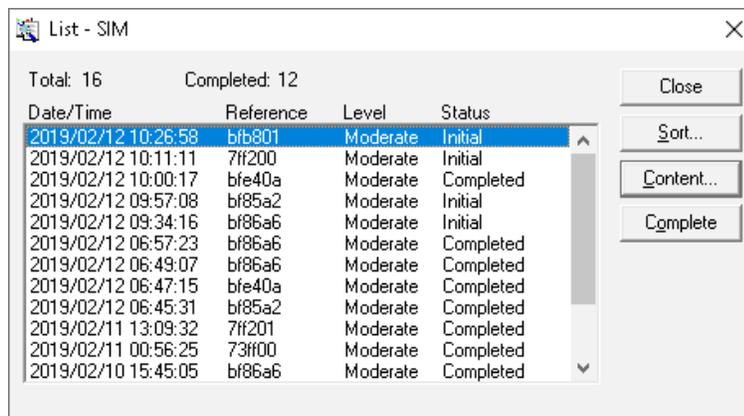
- (1) Change the mode to [Modify Mode], and then select [Information].
- (2) In the Information window, click [Log...].



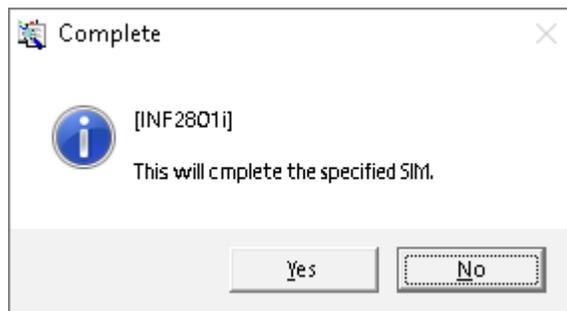
- (3) In the Log window, select [SIM] and then [List...].



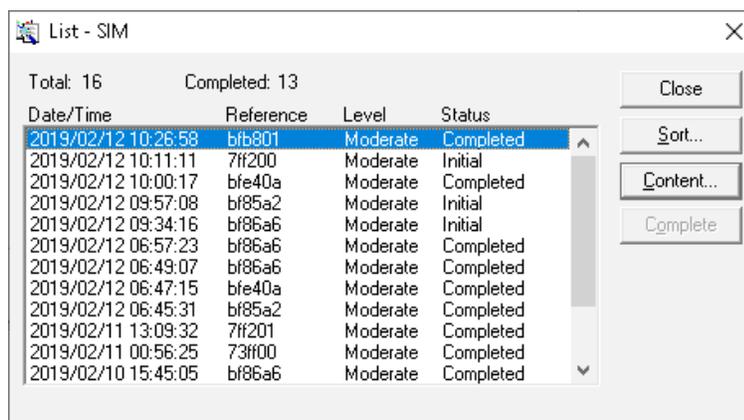
- (4) In the List-SIM window, select the data for which you end the process, and then click [Complete].



- (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.

29. Checking Normality

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