[SVP REPLACEMENT PROCESSING - RSVP]

1. Notes for starting SVP replacement

NOTICE:

- When the Audit Log information which is not downloaded remains, ask the customer to download the Audit Log information as needed.
- When the customer needed to download Performance Monitor of Web Console, ask the customer to download the Performance data.
- When the original key and manifest file for SSL communication of Web Console are installed by the customer request, ask the customer to prepare these data, see “System Administrator Guide”.
- The key management using the key management server might have been performed by the customer request. In this case, confirm with the customer that the encryption environment settings and the client certificate to be used to connect to the key management server are backed up.
- Do not open the User Account Control Settings window of the control panel in SVP operation. If the window is opened, the SVP has to be replaced.
- Do not change the Internal LAN setting from [Auto Negotiation].
- If a message other than those described in this document is displayed during the replacement, see MESSAGE SECTION.
- When the SVP High Reliability Kit is installed for SVP duplication, performing the SVP switching removes the monitoring data of the Performance Monitor for the short range.
- It is necessary to acquire the monitoring data for the short range before performing the SVP switching. Ask the customer to execute the export tool.
- When the SVP High Reliability Kit is installed, SIM RC = bf86a3 (SVP RAS Switch#1 remains (SVP-OPTION)), bfe3a2 (Duplex SVP Setup fail), and 7ff2xx (Standby SVP fail) might occur.
  SIM RC = bf85a3 (SVP RAS Switch#1 remains (SVP-BASIC)) might occur regardless of whether the SVP High Reliability Kit is installed or not.
  However, there is no problem because they occur in process of the SVP replacement.

NOTICE: Check and write down the time zone set on the SVP before replacement.
You need to set the time zone again on the SVP after replacement.

Check procedure:

1. Connect to the SVP to be replaced.

   If you cannot connect to the SVP to be replaced:

   When the SVP High Reliability Kit is installed, connect to the other SVP.
   When the SVP High Reliability Kit is not installed, ask the customer about the time zone settings.

2. Chnage the mode to [Modify Mode].
3. Click [Initial Setting].
4. In the Initial Setting window, click [Set Subsystem Time].
5. In the Set Subsystem Time window, click [Edit] on the menu, then [Change time zone].
6. Write down the set value displayed in the Time Zone Settings window here, and then click [Cancel].
   Time zone settings: _____

NOTICE: Check and write down the [Internal IP Address] set on the SVP before replacement. You need to set the [Internal IP Address] again on the SVP after replacement.

Check procedure:

1. Connect to the SVP to be replaced.

   If you cannot connect to the SVP to be replaced:

   When the SVP High Reliability Kit is installed, connect to the other SVP.
   When the SVP High Reliability Kit is not installed, check the information to be used for the [Internal IP Address] settings by following the procedure described in "Display of IP address of SVP" (LOC03-43).
   If you cannot check the information by performing the procedure in "Display of IP address of SVP" (LOC03-43), get the information from the customer.

2. Chnage the mode to [Modify Mode].
3. Click [Initial Setting].
4. In the Initial Setting window, click [Set IP Address].
5. Write down the set value displayed in the Set IP Address window here, and then click [Cancel].

   Internal IP Address

   IP Address: _____
   Subnet Mask: _____

NOTICE: Check and write down the [External IP Address] set on the SVP before replacement. You need to set the [External IP Address] again on the SVP after replacement.

Check procedure:

1. Connect to the SVP to be replaced.

   If you cannot connect to the SVP to be replaced:

   When the SVP High Reliability Kit is installed, connect to the other SVP.
   When the SVP High Reliability Kit is not installed, ask the customer about the set contents.

2. Click [Start], and then select [Control Panel] from [Windows System].
3. Select [Network and Sharing Center] in the Control Panel window.
4. Select [Change adapter settings] in the Network and Sharing Center window.
5. Right-click [Public LAN], and then click [Properties].
6. Select [Internet Protocol Version 4 (TCP/IPv4)] in the Public LAN Properties window and click [Properties].
7. See the Internet Protocol Version 4 (TCP/IPv4) Properties window display, and write down the set values of [IP address], [Subnet mask], [Default gateway], [Preferred DNS server], and [Alternate DNS server] here. Then, click [Cancel].

   External IP Address (IPv4)

   IP Address: _____
   Subnet Mask: _____
   Default gateway: _____
   Preferred DNS server: _____
   Alternate DNS server: _____

8. When IPv6 is set, from the Public LAN Properties window, select [Internet Protocol Version 6 (TCP/IPv6)], and then click [Properties].
9. See the Internet Protocol Version 6 (TCP/IPv6) Properties window display, and write down the set values of [IP address], [Subnet mask], [Default gateway], [Preferred DNS server], and [Alternate DNS server] here. Then, click [Cancel].

   External IP Address (IPv6)

   IPv6 address: _____
   Subnet prefix length: _____
   Default gateway: _____
   Preferred DNS server: _____
   Alternate DNS server: _____

2. Workflow of SVP replacement

The replacement procedure varies deeming on the installation of the SVP High Reliability Kit, location of the SVP to be replaced, and the SVP status (Master SVP or Standby SVP). Perform the replacement procedure following the workflow below.

Figure 2-1 Workfrow of SVP replacement (1/2)

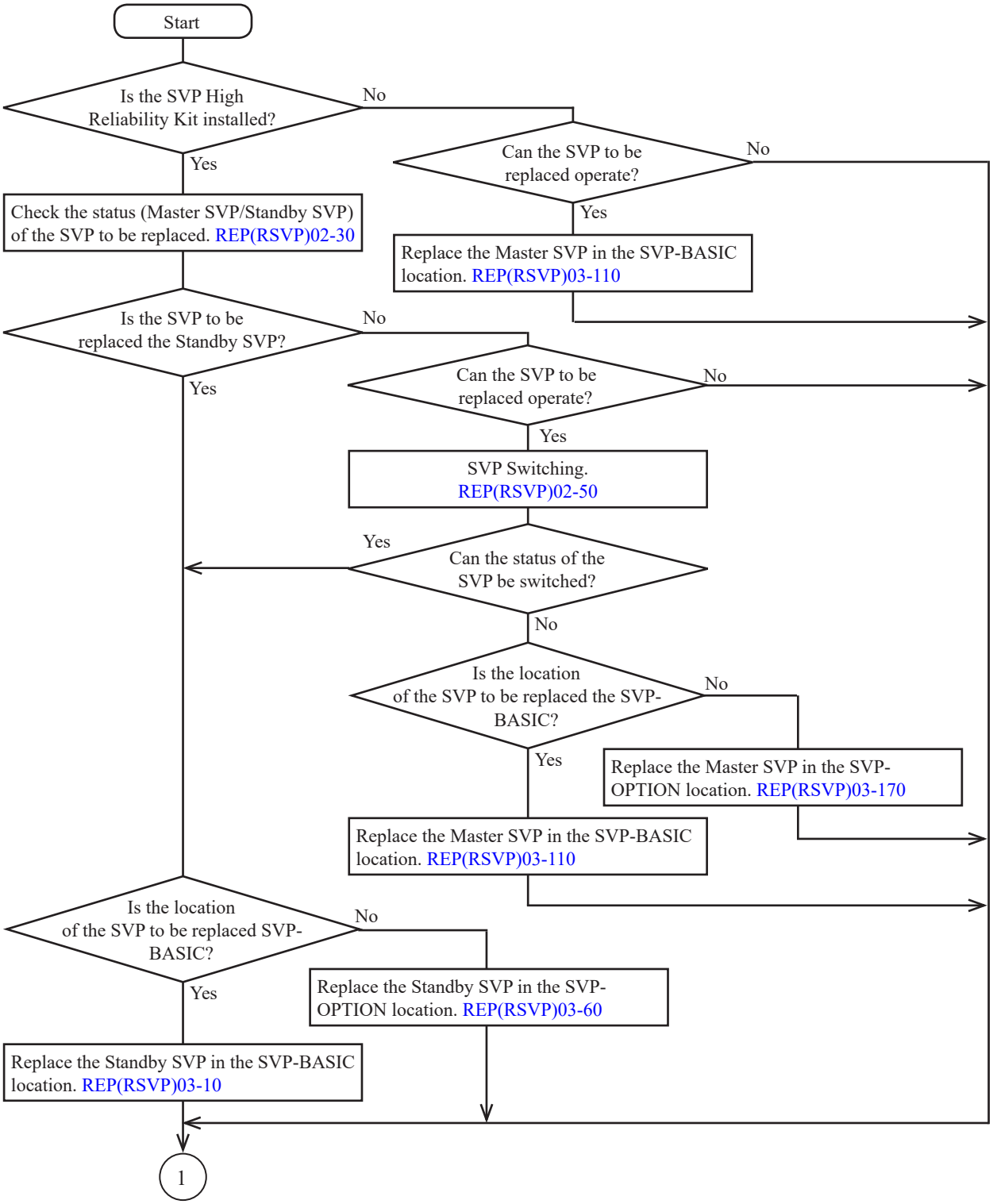
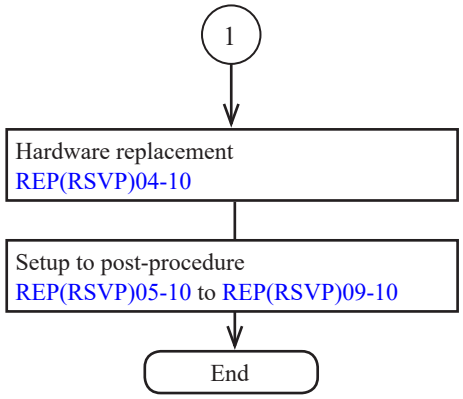


Figure 2-2 Workfrow of SVP replacement (2/2)

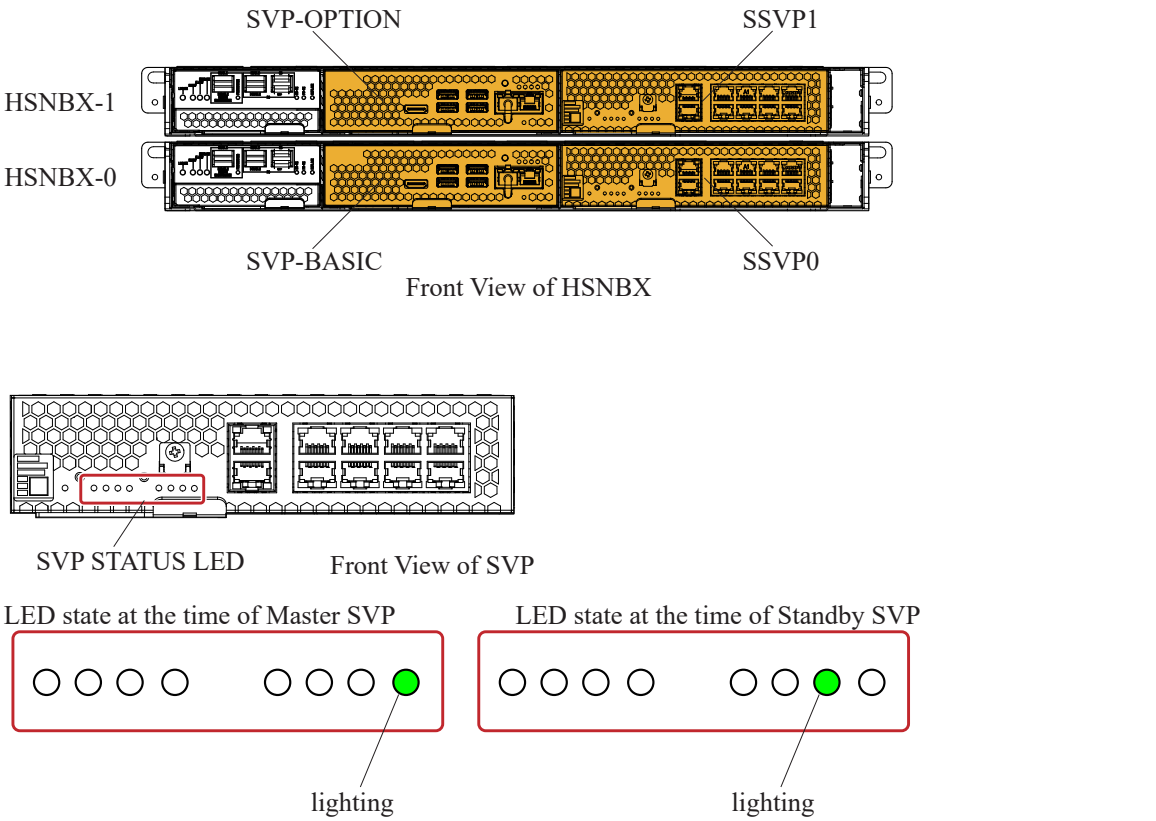


2.1 Checking status (Master SVP/Standby SVP) of SVP to be replaced

Check whether the SVP to be replaced is in the operating status (Master SVP) or in the standby status (Standby SVP) by seeing the LEDs on the SSVP next to the SVP to be replaced.
If a failure occurs in the SVP, the SIM (7ff2xx or 7ff3xx) is reported.
The location of the SVP can be identified by “xx”.

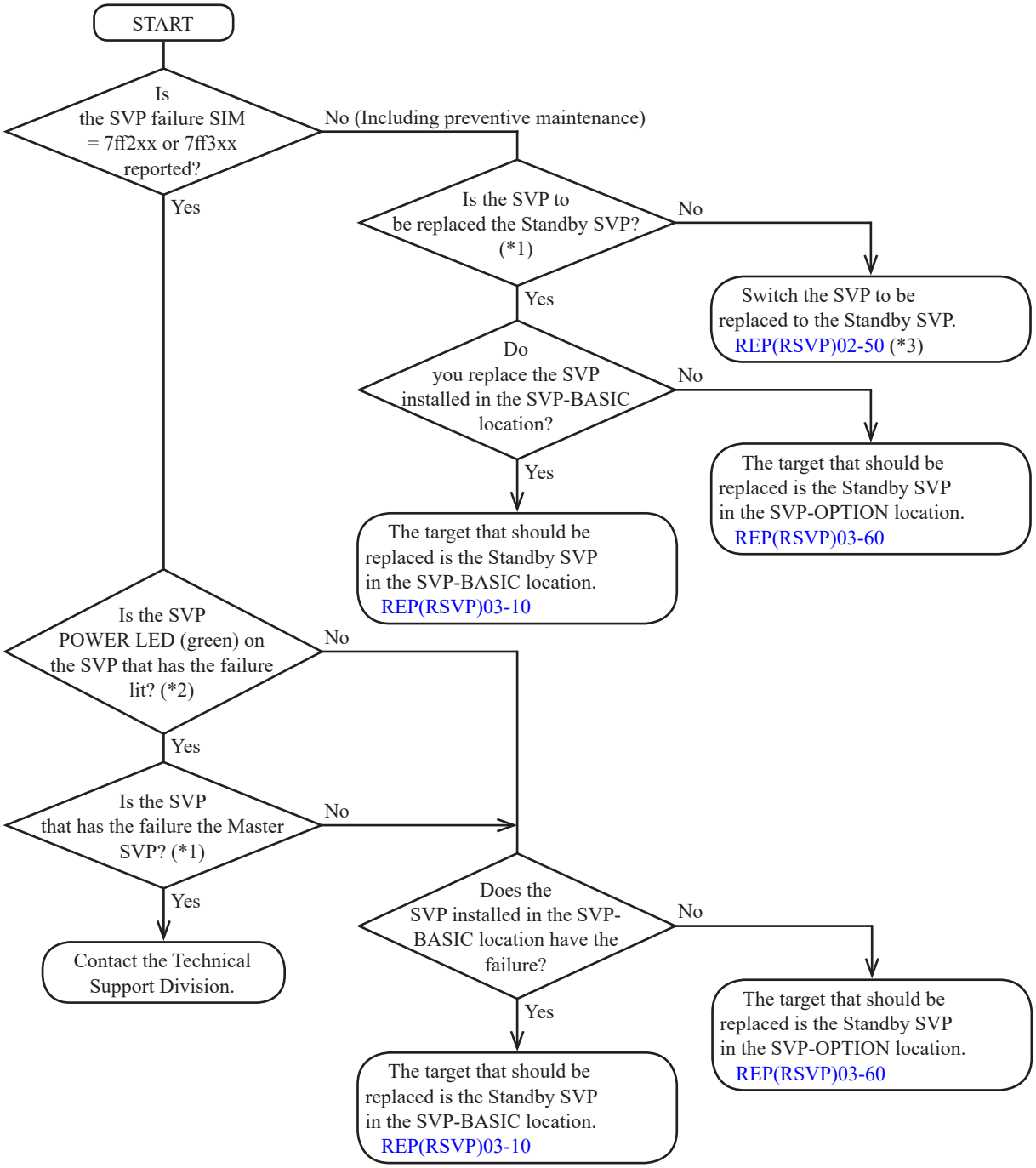
xx = 00 : SVP-BASIC
xx = 01 : SVP-OPTION

Figure 2-3 Locations of the LEDs to Be Checked on SVP/SSVP



Confirm the part targeted for replacement according to Figure 2-4 SVP Status and Target that Should Be Replaced.

Figure 2-4 SVP Status and Target that Should Be Replaced



*1: Identify the Master SVP/Standby SVP by checking the LEDs on the SSVP next to the SVP (see Figure 2-3).
When the lighting statuses of the SVP STATUS LEDs on both SSVPs represent the Master SVP and you cannot check whether the replacement target SVP is the Master SVP or the Standby SVP, see the LEDs on the SVP. If the status of either of the LEDs on the SVP is as follows, the SVP is the Standby SVP (SVP that has the failure).
• The SVP POWER LED is off (meaning that the SVP is powered off).
• The SVP SHUTDOWN LED (red) is on (meaning that the removal of the SVP is possible).

*2: In the case of the configuration with the SVP High Reliability Kit installed, the SVP in which a failure occurs is powered off and the LED on the SVP does not light. Judge the status (Master SVP/Standby SVP) of the SVP to be replaced that is powered off by seeing the LED on the SVP that is powered on.

*3: When the Master SVP needs to be replaced, switch the SVP status to Standby SVP, and then replace the SVP. Only if the SVP status cannot be changed to Standby SVP, replace the Master SVP.

2.2 SVP Switching

This function is valid when the SVP High Reliability Kit is installed.

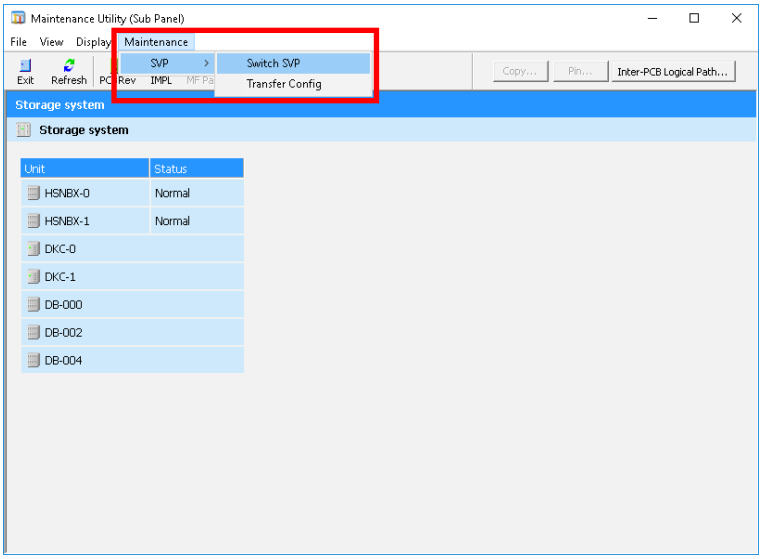
NOTE:
- This operation needs that Standby SVP (IP Address: xxx.xxx.xxx.14) is a View mode.
- When screen saver operates (60 minutes pass without operation) with a Standby SVP having been connected to the remote desktop, this operation fails.
- Performing the SVP switching removes the monitoring data of the Performance Monitor for the short range.It is necessary to acquire the monitoring data for the short range before performing the SVP switching. Ask the customer to execute the export tool.

1. <Connecting the Maintenance PC>
   Connect the maintenance PC to SSVP, and then lon in to the Master 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 Components (General)].

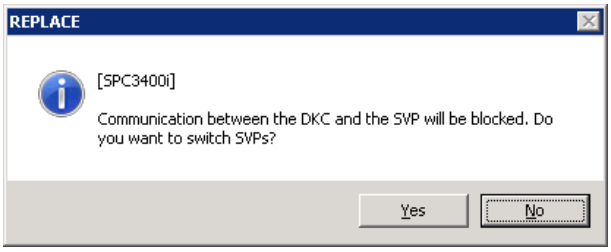
3. <Operation mode change>
   Change the mode to [Modify Mode].
   Click [Maintenance Utility (Sub Panel)].

4. Select [Maintenance]-[SVP]-[Switch SVP] from the menu.

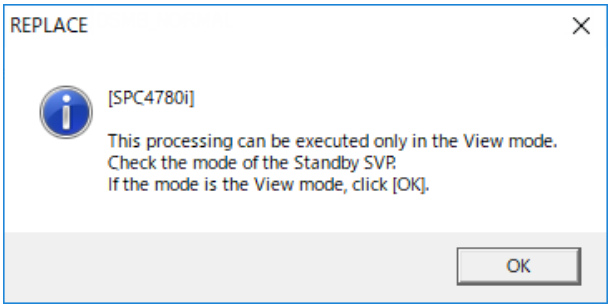


5. <Execution>
   Execute switching.
   Click [Yes].

   NOTE: Switching might take up to 50 minutes.

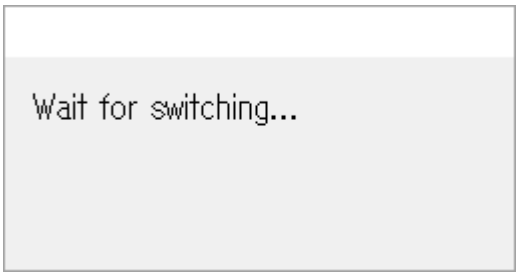


6. <Checking the mode of standby SVP>
   Check the mode of the Standby SVP.
   If the mode is View mode, click the [OK].



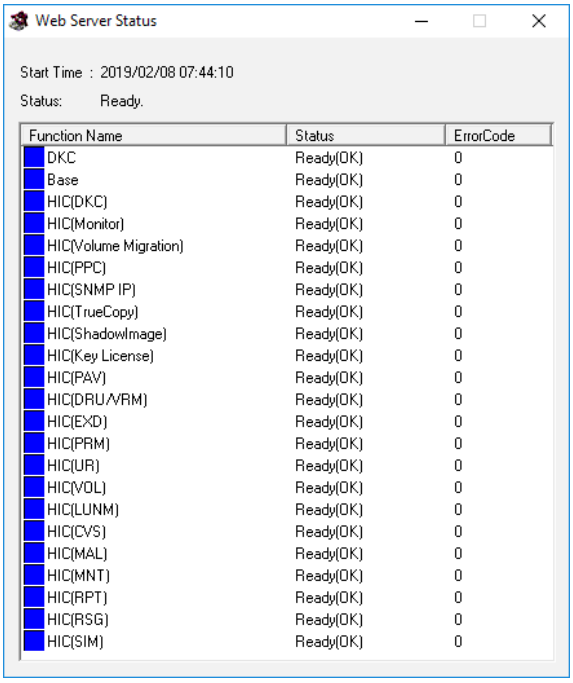
7. <Configuration Information Transfer>
   The message “Transferring storage system configuration data...” is displayed.
   The SVP transfers the configuration information automatically to reflect the configuration information of the Master SVP on the Standby SVP. Therefore, if the transfer processing of the configuration information overlaps, the actually transferred status display may be repeated.
   In such a case, it might take about 40 minutes for the transfer to be completed.

8. <Connection to SVP after Switching Operation>
   It waits for about 3 minutes until a change is completed.
   After Standby SVP starts as Master SVP by the switching indication, use the connection utility connect Maintenance PC and the switched SVP.
   Select IP Address of SVP in the SvpConnectUtility window and click [Connect].
   (IP Address is the same with that of SVP at the time of the SVP switching indication.)



9. <Initial Window>
   Click [Web Server Status].

10. <Web Server Status Window>
    If all function's Status displays Ready, switching is completed.



Function Name	Status	ErrorCode
DKC	Ready(OK)	0
Base	Ready(OK)	0
HIC(DKC)	Ready(OK)	0
HIC(Monitor)	Ready(OK)	0
HIC(Volume Migration)	Ready(OK)	0
HIC(PPC)	Ready(OK)	0
HIC(SNMP IP)	Ready(OK)	0
HIC(TrueCopy)	Ready(OK)	0
HIC(ShadowImage)	Ready(OK)	0
HIC(Key License)	Ready(OK)	0
HIC(PAV)	Ready(OK)	0
HIC(DRU/VRM)	Ready(OK)	0
HIC(EXD)	Ready(OK)	0
HIC(PRM)	Ready(OK)	0
HIC(UR)	Ready(OK)	0
HIC(VOL)	Ready(OK)	0
HIC(LUNM)	Ready(OK)	0
HIC(CVS)	Ready(OK)	0
HIC(MAL)	Ready(OK)	0
HIC(MNT)	Ready(OK)	0
HIC(RPT)	Ready(OK)	0
HIC(RSG)	Ready(OK)	0
HIC(SIM)	Ready(OK)	0

NOTE: The pop-up message to indicate duplicate computer names exist may be displayed depending on network environment on task-tray after the change. Although the message may be displayed, there is especially no problem.

11. Revising the note that you wrote before starting the SVP replacement
    If you have performed the SVP switching, revise the note that you wrote according to "1. Notes for starting SVP replacement" REP(RSVP)01-20 through REP(RSVP)01-30 by following the same procedure.

12. Perform either of the following according to the processing result of the SVP switching and the installation location of the SVP to be replaced.
    - When SVP switching is completed
      If the location of the SVP to the replaced is SVP-BASIC, go to "3.1 Replacement of Standby SVP in SVP-BASIC".
      If the location of the SVP to the replaced is SVP-OPTION, go to "3.2 Replacement of Standby SVP in SVP-OPTION".

    - When SVP switching is failed
      If the location of the SVP to the replaced is SVP-BASIC, go to "3.3 Replacement of Master SVP in SVP-BASIC".
      If the location of the SVP to the replaced is SVP-OPTION, go to "3.4 Replacement of Master SVP in SVP-OPTION".

3. Pre-processing of SVP replacement

3.1 Replacement of Standby SVP in SVP-BASIC

Perform the pre-processing for replacing the Standby SVP in the SVP-BASIC location.

1. <Dump collection>
   Before replacing the failed Standby SVP, collect the dump from the Standby SVP for failure analysis.
   Specify “Rapid” for the dump type, perform the dump collection, and then replace the Standby SVP.
   (1) Connect the Maintenance PC to SSVP, and then log in to the Standby SVP.
   - “Attachment/Removal Procedure of Maintenance PC” (INST(IN)13-02-10)
   - “Connection to the SVP” (SVP01-30)

   (2) Collect the Rapid dump. (SVP02-09-10)

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2. <Connecting the Maintenance PC>
   Connect the maintenance PC to SSVP, and then log on to the Master SVP.

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3. <Starting the SVP window>
   From the menu of Web Console, click [Maintenance Components] - [Maintenance Components (General)].

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4. <Operation mode change>
   Change the mode to [Modify Mode].
   Click [Maintenance Utility (Sub Panel)].

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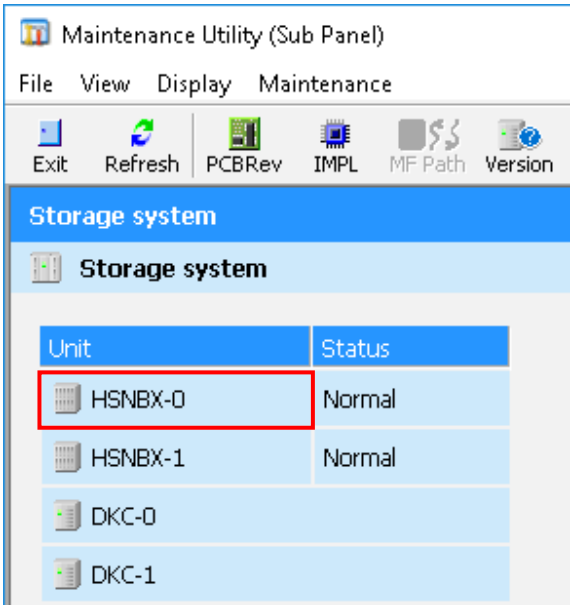
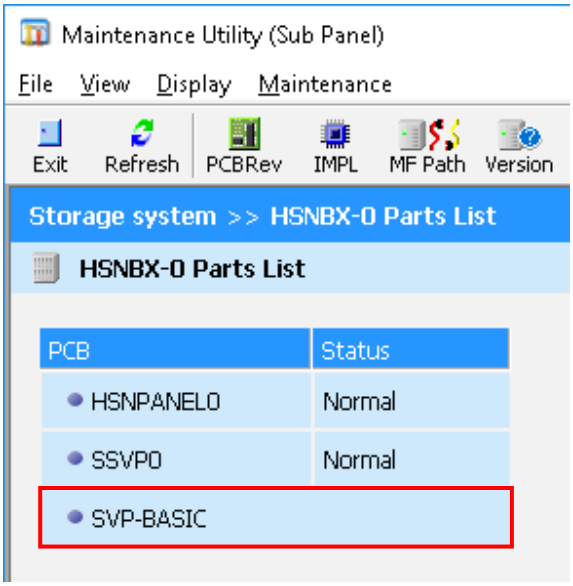
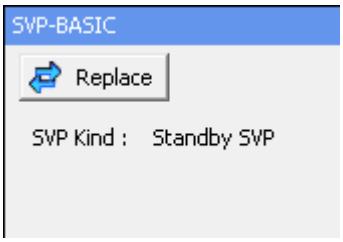
5. <Maintenance Utility (Sub Panel) window>
   In the Maintenance Utility (Sub Panel) window, click [HSNBX-0].



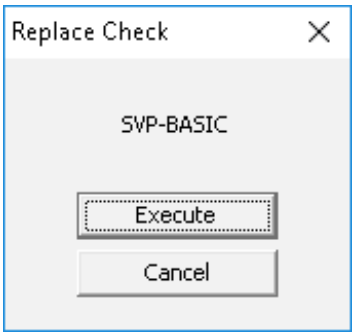
6. <Specify SVP>
   Click [SVP-BASIC].



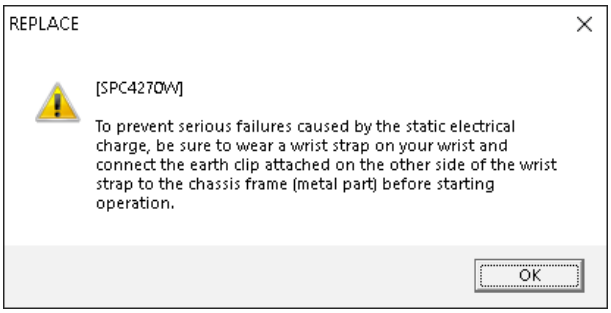
7. Click [Replace].



8. <Execute>
   The Replace Check window is displayed.
   Click [Execute].



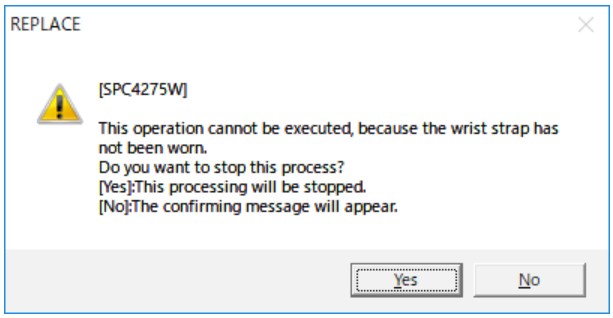
9. <Wear a wrist strap without fail>
   The message “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.” is displayed.



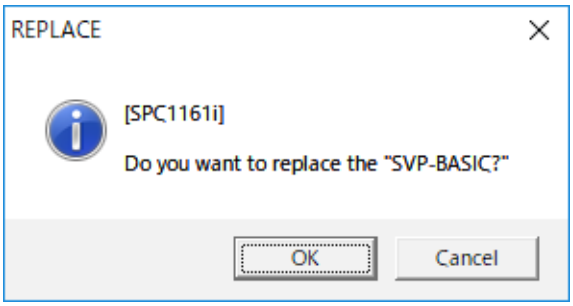
   Wear a wrist strap, and then click [OK].
   The message “Did you put on a wrist strap on your wrist?” is displayed.
   Click [Yes], and then go to Step 10.

   NOTE: If you are not wearing a wrist strap, click [No] in response to the message above. Then, the message below is displayed. Click [Yes] to stop the processing, wear a wrist strap, and then resume the operation.

   “This operation cannot be executed, because the wrist strap has not been worn.
   Do you want to stop this process?
   [Yes]: This processing will be stopped.
   [No]: The confirming message will appear.”

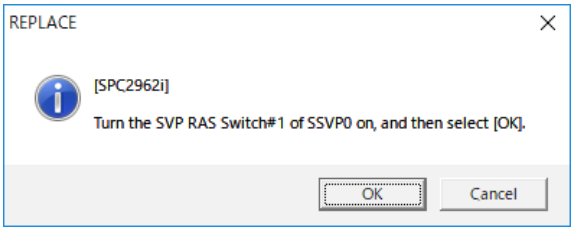


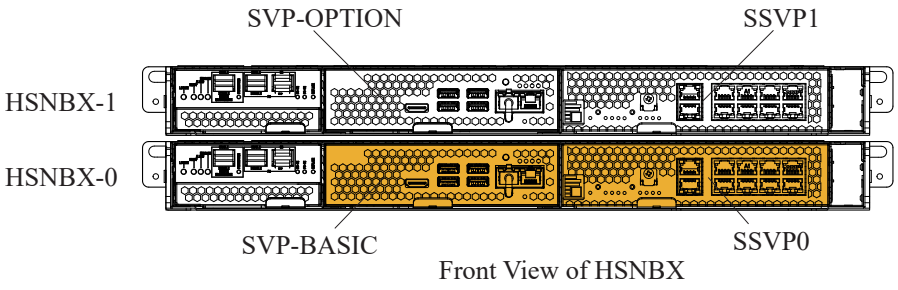
10. <Check beginning of SVP Replacement>
    The message, “Do you want to replace the “SVP-BASIC?”” is displayed.
    When you perform the replacement, click [Yes].
    Go to Step 11.



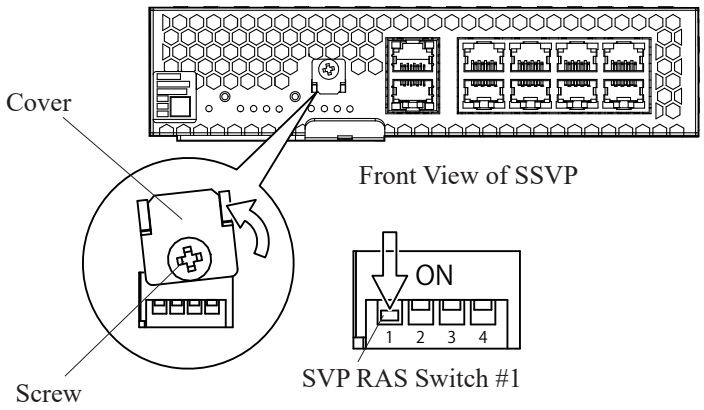
11. <Entering the RAS Switch#1>
    Turn ON SVP RAS Switch#1 of the SSVP0 and click [OK] following the message, “Turn the SVP RAS Switch#1 of SSVP0 on, and then select [OK].”

    NOTE: Use an object with a sharp edge such as a pair of tweezers to manipulate the SVP RAS switch.





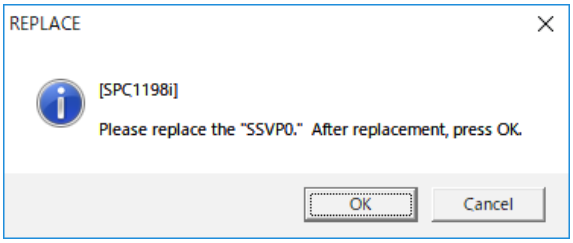
Front View of HSNBX



Front View of SSVP

12. <Standby SVP replacement>
    The message “Please replace the “SSVP0.” After replacement, press OK.” is displayed.

    NOTE: In this step, do not click [OK] and then proceed to the procedure Go to “4. HARDWARE REPLACEMENT PROCESSING”.
    After replacing the Standby SVP, click [OK] in the procedure “5.1 Ending the hardware replacement work”.



3.2 Replacement of Standby SVP in SVP-OPTION

Perform the pre-processing for replacing the Standby SVP in the SVP-OPTION location.

1. <Dump collection>
   Before replacing the failed Standby SVP, collect the dump from the Standby SVP for failure analysis.
   Specify “Rapid” for the dump type, perform the dump collection, and then replace the Standby SVP.
   (1) Connect the maintenance PC to the SSVP, and then log in to the Standby SVP.
   - “Attachment/Removal Procedure of Maintenance PC” (INST(IN)13-02-10)
   - “Connection to the SVP” (SVP01-30)

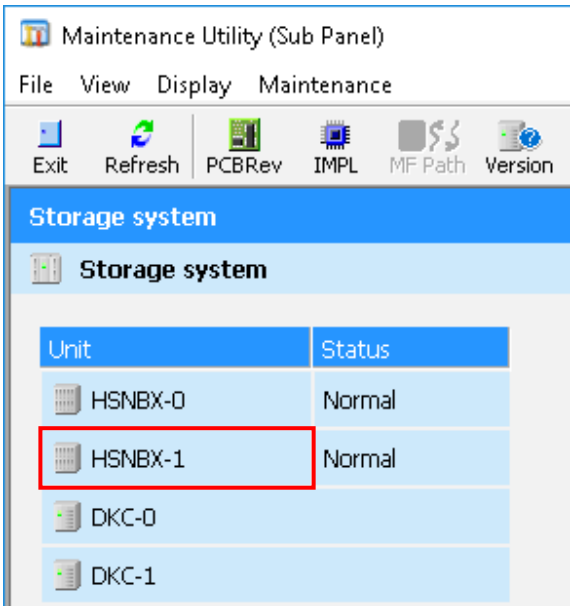
   (2) Collect the Rapid dump. (SVP02-09-10)

2. <Connecting the Maintenance PC>
   Connect the maintenance PC to the SSVP, and then log in to the Master SVP.

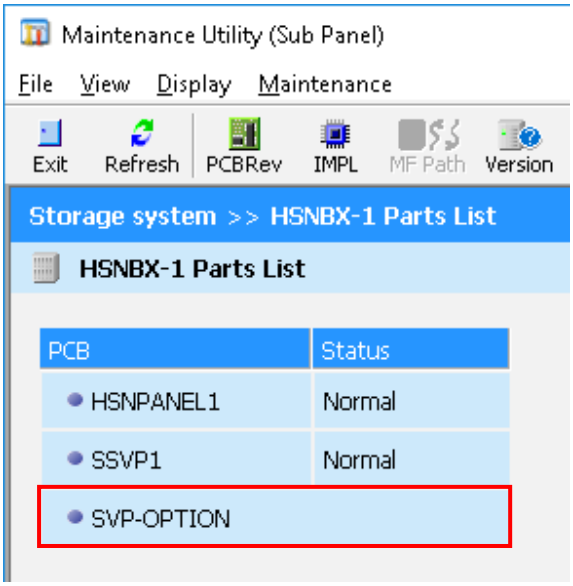
3. <Starting the SVP window>
   From the menu of Web Console, click [Maintenance Components] - [Maintenance Components (General)].

4. <Operation mode change>
   Change the mode to [Modify Mode].
   Click [Maintenance Utility (Sub Panel)].

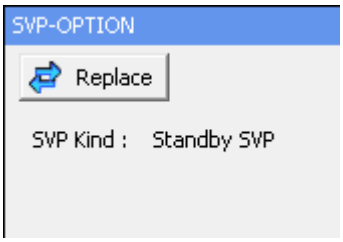
5. <Maintenance Utility (Sub Panel) window>
   In the Maintenance Utility (Sub Panel) window, click [HSNBX-1].



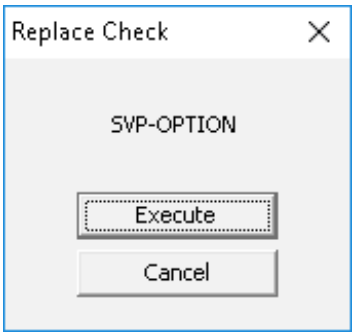
6. <Specify SVP>
   Click [SVP-OPTION].



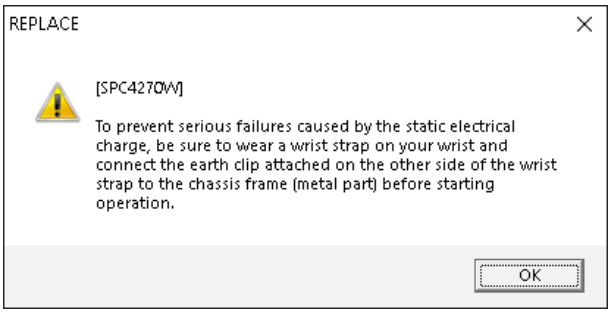
7. Click [Replace].



8. <Execute>
   The Replace Check window is displayed.
   Click [Execute].



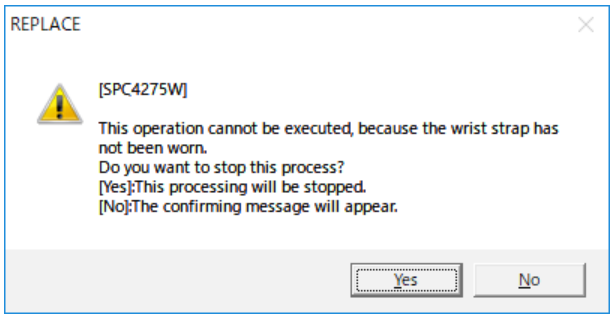
9. <Wear a wrist strap without fail>
   The message “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.” is displayed.



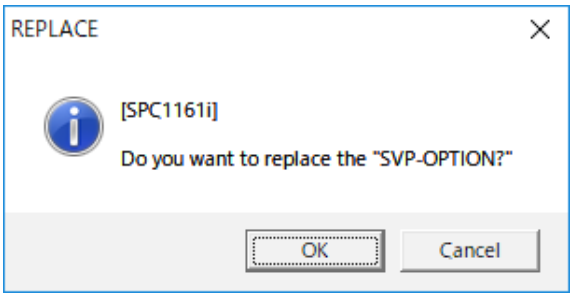
   Wear a wrist strap, and then click [OK].
   The message “Did you put on a wrist strap on your wrist?” is displayed.
   Click [Yes], and then go to Step 10.

   NOTE: If you are not wearing a wrist strap, click [No] in response to the message above. Then, the message below is displayed. Click [Yes] to stop the processing, wear a wrist strap, and then resume the operation.

   “This operation cannot be executed, because the wrist strap has not been worn.
   Do you want to stop this process?
   [Yes]: This processing will be stopped.
   [No]: The confirming message will appear.”

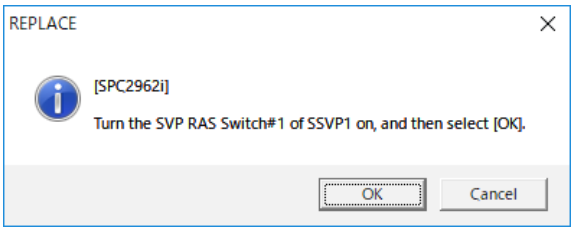


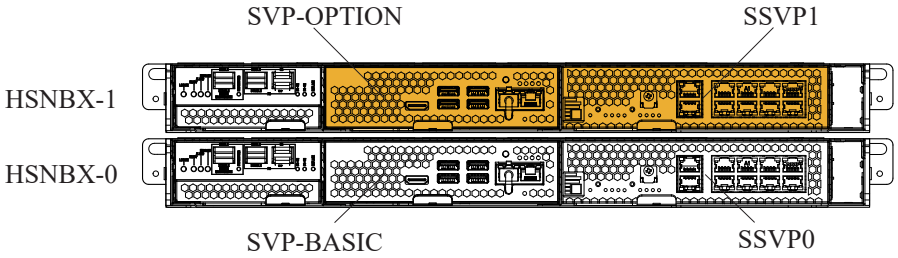
10. <Check beginning of SVP Replacement>
    The message, “Do you want to replace the “SVP-OPTION?”” is displayed.
    When you perform the replacement, click [Yes].



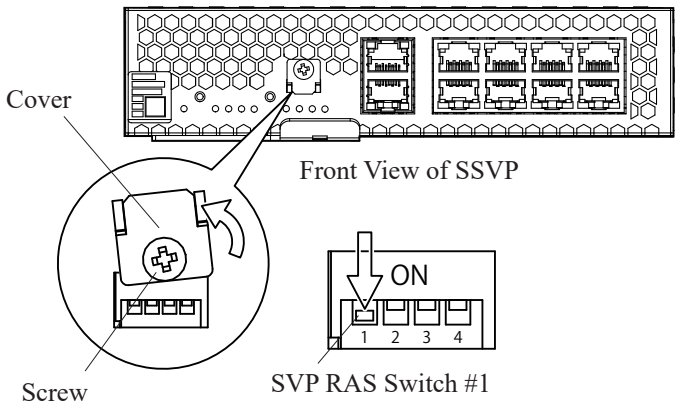
11. <Entering the RAS Switch#1>
    Turn ON SVP RAS Switch#1 of the SSVP1 and click [OK] following the message, “Turn the SVP RAS Switch#1 of SSVP1 on, and then select [OK].”

    NOTE: Use an object with a sharp edge such as a pair of tweezers to manipulate the SVP RAS switch.





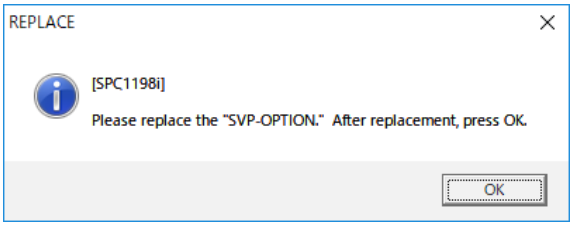
Front View of HSNBX



Front View of SSVP

12. <Standby SVP replacement>
    The message “Please replace the “SVP-OPTION.” After replacement, press OK.” is displayed.

    NOTE: In this step, do not click [OK] and then proceed to the procedure Go to “4. HARDWARE REPLACEMENT PROCESSING”.
    After replacing the Standby SVP, click [OK] in the procedure “5.1 Ending the hardware replacement work”.



3.3 Replacement of Master SVP in SVP-BASIC

Perform the pre-processing for replacing the Master SVP in the SVP-BASIC location.

1. <Storage Navigator setting information downloading>
   Ask the customer to download the Storage Navigator setting information file.
   Restore the user account information and the environment setting information by the download file (See "7.7.3 Setting the user account information and the environment setting information".).
   If the file cannot be downloaded, restore them by using the download file that the customer has.
   For how to download, refer to "System Administrator Guide".

2. <Connecting the Maintenance PC>
   Connect the maintenance PC to the Master SVP.
   (1) Connect the maintenance PC to the SSVP, and then log in to the Master SVP.
   - "Attachment/Removal Procedure of Maintenance PC" (INST(IN)13-02-10)
   - "Connection to the SVP" (SVP01-30)

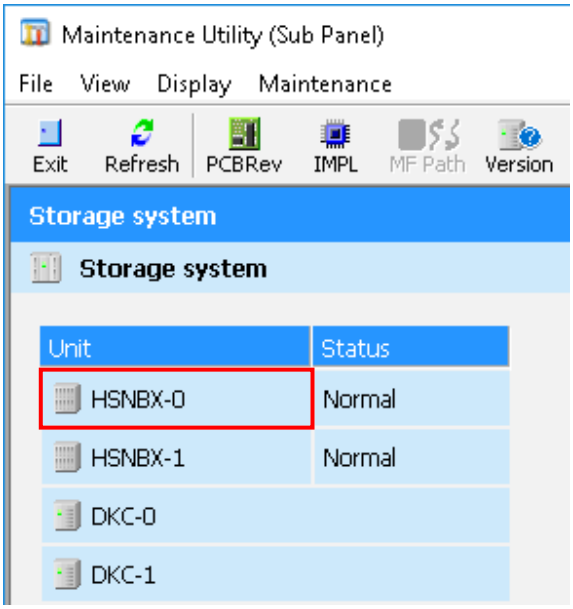
   If the SVP cannot be operated, go to "4. HARDWARE REPLACEMENT PROCESSING".

3. <Starting the SVP window>
   From the menu of Web Console, click [Maintenance Components] - [Maintenance Components (General)].

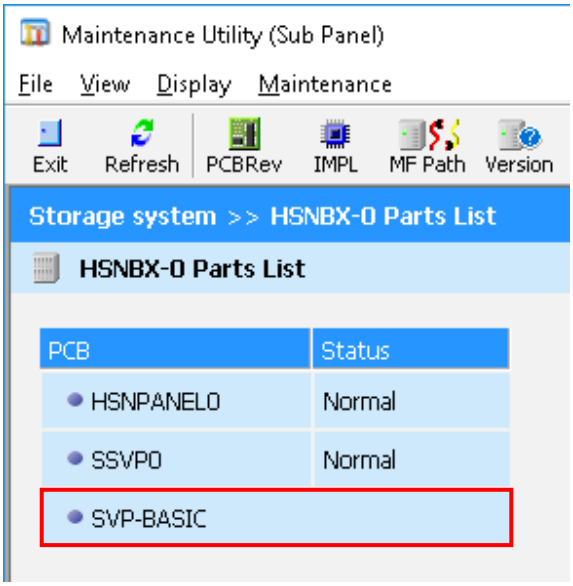
4. <Dump collection>
   Before replacing the failed Master SVP, collect the dump from the Master SVP for failure analysis.
   Specify "Rapid" for the dump type, perform the dump collection, and then replace the Master SVP.

5. <Operation mode change>
   Change the mode to [Modify Mode].
   Click [Maintenance Utility (Sub Panel)].

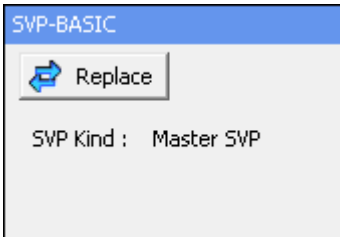
6. <Maintenance Utility (Sub Panel) window>
   In the Maintenance Utility (Sub Panel) window, click [HSNBX-0].



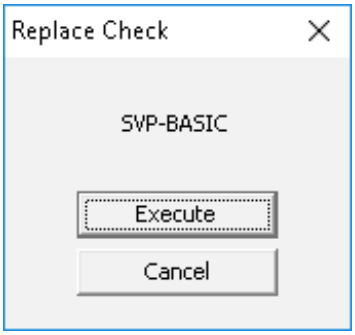
7. <Specify SVP>
   Click [SVP-BASIC].



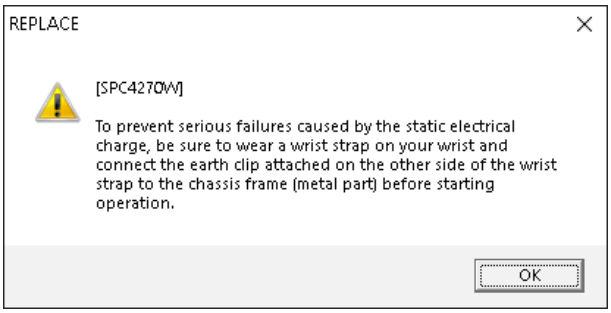
8. Click [Replace].



9. <Execute>
   The Replace Check window is displayed.
   Click [Execute].



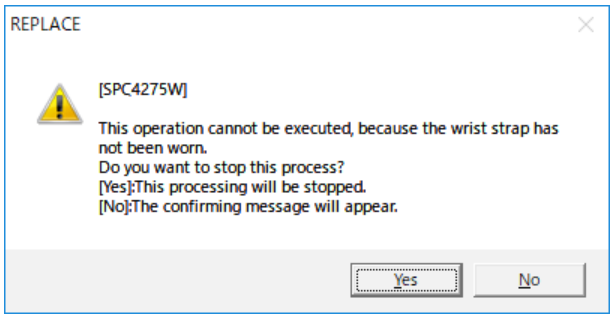
10. <Wear a wrist strap without fail>
    The message “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.” is displayed.



    Wear a wrist strap, and then click [OK].
    The message “Did you put on a wrist strap on your wrist?” is displayed.
    Click [Yes], and then go to Step 11.

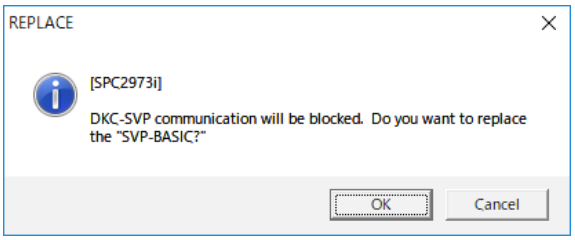
    NOTE: If you are not wearing a wrist strap, click [No] in response to the message above. Then, the message below is displayed. Click [Yes] to stop the processing, wear a wrist strap, and then resume the operation.

    “This operation cannot be executed, because the wrist strap has not been worn.Do you want to stop this process?
    [Yes]: This processing will be stopped.
    [No]: The confirming message will appear.”

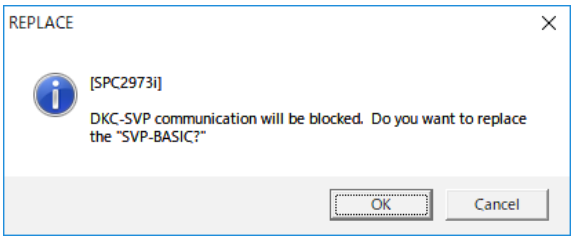


11. <Check beginning of SVP Replacement>
    The message, “DKC-SVP communication will be blocked. Do you want to replace the “SVP-BASIC?”” is displayed.
    When you perform the replacement, click [Yes].

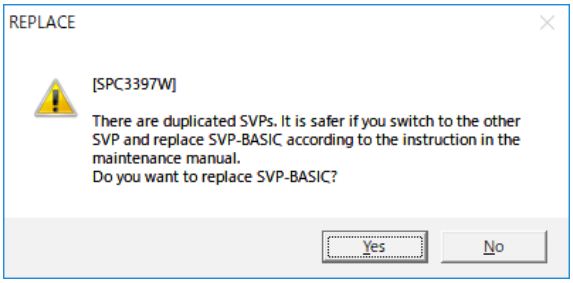
    Go to Step 12.



    <When the SVP High Reliability Kit has been added>
    The message, “DKC-SVP communication will be blocked. Do you want to replace the “SVP-BASIC?”” is displayed.
    When you perform the replacement, click [Yes].

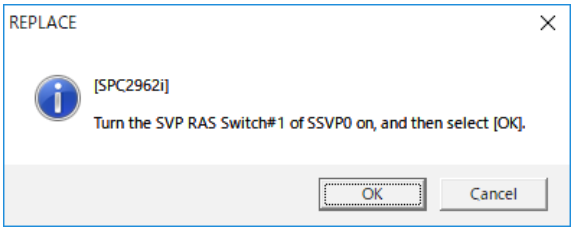


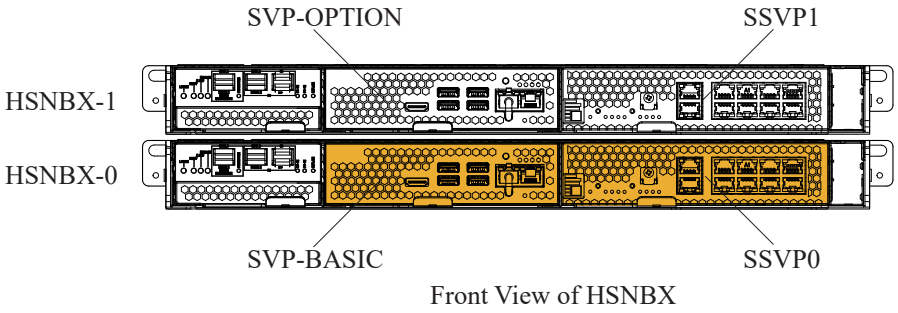
    The message, “There are duplicated SVPs. It is safer if you switch to the other SVP and replace SVP-BASIC according to the instruction in the maintenance manual. Do you want to replace SVP-BASIC?” is displayed.
    When you perform the replacement, click [Yes].



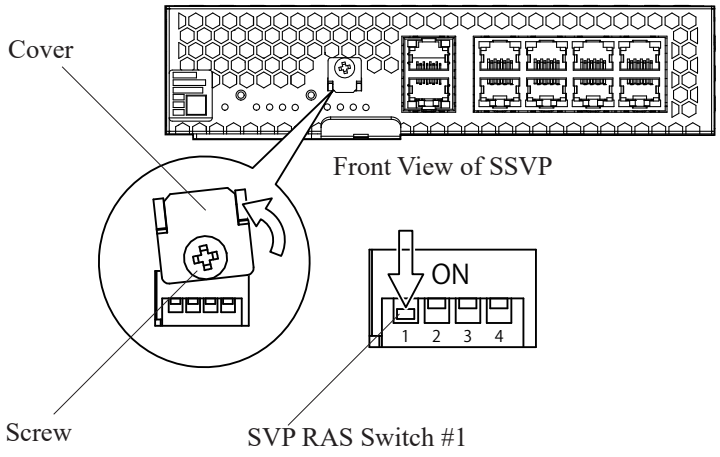
12. <Entering the RAS Switch#1>
    Turn ON SVP RAS Switch#1 of the SSVP0 and click [OK] following the message, “Turn the SVP RAS Switch#1 of SSVP0 on, and then select [OK].”

    NOTE: Use an object with a sharp edge such as a pair of tweezers to manipulate the SVP RAS switch.





Front View of HSNBX



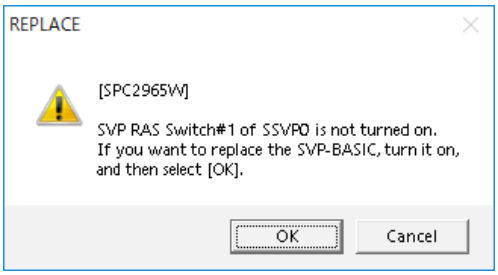
Front View of SSVP

Go to Step 14.

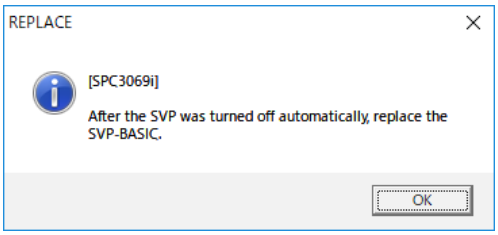
NOTE: If you click [OK] in response to the message [SPC2962i] without turning on the SVP RAS Switch#1, the message shown in Step 13 is displayed.

13. <Checking the RAS Switch#1>
    When the SVP RAS Switch#1 is not turned on, the message, “SVP RAS Switch#1 of SSVP0 is not turned on. If you want to replace the SVP-BASIC, turn it on, and then click [OK].” is displayed. Turn ON SVP RAS Switch#1 of the SSVP0 and click [OK].
    Go to Step 14.

    NOTE: If the following message is displayed even though the SVP RAS Switch#1 is turned on, contact the Technical Support Division.

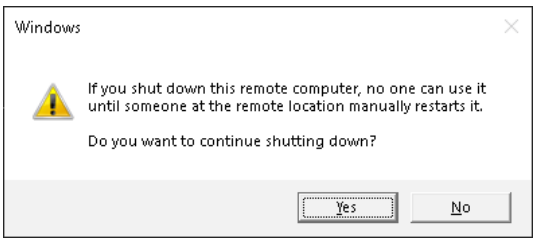


14. <Powering off the SVP>
    The message, “After the SVP was turned off automatically, replace the SVP-BASIC.” is displayed.
    Click [OK].



15. <The check of Maintenance PC shut down>
    The message, “If you shut down this remote computer, no one can use it until someone at the remote location manually restart it. Do you want to continue shutting down?” is displayed.
    Click [Yes].

    NOTE: If the message saying that the remote connection was disconnected appears on the maintenance PC, click [OK].



    When you click [Yes], the SVP is shut down and the connection to the Maintenance PC is disconnected.

16. <SVP replacement>
    Go to “4. HARDWARE REPLACEMENT PROCESSING”.

3.4 Replacement of Master SVP in SVP-OPTION

Perform the pre-processing for replacing the Master SVP in the SVP-OPTION location.

1. <Storage Navigator setting information downloading>
   Ask the customer to download the Storage Navigator setting information file.
   Restore the user account information and the environment setting information by the download file (See "7.7.3 Setting the user account information and the environment setting information".).
   If the file cannot be downloaded, restore them by using the download file that the customer has.
   For how to download, refer to "System Administrator Guide".

2. <Connecting the Maintenance PC>
   Connect the maintenance PC to the Master SVP.
   (1) Connect the maintenance PC to the SSVP, and then log in to the Master SVP.
   - "Attachment/Removal Procedure of Maintenance PC" (INST(IN)13-02-10)
   - "Connection to the SVP" (SVP01-30)

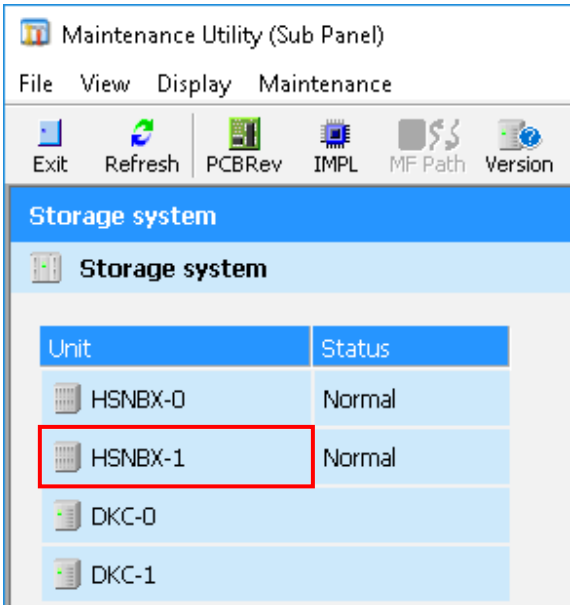
   If the SVP cannot be operated, go to "4. HARDWARE REPLACEMENT PROCESSING".

3. <Starting the SVP window>
   From the menu of Web Console, click [Maintenance Components] - [Maintenance Components (General)].

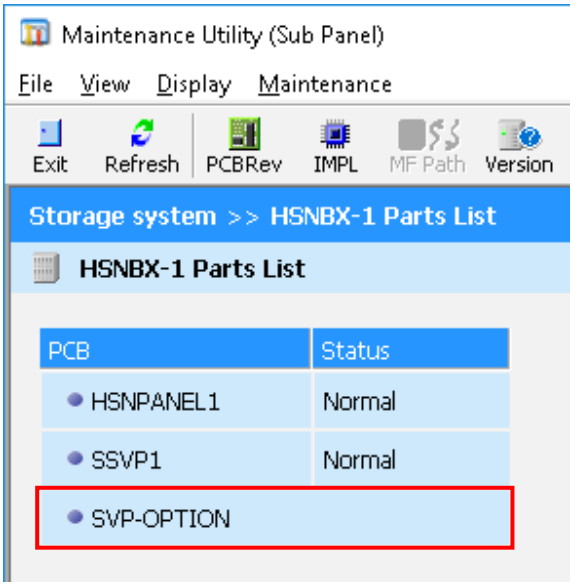
4. <Dump collection>
   Before replacing the failed Master SVP, collect the dump from the Master SVP for failure analysis.
   Specify "Rapid" for the dump type, perform the dump collection, and then replace the Master SVP.

5. <Operation mode change>
   Change the mode to [Modify Mode].
   Click [Maintenance Utility (Sub Panel)].

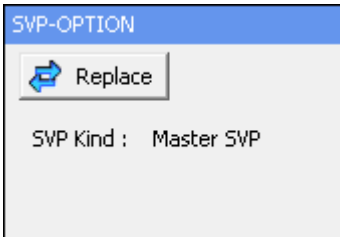
6. <Maintenance Utility (Sub Panel) window>
   In the Maintenance Utility (Sub Panel) window, click [HSNBX-1].



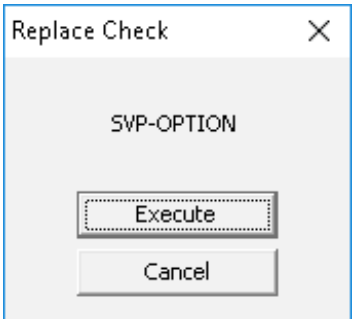
7. <Specify SVP>
   Click [SVP-OPTION].



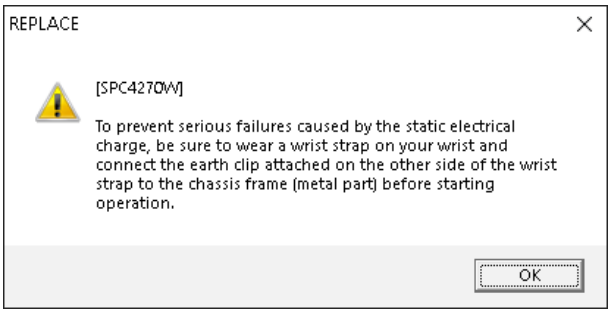
8. Click [Replace].



9. <Execute>
   The Replace Check window is displayed.
   Click [Execute].



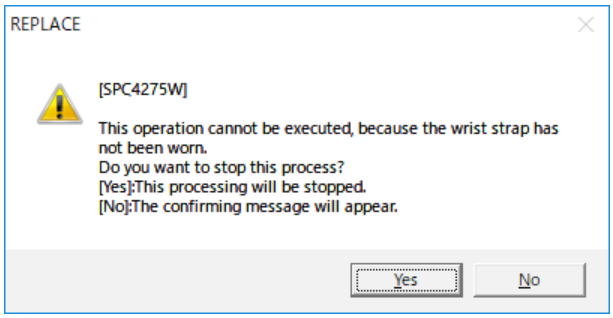
10. <Wear a wrist strap without fail>
    The message “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.” is displayed.



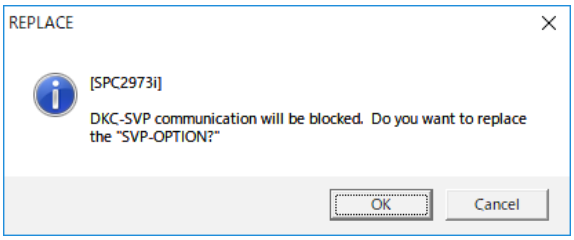
    Wear a wrist strap, and then click [OK].
    The message “Did you put on a wrist strap on your wrist?” is displayed.
    Click [Yes], and then go to Step 11.

    NOTE: If you are not wearing a wrist strap, click [No] in response to the message above. Then, the message below is displayed. Click [Yes] to stop the processing, wear a wrist strap, and then resume the operation.

    “This operation cannot be executed, because the wrist strap has not been worn.
    Do you want to stop this process?
    [Yes]: This processing will be stopped.
    [No]: The confirming message will appear.”

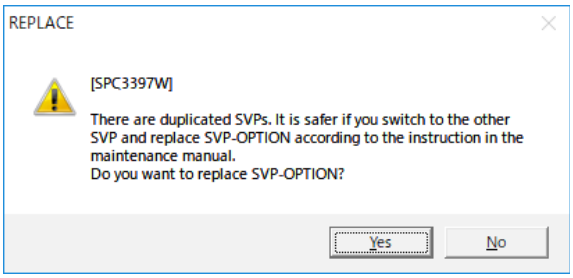


11. <Check beginning of SVP Replacement>
    The message, “DKC-SVP communication will be blocked. Do you want to replace the “SVP-OPTION?”” is displayed.
    When you perform the replacement, click [Yes].



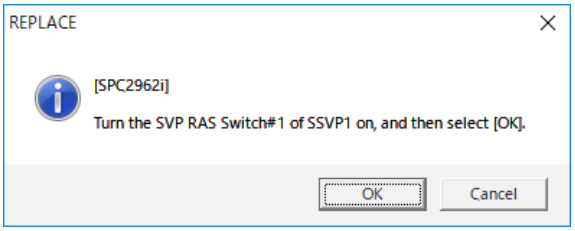
    The message, “There are duplicated SVPs. It is safer if you switch to the other SVP and replace SVP-OPTION according to the instruction in the maintenance manual. Do you want to replace SVP-OPTION?” is displayed.
    When you perform the replacement, click [Yes].

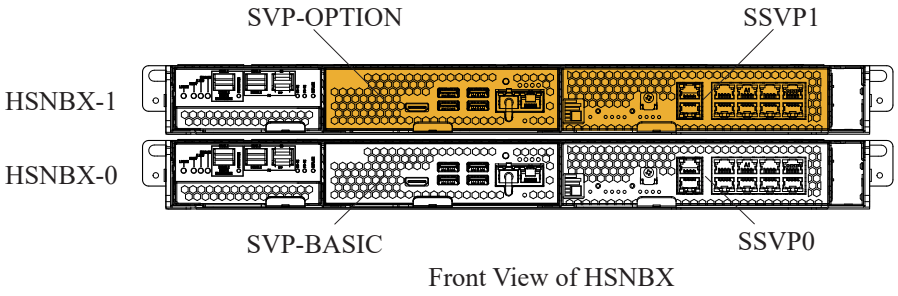
    Go to Step 12.



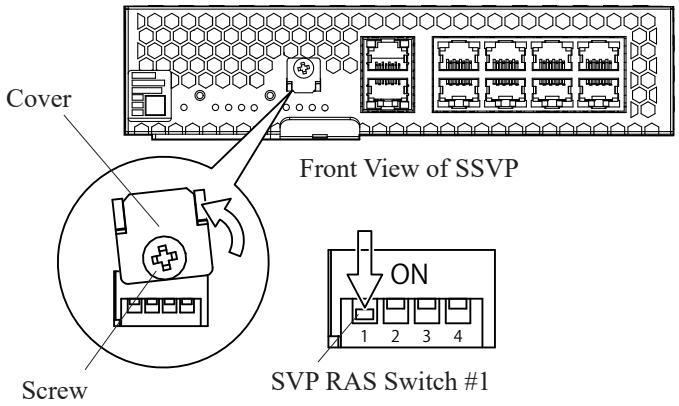
12. <Entering the RAS Switch#1>
    Turn ON SVP RAS Switch#1 of the SSVP1 and click [OK] following the message, “Turn the SVP RAS Switch#1 of SSVP1 on, and then select [OK].”

    NOTE: Use an object with a sharp edge such as a pair of tweezers to manipulate the SVP RAS switch.





Front View of HSNBX



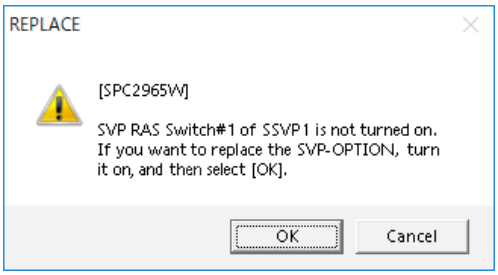
Front View of SSVP

Go to Step 14.

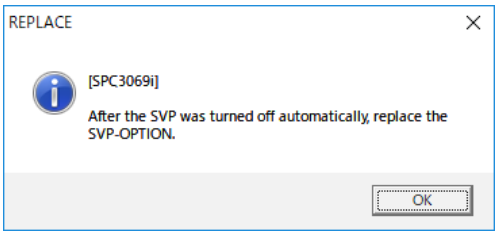
NOTE: If you click [OK] in response to the message [SPC2962i] without turning on the SVP RAS Switch#1, the message shown in Step 13. is displayed.

13. <Checking the RAS Switch#1>
    When the SVP RAS Switch#1 is not turned on, the message, “SVP RAS Switch#1 of SSVP1 is not turned on. If you want to replace the SVP-OPTION, turn it on, and then select [OK].” is displayed. Turn ON SVP RAS Switch#1 of the SSVP1 and click [OK].
    Go to Step 14.

    NOTE: If the following message is displayed even though the SVP RAS Switch#1 is turned on, contact the Technical Support Division.

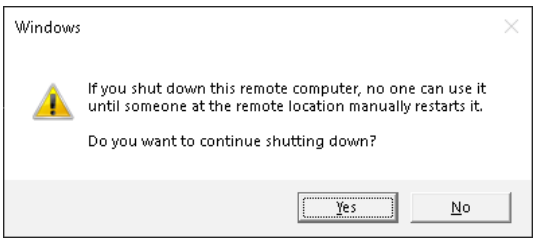


14. <Powering off the SVP>
    The message, “After the SVP was turned off automatically, replace the SVP-OPTION.” is displayed.
    Click [OK].



15. <The check of Maintenance PC shut down>
    The message, “If you shut down this remote computer, no one can use it until someone at the remote location manually restart it. Do you want to continue shutting down?” is displayed.
    Click [Yes].

    NOTE: If the message saying that the remote connection was disconnected appears on the maintenance PC, click [OK].

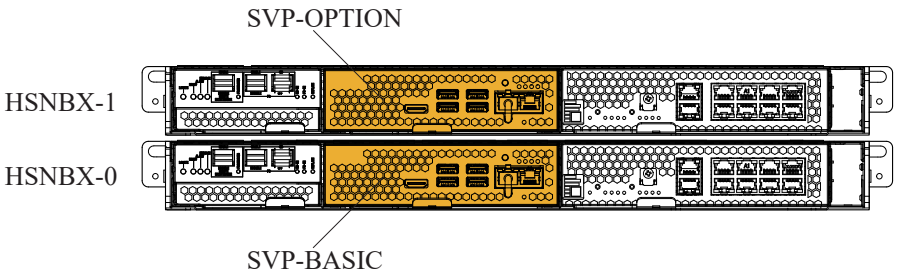


    When you click [Yes], the SVP is shut down and the connection to the Maintenance PC is disconnected.

16. <SVP replacement>
    Go to “4. HARDWARE REPLACEMENT PROCESSING”.

4. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front of HSNBX	1	SVP	• SVP



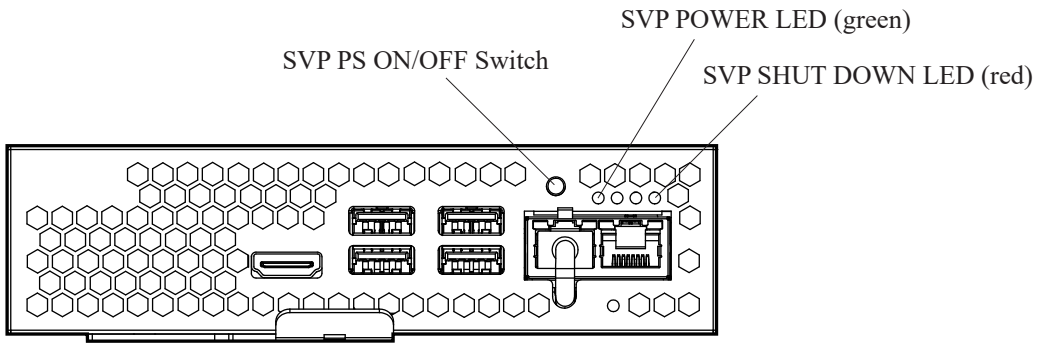
Front View of HSNBX

NOTICE: Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

4.1 SVP Replacement Processing

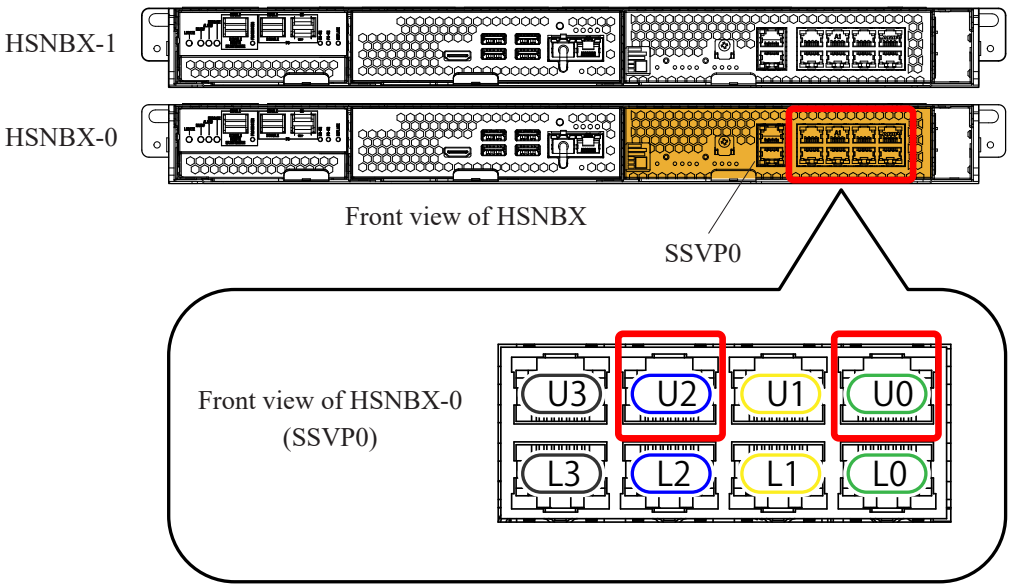
1. SVP PS OFF
   Check that the SVP POWER LED is off.
   When the SVP POWER LED is still on, press the SVP PS ON/OFF switch on the SVP and check if the SVP POWER LED is off.
   When the SVP POWER LED is still on even if three minutes have passed since the SVP PS ON/OFF switch was pressed, press the SVP PS ON/OFF switch on the SVP for five seconds or more (forced power off) and check if the SVP POWER LED is off.

Figure 4-1 SVP PS OFF

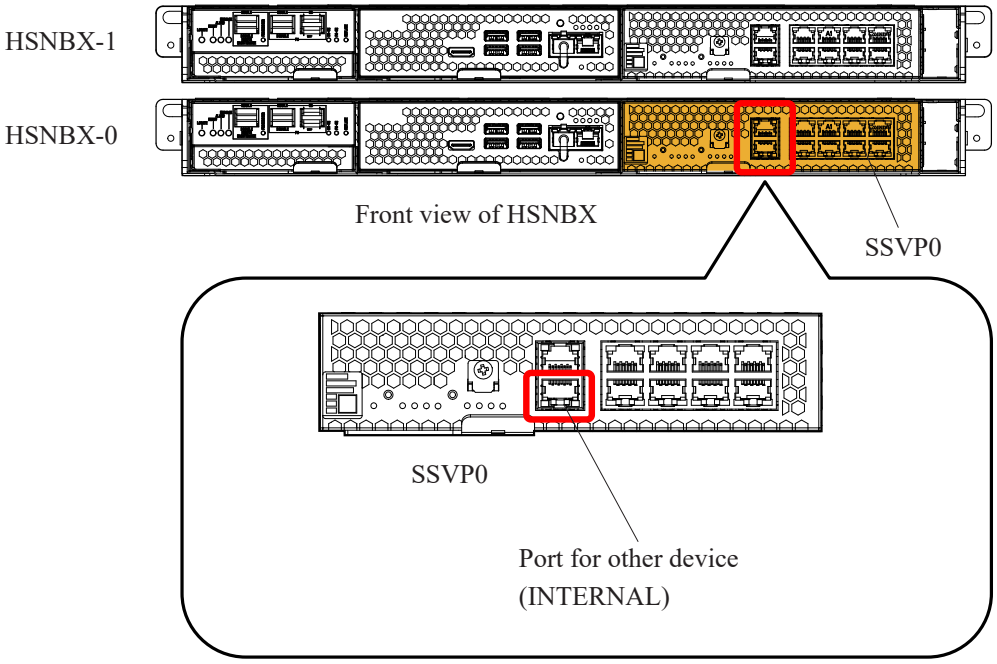


Front View of SVP

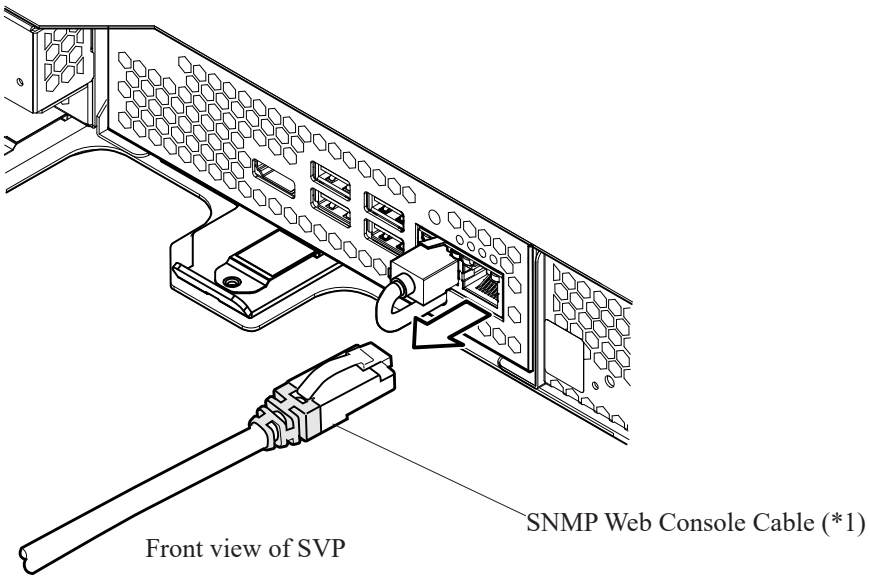
2. Disconnecting LAN cables from SSVP0
   When LAN cables are connected to LAN ports (U0 and U2) on SSVP0, disconnect the LAN cables.



When a LAN cable is connected to the port for other device (INTERNAL) on SSVP0, disconnect the LAN cable.



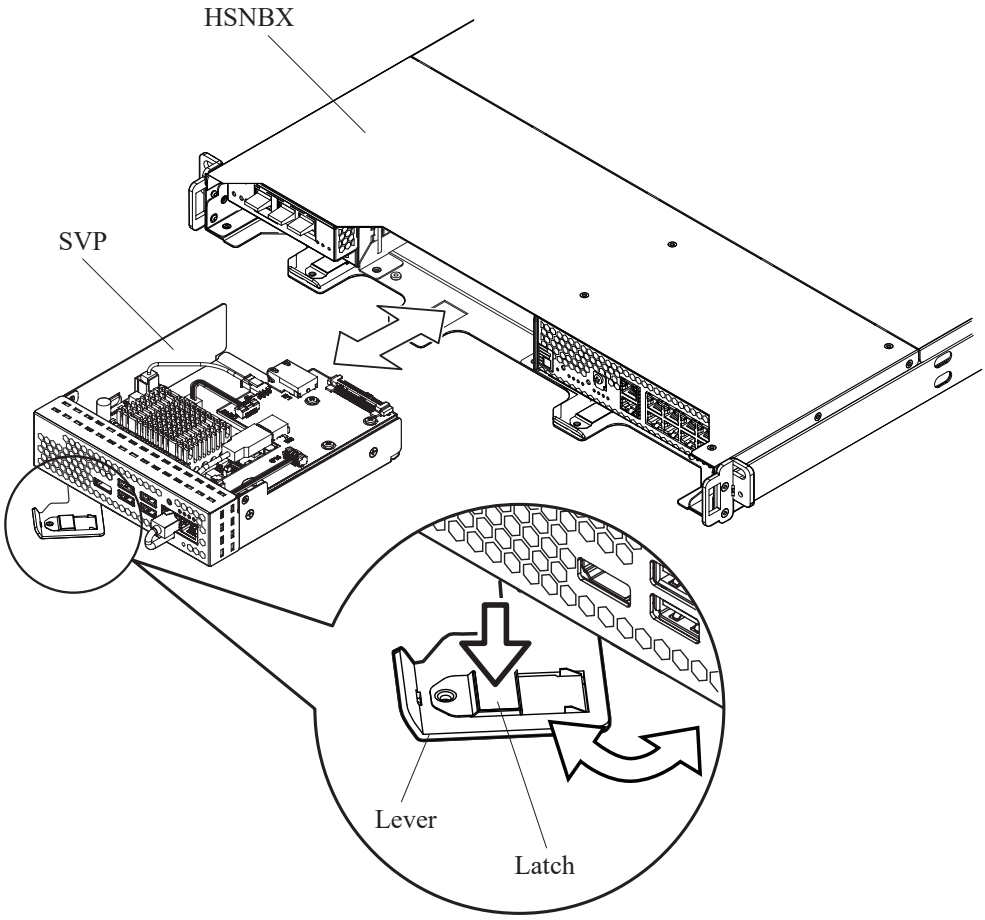
3. Replacing the SVP
   (1) Remove the connection cable from the SVP to be replaced.



*1: This cable may not be 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 out it while holding it with your hands.
(5) Open the lever on the new SVP completely toward you.
(6) Insert the SVP fully and push the lever until the latch on the lever clicks and is locked.

Figure 4-2 Replacing the SVP



4. SVP PS ON
   Check that the SVP POWER LED of the SVP is on. (Refer to Figure 4-1)

5. Go to "5. Setup for SVP".

5. Setup for SVP

This chapter explains the procedure of software installation after the hardware replace and various setting.

5.1 Ending the hardware replacement work

In the case where the Master SVP was replaced, go to "5.2 PRE-PROCESSING of the Setup for SVP".
In the case where the Standby SVP was replaced, the following message is displayed on the Master SVP.

1. Click [OK] for "Please replace the "[svp-location]." After replacement, press OK.".

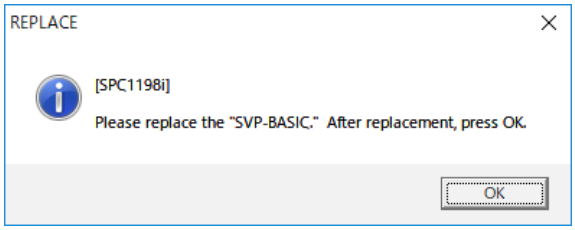
   NOTE: [svp-location] indicates the location of the SVP (SVP-BASIC or SVP-OPTION).

   NOTE: [1] Connect the LAN cable between the Maintenance PC and the port for Maintenance PC (CONSOLE) on SSVP.
   - When replacing SVP-BASIC, connect the LAN cable to the port for Maintenance PC (CONSOLE) on SSVP1.
   - When replacing SVP-OPTION, connect the LAN cable to the port for Maintenance PC (CONSOLE) on SSVP0.

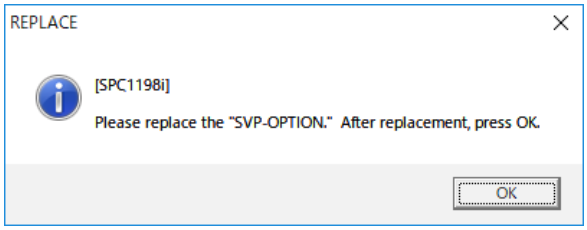
   [2] Log in to the Master SVP (xxx.xxx.xxx.15).

   NOTE: If you have got another maintenance part in "(2) User name and password for login to SVP" and are repeating the procedure, this step needs not to be performed because it is already done. Go to "2. <Setting the SVP>".

In the case of SVP-BASIC



In the case of SVP-OPTION

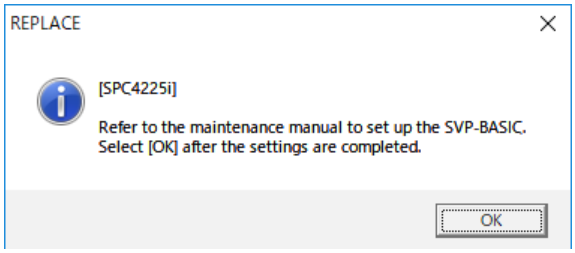


2. <Setting the SVP>
The message “Refer to the maintenance manual to set up [svp-location]. Select [OK] after the settings are completed.” is displayed.

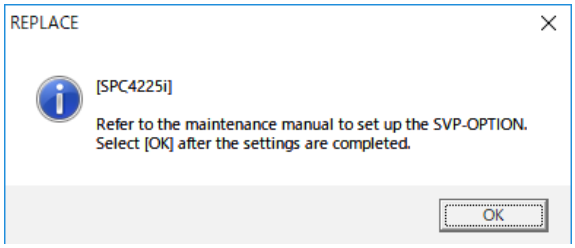
NOTE: [svp-location] indicates the location of the SVP (SVP-BASIC or SVP-OPTION).

NOTE: In this step, do not click [OK]. In the step “7.3.1 Post operation of Standby SVP replacement”, click [OK].

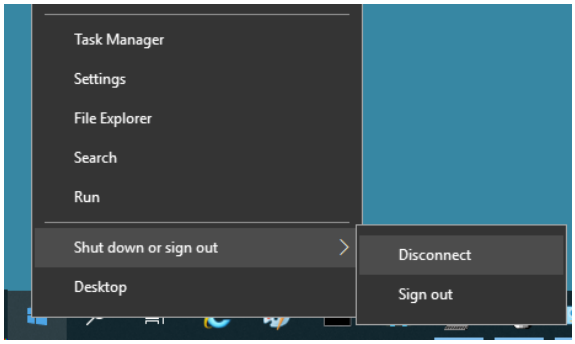
In the case of SVP-BASIC



In the case of SVP-OPTION



3. <Disconnecting the SVP>
Right-click [Start], and then select [Shut down or sign out]-[Disconnect].
The SVP window of the Maintenance PC is closed.



5.2 PRE-PROCESSING of the Setup for SVP

To the replaced SVP, perform the following work:

1. Powering up the SVP
   The SVP installed for replacement is automatically powered on.

NOTICE: If the MESSAGE LED on HSNPANEL has lit on when power on SVP, please complete SIM before operation.
(When the SVP High Reliability Kit is installed, SIM RC = bf86a3 (SVP RAS Switch#1 remains (SVP-OPTION)), bfe3a2 (Duplex SVP Setup fail), and 7ff2xx (Standby SVP fail) might occur. SIM RC = bf85a3 (SVP RAS Switch#1 remains (SVP-BASIC)) might occur regardless of whether the SVP High Reliability Kit is installed or not. However, there is no problem because they occur in process of the SVP replacement.)

2. Connecting the Maintenance PC
   (1) IP address of connection destination

NOTE: Before the connection, take a note of the current IP address of the Maintenance PC, and then change the IP address to 126.255.254.x (x: available value equal to or less than 13, for example, 12).
After the SVP setup, restore the IP address to the original one.
The SVP and the Maintenance PC communicate with each other at up to 1 Gbps (depending on specifications of the Maintenance PC) through Auto-Negotiation.

NOTE: About the port to connect the Maintenance PC to
When replacing SVP-BASIC, connect the Maintenance PC to the port for Maintenance PC (CONSOLE) on SSVP0. When replacing SVP-OPTION, connect the Maintenance PC to the port for Maintenance PC (CONSOLE) on SSVP1.

Wait about 10 minutes until the SVP reboots. Then, connect the Maintenance PC to the replacement SVP using the connection utility.

[Connection destination] 126.255.254.15

When the connection to the replacement SVP is successful, go to Step (2).
When it is unsuccessful, initialize the IP address (*1), and then connect to the replacement SVP.
If the connection fails again, the replacement SVP might have a failure. Get another maintenance part, and perform the procedure from "4.1 SVP Replacement Processing" again.

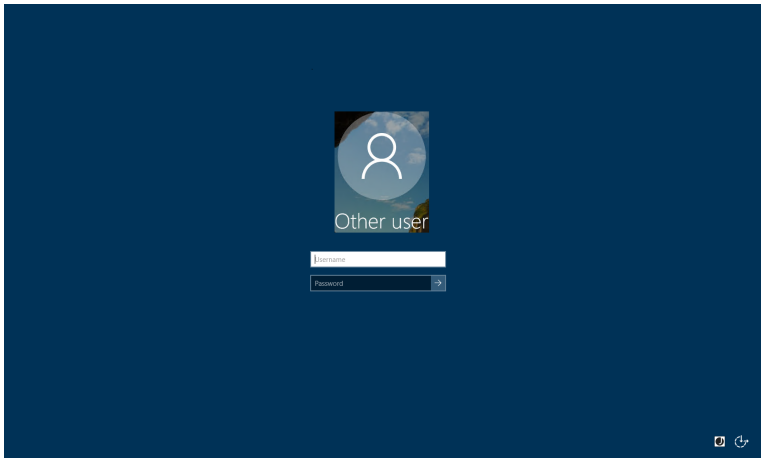
*1: For the initialization procedure, see (LOC03-44). If you initialize the IP address, the login password of the SVP and the maintenance password are also initialized.

(2) User name and password for login to SVP

There are two types of user names used for connection to the SVP.
One is the user name for connecting to the SVP on which the SVP microprogram is installed, and the other is the user name for connecting to the SVP on which the SVP microprogram is not installed.
In this procedure, use the latter to login to the SVP because the SVP microprogram is not installed in the replacement SVP.
Ask the Technical Support Division about the user name and password.

NOTE: If you have initialized the login password of the SVP in Step (1), ask the Technical Support Division about the initial password of the user name for connecting to the SVP on which the SVP microprogram is installed.

NOTE: If the “Other user” window shown below is displayed when you connect to the SVP, enter the user name and password for connecting to the SVP on which the SVP microprogram is not installed.



NOTE: If the following window appears when you connect to SVP, an IP address conflict might occur. Check that the LAN cables are disconnected (see "2. Disconnecting LAN cables from SSVP0").

When the LAN cables are not disconnected, perform [1] and [2], and then perform the procedure from Step (1) again.

[1] Disconnect the LAN cables (see "2. Disconnecting LAN cables from SSVP0").

[2] Power off and then on the replacement SVP (see "Power Off" (SVP01-200) and "Power On" (SVP01-190)).

When the LAN cables are disconnected, check whether the replacement SVP has been used before.

If the replacement SVP has been used before, the following window certainly appears. Continue the operation.

If the replacement SVP has not been used before, get another maintenance part, and perform the procedure from "4.1 SVP Replacement Processing" again.

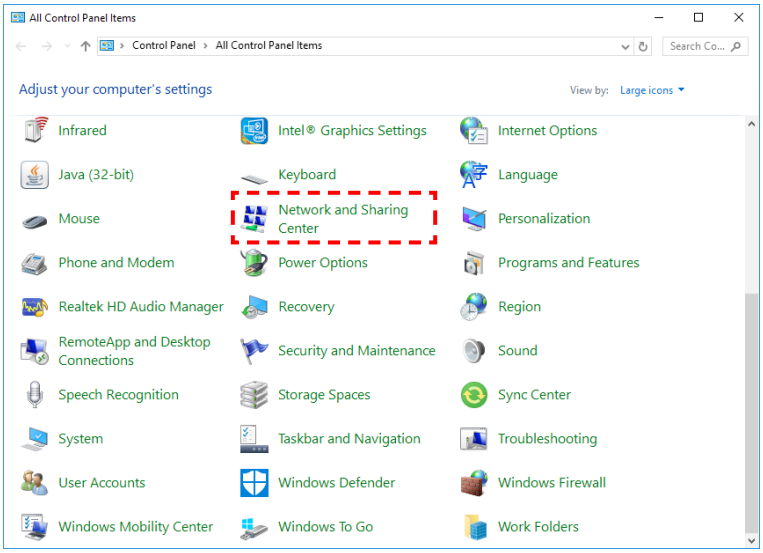
3. IP address settings of the replacement SVP

(1) <Opening the Control Panel window>

Click [Start], and then select [Control Panel] from [Windows System].

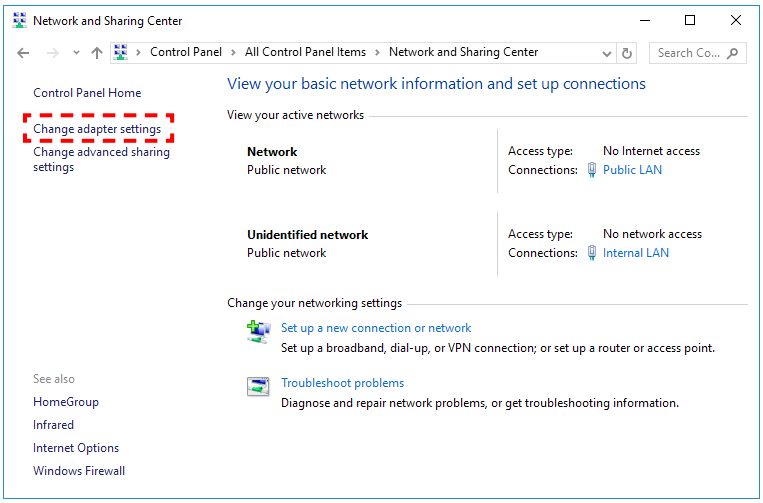
(2) <Opening the Network and Sharing Center window>

Select [Network and Sharing Center] in the Control Panel window.

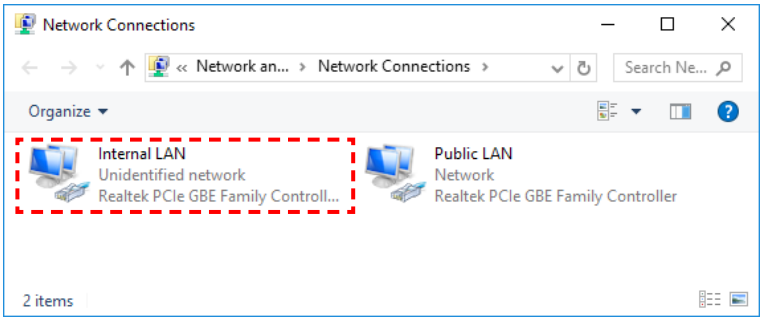


(3) <Opening the Network Connections window>

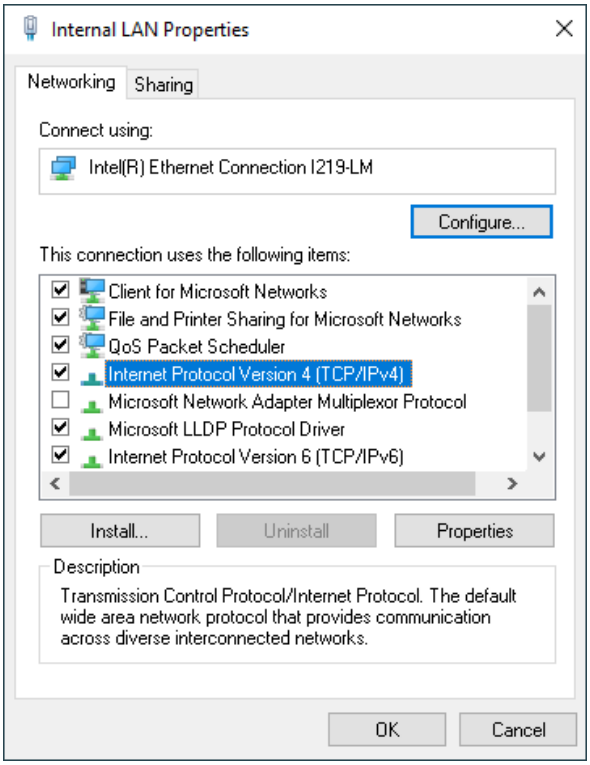
Select [Change adapter settings] in the Network and Sharing Center window.



(4) <Opening the Internal LAN Properties window>
Right-click [Internal LAN], and then click [Properties].



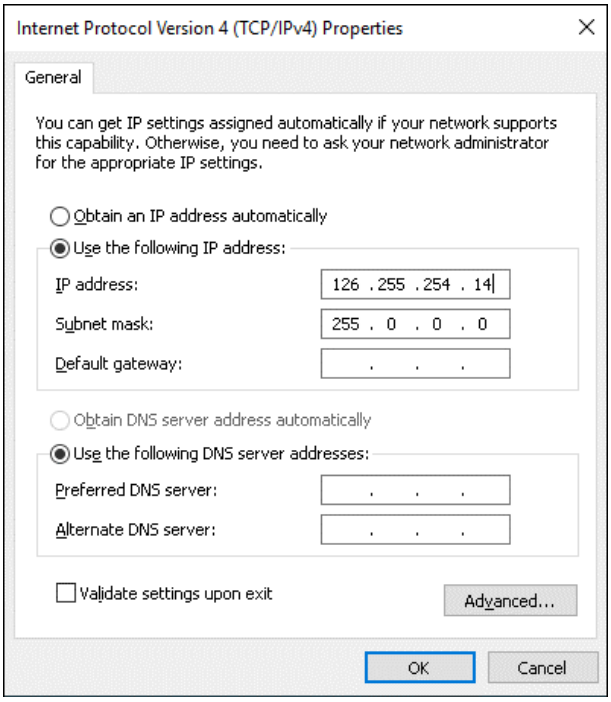
(5) In the Internal LAN Properties window, select [Internet Protocol Version 4 (TCP/IPv4)] and click [Properties].



(6) Set the values for “IP address” and “Subnet mask” and click [OK].

NOTE: When the “Set Network Location” dialog (TRBL03-30-60) is displayed, click [Cancel].

Set the values same as those of the SVP before the replacement, which you wrote down, for “IP address” and “Subnet mask” of [Internal IP Address].



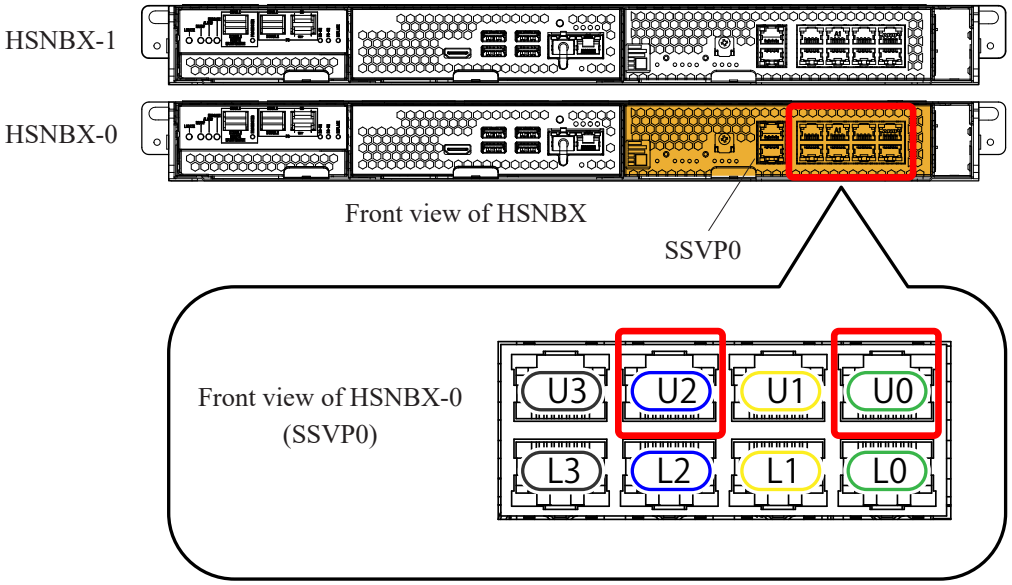
(7) In the Internal LAN Properties window, click [OK].
Close the Network Connections window.
Disconnects the connection between the Maintenance PC and the SVP.

NOTE: When the [Internal IP Address] of the SVP before the replacement is the same as that of the SVP after the replacement, the connection between the Maintenance PC and SVP is not disconnected. Go to Step 4.

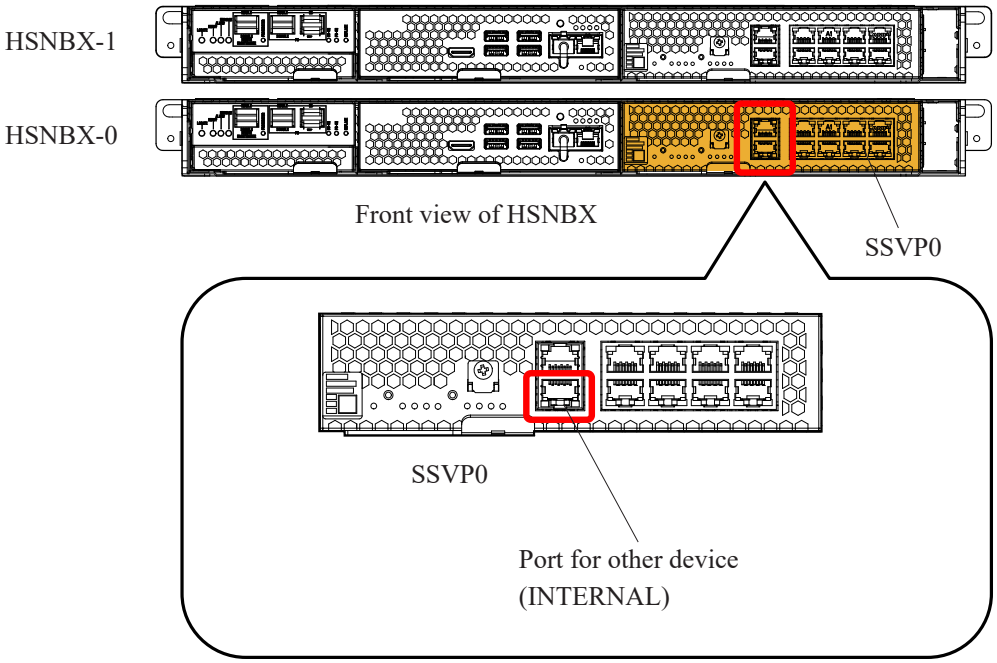
(8) Connecting to the SVP again.
Change the IP address of the Maintenance PC.
Set the IP address that can connect to the [Internal IP address] of the SVP before the replacement (same subnet mask and different IP address).

Connect to the SVP by using the [Internal IP Address] of the SVP before the replacement, which you wrote down.

4. If LAN cables have been connected to SSVPs, connect the following LAN cables:
   - LAN cable between the LAN port (U0) on SSVP0 and the LAN port (U0) on SSVP1
   - LAN cable between the LAN port (U2) on SSVP0 and the LAN port (U2) on SSVP1



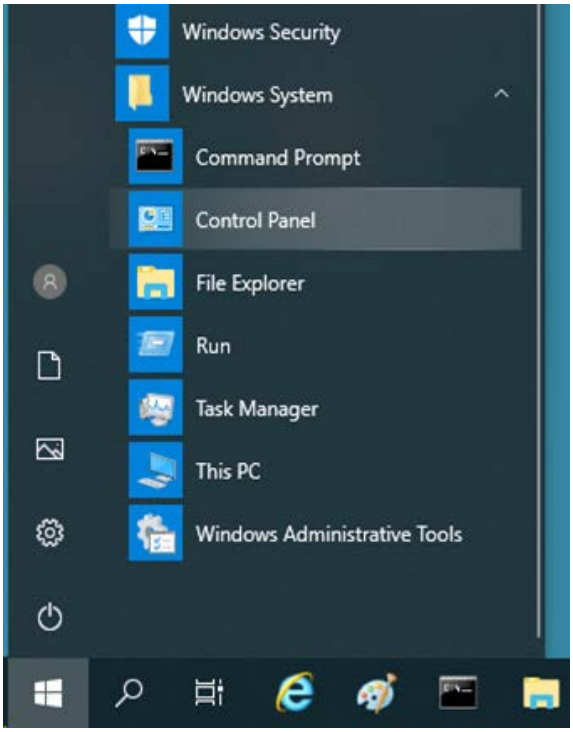
If the LAN cable has been connected to the port for other device (INTERNAL) on SSVP0, connect the LAN cable.



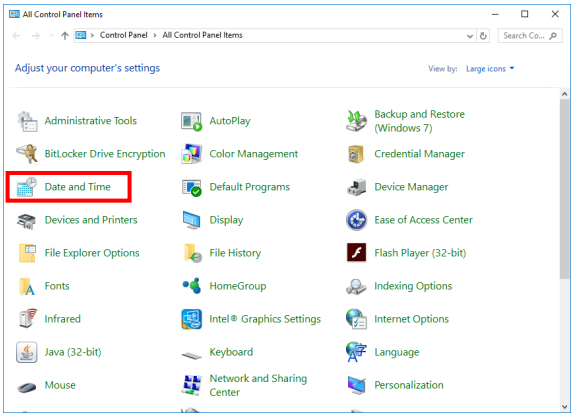
5.3 Setting the Date and Time

<Making sure of the setting of a time zone>

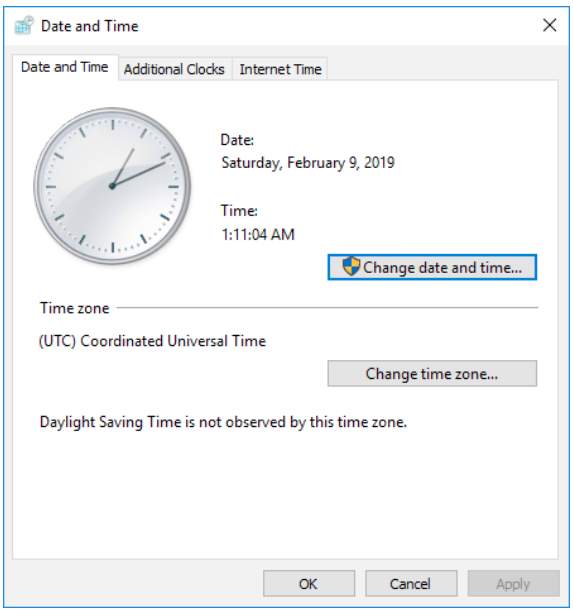
1. Open the Control Panel window.
   Click [Start], and then select [Control Panel] from [Windows System].



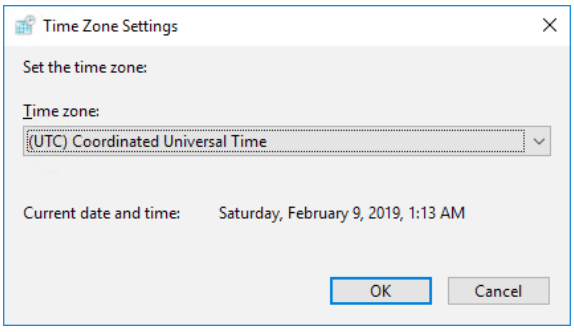
2. Open the Date and Time window.
   Click [Date and Time] in the [Control Panel] window.



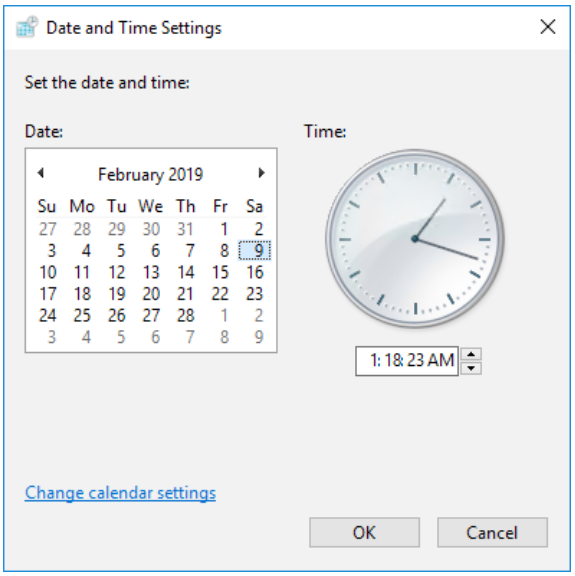
3. Click [Change time zone...].



4. Check the [Time Zone Settings].
   Set the same time zone as that set on the SVP before replacement, which you wrote down according to "1. Notes for starting SVP replacement".



5. Set the [Date and Time Settings].
   Click [Change date and time...].
   Check if the [Date and Time Settings] is set to the current date and time where the storage system is placed.
   If it is not set as above, correct the settings. Then, click [OK].



6. Close the Control Panel window.

5.4 Installing the Microprogram

The processing time of the SVP micro-program installation is about 30 minutes.
When the SVP micro-program is installed, OSSs are installed at the same time. For the OSSs to be installed and their versions, see (MICRO07-10).

NOTICE: When Apache is updated, the SSL communication key and the certificate files for Apache return to the defaults.
Notify the customer that the setting operations for the SSL communication key and the certificate files are customer's responsibility, and ask the customer to perform the operations according to "System Administrator Guide" after the update of Apache.

1. Starting Installation
   (1) Insert the micro-program media into the drive of the Maintenance PC and wait 1 minute.

   (2) Open the Run window
   Right-click [Start], and then select [Run].

   (3) Enter "\\tsclient\E\xxxxx.exe (*1)", and click [OK]

   NOTE: • Select the drive which inserted a micro-program media.
   "\\tsclient\E\xxxxx.exe (*1)"
   — Enter the drive letter of the drive of the Maintenance PC.
   — Indicate Maintenance PC. (Use this spelling as it is.)
   • If the SVP is unintentionally rebooted while "xxxxx.exe (*1)" is performed, perform the SVP micro-program installation again.
   • The installation process might take time. Also, it might take up to 15 minutes before the processing is started.

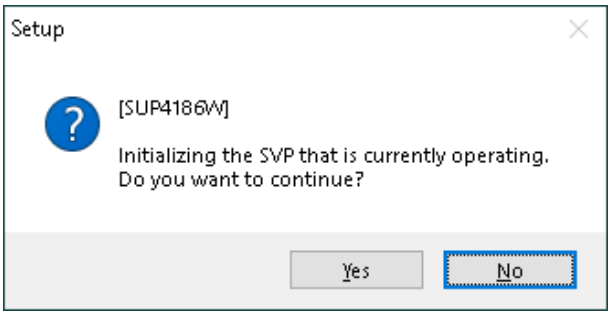
   *1: The executable file name varies depending on the micro-program version.

DKCMAIN version	Executable file name
90-01-01-x0/xx or later and less than 90-01-51-x0/xx	setup.exe
90-01-51-x0/xx or later and less than 90-01-61-x0/xx	svpsetup.exe
90-01-61-x0/xx or later and less than 90-02-01-x0/xx	setup.exe
90-02-01-x0/xx or later	svpsetup.exe

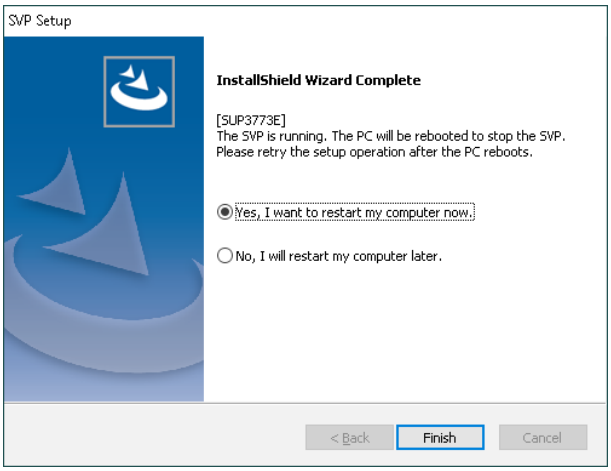
(4) When the SVP micro-program is not installed in the SVP installed as a replacement (*1), go to Step (8).

*1: A maintenance part SVP is shipped without SVP micro-program installed. If you have performed a replacement with an SVP in which the SVP micro-program is installed (for example, dummy replacement), the message shown in Step (5) is displayed.

(5) The message [SUP4186W] is displayed. Click [Yes].

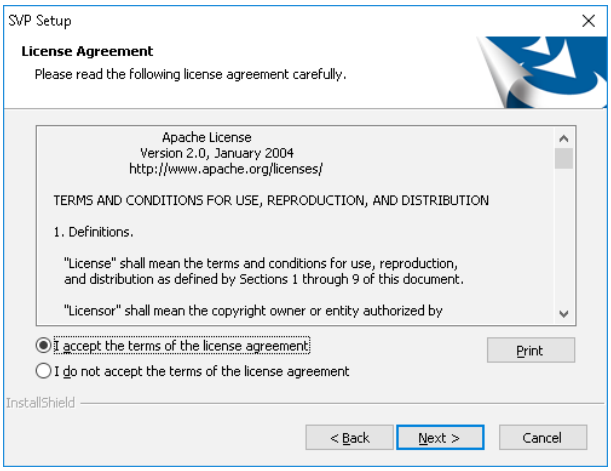


(6) The window to reboot the SVP is displayed. Click [Finish] after check [Yes] in radio buttons. After rebooting the SVP (after waiting for about five minutes), install the microprogram again from Step (3).
Specify “the user name for connecting to the SVP on which the SVP micro-program is not installed” for the login user to the SVP.



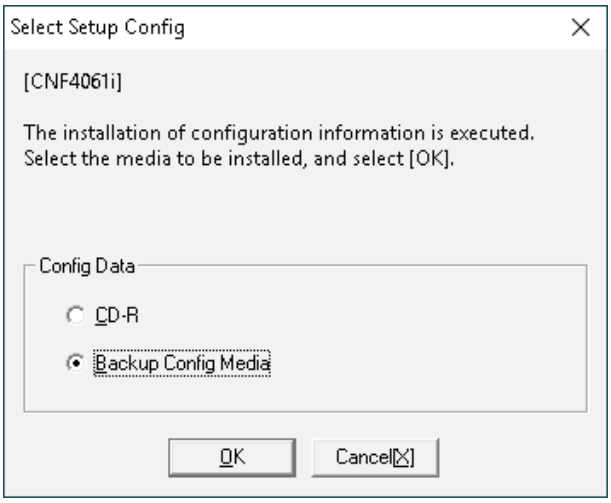
(7) When you retry the installation microprogram after the SVP reboot, the following message is displayed. Click [Run].

(8) The confirmation window of the OSS license agreement is displayed. Select [I accept the terms of the license agreement], and then click [Next >].

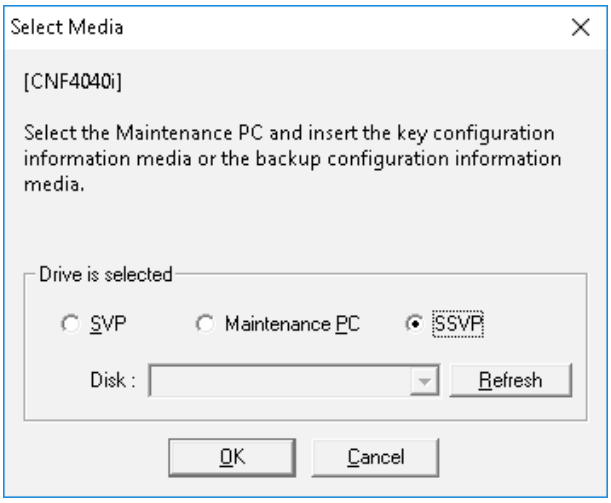


2. Installing the Configuration Information

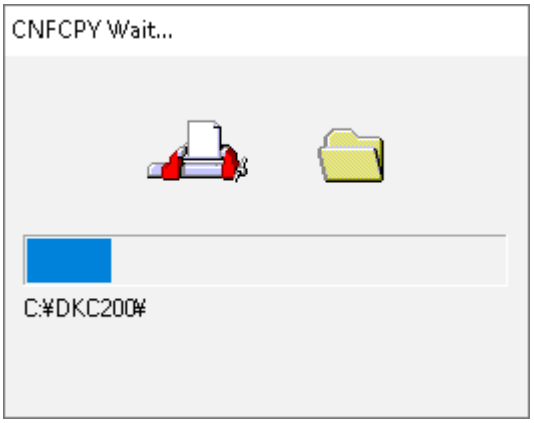
(1) When the installation processing progresses, the following window is displayed. Select “Backup Config Media”, and click [OK].



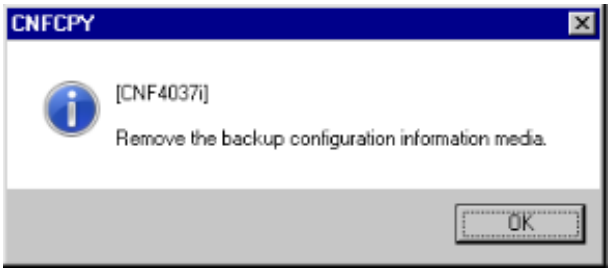
(2) Select “SSVP”, and then click [OK].



(3) The copy processing of the configuration information from SSVP to SVP is performed. The CNFCPY Wait... window is displayed during this time.

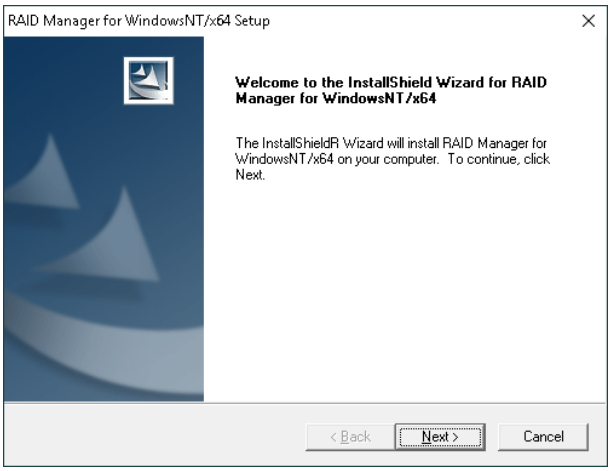


(4) Click [OK].

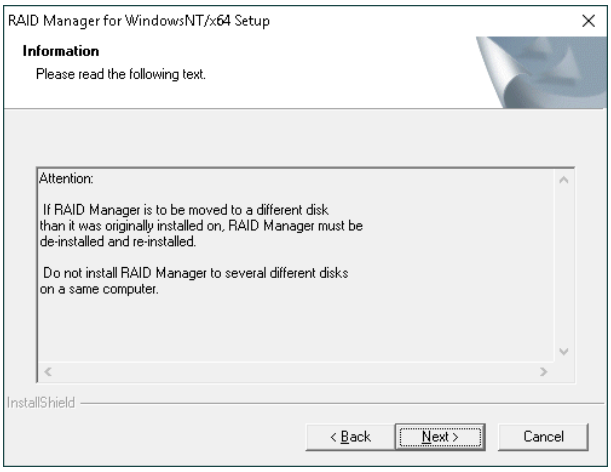


3. Installing the RAID Manager

(1) Click [Next >].

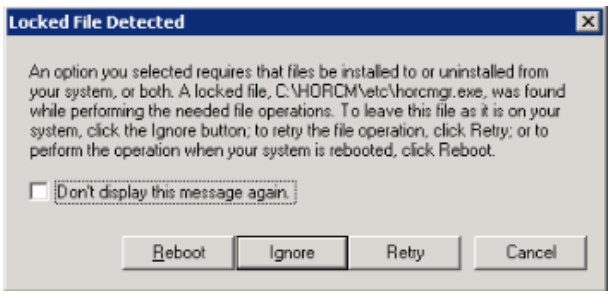


(2) Click [Next >].

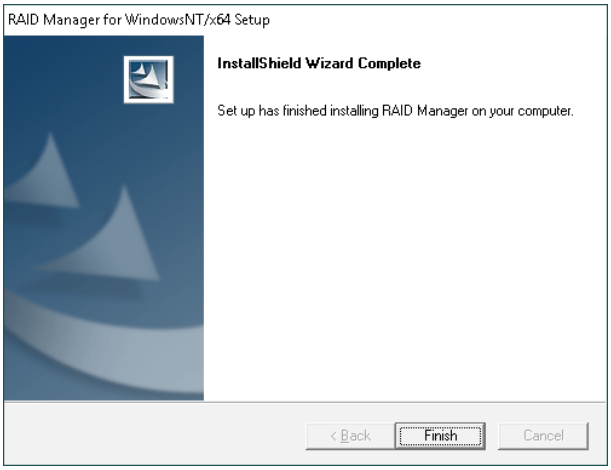


When “Locked File Detected” is displayed, click [Retry] after waiting for about five minutes.

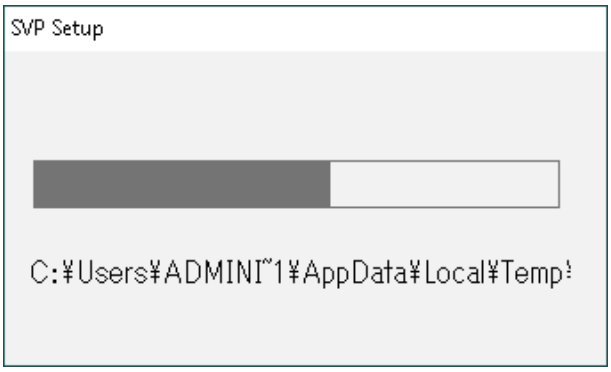
NOTE: “Locked File Detected” is displayed when RAID Manager process is not terminated. At this time, you should wait until RAID Manager process is terminated.



(3) Click [Finish].

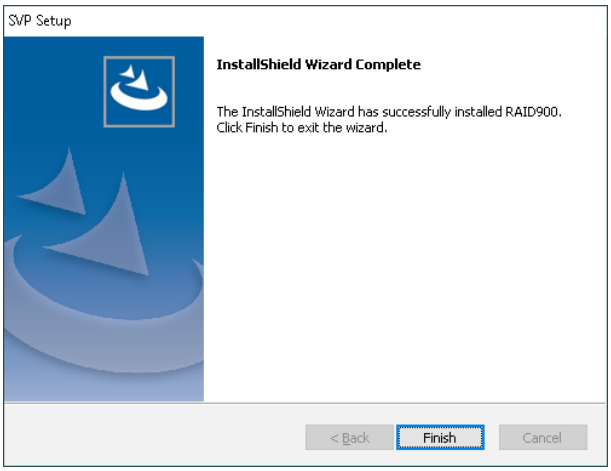


4. OSS Installation
   Wait for about 5 minutes until the OSS installation is completed. The following window is displayed during the OSS installation.



5. Restarting the SVP

   When the installation of the micro program is completed, the following window is displayed. Take out the micro-program media and click [Finish]. The SVP is restarted (disconnected from the Maintenance PC).
   After waiting for about five minutes, reconnect the Maintenance PC to the Additional SVP. When reconnecting to the Additional SVP, use the user name and password for the SVP on which the SVP microprogram is already installed (see REP(RSVP)05-20) to log in to the Additional SVP.



6. Turning off the RAS Switch#1

When SVP High Reliability Kit is set, go to the next step.
When SVP High Reliability Kit is not set, turn off the SVP RAS Switch#1 on the SVP.

NOTE: Use an object with a sharp edge such as a pair of tweezers to manipulate the SVP RAS switch.

NOTICE: The SIM bf85a3, bf86a3 may be reported, however, it is not a problem because it is one of the normal processes of the SVP replacement.
Complete the SIM concerned.

7. Various setting for SVP

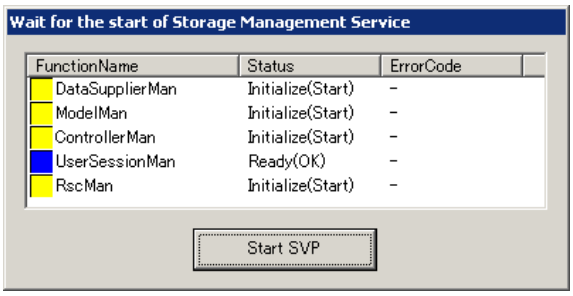
7.1 Setting the IP Address of the SVP

1. <Starting SVP window>

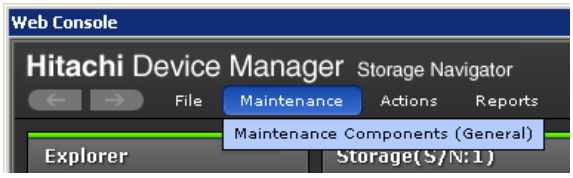
   NOTE: The SVP4756W message might be displayed when the SVP window is started. However, there is no problem.

<When Web Console is not working>
The window shown to the next appears.
Click [Start SVP].

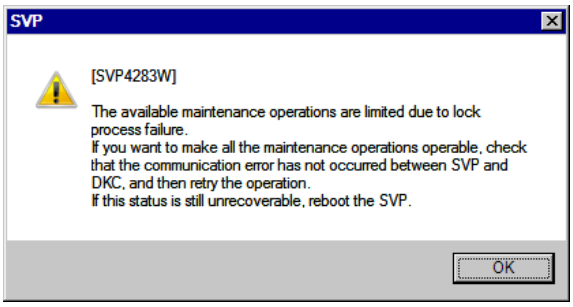
NOTE: Statuses that are different from the one in the window shown to the next might be displayed. Even in such a case, click [Start SVP].



<When Web Console is working>
Select [Maintenance]-[Maintenance Components (General)].



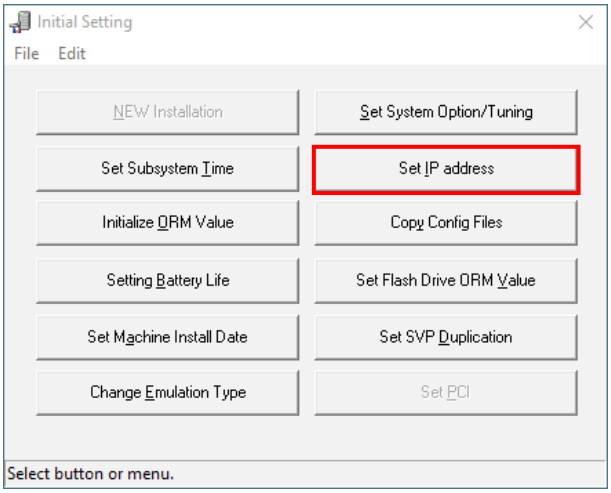
2. <Mode change>
   Click [View Mode] display in the SVP main window to change the mode to [Modify Mode (Unlocked)]. (It might take about 45 minutes to change the mode.)
   When the following message appears, click [OK] and go to Step 3.
   "The available maintenance operations are limited due to lock process failure.
   If you want to make all the maintenance operations operable, check that the communication error has not occurred between SVP and DKC, and then retry the operation. If this status is still unrecoverable, reboot the SVP.".
   Click [View Mode] of the SVP main screen. When it becomes to [Modify Mode] from [View Mode] too, click [OK] and go to Step 3.



3. <Opening the Initial Setting window>
   Click [Initial Setting] in the SVP window.

4. <Opening Set IP address window>
   Click [Set IP address] in the Initial Setting window.

   NOTE: Although it may be an error display if the Web Server Status window is displayed before the IP address setting work of SVP is completed, there is no problem because it is the one by the process of the SVP replacement.



5. <Setting the IP address>
   Perform the following, and then click [OK].

   NOTE: Be sure to click [OK]. If you click [Cancel], the settings are not applied.

Checking [Internal IP Address]:

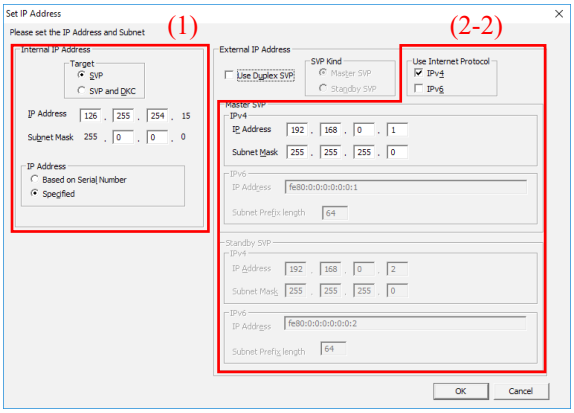
(1) Setting values restored from the configuration backup media are displayed.
Check each setting value in the “Internal IP Address” field. If setting values are wrong, select “SVP” for “Target”, and enter the correct values of the internal IP address (IP address of the internal LAN) in “IP Address” and “Subnet Mask”.

Setting [External IP Address]:

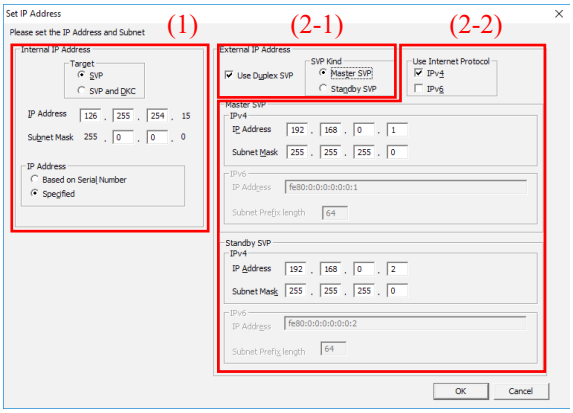
(2-1) When the SVP High Reliability Kit is installed, check the checkbox next to [Use Duplex SVP] and select an SVP kind.(see REP(RSVP)07-40.)

(2-2) Setting values are not restored from the configuration backup media. Select the protocol(s) you use under “Use Internet Protocol”, and then, enter the values of the external IP address (IP address of the public LAN) in “IP Address” and “Subnet Mask” (for IPv4) / “Subnet Prefix length” (for IPv6).

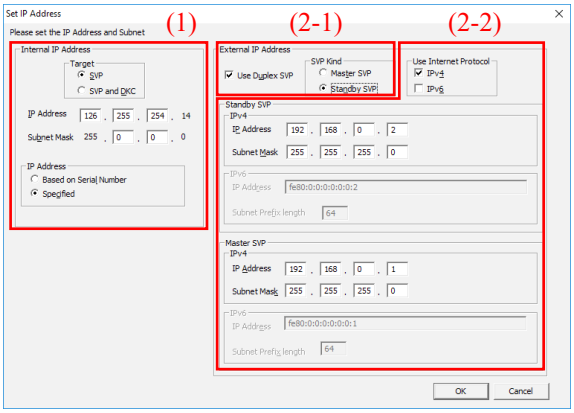
When SVP High Reliability Kit is not set



When SVP High Reliability Kit is set
(in the Master SVP)

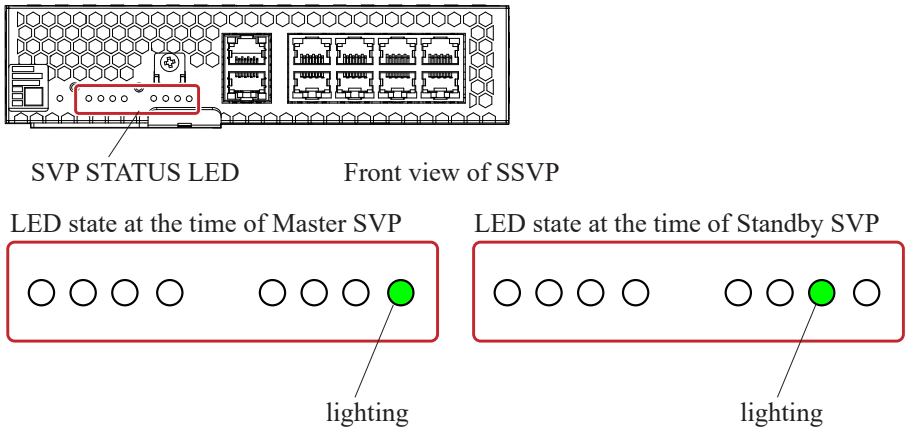


When SVP High Reliability Kit is set
(in the Standby SVP)



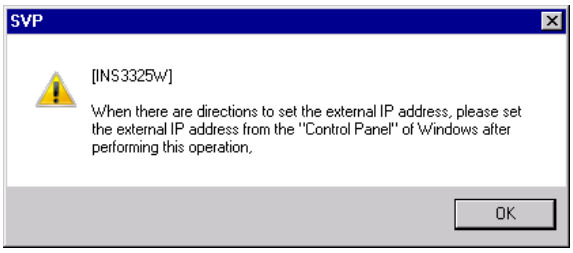
Setting [SVP Kind] :

Check the type of the SVP not replaced by looking at the SVP STATUS LEDs on the SSVP next to the SVP.



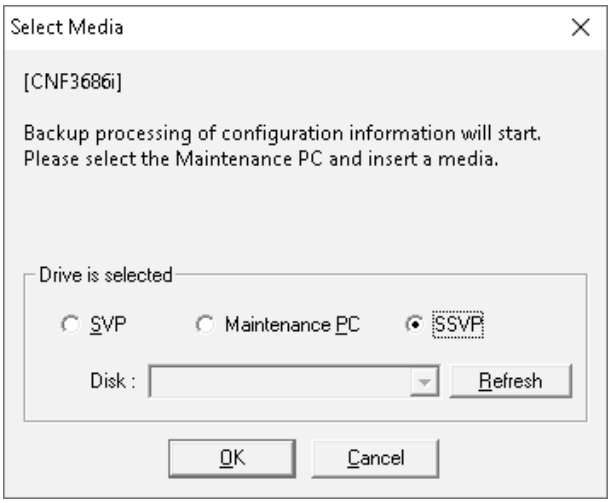
- When the SVP not replaced is the Master SVP, select “Standby SVP” for [SVP Kind] of the SVP installed as a replacement.
- When the SVP not replaced is the Standby SVP, select “Master SVP” for [SVP Kind] of the SVP installed as a replacement.

6. <Making sure of the setting of the external IP address>
   When a message, “When there are directions to set the external IP address, please set the external IP address from the “Control Panel” of Windows after performing this operation,” is displayed, click [OK].

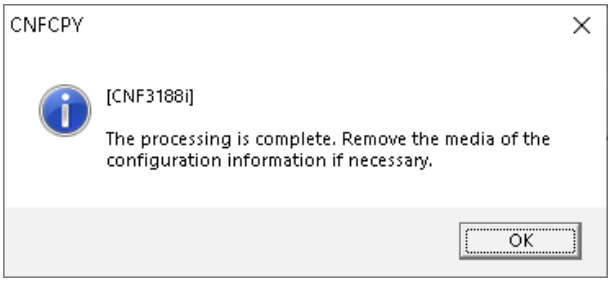


7. <Specifying where to back up the configuration information>
   Select “SSVP”, and then click [OK].

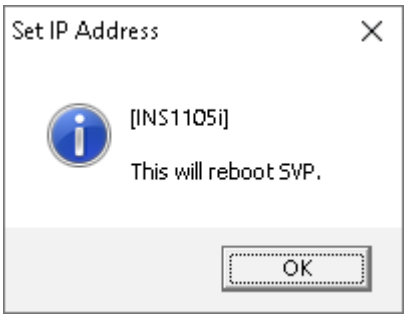
   NOTE: If you have replaced an SVP other than the Master SVP in SVP-BASIC, click [Cancel] (go to Step 9). If you click [OK], a backup error message is displayed. Click [OK] in response to the backup error message to return to the Select Media window. Then, click [Cancel].



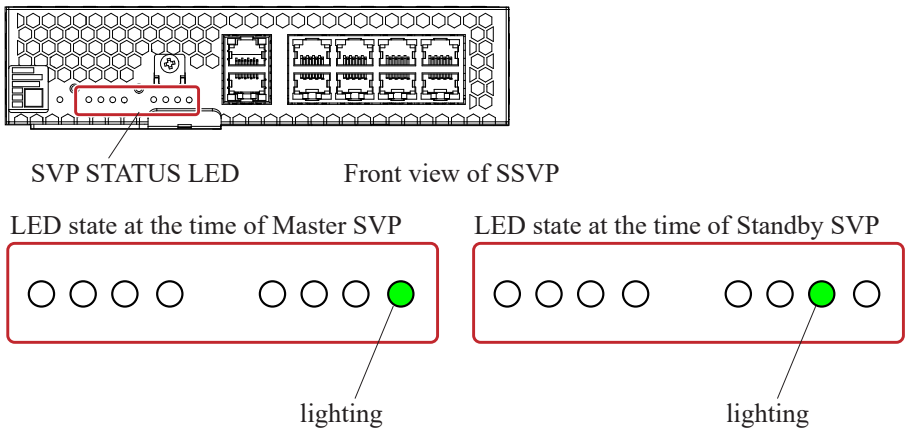
8. <Taking out the Config media>
   When the configuration information backup is complete, the message “The processing is complete. Remove the media of the configuration information if necessary.” is displayed. Click [OK].



9. <Making sure of the restart of the SVP>
   Click [OK].
   The SVP is disconnected from the Maintenance PC.
   After waiting for about five minutes, reconnect the SVP that has been replaced to the Maintenance PC.



10. <LED state confirmation of SSVP>
    Check the SVP STATUS LEDs on the SSVP next to the SVP installed as a replacement. If the LEDs are not in the status of the SVP kind set in Step 5., the IP address settings might be wrong. Perform the procedure from Step 1. again.

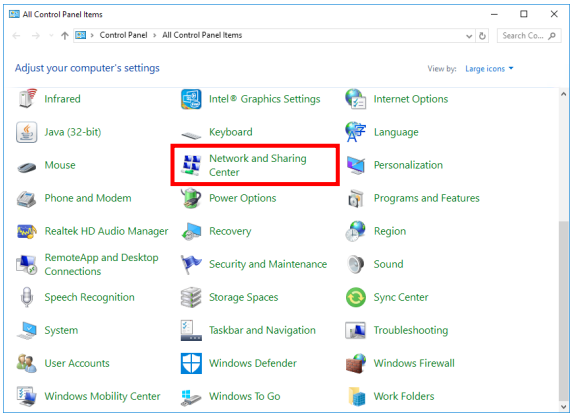


11. <Setting the external IP address>

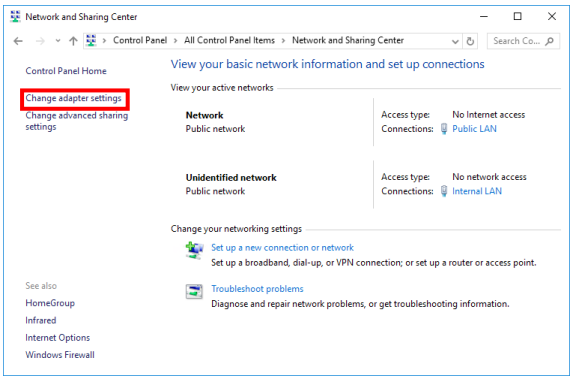
NOTE: Don't change connection name. If you do so, Web Console will not work.

(1) <Opening the Control Panel window>
Click [Start], and then select [Control Panel] from [Windows System].

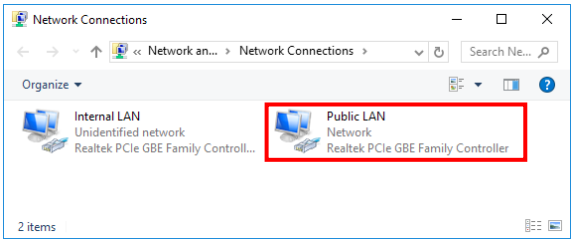
(2) <Opening the Network and Sharing Center window>
Click [Network and Sharing Center] in the Control Panel window.



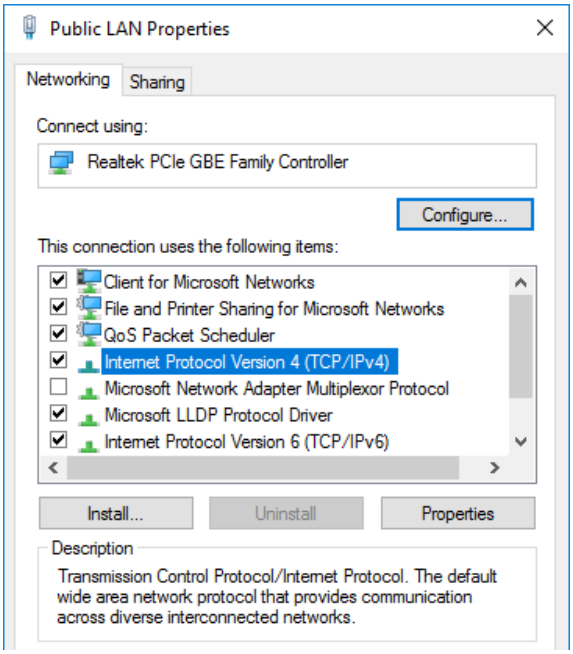
(3) <Opening the Network connections window>
Click [Change adapter settings] in the Network and Sharing Center window.



(4) <Opening the Public LAN Properties window>
Right-click [Public LAN] and then select [Properties].



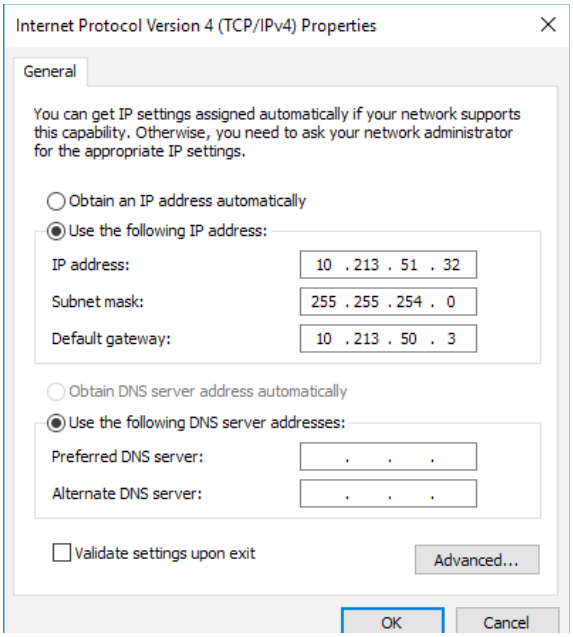
(5) Click [Internet Protocol Version 4 (TCP/IPv4)] in the Public LAN Properties window and click [Properties].



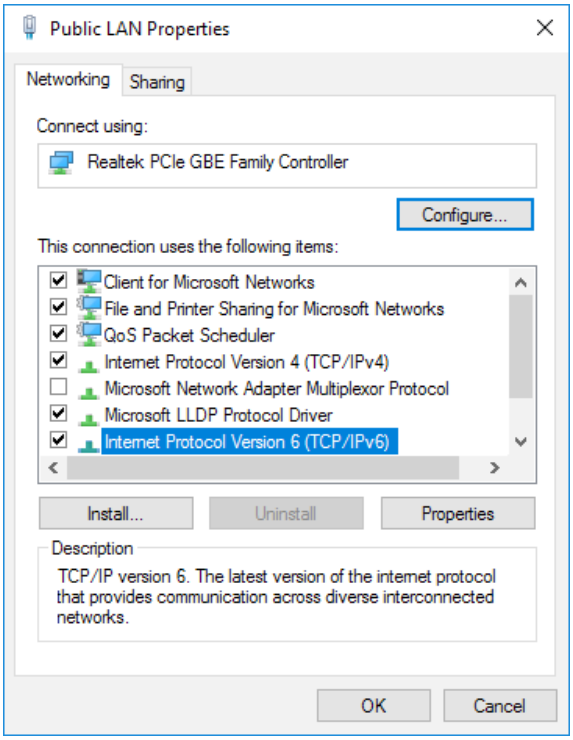
(6) <Setting the external IP address>
Set the “IP address”, “Subnet mask”, “Default gateway”, “Preferred DNS server” and “Alternate DNS server” and click [OK].
When you do not set IPv6, go to Step (9).

NOTE: When the ‘Set Network Location’ dialog (TRBL03-30-60) is displayed, Click [Cancel].

NOTE: Set the same default gateway and DNS servers for Master SVP and Standby SVP when configuring a network.

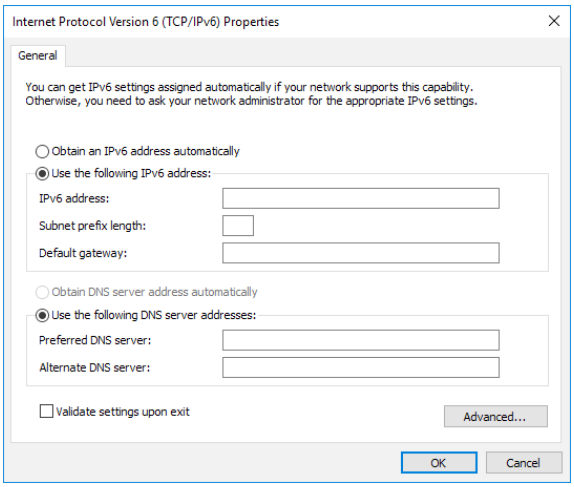


(7) Click [Internet Protocol Version 6 (TCP/IPv6)] in the Public LAN Properties window and click [Properties].



(8) <Setting the external IP address>
Set the “IPv6 address”, “Subnet prefix length”, “Default gateway”, “Preferred DNS server”, “Alternate DNS server” and click [OK].

NOTE: Set the same default gateway and DNS servers for Master SVP and Standby SVP when configuring a network.



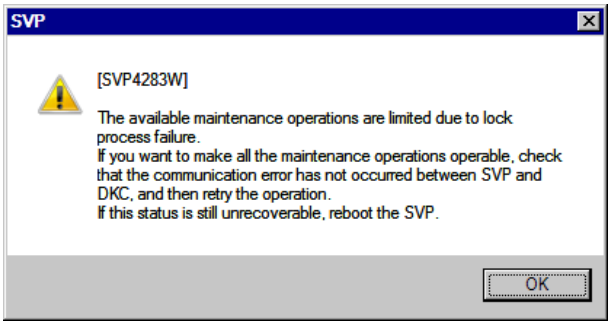
(9) After the setting is completed, click [OK]) in the Public LAN Properties window.
Close the Network connections window.

(10) Connect the cable removed in “4.1 SVP Replacement Processing” Step 2 to the new SVP.

7.1.1 Setting the Time zone

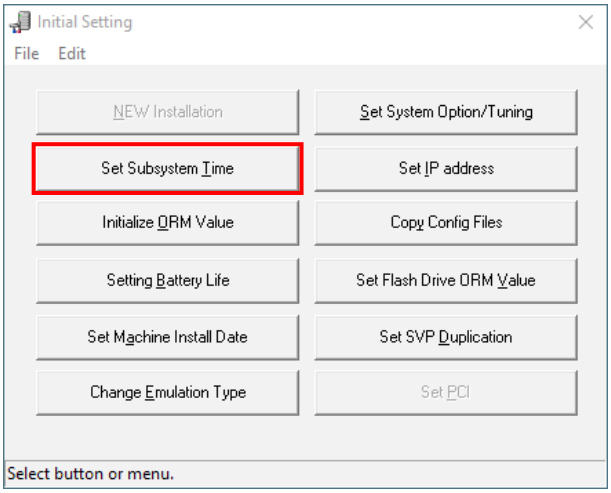
NOTE:
- When the customer uses a Kerberos server for the authentication for login to the storage system:
  Ask the customer about the time zone of the Kerberos server, and then set the same time zone as that of the Kerberos server according to the steps shown below.
- When the customer uses an authentication server other than Kerberos for login to the storage system, or when the customer does not use an authentication server:
  If a time zone other than "(UTC) Coordinated Universal Time" is set on the Basic SVP (*1), set the time zone by following the steps below.
  *1: Time zone that is set in the setting window opened by clicking "Change time zone" in the Set Subsystem Time window of SVP.
- If neither of the above is true, the time zone setting is not required.
  Go to "7.2 Resetting the SSVP".

1. Change the mode from [View Mode] to [Modify Mode].
   When the SVP is the Standby SVP of the storage system with the SVP High Reliability Kit installed, click [View Mode] in the SVP main window to change the mode to [Modify Mode (Unlocked)]. When the following message is displayed, click [OK], and then go to Step 2:
   "The available maintenance operations are limited due to lock process failure.
   If you want to make all the maintenance operations operable, check that the communication error has not occurred between SVP and DKC, and then retry the operation. If this status is still unrecoverable, reboot the SVP.".

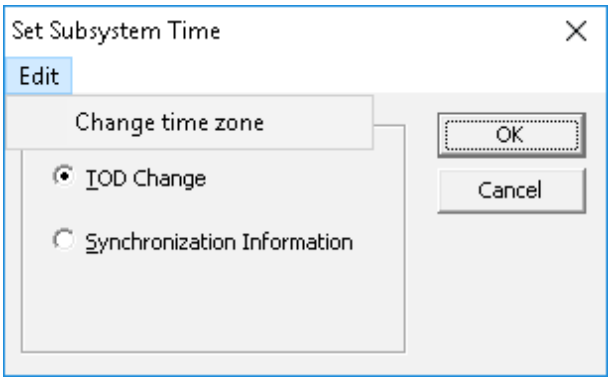


2. Click [Initial Setting] from the SVP window.

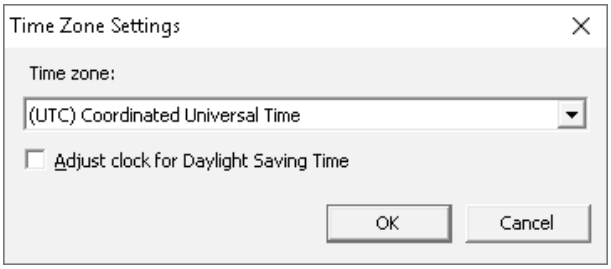
3. Click [Set Subsystem Time] in the Initial Setting window.



4. Select [Change time zone] from the [Edit] menu of the Set Subsystem Time window.



5. The time zone settings window appears.
   Set the time zone and click [OK].

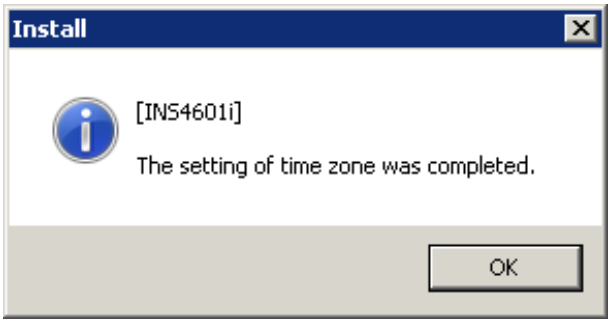


[Adjust clock for Daylight Saving Time]

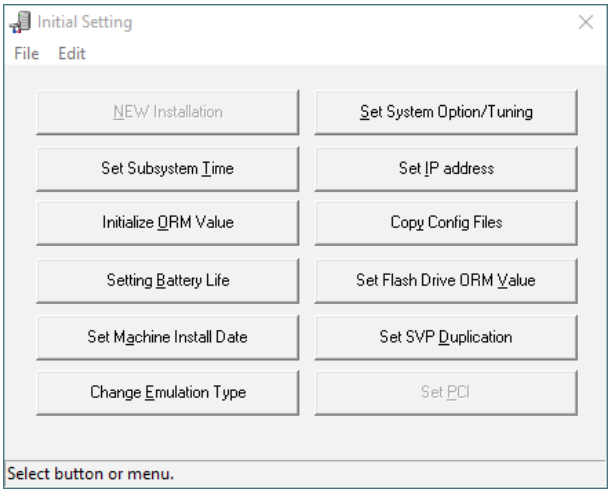
☑ Selected : Daylight Saving Time adjusting function is enabled.
Not selected : Daylight Saving Time adjusting function is disabled.

NOTE: Disable this function in a time zone where the Daylight Saving Time is not implemented.

6. The message “The setting of time zone was completed.” appears. Click [OK].



7. Close the Initial Setting window.

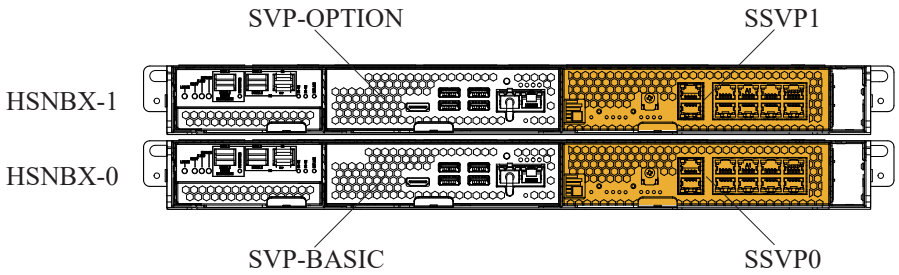


8. SVP Change the SVP mode to [View Mode].

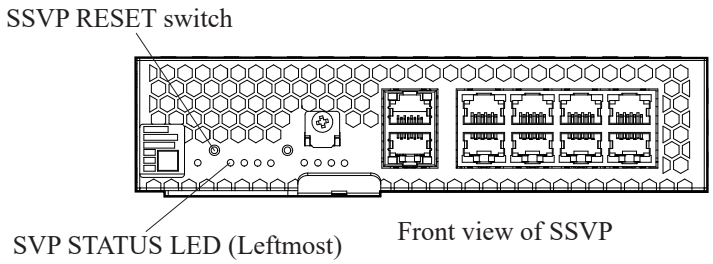
9. In the case where the Standby SVP was replaced, right-click [Start], and then select [Shut down or sign out]-[Disconnect].
   The SVP window of the Maintenance PC is closed

7.2 Resetting the SSVP

When SVP High Reliability Kit is not installed, go to "7.5 Setting the TOD".
When the SVP High Reliability Kit is installed, press the SSVP RESET switch on the SSVP next to the replaced SVP for 3 seconds or more.
It takes about 1 minute to reset the SSVP. The status of the leftmost SVP STATUS LED changes as shown below due to the SSVP reset.
Off (for about 30 seconds) → Off, blinking, or On (for about 30 seconds) → normal blinking status (at 1 second intervals) after completion of reset



Front view of HSNBX



Front view of SSVP

7.3 Post operation of SVP replacement when the SVP High Reliability Kit is installed

When the Standby SVP of the SVP High Reliability Kit is replaced, go to "7.3.1 Post operation of Standby SVP replacement".
When the Master SVP of the SVP High Reliability Kit is replaced, go to "7.3.2 Post operation of Master SVP replacement".

7.3.1 Post operation of Standby SVP replacement

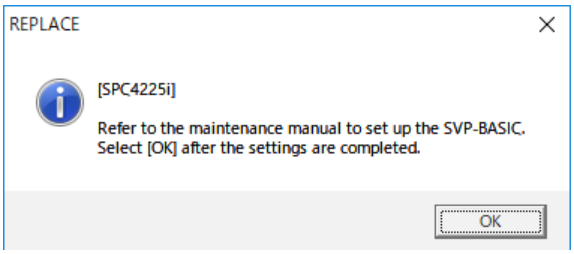
1. Connect to Master SVP (IP address: xxx.xxx.xxx.15).

---

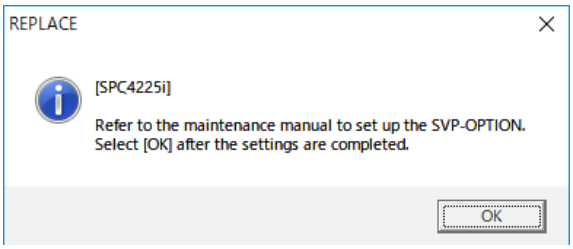
2. <Setting the SVP>
   Confirm that the following operations are complete, and then click [OK] in response to the message "Refer to the maintenance manual to set up [svp-location]. Select [OK] after the settings are completed.".
   - Performing "7.1 Setting the IP Address of the SVP"
   - Turning off the SVP RAS switches #2, #3, and #4 on the SVP on which the IP address initialization has been performed.

   NOTE: [svp-location] indicates the location of the SVP (SVP-BASIC or SVP-OPTION).

In the case of SVP-BASIC



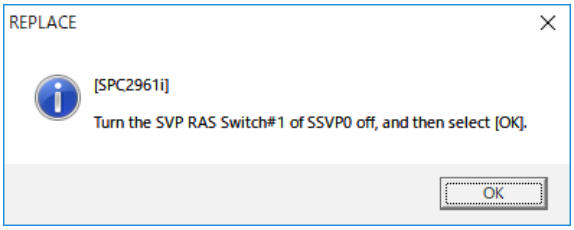
In the case of SVP-OPTION



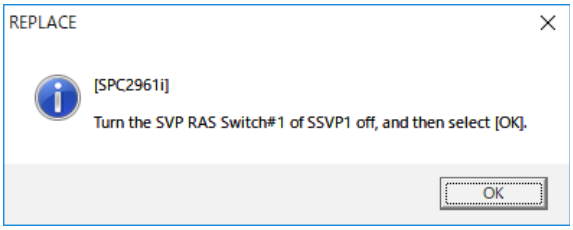
3. <Turning off the RAS Switch#1>
   The message “Turn the SVP RAS Switch#1 of SSVPn off, and then select [OK].” is displayed.
   Turn off the SVP RAS switch#1 of the SSVP next to the SVP installed for replacement, and then click [OK].

   NOTE: Use an object with a sharp edge such as a pair of tweezers to manipulate the SVP RAS switch.

In the case of SVP-BASIC

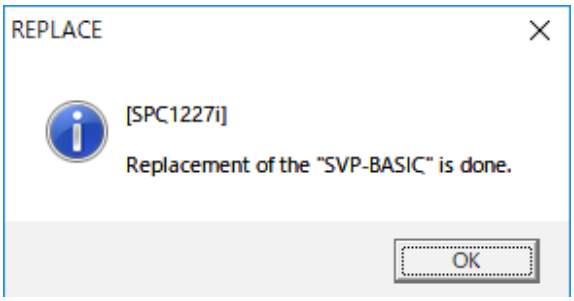


In the case of SVP-OPTION

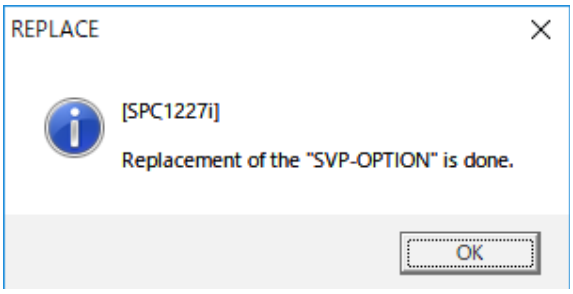


4. <Replacement of the Standby SVP is done>
   Click [OK] for the following message.

In the case of SVP-BASIC



In the case of SVP-OPTION



7.3.2 Post operation of Master SVP replacement

In the case where the Master SVP was replaced in the configuration containing the SVP High Reliability Kit, turn the RAS Switch#1 on the SSVP next to the replaced SVP to OFF.

NOTE: Use an object with a sharp edge such as a pair of tweezers to manipulate the SVP RAS switch.

NOTICE:	The SIM bf85a3, bf86a3 may be reported, however, it is not a problem because it is one of the normal processes of the SVP replacement. Complete the SIM concerned.

7.4 Transferring the Configuration Information (SVP High Reliability Kit is installed)

When SVP High Reliability Kit is set, transfer the configuration information.
(When the Master SVP has been replaced, do the same in order to make sure of the setting of the Master SVP.)

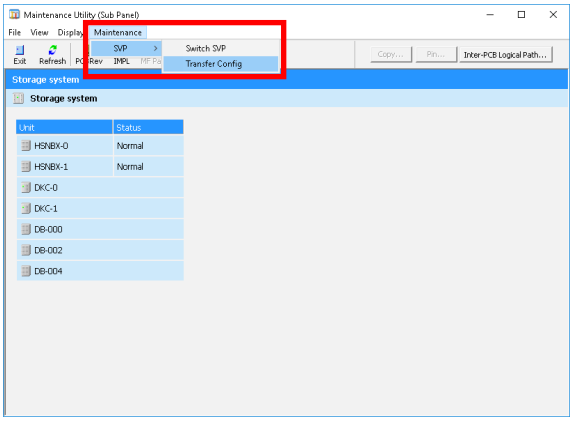
NOTE: • This operation needs that Standby SVP is a View mode.
• When screen saver operates (60 minutes pass without operation) with a Standby SVP having been connected to the remote desktop, this operation fails.

Perform the following operation for the Master SVP (IP address: xxx.xxx.xxx.15)

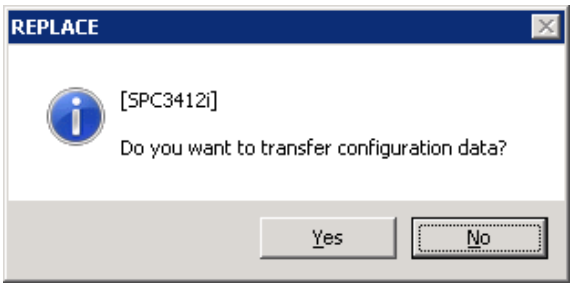
NOTE: When the SVP, which is an object of the operation, cannot be detected, retry the connection after a while (about one minute).

1. <Opening the Maintenance Utility (Sub Panel) window>
   When the Master SVP was replaced, change the mode to [Modify Mode].
   Click [Maintenance Utility (Sub Panel)].
   When the Standby SVP was replaced, go to Step 2.

2. Select [Maintenance]-[SVP]-[Transfer Config] from the menu.

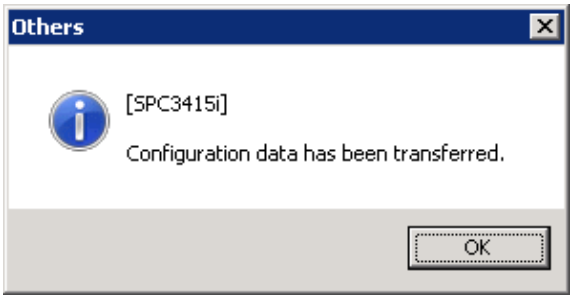


3. Click [Yes] for the message “Do you want to transfer configuration data?”.



4. The message “Transferring storage system configuration data...” is displayed.
   The SVP transfers the configuration information automatically to reflect the configuration information of the Master SVP on the Standby SVP. Therefore, if the transfer processing of the configuration information overlaps, the actually transferred status display may be repeated.
   In such a case, it might take about 40 minutes for the transfer to be completed.

5. When configuration data has been transferred, the message “Configuration data has been transferred.” is displayed.
   Click [OK].
   If errors occur on the way, check the problems of connection and setting of the replaced Standby SVP.



6. Close the Maintenance Utility (Sub Panel) window.

7. Change the SVP mode to [View Mode].

8. In the case where the Standby SVP was replaced, right-click [Start], and then select [Shut down or sign out]-[Disconnect].
   The SVP window of the Maintenance PC is closed.

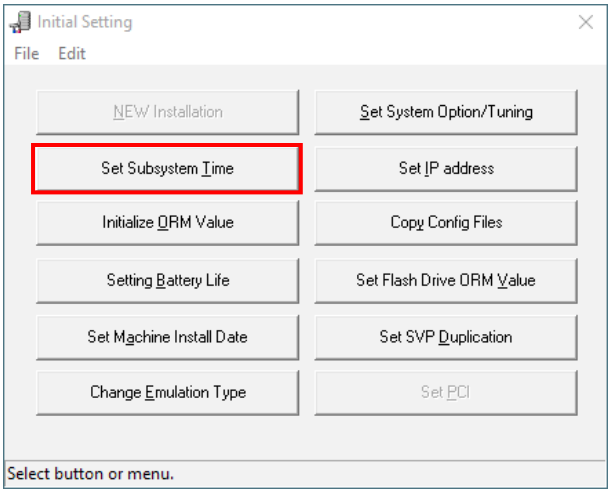
7.5 Setting the TOD

When SVP High Reliability Kit is not set or Master SVP is replaced after SVP High Reliability Kit is set, set the TOD after the message, “Loading SVP Program... SVP requests to DKC cannot be performed presently. Please wait...” disappears.
To replace the Standby SVP of the storage system with the SVP High Reliability Kit installed, go to “7.7 Setting the Web Console”.

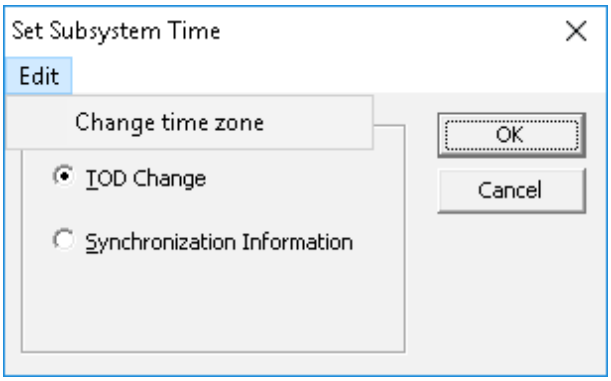
1. <Changing the mode>
   Change the mode to Modify Mode.

2. <Opening the Initial Setting window>
   Click [Initial Setting] in the SVP window.

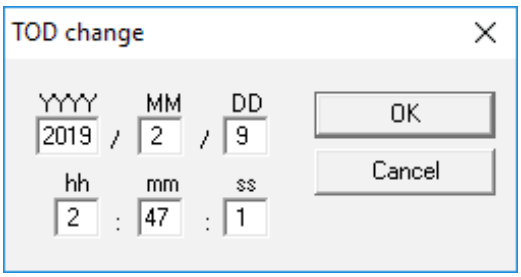
3. <Selecting Set Subsystem Time>
   Click [Set Subsystem Time] in the Initial Setting window.



4. Select [TOD Change] in the Set Subsystem Time window, and then click [OK].



5. Enter a date (year, month, and day) and time (hours, minutes, and seconds), and then click [OK].



6. Close the Initial Setting window.

7. Change the SVP mode to [View Mode].

7.6 Loading the configuration information from the SM to the SVP

1. <Opening the Maintenance Utility (Sub Panel) window>
   Click [Maintenance Utility (Sub Panel)] from the SVP window.

2. Make sure that the message, “Connection error occurred SVP-DKC,” is not displayed.
   If the above message is displayed, refer to page (TRBL03-64-10).

3. <Selecting [Exit]>
   Select [File] from the Maintenance Utility (Sub Panel) window.
   Click [Exit].

7.7 Setting the Web Console

If the customer don't use Web Console (Storage Navigator), 7.7.3 and 7.7.4 are not required.
If the customer uses neither Web Console nor SNMP Agent, 7.7.1 through 7.7.4 are not required.

7.7.1 Setting Network

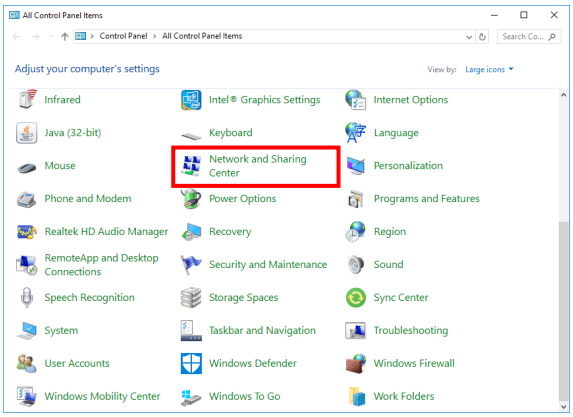
NOTICE: Do not change the connection name ("Public LAN" or "Internal LAN"). If you do so, Web Console will not work.

1. Changing the Public LAN settings (Speed and Duplex) according to the settings on customer's switch (HUB).
   Ask your customer about the settings on the switch (HUB) to be connected to the SVP.
   When "100M Full Duplex" is fixed against the SVP in the settings on customer's switch (HUB), this procedure is required. In other cases than the above, go to Step 2.

NOTICE: Do not change the Internal LAN setting from [Auto Negotiation].

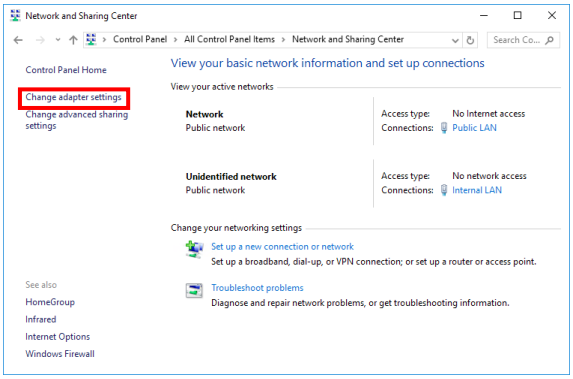
(1) Opening the Control Panel window
Click [Start], and then select [Control Panel] from [Windows System].

(2) Opening the Network and Sharing Center window
Click [Network and Sharing Center] in the Control Panel window.



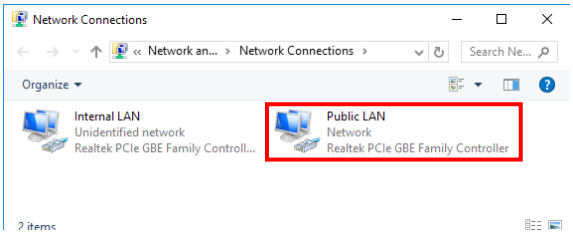
(3) Opening the Network connections window

Click [Change adapter settings] in the left side of Network and Sharing Center window.

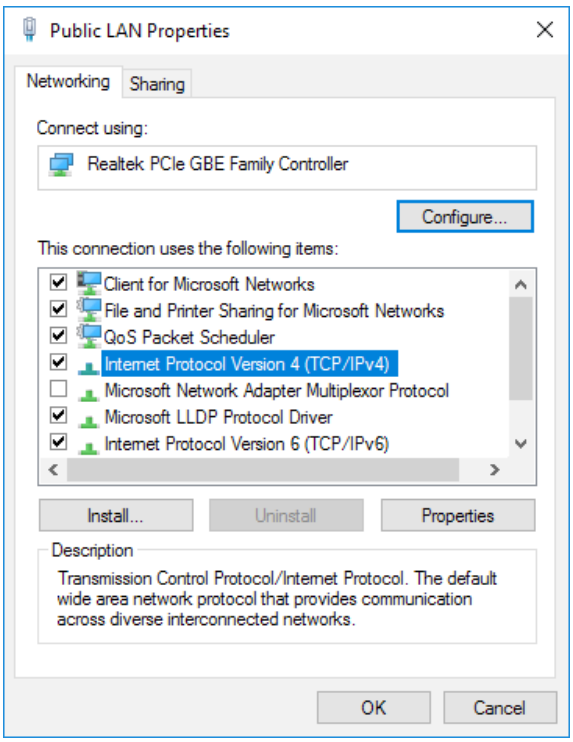


(4) Opening the Public LAN Properties window

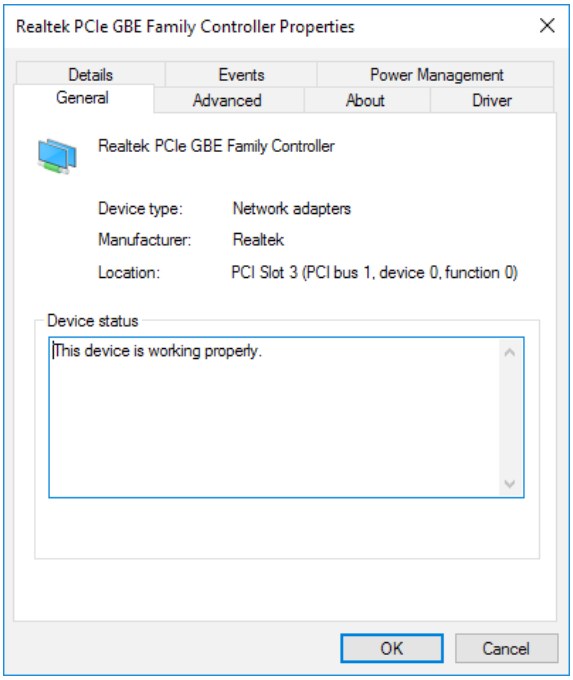
Right-click [Public LAN] and then select [Properties] by clicking the right mouse button.



(5) In the Public LAN Properties window, click [Configure].



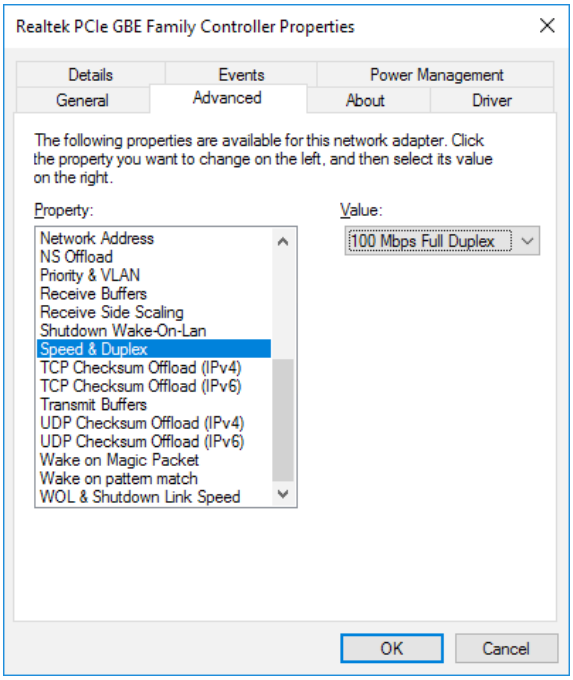
(6) Switching the tab
After [Configure] is pressed, the following window is displayed.
Select the 'Advanced' tab in the following window.



(7) Setting the Connection Properties

After the 'Advanced' tab is selected, the following window is displayed.

Change the value of 'Speed and Duplex' from 'Auto Detect' to '100Mbps Full Duplex'.



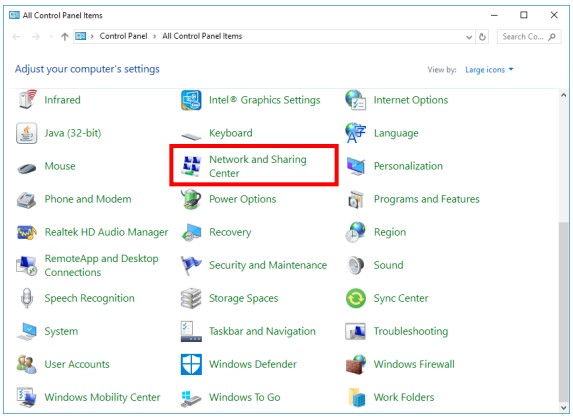
(8) Applying the settings and closing the window

Return the window to Publick LAN Properties by clicking [OK] and close the window by clicking [OK].

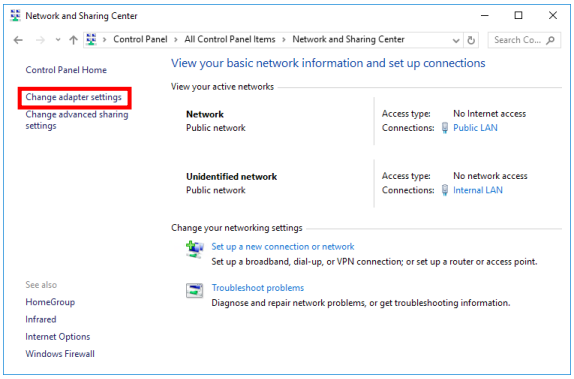
NOTE: When the Set Network Location dialog (TRBL03-30-60) is displayed, click [Cancel].

2. <Changing the Public LAN and External IP Address settings when Web Console is connected only through IPv6>
When Web Console is connected only through IPv6, this procedure is required. In other cases than the above, go to Step 3.

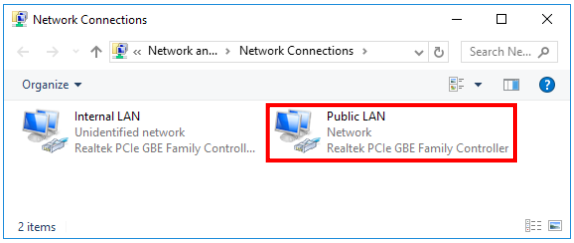
(1) Open the Control Panel window
Click [Start], and then select [Control Panel] from [Windows System].



(2) Launch the Network Connections
Click “Change adapter settings”.

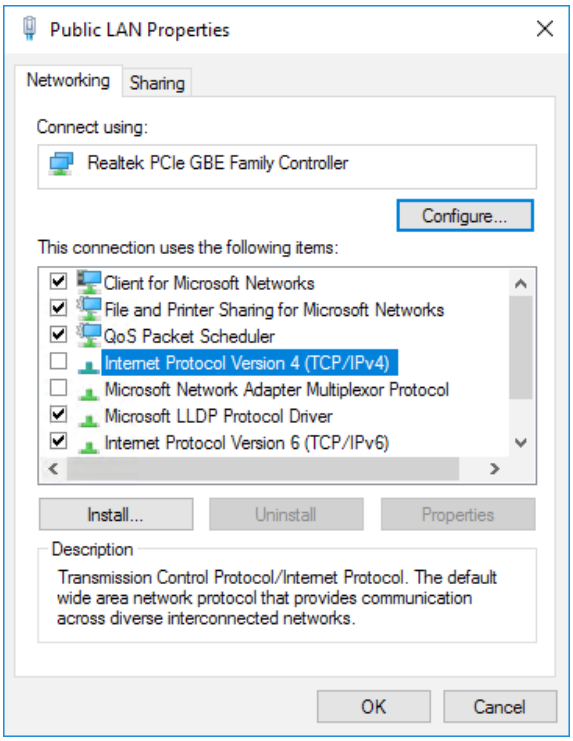


(3) Open the Connection Properties window
Right-click [Public LAN], and then select [Properties].



(4) Set properties

When the property is displayed, uncheck the checkbox of “Internet Protocol Version 4 (TCP/IPv4)” in the list. Click [OK] and close the window.

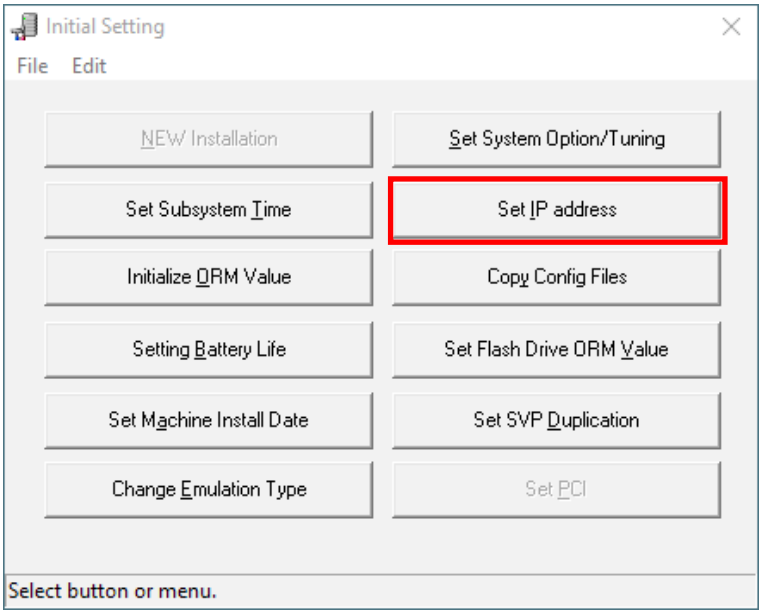


(5) Operate SVP window

Change to [Modify Mode].

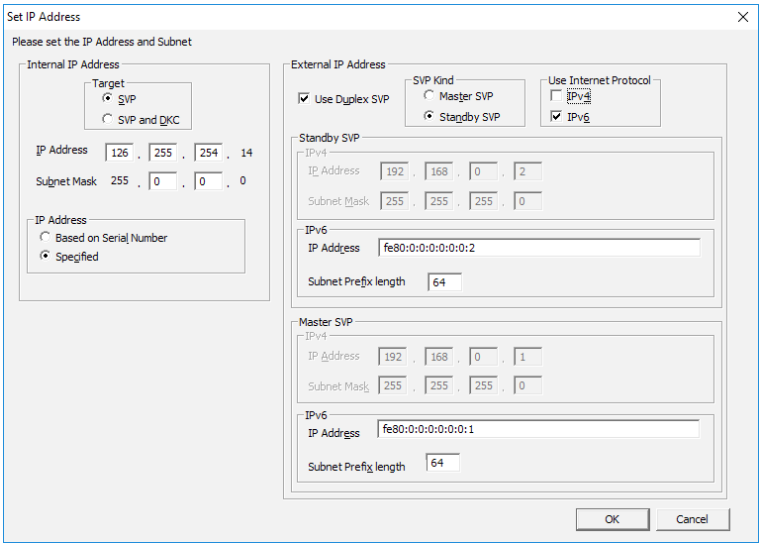
(6) Click [Initial Setting] in the SVP window.

(7) Click [Set IP address] in the Initial Setting window.



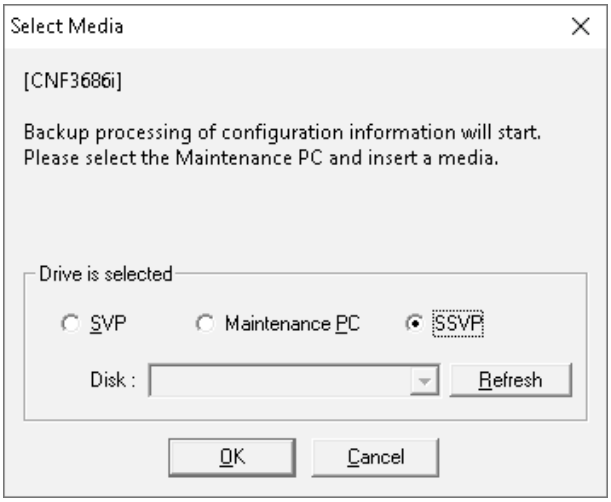
(8) Set SVP properties
Check the checkbox of IPv6 of “Use Internet Protocol”.
Uncheck the checkbox of IPv4 of “Use Internet Protocol”.
Click [OK].

NOTE: Please click [OK] absolutely. And, [Cancel] is not reflected in the setting.

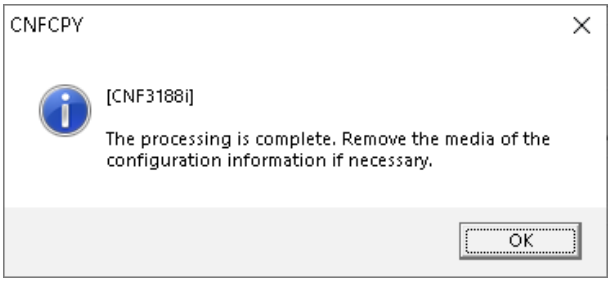


(9) <Specifying where to back up the configuration information>
Select “SSVP”, and then click [OK].

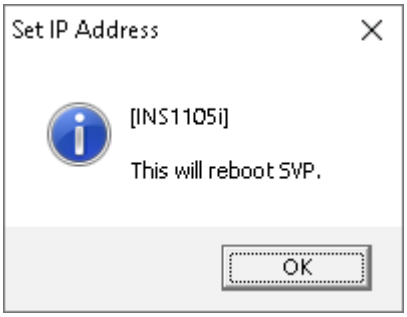
NOTE: In the case where the SVP in SVP-OPTION was replaced, click [Cancel] (go to Step (11)). If you click [OK], a backup error message is displayed. Click [OK] in response to the backup error message to return to the Select Media window. Then, click [Cancel].



(10) <Taking out the Config media>
When the configuration information backup is complete, the message “The processing is complete. Remove the media of the configuration information if necessary.” is displayed. Click [OK].



(11) <Making sure of the restart of the SVP>
Click [OK].
The SVP is disconnected from the Maintenance PC.
After waiting for about five minutes, reconnect the SVP that has been replaced to the Maintenance PC.



3. In the case where the Standby SVP was replaced, right-click [Start], and then select [Shut down or sign out]-[Disconnect].
   The SVP window of the Maintenance PC is closed.

7.7.2 Setting SNMP

When you replace Standby SVP, go to “9. Post-procedure”.

1. Perform the following procedure, when you use SNMP Agent.
   (1) Select the following menu item on Web Console.
   [Settings]-[Environmental Setting]-[Edit Alert Settings]
   (2) Select [SNMP] tab.
   (3) Select [Extension SNMP] to [Enable], and then click [Finish].
   (4) Click [Apply] after checking the settings on the confirmation window.

2. Perform the following procedure, when you don’t use SNMP Agent.
   (1) Select the following menu item on Web Console.
   [Settings]-[Environmental Setting]-[Edit Alert Settings]
   (2) Select [SNMP] tab.
   (3) Select [Extension SNMP] to [Disable], and then click [Finish].
   (4) Click [Apply] after checking the settings on the confirmation window.
   (5) Select the following menu item on Web Console.
   [Settings]-[Environmental Setting]-[Edit Storage System]
   (6) Set Storage System Name/Contact/Location again, and then click [Finish].
   (7) Click [Apply] after checking the settings on the confirmation window.

For details, refer to the chapter on operation of SNMP in “Hitachi SNMP Agent User Guide”.

7.7.3 Setting the user account information and the environment setting information

(The setting is not required when replacing the Standby SVP of the storage system with the SVP High Reliability Kit installed.)
Ask the customer to restore the user account information and the environment setting information of Web Console using the backup which he/she is keeping.
If the backup is not kept, ask him/her to reset it.
Please refer to “System Administrator Guide” for the restoration method and the setting method.

7.7.4 Setting Audit Log

(The setting is not required when replacing the Standby SVP of the storage system with the SVP High Reliability Kit installed.)
When the customer is using the Syslog function of Audit Log or the FTP transfer function, request the customer to restore it by using the backup that he/she is keeping.
If the backup is not kept, ask him/her to reset it.
Please refer to “Hitachi Audit Log User Guide”, and “System Administrator Guide” for the restoration method and the setting method.
Please refer to “Hitachi Audit Log User Guide”, and “System Administrator Guide” for the restoration method and the setting method.

7.7.5 Setting SIMSyslog

(The setting is not required when replacing the Standby SVP of the storage system with the SVP High Reliability Kit installed.)
When the customer is using the Syslog function of the error information notification, request the customer to restore it by using the backup that he/she is keeping.
If the backup is not kept, ask him/her to reset it.
Please refer to “System Administrator Guide” for the restoration method and the setting method.

8. Backing Up the Configuration Information

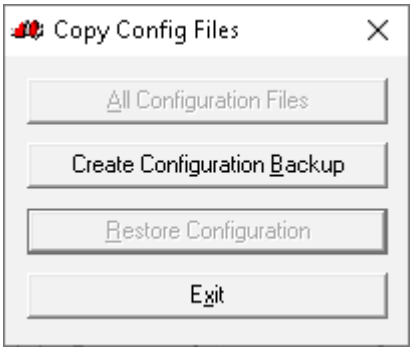
In the case where SVP High Reliability Kit is not set and where SVP High Reliability Kit is set and the Master SVP has been replaced, make a backup of the configuration information.
In the case where SVP High Reliability Kit is set and the Standby SVP has been replaced, go to "9. Post-procedure".

1. Change the mode to [Modify Mode] in the SVP window.

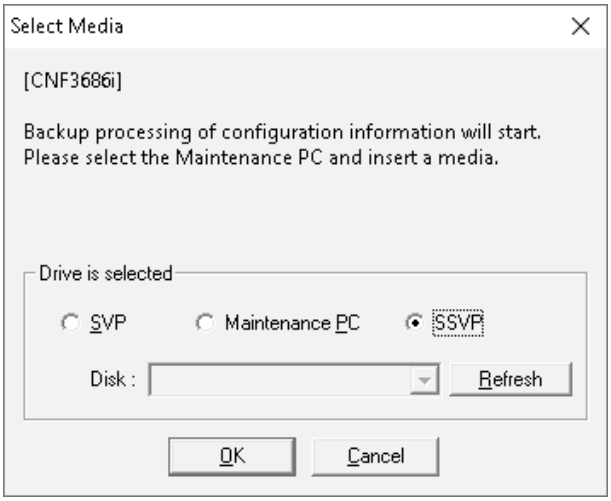
2. Click [Initial Setting] in the SVP window.

3. Click [Copy Config Files] in the Initial Setting window.

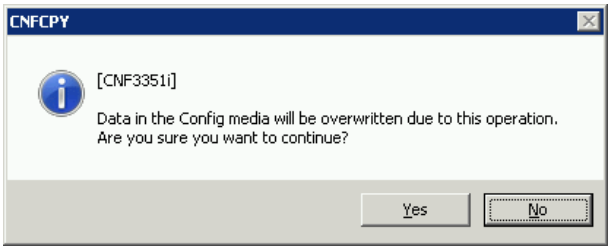
4. Click [Create Configuration Backup] in the Copy Config Files window.



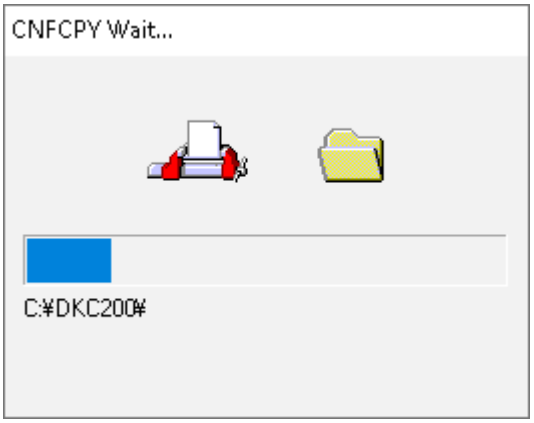
5. Select “SSVP”, and then click [OK].



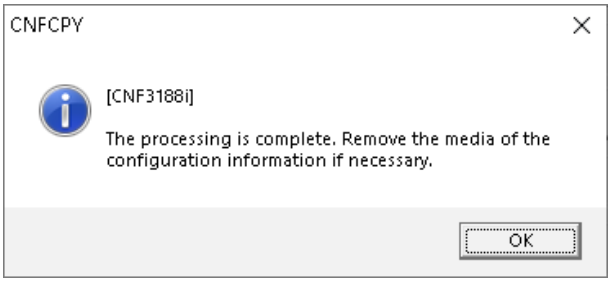
6. When you want to continue the process, click [Yes]. When the backup to the Config media is not necessary, click [No].



7. The backup processing of the configuration information to the specified backup location is performed. The “CNFCPY Wait...” window is displayed during the processing.



8. When the configuration information backup is complete, the message “The processing is complete. Remove the media of the configuration information if necessary.” is displayed. Click [OK].



9. Select [Exit] of the Copy Config Files to finish this operation.

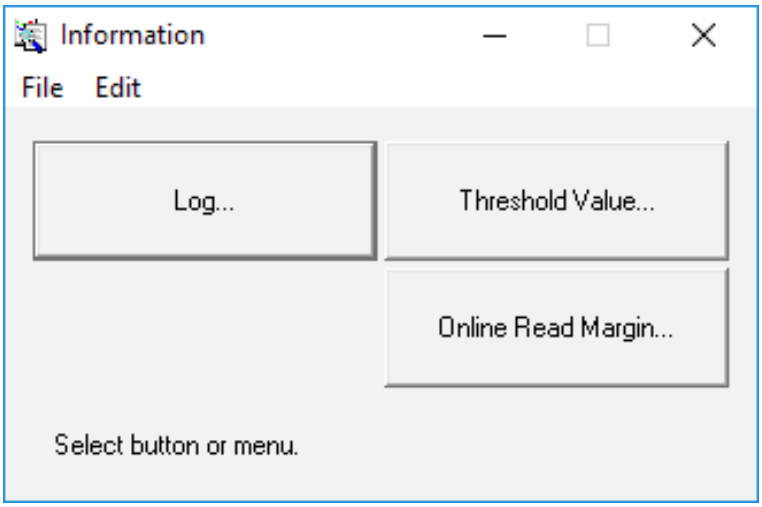
10. Change the SVP to [View Mode].

9. Post-procedure

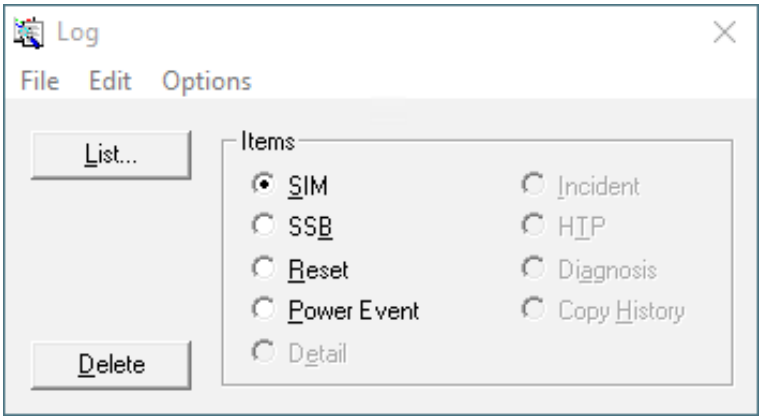
1. In the case where the Standby SVP was replaced, connect to the Master SVP (IP address: xxx.xxx.xxx.15).

2. Completing the SIM log
   (1) Change the mode to [Modify Mode], and then select [Information].

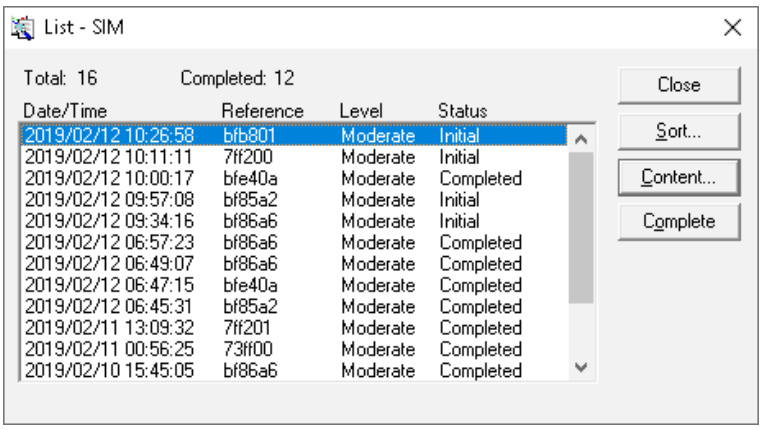
   (2) In the Information window, click [Log...].



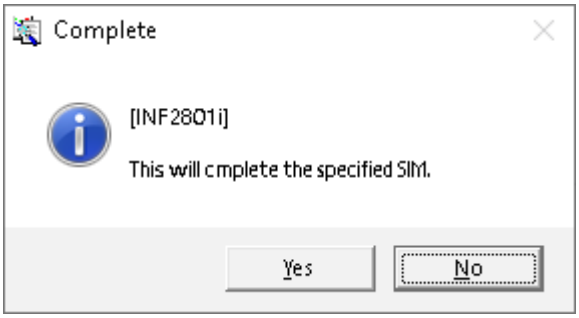
   (3) In the Log window, select [SIM] and then [List...].



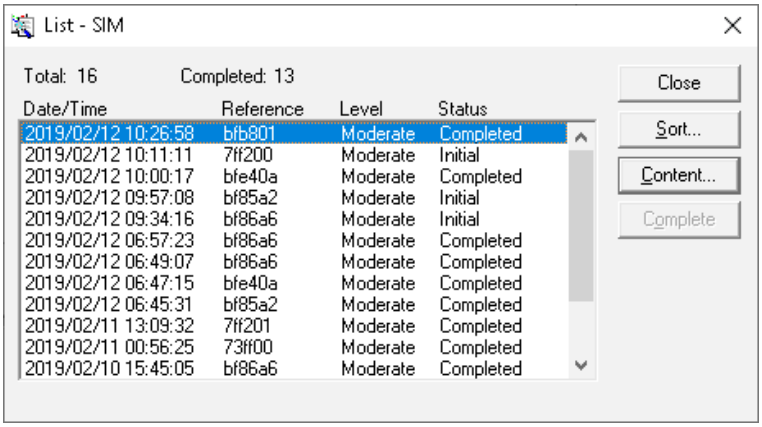
(4) In the List-SIM window, select the data for which you end the process, and then click [Complete].



(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.

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.

3. Changing the operation mode
Change the mode to [View Mode] in the SVP window.

Please up-load trouble information gathered in Maintenance PC to the server by using OnlineDumpTool. (SVP02-21-10)

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