[Cache Flash Memory(CFM) REPLACEMENT PROCESSING - RCFM]

1. Replacing a Cache Flash Memory (CFM)

NOTE: • After any CFM in the storage system is replaced, a micro-program is automatically copied to the CFM from another CFM.
• If all CFM-xy0 (*1) in the storage system fail, any micro-program is not copied. In such a case, perform the micro-program exchange according to "Recovery Procedure When CFM Failure Occurs (SIM = 30750x)" (TRBL03-53-10) after CFM replacement.

*1 : "x" indicates the DKC number (0 to 5).
"y" indicates the CTL number (1 or 2).

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

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

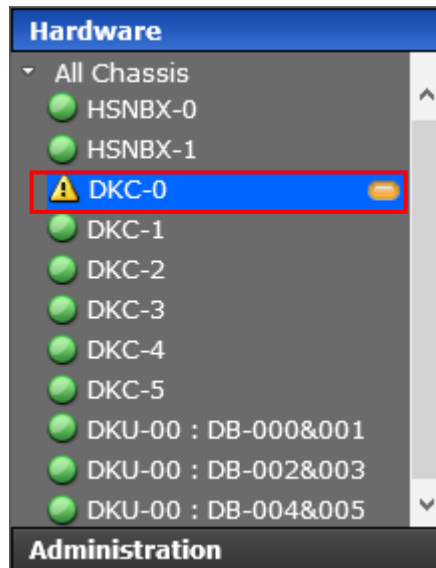3. Changing the operation mode
   Change the mode to [View Mode].

4. Starting Maintenance Utility
   In the SVP window, click [Maintenance Utility]. (See "Starting Maintenance Utility" (MU01-10).)
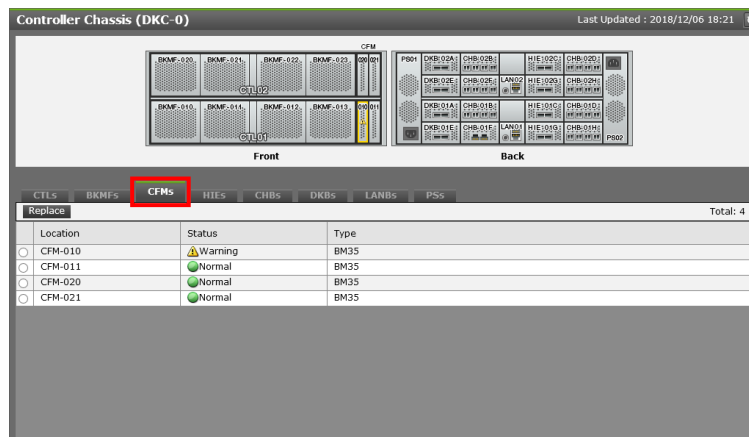
5. Selecting replacement parts by Maintenance Utility.
   (1) <Main window>
   Select [Controller Chassis] in the main window.

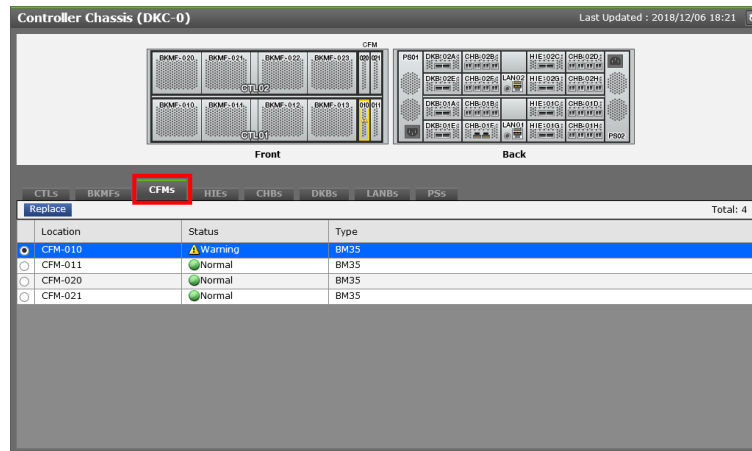   (2) <Controller Chassis window>
   Click the [CFMs] tab in the Controller Chassis window to display a Cache Flash Memory status.
   See "Alert Display Related to FRU (Field Replacement Unit)" (MU02-10) for [Status].

(3)   <Select CFM>

Select a CFM to be replaced. Click [Replace].

(4)   <Block Cache Flash Memory>

⚠ CAUTION

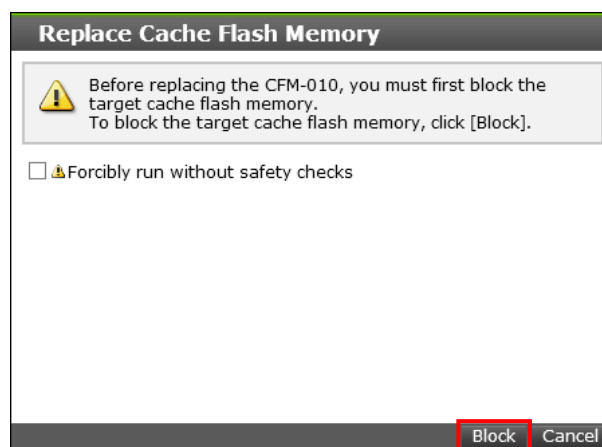About ″Forcibly run without safety checks″:

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

Click [Block] after checking that the Cache Flash Memory to be replaced is correct.
If a message other than the described is displayed, refer to Message Section (MSG00-00).

NOTE : The error list window is displayed if multiple errors are detected by the prior check.
If it is displayed, click the text of "Error Code" and recover the failures or the blockade in accordance with the details of the displayed errors.
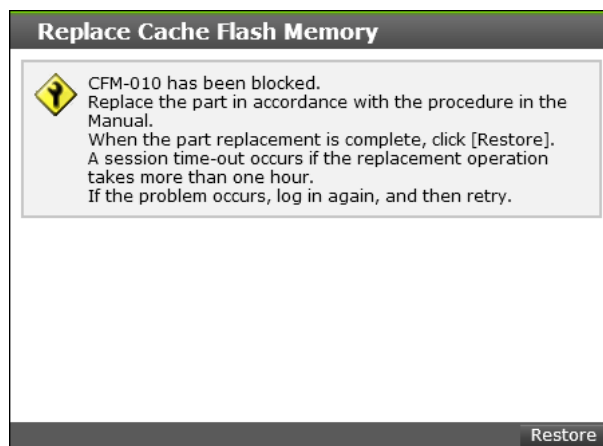
(5) <Check the beginning of Cache Flash Memory replacement>
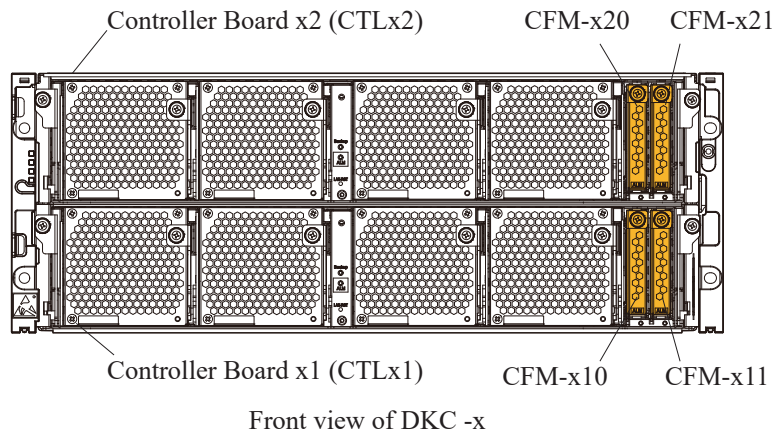   Check that the Cache Flash Memory is blocked and becomes ready for replacing.

   NOTE : Do not click [Restore] at this time.
   Click [Restore] after completing the replacement work.

Replace Cache Flash Memory

CFM-010 has been blocked.
Replace the part in accordance with the procedure in the Manual.
When the part replacement is complete, click [Restore].
A session time-out occurs if the replacement operation takes more than one hour.
If the problem occurs, log in again, and then retry.

Restore

6. Cache Flash Memory Replacement Processing

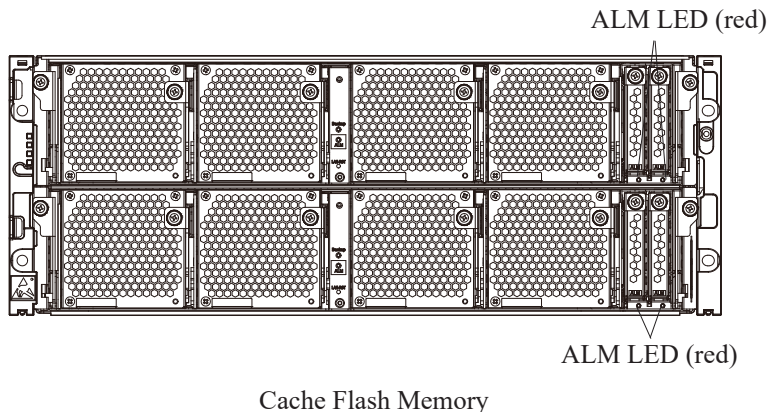| Location		Function Name of Component	Part Name
Front of DKC	1	Cache Flash Memory	• CFM (BM35)
			• CFM (BM45)
			• CFM (BM3E)
			• CFM (BM4E)

Front view of DKC -x

*1: DKC-x
        └→DKC No. (0, 1, 2, ... , 5)

NOTE: The above illustrations are for VSP 5500 and VSP 5500H. For VSP 5100 and VSP 5100H, only CTL01 and CTL12 are installed.

> **NOTICE:** To prevent part failures caused by static electrical charge built up on your own body, be sure to wear a wrist strap connected to the Storage System before starting and do not take it off until you finish. See ″Note on Installing and Removing Parts″ (REP(GE)01-30).
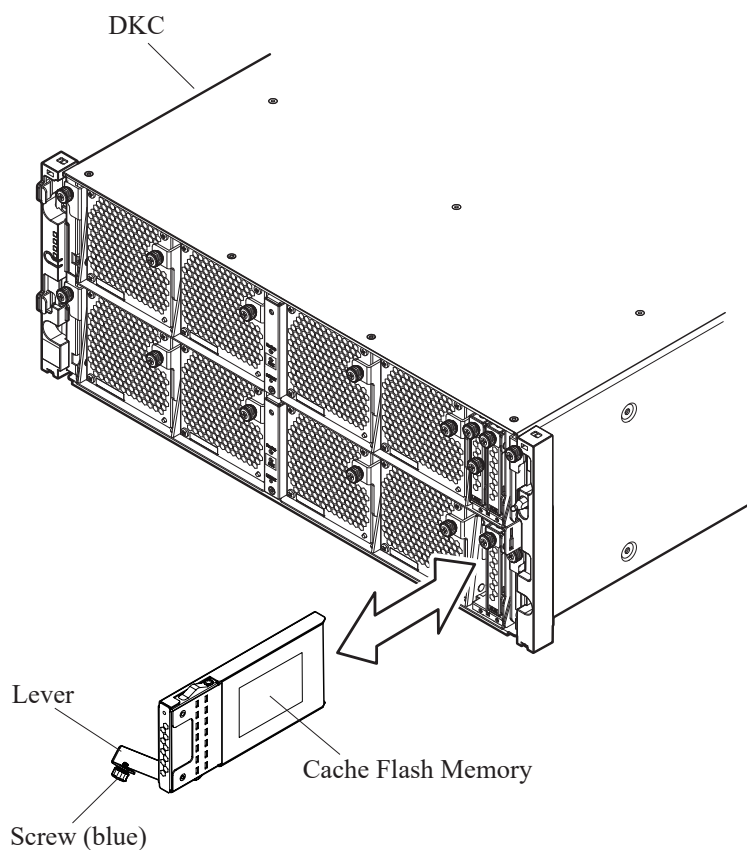
(1) Check that the ALM LED (red) on the DKC Cache Flash Memory to be replaced lights up. When the LED does not light up, check the location of the Cache Flash Memory to be replaced in the Maintenance Utility window.

Figure 1-1 ALM LED Location

Cache Flash Memory

(2)   Replace the Cache Flash Memory.
    (a)   Loosen the screw (blue) fixing the failed Cache Flash Memory.
    (b)   Open the lever.
    (c)   Pull out and remove the Cache Flash Memory while holding its body with both hands.
    (d)   With the lever opened completely, insert the new Cache Flash Memory into the slot.
    (e)   Push the Cache Flash Memory all the way in.
    (f)   Close the lever completely.
    (g)   Tighten the screw (blue) to fix the Cache Flash Memory.
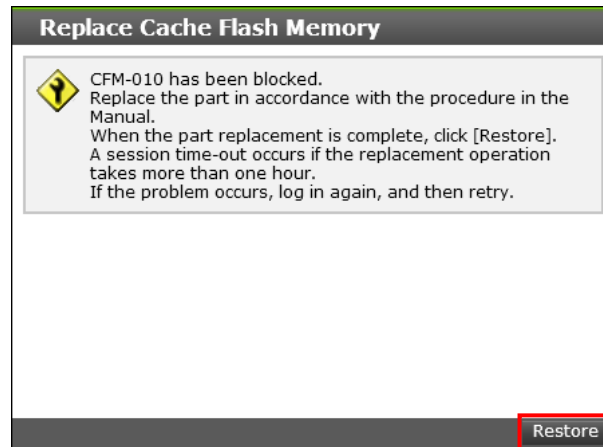
Figure 1-2 Replacement of Cache Flash Memory

DKC

Lever

Cache Flash Memory

Screw (blue)

7. Restoring replacement parts by Maintenance Utility
    (1) <Restore replacement parts>
         Click [Restore].

> **Replace Cache Flash Memory**
>
> ⚠️ CFM-010 has been blocked.
>   Replace the part in accordance with the procedure in the
>   Manual.
>   When the part replacement is complete, click [Restore].
>   A session time-out occurs if the replacement operation
>   takes more than one hour.
>   If the problem occurs, log in again, and then retry.
>
>   [Restore]
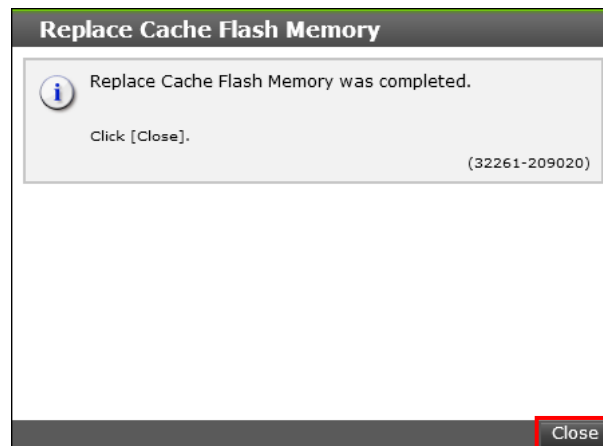
    (2) <Check replacement parts restoration>
         Check that the following message is displayed and click [Close].
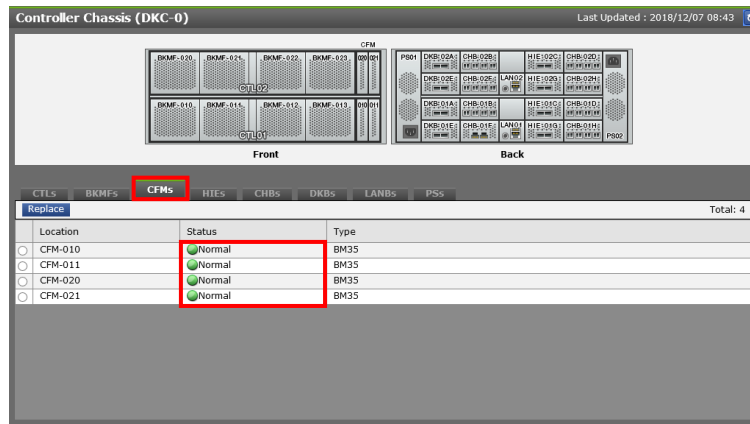   If a message other than the described is displayed, refer to Message Section (MSG00-00).

> **Replace Cache Flash Memory**
>
> ⓘ Replace Cache Flash Memory was completed.
>
>   Click [Close].
>   (32261-209020)
>
>   [Close]

(3) <Check Cache Flash Memory restoration>
Click the [CFMs] tab in the Controller Chassis window and check that a Status of the replaced
Cache Flash Memory is "Normal".

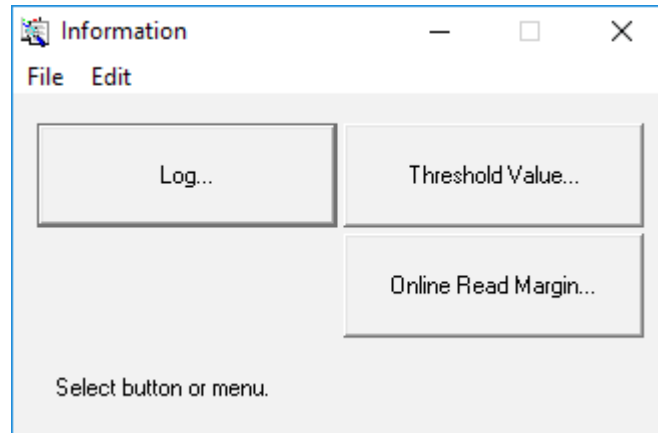8. Closing Maintenance Utility

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

(2) <Get the error information>
Collect small system dumps by referring to "Dump/Auto Dump" (SVP02-09-10).
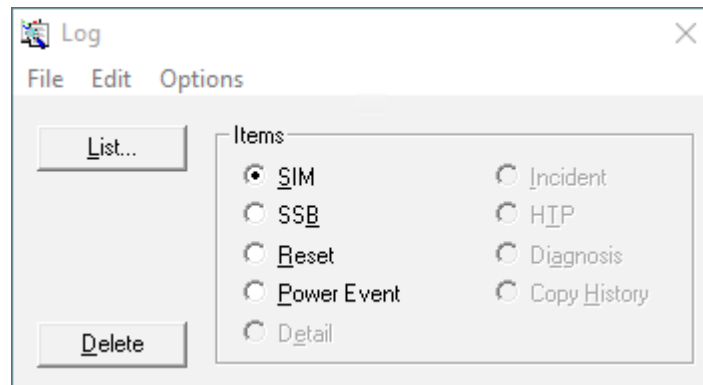
(3) Refer to the "Use of OnlineDumpTool" (SVP02-21-10), please upload the error information.
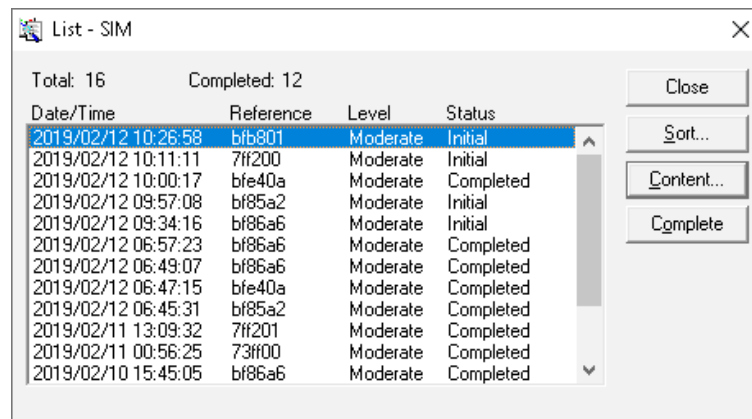
9. Completing the SIM log

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

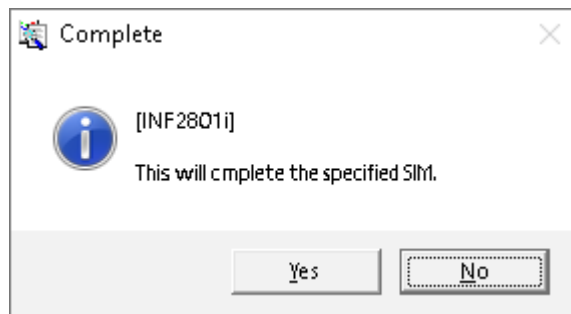   (2)   In the Information window, click [Log...].

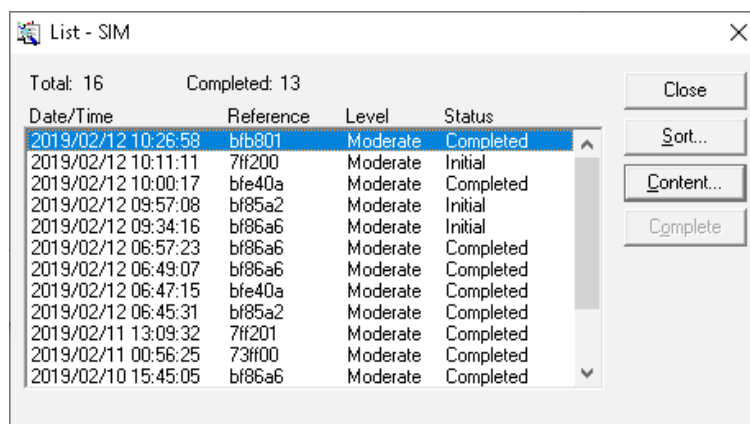   (3)   In the Log window, select [SIM] and then [List...].

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

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

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

(7)   In the List-SIM window, click [Close].
      Close the Log window, then the Information window.
      Change the mode from [Modify Mode] to [View Mode].

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

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