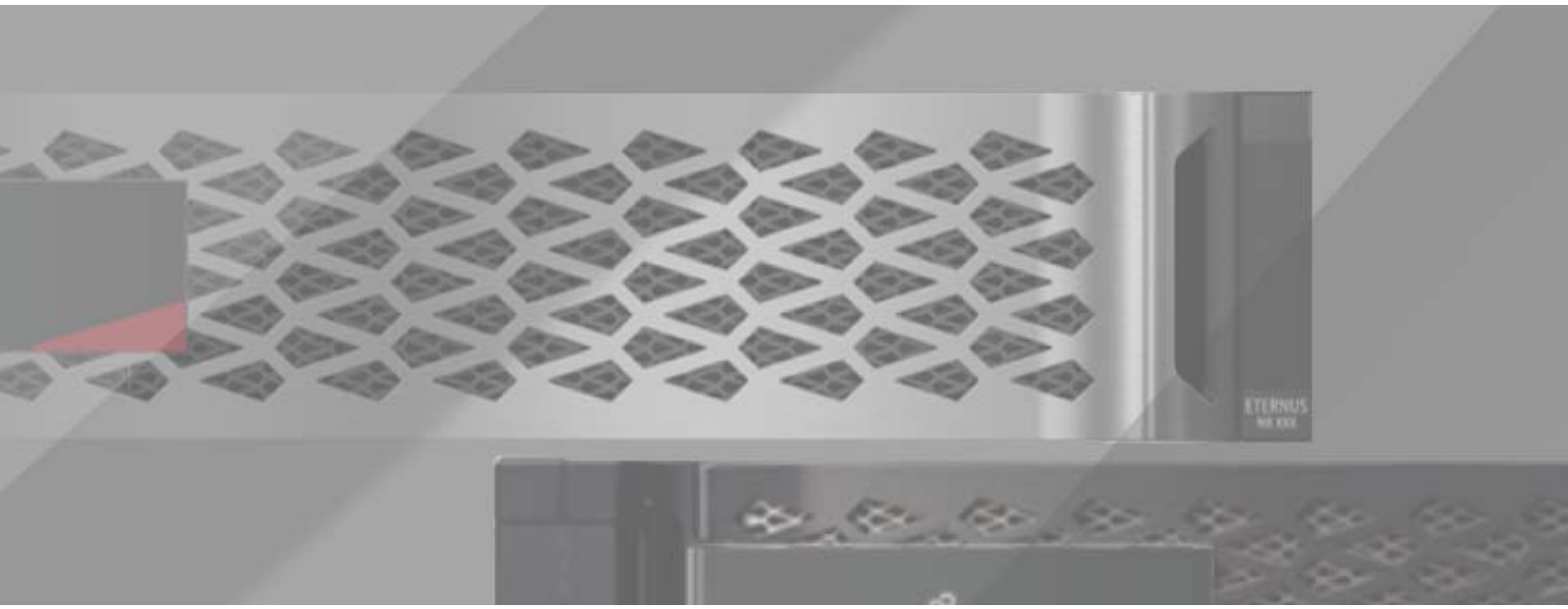
P3AG-5532-02ENZ0

FUJITSU Storage
ETERNUS AB series All-Flash Arrays,
ETERNUS HB series Hybrid Arrays

SANtricity Windows DSM Software Manual



FUJITSU

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Preface

This document describes how to install and use SANtricity Windows DSM.

Second Edition
January 2023

Trademarks

Third-party trademark information related to this product is available at:
https://www.fujitsu.com/global/products/computing/storage/eternus/trademarks.html

About This Manual

Intended Audience

This manual is intended for system administrators who configure and manage operations of the ETERNUS AB/HB, or field engineers who perform maintenance. Refer to this document as required.

Related Information and Documents

The latest information for your model is available at:
https://www.fujitsu.com/global/support/products/computing/storage/manuals-list.html

Document Conventions

Notice Symbols

The following notice symbols are used in this manual:

Caution	Indicates information that you need to observe when using the ETERNUS storage system. Make sure to read the information.
Note	Indicates information and suggestions that supplement the descriptions included in this manual.
IMPORTANT	This symbol indicates IMPORTANT information for the user to note when using the ETERNUS storage system.

1. SANtricity Windows DSM Installation

Preparation

For SANtricity Windows DSM, activation of the Windows standard multipath software (MPIO Device Specific Module) is required. Although the Windows standard multipath software can be enabled during the installation of SANtricity Windows DSM, installation of the DSM driver may fail depending on the OS. Before installing SANtricity Windows DSM, enabling the Windows standard multipath software in advance is recommended.

Caution

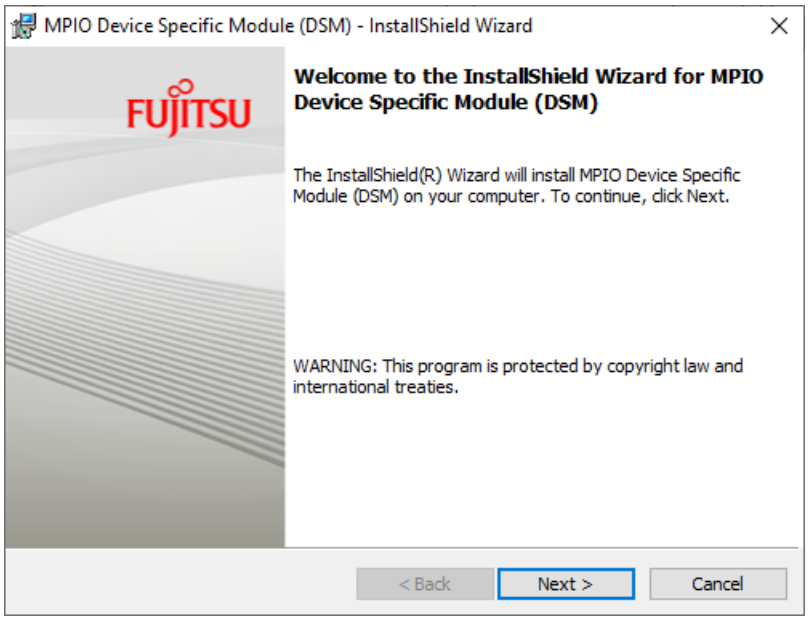
For Windows Server 2016 and Windows Server 2019, if the storage system is not rebooted after the Windows standard multipath software is enabled, installation of the DSM driver will fail. The installation will finish successfully by re-executing the installation of SANtricity Windows DSM.

Installing SANtricity Windows DSM

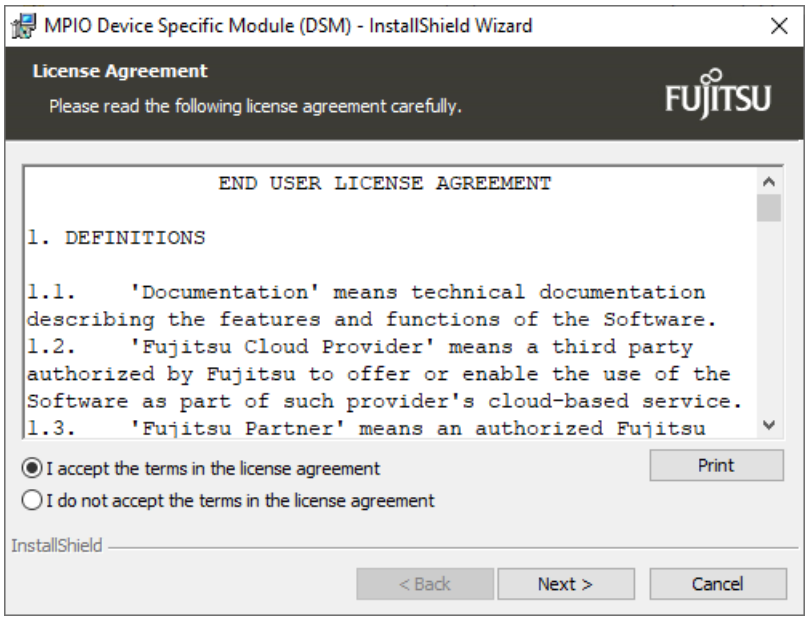
The installation begins when the installer is started. Perform the installation by following the procedure below.

Procedure ▶▶▶

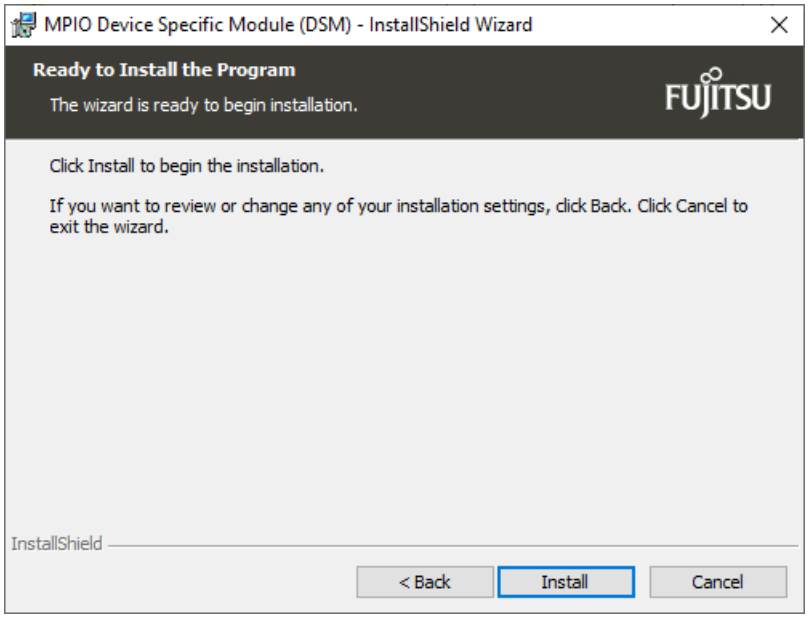
1 Start the installer and click [Next].



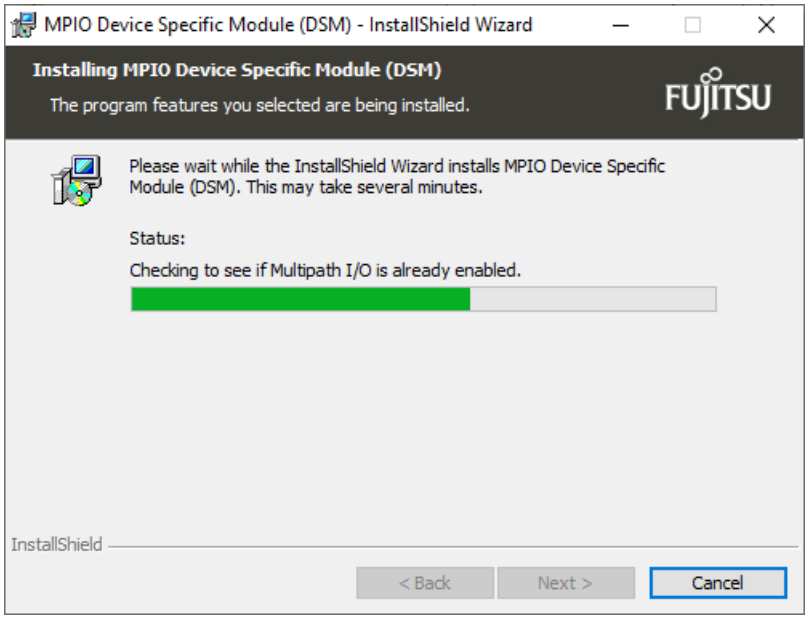
2 Select "I accept the terms in the license agreement" and click [Next].



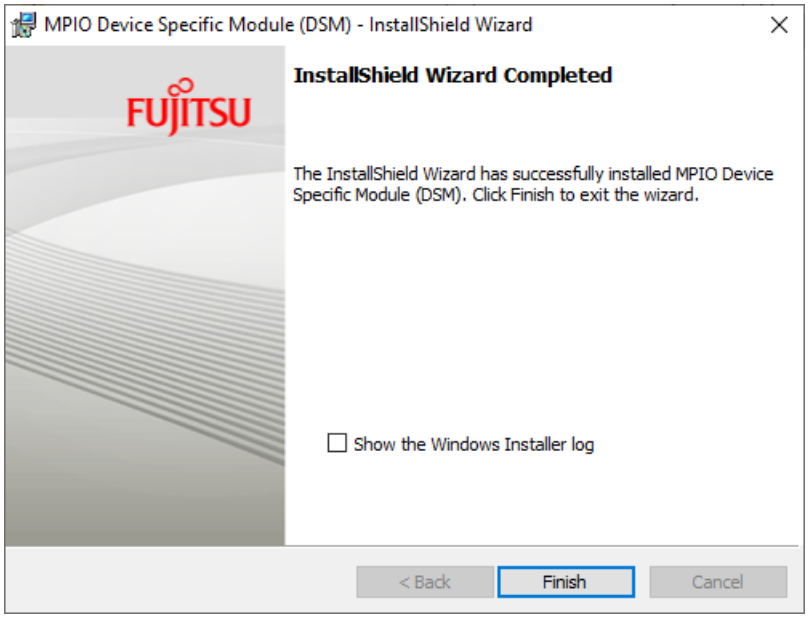
3 Click [Install].



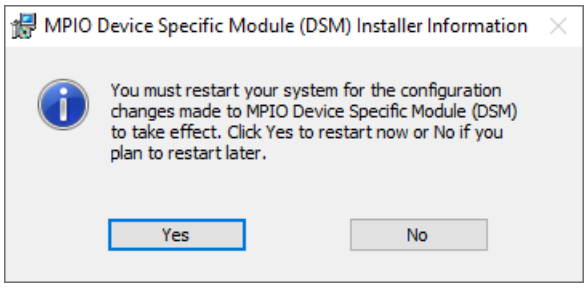
The installation begins.



4 When the "InstallShield Wizard Completed" screen is displayed, click [Finish].

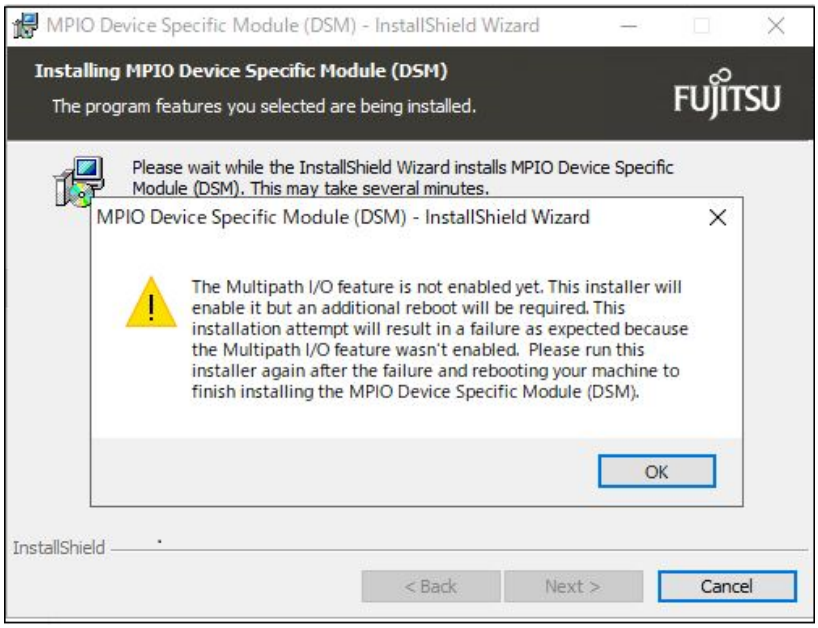


5 Reboot Windows server.
After the reboot, SANtricity Windows DSM is enabled.

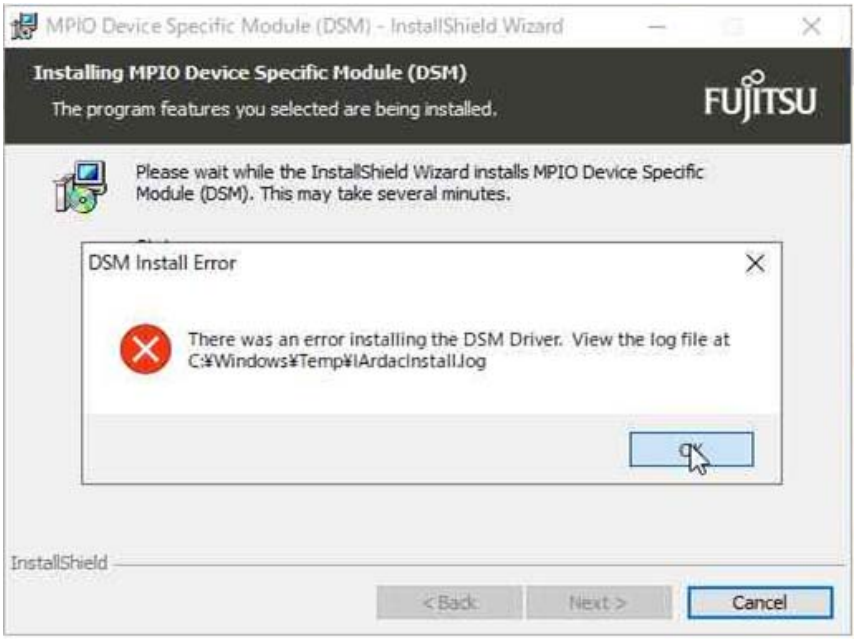


Caution

If an installation of SANtricity Windows DSM is started in a system where Windows standard multipath software (MPIO Device Specific Module) is not installed, installation of Windows standard multipath software (MPIO Device Specific Module) is started.
After the server is rebooted, check if the driver installation has been completed. For details, refer to "How to Check If SANtricity Windows DSM Is Installed Successfully" (page 11).
If the driver is not installed, perform the installation of SANtricity Windows DSM again.

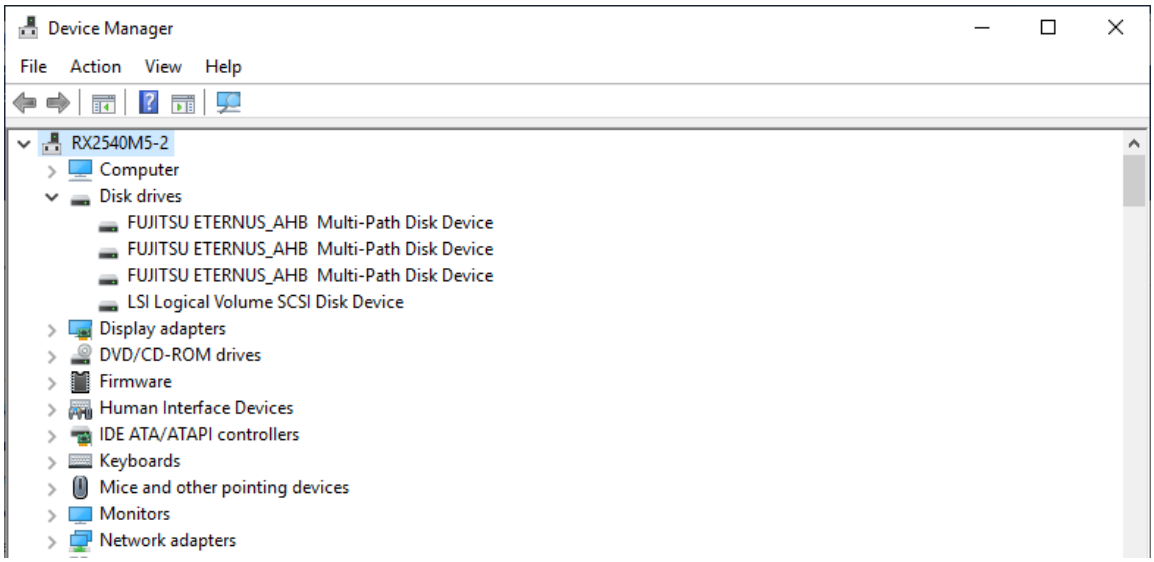


For Windows Server 2016 and Windows Server 2019, due to the different OS policies of the driver installation, installation of the DSM driver fails. Perform an installation of SANtricity Windows DSM again after the OS is rebooted.



The following is an example showing that the ETERNUS AB/HB is recognized correctly as FUJITSU ETERNUS_AHB and Multi-Path Disk Device by a host created in the ETERNUS AB/HB after SANtricity Windows DSM is installed.

Figure 1 Device Manager Screen (When Installed Successfully)



How to Check If SANtricity Windows DSM Is Installed Successfully

Check if the driver has been installed successfully with the following procedure.

Procedure ▶▶▶

1. Open the following directory in the server where SANtricity Windows DSM is installed.
   C: \ Program Files \ DSMDrivers \ fjsmpddsm \ drivers
2. Open fjsmpddsm.inf with a text editor.
3. Scroll down to the Strings Section and check whether the following lines exist.

```
; ================================================================
;             Strings Section
; ================================================================
[Strings]
MPPDSM_PROVIDER="Fujitsu Limited"
MPPDSM_INSTALL_DISK= "Multi-Path Installation Media"
MPPDSM_DEVICEDESC="Fujitsu Device Specific Module for Multi-Path"
MPPDSM_DESC="Fujitsu Device Specific Module for Multi-Path"
```

◀◀◀

2. CLI Interface of SANtricity Windows DSM

After SANtricity Windows DSM is installed, operations to take paths offline or bring them online can be performed using the CLI. Although the timer value can also be changed, use the default value unless otherwise instructed.

The executable file is in installed in the path specified for the installation destination. The help display is shown below.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -h
Usage:  dsmUtil.exe [-a {target_name}] [-g target_id] [-o [feature_action_name | fea-
ture_variable_name=value] [,SaveSettings]] [-s "busscan" | "forcerebalance"]
[-S] [-D [dsm]] [-R] [-M] [-P [GetMpioParameters] | [[MpioParameter=value] | ...]]
```

Table 1 CLI Command Option

Option	Overview	Description
-a	Storage Array Summary	Displays a summary of the storage arrays recognized by DSM.
-a or -g	Storage Array Detail	Displays the details of a storage array when WWN and iSCSI Name are specified.
-a or -g extended	Storage Array Detail Extended	Displays the extended details of a storage array when WWN and iSCSI Name are specified. Used for troubleshooting.
-S	Storage Array Real-Time Status	Displays the real-time status of the target port that is connected with the host.
-c	Cleanup option	Clears error information in situations such as when an error is continuously displayed due to the removal of the storage array.
-M	MPIO Disk to Physical Drive Mappings	Displays instances of the MPIO virtual disk and physical disk for volumes that are mapped in the storage array.
-o	Displays the option settings and changes the setting values	Displays the options that can be set and the setting values that can be changed with DSM. The specified path can be changed to offline with this option.
,SaveSettings	Stores the setting values	Specified when storing the setting values. If this setting is not performed, the values will revert to the state before the changes are made after the power is turned off and then on.
-s	Various operations related to scans	Bus scans and forced balance operations are available.
-D	Multiple DSM management	Depending on the customer's environment, there may be cases when multiple DSMs are installed. If this option is specified, multiple DSMs can be installed all at once.
-R	Removal of Device-Specific Settings	Although the load balance policy may remain in the registry, device-specific settings can be deleted by specifying this option.
-P	Displays the parameter settings and changes the setting values	Displays the parameter value within the option and can change the setting values.

CLI Interface Execution Example

This section describes an execution example in the CLI interface of SANtricity Windows DSM.

Procedure ▶▶▶

1 Show a summary of the storage arrays recognized by DSM.
The WWN/iSCSI Name visible from the host, the DSM version, and the hostname are displayed.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a

Hostname    = RX2540M5-2
Domainname  = N/A
Time        = GMT Wed Jun 24 18:39:32 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001

-------------------------------------------------------------------------------
Info of Array Module's seen by this Host.
-------------------------------------------------------------------------------
 ID               WWN                          Interface(s)     Name
-------------------------------------------------------------------------------
 0   600A098000A4AE9B000000005DFBD9FD          iSCSI            HB2101N
-------------------------------------------------------------------------------
```

2 Specify the ID or WWN/iSCSI Name to display the details of the storage recognized by DSM.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a 600A098000A4AE9B000000005DFBD9FD

Hostname    = RX2540M5-2
Domainname  = N/A
Time        = GMT Wed Jun 24 18:41:46 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001

Array Information:
==================
    ModuleName:  HB2101N
    WWN:   600A098000A4AE9B000000005DFBD9FD
    UTM LUN enabled:  Y        UTM LUN number:  0x7

Controller Information:
=======================
    SerialNumber:  0216190390
    -------------------------
    Designation:    A
    NumberOfPaths:  1

        PathID        State            Interface
        ------------------------------------------------------------------
        0x77070000    Working          iSCSI

    SerialNumber:  0216190390
    -------------------------
    Designation:    B
    NumberOfPaths:  1

        PathID        State            Interface
        ------------------------------------------------------------------
        0x77070001    Working          iSCSI

Lun Information:
=======================
    Lun # 0x01 : 600A098000A4AE9B0000DD8A5EE68020
    ---------------------------------------
    State:  Normal
    MPIO Disk:  0
    NumberDevices:  2
    LBPolicy:  Dynamic Least Queue Depth
    FailoverMethod:  TPGS - Implicit
    CurrentOwningController:  0216190390 (B)
    PreferredController:      0216190390 (B)

        Path_ID       State              DeviceInfo           Online State    Weight
        ------------------------------------------------------------------------------
        0x77070001    Active/Optimized   0xFFFFD884342BB8B0    Online          0
        0x77070000    Active/UnOptimized 0xFFFFD884344ED670    Online          0
(The rest is omitted.)
```

3 If the list of parameters is displayed, the Current Value, Default Value, Minimum Value, and Maximum Value are displayed as follows.

The values can be changed within the acceptable range by executing "dsmUtil -o [Variable Options]=value".
Use the default value unless otherwise instructed.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil -o
                                        Current       Default       Minimum       Maximum
Variable Options                        Value         Value         Value         Value
--------------------------------------  ----------    ----------    ----------     ----------
DebugTraceLevel                         0xffffffff    0xffffffff     0x0           0xffffffff
EventLogLevel                           0x3f          0x3f          0x1           0x3f
FCTimeOutValue                          0x3c          0x3c          0x1           0xffff
SASTimeOutValue                         0x3c          0x3c          0x1           0xffff
iSCSITimeOutValue                       0x41          0x41          0x1           0xffff
LoadBalancePolicy                       0x4           0x4           0x2           0x4
CongestionDetectionEnabled              0x0           0x0           0x0           0x1
CongestionResponseTime                  0x0           0x0           0x1           0x10000
CongestionIoCount                       0x0           0x0           0x0           0x10000
CongestionTimeFrame                     0x0           0x0           0x1           0x1c20
CongestionSamplingInterval              0x0           0x0           0x1           0xffffffff
CongestionMinPopulationSize             0x0           0x0           0x0           0xffffffff
CongestionTakeLastPathOffline           0x0           0x0           0x0           0x1
CongestionTakePathsOffline              0x0           0x0           0x0           0x1
SetAPTPLForPR                           0x0           0x0           0x0           0x1
AlwaysUseLegacyLunFailover              0x0           0x0           0x0           0x1
OverridePassThruTimeout                 0x0           0x0           0x0           0x1
LunFailoverInterval                     0x3           0x3           0x0           0xa
RetryLunFailoverInterval                0x3           0x3           0x0           0xa
LunFailoverWaitTime                     0x12c         0x12c         0xb4          0x258
LunFailoverQuiescenceTime               0x5           0x5           0x1           0x1e
NsdIORetryDelay                         0x5           0x5           0x0           0x3c
IORetryDelay                            0x2           0x2           0x0           0x3c
SyncIORetryDelay                        0x2           0x2           0x0           0x3c
MaxTimeSinceLastModeSense               0x5           0x5           0x0           0x3c
ControllerIoWaitTime                    0x78          0x78          0xa           0x12c
MaxNumberOfWorkerThreads                0x10          0x10          0x0           0x10
NumberOfResidentWorkerThreads           0x4           0x4           0x0           0x10
FailedDeviceValidateInterval            0x1e          0x1e          0x5           0x3c
FailedDeviceMaxLogInterval              0x12c         0x12c         0x3c          0xffffffff

Action Options
--------------------------------------
SetPathOnline
SetPathOffline
```

4 If the specified path is offline, the output is displayed as follows.

If it is online, the displayed content is the same as with the -a option of Step 2. When setting the path connected to the specified controller to offline, specify all the path IDs that are connected to that controller.

```
C:/Program Files/DSMDrivers/fjsmpddsm>dsmUtil.exe -o SetPathOffline=0x77070000
C:/Program Files/DSMDrivers/fjsmpddsm>dsmUtil.exe -a
600A098000A4AE9B000000005DFBD9FD

Hostname    = rx2540m5-2
Domainname  = N/A
Time        = GMT Thu Jul 09 06:34:39 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001


Array Information:
==================
    ModuleName:  HB2101N
    WWN:   600A098000A4AE9B000000005DFBD9FD
    UTM LUN enabled:  Y        UTM LUN number:  0x7

(omitted)

Lun Information:
========================
    Lun # 0x01 : 600A098000A4AE9B0000EC635F024A40
    -------------------------------------
    State:  Normal
    MPIO Disk:  0
    NumberDevices:  2
    LBPolicy:  Dynamic Least Queue Depth
    FailoverMethod:  TPGS - Implicit
    CurrentOwningController:  0216190390 (B)
    PreferredController:      0216190390 (B)

     Path_ID       State              DeviceInfo            Online State    Weight
     ------------------------------------------------------------------------------
        0x77070000    Active/UnOptimized 0xFFFFEB011D074D50    Admin Offline   0
        0x77070001    Active/Optimized   0xFFFFEB011D0AAD60    Online          0
(The rest is omitted.)
```

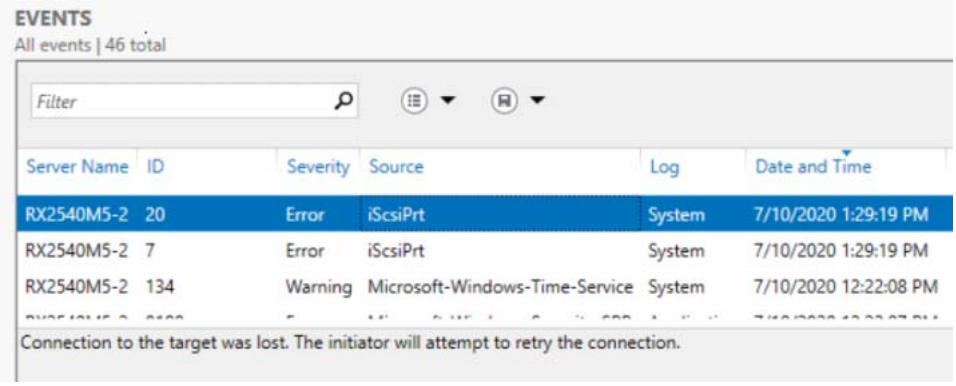
■ When one of the paths between the host and storage is disconnected in SANtricity Windows DSM

The path information of the unrecognized path is not displayed.
The following is an example of when the connection of Controller A is disconnected from the host. The path of Controller A is no longer displayed.

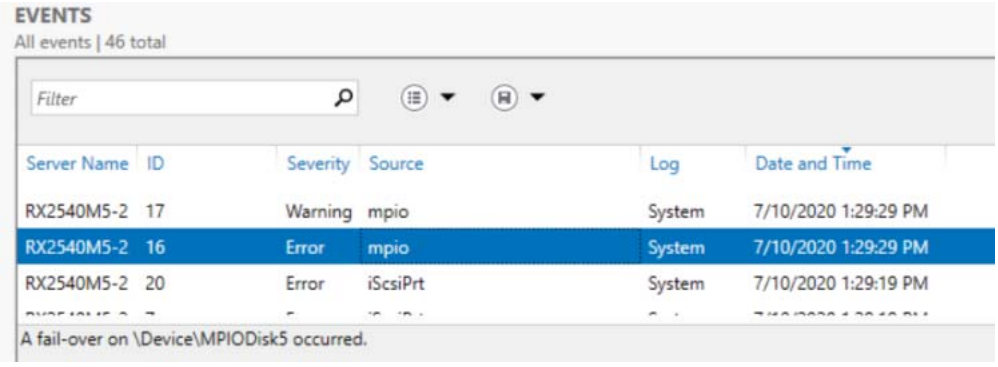
```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a 600A098000A4AE9B000000005DFBD9FD
Hostname    = rx2540m5-2
Domainname  = N/A
Time        = GMT Fri Jul 10 04:32:21 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001

(omitted)

Controller Information:
=======================
    SerialNumber:  0216190390
    -------------------------
    Designation:    B
    NumberOfPaths:  1

        PathID        State            Interface
        ------------------------------------------------------------------
        0x77070001    Working          iSCSI
```

In the event log on the Windows server, messages indicating path disconnections and Failover occurrences are displayed.

- Path disconnection event log



- Failover occurrence event log



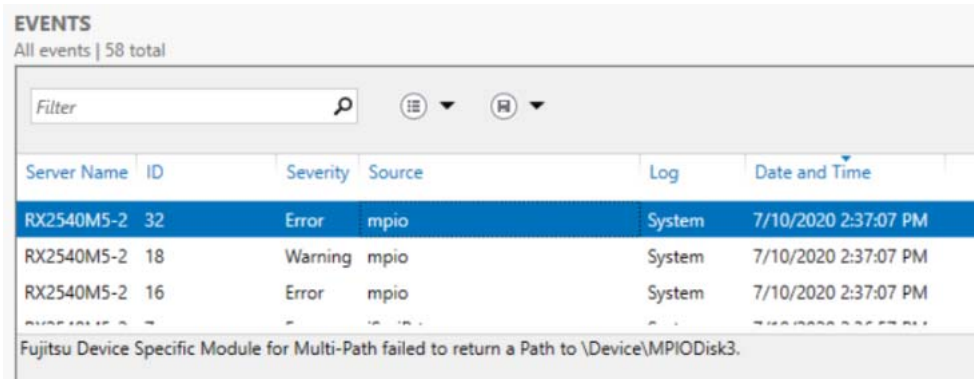
■ When storage devices are not recognized by SANtricity Windows DSM

Even if both paths connected between the storage and host are disconnected, the output of dsmUtil will be the same.

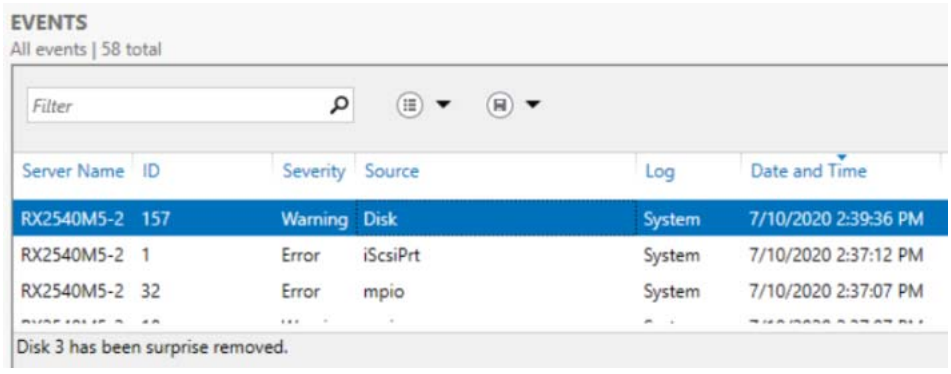
```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a

Hostname    = WIN-JKFUIGVQQ7E
Domainname  = N/A
Time        = N/A
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001

No Array Module's are seen by this Host.

C:\Program Files\DSMDrivers\fjsmpddsm>
```

In the event log on the Windows server, messages indicating path disconnections and drive deletions are displayed.

- Path disconnection event log



- Drive deletion event log



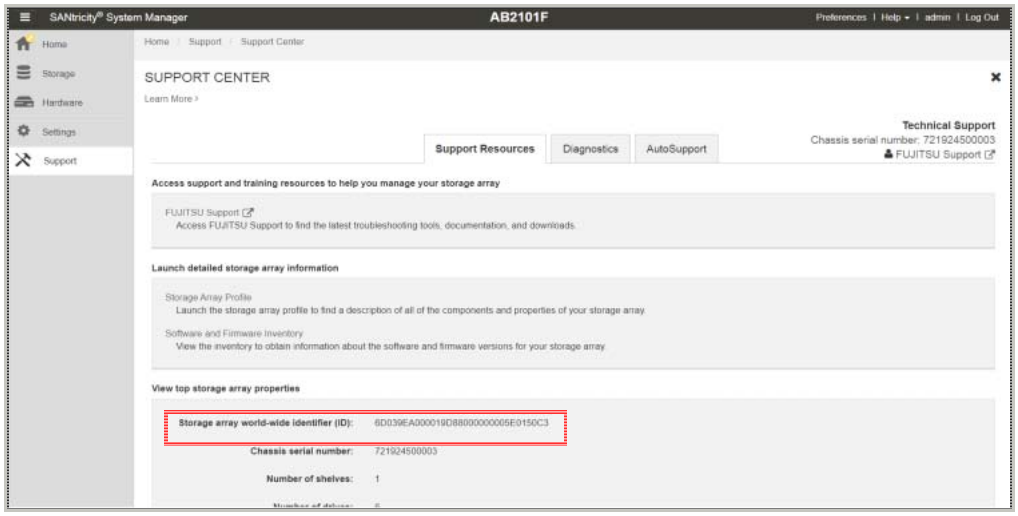
Path Offline/Online (Disconnecting One of the Paths to Perform Maintenance Work)

This section describes the procedure for switching the path offline/online during maintenance work.

Procedure ▶▶▶

1 Identify the WWN/iSCSI Name of the maintenance target device.

The WWN/iSCSI Name can be check by displaying the Storage Array World Wide Identifier (ID) under [Support] of SANtricity System Manager by selecting the Support Resource tab from [Support Center].



2 Show a summary of the storage arrays recognized by DSM from the host.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a

Hostname    = RX2540M5-2
Domainname  = N/A
Time        = GMT Wed Jun 24 18:39:32 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001

------------------------------------------------------------------------------
Info of Array Module's seen by this Host.
------------------------------------------------------------------------------
 ID               WWN                              Interface(s)     Name
------------------------------------------------------------------------------
 0 600A098000A4AE9B000000005DFBD9FD                 iSCSI            HB2101N
------------------------------------------------------------------------------
```

3 Specify the WWN/iSCSI Name of the maintenance target device, display the details, and check the path ID of the maintenance target controller.

In the following example, PathID:0x77070000 is assigned to Controller A and PathID:0x77070001 assigned to Controller B. If the path cannot be recognized from the host during a controller failure and port failure, the paths connected to that controller are not displayed.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a 600A098000A4AE9B000000005DFBD9FD

Hostname    = RX2540M5-2
Domainname  = N/A
Time        = GMT Wed Jun 24 18:41:46 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001

Array Information:
==================
    ModuleName:  HB2101N
    WWN:   600A098000A4AE9B000000005DFBD9FD
    UTM LUN enabled:  Y        UTM LUN number:  0x7

Controller Information:
=======================
    SerialNumber:  0216190390
    ------------------------
    Designation:    A
    NumberOfPaths:  1

        PathID        State            Interface
        ------------------------------------------------------------------
        0x77070000    Working          iSCSI

    SerialNumber:  0216190390
    ------------------------
    Designation:    B
    NumberOfPaths:  1

        PathID        State            Interface
        ------------------------------------------------------------------
        0x77070001    Working          iSCSI

Lun Information:
=======================
    Lun # 0x01 : 600A098000A4AE9B0000DD8A5EE68020
    -------------------------------------
    State:  Normal
    MPIO Disk:  0
    NumberDevices:  2
    LBPolicy:  Dynamic Least Queue Depth
    FailoverMethod:  TPGS - Implicit
    CurrentOwningController:  0216190390 (B)
    PreferredController:      0216190390 (B)

        Path_ID       State              DeviceInfo            Online State    Weight
        ------------------------------------------------------------------------------
        0x77070001    Active/Optimized   0xFFFFD884342BB8B0    Online          0
        0x77070000    Active/UnOptimized 0xFFFFD884344ED670    Online          0
(The rest is omitted.)
```

4 Set the path connected to the maintenance target controller to offline.

When setting the path connected to the specified controller to offline, specify all the path IDs that are connected to that controller.

The following is an example where the path connected to Controller A is set to offline. After Controller A is offline, respecify the -a option to check the state of the target path. While offline, "Admin Offline" is displayed for Online State.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -o SetPathOffline=0x77070000
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a 600A098000A4AE9B000000005DFBD9FD

Hostname    = rx2540m5-2
Domainname  = N/A
Time        = GMT Thu Jul 09 06:34:39 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001


Array Information:
==================
    ModuleName:  HB2101N
    WWN:   600A098000A4AE9B000000005DFBD9FD
    UTM LUN enabled:  Y        UTM LUN number:  0x7

(omitted)

Lun Information:
========================
    Lun # 0x01 : 600A098000A4AE9B0000EC635F024A40
    ------------------------------------
    State:  Normal
    MPIO Disk:  0
    NumberDevices:  2
    LBPolicy:  Dynamic Least Queue Depth
    FailoverMethod:  TPGS - Implicit
    CurrentOwningController:  0216190390 (B)
    PreferredController:      0216190390 (B)

        Path_ID       State              DeviceInfo            Online State    Weight
        ------------------------------------------------------------------------------
        0x77070000    Active/UnOptimized 0xFFFFEB011D074D50    Admin Offline   0
        0x77070001    Active/Optimized   0xFFFFEB011D0AAD60    Online          0
(The rest is omitted.)
```

5 Check the status of the path that is connected to the controller after the maintenance is completed.

When setting the path connected to the specified controller to online, specify all the path IDs that are connected to that controller.

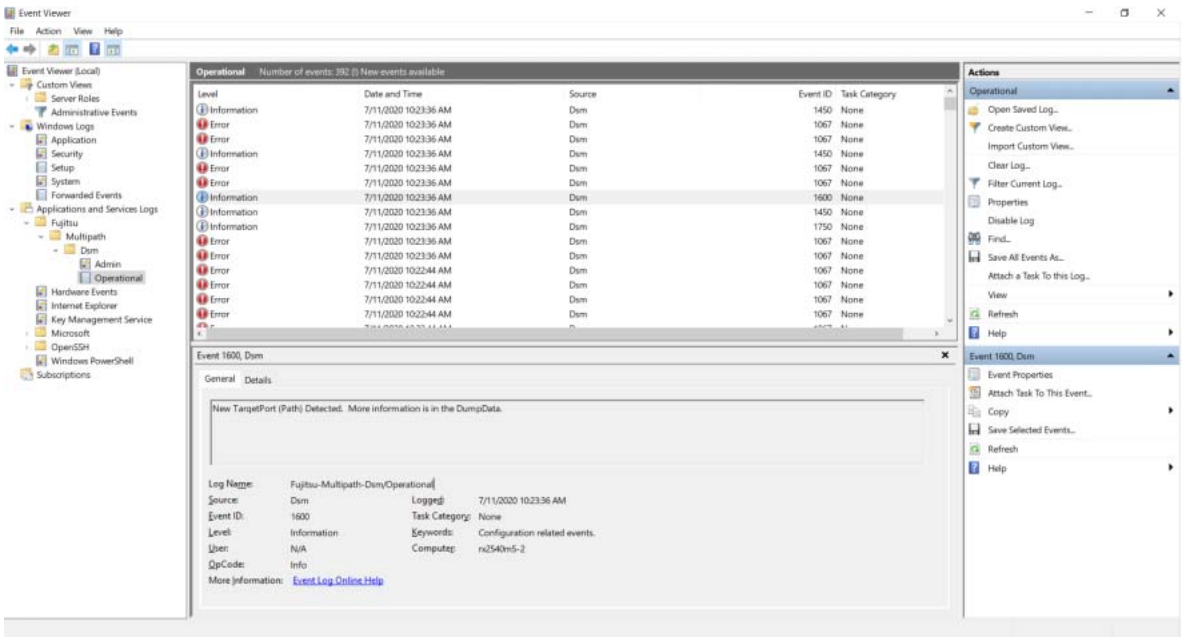
The following is an example where the path connected to Controller A is set to online. After Controller A is online, respecify the -a option to check the state of the target path. When online, "Online" is displayed for Online State.

```
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -o SetPathOnline=0x77070000
C:\Program Files\DSMDrivers\fjsmpddsm>dsmUtil.exe -a 600A098000A4AE9B000000005DFBD9FD

Hostname    = rx2540m5-2
Domainname  = N/A
Time        = GMT Thu Jul 09 06:34:39 2020
DSM Name    = FJSMPDDSM
DSM Version = 02.01.1312.0001


Array Information:
==================
    ModuleName:  HB2101N
    WWN:   600A098000A4AE9B000000005DFBD9FD
    UTM LUN enabled:  Y        UTM LUN number:  0x7

(omitted)

Lun Information:
========================
    Lun # 0x01 : 600A098000A4AE9B0000EC635F024A40
    ---------------------------------------
    State:  Normal
    MPIO Disk:  0
    NumberDevices:  2
    LBPolicy:  Dynamic Least Queue Depth
    FailoverMethod:  TPGS - Implicit
    CurrentOwningController:  0216190390 (B)
    PreferredController:      0216190390 (B)

        Path_ID       State              DeviceInfo           Online State    Weight
        ------------------------------------------------------------------------------
        0x77070000    Active/UnOptimized 0xFFFFEB011D074D50    Online          0
        0x77070001    Active/Optimized   0xFFFFEB011D0AAD60    Online          0
(The rest is omitted.)
```

3. Actions to Take for the Windows Event Log

If multipath software is installed, Source is displayed as "Dsm" for SANtricity Windows DSM related event logs as shown in Figure 2. If multipath software is not installed, Source is displayed as "Fujitsu-Multipath-DSM"; however, to display the message content, installation of multipath software is required.

Figure 2 Event Logs



A list of SANtricity Windows DSM related event logs that are output is shown in Table 2.
A message indicating the generated content is displayed in <msg>.

Table 2 List of Event Logs

Event Message	Event ID (Decimal)	Event Severity	Action
Memory Allocation Error. Memory description information is in the DumpData.	1000	Informational	Confirmation of the host state
Queue Request Error. Additional information is in the Dump-Data.	1001	Informational	Confirmation of the IO load
<msg>. Device information is in the DumpData.	1050	Informational	No action required
<msg>. TargetPort information is in the DumpData.	1051	Informational	No action required
<msg>. TargetPortGroup information is in the DumpData.	1052	Informational	No action required
<msg>. MultipathDevice is in the DumpData.	1053	Informational	No action required
<msg>. Array information is in the DumpData.	1054	Informational	No action required
<msg>.	1055	Informational	No action required
<msg>. Device information is in the DumpData.	1056	Warning	No action required
<msg>. TargetPort information is in the DumpData.	1057	Warning	No action required
<msg>. TargetPortGroup information is in the DumpData.	1058	Warning	No action required
<msg>. MultipathDevice information is in the DumpData.	1059	Warning	No action required
<msg>. Array information is in the DumpData.	1060	Warning	No action required
<msg>.	1061	Warning	No action required
<msg>. Device information is in the DumpData.	1062	Error	Contact Fujitsu support
<msg>. TargetPort information is in the DumpData.	1063	Error	Contact Fujitsu support
<msg>. TargetPortGroup information is in the DumpData.	1064	Error	Contact Fujitsu support

Event Message	Event ID (Decimal)	Event Severity	Action
<msg>. MultipathDevice information is in the DumpData.	1065	Error	Contact Fujitsu support
<msg>. Array information is in the DumpData.	1066	Error	Contact Fujitsu support
<msg>.	1067	Error	Contact Fujitsu support
IO Error. More information is in the DumpData.	1100	Informational	Confirm the following • The host • The state of the host and the connection between devices • The device state
IO Request Time Exceeded. More information is in the DumpData.	1101	Informational	Confirm the following • The host • The state of the host and the connection between devices • The device state
IO Throttle Requested to <MPIODisk_n>. More information is in the DumpData.	1102	Informational	No action required
IO Resume Requested to <MPIODisk_n>. More information is in the DumpData.	1103	Informational	No action required
No Path Available for IO to \ Device \ MPIODisk	1104	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
<msg>. More information in the DumpData	1105	Warning	Contact Fujitsu support
<msg>. More information in the DumpData	1106	Informational	No action required
<msg>. More information in the DumpData	1107	Informational	No action required
Failover Request Issued to <MPIODisk_n>. More information is in the DumpData.	1200	Informational	No action required
Failover Request Issued Failed to <MPIODisk_n>. More information is in the DumpData.	1201	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
Failover Request Succeeded to <MPIODisk_n>. More information is in the DumpData.	1202	Informational	No action required
Failover Request Failed to <MPIODisk_n>. More information is in the DumpData.	1203	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
Failover Request Retried to <MPIODisk_n>. More information is in the DumpData.	1204	Informational	No action required

Event Message	Event ID (Decimal)	Event Severity	Action
Failover Error to <MPIODisk_n>. More information is in the DumpData.	1205	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
<MPIODisk_n> rebalanced to Preferred Target Port Group (Controller). More information is in the DumpData.	1206	Informational	No action required
Rebalance Request Failed to <MPIODisk_n>. More information is in the DumpData.	1207	Error	Check the state of the host and if no problems are found, contact Fujitsu support.
<MPIODisk_n> transferred due to Load Balance Policy Change. More information is in the DumpData.	1208	Informational	No action required
Transfer Due to Load Balance Policy Change Failed for <MPIODisk_n>. More information is in the DumpData.	1209	Error	Contact Fujitsu support
Rebalance Request issued to <MPIODisk_n>. More information is in the DumpData.	1210	Informational	No action required
Rebalance Request Issued Failed to <MPIODisk_n>. Array information is in the DumpData.	1211	Error	Contact Fujitsu support
Rebalance Request Retried to <MPIODisk_n>. More information is in the DumpData.	1212	Informational	No action required
Failover Request Issued to TargetPortGroup (Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1213	Informational	No action required
Failover Request Issued Failed to TargetPortGroup (Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1214	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
Failover Request Failed to TargetPortGroup (Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1215	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
Failover Request Retried to TargetPortGroup (Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1216	Informational	No action required
Failover Setup Error for Failover to TargetPortGroup (Controller <n>). More information is in the DumpData.	1217	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
Failover Request Succeeded to TargetPortGroup (Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1218	Informational	No action required
Rebalance Request issued to TargetPortGroup(Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1219	Informational	No action required

Event Message	Event ID (Decimal)	Event Severity	Action
Rebalance Request Issued Failed to TargetPortGroup (Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1220	Error	Contact Fujitsu support
Rebalance Request Retried to TargetPortGroup (Controller <n>) via <MPIODisk_n>. Moreinformation is in the DumpData.	1221	Informational	No action required
Rebalance Setup Error for Rebalance to TargetPortGroup (Controller <n>). More information is in the DumpData.	1222	Error	Contact Fujitsu support
<MPIODisk_n> transferred from TargetPortGroup (Controller <n>) due to Load Balance Policy Change. More information is in the DumpData.	1223	Informational	No action required
Transfer Due to Load Balance Policy Change Failed for TargetPortGroup (Controller <n>) via <MPIODisk_n>. More information is in the DumpData.	1224	Error	Contact Fujitsu support
<MPIODisk_n> rebalance to Preferred TargetPortGroup (Controller <n>). More information is in the DumpData.	1225	Informational	No action required
Failure during transfer to TargetPortGroup (Controller <n>). More information is in theDumpData.	1226	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
Transfer Setup Due to Load Balance Policy Change Failed for TargetPortGroup (Controller <n>). More information is in the DumpData.	1227	Error	Contact Fujitsu support
Configured Parameter Invalid of Out of Range. More information is in the DumpData.	1300	Informational	No action required
Configuration Initialization Error	1301	Informational	Contact Fujitsu support
No Target Ports Found for <MPIODisk_n>. More information is in the Dump-Data.	1302	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
New Device Detected. More information is in the DumpData.	1450	Informational	No action required
Device for <MPIODisk_n> Pending Removed via MPIO. More information is in the DumpData.	1451	Informational	No action required
Device for <MPIODisk_n> Removed via MPIO. More information is in the DumpData.	1452	Informational	No action required
Early Device Failure. More information is in the DumpData.	1453	Warning	Contact Fujitsu support
Failed to obtain the ¥Device¥MPIODisk ordinal.	1454	Warning	Contact Fujitsu support
New TargetPort (Path) Detected. More information is in the DumpData.	1600	Informational	No action required
TargetPort (Path) Removed via MPIO. More information is in the DumpData.	1601	Informational	No action required
TargetPort (Path) Offline Manually. More information is in the DumpData.	1602	Warning	No action required
TargetPort (Path) Online Manually. More information is found in the DumpData.	1603	Warning	No action required
TargetPort (Path) Offline (Threshold Exceeded). More information is found in the DumpData.	1604	Warning	No action required

Event Message	Event ID (Decimal)	Event Severity	Action
Congestion Threshold Detected on TargetPort. More information is found in the DumpData.	1605	Warning	No action required If this occurs frequently, contact Fujitsu support
Not all PCD configuration parameters are set. PCD is not enabled.	1606	Warning	No action required
Congestion Threshold detected but path not placed Offline due to configuration setting. More information is found in the DumpData.	1607	Warning	No action required If this occurs frequently, contact Fujitsu support
TargetPort (Path) automatically placed Offline due to exceeding congestion threshold. More information is in the DumpData.	1608	Warning	Contact Fujitsu support
New TargetPortGroup (Controller) Detected. More information is in the DumpData.	1750	Informational	No action required
TargetPortGroup (Controller) Removed. More information is in the DumpData.	1751	Informational	No action required
TargetPortGroup (Controller) IO Timeout. More information is in the DumpData	1752	Error	Confirm the following • The host • The state of the host and the connection between devices • The device state
New Storage Array Detected. More information is in the DumpData.	1900	Informational	No action required
Storage Array Removed. More information is in the DumpData.	1901	Informational	No action required

FUJITSU Storage
ETERNUS AB series All-Flash Arrays,
ETERNUS HB series Hybrid Arrays
SANtricity Windows DSM Software Manual

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