Important Notice
RAID System Monitoring on vSphere Client / Host Client in VMware vSphere 5 or later

This document includes important notice for using vSphere Client / Host Client of VMware vSphere 5 for monitoring the statuses of RAID Controller.
Please read carefully and follow the instructions when you use your system.

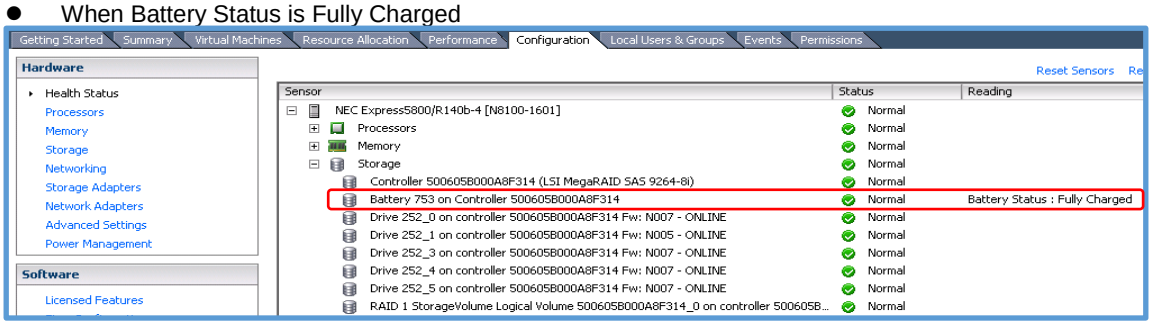
The following symptoms occur when you monitor RAID Controllers using vSphere Client / Host Client with LSI SMI-S provider on VMware ESXi. All symptoms are just cosmetic problems and there are no problem in product operation and quality.

* On this document, “VMware ESXi” means hypervisor of VMware ESXi 5 or later.

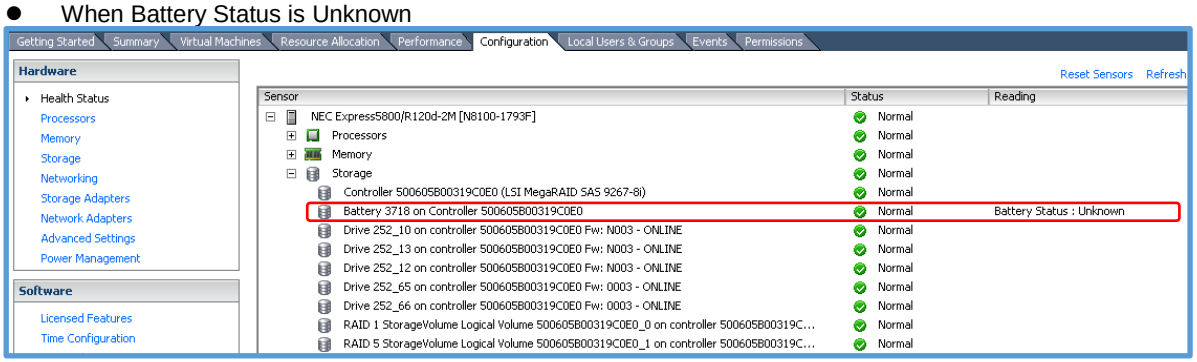
RAID Controller with Battery

The status is “Normal” when the battery is connected without fails. The value of Battery Status in the Reading Colum is “Fully Charged” or “Unknown” depending on the RAID Controller.

- When Battery Status is Fully Charged



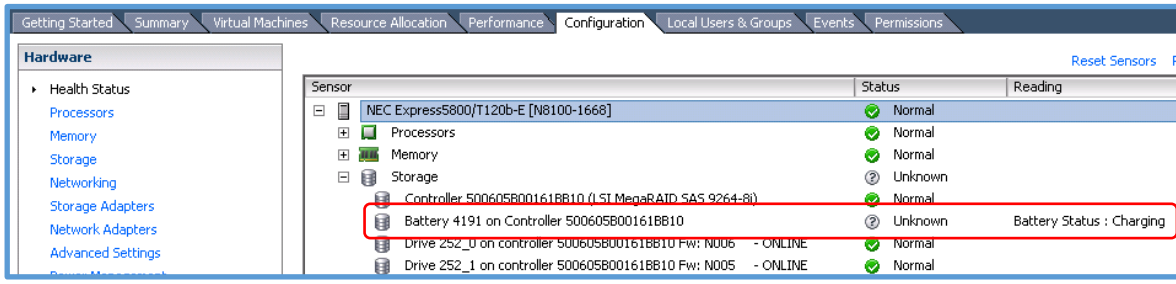
- When Battery Status is Unknown



The image above indicates there is no problem in the battery. The Battery Status in the Reading column is Unknown while the Status is Normal. This is the same as Fully Charged.

During battery refreshing

The status of the battery indicates “Unknown” on the Hardware Health Status window.



If the value of the Battery Status is Unknown in the Reading column when the battery is Fully Charged, the Battery Status may be also Unknown during battery refreshing.

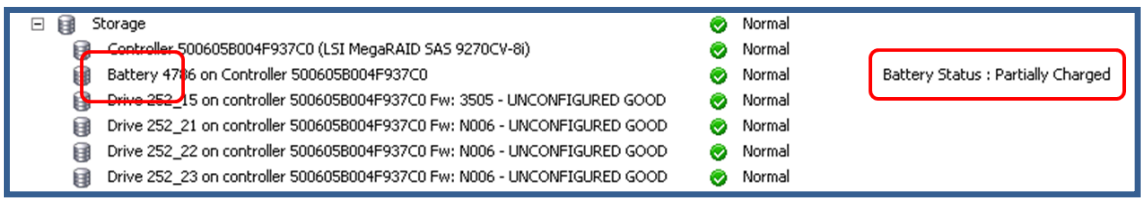
You can check the battery status in the Status column and the value of Battery Status in the Reading column.

Status of Battery	Status	Value of “Battery Status”
Fully Charged	Normal	Fully Charged or Unknown
Discharge in Progress	Unknown	Partially Charged or Unknown
Low Voltage	Unknown	Critical or Unknown
Charge in Progress	Unknown	Charging or Unknown

The battery refresh completes in 24 hours and the Status becomes Normal. If the Status is left “Unknown” for a long time, the battery may be degraded. Contact your NEC sales/maintenance person.

RAID Controller with Flash Backup Unit

The status is “Normal” and the label in the Sensor Column is “Battery” when the Flash Backup Unit is connected without fails. The value of Battery Status in the Reading Colum is “Partially Charged” even if the Flash Backup Unit is fully charged.



You can check the Flash Backup Unit status in the Status column and the value of Battery Status in the Reading column.

Status of Flash Backup Unit	Status	Value of “Battery Status”
Fully Charged	Normal	Fully Charged
Discharge in Progress	Unknown	Partially Charged
Low Voltage	Unknown	Critical
Charge in Progress	Unknown	Charging

Status of Battery and Flash Backup Unit

If the battery or Flash Backup Unit is warning status, the status of the battery may be indicated "Unknown" on the Hardware Health Status window.

Getting latest status of the Battery and Flash Backup Unit

The battery and Flash Backup Unit status is not refreshed by [Reset Sensors] and [Refresh].
If you want to get latest status of the battery and Flash Backup Unit, close vSphere Client / Host Client and restart it.

When a problem occurs in Physical Device

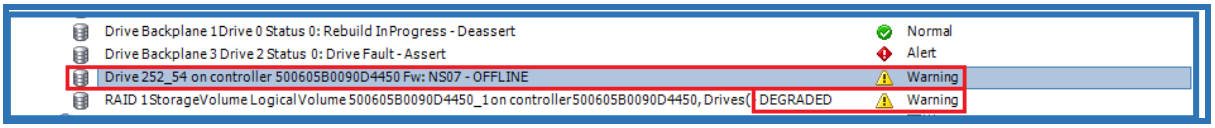
The status of Physical Device becomes “Warning” on the Hardware Health Status window. Either of the following symptoms occurs in this case.

- Physical Device fails
- Physical Device has S.M.A.R.T. error

You can identify which case occurs by confirming the status of the Logical Drive. Check if the status of the status of the Logical Drive is Warning.

(1) When the status of the Logical Drive is Warning

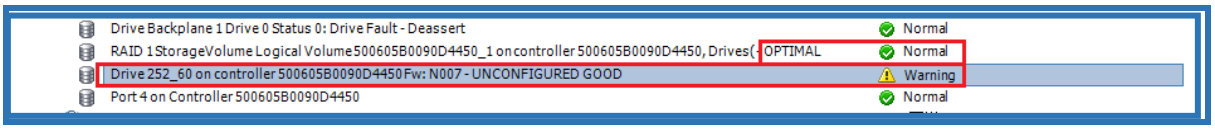
The Logical Drive is no longer redundant because the Physical Device fails. Replace the failed Physical Device. The screen when the Physical Device fails may be as shown below.



The label of the failed Physical Device (Drive 252_0) is “OFFLINE” and the status becomes “Warning”. The status of the Logical Drive (Logical Volume which includes Drive 252_0) also becomes “Warning”.

(2) When the status of the Logical Drive is Normal

The Physical Device does not fail but has S.M.A.R.T. error. This may cause a Physical Device error in the future, so replace the Physical Device. The screen when S.M.A.R.T. error occurs may be as shown below.

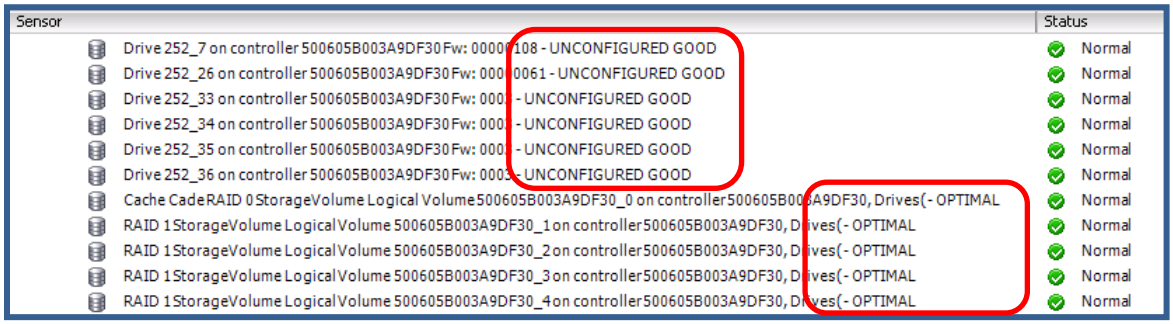


The label of the Physical Device with S.M.A.R.T. error (Drive 252_4) indicates “UNCONFIGURED GOOD” and the status becomes “Warning”. The status of the Logical Drive (Logical Volume which includes Drive 252_4) remains as “Normal”.

Identifying Physical Device which is a part of Logical Drive

The label of Online Physical Device may indicate “UNCONFIGURED GOOD” on the Hardware Health Status window. And a part of the label of Logical Drive is dropped. For these reasons, **you cannot Identify Physical Device which is a part of Logical Drive from vSphere Client / Host Client without occurring problem.**

Identifying Physical Device which is a part of Logical Drive without when a problem occurs in Physical Device, Start the Offline RAID Utility to identify the Physical Device.



Environment where many Physical Devices or Logical Drives

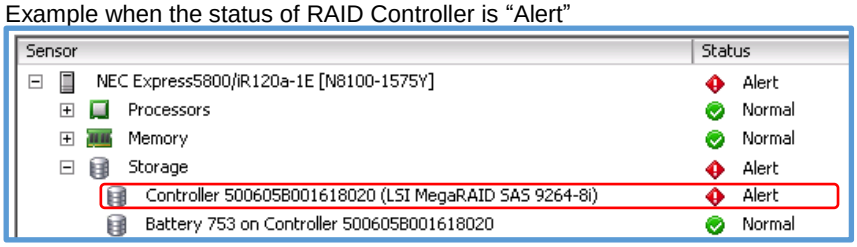
When you connect the server using vSphere Client / Host Client immediately after restarting VMware ESXi, there may be the case that no storage node is displayed on the Health Status window. The symptom occurs because a lot of processes are being activated immediately after VMware ESXi start.

In this case, check the display of vSphere Client / Host Client some time later. The more the number of the Physical Devices or Logical Drives are, the longer the time when all the storage nodes are successfully displayed.

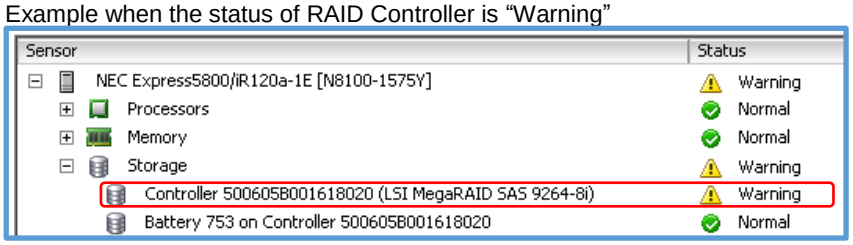
When a RAID Controller problem occurs on environment where more than one RAID Controller is connected

Shut down VMware ESXi if the status of the RAID Controller is “Alert” or “Warning” on the Hardware Health Status window.

Example when the status of RAID Controller is “Alert”



Example when the status of RAID Controller is “Warning”



Start the Offline RAID Utility to identify the RAID Controller that has a problem. Replace the RAID Controller if required.

Connection between vSphere Client / Host Client and VMware ESXi

VMware ESXi may not send information to vSphere Client / Host Client if the RAID System configuration changes frequently in a short period of time, for example, if a physical device is removed and inserted at intervals of approximately 90 seconds. In this case, please wait for 10 minutes to recovery from the communication failure or restart the VMware ESXi Management Agent. You can restart the Management Agent in the following procedure.

[How to restart the Management Agents]

1. Press F2 on the console of VMware ESXi and log in to the management window.
2. Select Troubleshooting Options and press Enter.
3. Select Restart Management Agents and press Enter.
4. Press F1 on the confirmation windows to restart Management Agents.

About automatic refresh display

vSphere Client / Host Client may not refresh display automatically. If you want to reflect current status, refresh display manually.

About Screenshots on each item

Screenshots on each item are taken on vSphere Client. These may not use latest version. Screen display may be different without notable points that enclosing red square.

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