Important Notice RAID System Monitoring on NEC ESMPRO Manager in VMware ESXi 5 or later

This document includes important notice for using NEC ESMPRO Manager for monitoring the status of RAID System on VMware ESXi.

Please read carefully and follow the instructions when you use your system.

The following symptoms occur when you monitor RAID System using NEC ESMPRO Manager with LSI SMI-S Provider on VMware ESXi.

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

Recommended OS setting when use NEC ESMPRO Manager

1) Disabling hhrcwrapper

When NEC ESMPRO Manager manages VMware ESXi RAID System, if ESXi OS module which called "hhrcwrapper" is running, this module may crash and be cannot manage RAID System correctly.

If you would like to use NEC ESMPRO Manager and manage ESXi RAID System, NEC strongly recommends that hhrcwrapper turns off by following command.

[Less than VMware ESXi 6.5] # esxcfg-advcfg -s 0 /UserVars/CIMvmw_hhrcwrapperProviderEnabled # /etc/init.d/sfcbd-watchdog restart

[Not less than VMware ESXi 6.5] # esxcli system wbem provider set -e false -n vmw_hhrcwrapper # /etc/init.d/sfcbd-watchdog restart

If hhrcwrapper is turned off, the health status of RAID System does not displays to vSphere Client.

In this case, if you want to check RAID System status, please use NEC ESMPRO Manager.

2) Restart sfcbd service automatically on every boot VMware ESXi (only not less than VMware ESXi 6.5)

In VMware ESXi 6.5, sfcbd service starts incorrect setting and it cannot send event notification (CIM Indication) on every boot VMware ESXi. This problem is resolved by restarting sfcbd service.

For manage VMware ESXi 6.5 RAID System from NEC ESMPRO Manager, add below line at before of "exit 0" bottom line in **/etc/rc.local.d/local.sh** .

From next VMware ESXi boot, sfcbd service will restart automatically.

[Not less than VMware ESXi 6.5] /etc/init.d/sfcbd-watchdog restart

Number information of Logical Drive in Disk Array

For "Disk Array Information" in Logical Drive Property, NEC ESMPRO Manager does not display the part "order n/m". Therefore, if multiple logical drives are created for one disk array, you do not know what number drive a certain logical drive is in the disk array.

Property/Setting		
Item		Value
General		
Number	⁴ This part	is not displayed.
D	3	
Disk Array Information	4 🗲	
RAID Level	RAIDI	
Capacity	100GB	
Stripe Size	64KB	
Cache Mode (Current)	Write Through	
Туре	Logical Drive	
Status	🕜 Online	
The display of Windows/ Linux/ VMwa	ra ESV/ Sarvar	
Property/Setting		
Item		Value
General		
Number	4	
D	3	
Disk Array Information	4 (order 1/1) 🧲	
RAID Level	RAID 1	
Capacity	100GB	
Stripe Size	64KB	
Cache Mode (Current)	Write Through	
Туре	Logical Drive	
Status	🕑 Online	

The display of VMware ESXi5 Server

Display of Cache Mode (Current)

In Logical Drive Property, NEC ESMPRO Manager does not display "Cache Mode (Current)" with some RAID Controllers. In addition, no correct information of "Cache Mode (Current)" is registered in the RAID log when "Cache Mode (Setting)" is changed manually.

See the value of "Cache Mode (Setting)" to check the Cache Mode.

Item General		Value			
Number		Vulue			
	2				
	1				
Disk Array Information	3				
RAID Level	RAID 1				
		be displayed de	pending	on RAID Co	ntroll
Type	SSD Cache Drive				
Status	🕜 Online				
		not displayed.			
Cache Mode (Setting)	Write Back				
RAID log					
ype Date/Time	17 Description				
	x/ VMware ESX4 S	Server	······································		
Logical Drive Property	x/ VMware ESX4 S	Server			
Property/Setting	x/ VMware ESX4 S				
Logical Drive Property Property/Setting Item	x/ VMware ESX4 S	Gerver Value			
Logical Drive Property Property/Setting Item General					
Logical Drive Property Property/Setting Item General Number	2				
Logical Drive Property Property/Setting Item General Number D	2				
Logical Drive Property Property/Setting Item General Number D Disk Array Information	2 1 3				
Logical Drive Property Property/Setting Item General Number D Disk Array Information RAID Level	2 1 3 RAID 1				
Logical Drive Property Property/Setting Item General Number D Disk Array Information	2 1 3				
Logical Drive Property Property/Setting Item General Number D Disk Array Information RAD Level Capacity Stripe Size	2 1 3 RAID 1 33GB				
Logical Drive Property Property/Setting Item General Number D Disk Array Information RAID Level Capacity Stripe Size Cache Mode (Current)	2 1 3 RAID 1 33GB 64KB Write Back				
Logical Drive Property Property/Setting Item General Number D Disk Array Information RAD Level Capacity Stripe Size	2 1 3 RAID 1 33GB 64KB				
Logical Drive Property Property/Setting Item General Number D Disk Array Information RAID Level Capacity Stripe Size Cache Mode (Current) Type	2 1 3 RAID 1 33GB 64KB Write Back Logical Drive				
Logical Drive Property Property/Setting Item General Number D Disk Array Information RAD Level Capacity Stripe Size Cache Mode (Current) Type Status	2 1 3 RAID 1 33GB 64KB Write Back Logical Drive				
Logical Drive Property Property/Setting General Number D Disk Array Information RAD Level Capacity Stripe Size Cache Mode (Current) Type Status Option	2 1 3 RAID 1 33GB 64KB Write Back Logical Drive				

The number of Disk Arrays which you can select for a Dedicated Hot Spare

You can select only one Disk Array for a Dedicated Hot Spare.

For the Logical Drive which belongs to more than one Disk Arrays, you can also select only one Disk Array in the Hot Spare creation screen.

If you want to create Hot Spare which belongs to more than one Disk Array, please use Global Hot Spare or create Dedicated Hot Spare from offline utility.

Number	Required Capacity	Logical Drive
Select Dick Array(c) to make Dodie	ated Hot Spare. You can select up t	to 1 Disk Array(s).
🗆 🥑 😝 Disk Array #3	3368	and Diels America
🔽 🥑 📄 Disk Array #4	³³ BYou can select on	y one Disk Array.
Capacity of selected Physical Devic	ce: 67GB	
Create a Dedicated Hot Spare for the sel	lected Disk Array(s).	Create Cancel
Logical Drive LD#2 belongs to De #3 and #4, but you can select a		ou select Disk Army #3, the Dedicated
Disk Array in the Hot Spare	creation isot	Spare will be created for only Disk Array
DURBER.		
	🗃 🥝 🛢 Disk Array 🗄	8
0 E LD #2 [Online] RAD 10		2 [Online] RAID 10
- 🔗 🖶 LD #2 [Online] RAD 10		Second and an and a second
0 ELD #2 [Online] RAD 10		[Online] RAID 10
ID #2 [Online] RAD 10 Image: Construction of the second		[Online] RAID 10 52:0 [Online] SAS-HDD 52:1 [Online] SAS-HDD
ID #2 [Online] RAD 10 Image: Contract of the second sec		[Online] RAID 10 52s0 [Online] SAS-HDD 52s1 [Online] SAS-HDD 52s5 [Dedicated Hot Spare] SAS-H
Image: Second state Second	B S Blisk Array # H S B LD #2 H S B D c2 H S B D c2 H S B D c2 B S B Disk Array #	[Online] RAID 10 52s0 [Online] SAS-HDD 52s1 [Online] SAS-HDD 52s5 [Dedicated Hot Spare] SAS-H
Contine) SAS-HDD	B S Blisk Array #	[Online] RAID 10 5220 [Online] SAS-HDD 5225 [Online] SAS-HDD 5225 [Dedicated Hot Spare] SAS-H

Event notification about HDD Power Status change

From VMware ESXi to NEC ESMPRO Manager, event notification may delay in the event of HDD Power Status change (Power Saving/ Transitioning/ On).

As a result, NEC ESMPRO Manager may delay in reflecting HDD Power Status to the WebGUI and RAID log.

If you want to get most recent HDD Power Status, please rescan RAID System.

Connection between NEC ESMPRO Manager and VMware ESXi

VMware ESXi may fail to send information to NEC ESMPRO Manager 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 recover from the communication failure or restart the VMware ESXi Management Agents. You can restart the Management Agents 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.