

**Important Notice**  
**RAID System Monitoring on NEC ESMPRO Manager**  
**in VMware ESXi 6 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 WBEM Provider on VMware ESXi.

\* On this document, "VMware ESXi" means hypervisor of VMware ESXi 6 or later.

## Supported functions on NEC ESMPRO Manager

The RAID System which needs HPE WBEM Provider for management from NEC ESMPRO Manager, only supports “Display Alert Viewer”.

If it use with “Express Report Service (MG), it supports Express Report function.

For details, refer User Guide of each product.

Category	Function	NEC ESMPRO Manager						Description
		Target of this document				Reference		
		HPE WBEM Provider		LSI SMI-S Provider		Universal RAID Utility		
		Standard	Advanced	Standard	Advanced	Standard	Advanced	
Configuration/Status/Log information browsing	Tree View of RAID System			✓	✓	✓	✓	Shows system configuration in the component in a hierarchical manner.
	Show Property			✓	✓	✓	✓	Shows property for each component.
	Current status of operation			✓	✓	✓	✓	Shows current status of operation.
	Display information update			✓	✓	✓	✓	Refresh the RAID System information.
	RAID Log display			✓	✓	✓	✓	Displays the log of the RAID System
	Display Alert Viewer	✓	✓	✓	✓	✓	✓	Display the Alert Viewer that manages alert information sent from the RAID System.
Configuration	Easy Configuration					✓	✓	Creates RAID System easily.
	Create Logical Drive					✓	✓	Creates Logical Drive.
	Delete Logical Drive						✓	Delete Logical Drive
	Hot spare (create)			✓	✓	✓	✓	Creates Hot Spare

	Hot spare (delete)	✓	✓	✓	✓	Delete Hot Spare
	Create SSD Cache Drive				✓	Creates SSD Cache Drive
	Delete SSD Cache Drive				✓	Deletes SSD Cache Drive
Operation	Consistency Check (start)	✓	✓	✓	✓	Starts Consistency Check
	Consistency Check (stop)	✓	✓	✓	✓	Stops Consistency Check
	Scheduled Consistency Check	✓	✓	✓	✓	Starts scheduled Consistency Check
	Initialization (start)		✓		✓	Starts Consistency Check
	Initialization (stop)		✓		✓	Stops Consistency Check
	Rebuild (start)		✓		✓	Starts Consistency Check
	Rebuild (stop)		✓		✓	Stops Consistency Check
	Refresh battery		✓		✓	Refreshes battery
Maintenance	Silence buzzer	✓	✓	✓	✓	Silences buzzer
	Locate the Physical Device	✓	✓	✓	✓	Turns on (blinks) or off the disk lamp of the slot Physical Device is inserted.
	Make Physical Device Offline		✓		✓	Makes physical device offline forcibly.
	Make Physical Device Online		✓		✓	Makes physical device online forcibly.
Change settings	Option parameters of RAID Controller		✓		✓	Changes the setting of RAID Controller.
	Option parameters of Logical Drive		✓		✓	Changes the setting of Logical Drive.

Other function	Change RAID System Management Mode	✓	✓	✓	✓	Changes the RAID System Management Mode.
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## RAID System information tree in Local Navigation

The RAID System which needs HPE WBEM Provider for management from NEC ESMPRO Manager, it cannot display RAID System information tree in Local navigation.

And RAID Log cannot record.

Please use SSACLI or offline utility for check and operation RAID System.

SSACLI can download from NEC corporate site.

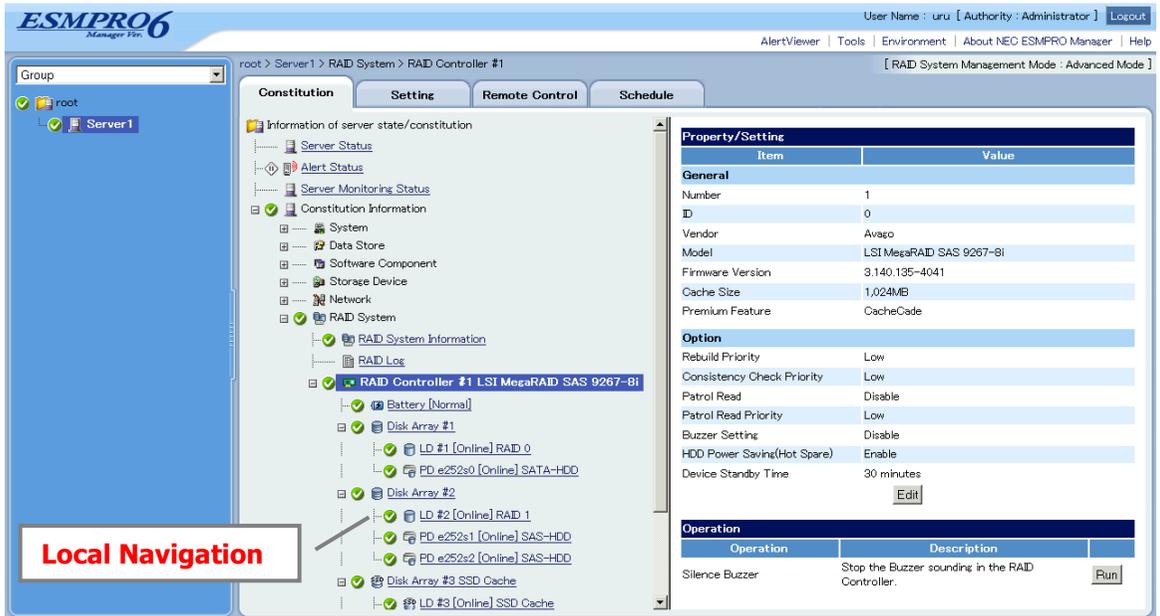


Fig.1 Local Navigation



Fig.2 cf. with LSI SMI-S Provider

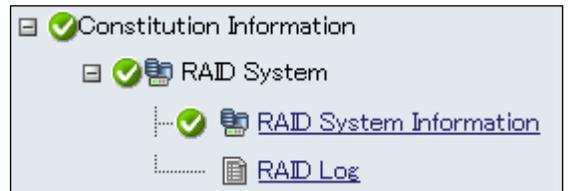


Fig.3 with HPE WBEM Provider

## The necessary operation when RAID configuration is changed

Please restart sfc b service when RAID configuration is changed, like Logical Drive create/ delete, Physical Device insert/ remove, etc.

The changes may not be identified from sfc b until restart service. This may be cause of inaccurate alert.

```
# /etc/init.d/sfc b-watchdog restart
```

## Increasing memory size of sfc b-smx process

If HPE WBEM Provider is long-term continuous worked, memory size of sfc b-smx process which uses the provider increase gradually.

Please check memory size of sfc b-smx process and restart sfc b service periodically per 3 months as below steps.

- 1) Check sfc b-smx process ID.
 

```
# ps -C | grep sfc b-smx
42130 42130 sfc b-smx-intero
42101 42101 sfc b-smx
```
- 2) Check memory size of relevant process. Below “71680” is memSizeLimit value, and “29588” is current memSize value.
 

```
# memstats -r uw-stats | grep sfc b-ProviderMa.42101
uw sfc b-ProviderMa.42101 72873 16786 42101 0 76800 -1 -3 29588 71680 29588 (snip)
```
- 3) If memSize seems to exceed 70-80% of memSizeLimit (50176-57334 in above example), restart sfc b service and reset memSize.
 

```
# /etc/init.d/sfc b-watchdog restart
```

## About “Rebuild Failed” alert

The RAID System which is managed by the HPE WBEM Provider registers “Rebuild Failed” alert when the RAID System is under any of the following conditions.

- 1) When Rebuild was aborted with various reasons, “Rebuild Failed” alert will register at the next monitor timing.
- 2) When Rebuild was finished but the Logical Drive did not get back to Online because of failing other Physical Device was failed during Rebuild etc., “Rebuild Failed” alert will register after finishing Rebuild.
- 3) When Hot Spare Rebuild was finished or Aborted, “Rebuild Failed” alert will register regardless of whether the Rebuild was succeeded or not.

If you want to know right result of Hot Spare Rebuild, please use Smart Storage Administrator CLI for VMware ESXi and check the logical drive information.

## How to add vib files to ESXi Custom Image

vSphere Auto Deploy can't use vib files to add ESXi Custom Image. Please use the next procedure.

### Preliminary preparations

- 1) Install VMware PowerCLI to server PC.  
e.g. VMware PowerCLI 10.0.0 (<https://code.vmware.com/web/dp/tool/vmware-powercli/10.0.0>)
- 2) Copy "Custom Image Offline Bundle(zipped file)" to server PC.

### How to add vib files

- 1) Start VMware PowerCLI. Later, it's operated by server PC.
- 2) Read "Custom Image Offline Bundle".
  - > Add0EsxSoftwareDepot [1]
  - [1] Custom Image Offline Bundle path.  
e.g. > Add-EsxSoftwareDepot .\ESXi-6.5.0-5224529-XYZ-6.5.0-02.zip
- 3) Copy Custom Image offline Bundle profile.
  - > New-EsxImageProfile -CloneProfile [2] -Name [3] -Vendor [4] -AcceptanceLevel PartnerSupported
  - [2] Custom Image offline Bundle image profile name.
  - [3] New image profile name.
  - [4] New vendor name.
  - e.g. > New-EsxImageProfile -CloneProfile ESXi-6.5.0-5224529-XYZ-6.5.0-02 -Name ESXi-6.5.0-5224529-XYZ-6.5.0-02-custom -Vendor "XYZ Corporation" -AcceptanceLevel PartnerSupported
- 4) Add vib files to new profile.
  - > Get-EsxSoftwarePackage -PackageUri [5]
  - > Add-EsxSoftwarePackage -ImageProfile [3] -SoftwarePackage [6]
  - [5] vib file path.
  - [6] vib file package name ("smx-provider" or "ssacli").
  - e.g. > Get-EsxSoftwarePackage -PackageUri .\smx-provider-650.03.12.00.18-4240417.vib  
Add-EsxSoftwarePackage -ImageProfile ESXi-6.5.0-5224529-XYZ-6.5.0-02-custom -SoftwarePackage smx-provider
- 5-1) Output to Offline Bundle(zipped file).
  - > Export-EsxImageProfile -ExportToBundle -ImageProfile [3] -FilePath [7]
  - [7] New Offline Bundle path.
  - e.g. > Export-EsxImageProfile -ExportToBundle -ImageProfile ESXi-6.5.0-5224529-XYZ-6.5.0-02-custom -FilePath ESXi-6.5.0-5224529-XYZ-6.5.0-02-custom.zip
- 5-2) Output to Custom Image(iso file).
  - > Export-EsxImageProfile -ExportToIso -ImageProfile [3] -FilePath [8]

[8] New Custom Image path.

e.g. > Export-EsxImageProfile -ExportToIso -ImageProfile  
ESXi-6.5.0-5224529-XYZ-6.5.0-02-custom -FilePath  
ESXi-6.5.0-5224529-XYZ-6.5.0-02-custom.iso