

**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.

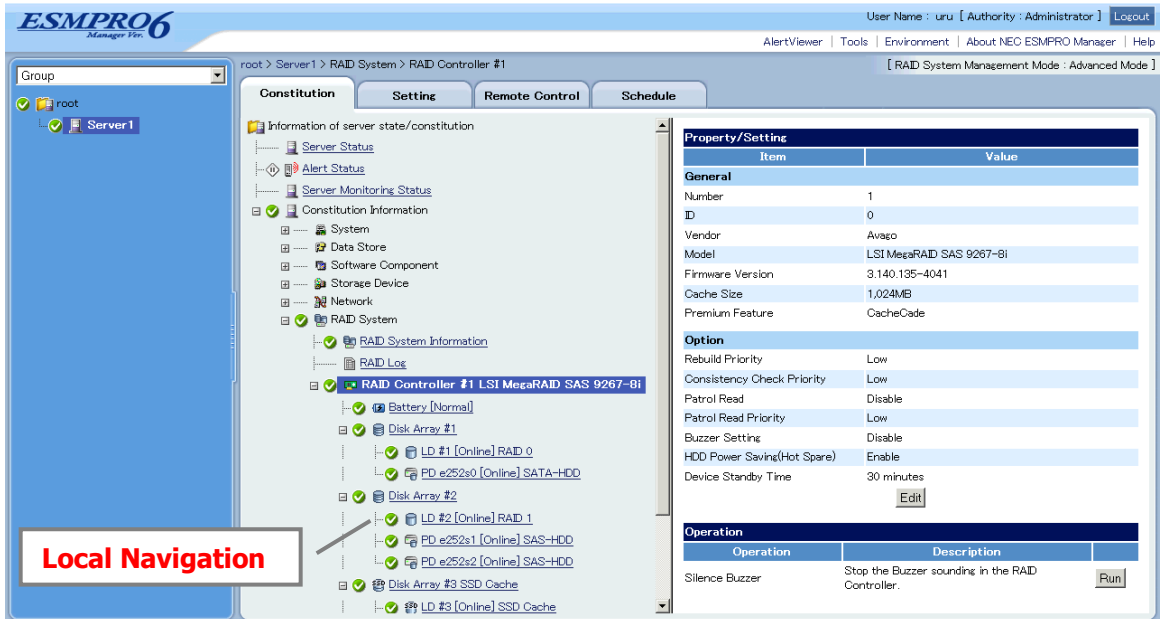


Fig.1 Local Navigation



Fig.2 cf. with LSI SMI-S Provider

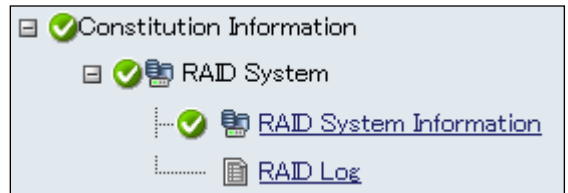


Fig.3 with HPE WBEM Provider

## The necessary operation when RAID configuration is changed

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

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

```
# /etc/init.d/sfcdb-watchdog restart
```

## Increasing memory size of sfcdb-smx process

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

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

- 1) Check sfcdb-smx process ID.
 

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

```
# memstats -r uw-stats | grep sfcdb-ProviderMa.42101
uw sfcdb-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 sfcdb service and reset memSize.
 

```
# /etc/init.d/sfcdb-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.