



**DELL iSM  
Software Raid  
Features in Idrac  
Service Module**

**DELL Technologies**  
Technical Manager

Software RAID features in iDRAC Service  
Module

**Abstract**  
This technical whitepaper provides information about the software RAID feature  
in iDRAC Service Module (iSM), and guides you through the steps to perform  
installation, configuration, and monitoring of the controller, physical disks, and  
virtual disks that are attached to Dell PowerEdge servers.  
December 2024



# DELL iSM Software Raid Features in Idrac Service Module User Guide

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**DELL iSM Software Raid Features in Idrac Service Module**

## Software RAID features in iDRAC Service Module

### Abstract

This technical whitepaper provides information about the software RAID feature on iDRAC Service Module (iSM), and guides you through the steps to perform enumeration, configuration, and monitoring of the controllers, physical disks, and virtual disks that are attached to Dell PowerEdge servers.

December 2024

## Product Information

### Specifications

- Product Name: iDRAC Service Module
- Feature: Software RAID
- Compatibility: Dell PowerEdge servers
- Release Date: December 2024
- Model Number: WP642

## Software RAID features in iDRAC Service Module

### Abstract

This technical whitepaper provides information about the software RAID feature on iDRAC Service Module (iSM), and guides you through the steps to perform enumeration, configuration, and monitoring of the controllers, physical disks, and virtual disks that are attached to Dell PowerEdge servers.

December 2024

### Revisions

Date	Description
December 2024	Initial release

## Acknowledgments

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- Other:

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[12/20/2024] [Technical Whitepaper]

## **Executive summary**

- The software RAID feature in iDRAC Service Module (iSM), facilitates enumeration, configuration and monitoring of the controllers, physical disks, and virtual disks that are attached to PowerEdge servers.
- This technical whitepaper serves as a comprehensive reference which helps you to migrate from Dell OpenManage Server Administrator (OMSA) to iSM before the End Of Life (EOL) of OMSA.
- The technical whitepaper provides information about the software RAID functionalities on iSM, providing instructions for its configuration. By simplifying the complexities of transitioning to iSM, this whitepaper aims to provide an understanding of software RAID capabilities, ensuring a seamless adoption of iSM Software RAID feature in place of Dell OpenManage Server Administrator (OMSA).

## **Access operations of software RAID in iDRAC Service Module (iSM)**

When you migrate from OMSA to iSM, you can use the Command-Line Interface (CLI) to perform operations pertaining to the software RAID features.

### **Prerequisites**

Install the iSM software on the operating system.

### **About this task**

To view software RAID operations in iSM, complete the following tasks:

### **Steps**

1. From the Start menu, start CLI as an administrator.
2. To view the Online Help content of the Software RAID feature, run the following command: `dcismcfg.exe -swraid`

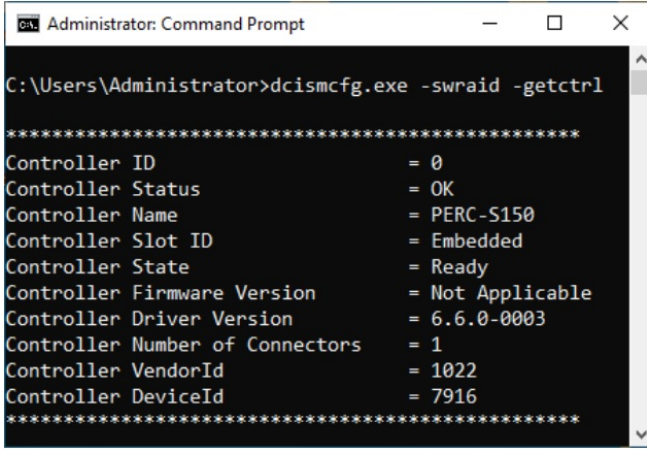
**The following table lists the dcismcfg CLI options of the Software RAID feature:**

iSM command	Description
dcismcfg.exe -swraid -getctrl	To display the Software RAID controller properties.
dcismcfg.exe -swraid -ctrlID=0/1 [-getpd]/[-getvd]	To display the Physical or Virtual Disk properties managed by the controller 0/1.
dcismcfg.exe -swraid -getpd	To display the Physical Disk properties.
dcismcfg.exe -swraid -getvd	To display the Virtual Disk properties.

### Display controller properties

To display the properties of the software RAID controller, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -getctrl	omreport storage controller

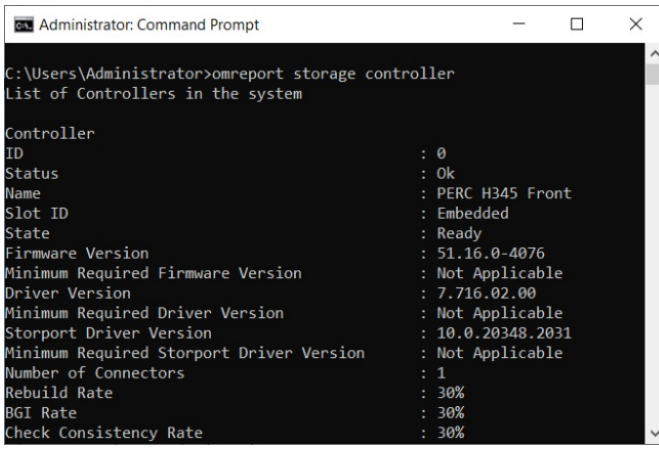


```

Administrator: Command Prompt
C:\Users\Administrator>dcismcfg.exe -swraid -getctrl

*****
Controller ID           = 0
Controller Status       = OK
Controller Name         = PERC-S150
Controller Slot ID      = Embedded
Controller State        = Ready
Controller Firmware Version = Not Applicable
Controller Driver Version = 6.6.0-0003
Controller Number of Connectors = 1
Controller VendorId     = 1022
Controller DeviceId     = 7916
*****

```



```

Administrator: Command Prompt
C:\Users\Administrator>omreport storage controller
List of Controllers in the system

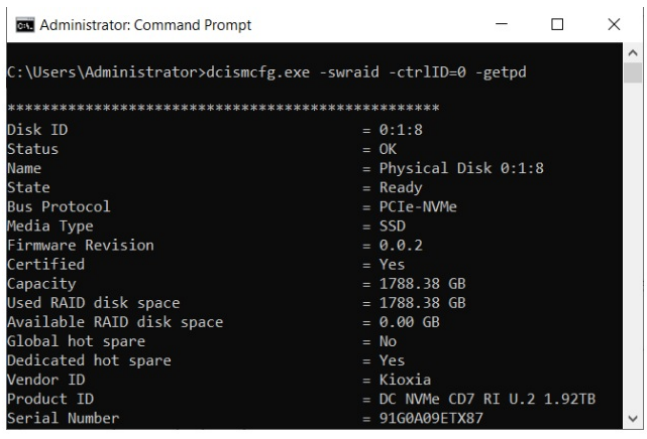
Controller
ID              : 0
Status          : Ok
Name           : PERC H345 Front
Slot ID        : Embedded
State          : Ready
Firmware Version : 51.16.0-4076
Minimum Required Firmware Version : Not Applicable
Driver Version  : 7.716.02.00
Minimum Required Driver Version   : Not Applicable
Storport Driver Version : 10.0.20348.2031
Minimum Required Storport Driver Version : Not Applicable
Number of Connectors : 1
Rebuild Rate      : 30%
BGI Rate          : 30%
Check Consistency Rate : 30%

```

### Display physical disk properties

To display the physical disk properties, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0 – getpd	omreport storage pdisk controller=id

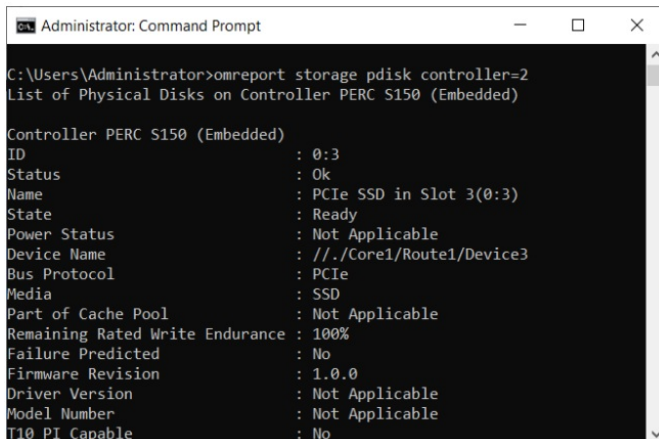


```

Administrator: Command Prompt
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -getpd

*****
Disk ID           = 0:1:8
Status           = OK
Name             = Physical Disk 0:1:8
State            = Ready
Bus Protocol      = PCIe-NVMe
Media Type       = SSD
Firmware Revision = 0.0.2
Certified        = Yes
Capacity         = 1788.38 GB
Used RAID disk space = 1788.38 GB
Available RAID disk space = 0.00 GB
Global hot spare  = No
Dedicated hot spare = Yes
Vendor ID        = Kioxia
Product ID       = DC NVMe CD7 RI U.2 1.92TB
Serial Number    = 91G0A09ETX87

```



```

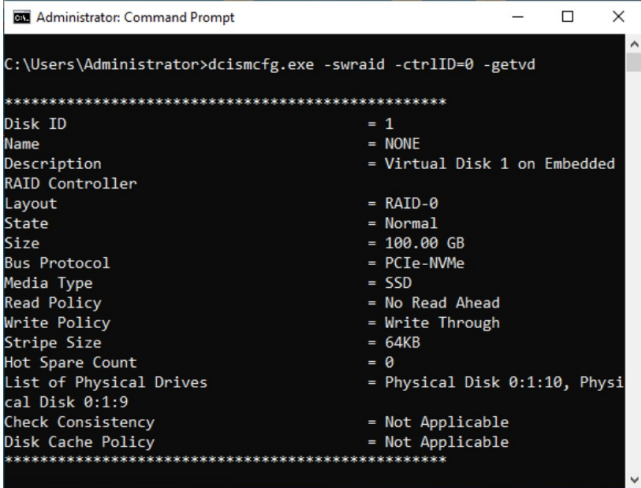
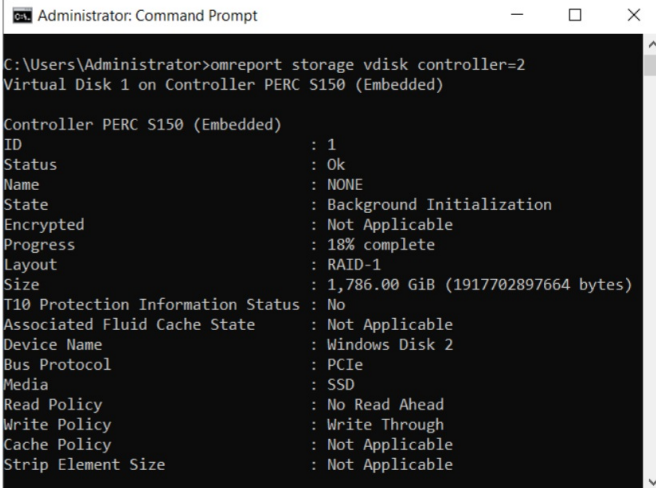
Administrator: Command Prompt
C:\Users\Administrator>omreport storage pdisk controller=2
List of Physical Disks on Controller PERC S150 (Embedded)

Controller PERC S150 (Embedded)
ID              : 0:3
Status          : Ok
Name           : PCIe SSD in Slot 3(0:3)
State          : Ready
Power Status    : Not Applicable
Device Name     : //./Core1/Route1/Device3
Bus Protocol    : PCIe
Media          : SSD
Part of Cache Pool : Not Applicable
Remaining Rated Write Endurance : 100%
Failure Predicted : No
Firmware Revision : 1.0.0
Driver Version   : Not Applicable
Model Number     : Not Applicable
T10 PI Capable  : No

```

### Display virtual disk properties

To display the virtual disk properties, run the following commands of iSM and OMSA:

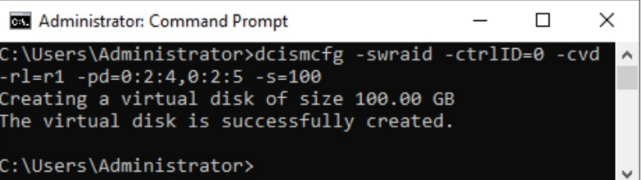
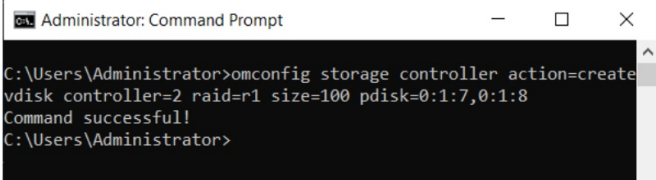
iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0 – getvd	omreport storage vdisk controller=id
 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;dcismcfg.exe -swraid -ctrlID=0 -getvd ***** Disk ID                      = 1 Name                        = NONE Description                  = Virtual Disk 1 on Embedded RAID Controller              = RAID-0 Layout                      = RAID-0 State                       = Normal Size                        = 100.00 GB Bus Protocol                 = PCIe-NVMe Media Type                   = SSD Read Policy                  = No Read Ahead Write Policy                 = Write Through Stripe Size                  = 64KB Hot Spare Count              = 0 List of Physical Drives      = Physical Disk 0:1:10, Physical Disk 0:1:9 Check Consistency            = Not Applicable Disk Cache Policy            = Not Applicable ***** </pre>	 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;omreport storage vdisk controller=2 Virtual Disk 1 on Controller PERC S150 (Embedded)  Controller PERC S150 (Embedded) ID                      : 1 Status                  : Ok Name                    : NONE State                   : Background Initialization Encrypted               : Not Applicable Progress                : 18% complete Layout                  : RAID-1 Size                    : 1,786.00 GiB (1917702897664 bytes) T10 Protection Information Status : No Associated Fluid Cache State : Not Applicable Device Name             : Windows Disk 2 Bus Protocol            : PCIe Media                   : SSD Read Policy             : No Read Ahead Write Policy            : Write Through Cache Policy            : Not Applicable Strip Element Size      : Not Applicable </pre>

### Create a virtual disk

To create a virtual disk from one or more physical disks of a specific RAID level, run the following commands of iSM and OMSA:

**NOTE:** The size parameter is optional in iSM.

iSM command	OMSA command
<p>dcismcfg.exe -swraid -ctrlID=0/1</p> <p>-createVD/-cvd -raidlevel/- rl=&lt;RAID Type&gt; -pdisk/-pd =&lt;comma separated physical disk IDs&gt; – vdName/-v dn=&lt;virtual disk ID&gt; – size/-s -rwpolicy/-rp -wpolicy/-wp -diskCachePolicy/-dcp</p>	<p>omconfig storage controller action=createvdisk controller=id raid=&lt;c   r0   r1   r1c   r5   r6   r10   r50   r60&gt; size=&lt;number   b</p> <p>  m   g   max   min&gt; pdisk=&lt;PDISKID&gt; [stripesize=&lt; 2kb</p> <p>  4kb   8kb   16kb   32kb   64kb   128kb   256kb   512kb   1mb &gt;] [cachepolicy=&lt;d   c&gt;] [readpolicy=&lt;ra   nra   ara   rc   nrc&gt;] [writepolicy=&lt;wb   wt   wc   nwc   fwb&gt;] [diskcachepolicy=&lt;default   disabled   enabled&gt;] [name=&lt;string&gt;] [spanlength=&lt;n&gt;] [secureflag=yes] [vdpienabled=yes]</p>

 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;dcismcfg.exe -swraid -ctrlID=0 -cvd -rl=r1 -pd=0:2:4,0:2:5 -s=100 Creating a virtual disk of size 100.00 GB The virtual disk is successfully created. C:\Users\Administrator&gt; </pre>	 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;omconfig storage controller action=createvdisk controller=2 raid=r1 size=100 pdisk=0:1:7,0:1:8 Command successful! C:\Users\Administrator&gt; </pre>
---	---

You can verify if the virtual disk is created by viewing the properties of the new virtual disk. To display the virtual disk properties, run the following iSM command:

### iSM command

dcismcfg.exe -swraid -ctrlID=0 -getvd

```

Administrator: Command Prompt
*****
Disk ID                = 2
Name                  = NONE
Description           = Virtual Disk 2 on Embedded RAID Controller
Layout               = RAID-1
State                = Normal
Size                 = 100.00 GB
Bus Protocol         = SATA
Media Type           = HDD
Read Policy          = No Read Ahead
Write Policy         = Write Through
Stripe Size         = Not Applicable
Hot Spare Count      = 0
List of Physical Drives = Physical Disk 0:2:4, Physical Disk 0:2:5
Check Consistency    = 2.11 %
Disk Cache Policy    = Not Applicable
*****
C:\Users\Administrator>

```

**Example 1:** To create a virtual disk of type RAID <5>, using three physical disks with IDs <0:1:0>, <0:1:1>, and <0:1:2> that have storage disk space <100> GB, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -cvd -rl=r5 -
pd=0:1:0,0:1:1,0:1:2 -size=100
```

**When a virtual disk is created successfully, the following message is displayed:**

Creating a virtual disk of size 100.00 GB The virtual disk is successfully created.

**Example 2:** To create a virtual disk of type RAID <0>, using two physical disks with IDs <0:1:0> and <0:1:1> that have storage space <100> GB, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -cvd -rl=r0 -
pd=0:1:0,0:1:1 -s=100
```

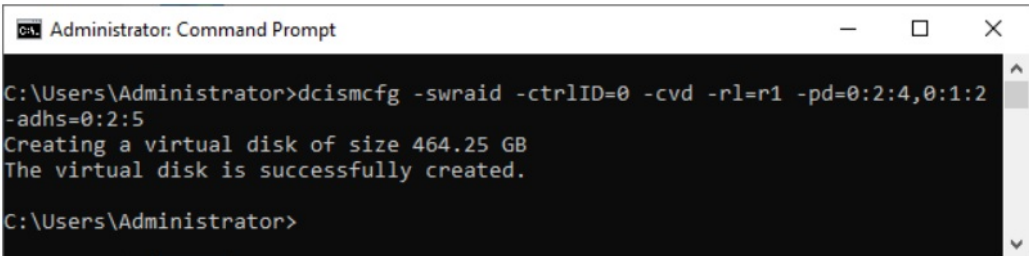
**When a virtual disk is created successfully, the following message is displayed:**

Creating a virtual disk of size 100.00 GB The virtual disk is successfully created.

### Create virtual disk with dedicated hot spare devices

To create a virtual disk with one or more dedicated hot spare devices, run the following:

**NOTE:** The maximum number of dedicated hot spare devices that can be assigned to a virtual disk is six.

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1 -createVD/-cvd – raidlevel/-rl -pdisk/-pd=<comma separated physical disk IDs> -adhs=<comma separated physical disk IDs>	Not available
 <pre> Administrator: Command Prompt  C:\Users\Administrator&gt;dcismcfg -swraid -ctrlID=0 -cvd -rl=r1 -pd=0:2:4,0:1:2 -adhs=0:2:5 Creating a virtual disk of size 464.25 GB The virtual disk is successfully created.  C:\Users\Administrator&gt; </pre>	

You can verify if the virtual disk is created by viewing the properties of the new virtual disk. To display the virtual



disk properties, run the following iSM command:

```
iSM command

dcismcfg.exe -swraid -ctrlID=0 -getvd

Administrator: Command Prompt

*****
Disk ID                = 2
Name                  = NONE
Description            = Virtual Disk 2 on Embedded RAID Controller
Layout                = RAID-1
State                 = Normal
Size                  = 464.00 GB
Bus Protocol          = SATA
Media Type            = HDD
Read Policy           = No Read Ahead
Write Policy          = Write Through
Stripe Size          = Not Applicable
Hot Spare Count       = 1
Hot Spare List        = Physical Disk 0:2:5
List of Physical Drives = Physical Disk 0:2:4, Physical Disk 0:1:2
Check Consistency     = 0.87 %
Disk Cache Policy     = Not Applicable
*****

C:\Users\Administrator>
```

**Example 1:** To create a virtual disk of type RAID <5>, using three physical disks with IDs <0:1:0>, <0:1:1>, and 0:1:2 that have storage disk space <100> GB and a dedicate hot spare device associated with disk ID <0:1:3>, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -cvd -rl=r5 -
pd=0:1:0,0:1:1,0:1:2 -size=100 -adhs=0:1:3
```

**When a virtual disk is created successfully, the following message is displayed:**

Creating a virtual disk of size 100.00 GB The virtual disk is successfully created.

**Example 2:** To create a virtual disk of type RAID <1>, using two physical disks with IDs <0:1:0> and <0:1:1> that have storage disk space <100> GB and dedicate hot spare devices associated with disk IDs <0:1:2> and <0:1:3>, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -cvd -rl=r1 -pd=0:1:0,0:1:1-size=100 -adhs=0:1:2,0:1:3
```

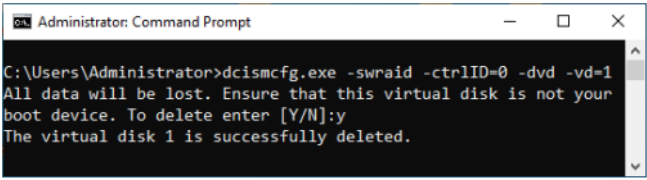
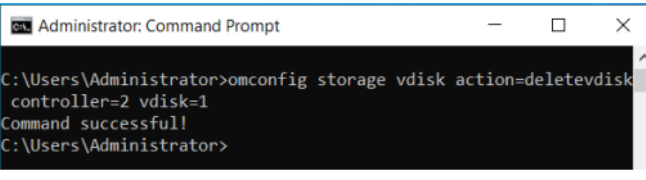
**When a virtual disk is created successfully, the following message is displayed:**

Creating a virtual disk of size 100.00 GB  
The virtual disk is successfully created.

### Delete a virtual disk

To delete a virtual disk, run the following commands of iSM and OMSA:

**NOTE:** Ensure that the virtual disk is not the boot device.

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1 -dvd -vd=<disk ID>	omconfig storage vdisk action=deletevdisk controller=<ID> vdisk=id
 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;dcismcfg.exe -swraid -ctrlID=0 -dvd -vd=1 All data will be lost. Ensure that this virtual disk is not your boot device. To delete enter [Y/N]:y The virtual disk 1 is successfully deleted. </pre>	 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;omconfig storage vdisk action=deletevdisk controller=2 vdisk=1 Command successful! C:\Users\Administrator&gt; </pre>

**Example:** To delete a virtual disk associated with disk ID <2>, run the following command:

C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -dvd -vd=2

All data will be lost. Ensure that this virtual disk is not your boot device. To delete enter [Y/N]:y

When a virtual disk is deleted successfully, the following message is displayed:

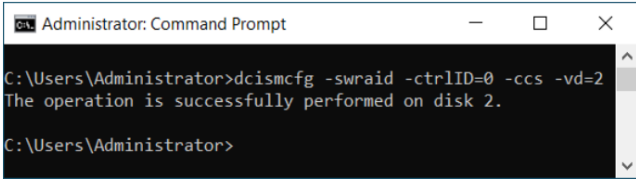
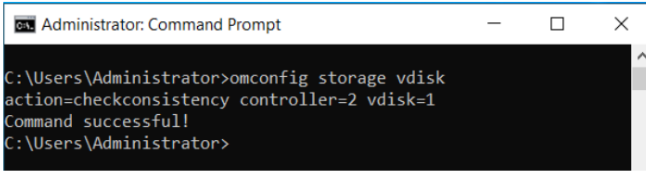
The virtual disk 2 is successfully deleted.

### Check-consistency operation

Check-consistency is a background operation that verifies data parity on software RAID storage. iDRAC Service Module enables you to start and cancel the check-consistency operation.

#### Start the check-consistency operation

To start the check-consistency operation, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1 -ccs -vdisk/-vd=<disk ID>	omconfig storage vdisk action=checkconsistency controller=<ID> vdisk=id
 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;dcismcfg -swraid -ctrlID=0 -ccs -vd=2 The operation is successfully performed on disk 2. C:\Users\Administrator&gt; </pre>	 <pre> Administrator: Command Prompt C:\Users\Administrator&gt;omconfig storage vdisk action=checkconsistency controller=2 vdisk=1 Command successful! C:\Users\Administrator&gt; </pre>

You can verify the percentage completed of the check-consistency operation through virtual disk properties. To display the virtual disk properties, run the following iSM command:

#### iSM command

dcismcfg.exe -swraid -ctrlID=0 -getvd



```

Administrator: Command Prompt

*****
Disk ID                = 2
Name                  = NONE
Description           = Virtual Disk 2 on Embedded RAID Controller
Layout               = RAID-1
State                = Normal
Size                 = 150.00 GB
Bus Protocol         = SATA
Media Type           = HDD
Read Policy          = No Read Ahead
Write Policy         = Write Through
Stripe Size         = Not Applicable
Hot Spare Count      = 0
List of Physical Drives = Physical Disk 0:1:2, Physical Disk 0:2:4
Check Consistency    = 0.26 %
Disk Cache Policy    = Not Applicable
*****

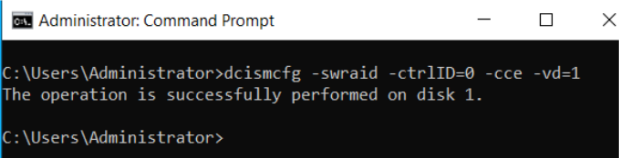
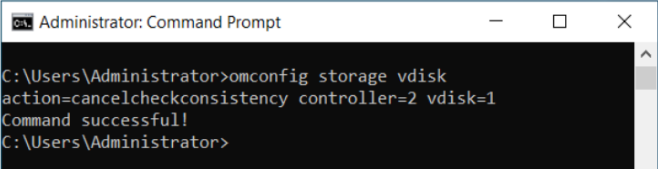
C:\Users\Administrator>

```

Example: To start the check-consistency operation on a virtual disk with disk ID <3>, run the following command:  
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -ccs -vd=3  
When the check-consistency operation is completed successfully, the following message is displayed:  
The operation is successfully performed on disk 3.

### Cancel the check-consistency operation

To cancel the check-consistency operation, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1 -cce -vdisk/-vd=<disk ID>	omconfig storage vdisk action=cancelcheckconsistency controller=<ID> vdisk=id
 <pre> Administrator: Command Prompt  C:\Users\Administrator&gt;dcismcfg -swraid -ctrlID=0 -cce -vd=1 The operation is successfully performed on disk 1.  C:\Users\Administrator&gt; </pre>	 <pre> Administrator: Command Prompt  C:\Users\Administrator&gt;omconfig storage vdisk action=cancelcheckconsistency controller=2 vdisk=1 Command successful!  C:\Users\Administrator&gt; </pre>

**Example:** To cancel check-consistency operation on a virtual disk with disk ID <3>, run the following command:  
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -cce -vd=3  
When the check-consistency operation is completed successfully, the following message is displayed:  
The operation is successfully performed on disk 3.

## Assign and unassign hot spare devices

### Prerequisites

- The physical disk which must be assigned as a dedicated hot spare must be in Ready state.

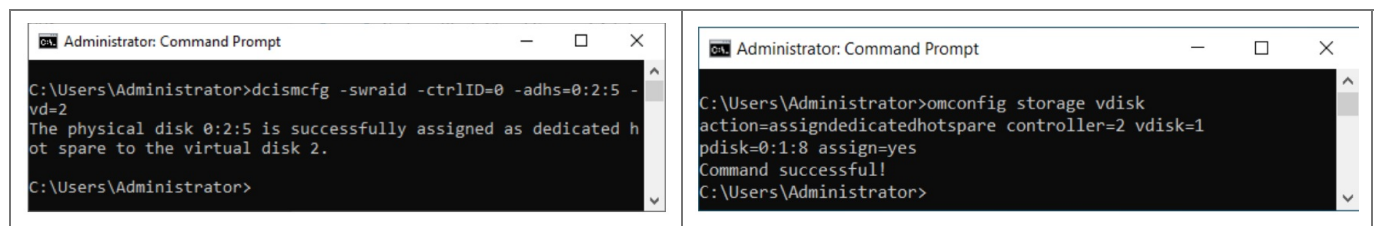
## Limitations

- A dedicated hot spare device cannot be assigned to a virtual disk with Volume or RAID 0 type.
- A dedicated hot spare device cannot be assigned for different media type disks.
- A maximum of six dedicated hot spare devices can be assigned to a virtual disk.
- A physical disk cannot act both as a global hot spare device and a dedicated hot spare device.

## Assign dedicated hot spare devices

To assign one or more dedicated hot spare devices to a virtual disk, run the following commands of iSM and OMSA:

iSM command	OMSA command
<pre>dcismcfg.exe -swraid -ctrlID=0/1  -adhs=&lt;comma separated physical disk IDs&gt; -vdisk/- vd=&lt;disk ID&gt;</pre>	<pre>omconfig storage vdisk action=assignededicatedhotspare controller=&lt;ID&gt; vdisk =id pdisk=&lt;pdisk id&gt; assign=yes</pre>



You could verify if the assign dedicated hot spare operation is completed using the physical disk ID in the hot spare devices list of VD properties. To display the virtual disk properties, run the following iSM command:

iSM command
<pre>dcismcfg.exe -swraid -ctrlID=0 -getvd</pre>
<p>The screenshot shows the output of the <code>dcismcfg.exe -swraid -ctrlID=0 -getvd</code> command. The output lists the following properties for Virtual Disk 2:</p> <ul style="list-style-type: none"><li>Disk ID = 2</li><li>Name = NONE</li><li>Description = Virtual Disk 2 on Embedded RAID Controller</li><li>Layout = RAID-1</li><li>State = Normal</li><li>Size = 464.00 GB</li><li>Bus Protocol = SATA</li><li>Media Type = HDD</li><li>Read Policy = No Read Ahead</li><li>Write Policy = Write Through</li><li>Stripe Size = Not Applicable</li><li>Hot Spare Count = 1</li><li>Hot Spare List = Physical Disk 0:2:5</li><li>List of Physical Drives = Physical Disk 0:2:4, Physical Disk 0:1:2</li><li>Check Consistency = 0.87 %</li><li>Disk Cache Policy = Not Applicable</li></ul>

**Example 1:** To assign a dedicated hot spare associated with physical disk ID <0:1:0>, to a virtual disk with disk ID <1>, run the following command:

C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -adhs=0:1:0 -vd=1

When a dedicated hot spare is assigned successfully to the virtual disk, the following message is displayed:  
The physical disk 0:1:0 is successfully assigned as dedicated hot spare to the virtual disk 1.

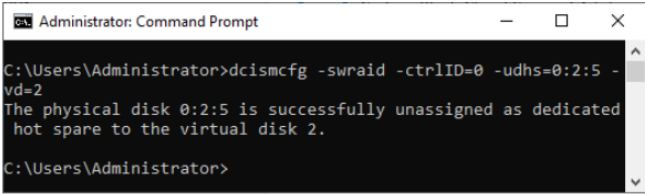
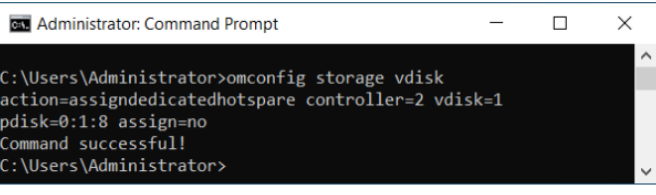
**Example 2:** To assign dedicated hot spares associated with physical disk IDs <0:1:0> and <0:1:1>, to a virtual disk with disk ID <1>, run the following command:

C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -adhs=0:1:0,0:1:1 -vd=1

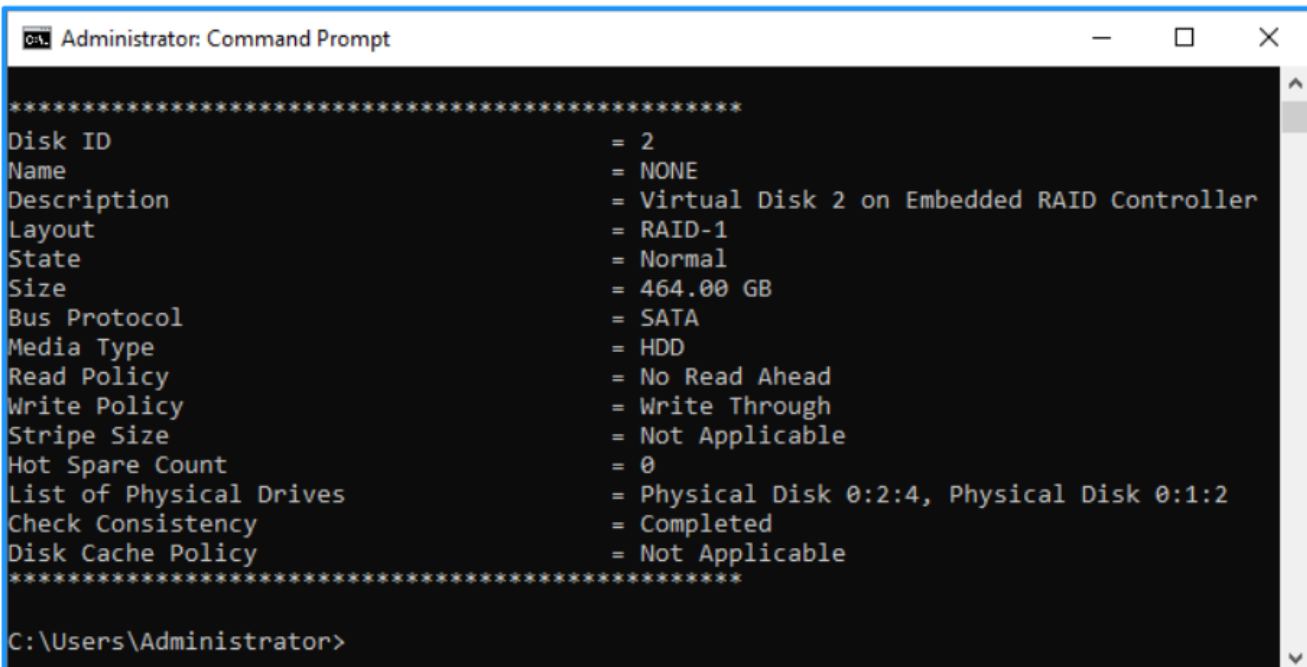
When dedicated hot spares are assigned successfully to the virtual disk, the following message is displayed:  
The physical disks 0:1:0,0:1:1 are successfully assigned as dedicated hot spare to the virtual disk 1.

**Unassign dedicated hot spare devices**

To unassign one or more dedicated hot spare devices to a virtual disk, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1 -udhs=<comma separated physical disk IDs> -vdisk/-vd=<disk ID>	omconfig storage vdisk action=assignededicatedhotspare controller=<ID> vdisk=id pdisk=<pdisk id> assign=no
	

When dedicated hot spare devices are assigned successfully to the virtual disk, the following message is displayed:

iSM command
dcismcfg.exe -swraid -ctrlID=0 -getvd


**Example 1:** To unassign a dedicated hot spare associated with physical disk ID <0:1:0> from a virtual disk with

disk ID <1>, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -udhs=0:1:0 -vd=1
```

When the dedicated hot spare is unassigned successfully from the virtual disk, the following message is displayed:  
The physical disk 0:1:0 is successfully unassigned as dedicated hot spare to the virtual disk 1.

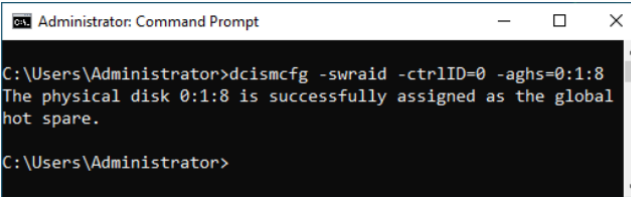
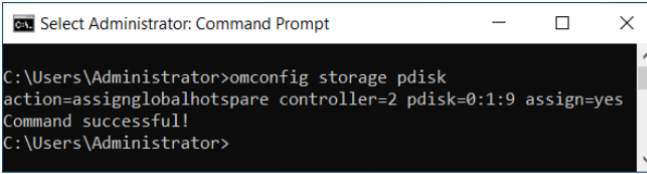
**Example 2:** To unassign dedicated hot spares associated with physical disk IDs <0:1:0> and <0:1:1>, from a virtual disk with disk ID 1, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -udhs=0:1:0,0:1:1 -vd=1
```

When the dedicated hot spare is unassigned successfully from the virtual disk, the following message is displayed:  
The physical disks 0:1:0,0:1:1 are successfully unassigned as dedicated hot spare to the virtual disk 1.

### Assign global hot spare devices

To assign one or more global hot spare device to a virtual disk, run the following commands of iSM and OMSA:

iSM command	OMSA command
<pre>dcismcfg.exe -swraid -ctrlID=0/1 -aghs=&lt;comma separated physical disk IDs&gt;</pre>	<pre>omconfig storage pdisk action=assignglobalhotspare controller=&lt;ID&gt; pdisk=&lt;pdisk id&gt; assign=yes</pre>
	

**Example 1:** To assign a global hot spare device associated with physical disk ID <0:1:0>, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -aghs=0:1:0
```

When a global hot spare device is assigned successfully to the virtual disk, the following message is displayed:  
The physical disk 0:1:0 is successfully assigned as the global hot spare.

**Example 2:** To assign two global hot spare devices associated with physical disk IDs <0:1:0> and <0:1:1>, run the following command:

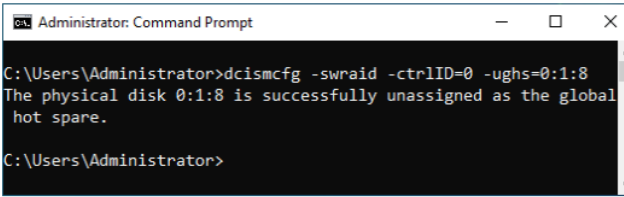
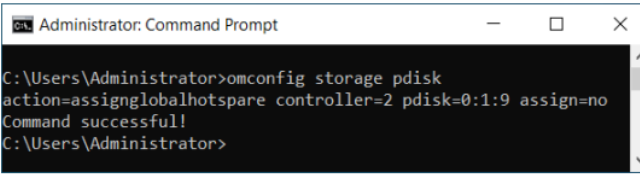
```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -aghs=0:1:0,0:1:1
```

When the global hot spare devices are assigned successfully to the virtual disk, the following message is displayed:

The physical disks 0:1:0,0:1:1 are successfully assigned as the global hot spare.

### Unassign global hot spare devices

To unassign one or more global hot spare devices to a physical disk, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1 -ughs=<comma separated physical disk IDs>	omconfig storage vdisk action=assignededicatedhotspare controller=<ID> vdisk=id pdisk=<pdisk id> assign=no
	

**Example 1:** To unassign a global hot spare device associated with physical disk ID <0:1:0>, run the following command:

C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -ughs=0:1:0

When a global hot spare device is unassigned successfully from the virtual disk, the following message is displayed:

The physical disk 0:1:0 is successfully unassigned as the global hot spare.

**Example 2:** To unassign two global hot spare devices associated with physical disk IDs <0:1:0> and <0:1:1>, run the following command:

C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -ughs=0:1:0,0:1:1

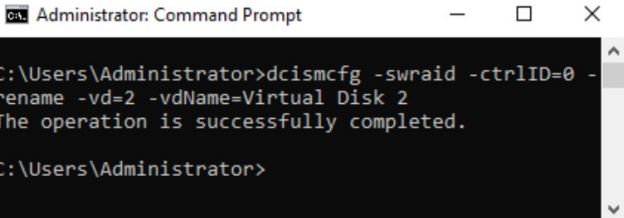
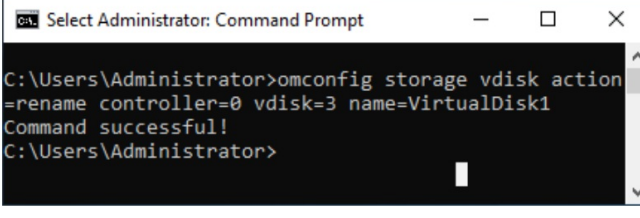
When a global hot spare device is unassigned successfully from the virtual disk, the following message is displayed:

The physical disks 0:1:0,0:1:1 are successfully unassigned as the global hot spare.

### Rename a virtual disk

To rename an existing virtual disk, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1  -rename -vd=<disk ID> - vdName=<new VD name>	omconfig storage vdisk omconfig storage vdisk action=r ename controller=id vdisk=id name=new name

	
---	--

You can verify if the virtual disk is renamed, through the virtual disk name in virtual disk properties. To display the virtual disk properties, run the following iSM command:



iSM command

dcismcfg.exe -swraid -ctrlID=0 -getvd

Administrator: Command Prompt

\*\*\*\*\*  
Disk ID = 2  
Name = Virtual Disk 2  
Description = Virtual Disk 2 on Embedded RAID Controller  
Layout = RAID-1  
State = Normal  
Size = 464.00 GB  
Bus Protocol = SATA  
Media Type = HDD  
Read Policy = No Read Ahead  
Write Policy = Write Through  
Stripe Size = Not Applicable  
Hot Spare Count = 0  
List of Physical Drives = Physical Disk 0:2:4, Physical Disk 0:1:2  
Check Consistency = Completed  
Disk Cache Policy = Not Applicable  
\*\*\*\*\*  
C:\Users\Administrator>

**Example 1:** To rename a virtual disk with disk ID <1> with <OLD NAME> to <NEW NAME>, run the following command:  
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -rename -vd=1 -vdName=NEW NAME  
When a virtual disk is renamed successfully, the following message is displayed:  
The operation is successfully completed.

Reconfiguration of Virtual Disk

To reconfigure an existing virtual disk, run the following commands of iSM and OMSA:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1  -reconfigure -vd=<disk ID> - size/-s=<Size> -pdisk/-p d=<Disk ID>]	omconfig storage vdisk action=reconfigure controller=id vdisk=id raid=<c r0 r1 r1c r5 r10> pdisk=<PDISKID>[size=<size>vdcapac
	ityexpansion=yes sizeinpercent=<1 to 100>]
<div><div>Administrator: Command Prompt</div><div>C:\Users\Administrator&gt;dcismcfg -swraid -ctrlID=0 -reconfigure -vd=2 -size=150 The operation is successful. C:\Users\Administrator&gt;</div></div>	<div><div>Administrator: Command Prompt</div><div>C:\Users\Administrator&gt;omconfig storage vdisk action=reconfigure controller=0 vdisk=3 raid=r0 size=150 pdisk=0:2:4,0:2:5 Command successful! C:\Users\Administrator&gt;</div></div>

You can verify if the virtual disk is reconfigured, through the virtual disk size in virtual disk properties. To display the virtual disk properties, run the following iSM command:



iSM command

```
dcismcfg.exe -swraid -ctrlID=0 -getvd
```

Administrator: Command Prompt

```
*****
Disk ID                = 2
Name                  = NONE
Description            = Virtual Disk 2 on Embedded RAID Controller
Layout                = RAID-1
State                 = Normal
Size                  = 150.00 GB
Bus Protocol          = SATA
Media Type             = HDD
Read Policy            = No Read Ahead
Write Policy           = Write Through
Stripe Size           = Not Applicable
Hot Spare Count        = 0
List of Physical Drives = Physical Disk 0:1:2, Physical Disk 0:2:4
Check Consistency      = Completed
Disk Cache Policy      = Not Applicable
*****
C:\Users\Administrator>
```

**Example 1:** To reconfigure a virtual disk with disk ID <2> of size <100> GB to <150> GB, run the following command:  
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -reconfigure -vd=2 -size=150  
When a virtual disk is reconfigured successfully, the following message is displayed:  
The operation is successful.

**Example 2:** To reconfigure a virtual disk with disk ID <2> of size <100>GB to <200>GB with additional physical disk of disk ID <0:1:2>, run the following command:  
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -reconfigure -vd=2 -size=200 -pd=0:1:2

**When a virtual disk is reconfigured successfully, the following message is displayed:**  
The operation is successful.

### View the maximum size of a virtual disk for reconfiguration

To view the maximum size supported of a virtual disk up to which it can be reconfigured, run the following command:

iSM command	OMSA command
dcismcfg.exe -swraid -ctrlID=0/1 -getsize -vd=<disk ID> -pdisk/-pd=<Disk ID>]	Not available
<div>Administrator: Command Prompt</div> <pre>C:\Users\Administrator&gt;dcismcfg -swraid -ctrlID=0 -getsize -vd=2 The maximum virtual disk size that is supported for reconfiguration operation is 465.24 GB. The operation is successful. C:\Users\Administrator&gt;</pre>	

**Example 1:** To display the maximum size to which a virtual disk can be reconfigured with virtual disk ID <3>, run

the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -getsize -vd=3
```

When the above command is run successfully, the following message is displayed:

The maximum virtual disk size that is supported for reconfiguration operation is 1711.96 GB.

The operation is successful.

**Example 2:** To display the maximum size to which a virtual disk can be reconfigured with virtual disk ID <4> and with additional physical disks of disk IDs <0:1:2> and <0:1:3>, run the following command:

```
C:\Users\Administrator>dcismcfg.exe -swraid -ctrlID=0 -getsize -vd=4 –  
pd=0:1:2,0:1:3
```

When the above command is run successfully, the following message is displayed:

The maximum virtual disk size that is supported for reconfiguration operation is 1711.96 GB.

The operation is successful.

## Access operating system logs using Event Viewer

iDRAC Service Module (iSM) monitors alerts when OpenManage Server Administrator (OMSA) is running on the operating system. However, the alerts are logged only in the Lifecycle Controller log, and not in the operating system log. When OMSA is not running on the operating system, iSM logs the alerts in the operating system log and the Lifecycle Controller log. The source name for alerts that are logged in the operating system log is iDRACServiceModule-SWRAID. iSM monitors the alerts every 15 minutes, and a maximum of 50 alerts are logged per day.

To view the operating system logs using the Event Viewer, perform the following:

1. Start Windows Event Viewer application on your system.
2. On Event Viewer, click Windows Logs > System.
3. On the System tab, click to view the Lifecycle Controller Log events. You can view the event information under the General tab.

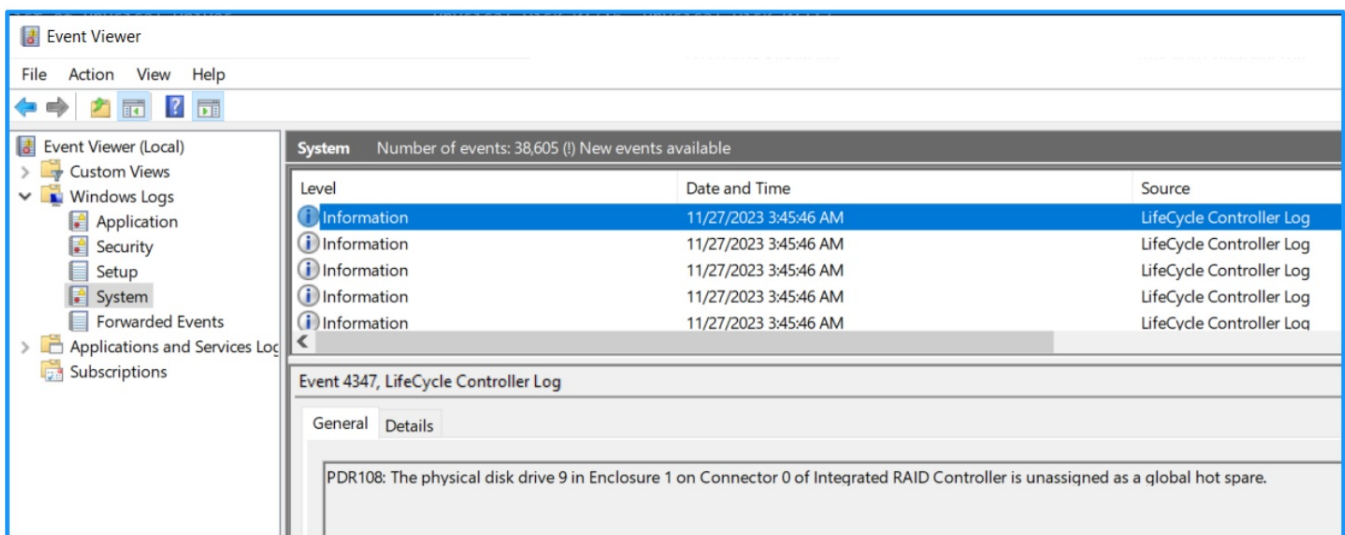


Figure 1 Access OS logs using Event Viewer

## Frequently Asked Questions (FAQ)


### Q: What is the purpose of the software RAID feature in iDRAC Service Module?

A: The software RAID feature facilitates enumeration, configuration, and monitoring of controllers, physical disks, and virtual disks attached to Dell PowerEdge servers.

**Q: How can I migrate from Dell OpenManage Server Administrator (OMSA) to iDRAC Service Module?**

**A:** Refer to the technical whitepaper provided to understand the steps for migrating from OMSA to iSM before OMSA's End Of Life (EOL).

**Documents / Resources**

	<p><b><a href="#">DELL iSM Software Raid Features in Idrac Service Module</a></b> [pdf] User Guide iSM Software Raid Features in Idrac Service Module, Features in Idrac Service Module, Idrac Service Module, Service Module</p>
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**References**

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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