



# Using HighPoint NVMe RAID AICs with the Dell PowerEdge R730 Server

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## 1. Dell PowerEdge R730 Server introduction

This document provides guidelines and procedures for installing HighPoint NVMe AICs into the Dell PowerEdge R730 Server. The guide examines the performance capabilities of each PCIe slot, and provides recommended hardware configurations that can be used to optimize NVMe storage configurations for maximum throughput and capacity.

### 1.1 Chassis

Dell PowerEdge R730 Server Chassis: 2U Rack Server

### 1.2 Chipset

Dell PowerEdge R730 Server Chipset: Intel C610

### 1.3 Processor Types

Dell PowerEdge R730 Server processor types:

- Intel Xeon E5-2600 v3 processors
- Intel Xeon E5-2600 v4 processors

### 1.4 Memory

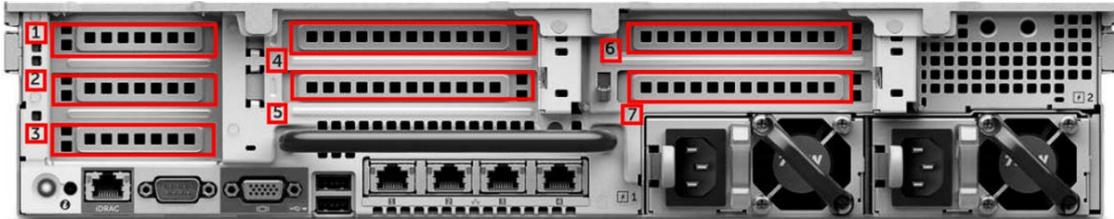
Memory type: DDR4 LRDIMM / RDIMM

Memory size per slot: 4GB/8GB/16GB/32GB

Memory speed: 1333 MT/s, 1600 MT/s, 1866 MT/s, 2133 MT/s, 2400 MT/s

Memory slot: 24 DIMM slots (2 DIMMs per channel)

## 1.5 Riser slots



This picture is from the R730 back panel, the numbers on the picture represent the slot locations.

Dell PowerEdge R730 Server Riser slots list:

Slot	Riser	Processor connection	Height	Length	Width	Link width	Slot width
1	Riser 1	Processor 2	Half Height	Low Profile	Single Width	x8	x16
2	Riser 1	Processor 2	Half Height	Low Profile	Single Width	x8	x16
3	Riser 1	Processor 2	Half Height	Low Profile	Single Width	x8	x16
4	Riser 2	Processor 2	Full Height	Full Length	Single Width	x16	x16
5	Riser 2	Processor 1	Full Height	Full Length	Single Width	x8	x16
6	Riser 3 (default)	Processor 1	Full Height	Full Length	Single Width	x8	x16
6	Riser 3 (alternate)	Processor 1	Full Height	Full Length	Single Width	x16	x16
7	Riser 3 (default)	Processor 1	Full Height	Full Length	Single Width	X8	x16

**Note:** PCIe slot 1 through 4 (Riser 1 and Riser 2) require a that the system is equipped with a second processor.

## 1.6 GPU

Dell PowerEdge R730 Server support GPU list:

GPU Type	Slot priority
GPU (double width)	6, 4
GPU (single width)	6, 4, 7, 5

**Note:** Depending on the type of GPU installed into the Dell R370 platform, one or more PCIe slots may be unavailable for use with HighPoint NVMe AICs.

## 1.7 Other PCIe devices

The Dell PowerEdge R730 Server is available with optional PCIe devices. The following table provides a list of PCIe device accessories available for the PowerEdge R730 platform and which expansion slot (or slots) they are typically associated with.

PCIe devices type	Slot priority
RAID H830	7, 6, 4, 5
RAID H830 (low profile)	3, 2
100G Intel Omni-Path Architecture Host (OPA) Channel Adapters (HCA)	4, 6
14 Gb InfiniBand, Fourteen Data Rate (FDR)HCA	3, 2, 1
40 Gb NICs (full height)	5, 7, 4, 6
40 Gb NICs (low profile)	3, 2, 1
25 Gb NICs (full height)	4, 6, 5
25 Gb NICs (low profile)	3, 2, 1
FC16 HBA (full height)	5, 7, 4, 6
FC16 HBA (low profile)	2, 3, 1
10 Gb NICs (full height)	5, 7, 4, 6
10 Gb NICs (low profile)	2, 3, 1
FC8 HBA (full height)	5, 7, 4, 6
FC8 HBA (low profile)	2, 3, 1
1 Gb NICs (full height)	5, 7, 4, 6
1 Gb NICs (low profile)	2, 3, 1
12 Gb SAS (low profile)	3, 2, 1
12 Gb SAS(full height)	6, 4, 5, 7
Integrated RAID	integrated slot
NDC	integrated slot

**Note:** Dell platforms are typically shipped with an array of pre-installed PCIe devices. Please note, one or more PCIe slots may be unavailable for use with HighPoint NVMe AICs.

## 2. HighPoint NVMe RAID AIC compatibility with Dell

### PowerEdge R730 Server

HighPoint NVMe RAID AICs	Slot1 PCIe 3.0 x8	Slot2 PCIe 3.0 x8	Slot3 PCIe 3.0 x8	Slot4 PCIe 3.0 x16	Slot5 PCIe 3.0 x8	Slot6 PCIe 3.0 x8	Slot6 PCIe 3.0 x16 (alternate)	Slot7 PCIe 3.0 x8
<b>Gen3 AICs</b>								
SSD6202	√ <sup>1, 4, 5</sup>	√ <sup>1, 4, 5</sup>	√ <sup>1, 4, 5</sup>	√ <sup>1, 3, 5</sup>	√ <sup>2</sup>	√ <sup>3</sup>	√ <sup>1, 3</sup>	√ <sup>2, 3</sup>
SSD6202A	√ <sup>1, 4, 5</sup>	√ <sup>1, 4, 5</sup>	√ <sup>1, 4, 5</sup>	√ <sup>1, 3, 5</sup>	√ <sup>2</sup>	√ <sup>3</sup>	√ <sup>1, 3</sup>	√ <sup>2, 3</sup>
SSD6204A	X	X	X	√ <sup>1, 5</sup>	√ <sup>2</sup>	√	√ <sup>1</sup>	√ <sup>2</sup>
SSD7101A-1	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
SSD7104	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
SSD7105	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
SSD7140A	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
SSD7202	√ <sup>1, 4, 5</sup>	√ <sup>1, 4, 5</sup>	√ <sup>1, 4</sup>	√ <sup>1, 3, 5</sup>	√ <sup>2</sup>	√ <sup>3</sup>	√ <sup>1, 3</sup>	√ <sup>2, 3</sup>
SSD7204	X	X	X	√ <sup>1, 5</sup>	√ <sup>2</sup>	√	√ <sup>1</sup>	√ <sup>2</sup>
RocketAIC 7105HW	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
RocketAIC 7140AW	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
<b>Gen4 AICs</b>								
SSD7502	N/A	N/A	N/A	√ <sup>1, 3, 5</sup>	N/A	N/A	√ <sup>1, 3, 6</sup>	N/A
SSD7505	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
SSD7540	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
RocketAIC 7502HW	N/A	N/A	N/A	√ <sup>1, 3, 5</sup>	N/A	N/A	√ <sup>1, 3, 6</sup>	N/A
RocketAIC 7505HW	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A
RocketAIC 7540HW	X	X	X	√ <sup>1, 5</sup>	N/A	N/A	√ <sup>1, 6</sup>	N/A

**Notes:**

- √ means that the HighPoint NVMe RAID AIC can be used normally in this slot.
- √<sup>1</sup> means that the HighPoint NVMe RAID AIC can be used normally in this slot if you do not have the GPU or other PCIe devices installed in this slot.
- √<sup>2</sup> means that the HighPoint NVMe RAID AIC can be used normally in this slot if you do not have the double-wide GPU installed in another slot on the riser card.
- √<sup>3</sup> means that the HighPoint NVMe RAID AIC can be used normally in this slot if you install a Full-Height bracket for the HighPoint NVMe RAID AIC.

**√<sup>4</sup>** means that the HighPoint NVMe RAID AIC can be used normally in this slot if you install a Low-Profile bracket for the HighPoint NVMe RAID AIC.

**√<sup>5</sup>** means that the HighPoint NVMe RAID AIC can be used normally in slots 1 through 4 on the risers 1 and 2, both the processors must be installed.

**√<sup>6</sup>** means that you need to purchase the alternate Riser3 to use the PCIe 3.0/ 4.0 x16 HighPoint NVMe RAID AIC in this slot.

**X** means that the HighPoint NVMe RAID AIC is not compatible with this slot.

**N/A** means that this slot is not recommended. This slot does not have enough electrical channels to work properly with the HighPoint NVMe RAID AIC.

## 3. Installing HighPoint NVMe RAID AIC into Dell PowerEdge R730 Server

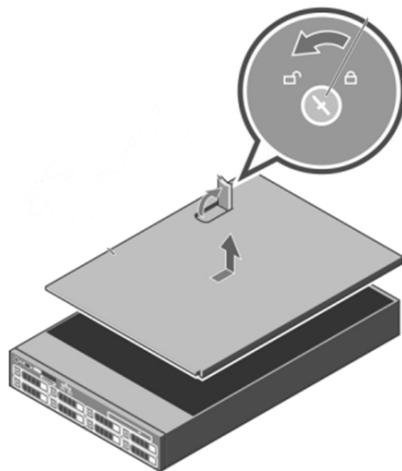
### 3.1 Install hardware

#### 3.1.1 Recommended tools

- a. Screwdriver (system cover require a screwdriver to open)
- b. Wired ESD wrist strap (to prevent electrostatic accidents)

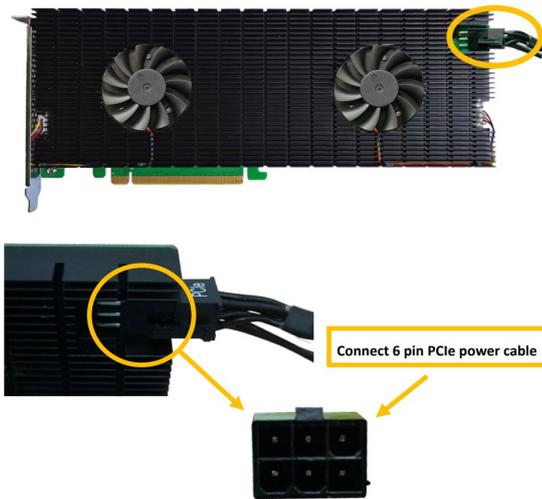
#### 3.1.2 Installing hardware

- a. Use a wired ESD wrist strap that is properly grounded.
- b. Shut down the system.
- c. Insert a screwdriver and turn counterclockwise to unlock the system cover latch.
- d. Lift the latch upward to remove the system cover.



- e. Lift the expansion card riser latch upward and remove the expansion card riser filler bracket.

- f. Remove the expansion card riser from the system.  
**Note:** Take the expansion card riser2 as an example, the expansion card riser1 and the expansion card riser 3 are the same step.
- g. Holding the edge of the HighPoint NVMe RAID AIC, align the HighPoint NVMe RAID AIC connector with the expansion card riser slot and insert it downward.
- h. If you are using the SSD7140A, SSD7540, RocketAIC 7140AW, or RocketAIC 7540HW, you will need to connect the power cable to the 8-pin power connector on the side of the expansion card riser and to the 6-pin power connector on the side of the HighPoint NVMe RAID AICs.



**Note1:** If you are not using SSD7140A, SSD7540, RocketAIC 7140AW, or RocketAIC 7540HW, you can safely move to the next step.

**Note2:** You may need to purchase additional power cables.

- i. Install the expansion card riser into the system connector.
- j. Press the expansion card riser latch to secure the HighPoint NVMe RAID AIC bracket.
- k. Align the system cover with the system board and then push down on the system cover latch.
- l. Insert a screwdriver and turn clockwise to lock the system cover latch.

## 3.2 System BIOS Setting

The following is a list of R730 system BIOS settings required for each NVMe RAID AIC. Please refer to the following sections for system BIOS settings setup procedures.

[3.2.1 Disable Secure boot](#)

[3.2.2 Boot mode to UEFI](#)

[3.2.3 Enable Slot Disablement](#)

[3.2.4 Disable Slot Bifurcation](#)

HighPoint NVMe RAID AICs	System BIOS setting (Boot RAID configurations)			
	Secure Boot	Boot mode	Slot Disablement	Slot Bifurcation
SSD6202	✓	✓	✓	✗
SSD6202A	✓	✓	✓	✗
SSD6204A	✓	✓	✓	✗
SSD7105	✓ <sup>1</sup>	✓	✓	✗
SSD7202	✓ <sup>1</sup>	✓	✓	✗
SSD7502	✓ <sup>1</sup>	✓	✓	✗
SSD7505	✓ <sup>1</sup>	✓	✓	✗
SSD7540	✓ <sup>1</sup>	✓	✓	✗
RocketAIC 7105HW	✓ <sup>1</sup>	✓	✓	✗
RocketAIC 7502HW	✓ <sup>1</sup>	✓	✓	✗
RocketAIC 7505HW	✓ <sup>1</sup>	✓	✓	✗
RocketAIC 7540HW	✓ <sup>1</sup>	✓	✓	✗

HighPoint NVMe RAID AICs	System BIOS Settings (Data RAID configurations)	
	Secure Boot	Slot Bifurcation
SSD6202	✓	✗
SSD6202A	✓	✗
SSD6204A	✓	✗
SSD7101A-1	✓ <sup>1</sup>	✗
SSD7104	✓ <sup>1</sup>	✗
SSD7105	✓ <sup>1</sup>	✗
SSD7140A	✓ <sup>1</sup>	✗
SSD7202	✓ <sup>1</sup>	✗
SSD7204	✓ <sup>1</sup>	✗
SSD7502	✓ <sup>1</sup>	✗
SSD7505	✓ <sup>1</sup>	✗

SSD7540	✓ <sup>1</sup>	✗
RocketAIC 7105HW	✓ <sup>1</sup>	✗
RocketAIC 7140AW	✓ <sup>1</sup>	✗
RocketAIC 7502HW	✓ <sup>1</sup>	✗
RocketAIC 7505HW	✓ <sup>1</sup>	✗
RocketAIC 7540HW	✓ <sup>1</sup>	✗

**Notes:**

✓ means that the HighPoint NVMe RAID AIC support this BIOS setting.

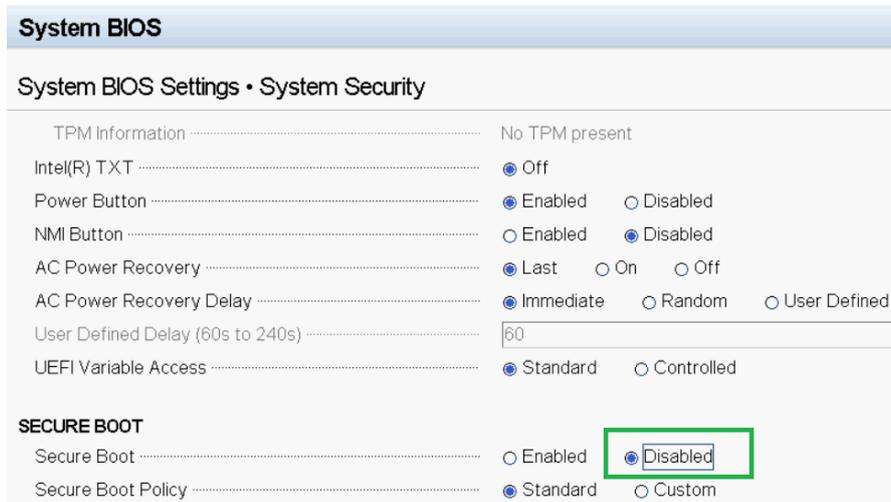
✓<sup>1</sup> means that the HighPoint NVMe RAID AIC support this BIOS setting if you are not using the Linux or the unsigned UEFI utility.

✗ means that the HighPoint NVMe RAID AIC do not support this BIOS setting.

### 3.2.1 Disable Secure boot

**Note:** If you are using the SSD7000/7500 series NVMe RAID AICs or RocketAICs in Linux or the unsigned UEFI utility, Secure Boot must be disabled. If you are using the SSD6200 series NVMe RAID AICs, Secure Boot can be enabled.

- a. Power up the system.
- b. Press **F2** to enter BIOS.
- c. Find **System BIOS Settings**→**System Security**→**Secure Boot**, select **Disabled**.



- d. Save configuration and restart system.

### 3.2.2 Boot mode to UEFI

- a. Power up the system.
- b. Press **F2** to enter BIOS.
- c. Find **System BIOS Settings**→**Boot Mode**, select **UEFI**.

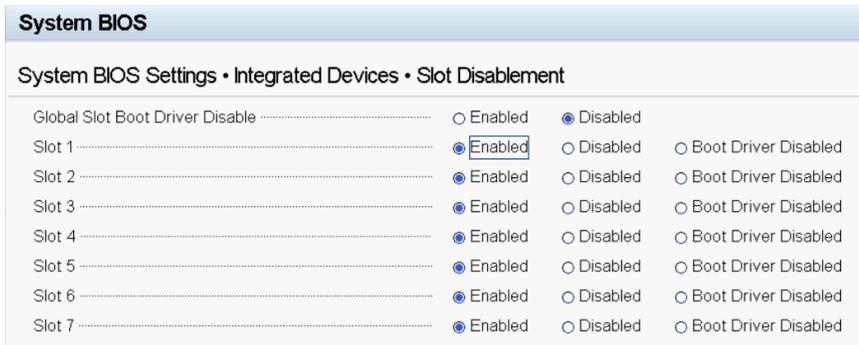


- d. Save configuration and restart system.

### 3.2.3 Enable Slot Disablement

**Note:** If you are using the SSD7000/7500 series NVMe RAID AICs or RocketAICs, Slot Disablement must be enabled. If this is not configured correctly, the system will fail to use these products.

- a. Power up the system.
- b. Press **F2** to enter BIOS.
- c. Find **System BIOS Settings**→**Integrated Devices**→**Slot Disablement**→**Slot**, select **Enabled**.



- d. Save configuration and restart system.

### 3.2.4 Disable Slot Bifurcation

**Note:** HighPoint NVMe RAID AICs do not support Slot Bifurcation. This setting must be disabled in order to use these products.

- a. Power up the system.
- b. Press **F2** to enter BIOS.
- c. Find **Integrated Devices**→**Slot Bifurcation**, select **Disabled**.
- d. Save configuration and restart system.

## **3.3 Install software**

### **3.3.1 Installing HighPoint NVMe RAID AICs into the Dell PowerEdge R730 Server (Data RAID configurations)**

The following section discusses HighPoint NVMe RAID AIC driver installation for a non-bootable NVMe configuration.

#### **3.3.1.1 Installing the Windows Driver & Management Software**

Please refer to the [Data RAID Installation Guide \(Windows\)](#) to install the Windows Device Driver and Management Software.

#### **3.3.1.2 Installing the Linux Driver & Management Software**

Please refer to the [Data RAID Installation Guide \(Linux\)](#) to install the Linux Device Driver and Management Software.

### **3.3.2 Installing HighPoint NVMe RAID AICs into the Dell PowerEdge R730 Server (Boot RAID configurations)**

The following section discusses HighPoint NVMe RAID AIC driver installation for a bootable NVMe configuration.

#### **3.3.2.1 Installing a Windows OS to a bootable RAID configuration**

Windows BootRAID:

Please refer to [HighPoint Windows Boot RAID Windows installation Guide](#).

#### **3.3.2.2 Installing Linux to a bootable RAID configuration**

Debian BootRAID:

Please refer to [Linux Debian On HighPoint NVMe RAID Controller Installation Guide](#).

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RHEL BootRAID:

Please refer to [Linux RHEL On HighPoint NVMe RAID Controller Installation Guide](#).

Ubuntu BootRAID:

Please refer to [Linux Ubuntu On HighPoint NVMe RAID Controller Installation Guide](#).

Rocky Linux BootRAID:

Please refer to [Linux Rocky Linux On HighPoint NVMe RAID Controller Installation Guide](#).

## 4. Benchmarking HighPoint NVMe RAID AICs

### 4.1 Performance Testing

#### 4.1.1 Recommended Hardware Configuration

- **Dell PowerEdge R730:**  
 CPU: Intel Xeon E5-2670 v3 Processor\*2  
 Memory: 32GB  
 PCIe Slot: Slot4/ Slot5

- **HighPoint NVMe RAID AICs:**

<b>Gen3 HighPoint NVMe RAID AICs</b>	SSD6202 SSD6202A SSD6204A SSD7101A-1 SSD7104 SSD7105 SSD7140A SSD7202 SSD7204
<b>Gen4 HighPoint NVMe RAID AICs</b>	SSD7502 SSD7505 SSD7540

- **Disk:**  
 Samsung 980 Pro 2TB  
**Note:** Samsung 980 Pro 2TB Disk spec.

Performance	Sequential Read	Sequential Write
	Up to 7,000 MB/s * Performance may vary based on system hardware & configuration	Up to 5,100 MB/s * Performance may vary based on system hardware & configuration
	<b>Random Read (4KB, QD32)</b> Up to 1,000,000 IOPS * Performance may vary based on system hardware & configuration	<b>Random Write (4KB, QD32)</b> Up to 1,000,000 IOPS * Performance may vary based on system hardware & configuration
	<b>Random Read (4KB, QD1)</b> Up to 22,000 IOPS * Performance may vary based on system hardware & configuration	<b>Random Write (4KB, QD1)</b> Up to 60,000 IOPS * Performance may vary based on system hardware & configuration

## 4.1.2 Test tool

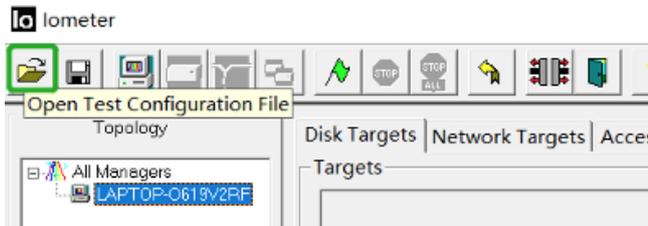
Benchmark Tool: Iometer

- **Iometer script setting:**

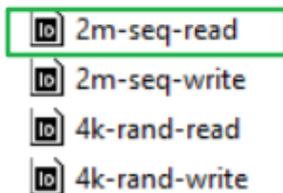
We will upload the [Iometer script](#) to a web page where you can download it.

**Note:** If you use the SSD6200 series NVMe RAID AICs, you will need to download another [Iometer script](#).

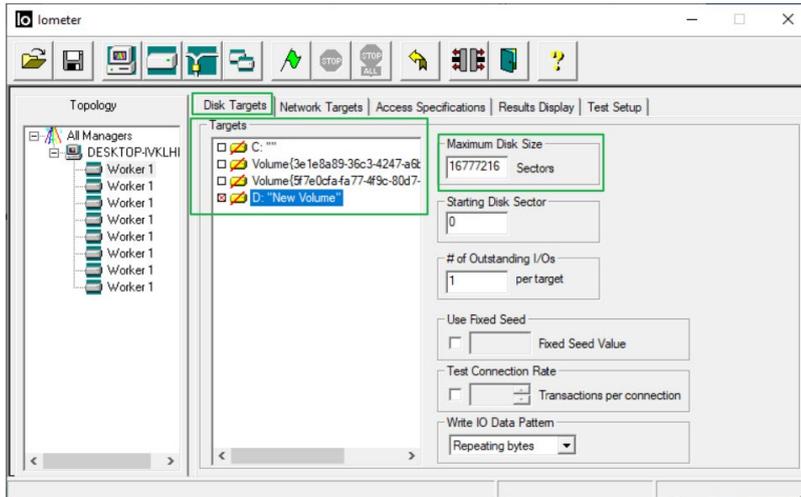
- The “**2m-seq-read.icf**” script tests the Sequential read performance of 2M large data blocks.
  - The “**2m-seq-write.icf**” script tests the Sequential write performance of 2M large data blocks.
  - The “**4k-rand-read.icf**” script tests the Random read performance of 4k small data blocks.
  - The “**4k-rand-write.icf**” script tests the Random write performance of 4k small data blocks.
- a. Open Iometer with administrator rights.
  - b. Click the folder icon to open the script, then select the script to be configured.



- c. Select **2M-seq-read**.



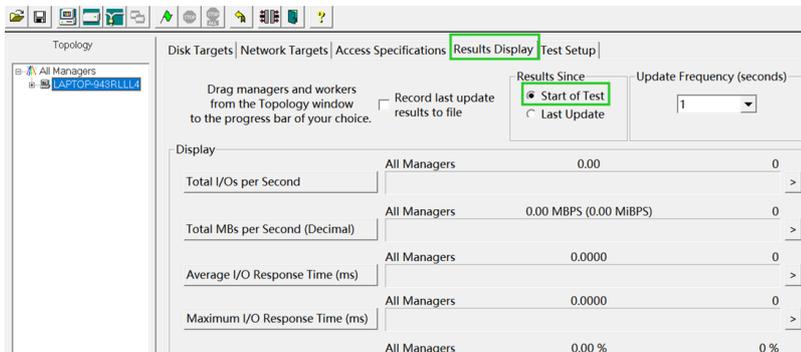
- d. The **Disk Targets** page will change, the **Target** should be the test disk (the RAID array). The **Maximum Disk Size** should be set to **16777216** Sectors.



- e. After confirming the settings, click the green mark to start the performance test.



- f. **Result Display** will be automatically configured as **Start of Test**.



### 4.1.3 Gen3 HighPoint NVMe RAID AIC test results

● **Iometer**

(script setting)	Gen3 RAID AIC	Legacy	RAID0	RAID1	RAID10
2m-Seq-Read (MiB/s)	SSD6202	3,458	6,950	6,907	/
	SSD6202A	3,500	6,928	6,938	/
	SSD6204A	1,785	7,035	3,512	/
	SSD7101A-1	3,528	10,375	6,923	10,475
	SSD7104	3,528	10,516	6,910	10,459
	SSD7105	3,528	10,515	6,937	10,519
	SSD7140A	3,527	10,203	6,765	10,388
	SSD7202	3,528	6,977	6,950	/
	SSD7204	3,529	7,052	6,929	7,055
2m-Seq-Write (MiB/s)	SSD6202	3,378	4,888	3,064	/
	SSD6202A	3,475	6,053	3,065	/
	SSD6204A	1,753	6,320	1,728	/
	SSD7101A-1	3,304	10,092	3,398	6,799
	SSD7104	3,314	13,199	3,405	6,548
	SSD7105	3,262	13,138	3,247	6,786
	SSD7140A	3,273	10,030	3,285	6,145
	SSD7202	3,317	6,790	3,401	/
	SSD7204	3,332	6,849	3,408	3,429
4k-Rand-Read (IOPS)	SSD6202	732,326	685,605	688,091	/
	SSD6202A	738,134	751,566	737,417	/
	SSD6204A	426,015	759,682	756,942	/
	SSD7101A-1	729,583	145,040	142,549	112,412
	SSD7104	758,275	157,142	142,229	148,825
	SSD7105	746,056	159,488	134,481	149,560
	SSD7140A	709,937	139,891	134,547	121,563
	SSD7202	743,205	157,649	145,180	/
	SSD7204	725,020	146,643	99,333	138,943
4k-Rand-Write (IOPS)	SSD6202	740,372	592,657	573,103	/
	SSD6202A	641,350	624,535	589,599	/
	SSD6204A	420,590	616,937	306,942	/
	SSD7101A-1	556,627	143,702	83,741	66,818
	SSD7104	600,147	157,077	90,236	88,855
	SSD7105	598,862	160,536	91,191	89,147
	SSD7140A	556,085	137,772	83,906	80,157
	SSD7202	585,907	156,391	92,821	/
	SSD7204	610,109	144,495	80,435	84,442

**Note:** / means that this AIC does not support the creation of RAID10.

### 4.1.4 Gen4 HighPoint NVMe RAID AIC test results

● **lometer**

(script setting)	Gen4 RAID AIC	Legacy	RAID0	RAID1	RAID10
2m-Seq-Read (MiB/s)	SSD7502	6,758	10,528	10,425	/
	SSD7505	6,784	10,496	10,425	10,501
	SSD7540	6,795	10,492	10,435	10,500
2m-Seq-Write (MiB/s)	SSD7502	5,010	9,933	5,058	/
	SSD7505	4,972	13,676	4,836	6,842
	SSD7540	4,915	13,506	5,038	6,860
4k-Rand-Read (IOPS)	SSD7502	528,465	692,672	685,824	/
	SSD7505	513,115	584,821	572,679	573,866
	SSD7540	527,081	570,797	559,006	538,289
4k-Rand-Write (IOPS)	SSD7502	501,073	604,550	445,746	/
	SSD7505	462,839	523,734	501,109	371,888
	SSD7540	494,559	511,870	357,845	368,985

**Note:** / means that this AIC does not support the creation of RAID10.

## 5. Uninstalling HighPoint NVMe RAID AICs from the Dell PowerEdge R730 Server

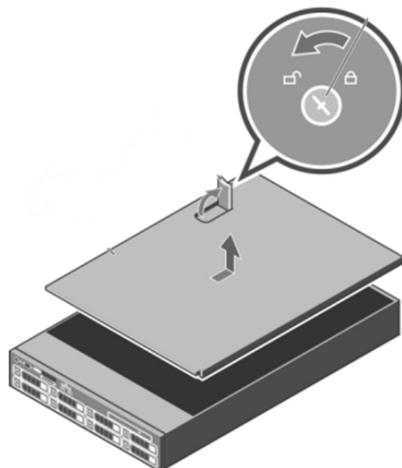
### 5.1 Uninstall hardware

#### 5.1.1 Recommended tools

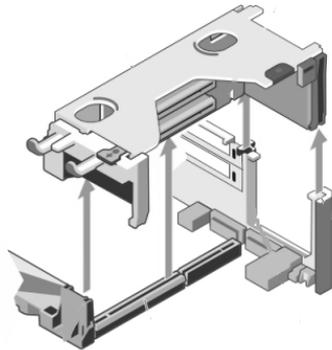
- a. Screwdriver (system cover require a screwdriver to open)
- b. Wired ESD wrist strap (to prevent electrostatic accidents)

#### 5.1.2 Uninstalling hardware

- a. Use a wired ESD wrist strap that is properly grounded.
- b. Shut down the system.
- c. Insert a screwdriver and turn counterclockwise to unlock the system cover latch.
- d. Lift the latch upward to remove the system cover.

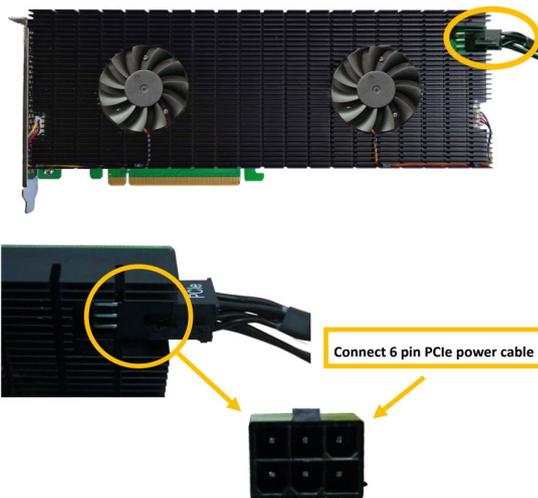


- e. Lift the expansion card riser latch upward.
- f. Remove the expansion card riser from the system.



**Note:** Take the expansion card riser2 as an example, the expansion card riser1 and the expansion card riser 3 are the same step.

- g. If you are using the SSD7140A, SSD7540, RocketAIC 7140AW, or RocketAIC 7540HW, you will need to disconnect the power cable to the 8-pin power connector on the expansion card riser and to the 6-pin power connector on the HighPoint NVMe RAID AICs.



**Note:** If you are not using SSD7140A, SSD7540, RocketAIC 7140AW, or RocketAIC 7540HW, you can safely move to the next step.

- h. Holding the edge of the HighPoint NVMe RAID AIC, lift up to remove the HighPoint NVMe RAID AIC connector from the expansion card riser slot.
- i. Install the expansion card riser filler bracket into the system.
- j. Install the expansion card riser into the system connector.
- k. Press the expansion card riser latch to secure the expansion card riser filler bracket.
- l. Align the system cover with the system board and then push down on the system cover latch.
- m. Insert a screwdriver and turn clockwise to lock the system cover latch.

## 5.2 Uninstalling the HighPoint Software

### 5.2.1 Uninstall the HighPoint NVMe RAID AIC for Windows

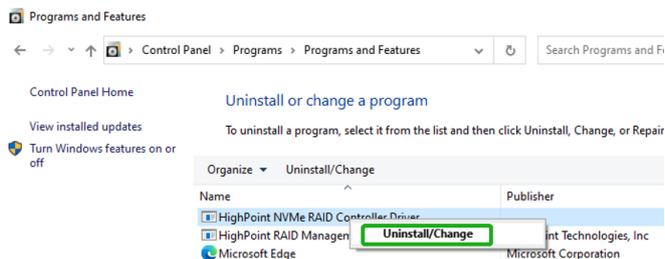
#### 5.2.1.1 Uninstall the driver

- a. Power down the system and remove the HighPoint NVMe RAID AIC from the system.

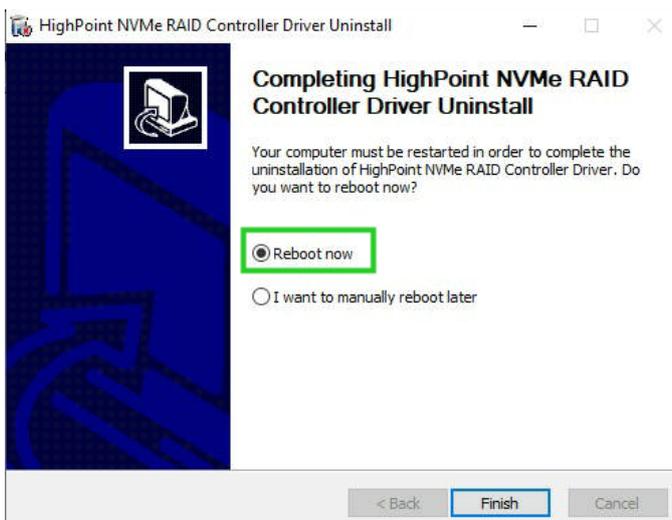
**Note1:** Failing to remove the HighPoint NVMe RAID AIC from the system during the uninstall process may result in data loss.

**Note2:** Whenever the driver is uninstalled, Windows will attempt to install the default NVMe support, which may corrupt the RAID configurations and any data stored on SSDs hosted by the HighPoint NVMe RAID AIC.

- b. Power on the system and boot Windows.
- c. Access **Control Panel** and select **Programs**→ **Programs and Features**, and click on the **HighPoint NVMe RAID Controller Driver** entry.
- d. Click **Uninstall/Change**.



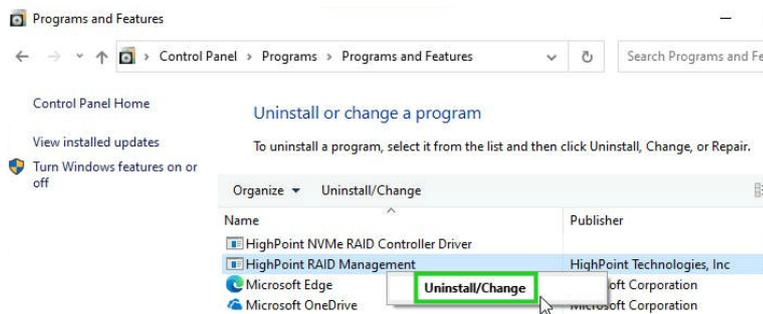
- e. After uninstalling the driver, click Finish.



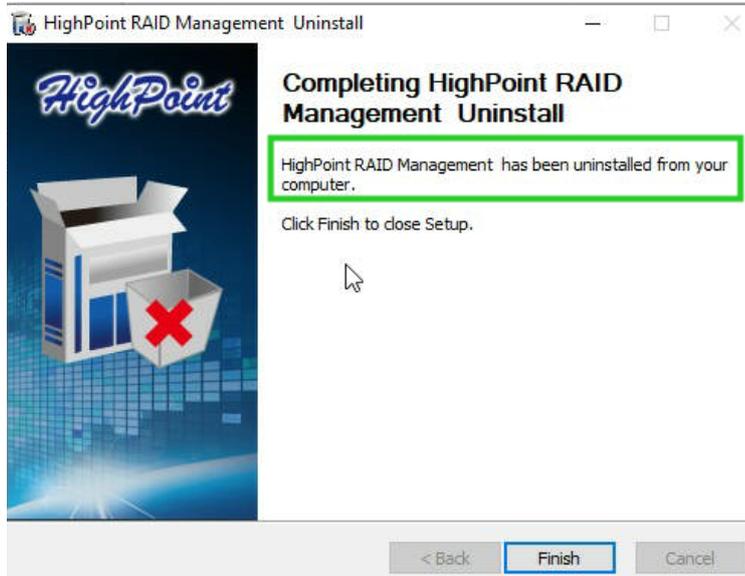
- f. Reboot Windows to complete the uninstall procedure.

### 5.2.1.2 Uninstall the RAID Management Software

- a. Access **Control Panel** and select **Programs**→ **Programs and Features**.
- b. Click on the **HighPoint RAID Management** entry.
- c. Click **Uninstall/Change**.



- d. After uninstalling the HighPoint RAID Management, click **Finish**.



## 5.2.2 Uninstall the HighPoint NVMe RAID AIC for Linux

### 5.2.2.1 Uninstall Driver

- Open the system terminal with root privileges.
- Enter the following commands to uninstall the driver: **hptuninhptnvme**.
- Press 'Y' to confirm.

```
[root@localhost Downloads]# hptuninhptnvme
Are you sure to uninstall the driver hptnvme from system? (Y/n): y
Removed symlink /etc/systemd/system/default.target.wants/hptdrv-monitor.service.
Removed symlink /etc/systemd/system/sysinit.target.wants/systemd-hptdrv.service.
All files installed have been deleted from the system.
[root@localhost Downloads]#
```

- After uninstalling the driver, manually reboot the system.
- After the system has rebooted, open the system terminal with root privileges. And enter the following command to check the driver status:  
**lsmod |grep hptnvme**

#### Before uninstalling:

```
[root@localhost test]# lsmod | grep hptnvme
hptnvme                235401  0
```

#### After uninstalling:

```
[root@localhost test]# lsmod | grep hptnvme
[root@localhost test]#
```

- If the system does not display information about “hptnvme”, the driver has been successfully uninstalled.

### 5.2.2.2 Uninstall the RAID Management Software

- Open the system terminal with root privileges.
- Enter the following commands to uninstall the RAID Management.  
**# dpkg -r hptsvr (or rpm -e hptsvr-https)**

```
root@testlu-Super-Server:/home/testlu/Desktop# dpkg -r hptsvr
(Reading database ... 183888 files and directories currently installed.)
Removing hptsvr (3.1.12) ...
```

- Enter the following command to check if the RAID Management has been removed successfully.

#### #hptraidconf

After uninstall:

```
root@testlu-Super-Server:/home/testlu/Desktop# hptraidconf
bash: /usr/bin/hptraidconf: No such file or directory
```