



# **FnL 7000 DC Series Monitor Guide**

Version 1.01

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## HighPoint FnL Monitor Software

### *Your Choice – Graphical or Text-only interfaces*

HighPoint understands that one size doesn't fit all - when it comes to maintaining critical storage configurations, each customer has specific needs and preferences. We have developed both graphical and text-based management interfaces for the Controllers:

SRD7204DC / 7104FDC / 7505DC

BRD7103DC / 7505DC

CRD7104FDC / 7505DC

To simplify installation and upgrade procedures both interfaces are packaged into a single download, and are available for each operating system platform.

Both management interfaces share universal layouts across all major operating systems, and can be administered locally or remotely via an internet connection. – if you are comfortable with the Windows release, you will have no problem managing NVMe AIC RAID Drive configurations installed for a Linux/Mac distribution.

The Web FnL Monitor Interface (**WebGUI**), is a simple, and intuitive web-based management tool available for Windows/ Linux/ Mac operating systems. It is an ideal interface for customers unfamiliar with RAID technology. The Wizard-like Quick Configuration menu allows even the most novice user to get everything up and running with a few simple clicks. Experienced users can fine tune configurations for specific applications using the Advanced Options menu.

The **CLI** (command line interface) is a powerful, text-only management interface designed for advanced users and professional administrators. The universal command lines work with any platform, and are shared across our entire product line. Comprehensive user guides are available for the CLI, and are included with the most recent product updates available from the SRD7204DC / SRD7104FDC / SRD7505DC / BRD7103DC / BRD7505DC / CRD7104FDC / CRD7505DC Software Updates webpage.

## Using the HighPoint FnL Monitor (WebGUI) Software

This guide provides an overview of the Web-FnL Monitor graphical user interface, also known as the WebGUI. The WebGUI is an intuitive, yet comprehensive management tool designed for users of any experience level.

### Starting the WebGUI

#### How to login WebGUI in Windows/Mac

Double click the Desktop ICON to start the software using the system's default web browser. It will automatically log-in to the WebGUI.



The password can be set after the first log-in. To change the password, select **Settings>Password Settings** from the menu bar (refer to: [Password Setting](#)).

| AIC RAID Drive                                                         | Device Info | Settings                                                                                             | Event Log | SHI | Help |
|------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------|-----------|-----|------|
| <b>Settings</b>                                                        |             |                                                                                                      |           |     |      |
| Restrict to localhost access.                                          |             | Enabled ▼                                                                                            |           |     |      |
| Set Fan Speed:                                                         |             | High ▼                                                                                               |           |     |      |
| Temperature Unit:                                                      |             | °F ▼                                                                                                 |           |     |      |
| <input type="button" value="Submit"/>                                  |             |                                                                                                      |           |     |      |
| <b>Password Settings</b>                                               |             |                                                                                                      |           |     |      |
| Password:                                                              |             | <input type="text"/>                                                                                 |           |     |      |
| Confirm:                                                               |             | <input type="text"/>                                                                                 |           |     |      |
| <input type="button" value="Submit"/>                                  |             |                                                                                                      |           |     |      |
| <b>Email Notification Settings</b>                                     |             |                                                                                                      |           |     |      |
| <b>SMTP Settings</b>                                                   |             |                                                                                                      |           |     |      |
| <input type="checkbox"/> Enable Event Notification                     |             |                                                                                                      |           |     |      |
| Server Address (name or IP):                                           |             | <input type="text"/>                                                                                 |           |     |      |
| Mail From (E-mail address):                                            |             | <input type="text"/>                                                                                 |           |     |      |
| Login Name:                                                            |             | <input type="text"/>                                                                                 |           |     |      |
| Password:                                                              |             | <input type="text"/>                                                                                 |           |     |      |
| SMTP Port:                                                             |             | 25                                                                                                   |           |     |      |
| Support SSL:                                                           |             | <input type="checkbox"/>                                                                             |           |     |      |
| <input type="button" value="Change Setting"/>                          |             |                                                                                                      |           |     |      |
| <b>Recipients</b>                                                      |             |                                                                                                      |           |     |      |
| <b>E-mail</b>                                                          | <b>Name</b> | <b>Event Level</b>                                                                                   |           |     |      |
| <b>Add Recipient</b>                                                   |             |                                                                                                      |           |     |      |
| E-mail:                                                                |             | <input type="text"/>                                                                                 |           |     |      |
| Name:                                                                  |             | <input type="text"/>                                                                                 |           |     |      |
| Event Level:                                                           |             | <input type="checkbox"/> Information <input type="checkbox"/> Warning <input type="checkbox"/> Error |           |     |      |
| <input type="button" value="Add"/> <input type="button" value="Test"/> |             |                                                                                                      |           |     |      |

## How to login WebGUI in Linux

Enter <http://127.0.0.1:7406> into the **browser** to log into the **WebGUI**, 7406 is the WebGUI's Port Number, which can be modified.

## Verify the Controller Status

The **AIC RAID Drive** Tab will display the overall status of the controller. RAID array and NVMe SSDs are listed under **Device Info**.

For Example: FnL SRD7505DC

The screenshot displays the 'FnL AIC RAID Drive' WebGUI interface. At the top, there is a navigation bar with tabs: 'AIC RAID Drive' (selected), 'Device Info', 'Settings', 'Event Log', 'SHI', and 'Help'. Below the navigation bar, the main content area is titled 'FnL AIC RAID Drive'. On the left, a box contains the following device information:

- Model:** FnL SRD7505 DC
- Serial Number:** 5432139123456
- Location:** 1:0.0
- Current Link Width:** x16
- Current Link Speed:** 16.0 GT/s

On the right, there are images of the hardware components: a PCIe RAID controller card, a 2.5-inch SATA drive, and a 3.5-inch SATA drive. Below the images, the status is shown as:

- RAID Level:** 1/0
- Temperature Status:** (indicated by a green circle)
- 3000 GB Used** (displayed in an orange box)

## Obtaining Device Information

The Device Info tab is the default page after clicking the tab of the AIC RAID Drive. This page contains information about your RAID arrays and NVMe SSDs.

### RAID Array

Once an array has been created, the RAID content contained in the board is provided here, such as Name, Type, Capacity, OS Name Status, Status.



| AIC RAID Drive                                                                             | Device Info | Settings | Event Log    | SHI    | Help |
|--------------------------------------------------------------------------------------------|-------------|----------|--------------|--------|------|
| RAID Array Information                                                                     |             |          |              |        |      |
| RAID Array                                                                                 |             |          |              |        |      |
| Name                                                                                       | Type        | Capacity | OS Name      | Status |      |
|  RAID_0_0 | RAID 0      | 4.00 TB  | HPT DISK 0_0 | Normal |      |

### NVMe SSDs

According to the RAID above, here are the NVMe SSD members that make up the RAID. It includes NVMe SSDs' model and capacity.

| NVMe SSDs                                                                                                    |       |  |          |         |  |
|--------------------------------------------------------------------------------------------------------------|-------|--|----------|---------|--|
|  <a href="#">Device 1</a> | Model |  | Capacity | 1.00 TB |  |
|  <a href="#">Device 2</a> | Model |  | Capacity | 1.00 TB |  |
|  <a href="#">Device 3</a> | Model |  | Capacity | 1.00 TB |  |
|  <a href="#">Device 4</a> | Model |  | Capacity | 1.00 TB |  |

Click [Device 1](#), it shows the NVMe SSD's details.

| NVMe SSDs                                                                           |                          |            |                 |            |         |
|-------------------------------------------------------------------------------------|--------------------------|------------|-----------------|------------|---------|
|  | <a href="#">Device 1</a> | Model      |                 | Capacity   | 1.00 TB |
|                                                                                     |                          | Revision   | 3B2QGXA7        | PCIe Width | x4      |
|                                                                                     |                          | Location   | 1               | PCIe Speed | Gen 4   |
|                                                                                     |                          | Max Free   | 0.00 GB         |            |         |
|                                                                                     |                          | Status     | Normal          |            |         |
|                                                                                     |                          | Serial Num | S5GXNG0N905363B |            |         |

**Model** — model number of the drive connected

**Revision** — revised version of drive

**Location** — which controller and port the drive is in

**Max Free** — total capacity that is not configured

**Status** — Current state of drive

**Serial Num** — Serial number of the drive

**Capacity** — total capacity of the drive

**PCIe Width** — PCIe width occupied by the drive

**PCIe Speed** — Rate of current bandwidth

## Array Information: Normal Status

RAID status – the RAID array’s status may change depending on the status of the disks.

### RAID Array

| Name                                                                                              | Type          | Capacity       | OS Name             | Status        |
|---------------------------------------------------------------------------------------------------|---------------|----------------|---------------------|---------------|
|  <b>RAID_0_0</b> | <b>RAID 0</b> | <b>4.00 TB</b> | <b>HPT DISK 0_0</b> | <b>Normal</b> |

Arrays and NVMe SSDs with the **Normal** status are healthy and functioning properly

## Array Information: Critical Status

Arrays in the **Critical** status can be accessed and utilized, but are no longer fault tolerant.

### RAID Array

| Name                                                                                                              | Type            | Capacity       | OS Name             | Status          |
|-------------------------------------------------------------------------------------------------------------------|-----------------|----------------|---------------------|-----------------|
|  <b>RAID10_0</b>                 | <b>RAID 1/0</b> | <b>2.00 TB</b> | <b>HPT DISK 0_0</b> | <b>Critical</b> |
|  <b>Member 1 of "RAID10_0"</b>  | <b>RAID 1</b>   | <b>1.00 TB</b> |                     | <b>Critical</b> |
|  <b>Member 2 of "RAID10_0"</b> | <b>RAID 1</b>   | <b>1.00 TB</b> |                     | <b>Normal</b>   |

### NVMe SSDs

|                                                                                                     |              |                                                                                     |                 |                |
|-----------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------|-----------------|----------------|
|  <b>Device_2</b> | <b>Model</b> |  | <b>Capacity</b> | <b>1.00 TB</b> |
|  <b>Device_3</b> | <b>Model</b> |  | <b>Capacity</b> | <b>1.00 TB</b> |
|  <b>Device_4</b> | <b>Model</b> |  | <b>Capacity</b> | <b>1.00 TB</b> |

## Array Information: Disabled Status

Disk Status – if any disks were added or removed, or if a disk is no longer responding, the status will change.

**RAID Array**

| Name                                                                                       | Type   | Capacity | OS Name | Status   |
|--------------------------------------------------------------------------------------------|--------|----------|---------|----------|
|  RAID_0_0 | RAID 0 | 4.00 TB  |         | Disabled |

**NVMe SSDs**

|                                                                                            |       |  |          |         |
|--------------------------------------------------------------------------------------------|-------|--|----------|---------|
|  Device_2 | Model |  | Capacity | 1.00 TB |
|  Device_3 | Model |  | Capacity | 1.00 TB |
|  Device_4 | Model |  | Capacity | 1.00 TB |

An array with the **Disabled** status means that the RAID level does not have enough disks to function.

- Your data will be inaccessible
- Rebuilding will not trigger, since the RAID array does not have enough parity data to rebuild.

**Settings**

| AIC RAID Drive                                                         | Device Info | Settings                                                                                             | Event Log | SHI | Help |
|------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------|-----------|-----|------|
| <b>Settings</b>                                                        |             |                                                                                                      |           |     |      |
| Restrict to localhost access.                                          |             | Enabled ▾                                                                                            |           |     |      |
| Set Fan Speed:                                                         |             | High ▾                                                                                               |           |     |      |
| Temperature Unit:                                                      |             | °F ▾                                                                                                 |           |     |      |
| <input type="button" value="Submit"/>                                  |             |                                                                                                      |           |     |      |
| <b>Password Settings</b>                                               |             |                                                                                                      |           |     |      |
| Password:                                                              |             | <input type="text"/>                                                                                 |           |     |      |
| Confirm:                                                               |             | <input type="text"/>                                                                                 |           |     |      |
| <input type="button" value="Submit"/>                                  |             |                                                                                                      |           |     |      |
| <b>Email Notification Settings</b>                                     |             |                                                                                                      |           |     |      |
| <b>SMTP Settings</b>                                                   |             |                                                                                                      |           |     |      |
| <input type="checkbox"/> Enable Event Notification                     |             |                                                                                                      |           |     |      |
| Server Address (name or IP):                                           |             | <input type="text"/>                                                                                 |           |     |      |
| Mail From (E-mail address):                                            |             | <input type="text"/>                                                                                 |           |     |      |
| Login Name:                                                            |             | <input type="text"/>                                                                                 |           |     |      |
| Password:                                                              |             | <input type="text"/>                                                                                 |           |     |      |
| SMTP Port:                                                             |             | 25                                                                                                   |           |     |      |
| Support SSL:                                                           |             | <input type="checkbox"/>                                                                             |           |     |      |
| <input type="button" value="Change Setting"/>                          |             |                                                                                                      |           |     |      |
| <b>Recipients</b>                                                      |             |                                                                                                      |           |     |      |
| <b>E-mail</b>                                                          | <b>Name</b> | <b>Event Level</b>                                                                                   |           |     |      |
| <b>Add Recipient</b>                                                   |             |                                                                                                      |           |     |      |
| E-mail:                                                                |             | <input type="text"/>                                                                                 |           |     |      |
| Name:                                                                  |             | <input type="text"/>                                                                                 |           |     |      |
| Event Level:                                                           |             | <input type="checkbox"/> Information <input type="checkbox"/> Warning <input type="checkbox"/> Error |           |     |      |
| <input type="button" value="Add"/> <input type="button" value="Test"/> |             |                                                                                                      |           |     |      |

Using this tab, you can change the following:

- Settings
- Password Settings
- Email Notification Settings

## Settings

- Restrict to localhost access
- Set Fan Speed
- Temperature Unit

**Note:** *Fan speed function support products: SRD7505DC / BRD7103DC / BRD7505DC / CRD7104FDC / CRD7505DC, This function is only supported by Windows and mac, not Linux*

### Restrict to localhost access (default: Enabled)

Remote access to the controller will be restricted when enabled; other users in your network will be unable to remotely log in to the HRM.

### Set Fan Speed (default: High)

The default fan speed is High, you can adjust the speed of the fan, There are 5 levels [Auto, Off, Low, Medium and High]

### Temperature Unit (default: °F)

The default temperature unit is Fahrenheit, you can change it to Celsius.

## Password Settings

### Setting your HRM password

Under Password Setting, type your new password, confirm it, then click **Submit**.

### Recovering your HRM password

If you forget your password, you can delete the file hptuser.dat. Then, restart the computer and open the WEBGUI to set a new password.

For **Windows** Users:

01. Open **File Explorer**
02. Navigate to **C:/Windows/**
03. Delete **hptuser.dat**
04. Reboot

## Email Notification Settings

- SMTP Settings
- Adding Recipients

You can instruct the controller to send an email out to the recipients of your choosing when certain events trigger (for more information, see Event Log Tab).

### SMTP settings

#### SMTP Settings

|                                                               |                                                  |
|---------------------------------------------------------------|--------------------------------------------------|
| <input checked="" type="checkbox"/> Enable Event Notification |                                                  |
| Server Address (name or IP):                                  | <input type="text" value="smtp.mail.yahoo.com"/> |
| Mail From (E-mail address):                                   | <input type="text" value="hptu@yahoo.com"/>      |
| Login Name:                                                   | <input type="text" value="hptu@yahoo.com"/>      |
| Password:                                                     | <input type="password" value="*****"/>           |
| SMTP Port:                                                    | <input type="text" value="465"/>                 |
| Support SSL:                                                  | <input checked="" type="checkbox"/>              |
| <input type="button" value="Change Setting"/>                 |                                                  |

### To set up email alerts:

Using a **Yahoo Mail** account as an example:

01. Check the **Enable Event Notification** box.
02. Enter the ISP server address name or SMTP name  
For example: **smtp.mail.yahoo.com**
03. Type in the email address of the **sender** (email account that is going to **send** the alert)  
For example: **hptu@yahoo.com**
04. Type in the account name and password of the sender
05. Type in the SMTP port (default: 25)
06. Check the **support SSL** box if SSL is supported by your ISP (note the port value will change to **465**).

## Email Precautions

If you want to receive notification mail using a Webmail account, you may need to modify the mailbox's permissions. The following example is for a Yahoo webmail account.

### Yahoo Setting:

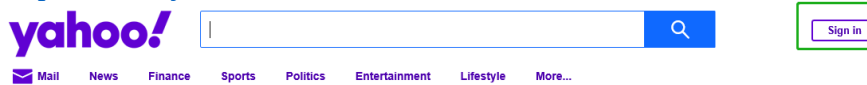
To change permission settings, please refer to the following link:

<https://help.yahoo.com/kb/account/SLN27791.html?impressions=true>

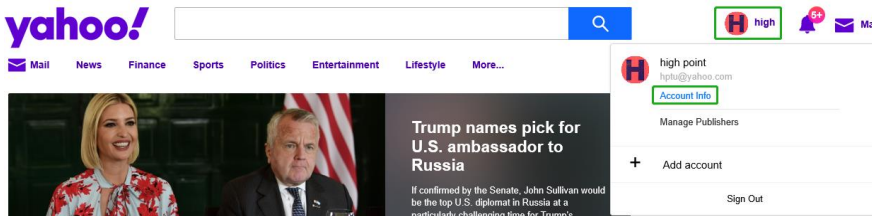
## Procedure:

01. Log in to yahoo email; click "**Sign in**" to log in:

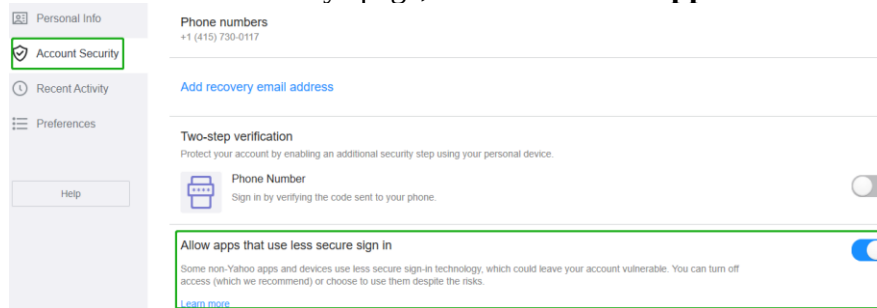
<https://www.yahoo.com>



02. After a successful login, click "**Account Info**" under the user name:



03. Go to the "**Account Info**" page, click "**Account Security**".  
On the "Account Security" page, click the "**Allow apps that use less secure sign in**" button:

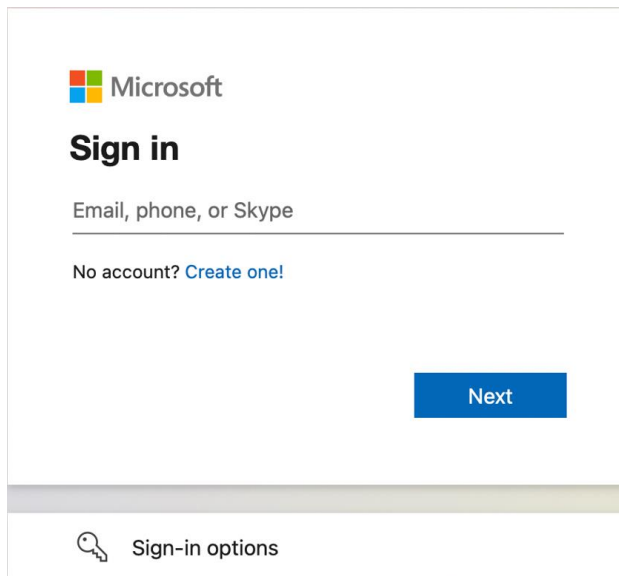


**Note:** If you are having trouble configuring notification for your Email account, please contact our [Technical Support Department](#).

## Outlook Setting:

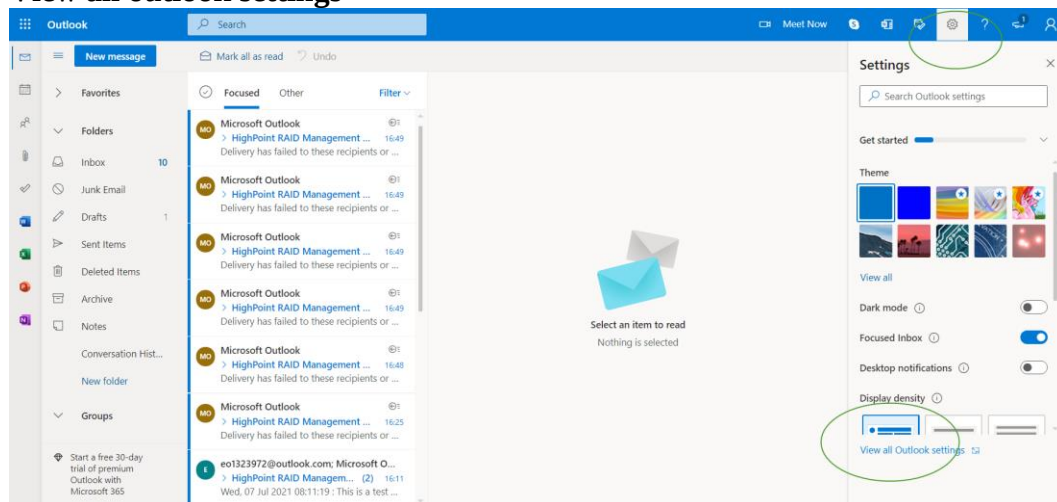
01. Sign in to mail and set it up, Login email address link:

<https://outlook.live.com/mail/inbox>

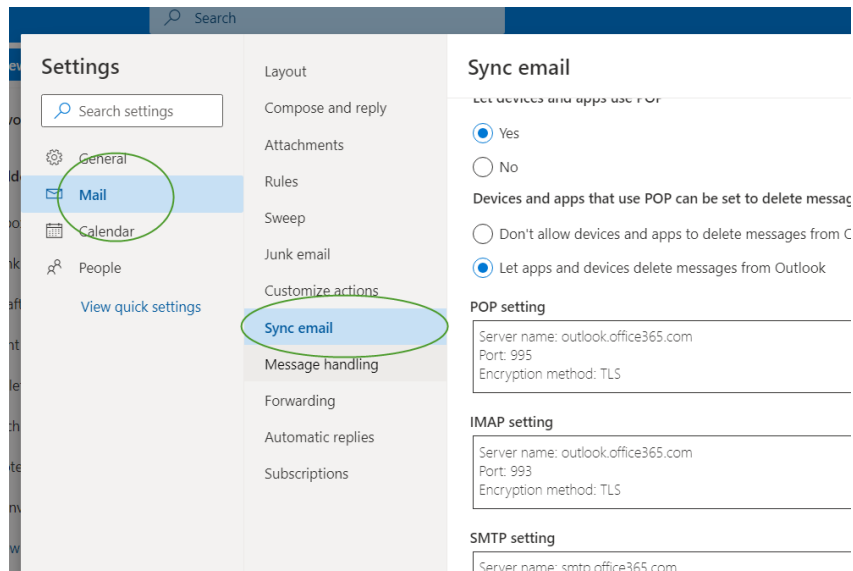


02. Click Settings in the upper right corner, select the lower left corner:

### View all outlook settings



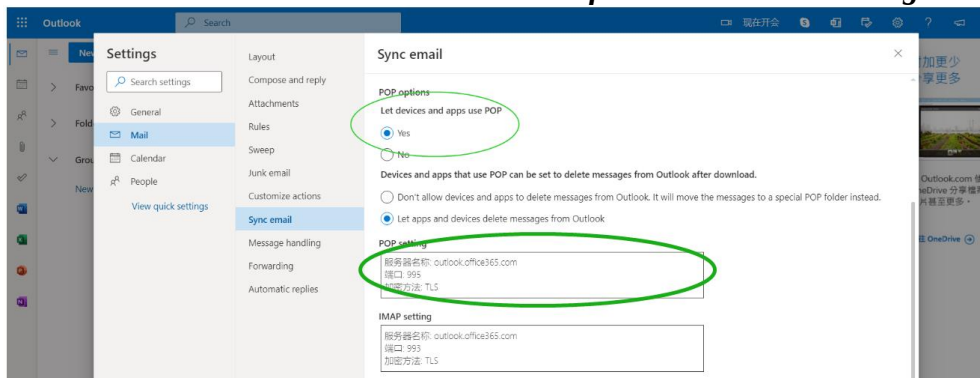
03. Enter the redirect page, select **mail**, then click **Sync email**



04. Let devices and apps use pop select 'yes'

05. choose 'Let app and devices delete messages from Outlook'

**Note:** The screenshot below can be used as a reference. The **POP** setting is the mailbox server.



**Note:** If you are having trouble configuring notification for your Email account, please contact our [Technical Support Department](#)

## How to Add Recipients

You can add multiple email addresses as receivers of a notice.

01. Type the email of the recipient in the **E-mail** text box

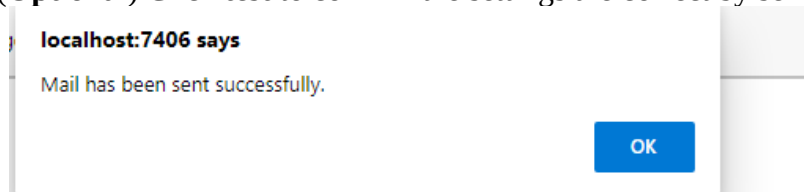
02. Type the name of the recipient in the **Name** text box

03. Set which type(s) of events will trigger an email using the respective **Event Level** check boxes.

**Add Recipient**

|                                                                        |                                                                                                      |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| E-mail:                                                                | <input type="text"/>                                                                                 |
| Name:                                                                  | <input type="text"/>                                                                                 |
| Event Level:                                                           | <input type="checkbox"/> Information <input type="checkbox"/> Warning <input type="checkbox"/> Error |
| <input type="button" value="Add"/> <input type="button" value="Test"/> |                                                                                                      |

04. (Optional) Click **test** to confirm the settings are correct by sending out a test email.



05. Click **add** to add the recipient to 'recipient list'

06. The added recipient will display in under **Recipients**

| <b>Recipients</b>                       |      |                             |
|-----------------------------------------|------|-----------------------------|
| E-mail                                  | Name | Event Level                 |
| <input type="checkbox"/> hptu@yahoo.com | hpt  | Information, Warning, Error |
| <input type="button" value="Delete"/>   |      |                             |

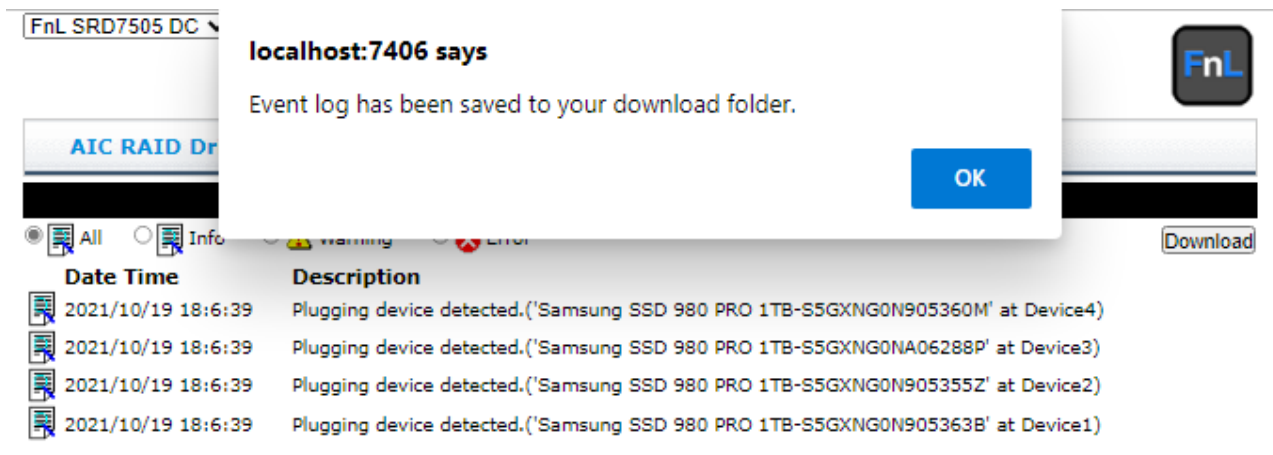
The email will include the output recorded in the event log.

## Event Log

In the Event Log tab, you can see log entries associated with the HighPoint device. The event log provides useful information when troubleshooting your set up.

In the event tab, there are four options available:

- Prev – View previous log page
- Next – View next log page
- Type of events – All, Info, Warning, Error
- Download – Save the log file on your computer
- The following image shows a downloaded page reminder.



## SHI (Storage Health Inspector)

SHI outputs information collected using SMART (Self-Monitoring Analysis and Reporting Technology) Hard Drive Technology. The data provided on this tab helps you to anticipate any disk failures based on a variety of monitored hard disk properties.

In the event tab, there are two options available:

- S.M.A.R.T Details
- Schedule a task (Task list and Health Inspector Scheduler)

## How to Enable SMART Monitoring

To access the SMART attributes of an individual disk:

01. Log in to the WebGUI
02. Select the proper controller using the drop-down menu on the top left
03. Click the **SHI** tab
04. Click **Detail** on the desired disk:

| AIC RAID Drive    Device Info    Settings    Event Log <b>SHI</b> Help                                                 |                      |                |             |                     |                        |
|------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|-------------|---------------------|------------------------|
| <a href="#">Schedule</a>                                                                                               |                      |                |             |                     |                        |
| Storage Health Inspector(SHI)                                                                                          |                      |                |             |                     |                        |
| Location#                                                                                                              | Device Serial Number | RAID           | °F          | Total Bytes Written | S.M.A.R.T              |
| 1                                                                                                                      | S5GXNG0N905363B      | RAID0_000041A7 | 118         | 108.68 TB           | <a href="#">Detail</a> |
| 2                                                                                                                      | S5GXNG0N905355Z      | RAID0_000041A7 | 123         | 148.35 TB           | <a href="#">Detail</a> |
| 3                                                                                                                      | S5GXNG0NA06288P      | RAID0_000041A7 | 123         | 81.24 TB            | <a href="#">Detail</a> |
| 4                                                                                                                      | S5GXNG0N905360M      | RAID0_000041A7 | 120         | 136.66 TB           | <a href="#">Detail</a> |
| <b>Device Name</b> Device_1                                                                                            |                      |                |             |                     |                        |
| <b>Model Number</b> <span style="background-color: #cccccc; display: inline-block; width: 150px; height: 1em;"></span> |                      |                |             |                     |                        |
| <b>Temperature</b> 118°F                                                                                               |                      |                |             |                     |                        |
| <b>Warning Composite Temperature Threshold</b> 179°F                                                                   |                      |                |             |                     |                        |
| <b>Critical Composite Temperature Threshold</b> 185°F                                                                  |                      |                |             |                     |                        |
| NVME S.M.A.R.T Attributes                                                                                              |                      |                |             |                     |                        |
| Name                                                                                                                   |                      |                | Value       |                     |                        |
| Critical Warning                                                                                                       |                      |                | 0x0         |                     |                        |
| Composite Temperature (C)                                                                                              |                      |                | 48          |                     |                        |
| Available Spare                                                                                                        |                      |                | 100%        |                     |                        |
| Available Spare Threshold                                                                                              |                      |                | 10%         |                     |                        |
| Percentage Used                                                                                                        |                      |                | 9%          |                     |                        |
| Data Units Read                                                                                                        |                      |                | 0xd447f19f  |                     |                        |
| Data Units Written                                                                                                     |                      |                | 0xde91de1   |                     |                        |
| Host Read Commands                                                                                                     |                      |                | 0x95c732949 |                     |                        |
| Host Write Commands                                                                                                    |                      |                | 0xbdce315d  |                     |                        |
| Controller Busy Time                                                                                                   |                      |                | 0x2317      |                     |                        |
| Power Cycles                                                                                                           |                      |                | 0x879       |                     |                        |
| Power On Hours                                                                                                         |                      |                | 0xb15       |                     |                        |
| Unsafe Shutdowns                                                                                                       |                      |                | 0x6a2       |                     |                        |
| Media and Data Integrity Errors                                                                                        |                      |                | 0x0         |                     |                        |
| Number of Error Information Log Entries                                                                                |                      |                | 0x0         |                     |                        |
| Warning Temperature Time                                                                                               |                      |                | 0x1         |                     |                        |
| Critical Composite Temperature Time                                                                                    |                      |                | 0x0         |                     |                        |
| Temperature Sensor 1 (C)                                                                                               |                      |                | 48          |                     |                        |
| Temperature Sensor 2 (C)                                                                                               |                      |                | 61          |                     |                        |
| Temperature Sensor 3 (C)                                                                                               |                      |                | 0           |                     |                        |
| Temperature Sensor 4 (C)                                                                                               |                      |                | 0           |                     |                        |
| Temperature Sensor 5 (C)                                                                                               |                      |                | 0           |                     |                        |
| Temperature Sensor 6 (C)                                                                                               |                      |                | 0           |                     |                        |
| Temperature Sensor 7 (C)                                                                                               |                      |                | 0           |                     |                        |
| Temperature Sensor 8 (C)                                                                                               |                      |                | 0           |                     |                        |

The **TBW** (Total Bytes Written) information can be used to monitor the lifespan of the NVMe drives.

| <a href="#">Schedule</a>      |                      |                |     |                     |                        |
|-------------------------------|----------------------|----------------|-----|---------------------|------------------------|
| Storage Health Inspector(SHI) |                      |                |     |                     |                        |
| Location#                     | Device Serial Number | RAID           | °F  | Total Bytes Written | S.M.A.R.T              |
| 1                             | S5GXNG0N905363B      | RAID0_000041A7 | 116 | 108.68 TB           | <a href="#">Detail</a> |
| 2                             | S5GXNG0N905355Z      | RAID0_000041A7 | 123 | 148.35 TB           | <a href="#">Detail</a> |
| 3                             | S5GXNG0NA06288P      | RAID0_000041A7 | 123 | 81.24 TB            | <a href="#">Detail</a> |
| 4                             | S5GXNG0N905360M      | RAID0_000041A7 | 120 | 136.66 TB           | <a href="#">Detail</a> |

## How to Use the Health Inspector Scheduler

The **Health Inspector Scheduler (HIS)** enables you to schedule disk/array checkups to ensure disks/array are functioning optimally.

If you want to check the disk status on a daily, weekly, or monthly basis, you can enable this using the **HIS** function.

For example:

1. Set the 'Task Name' to 't1', select the schedule as 'Daily', and set the time to 10:10:0
2. After clicking "Submit", the task you created will be shown under the "Task List".

**Tasks List**

| Name                        | Description                          |
|-----------------------------|--------------------------------------|
| <input type="checkbox"/> t1 | Check all disks every day at 10:10:0 |

[Delete](#)

**Health Inspector Scheduler**

Task Name:

Select a Schedule: ☐ Daily ☒ Weekly ☐ Bi-Weekly ☐ Monthly

Select a time:

[Submit](#)

FnL Monitor 1.1.3

## Log collecting

*Note: This function is only supported by Linux.*

## Diagnostic view

1. Start the WEBGUI, Diagnostic view will appear when Driver or HPT card does not effect, you can see the system information and HPT Product information in this view.

AIC RAID Drive Device Info Settings Event Log SHI Help

**Diagnostic View**

| System                                                                    | Product                                    |
|---------------------------------------------------------------------------|--------------------------------------------|
| OS: Ubuntu 21.04 x86_64                                                   | Controller: HighPoint NVMe RAID Controller |
| Kernel: 5.11.0-36-generic                                                 | Driver Name: hptnvme                       |
| CPU: AMD Ryzen Threadripper 3960X 24-Core Processor                       | Driver Version: v1.3.1                     |
| MotherBoard: ASUSTeK COMPUTER INC. PRIME TRX40-PRO Rev 1.xx               |                                            |
| BIOS: American Megatrends Inc. 1303 11/11/2020 13.3                       |                                            |
| Disk: Samsung SSD 860                                                     |                                            |
| Chipset: Advanced Micro Devices, Inc. [AMD] Starship/Matisse Root Complex |                                            |

Logs Location:  Logs have not been saved [Save Logs](#)

2. You can also click '**Help**' → '**Diagnostic**' to enter the diagnostic view.

| AIC RAID Drive         |                                                                  | Device Info | Settings                 | Event Log                      | SHI | Help                                  |
|------------------------|------------------------------------------------------------------|-------------|--------------------------|--------------------------------|-----|---------------------------------------|
| <b>Diagnostic View</b> |                                                                  |             |                          |                                |     | Register Product<br><b>Diagnostic</b> |
| System                 |                                                                  |             | Product                  |                                |     |                                       |
| OS:                    | Ubuntu 21.04 x86_64                                              |             | Controller:              | HighPoint NVMe RAID Controller |     |                                       |
| Kernel:                | 5.11.0-36-generic                                                |             | Driver Name:             | hptnvme                        |     |                                       |
| CPU:                   | AMD Ryzen Threadripper 3960X 24-Core Processor                   |             | Driver Version:          | v1.3.1                         |     |                                       |
| MotherBoard:           | ASUSTeK COMPUTER INC. PRIME TRX40-PRO Rev 1.xx                   |             |                          |                                |     |                                       |
| BIOS:                  | American Megatrends Inc. 1303 11/11/2020 13.3                    |             |                          |                                |     |                                       |
| Disk:                  | Samsung SSD 860                                                  |             |                          |                                |     |                                       |
| Chipset:               | Advanced Micro Devices, Inc. [AMD] Starship/Matisse Root Complex |             |                          |                                |     |                                       |
| Logs Location:         |                                                                  |             | Logs have not been saved |                                |     | Save Logs                             |

## Log saving

Enter the Diagnostic view, click '**Save Logs**', your log information will be collected. '**Logs Location**' will display the location of the saving path.

| AIC RAID Drive         |                                                                  | Device Info | Settings                                                  | Event Log                      | SHI | Help      |
|------------------------|------------------------------------------------------------------|-------------|-----------------------------------------------------------|--------------------------------|-----|-----------|
| <b>Diagnostic View</b> |                                                                  |             |                                                           |                                |     |           |
| System                 |                                                                  |             | Product                                                   |                                |     |           |
| OS:                    | Ubuntu 21.04 x86_64                                              |             | Controller:                                               | HighPoint NVMe RAID Controller |     |           |
| Kernel:                | 5.11.0-36-generic                                                |             | Driver Name:                                              | hptnvme                        |     |           |
| CPU:                   | AMD Ryzen Threadripper 3960X 24-Core Processor                   |             | Driver Version:                                           | v1.3.1                         |     |           |
| MotherBoard:           | ASUSTeK COMPUTER INC. PRIME TRX40-PRO Rev 1.xx                   |             |                                                           |                                |     |           |
| BIOS:                  | American Megatrends Inc. 1303 11/11/2020 13.3                    |             |                                                           |                                |     |           |
| Disk:                  | Samsung SSD 860                                                  |             |                                                           |                                |     |           |
| Chipset:               | Advanced Micro Devices, Inc. [AMD] Starship/Matisse Root Complex |             |                                                           |                                |     |           |
| Logs Location:         |                                                                  |             | /usr/share/hpt/HighPoint_hptnvme_v1.3.1_2021.10.27.tar.gz |                                |     | Save Logs |

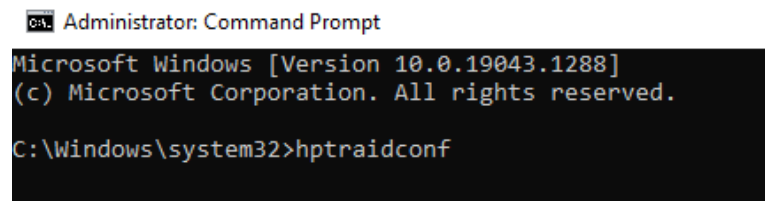
If you have problems in use, please submit the log to our online service (<https://www.highpoint-tech.com/websupport/>).

## Using the HighPoint Command Line Interface (CLI)

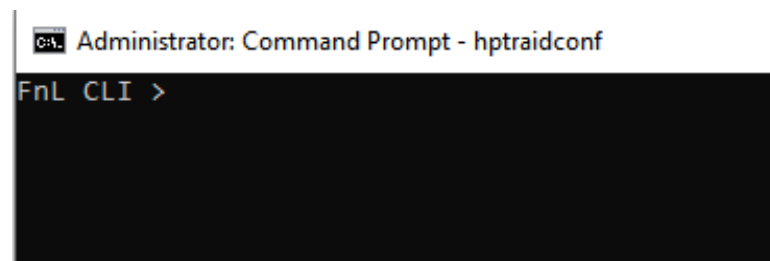
*Note: CLI function only supports Windows and Linux, not Mac*

### How to use the CLI in Windows

Method1: Run ‘**Command Prompt**’ as **Administrator** and enter **hptraidconf** and press Enter

A screenshot of a Windows Command Prompt window titled "Administrator: Command Prompt". The text inside shows the Microsoft Windows version (10.0.19043.1288) and copyright information. The command prompt is at C:\Windows\system32, and the command "hptraidconf" has been entered.

```
C:\Windows\system32>hptraidconf
```



Method2: Click ‘**Start**’ to find the **FnL Monitor** folder, and click on **hptraidconf**



### How to use the CLI in a Linux system

Open **Terminal** and enter root permissions, then execute the command **hptraidconf** to enter the CLI

```
File Edit View Search Terminal Help
test@test-System-Product-Name:~$ sudo su
[sudo] password for test:
root@test-System-Product-Name:/home/test# hptraidconf
```

## CLI Command Reference

This chapter discusses the various HighPoint CLI commands: query, switch, events, mail, task, set, clear, help, exit and diag.

The following example is for a Windows system:

### Query Commands

#### Syntax:

```
query drives
query devices | query devices {devices_id} |
query arrays | query arrays {array_id}
```

#### query drives

This command will provide the status of the drives. It provides a list of Vender ID, Product ID, SN, Number of PHY, Status. Each drive's status will be listed as one of the following: ACTIVE, INACTIVE

#### Example:

FnL CLI> query drives

| ID | VendorID | ProductID      | SN            | NumberOfPHY | Status |
|----|----------|----------------|---------------|-------------|--------|
| 1  | HPT      | FnL SRD7505 DC | 5432139123456 | 4           | ACTIVE |

Attributes:

#### Vender ID:

A vendor ID is an abbreviation for the company name.

#### Product ID:

Product ID refers to the name of the drive that is connected to the motherboard.

#### SN:

Serial Number is the product serial number, it is used to protect the user's genuine rights and interests, enjoy legitimate services.

**Number of PHY:**

The number it displays represents the number of disks that are accessed and recognized.

**Status:**

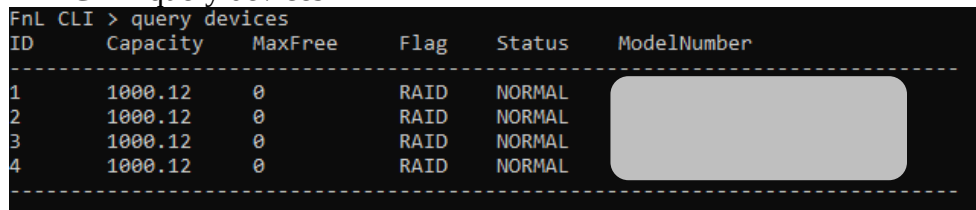
If you pick up a single drive, you will see the status is ACTIVE, if you pick up a double drives, you will see the two status are ACTIVE and INACTIVE.

**query device**

This command will provide the status of each physical device hosted by the controller. It provides a list of device ID's, capacity, maxfree, flag, status, and model number. Each device's flag will be listed as one of the following: SINGLE, RAID. Each device's status will be listed as one of the following: NORMAL, LEGACY.

**Example:**

```
FnL CLI> query devices
```



| ID | Capacity | MaxFree | Flag | Status | ModelNumber |
|----|----------|---------|------|--------|-------------|
| 1  | 1000.12  | 0       | RAID | NORMAL |             |
| 2  | 1000.12  | 0       | RAID | NORMAL |             |
| 3  | 1000.12  | 0       | RAID | NORMAL |             |
| 4  | 1000.12  | 0       | RAID | NORMAL |             |

Attributes:

**ID:**

A device ID is a string used to represent a disk.

**Capacity:**

The capacity of the disk in GB.

**MaxFree:**

The Maximum sequence free space on a disk which can be used by creating array.

**Flag:**

Shows whether the disk is **SINGLE** or has been created **RAID**.

**Status:**

This will display the disk status (1 of 2 possible states):

- **NORMAL**: The disk's status is normal.
- **RAID**: The disk is a member of a RAID array.

**Model Number:**

The disk's model number

## **query devices {device\_id}**

This command presents information for the specified device.

Attributes:

### **Mode Number:**

The disk's model number.

### **Serial Number:**

The disk's Serial number.

### **Firmware Version:**

The disk's Firmware version.

### **Capacity:**

The disk's capacity.

### **Status:**

The disk's status.

### **Flag:**

Shows whether the disk is **SINGLE** or has been created **RAID**.

### **PCIe Width:**

The disk's PCIe width.

### **PCIe Speed:**

The disk's PCIe speed.

### **Temperature:**

The disk's temperature and setting temperature threshold.

### **S.M.A.R.T Attributes:**

S.M.A.R.T Attributes detailed information reported by hard disk.

### **Example:**

FnL CLI> query devices 1

```

FnL CLI > query devices 1
Mode Number: 
Serial Number:  S5GXNG0N905363B
Firmware Version: 3B2QGXA7
Capacity(GB):  1000.12      TotalFree(GB):  0
Status:        RAID        Flag:             NORMAL
PCIe Width:    x4          PCIe Speed:        Gen 4
Temperature (F): 95
Warning Composite Temperature Threshold (F): 179
Critical Composite Temperature Threshold (F): 185
-----
S.M.A.R.T Attributes
S.M.A.R.T Status OK.
Name                                     Value
-----
Critical Warning                        : 0x0
Composite Temperature (C)              : 35
Available Spare                        : 100%
Available Spare Threshold              : 10%
Percentage Used                        : 9%
Data Units Read                        : 0xd447f19f
Data Units Written                     : 0xde91de1
Host Read Commands                     : 0x95c73299e
Host Write Commands                    : 0xbdce315d
Controller Busy Time                   : 0x2317
Power Cycles                           : 0x87f
Power On Hours                         : 0xb16
Unsafe Shutdowns                       : 0x6a8
Media and Data Integrity Errors        : 0x0
Number of Error Information Log Entries : 0x0
Warning Temperature Time               : 0x1
Critical Composite Temperature Time    : 0x0
Temperature Sensor 1 (C)              : 35
Temperature Sensor 2 (C)              : 43
Temperature Sensor 3 (C)              : 0
Temperature Sensor 4 (C)              : 0
Temperature Sensor 5 (C)              : 0
Temperature Sensor 6 (C)              : 0
Temperature Sensor 7 (C)              : 0
Temperature Sensor 8 (C)              : 0
-----

```

## query arrays

This command lists information for all configured arrays. It will list each array's ID, capacity, type, status, blocks, sector, cache and name.

Attributes:

### Status:

- **NORMAL:** Array status is normal
- **DISABLED:** Array status is disabled, and the RAID maybe be broken.
- **CRITICAL:** Array is in a degraded status (no data redundancy)

### Block:

Array Block size.

### Sector:

Bytes per sector.

### Cache:

Array Cache Policy

NONE: No Cache policy enabled

**Example:**

```
FnL CLI> query arrays
```

```
FnL CLI > query arrays
```

| ID | Capacity(GB) | Type  | Status | Block | Sector | Cache | Name           |
|----|--------------|-------|--------|-------|--------|-------|----------------|
| 1  | 4000.49      | RAID0 | NORMAL | 512k  | 512B   | NONE  | RAID0_000041A7 |

```
FnL CLI > query arrays
```

| ID | Capacity(GB) | Type  | Status   | Block | Sector | Cache | Name           |
|----|--------------|-------|----------|-------|--------|-------|----------------|
| 1  | 4000.49      | RAID0 | DISABLED | 512k  | 512B   | NONE  | RAID0_000041A7 |

```
FnL CLI >
```

```
FnL CLI > query arrays
```

| ID  | Capacity(GB) | Type   | Status   | Block | Sector | Cache | Name       |
|-----|--------------|--------|----------|-------|--------|-------|------------|
| 1   | 2000.25      | RAID10 | CRITICAL | 512k  | 512B   | NONE  | RAID10_0   |
| 1-1 | 1000.12      | RAID1  | CRITICAL | --    | 512B   | NONE  | [RAID10_0] |
| 1-2 | 1000.12      | RAID1  | NORMAL   | --    | 512B   | NONE  | [RAID10_0] |

**query arrays {arrays\_id}**

This command will present information of each disk of a specified array.

**Example:**

```
FnL CLI> query arrays 1
```

```
FnL CLI > query arrays 1
```

|               |         |              |          |
|---------------|---------|--------------|----------|
| ID:           | 1       | Name:        | RAID_0_0 |
| Type:         | RAID0   | Status:      | NORMAL   |
| Capacity(GB): | 4000.49 | BlockSize:   | 512k     |
| SectorSize:   | 512B    | CachePolicy: | NONE     |
| Progress:     | --      |              |          |

| ID | Capacity | MaxFree | Flag   | Status | ModelNumber |
|----|----------|---------|--------|--------|-------------|
| 1  | 1000.12  | 0       | NORMAL | RAID   |             |
| 2  | 1000.12  | 0       | NORMAL | RAID   |             |
| 3  | 1000.12  | 0       | NORMAL | RAID   |             |
| 4  | 1000.12  | 0       | NORMAL | RAID   |             |

**Events Commands**

The CLI system will automatically record three types of events: Information (shortened to “Inf”), Warning (shortened to “War”), and Error (shortened to “Err”) on the screen output. These commands allow you to query, save, or clear the logged events.

**Syntax**

```
events | events clear | events save {file_name}
```

## events

This command will display a list of all the logged events.

### Example

FnL CLI> events

```
FnL CLI > events
1  Inf  [10/19/2021 10:10:20]      Scheduled task (t1) started.
2  Err  [10/18/2021 08:32:11]      Disk 'Samsung SSD 980 PRO 1TB-S5GXNG0N905360M' at Device4 failed.
3  Err  [10/18/2021 08:32:11]      Disk 'Samsung SSD 980 PRO 1TB-S5GXNG0NA06288P' at Device3 failed.
4  Err  [10/18/2021 08:32:11]      Disk 'Samsung SSD 980 PRO 1TB-S5GXNG0N905355Z' at Device2 failed.
5  Err  [10/18/2021 08:32:11]      Disk 'Samsung SSD 980 PRO 1TB-S5GXNG0N905363B' at Device1 failed.
```

## events save {file\_name}

This command will save all the logged events as a plain text file.

### Example

HPT CLI> events save C:/raidlog.txt

```
FnL CLI > events save C:/raidlog.txt
The event log has been saved to C:/raidlog.txt.
```

This command will save all the events to C:/raidlog.txt.

| This PC > Local Disk (C:) ▾ ↻                                                               |                     | 🔍 Search Local Disk (C:) |      |
|---------------------------------------------------------------------------------------------|---------------------|--------------------------|------|
| Name                                                                                        | Date modified ▾     | Type                     | Size |
|  raidlog | 10/19/2021 12:03 AM | Text Document            | 1 KB |

## Mail Commands

### Syntax

mail recipient

mail recipient add {recipient\_name}{mail\_address} [Inf|War|Err]

mail recipient delete {recipient\_name}

mail recipient test {recipient\_name}

```
mail recipient set {recipient_name} {Inf|War|Err}
mail server
mail server set {server_address} {port} { status } {from_address} [username] [password]
mail server set {a|p|s|m|u|t} {value}
```

## mail recipient

List all of the mail recipients

### Example

```
FnL CLI> mail recipient
```

```
FnL CLI > mail recipient
ID   Name      Mail Address      Notify Types
-----
1    hpt       luchaonan@highpoint-tech.com  Information Warning Error
```

## mail recipient add {recipient\_name} {mail\_address} [Inf|War|Err]

Add a new recipient

### Example

```
FnL CLI> mail recipient add admin admin@somecompany.com Inf War Err
```

```
FnL CLI > mail recipient add high yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

```
FnL CLI > mail recipient
ID   Name      Mail Address      Notify Types
-----
1    hpt       luchaonan@highpoint-tech.com  Information Warning Error
2    high      yzhang@highpoint-tech.com     Information Warning Error
```

This command will setup the RAID system to send mail to admin@somecompany.com for any logged events.

## mail recipient delete {recipient\_name}

--- Delete an existing recipient.

### Example

```
FnL CLI> mail recipient delete hpt
```

```
FnL CLI > mail recipient delete hpt
```

```
FnL CLI > mail recipient
ID   Name      Mail Address      Notify Types
-----
1    high      yzhang@highpoint-tech.com     Information Warning Error
```

## mail recipient test {recipient\_name}

Send a test email to a specified recipient.

### Example

```
FnL CLI> mail recipient test high
```

```
FnL CLI > mail recipient test high
```

You will receive a test email.

HighPoint RAID Management Software  
Mail Notification

 hptu@yahoo.com

今天 06:59

Mon, 18 Oct 2021 22:59:33 :  
This is a test mail.

## mail recipient set {recipient\_name} {Inf|War|Err}

Set the notification type for a recipient.

### Example

```
FnL CLI> mail recipient set admin Inf War Err
```

```
FnL CLI > mail recipient set admin Inf War Err
```

| ID | Name | Mail Address              | Notify Types              |
|----|------|---------------------------|---------------------------|
| 1  | high | yzhang@highpoint-tech.com | Information Warning Error |

## mail server

--- display the SMTP server information

### Example

```
FnL CLI> mail server
```

```
FnL CLI > mail server
```

| ServerAddress       | Port | ssl | Status  | Mail From                 | User Name                 |
|---------------------|------|-----|---------|---------------------------|---------------------------|
| smtp.mail.yahoo.com | 465  | 0   | Enabled | yzhang@highpoint-tech.com | yzhang@highpoint-tech.com |

## mail server set {server\_address} {port} {ssl} {status} {from\_address} [username] [password]

Use this command to configure mail server settings.

**{server\_address}** – SMTP server address  
**{port}** – port, generally 25  
**{ssl}** – used ssl, '1' for enable and port need 465, '0' for disable  
**{status}** – status, 'e' for enable or 'd' for disable  
**{from\_address}** – mail from address  
**{username}** –mail username  
**{password}** – the user's password

### Examples:

```
FnL CLI> mail server set secure.emailsrvr.com 465 1 e name@somecompany.com
name@somecompany.com password
```

```
FnL CLI > mail server set secre.emailsrvr.com 465 1 e yzhang@highpoint.com yzhang@highpoint-tech.com

FnL CLI > mail server
ServerAddress      Port    ssl  Status  Mail From      User Name
-----
secre.emailsrvr.com 465     1    Enabled yzhang@highpoint.com yzhang@highpoint-tech.com
```

```
FnL CLI> mail server set mail.somecompany.com 25 0 e admin@somecompany.com
password
```

```
FnL CLI > mail server set secre.emailsrvr.com 25 0 e yzhang@highpoint-tech.com yzhang@highpoint-tech.com

FnL CLI > mail server
ServerAddress      Port    ssl  Status  Mail From      User Name
-----
secre.emailsrvr.com 25      0    Enabled yzhang@highpoint-tech.com yzhang@highpoint-tech.com
```

### mail server set {a|p|s|m|u|t} {value}

--- Use this to separate set your mail server value

### Parameters

**a** – SMTP server address  
**p** – port, generally 25  
**s** – status, 'e' for enable or 'd' for disable  
**m** – mail from address  
**u** – username  
**t** – user's password

### Examples:

```
FnL CLI> mail server set a smtp.somecompany.com
--- Change the server address
```

```

FnL CLI > mail server sey a smtp.mail.yahoo.com
ServerAddress      Port    ssl    Status    Mail From      User Name
-----
smtp.mail.yahoo.com 465    0      Enabled   yzhang@highpoint-tech.com yzhang@highpoint-tech.com

```

FnL CLI> mail server set p 465

--- Change the port

```

FnL CLI > mail server set p 465

FnL CLI > mail server
ServerAddress      Port    ssl    Status    Mail From      User Name
-----
secre.emailsrvr.com 465    0      Enabled   yzhang@highpoint-tech.com yzhang@highpoint-tech.com

```

FnL CLI> mail server set s d

--- Disable mail notification

```

FnL CLI > mail server set s d

FnL CLI > mail server
ServerAddress      Port    ssl    Status    Mail From      User Name
-----
secre.emailsrvr.com 465    0      Disabled  yzhang@highpoint-tech.com yzhang@highpoint-tech.com

```

FnL CLI> mail server set s e

--- Enable mail notification

```

FnL CLI > mail server set s e

FnL CLI > mail server
ServerAddress      Port    ssl    Status    Mail From      User Name
-----
secre.emailsrvr.com 465    0      Enabled   yzhang@highpoint-tech.com yzhang@highpoint-tech.com

```

## Task Commands

When an array requires regular verification or rebuilding, you can use the task commands to automate this process in the background. If you have the appropriate privileges, you can add new tasks, and modify or delete existing tasks.

### Syntax

```

task
task {smart} {name=} {once|daily|monthly|weekly|biweekly}={day} time=hh:mm:ss
task delete {task_id}

```

### task

This command displays detailed information about all scheduled tasks.

### Example

```
FnL CLI> task
```

This command displays the current background tasks.

```
FnL CLI > task
ID   Name                S-F   Description
-----
```

**task {smart} {name=} {daily|monthly|weekly|biweekly}={day} time=hh:mm:ss**

This command set a scheduled task.

### Example

```
FnL CLI> task smart name=1 daily time=18:00:00
```

```
FnL CLI > task smart name=1 daily time=18:00:00
```

**task delete {task\_id}**

This command allows you to delete a scheduled task. You can query the task ID by task command.

### Example

```
FnL CLI> task delete 1
```

```
FnL CLI > task delete 1
```

This command will delete the task "1".

## Set Commands

### Syntax

**set | set [name]={value}**

### set

Show the system settable parameters.

```
FnL CLI > set
-----
Show the system settable parameters.
-----
[FS] Fan Speed                Medium
[TU] Temperature unit         C
[PS] Password                  --
-----
```

- **set FS={Auto|Off|Low|Medium|High}**

Change Enclosure Fan Speed.

**Note:** *Fan speed function support products: SRD7101A / 7202 / 7505 / 7140 / 7540 / 7502/ CRD7104F / CRD7505, This function is only supported by Windows and mac, not Linux.*

### Example

FnL CLI> set FS=Medium

```
FnL CLI > set FS=Medium
FnL CLI > set
-----
                Show the system setable parameters.
-----
[FS] Fan Speed           Medium
[TU] Temperature unit    C
[PS] Password            --
-----
```

- **set TU={C|F}**

Set temperature unit to Celsius equals or Fahrenheit equals.

### Example

FnL CLI> set TU=F

```
FnL CLI > set TU=F
FnL CLI > set
-----
                Show the system setable parameters.
-----
[FS] Fan Speed           Medium
[TU] Temperature unit    F
[PS] Password            --
-----
```

- **set PS**

Set or change your password and confirm it.

### Example

FnL CLI> set PS

```
FnL CLI > set PS
Password :*****
Confirm  :*****
Password has been changed, please login with your new password.
HighPoint Windows CLI, Please Input
Password:
```

## Help Commands

If you input an unknown or error command, you will be told that the command is unknown, you can use help commands to find correct commands.

```
FnL CLI > raid
ERROR: Unknown command raid .
You can input 'help' for more commands

FnL CLI >
```

### Syntax

help | help {command}

### help

Show generic help about this utility.

### Example

```
FnL CLI> help
FnL CLI > help
help [query|switch|events|mail|task|set|clear|help|exit]

FnL CLI >
```

### help {command}

Show help about a specific command.

### Example

```
FnL CLI> help query
FnL CLI > help query
Query Command
    This command allows you to query devices or arrays' informations.
Syntax:
    query drives
    query devices
    query devices {device_id}
    query arrays
    query arrays {array_id}
Note:
    The query devices {device_id} has add S.M.A.R.T information in version 2.1.

FnL CLI >
```

## Exit Commands

### Syntax

exit

Exit from the interactive mode and close the window.

### Example

```
FnL CLI> exit
FnL CLI > exit
```

## Clear Commands

### Syntax

clear

This command is used to clear screen.

### Example

```
FnL CLI> clear
FnL CLI > clear
```

## Diag Commands

**Note:** *This function is only supported by Linux.*

This command allows you to collect the diagnostic information.

### Example

```
FnL CLI> diag
FnL CLI>diag
The diagnostic information has been saved in /usr/share/hpt/HighPoint_hptnvme_v1.3.2_2021.11.01.tar.gz
FnL CLI>
```

The saving path will be displayed after entering this command.

## Troubleshooting

Debugging an Abnormal RAID status

Please submit a support ticket using our online service at  
<https://www.highpoint-tech.com/websupport/>

**Table 1. WebGUI Icon Guide**

|                                                                                     |                                                                                                                           |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|    | Disabled<br>The icon represents a disabled array, meaning more than one disk failed and the array is no longer accessible |
|    | Legacy<br>An existing file system has been detected on the disk.<br>These disks are classified as legacy drives.          |
|   | Normal<br>The array status is normal                                                                                      |
|  | Critical – rebuild required<br>The array has all disks, but one disk requires rebuilding.                                 |

**Table 2. RAID Level Reference Guide**

| Type   | Description             | Min. disks | Usable space | Advantage                                                                                          | Disadvantage                                                                         | Application                                                                      |
|--------|-------------------------|------------|--------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| RAID 0 | Disk Striping           | 4          | 100%         | Offers the highest performance                                                                     | No fault tolerance - failure of one drive results in complete data loss              | Temporary file, performance driven application.                                  |
| RAID 1 | Disk Mirroring          | 2          | 50%          | Provides convenient low-cost data redundancy for smaller systems and servers                       | Useable storage space is 50% of total available capacity. Can handle 1 disk failure. | Operating system, backup, and transaction database.                              |
| RAID10 | Striping with Mirroring | 4          | 50%          | High read performance and medium write performance with data protection for up to 2-drive failures | Useable storage capacity equals total capacity of all drives in the array minus two  | Fast database and application servers which need performance and data protection |

## HighPoint Recommended List of Motherboards

HighPoint provides a list of motherboards suitable for use with the SRD7204DC / SRD7104FDC / SRD7505DC / BRD7103DC / BRD7505DC / CRD7104FDC / CRD7505DC

This document is routinely updated, and is available from the SRD7204DC / SRD7104FDC / SRD7505DC / BRD7103DC / BRD7505DC / CRD7104FDC / CRD7505DC

Resources webpage:

**SRD7104FDC:**

[https://highpoint-tech.com/PDF/Compatibility\\_List/FnL/SRD/DC/FnL\\_SRD7104FDC\\_Compatibility\\_List\\_v1.00\\_21\\_9\\_6.pdf](https://highpoint-tech.com/PDF/Compatibility_List/FnL/SRD/DC/FnL_SRD7104FDC_Compatibility_List_v1.00_21_9_6.pdf)

**SRD7204DC:**

[https://highpoint-tech.com/PDF/Compatibility\\_List/FnL/SRD/DC/FnL\\_SRD7204DC\\_Compatibility\\_List\\_v1.00\\_21\\_9\\_6.pdf](https://highpoint-tech.com/PDF/Compatibility_List/FnL/SRD/DC/FnL_SRD7204DC_Compatibility_List_v1.00_21_9_6.pdf)

**SRD7505DC:**

[https://highpoint-tech.com/PDF/Compatibility\\_List/FnL/SRD/DC/FnL\\_SRD7505DC\\_Compatibility\\_List\\_v1.00\\_21\\_9\\_6.pdf](https://highpoint-tech.com/PDF/Compatibility_List/FnL/SRD/DC/FnL_SRD7505DC_Compatibility_List_v1.00_21_9_6.pdf)

**BRD7505DC:**

[https://highpoint-tech.com/PDF/Compatibility\\_List/FnL/BRD/DC/FnL\\_BRD7505DC\\_Compatibility\\_List\\_v1.00\\_21\\_9\\_6.pdf](https://highpoint-tech.com/PDF/Compatibility_List/FnL/BRD/DC/FnL_BRD7505DC_Compatibility_List_v1.00_21_9_6.pdf)

**BRD7103DC:**

[https://highpoint-tech.com/PDF/Compatibility\\_List/FnL/BRD/DC/FnL\\_BRD7103DC\\_Compatibility\\_List\\_v1.00\\_21\\_9\\_6.pdf](https://highpoint-tech.com/PDF/Compatibility_List/FnL/BRD/DC/FnL_BRD7103DC_Compatibility_List_v1.00_21_9_6.pdf)

**CRD7505DC:**

[https://highpoint-tech.com/PDF/Compatibility\\_List/FnL/CRD/DC/FnL\\_CRD7505DC\\_Compatibility\\_List\\_v1.00\\_21\\_9\\_6.pdf](https://highpoint-tech.com/PDF/Compatibility_List/FnL/CRD/DC/FnL_CRD7505DC_Compatibility_List_v1.00_21_9_6.pdf)

**CRD7104FDC:**

[https://highpoint-tech.com/PDF/Compatibility\\_List/FnL/CRD/DC/FnL\\_CRD7104FDC\\_Compatibility\\_List\\_v1.00\\_21\\_9\\_6.pdf](https://highpoint-tech.com/PDF/Compatibility_List/FnL/CRD/DC/FnL_CRD7104FDC_Compatibility_List_v1.00_21_9_6.pdf)

## Contacting Technical Support

FAQ's, technical articles, and trouble-shooting tips are available from our Support web page and Blog web page:

<https://www.fnlnvme.com/faq>

<https://www.fnlnvme.com/blog>

If you require technical Support, please go to the page footer our official website and Click Contact Us for further support.

<https://www.fnlnvme.com>