



Promise Utility Pro

Software Manual

Pegasus32 R4/R6/R8, Pegasus R4i/J2i, Pegasus

Version 1.0

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PROMISE UTILITY PRO

This chapter contains the following topics:

- “Installing the Software on your Mac”
- “Desktop menu bar”
- “Promise Utility Pro Toolbar”
 - “Dashboard”
 - “Disk Arrays”
 - “PassThru Drive tab in Controls menu”
 - “Spare Drive tab in Controls menu”
 - “Unconfigured Drive tab in Controls menu”
 - “Lock tab on the Controls page”



Note

This guide describes how to install and use Promise Utility Pro (PUP) on the following devices:

- Pegasus32 R4, Pegasus32 R6, Pegasus32 R8
- Pegasus R4i, Pegasus J2i
- Pegasus M4

Installing the Software on your Mac

Pegasus ships ready to use without configuration or set-up; however, it is a good idea to install the PROMISE Utility Pro software even if you do not plan to make any changes to the device's configuration. The utility is useful for monitoring the system and getting firmware updates. The utility is necessary if you plan to change the default RAID configuration (Pegasus is shipped with a RAID 5) or if you will swap out any of the hard drives shipped with the device.

The software utility installation package is located on Pegasus. Follow the instructions below to install the utility.

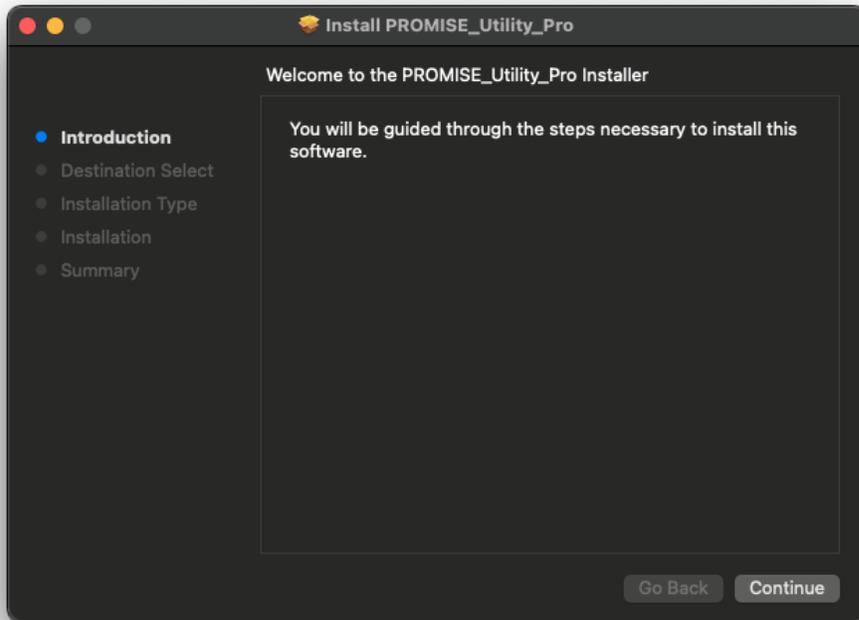
1. Double-click on the Pegasus icon on your desktop to view the device's contents.
2. Find the file `R_PROMISE_Utility_Pro_<version number>.dmg` and double-click on it to mount the virtual drive containing the installation software package.

Note that the version number of the .dmg file and .pkg file will change as it is updated. The version number used in this example is just for illustration.

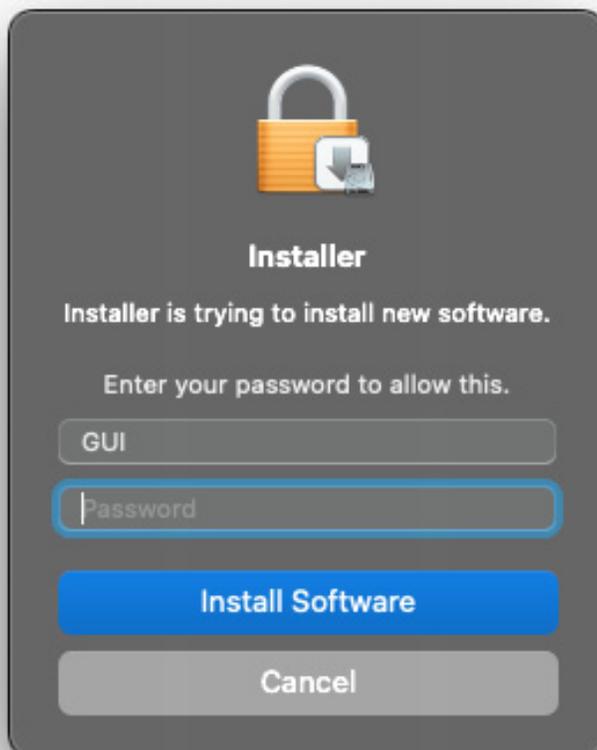
3. Double-click on the `R_PROMISE_Utility_Pro.pkg*` file to begin the software installation.



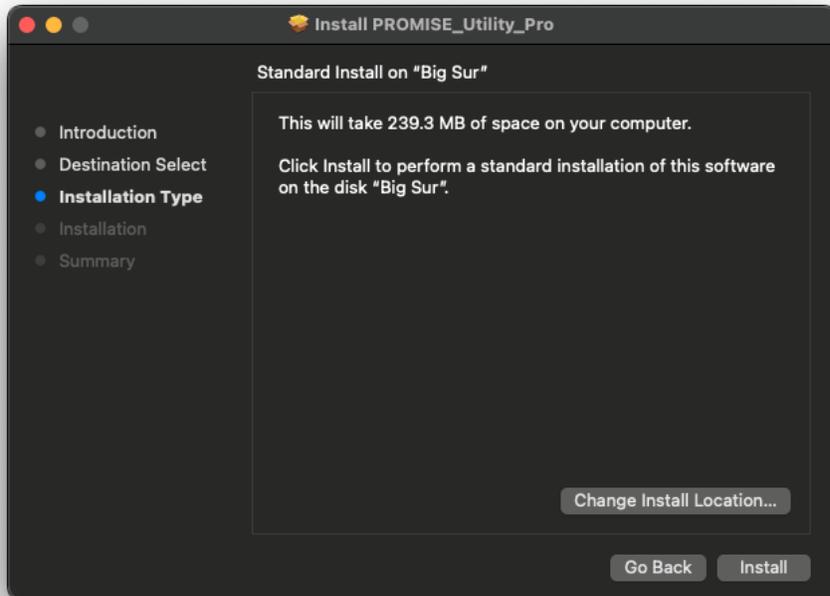
- The Welcome menu explains that software will be installed on the computer. Click Continue to proceed with the installation.



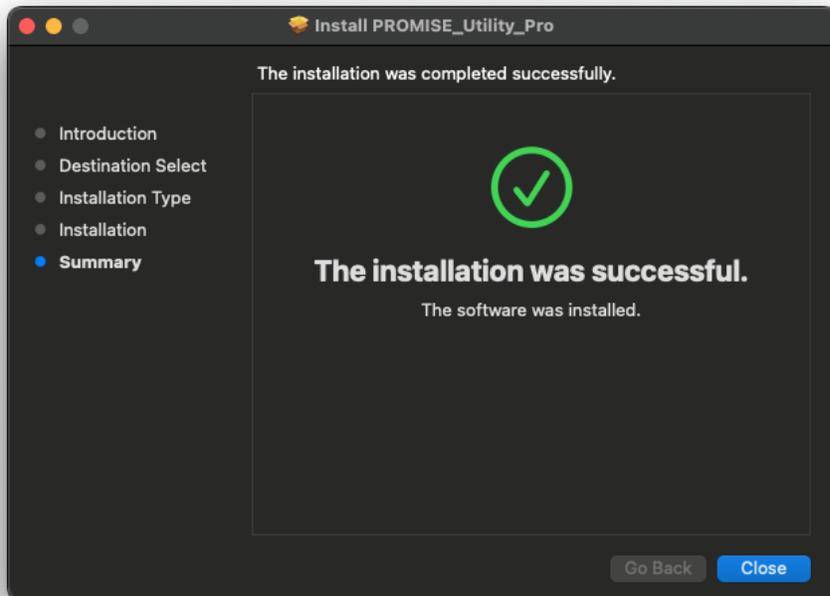
- Administrator permission is required to install the software. Type the administrator password of your computer for permission to install the software.



- You can change the location on your system for the installation if desired by clicking the Change Install Location button. Otherwise, click on Install to continue the installation in the default location.



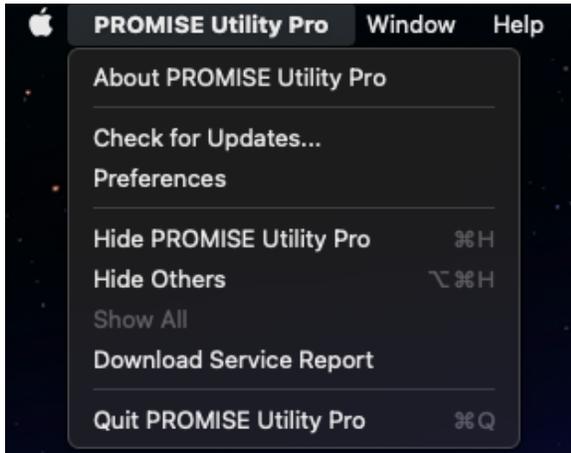
- It takes a few seconds for the software to be installed. When the installation has been completed, a message informs you that the installation was successful.



The PROMISE Utility Pro is now available to be used for the management of the Pegasus series. Use this if you need to change a hard drive, change the default array configuration, or update the device firmware. This is also useful for monitoring the status of the system and for troubleshooting.

Desktop menu bar

After opening the PROMISE Utility Pro there are some settings on the desktop menu bar. Users can change it to meet their needs.



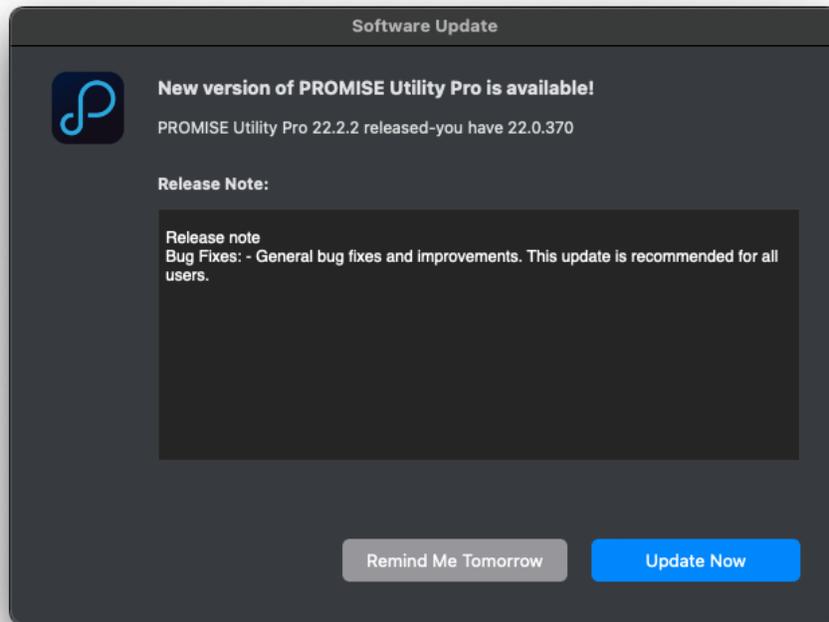
Promise Utility Pro - Preference and actions for the PROMISE Utility Pro

Window - Layout and actions for display of the window. The options include moving the window to the left or right side of the monitor screen, close and minimize.

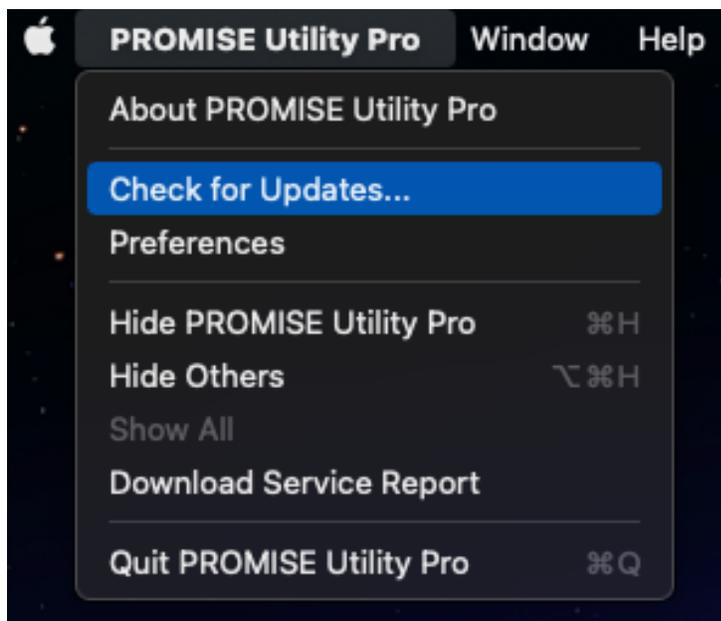
Help - Guide users to the official website for further help options.

Check for update

It is important to make sure the Promise Utility Pro software is up to date. The software version is automatically checked whenever the PROMISE Utility Pro app opens. If Promise Utility Pro is not up-to-date, it will prompt the latest version for the user. Either choose Update now or Remind me tomorrow.

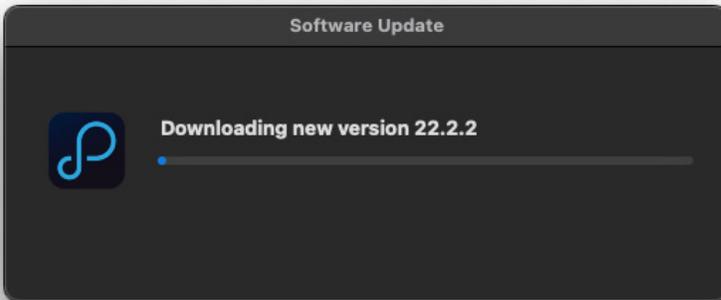


Users can also click on the Promise Utility Pro menu tab, and choose to Check for Updates in the drop-down menu to manually check the update.



Choose Update Now to start the software update

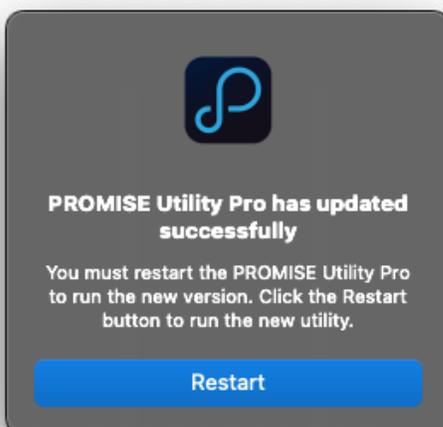
1. After clicking on the Update now button. PROMISE Utility Pro will automatically download the newest version.



2. Administrator permission is required to install the software. Type the administrator password of your computer for permission to install the software.

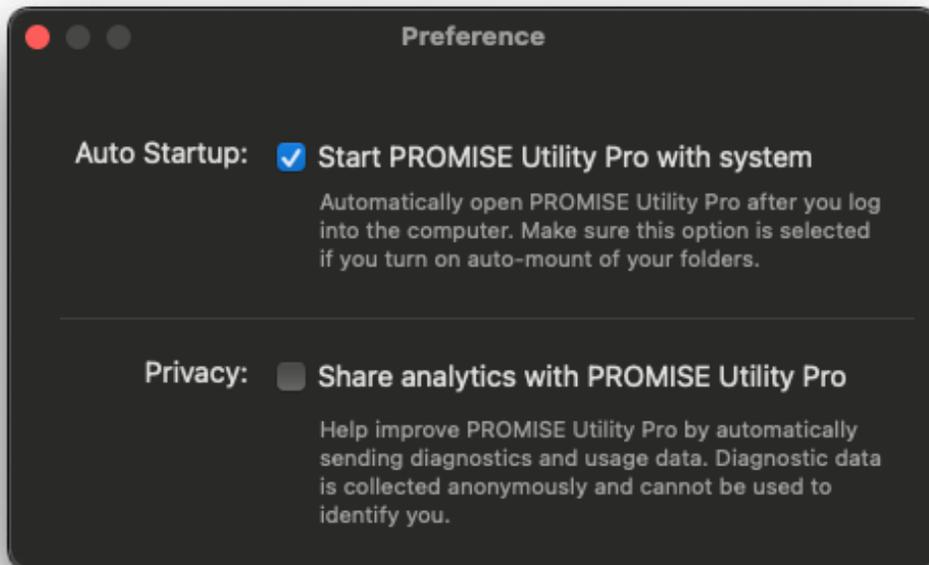


3. It takes a few seconds for the Utility software to be installed. When the installation has been completed, a message informs you that the installation was successful. Restart PROMISE Utility Pro to run the new version.



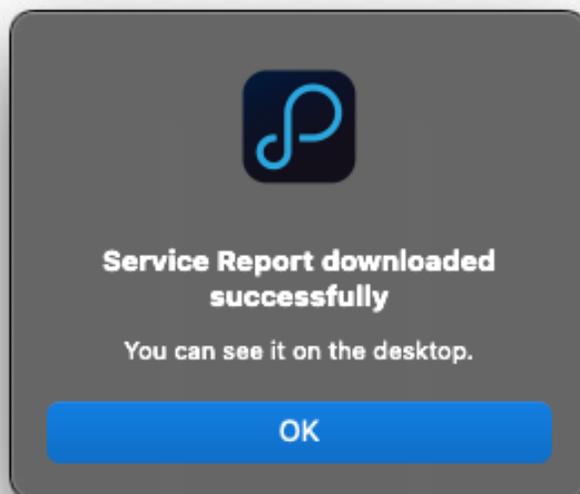
Preference

- **Auto Startup** - It will open PROMISE Utility Pro automatically every time you log into the computer.
- **Privacy** - Share analytics to PROMISE Utility Pro to improve the service.



Download Service report

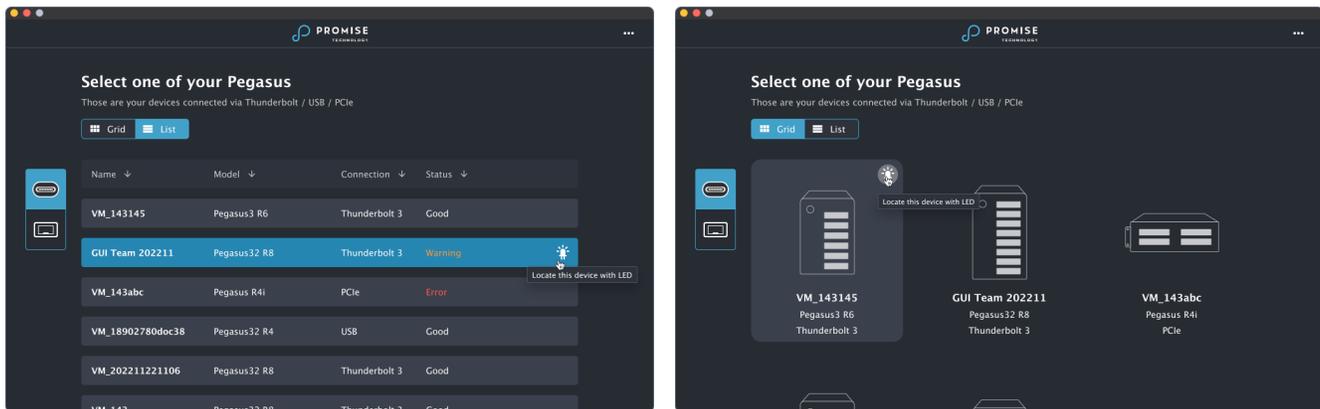
A service report can be used by tech support staff for troubleshooting or diagnosing issues on the device. To download a service report to your computer desktop, click on the “Promise Utility Pro” tab, and choose Download Service Report in the drop-down menu. It will automatically download to the user’s desktop.



Promise Utility Pro Toolbar

Device list

The PROMISE Utility Pro automatically discovers all Pegasus units that are connected via daisy chained Thunderbolt cable and powered up.



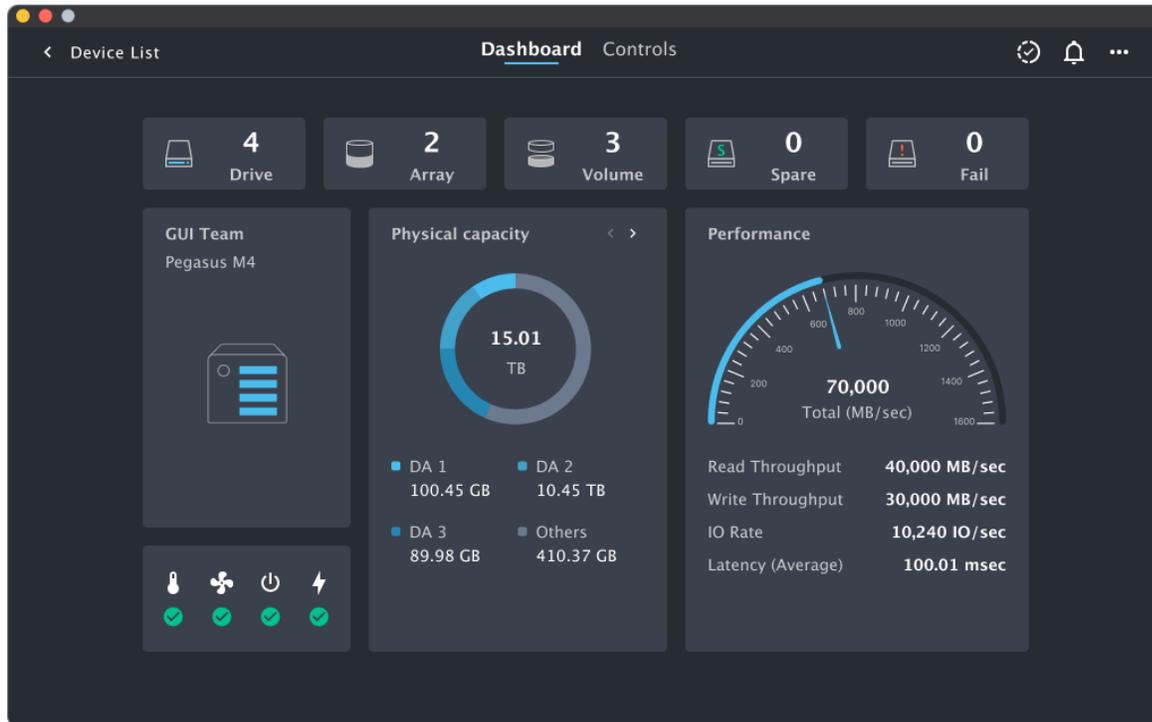
- To view a list of the Pegasus units, click the List menu.
- To view the Pegasus units image, click the Grid menu.

And then choose the Pegasus unit you want to see.

Note: Pegasus units are listed by the order in which they are recognized, not by the sequence in the daisy chain.

Dashboard

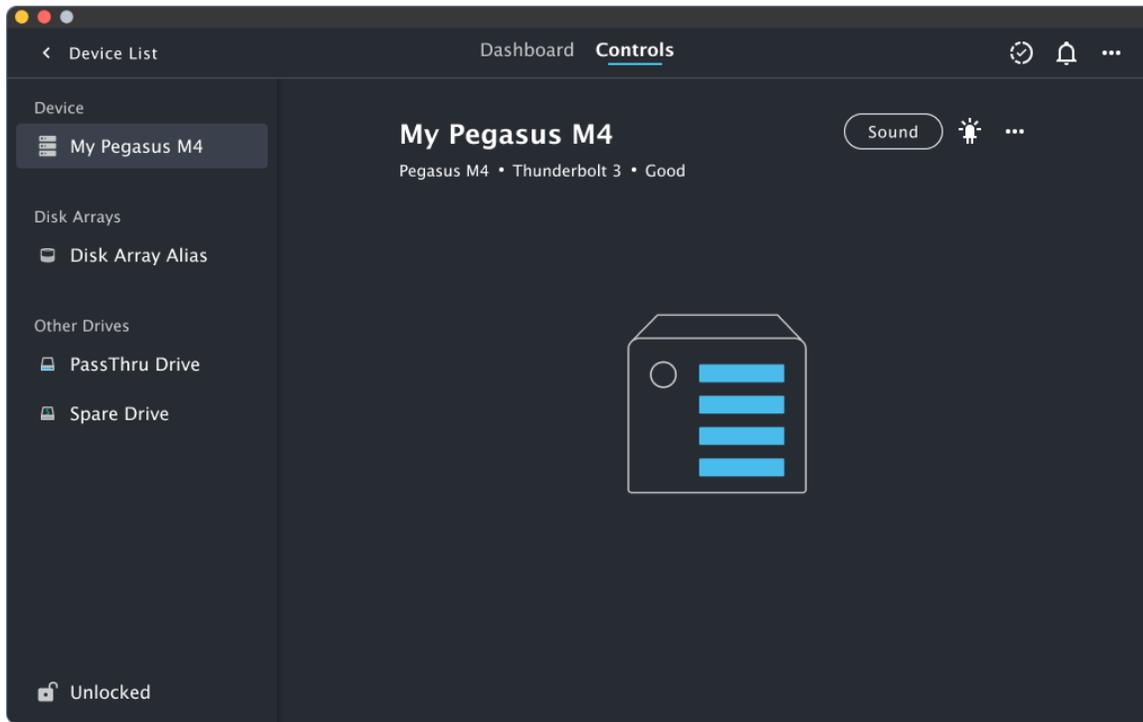
Displays the Physical Drive, Disk Array, Volume (includes Logical Drive and PassThru Drive), Spare Drive, Fail (failed drives), Temperature, Fan, Power Supply Unit and Voltage status indicators, Physical Capacity and Logical Capacity overview.



Controls

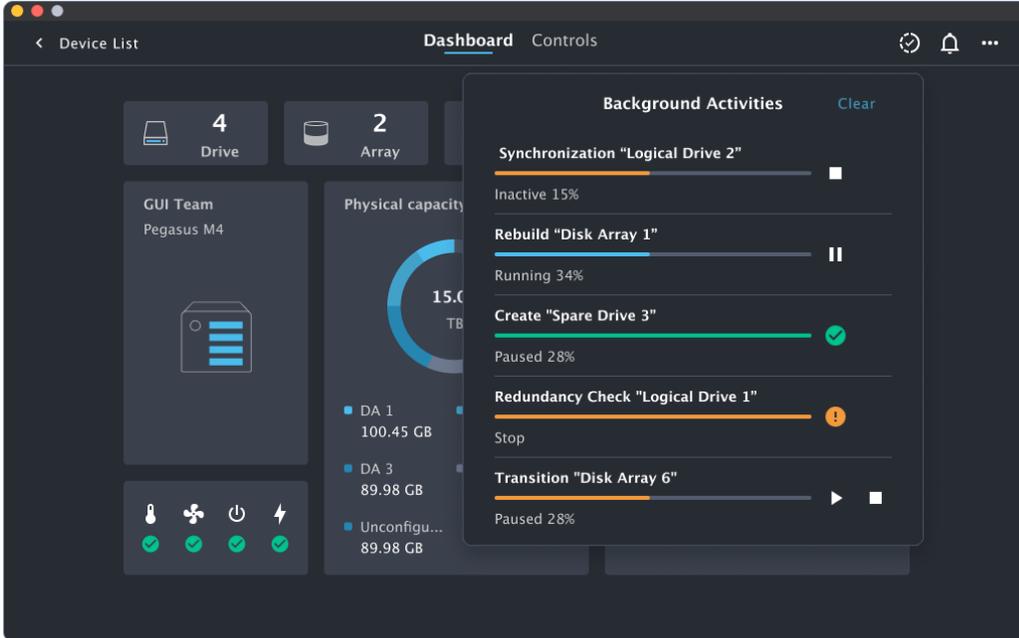
Display Pegasus series information, settings, and functions. Details will be introduced in the chapters below. There is a navigation bar in the Controls page. The tabs sections are:

- **Device** - Display this Pegasus series unit information
- **Disk Arrays** - List all disk arrays
- **Other Drives** - List PassThru Drives, Spare Drives, Unconfigured Drives, Failed Drives
- **Lock** - To lock or unlock certain actions to prevent unauthorized changes



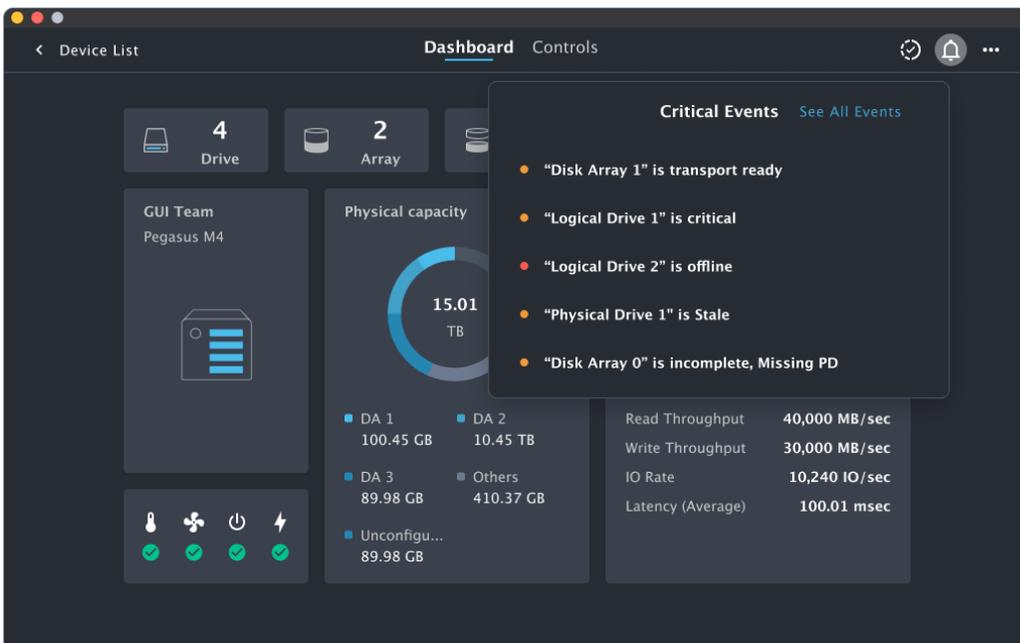
Background Activity

Background activities perform a variety of preventive and remedial functions on your Physical Drives, Disk Arrays, Logical Drives, and other components. If the user wants to change each activity settings they can find it listed in the Settings menu.



Critical Events menu

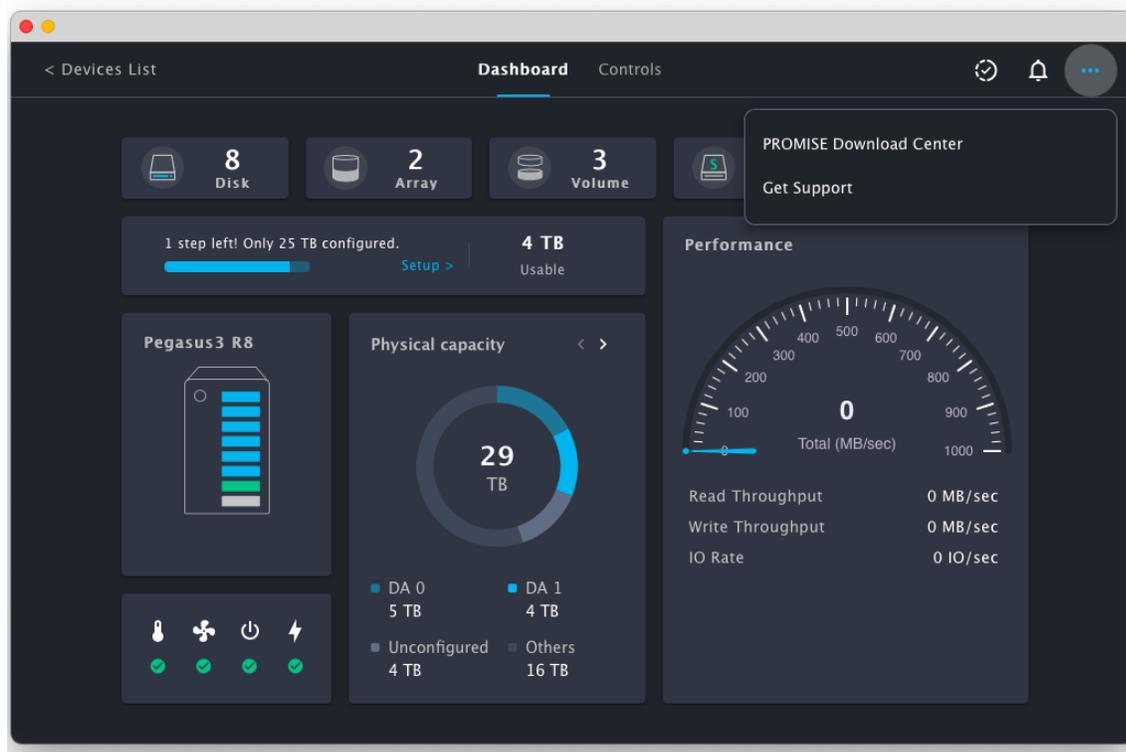
PROMISE Utility Pro filters out the most urgent level of the event and lists it in the Critical Event. Users can click on See all Events as well to see every level of events.



More

Information for users to navigate to the official website for further help options and product registration

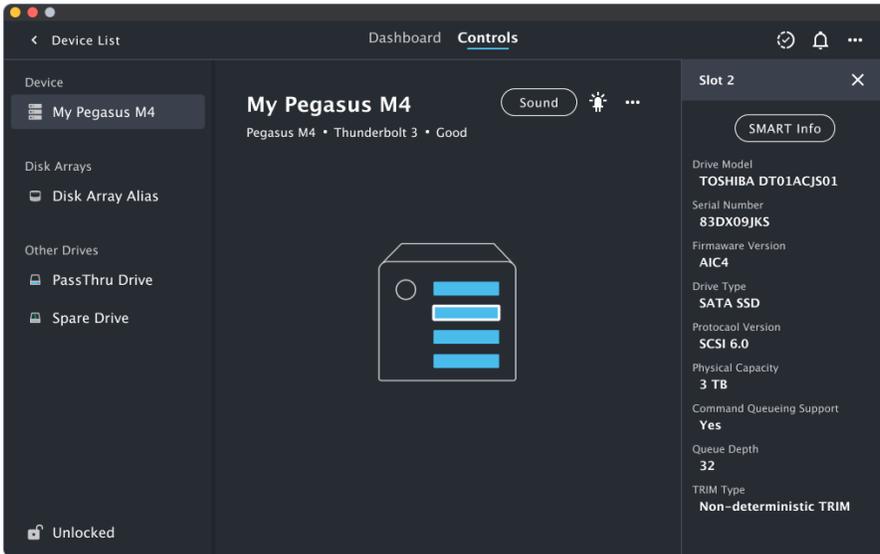
- PROMISE download center - Website for downloading the product manual, latest firmware, etc...
- Get support - 24/7 PROMISE eSupport Portal (support.promise.com), optional 24/7 phone and email support available.



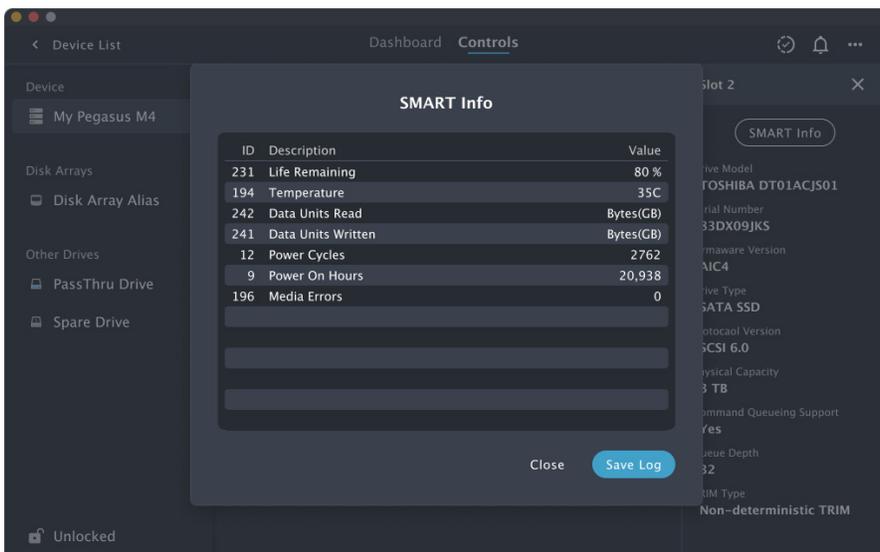
Device tab on the Controls page

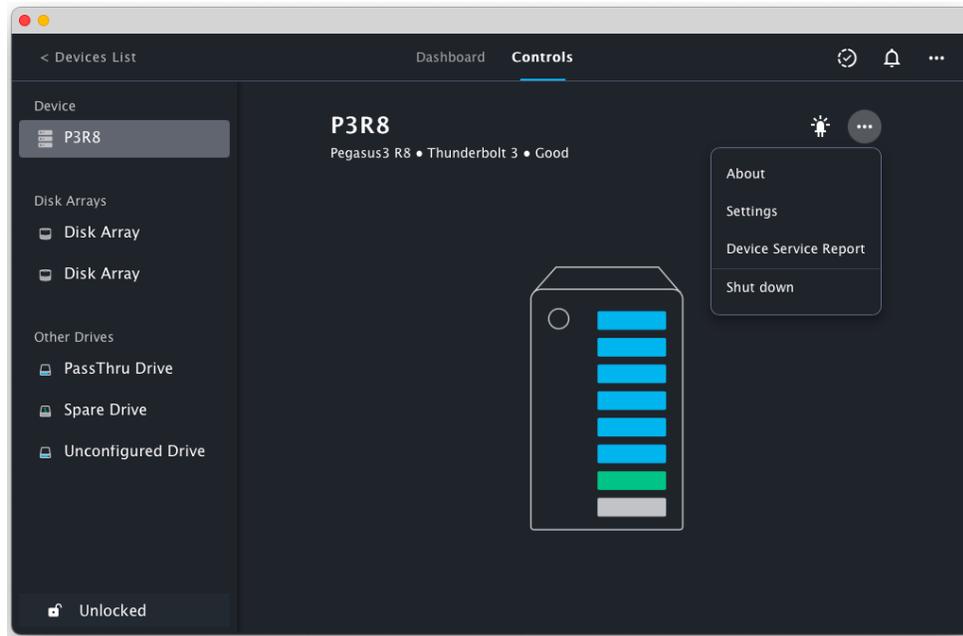
Shows the device alias, model, connection type, and Status. The front view has the ability to indicate which carriers contain:

- Unconfigured Physical Drives - shaded gray
- Configured Physical Drives - shaded sky blue
- Spare Drives - shaded green
- PassThru Drives - shaded cerulean blue
- Failed Drives - shaded orange or red



Mouse over the drive carrier to display the information of the installed physical drive, including the model name, drive type, physical capacity, ID, and operational status. Click on the drive to bring up further drives information and SMART info. To save this logged information to a text file, click the **Save Log** button and save the file to your preferred location.





Alert Sound

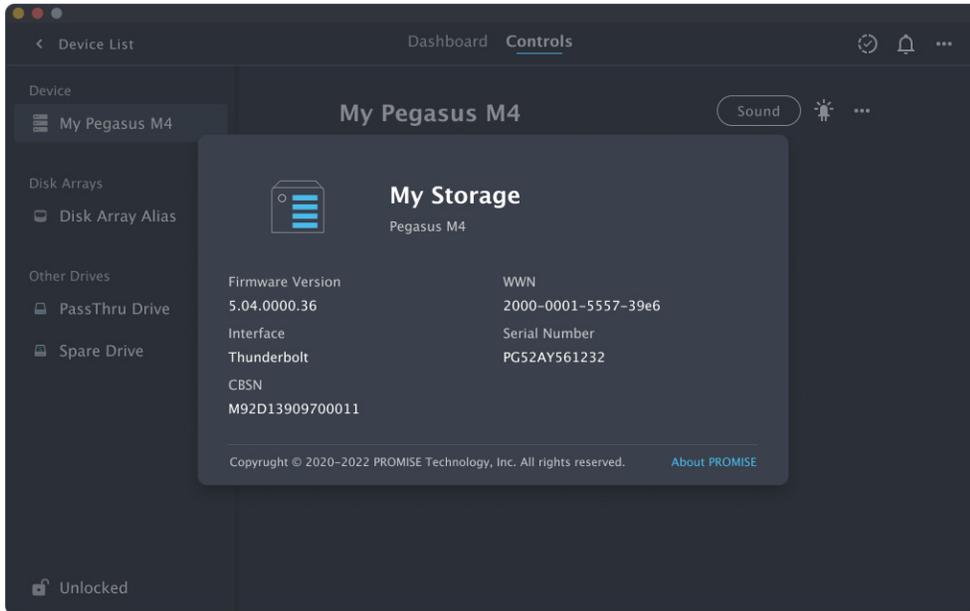
When the disk array is rebuilding and the buzzer is enabled, the Pegasus unit emits two quick beeps every five seconds. The beeps stop when the rebuild is done. Users can mute the noise with the sound / mute button. You can also use the buzzer to locate the device.

LED light locate

Use LED light to locate the device. Click on the light icon and the front LEDs will blink for 60 seconds.

About

Select the About option to display basic information about the M4.



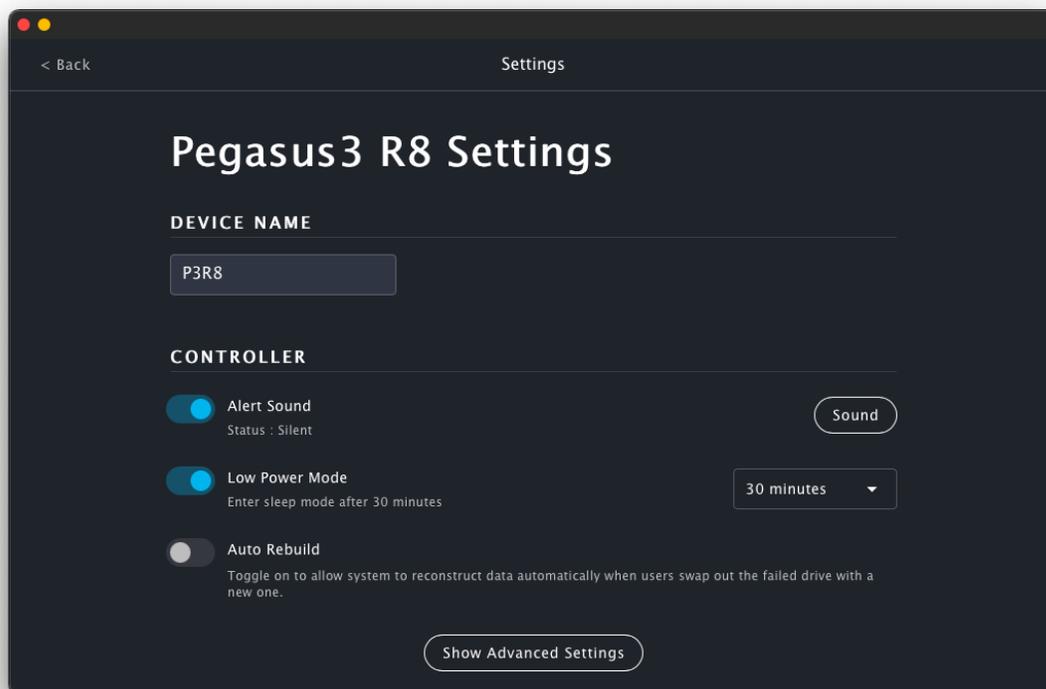
Settings

Device name

Users can change the device name used for display reference in the user interface. Note that the example below is a Pegasus3 since PegasusPro utility can be used for any Pegasus device in a daisy chain.

Controller

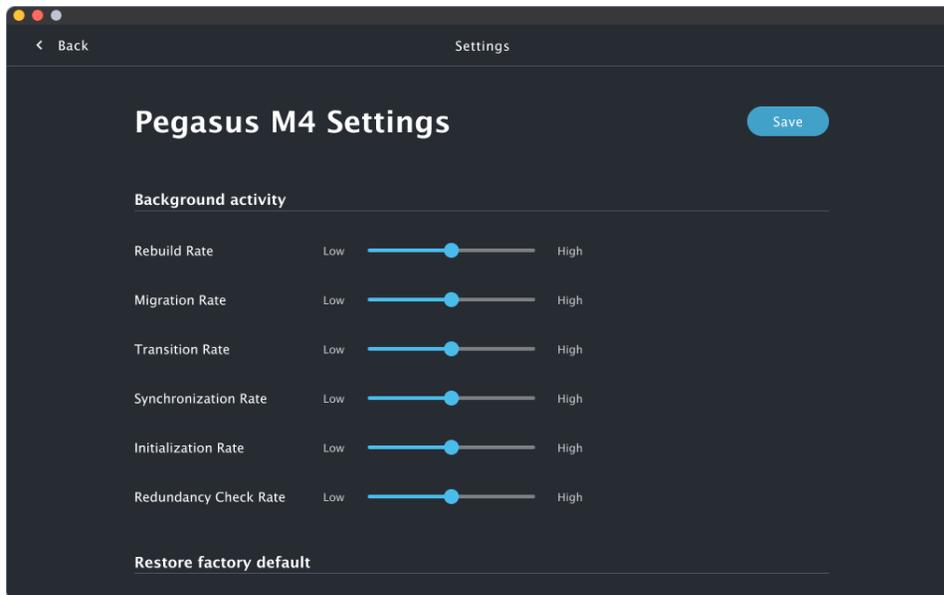
- **Alert Sound**- When the disk array is rebuilding and the alert sound is enabled, the Pegasus unit emits two quick beeps every five seconds. The beeps stop when the rebuild is done.
- **Low Power Mode** - The Pegasus includes a power-saving feature that spins down the hard disk drives if the logical drive is idle. The idle time can be changed.
- **Auto Rebuild** - Toggle on to allow system to reconstruct data automatically when users swap out the failed drive with a new one.



Background Activities

Use this to adjust settings of the items below, there are three rate settings:

- **Low** – Fewer system resources to the action, more to data read/write operations
- **Medium** – Balances system resources between the action and data read/write operations.
- **High** – More system resources to the action, fewer to data read/write operations.



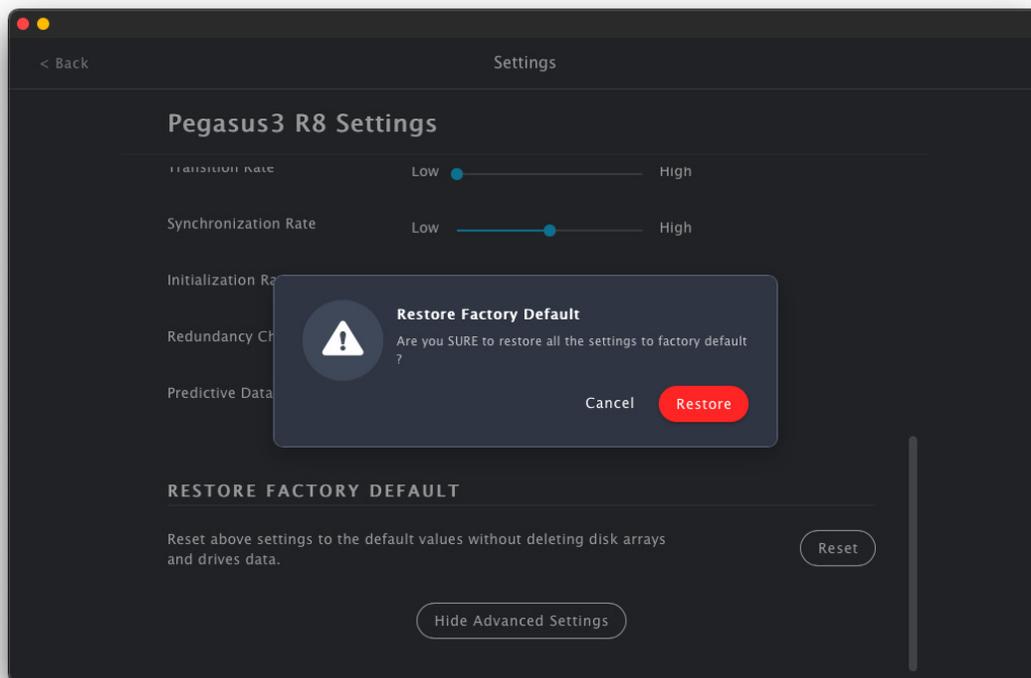
1. **Rebuild Rate** - When you rebuild a disk array, you are actually rebuilding the data on one physical drive.
 - When a physical drive in a disk array fails and a spare drive of adequate capacity is available, the disk array begins to rebuild automatically using the spare drive.
 - If there is no spare drive of adequate capacity, but the Auto Rebuild function is ENABLED, the disk array begins to rebuild automatically as soon as you remove the failed physical drive and install an unconfigured physical drive in the same slot.
 - If there is no spare drive of adequate capacity and the Auto Rebuild function is DISABLED, you must replace the failed drive with an unconfigured physical drive, then perform a Manual Rebuild
2. **Transition Rate** - Transition is the process of replacing a revertible spare drive that is currently part of a disk array with an unconfigured physical drive or a non-revertible spare drive.
3. **Synchronization Rate** - Synchronization is automatically applied to logical drives when they are created. Synchronization recalculates the redundancy data to ensure that the working data on the physical drives are properly in sync. Mouse over on the logical drive, click the View button and look under Logical Drive Information beside the line that says Synchronized. A Yes means the logical drive was synchronized.

- 4. Initialization Rate** - Technically speaking, Initialization is a foreground activity, as you cannot access a logical drive while it is Initializing. Initialization is normally done to logical drives after they are created from a disk array. Initialization sets all data bits in the logical drive to zero. The action is useful because there may be residual data on the logical drives left behind from earlier configurations. For this reason, Initialization is recommended whenever you create a logical drive.
- 5. Redundancy Check** - Redundancy Check is a routine maintenance procedure for fault-tolerant disk arrays (those with redundancy) that ensures all the data matches exactly. A redundancy check can also correct inconsistencies
- 6. Predictive Data Migration Rate** - Predictive Data Migration (PDM) is the migration of data from the suspect disk drive to a spare disk drive, similar to Rebuilding a Logical Drive. But unlike Rebuilding, PDM constantly monitors your disk drives and automatically copies your data to a spare disk drive before the disk drive fails and your Logical Drive goes Critical. After the data is copied from the suspect disk drive, the controller marks it with a Stale configuration and a PFA error.

Restore Factory Default

This feature restores settings to their default values. To restore all settings to their default values:

1. Go to settings find the Restore Factory Default at the bottom, and click Reset

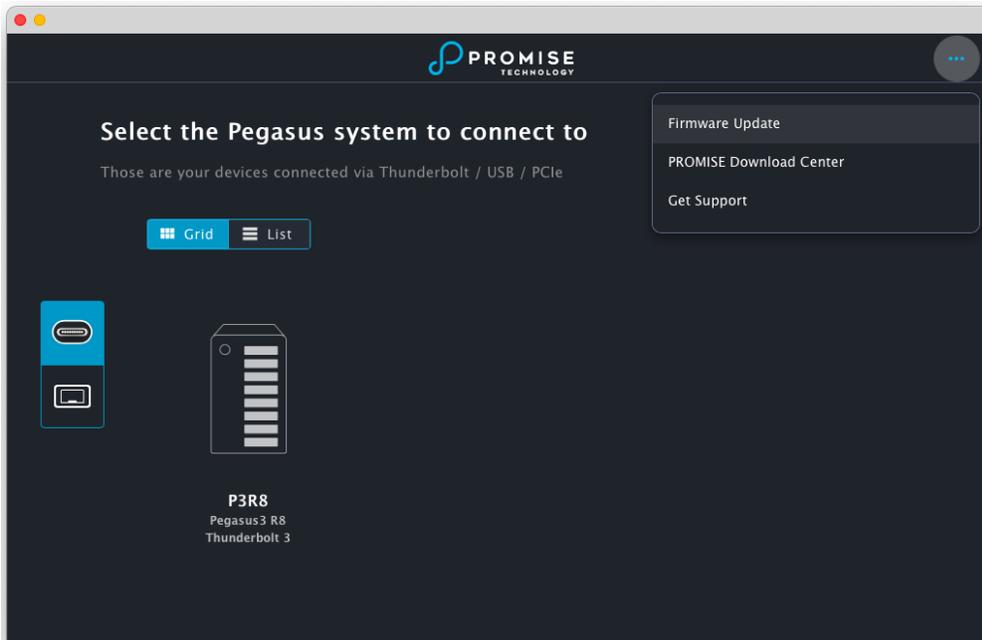


2. Confirm that you want to restore to default settings by clicking on Restore.

All the settings will turn to the default value.

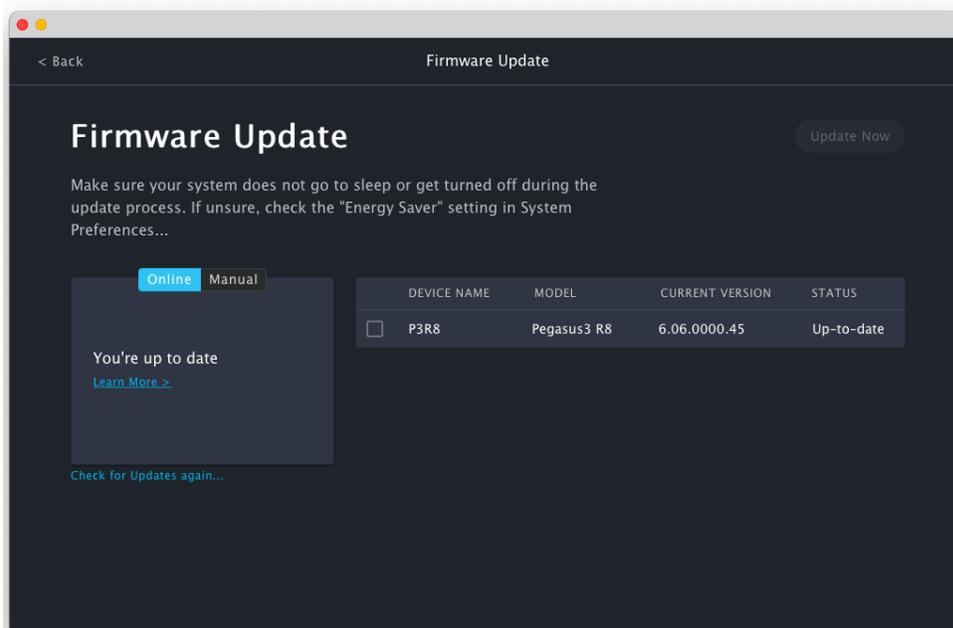
Firmware update

To update firmware on the Pegasus, open PROMISE Utility Pro, select Firmware Update. Firmware can be updated manually or automatically online.

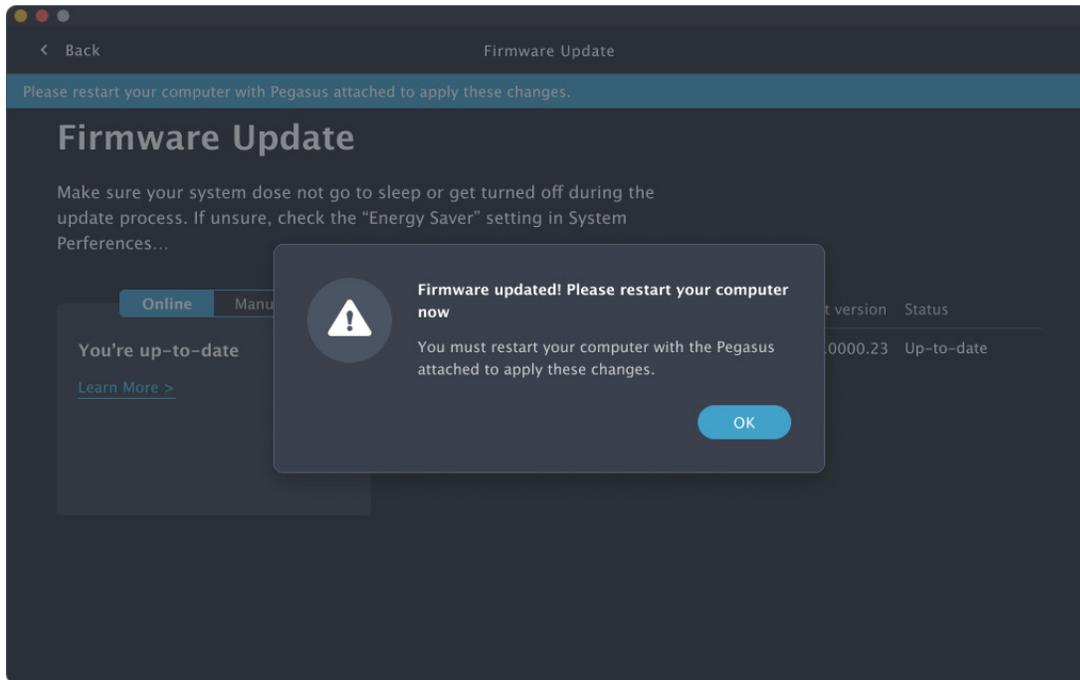


Update Firmware Online

1. In the Firmware Update menu, use the Online option to automatically check the installed firmware version. If the Pegasus firmware is not up-to-date, the user is prompted to Update. Click **Update** to start the firmware update process.

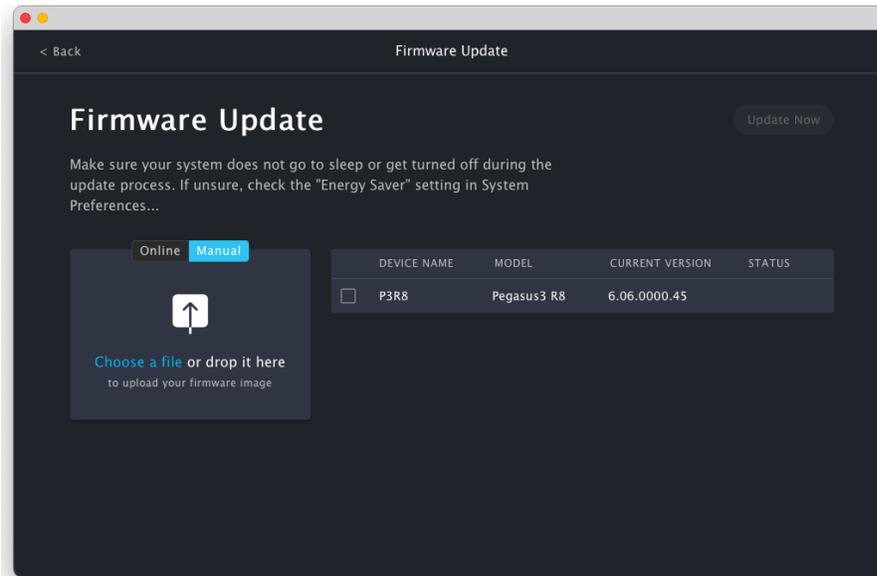


2. PROMISE Utility Pro will start to download the newest version. After the download is completed, next it will start to update the firmware.
3. The process will take several seconds to complete. Once the process has been completed, it is necessary to restart the computer. **Mac users connecting to Pegasus via USB need to shut down the host system, wait a few seconds for it to completely shut down, then start it again to apply the new firmware.** Once the computer is powered on and booted up, you may continue to use the Pegasus.



Manual Firmware Update

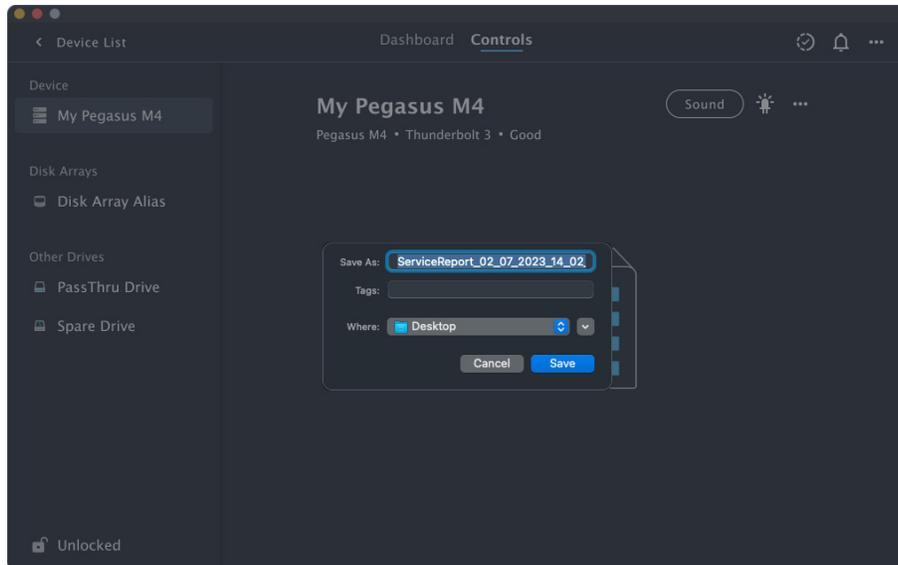
1. Download the latest firmware from the PROMISE website at www.PROMISE.com/support/ download and place the .img file on your computer.
2. Open the PROMISE Utility Pro to the Firmware Update page. Drag the file into the PROMISE Utility Pro menu.



3. PROMISE Utility Pro will start to upload the .img file from your computer. After the upload is completed, next it will start to update the firmware.
4. The process will take several seconds to complete. Once the process has been completed, it is necessary to restart the computer. It is the same as the previous Online Firmware update.

Device Service Report

A dialog prompt will ask you where you want to save the HTML file containing the service report. Choose a location and click the Save button. A technical support representative might ask you to email this file for system analysis.



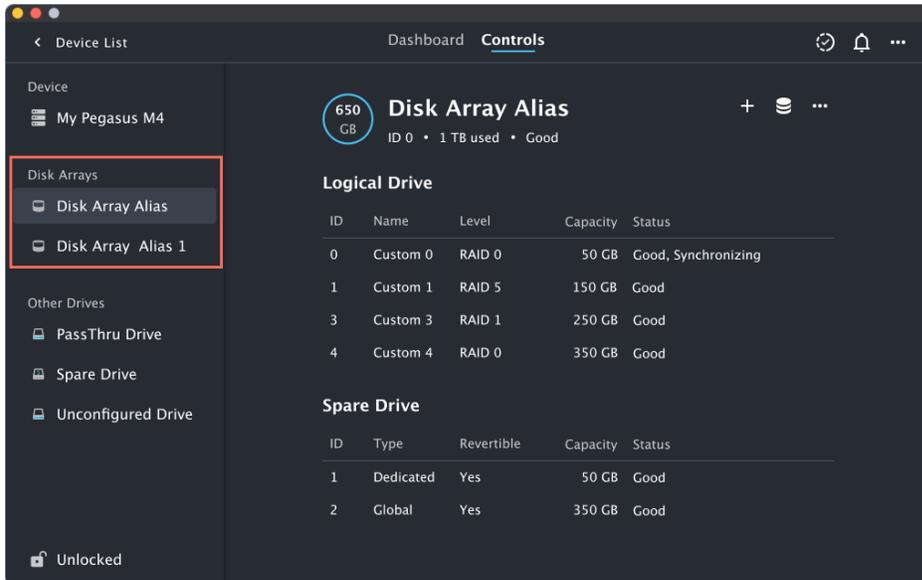
Shutdown

To shut down the Pegasus on PROMISE Utility Pro:

1. Open PROMISE Utility Pro and click on the Pegasus series. Click on the More button in the up right-hand corner.
2. Select Shutdown.
3. To prevent accidental shutdown, and the daisy chain will shut down all the Pegasus, a warning dialog pop-up will appear.
4. A message appears informing you that the shutdown process will take a few minutes. If you want to move the device, wait until the system is completely powered off before disconnecting the power cord.

Disk Arrays

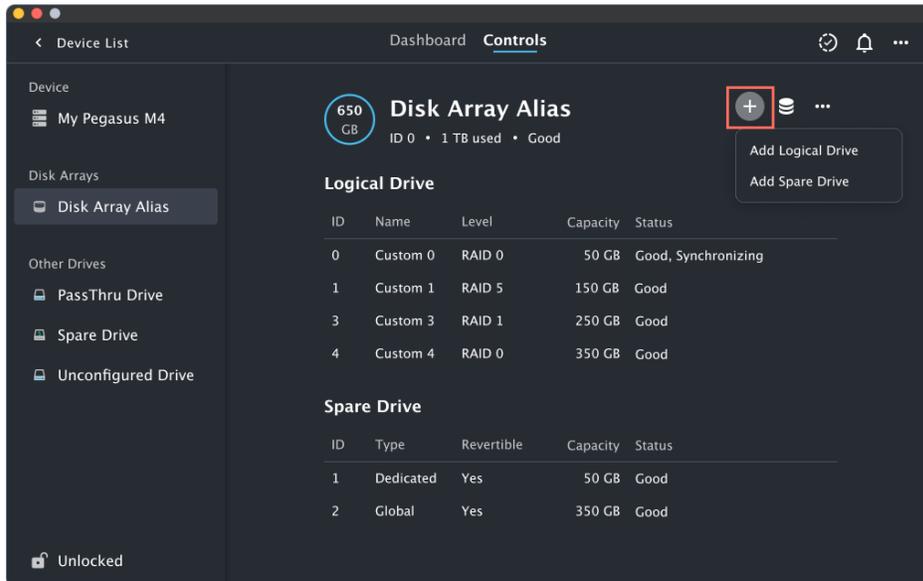
Disk Array information including the assigned Alias are displayed in the Disk Array status display menu.



Information of the selected Disk Array displayed in the right panel include Capacity, ID, Status, Logical Drives, and Spare Drives.

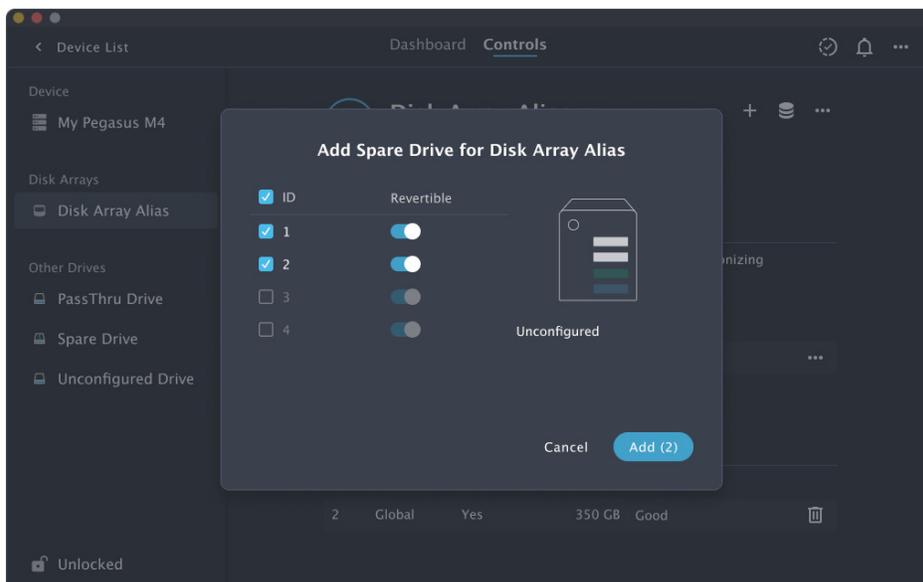
Adding a Logical Drive/Spare Drive

Use the Disk Array menu to add a Logical Drive or Spare Drive.



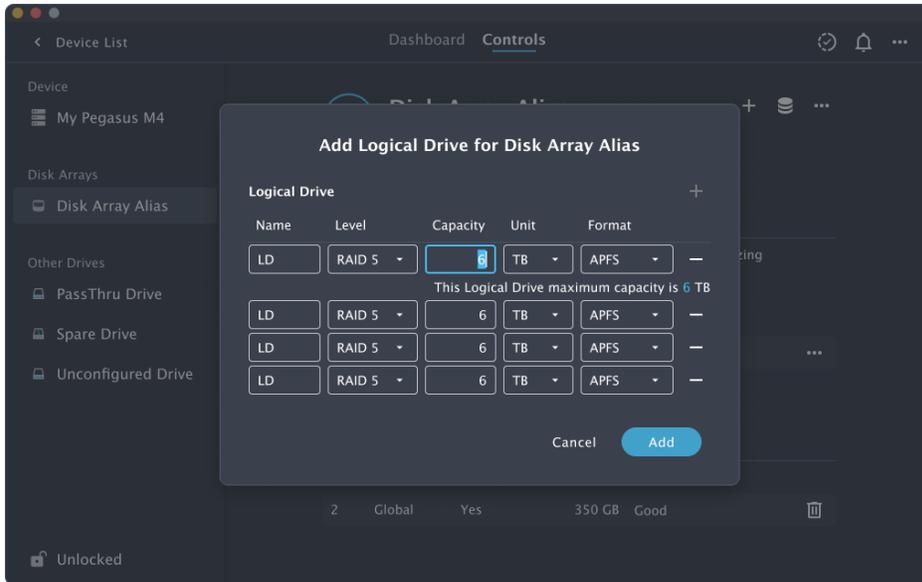
If you have an unconfigured drive installed, click on the Add button and select the Add Logical Drive or Add Spare Drive option.

Spare Drive



Select the Unconfigured Drive to use as Spare Drive, accept the default, or change the settings as required. Toggle the Revertible switch to enable the drive to be revertible. A revertible spare drive returns to its spare drive assignment after you replace the failed Physical Drive in the Disk Array and run the Transition function.

Logical Drive

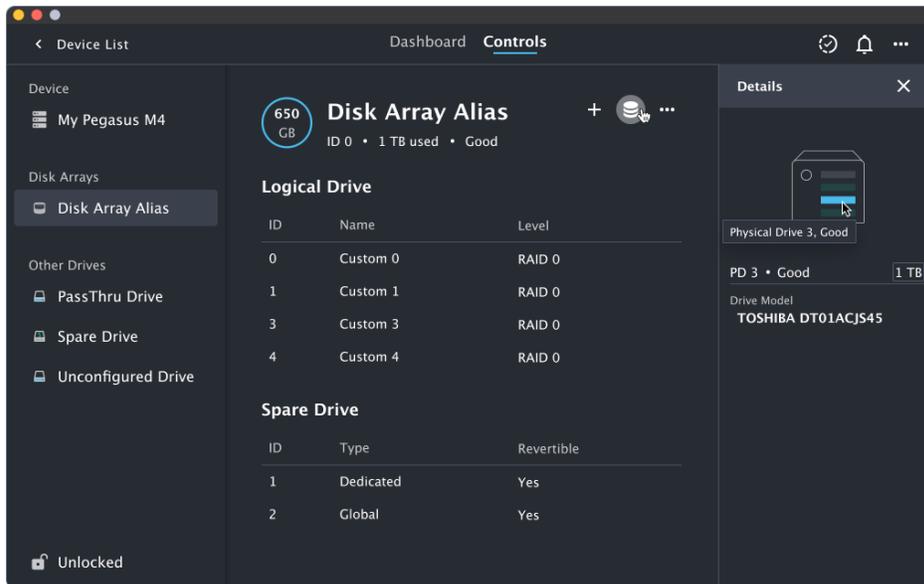


Up to four Logical Drives can be added. Enter a Logical Drive name, choose a RAID configuration type, capacity, and file system format. Click on the minus icon will delete the Logical Drive from the list.

Note that the RAID will consist of the Logical Drives in this list. The options available for type of RAID configuration is dependent upon the number of drives in the RAID. See below.

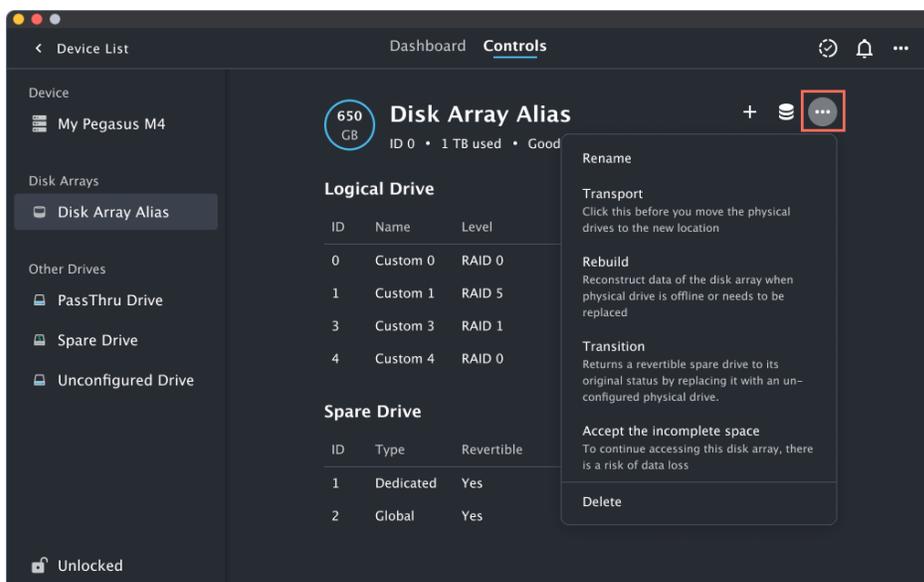
View Physical Drive Status

The sidebar can view the status of Physical Drive in this Disk Array. *Not including Spare Drive.*



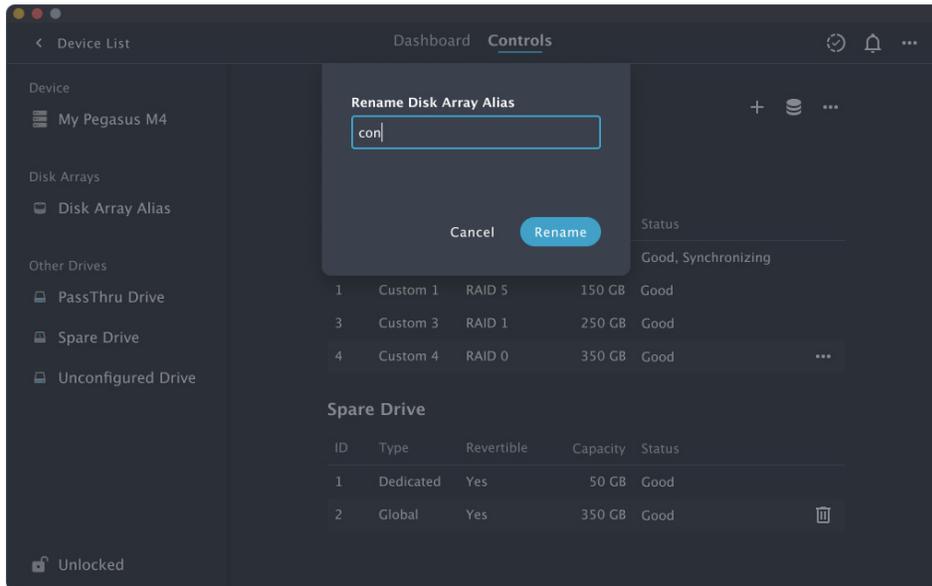
More button

Click the 'More' options link and choose the actions on the Disk Array.



Rename Disk Array

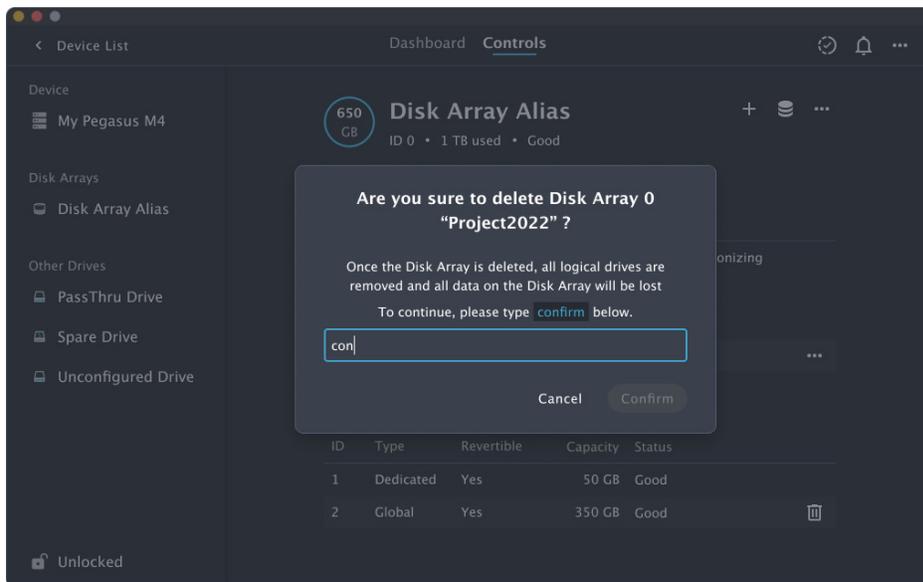
To rename a Disk Array, click the 'More' options link and choose the Rename option.



Type the new Disk Array name and click the Rename button.

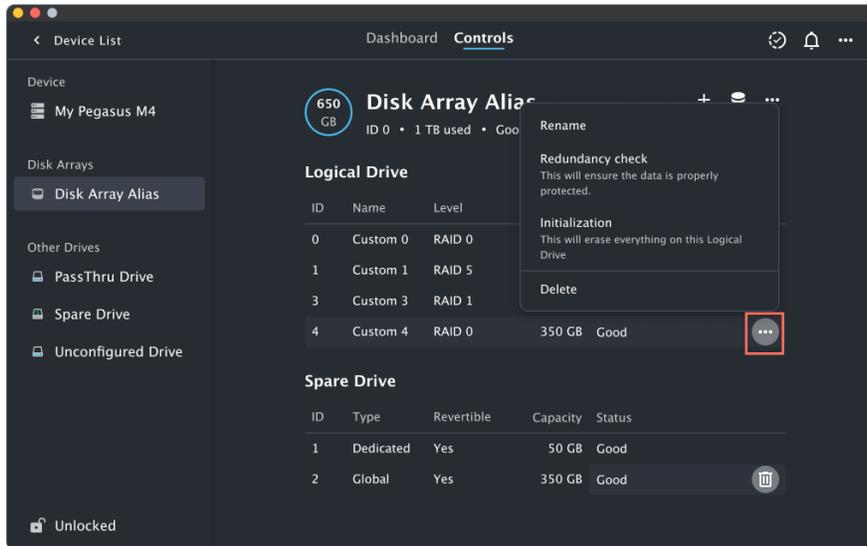
Delete Disk Array

To delete a Disk Array, click the 'More' options link and choose the Delete option. You will need to confirm that you want to remove the disk array by typing 'confirm' and clicking on the Confirm button.



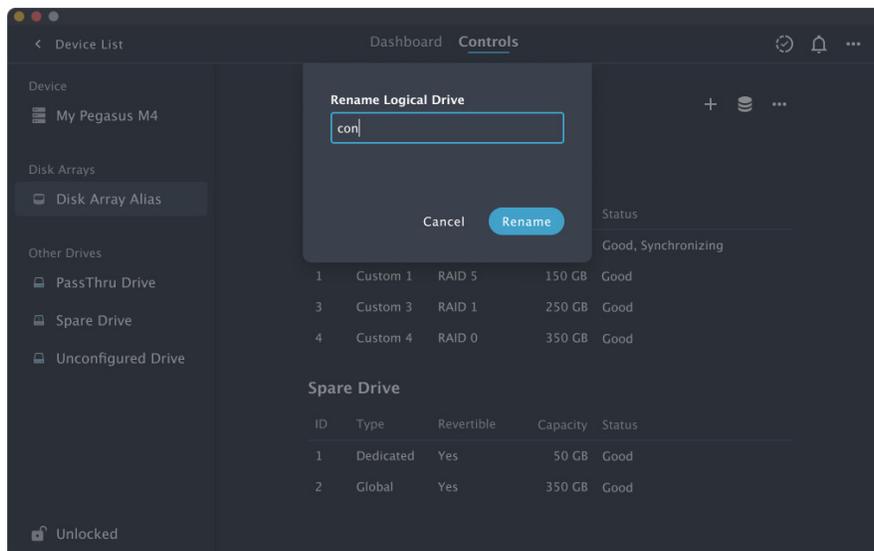
More button in separate logical drive

Click the 'More' options link for a logical drive and choose the Actions on the Logical Drive.



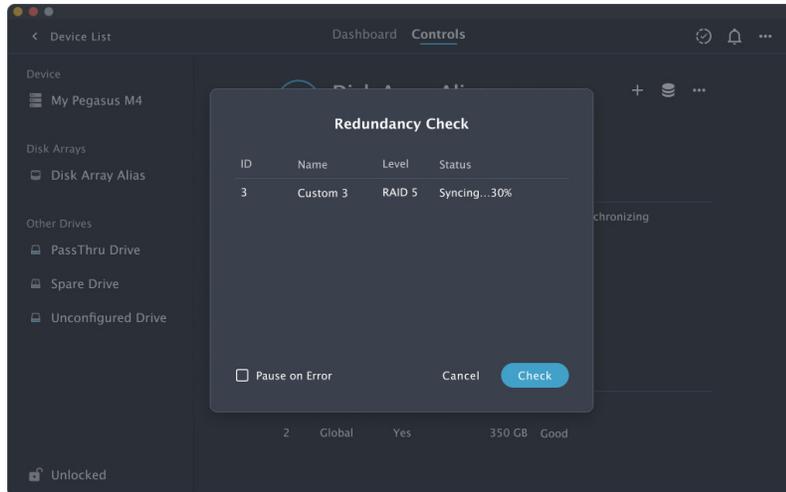
Rename Logical Drive

To rename a Logical Drive, click the 'More' options link for a logical drive and choose the Rename option. In the new menu that appears, type the new name for the Logical Drive and click the Rename button.



Redundancy check the Logical Drive

To perform a redundancy check on a Logical Drive, click the 'More' options link for a logical drive and choose the Redundancy Check. This includes the option to Pause on Error, i.e. stop the redundancy check if an error is detected.

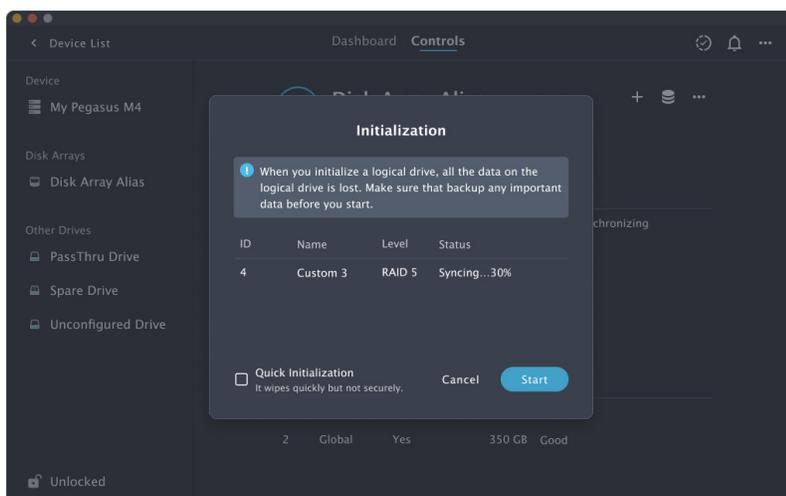


Logical Drive Initialization

WARNING: Initialization of the a logical drive will erase all data on the drive.

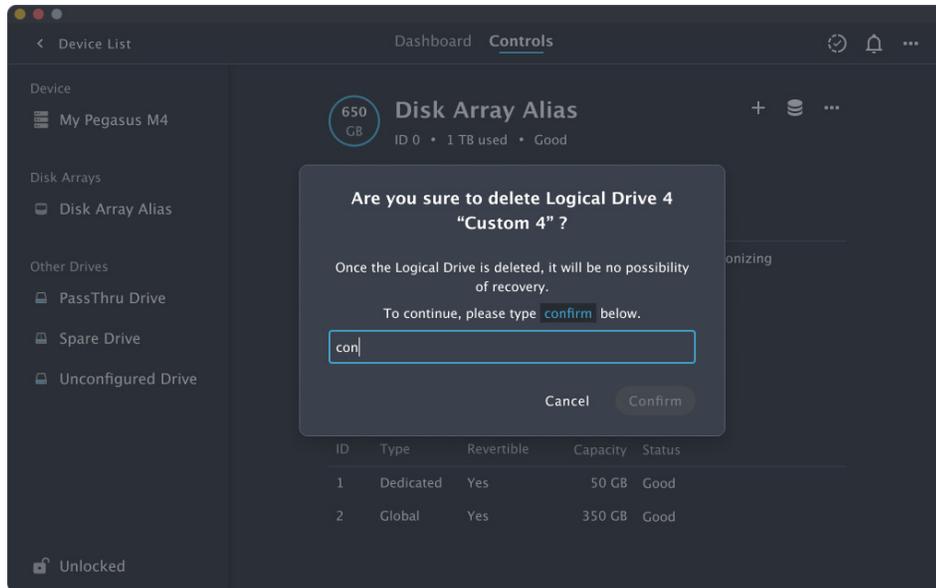
Before initializing a logical drive, backup data you want to keep since the drive will be erased.

If you want to enable Quick Initialization, select this option. Click Start to begin initialization.



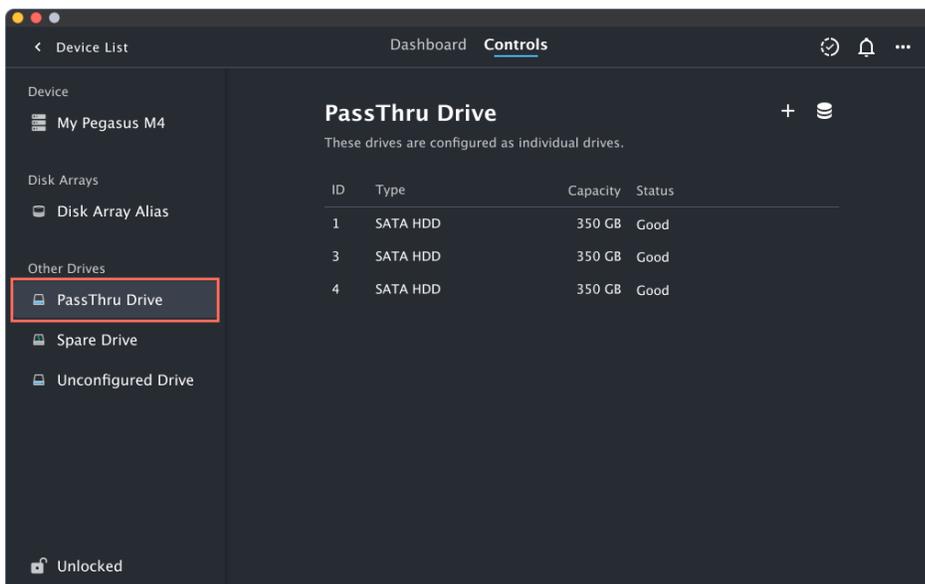
Delete Logical Drive

To delete a Logical Drive, click the 'More' options link for a logical drive and choose the Delete option. You will need to confirm that you want to remove the logical drive by typing 'confirm' and clicking on the Confirm button.



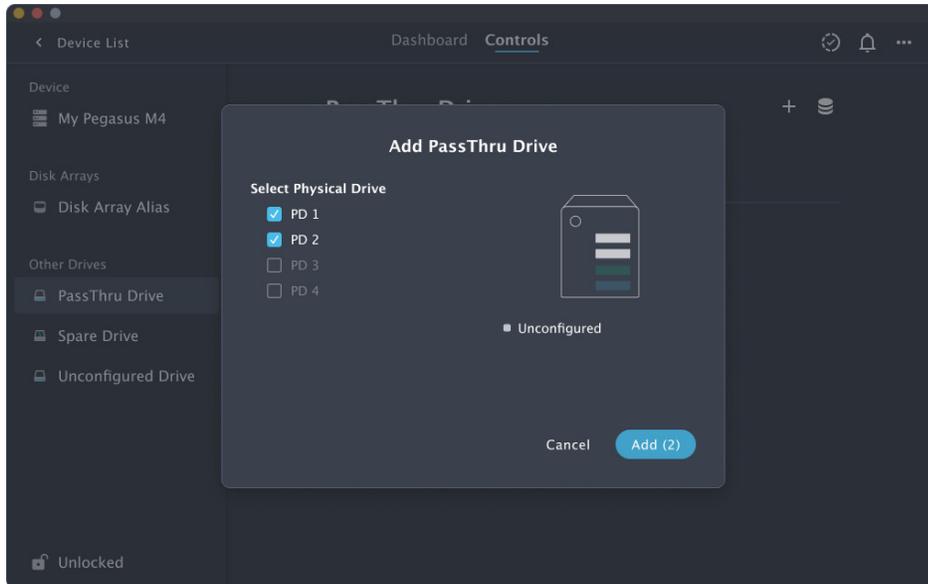
PassThru Drive tab in Controls menu

A Pass Thru Drive (pass through drive) is a physical drive that will not be part of the RAID configuration. Using a Pass Thru Drive (i.e. JBOD drive) reduces the options for RAID configuration of the remaining three physical drives. Go to the PassThru Drive menu in the Controls menu to add, delete or view PassThru Drives.



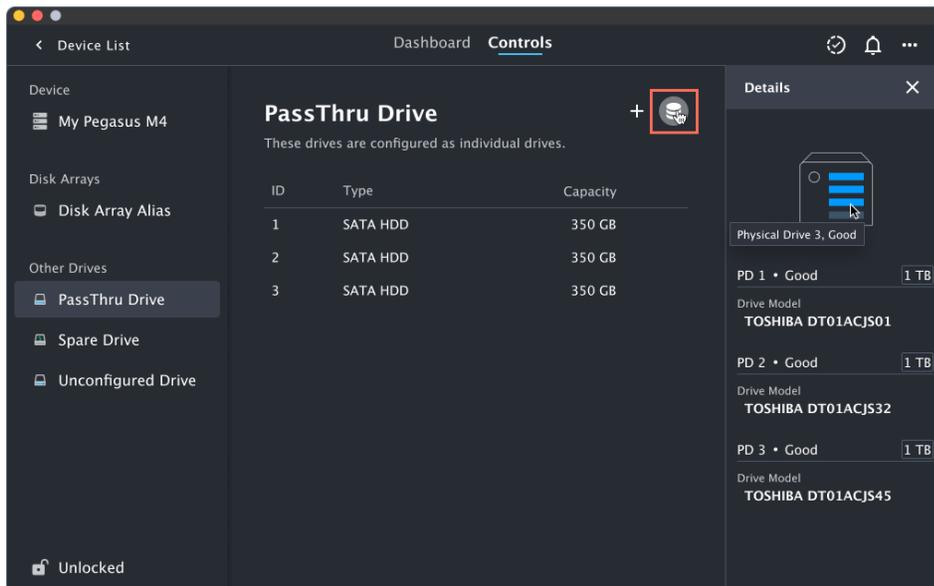
Add PassThru Drive

Users can add PassThru Drives as needed. Click the Add (+) option and select the PD (physical drives) to be designated as PassThru Drives and click the Add button.



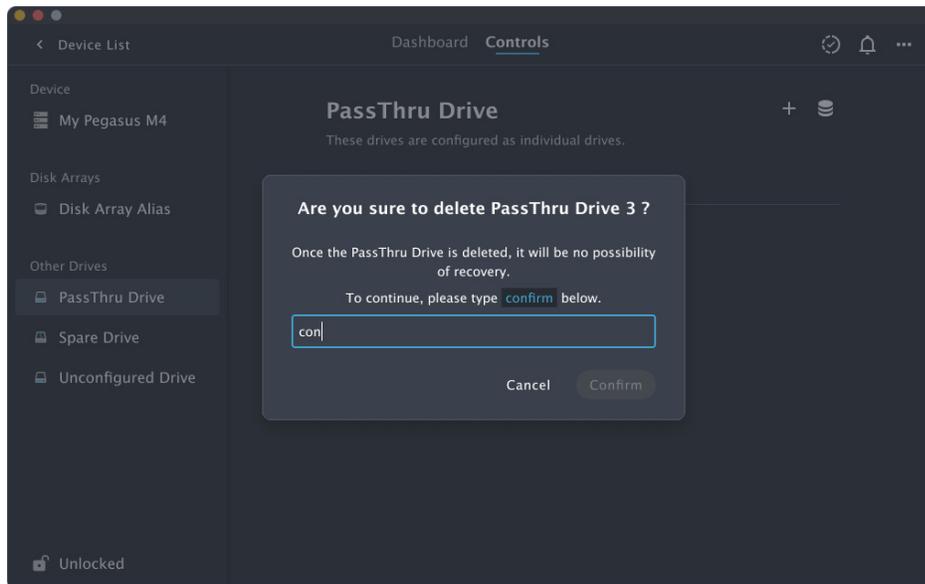
View PassThru Drives

Click the PassThru Drive tab in Controls to view the Physical Drive as PassThru Drive status.



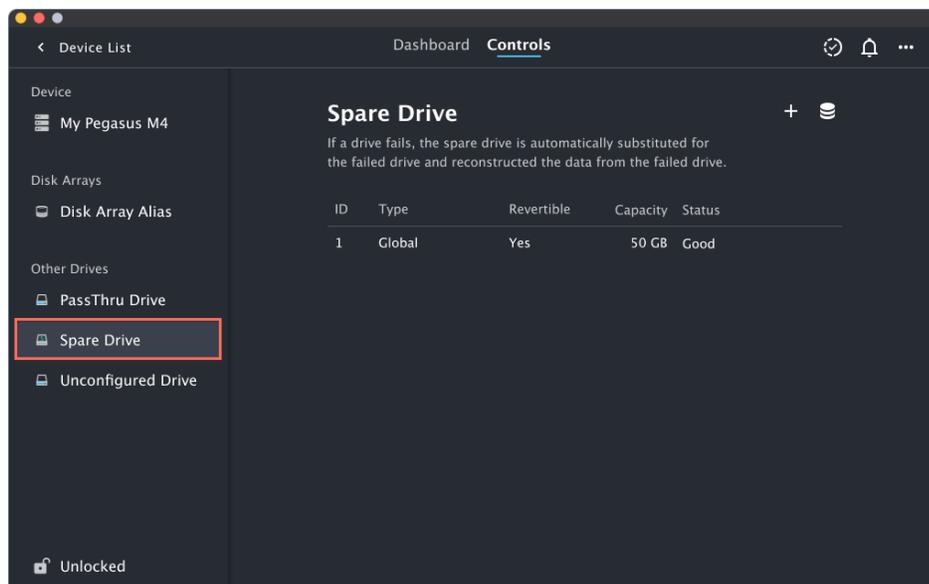
Delete PassThru Drive

To delete a PassThru drive, choose the Delete option and type 'confirm' to confirm you want to delete it.



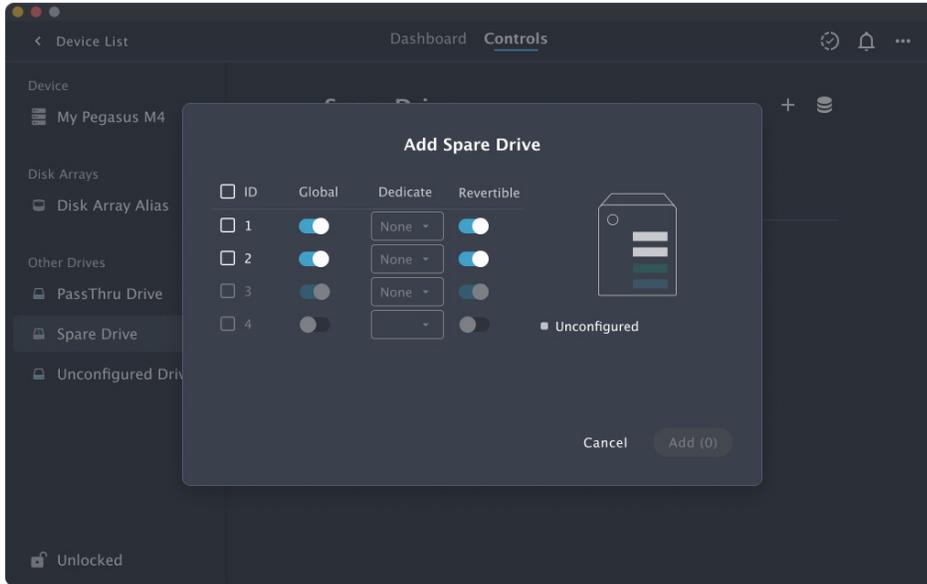
Spare Drive tab in Controls menu

Click the Spare Drive tab to view status, add or delete a spare drive. Mouse over the Spare Drive to view the current status.



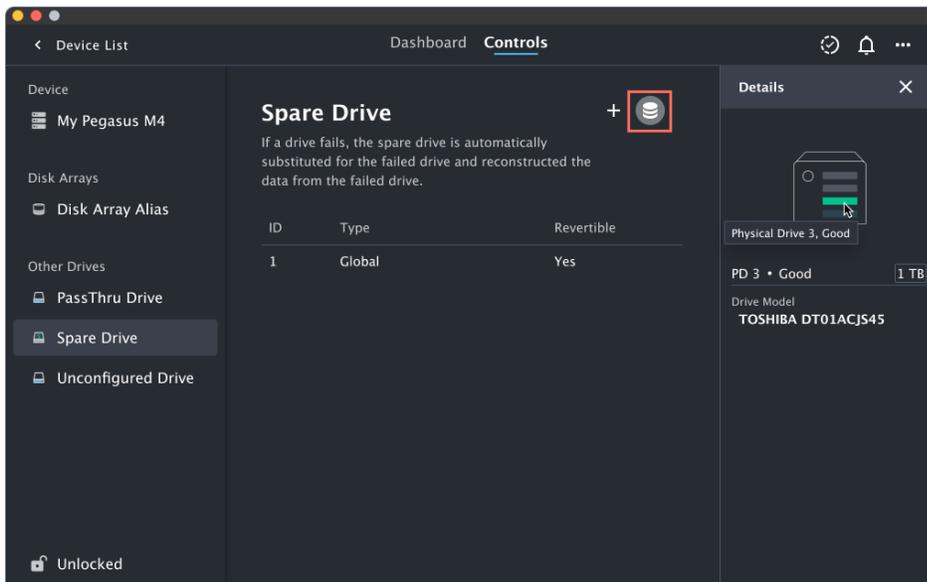
Add Spare Drive

To add a Spare Drive, select an unconfigured drive and change the settings as required. Spare drives serve as global or dedicated to a specified Disk Array. Swipe the Revertible switch. A revertible spare drive returns to its spare drive assignment after you replace the failed Physical Drive in the Disk Array and run the Transition function.



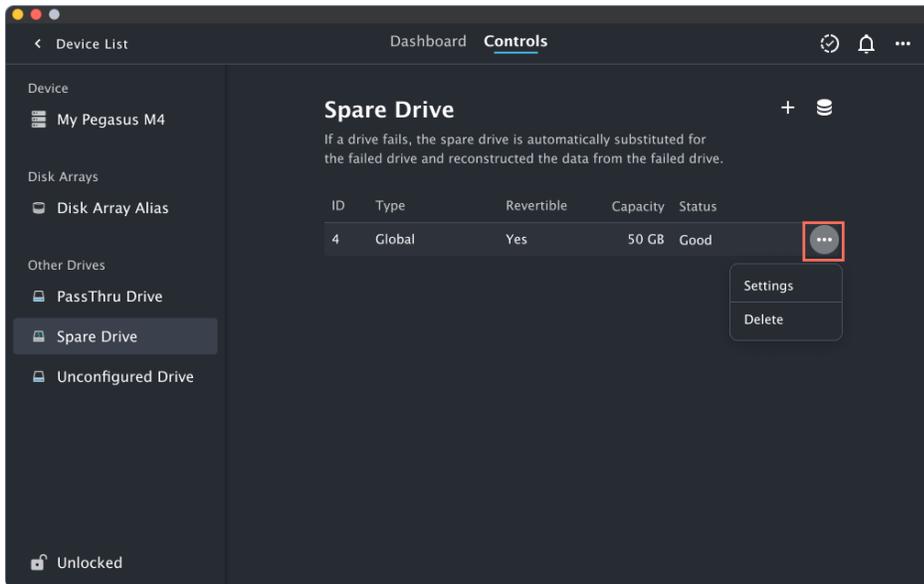
View Spare Drive

Use this button to open the sidebar to display the Spare Drive as a physical drive. The Spare Drive is the highlighted physical drive.



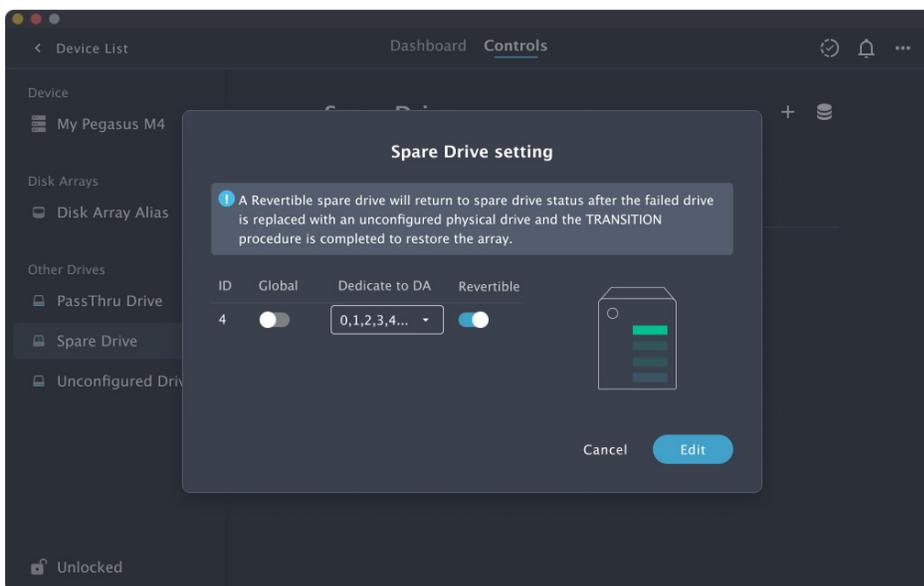
More button for Spare Drives

Click the More button to change settings or delete a Spare Drive.



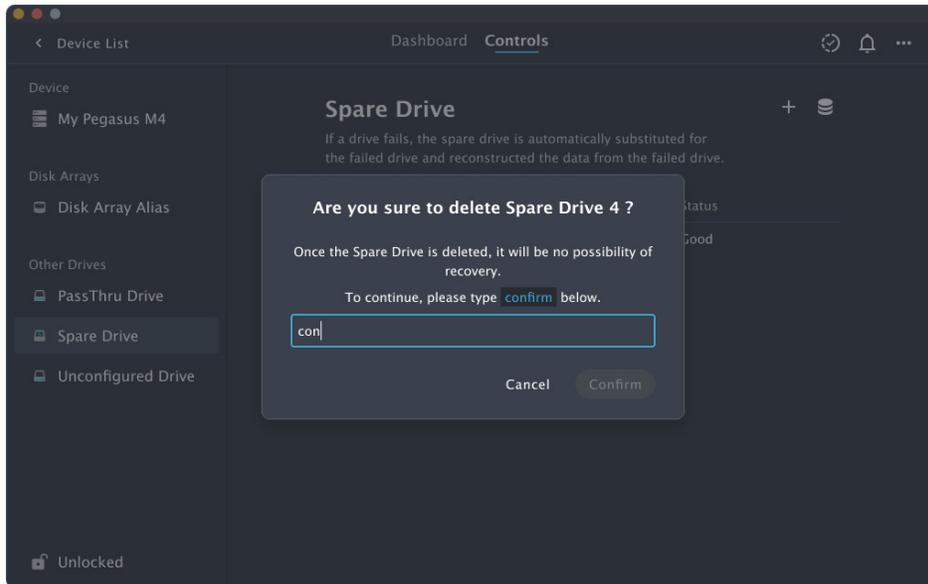
Change Spare Drive Settings

Choose the options for a selected spare drive. Use the slider to toggle Global and/or Revertible settings. For Non-global Spare Drives, an additional option allows the spare to be dedicated to a specific drive to function as the dedicated spare for the chosen array. Swipe the Global or Revertible switch to toggle these states on or off. Click the Edit button to apply the new settings.



Delete Spare Drive

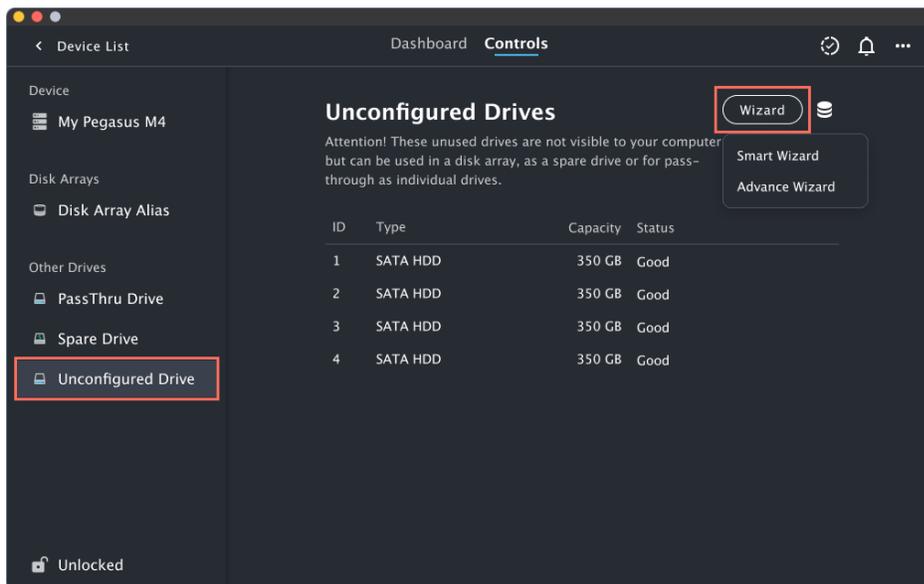
To delete the Spare Drive (i.e. to remove Spare Drive status from a designated Spare Drive), choose the Delete option in the More button options list. A menu will pop up asking you to confirm your decision by typing “confirm” and clicking on the Confirm button. When the Spare Drive status is removed, the drive displays as an unconfigured physical drive.



Unconfigured Drive tab in Controls menu

The Pegasus is shipped with physical drives installed and RAID array configured, so it is not necessary to do this yourself. However, if you want to change the disk drives or configure a different RAID, you will need to create a disk array and logical drive to use the storage. If you are installing new drives, use the Wizard to create a disk array and logical drive.

To create a Disk Array and Logical Drive click on the Wizard button. There are 2 configuration methods: Smart Wizard and Advanced Wizard. If you are not familiar with RAID systems, it is recommended to use the Smart Wizard.

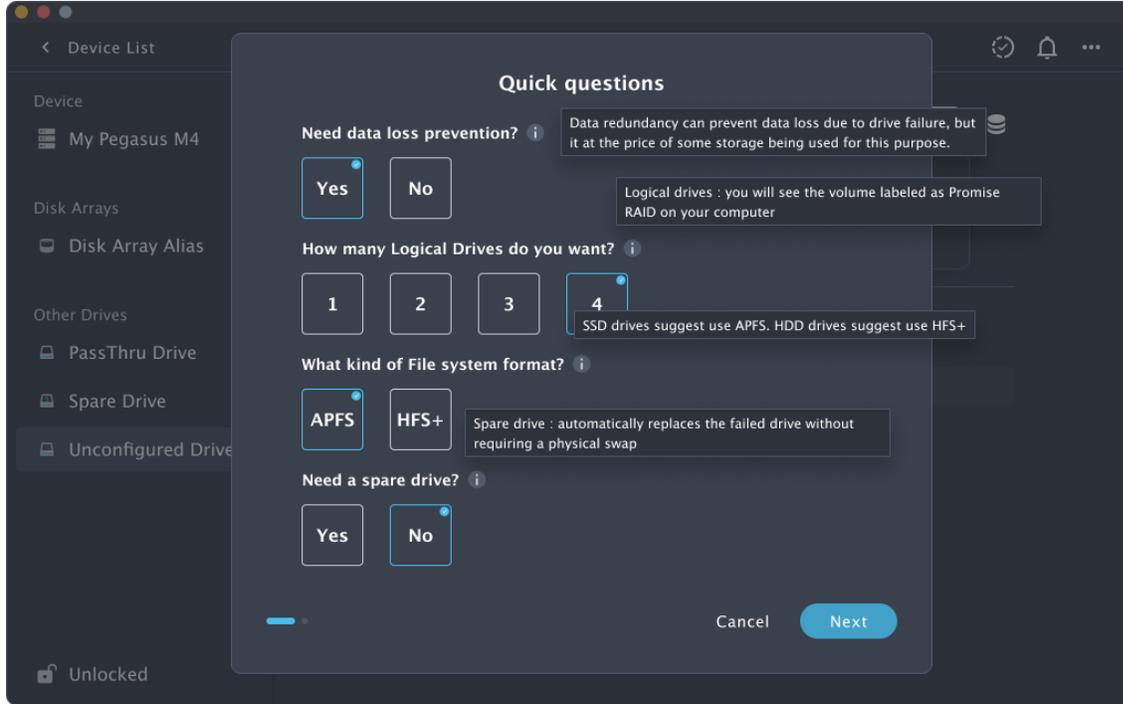


Choose your preference from the drop-down Wizard menu options. See the table below.

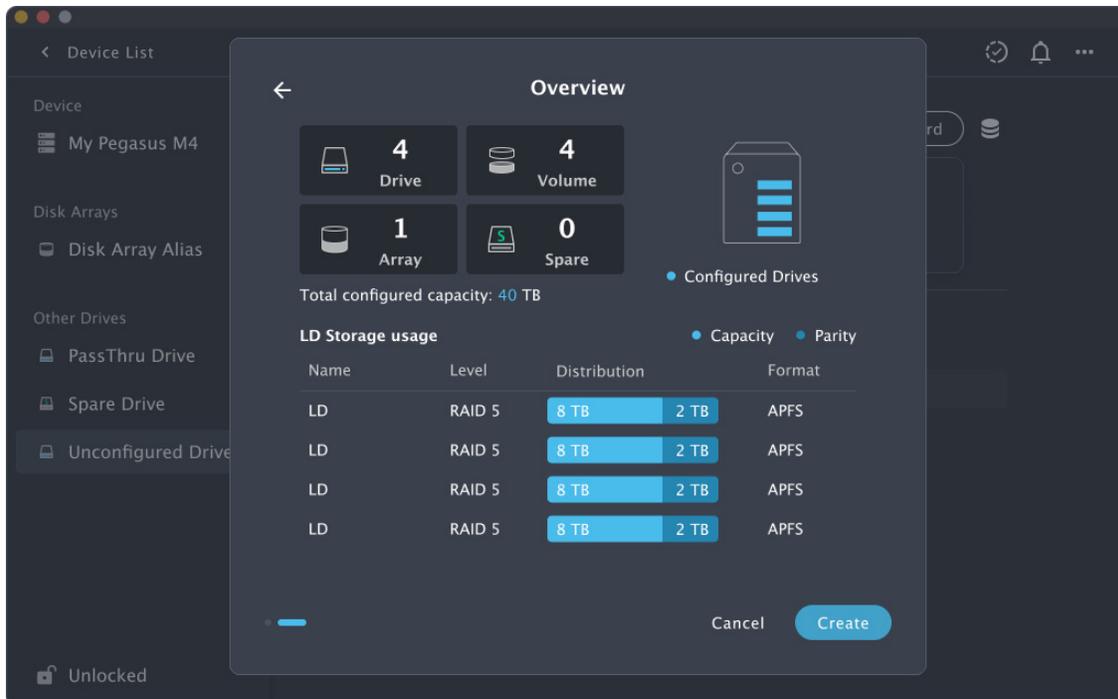
Method	User options	Suggested for users who are ...
Smart Wizard	No options, just use default settings.	Users with little or no experience with digital storage systems.
Advanced Wizard	Options to change storage parameters.	Users with high level of knowledge about digital storage systems.

Smart Wizard (2 steps)

1. There are four questions presented: Do you want data redundancy? How many Logical Drives? What File System do you want to use? Do you need a Spare Drive? Provide answers and click Next to continue.

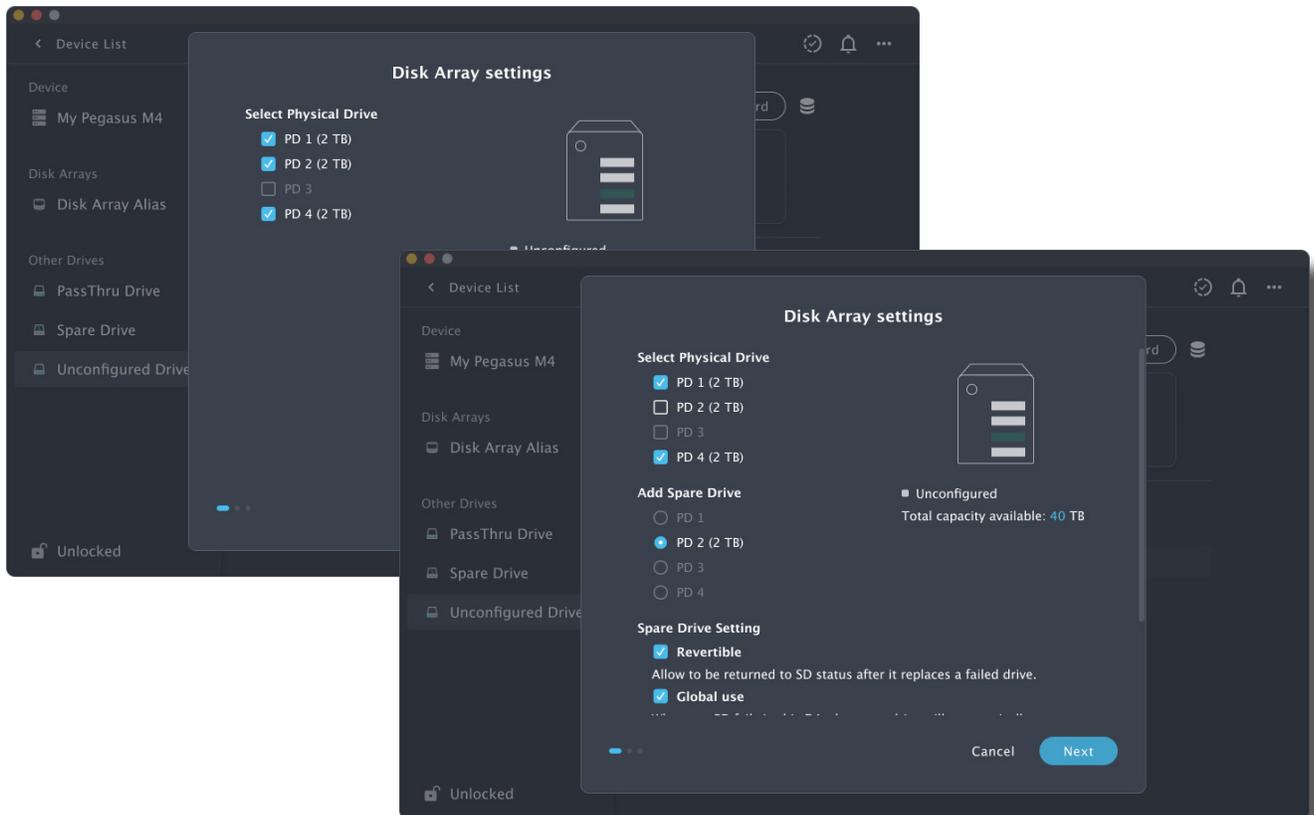


2. In Step 2 an overview of the proposed configuration appears. Click Create the Wizard to create the disk array, logical drive, and spare drive based on the answer from Step 1.

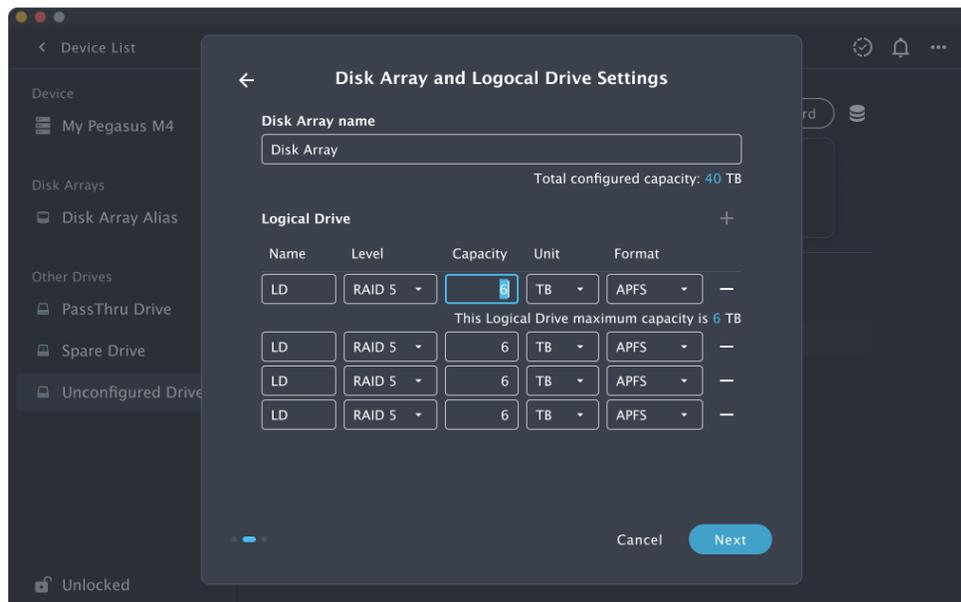


Advanced Wizard (3 steps)

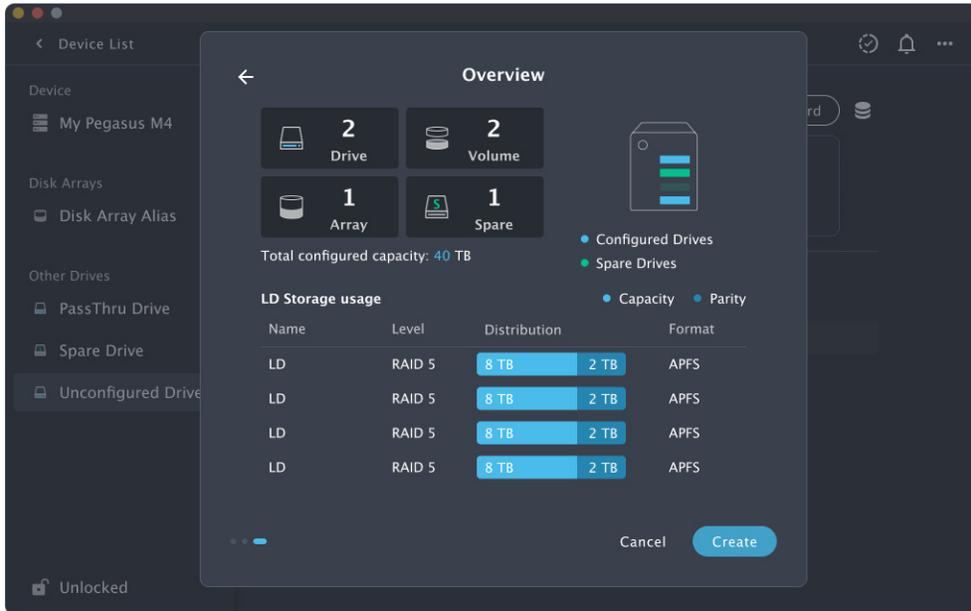
1. Choose which Physical Drives will be included in the array. If there is an unconfigured drive remaining, the spare drive settings will appear automatically.



2. Enter a name for the Disk Array and Logical Drive. Choose settings for each logical drive, including the RAID level, the capacity to use (default settings apply all available capacity) and the file system. Click Next to continue.

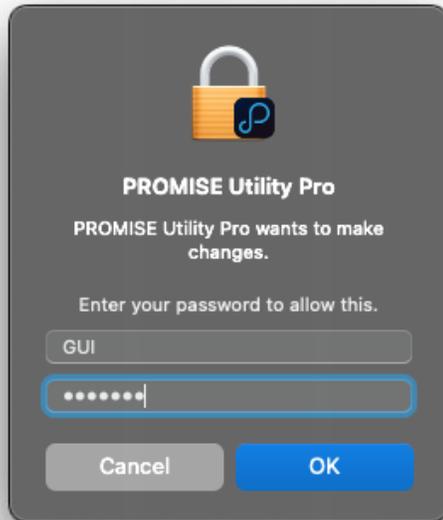


- An overview of the RAID setup appears. Double-check the storage configuration settings to make sure this is what you want. Click Create to create the new logical drive (and new spare drive if that is an option in the chosen settings).

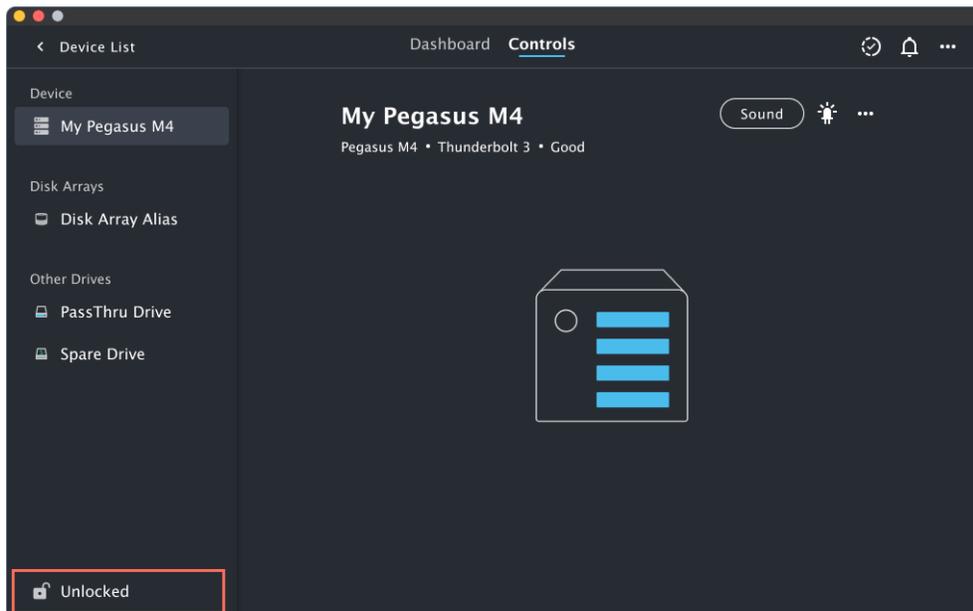


Lock tab on the Controls page

By default, the PROMISE Utility Pro is locked to prevent unauthorized changes to your RAID system. When it is locked, you cannot create logical drives or change settings on the Pegasus series unit. PROMISE Utility Pro will automatically display a pop-up menu asking for the administrator password.



Users can also unlock manually by clicking the closed lock icon at the lower left screen of the Controls page. The password authorizing dialog will pop up to let the user type in the password.



Once is unlocked all the Pegasus series that is auto-discovered by the PROMISE Utility Pro are also at unlock status.