



LaCie RAID Manager for 2-Bay Devices User Manual

LaCie 2big Dock Thunderbolt 3

LaCie 2big RAID

LaCie Rugged RAID Pro

LaCie Rugged RAID Shuttle



one billion bytes and one terabyte, or TB, equals one thousand billion bytes. Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity is used for formatting and other functions and will not be available for data storage.

Quantitative usage examples for various applications are for illustrative purposes.

Actual quantities will vary based on various factors, including file size, file format, features, and application software. The export or re-export of hardware or software containing encryption may be regulated by the U.S. Department of Commerce, Bureau of Industry and Security (for more information, visit www.bis.doc.gov) and controlled for import and use outside of the U.S. Actual data rates may vary depending on operating environment and other factors. Complying with all applicable copyright laws is the responsibility of the user. All coded instruction and program statements contained herein is, and remains copyrighted works and confidential proprietary information of Seagate Technology LLC or its affiliates. Any use, derivation, dissemination, reproduction, or any attempt to modify, reproduce, distribute, disclose copyrighted material of Seagate Technology LLC, for any reason, in any manner, medium, or form, in whole or in part, if not expressly authorized, is strictly prohibited. Seagate reserves the right to change, without notice, product offerings or specifications.

Seagate Technology LLC
10200 S. De Anza Blvd.
Cupertino, CA 95014 U.S.A.

Seagate Singapore International Headquarters Pte. Ltd.
Koolhovenlaan 1
1119 NB Schiphol-Rijk
The Netherlands

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Introduction

Created specifically for LaCie professional direct-attached storage, LaCie RAID Manager helps you configure and manage arrays, set up important email alerts, measure the health of hard drives, and more.

The **LaCie RAID Manager for 2-Bay Devices** user manual provides instructions on configuring and maintaining arrays for the following LaCie professional storage devices:

- LaCie 2big Dock Thunderbolt 3
- LaCie Rugged RAID Pro
- LaCie Rugged RAID Shuttle

For common questions and answers about LaCie RAID Manager, please see [Frequently Asked Questions](#).

You can get the latest tips and updated technical information about your product at [LaCie customer support](#).

LaCie RAID Manager: 5big, 6big, 8big and 12big

LaCie RAID Manager's features and options differ significantly for devices with more than two hard drives. These products include:

- LaCie 12big Thunderbolt 3
- LaCie 6big Thunderbolt 3
- LaCie 8big Rack Thunderbolt 2
- LaCie 5big Thunderbolt 2

For details on using LaCie RAID Manager for these devices, see [LaCie RAID Manager: 5big, 6big, 8big and 12big](#).

LaCie RAID Manager requirements

LaCie professional storage

- LaCie 2big Dock Thunderbolt 3
- LaCie Rugged RAID Pro
- LaCie Rugged RAID Shuttle

Minimum operating system

For detailed information on supported operating systems, please see the following [knowledge base article](#).

Thunderbolt 3

- macOS Sierra 10.12 and higher
- Windows 10 and higher

Thunderbolt 2

- Mac OS X 10.9 and higher
- Windows 7 and higher ([driver required](#))

USB

- Mac OS X 10.9 and higher
- Windows 8 and higher

Getting Started

Download the LaCie RAID Manager installer per the instructions provided on your LaCie storage device's quick install guide or online registration. The LaCie RAID Manager installation includes:

- The driver to mount the LaCie device via Thunderbolt 2 and Thunderbolt 3.
- LaCie RAID Manager to manage the storage.



Important info regarding LaCie RAID Manager and LaCie Desktop Manager—Older versions of LaCie Desktop Manager may conflict with LaCie RAID Manager. If you are using LaCie Desktop Manager, go to LaCie support to download and install the latest version. It's recommended that you install the new version before following the steps below.

Download and Install LaCie RAID Manager

After downloading the LaCie RAID Manager installer:

1. Launch it from the computer's Downloads folder. If you cannot find the installer on your computer, it can be [downloaded here](#).
2. Follow the on-screen instructions to complete the installation. You may be prompted to restart your computer.

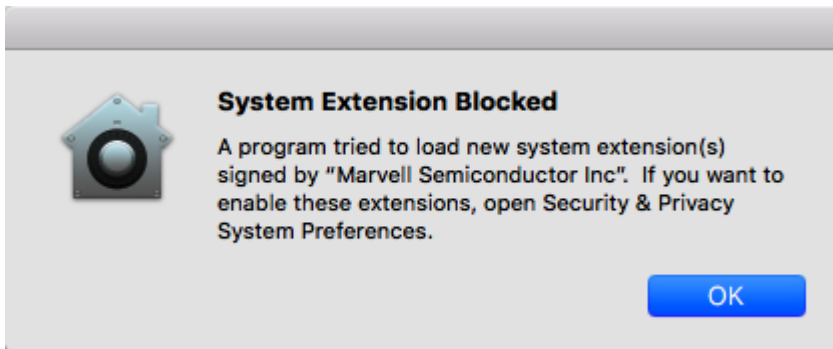
See the user manual for your LaCie product for instructions on connecting your drive and details regarding hard drive formats.

Device	Factory configuration	User manual
LaCie 2big Dock Thunderbolt 3	RAID 0	Click here
LaCie 2big RAID	RAID 0	Click here
LaCie Rugged RAID Pro	RAID 0	Click here
LaCie Rugged RAID Shuttle	RAID 0	Click here

macOS 10.13 High Sierra

Apple introduced a new security mechanism in macOS High Sierra 10.13 that requires a user's approval before loading third-party kernel extensions (kexts). When installing LaCie RAID Manager on a Mac running

macOS 10.13 (High Sierra), you may receive a 'System Extension Blocked' alert message:



The macOS alert message shows the name of the developer who signed the next certificate.

Enabling the kernel extension

To enable the kernel extension:

1. When the alert message appears, click **OK**.



Once you press **OK**, you have 30 minutes to approve the software.

2. Click on the Apple icon and select **System Preferences...**
3. Select **Security & Privacy**.
4. Click on the **Allow** button for the blocked software.



If the Allow button is not selectable, click on the Lock icon at the bottom of the pane, and then enter your system password.



5. Click **Restart** to restart computer right away, or **OK** if you prefer to manually restart your computer.

Troubleshooting for big devices

- It's recommended that you install the latest version of LaCie RAID Manager (LRM v2.5.704.24245 or later).
- Make sure that the "Marvell Semiconductor Inc" kernel extension is enabled in System Preferences > Security & Privacy.
- If the kernel extension is not listed under Security and Privacy, reinstall LRM v2.5.704.24245 or later. Before restarting the computer, go immediately to System Preferences > Security & Privacy to enable the "Marvell Semiconductor Inc" kernel extension.

Windows and Thunderbolt 3

Your LaCie Thunderbolt 3 storage device is certified for use with Windows PCs that have a Thunderbolt 3 port. However, you may experience connectivity issues between the storage device and the Thunderbolt 3 port on a Windows PC. Therefore, before setting up your LaCie Thunderbolt 3 storage device, please visit your PC manufacturer's website to update your Windows PC to the latest versions of:

- BIOS
- Thunderbolt 3 firmware
- Thunderbolt 3 driver

Also, make certain that your PC has the most recent version of Windows 10.

For questions regarding your PC, please contact the PC manufacturer. You can also review the following website for additional information: <https://thunderbolttechnology.net/updates>

Sign into LaCie RAID Manager

Administrators

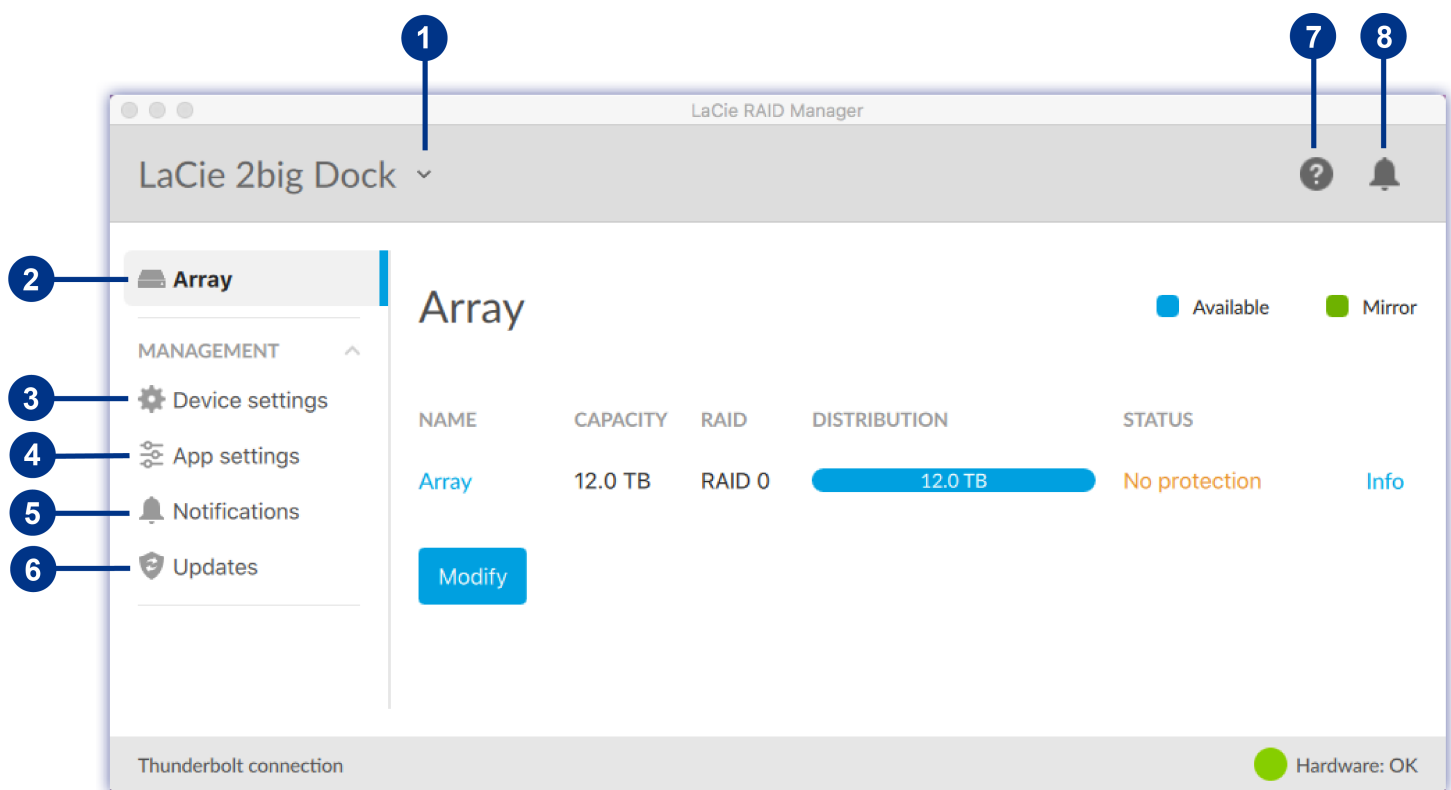
Users with administration privileges to the computer can launch LaCie RAID Manager without signing into the application.

Users

LaCie RAID Manager requests administrator credentials when it is launch by a user with standard user privileges to the computer. The administrator for the computer should launch the application to prepare it for the user.

LaCie RAID Manager navigation

LaCie RAID Manager's intuitive interface helps you manage your device's storage.



-
- 1 Select a connected device.

 - 2 Modify an array and view information on your current RAID configuration.

 - 3 Register your device and change device settings.

 - 4 Change LaCie RAID Manager app settings.

 - 5 View device events, download the event log, and set up email alerts.

 - 6 Check for updates to LaCie RAID Manager and your device firmware (internet connection required).

 - 7 Go to the LaCie RAID Manager support page (internet connection required).

 - 8 View a list of recent device operations and events.

Array Configuration and Maintenance

A 2-bay device can typically be configured as RAID 0, RAID 1, or JBOD. Each RAID level has its own advantages:

RAID level	Capacity	Protection	Speed	Factory default
RAID 0	100%	None	Excellent	Yes
RAID 1	50%	Excellent	Good	No
JBOD	100%	None	Varies	No

RAID 0—Data is not duplicated on both hard drives in RAID 0. This results in faster transfers and more storage, since the full capacity of both drives can be used to store unique data. However, RAID 0 lacks a very important feature: data protection. If a hard drive fails, all data in the array is lost.

RAID 1—RAID 1 provides greater safety since data is duplicated on each disk in the array. If a single disk fails, the data remains available on the other disk. However, this comes at a cost—since the same data is written to each drive, copying data takes longer and overall storage capacity is reduced by 50%. RAID 1 is a good choice when safety is more important than speed or disk space.

JBOD—"JBOD" stands for "Just a Bunch of Disks", meaning that your two drives have not been configured as an array and operate as two independent disks.



Note—LaCie Rugged RAID Shuttle uses Seagate Secure encryption, which does not support a JBOD configuration.

RAID and data security

While RAID levels higher than 0 can protect data in case of a single drive failure, they cannot guarantee complete data protection for all cases of hardware failure or data corruption. To help prevent the loss of your data in case of extreme circumstances such as hardware failure, LaCie highly recommends that you keep at least two copies of your data, one copy on your LaCie storage device and a second copy on one of the following:

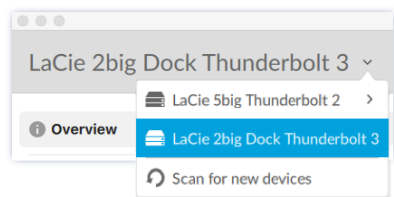
- Another direct-attached storage (DAS) device

- A network attached storage (NAS) device
- Some form of removable or archival storage

Any loss, corruption or destruction of data while using a LaCie hard drive or a LaCie hard drive system is the sole responsibility of the user and under no circumstances will LaCie be held liable for the recovery or restoration of this data.

Select a device

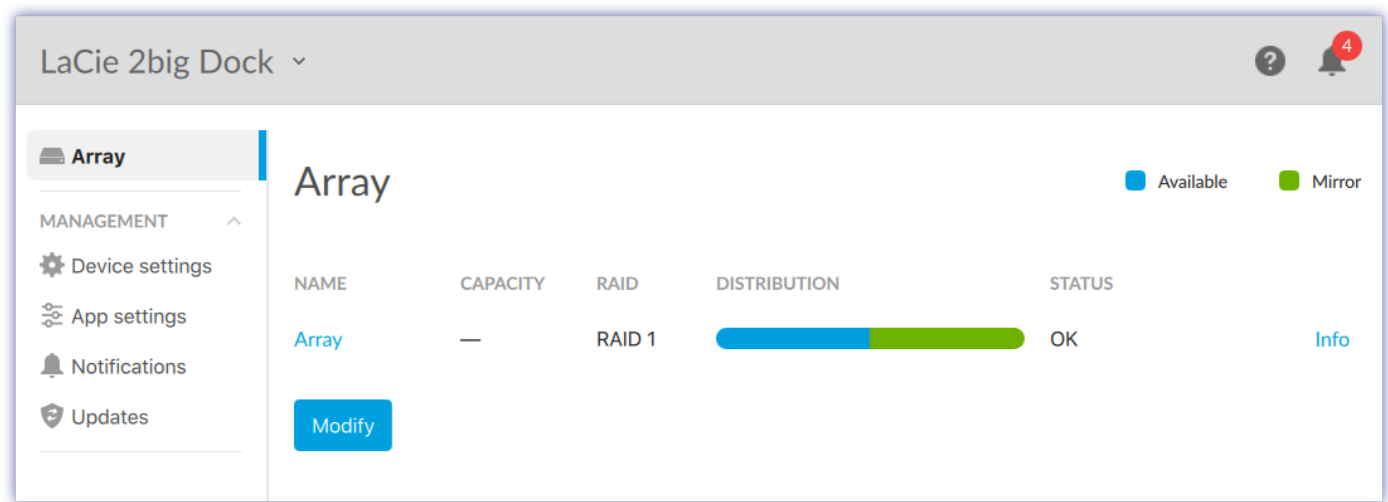
If your computer is connected to multiple compatible devices, click the arrow and select the device you want to manage.



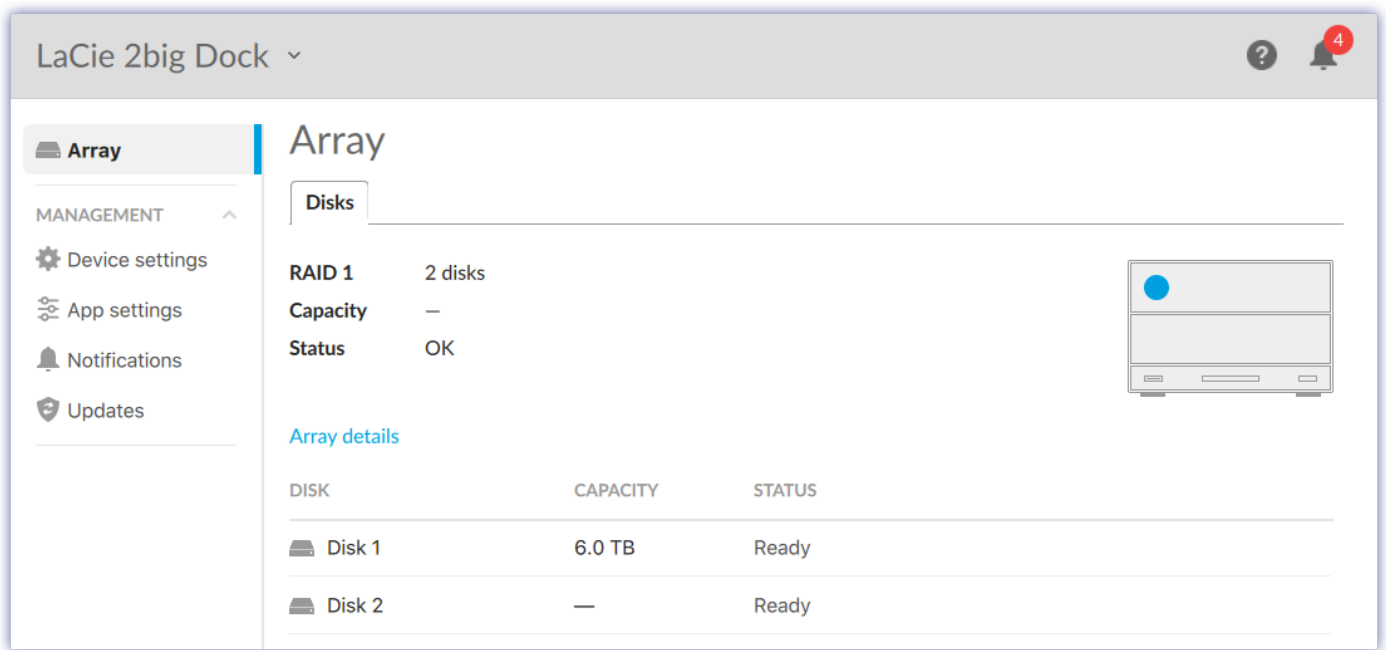
If the device is not currently listed, select [Scan for new devices](#) to have LaCie RAID Manager search for new devices connected to your computer.

View array

The Array tab provides summary information about the array configured for the selected device.



Click [Array](#) to view the capacity and status of the disks in the array.



Click [Array details](#) to view the following:

ID

RAID level

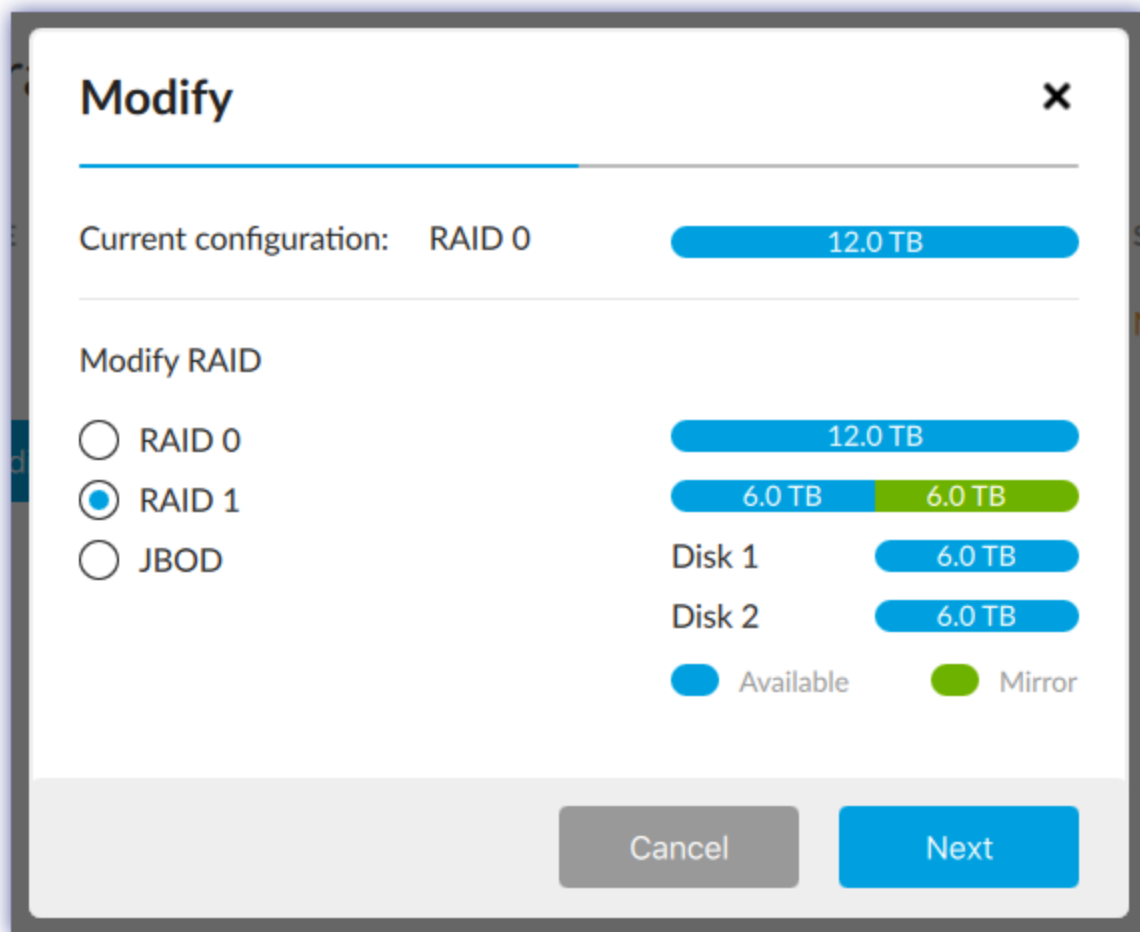
Status

Size

Modify RAID configuration

You can modify the RAID configuration for your device.

1. Go to the Array tab.
2. Click [Modify](#).
3. Choose the new RAID level for your device:



3. Click [Next](#).
4. At the prompt, click [Modify](#) to confirm.
5. Your device may require an additional physical action to complete the modification (for example, pushing the power button on the back of the device or inserting the end of a paperclip into a pinhole). Follow the onscreen instructions.

After modifying the RAID configuration, your operating system prompts you to initialize and format the array. Follow the instructions to format the array and use it with your computer. For more information about hard drive formats, see your product user manual.

Device and App Management

Device settings

Click the [Device settings](#) tab in the sidebar to view details and settings related to the currently selected device.

Change device name

To change the name of your device:

1. Click on the Edit icon  next to the device name.
2. Enter a new name in the edit field (up to 19 characters in length).
3. Press **Enter**.

View device details

Click [Device details](#) to see information related to your hardware.

Vendor version

Vendor ID

Subvendor ID

Subdevice ID

Port count

Supported RAID

Max disks / Device

Serial Number

Register your device

Click [Register your device](#) to go to the LaCie Product Registration page. An internet connection is required.

App settings

Click the [App settings](#) tab in the sidebar to change LaCie RAID Manager settings.

Change language settings

Use the [Language](#) drop-down menu to select a language setting.

Send usage information

When [Send usage information](#) is enabled, LaCie RAID Manager is permitted to send anonymous usage data to help LaCie improve your user experience.

Change auto start setting

When [Auto start](#) is enabled (default setting), LaCie RAID Manager starts automatically after you sign into your computer. When disabled, you must start LaCie RAID Manager manually.

View app version

The installed version of LaCie RAID Manager is listed on the app page.

Notifications

Click the [Notifications](#) tab in the sidebar to view device events, download the event log, and set up email alerts.

Download log

Click [Download log](#) to save a .log file to your computer containing a list of events related to your device.

Clear notification entries

Click [Clear All](#) to clear the list of notifications.

Change email settings

LaCie RAID Manager can send you email updates on the health and status of your device. Your computer must have internet access and LaCie RAID Manager must be open in order to send you email notifications.

To change email settings:

- 1 Click [Email settings](#)

1. Click [Email settings](#).
2. Enter your email address.
3. Select the types of content you want notifications for.
4. Click [Save](#).

Custom server

By default, emails are sent from LaCie's server. You can configure email notifications to be routed through a custom server instead. A basic understanding of servers and networking is required.

1. Click [Email settings](#).
2. Click the [Email server](#) drop-down list and choose [Custom](#).
3. Complete all fields.
4. Click [Save](#).

Updates

Click the [Updates](#) tab in the sidebar to view the installed versions of:

- System firmware
- LaCie RAID Manager

Check for updates

To have LaCie RAID Manager check for updates, click [Check now](#). Your computer must have access to the internet to check for updates.

Use system proxy settings

LaCie RAID Manager searches for updates using your PC or Mac's internet connection. If your computer uses a proxy server for internet connection, make certain to enable [Use system proxy settings](#).

Recent notifications

Click the Bell icon in the header bar to view a list of recent events.



Click [View all notifications](#) to go to the Notifications page.

Frequently Asked Questions

RAID levels

[Why doesn't LaCie RAID Manager support JBOD \("just a bunch of disks"\) as a RAID level for Rugged RAID Shuttle?](#)

Rugged RAID Shuttle uses Seagate Secure encryption, which does not support a JBOD configuration.

RAID initialization and other operations

[Can I disconnect my computer during RAID synchronization or initialization?](#)

Yes. Synchronization and initialization continue uninterrupted when the computer disconnects from the LaCie device. Similarly, your LaCie device can be placed into low power mode or powered off during synchronization and initialization. Provided the same hard drives are in the enclosure, the operation continues once the device is powered on.

[Initialization has been running for days. Has initialization become stuck?](#)

With higher capacity storage, initialization can take many days and, in some cases, well over a week. This is especially true of background initializations. You can check Device settings in LaCie RAID Manager to see if the processing for initialization has been moved to Low. Reducing the processing allotted to initialization can slow down initialization while helping to improve performance. To speed up initialization, move the slider to High. The device's performance can be negatively affected when the slider is set to High.

[Can I perform more than one operation at a time, for example, run a disk check while an initialization is in progress?](#)

Only one operation can be performed at a time. Therefore, you can run an initialization and then a disk check but not at the same time. The same is true for a consistency check and an array upgrade.