STORAGE



The information below identifies and explains the functions on the Storage page. For directions on how to configure RAID for your LaCie NAS, select product below:

- LaCie 2big NAS
- LaCie 5big NAS Pro

Manual note: Certain features and functions listed below apply only to the LaCie 5big NAS Pro, such as LaCie SimplyRAID, RAID 5, RAID 6, spare disks, and double-disk security.

LACIE NAS VOLUME AND RAID MANAGEMENT

Your LaCie NAS can have up to five volumes, each with its own level of RAID.

Enhanced data protection: LaCie SimplyRAID

No matter the capacity of your disks, LaCie SimplyRAID will prepare the storage for immediate use as well as future expansion. LaCie SimplyRAID allows you to:

- Install disks of varying capacities (1TB, 2TB, and 3TB)
- Replace smaller capacity disks with larger capacity disks
- Upgrade storage capacity without deleting or moving data
- Protect data without compromising performance

When using disks of varying capacities, LaCie SimplyRAID will attempt to optimize available storage for your data.

Standard disk configuration: Manual RAID

While the benefits of LaCie SimplyRAID are highly recommended, the Storage page also gives you the option to manually configure your hard disks as:

- JBOD
- RAID 0 (minimum two disks)
- RAID 1 (minimum two disks for data protection)
- RAID 5 (minimum three disks)
- RAID 5 plus spare (minimum four disks)
- RAID 6 (minimum four disks)
- RAID 6 plus spare (minimum five disks)

REVIEW AND REVISE THE STORAGE SETTINGS

Storage				Add storage
RAID 0 51% LACIE-ISCSI SimplyRAID 0%	SimplyF Capacity Mode Status Drives	AID A 3.9 TB of 3.9 TB SimplyRAID C OK	Manage O _v Def	Format Delete

The initial view for the Storage page displays the volume(s) and current RAID scheme(s) for your LaCie NAS. Use this page to add, manage, and configure the NAS storage.

Select a volume

Storage		Add storage
RAID 0	SimplyRAID Capacity 3.9 TB of 3.9 TB Mode SimplyRAID Status OK Drives	ge Format Delete

Choose a volume within the left-hand column. The selected volume will appear in white while the other volumes are grey.

Volume tools



Tools to manage the selected volume are available in the center of the Storage page.

Name

The default name for the first new volume is *Volume 1*. The number will rise incrementally when adding new volumes, *Volume 2*, *Volume 3*, etc. To change the name:

1. Choose the configuration icon (pencil) next to the name.



2. Select the default name to type the new name.



3. Once the new name is entered, choose the check mark.



Capacity

A quick reference of the volume's:

- Total storage capacity.
- Available storage capacity.



LACIE 5big	NAS Pr	0	
Storage			Add storage
RAID 0	RAID 0	B	Format Delete
	Capacity	1.9 TB of 3.9 TB	
	Mode Status Drives	RAID 0 A OK	Q. Details

The *i* tooltip will appear in the row for capacity following the creation of an iSCSI target. In the example below, passing the cursor over the tooltip indicates the amount of storage assigned to the volume's iSCSI target.



Mode

Mode lists the level of RAID configured for the volume. A tooltip is available next to the volume's RAID level:

Storage				Add storage
RAID 0	Simply F	CAID S 3.9 TB of 3.9 TB	Manage	Format Delete
	Mode	SimplyRAID		
SimplyRAID	Status	ок		
	Drives		O, De	talls

Storage			Add storage
RAID 0	RAID 0	P	Format Delete
	Capacity	1.9 TB of 3.9 TB	
EACIE-ISUSI	Mode	RAID 0 A	
SimplyRAID	Status	ок	
	Drives		Q, Details

Pass the cursor over the tooltip for important information about the RAID's level of data protection.





Status

Status gives you immediate feedback on the health of the volume's RAID configuration:

• **OK**. The standard message in most instances, indicating that the RAID is operational and that no problems have been detected.



• No data protection. Data on the volume is intact but the RAID is in danger of breaking since one or more disk(s) are missing or reporting errors. The amount of disks that can fail before this message appears is contingent upon the level of RAID (see <u>5big NAS Pro: About RAID Modes</u> for further information.)

Storage				Add storage	0
RAID 0	SimplyF	RAID 🖉	Manage	Format	Delete
	Capacity	3.9 TB of 3.9 TB			
	Mode	SimplyRAID			
SimplyRAID	Status	No data protection			
	Drives		Q, De	tails	

• **Protected if one disk fails**. RAID configurations with double-disk security will see this message if a single disk is missing or reporting errors.



• Broken. The RAID is broken resulting in a loss of data.



Broken RAID 0: One is disk missing



Broken SimplyRAID: Two disks are missing

• **Synchronizing**. The system is synchronizing data across all the disks selected for the RAID configuration. The volume is available for use while the RAID is synchronizing.

Storage				Add storage
RAID 0	Simply	RAID 🖉	Manage	Format Delete
	Capacity	3.9 TB of 3.9 TB		
	Mode	SimplyRAID		
SimplyRAID	Status	Synchronizing (13%) 🚯		
	Drives		O, De	stalls

Choose **Details** for further information.

Details

Choosing **Details** opens a popup window with information that complements the message within **Status**.

When the **Status** is *OK*, a multicolor bar shows how LaCie SimplyRAID or standard RAID distributes the volume's storage.



RAID Status: SimplyRAID

Drive	Status	Capacity	
1	OK	2 TB	
2	OK	2 TB	
3	OK	1 TB	
4	OK	2 TB	
5	OK	2 TB	

RAID Status: RAID 6

- Dark blue: Storage capacity for your data.
- Light blue: Protection in case one or two disks fail. The light blue indicator will vary in size depending upon single or double disk protection.
- Green: Disk capacity that spans beyond the level of RAID. This space is reserved for expansion should you add new or, larger capacity disks.

Status messages *Broken*, *Protected if one disk fails*, and *Synchronizing* are also listed in the Details popup window.

Storage				Add storage
RAID 0	SimplyR	AID 🖉	Manage	Format Delete
LACIE-ISCSI	Capacity	3.9 TB of 3.9 TB		
	Mode	SimplyRAID		
	Status	Broken RAID		
	Drives			
	Drive d	letails	×	
	Drive d	letails _{Status}	X	
	Drive d	Status Broken RAID	Capacity 2 TB	
	Drive d Drive 1 2	Status Broken RAID Broken RAID	Capacity 2 TB 2 TB	

RAID Status: SimplyRAID Broken

0%	RAI	D_6 🖉		Manage Format	Delet
	Capa	city 2.9 1	B of 2.9 TB		
	Mode	RAID	6		
	Statu	s Prot	ected if one disk fails		
	Drives	5		1	
		Drive d	etails	×	
		Drive	Status	Capacity	
			OK	2 TB	
		1	UN		
		1	OK	2 TB	
		1 2 3	OK OK Missing	2 TB	
		1 2 3 4	OK Missing OK	2 TB - 2 TB	

RAID Status: RAID 6 Single-disk protection

RAID_6	RAI	D_6 🖉		Manage Forn
	Capad	ity 2.9 T	B of 2.9 TB	
	Mode	RAID	6	
	Status	s Sync	hronizing (8.4%) 🚯	
	Drives			1
	1	Drive d	letails	X
		Drive	letails Status Svnchronizing	X Capacity 2 TB
		Drive Drive	Status Synchronizing Synchronizing	X Capacity 2 TB 2 TB
		Drive d	Status Synchronizing Synchronizing Synchronizing	X Capacity 2 TB 2 TB 2 TB 1 TB
		Drive d Drive 1 2 3 4	Synchronizing Synchronizing Synchronizing Synchronizing Synchronizing	X Capacity 2 TB 2 TB 1 TB 2 TB 2 TB

RAID Status: Synchronizing RAID 6

Add storage

Choose **Add storage** to create new volumes and iSCSI targets. For further information, see:

- New volume wizard: 2big NAS
- New volume wizard: 5big NAS Pro
- iSCSI Target

Manage

You can perform the following on a volume using **Manage**:

- Add disks
- Repair
- Expand storage capacity
- Upgrade from single-disk security to double-disk security

Format

Select **Format** to **delete all shares and data on a volume**. Make certain to back up your data before choosing **Format**.

Though data is deleted, the RAID configuration for the volume will remain intact. Since you do not have to rebuild the RAID, this is a good alternative to **Delete** when you want a simple option to deleting all data on the volume.

Delete

Choosing **Delete** will **DELETE THE VOLUME AND ALL OF ITS ASSOCIATED SHARES AND DATA**. Use the **Delete** button only if you intend to recreate the RAID from scratch and/or add disk(s) to another volume.

Drive

The dynamic photo of the LaCie NAS backplate highlights:

• The disks associated with the volume selected on the left-hand column.



Disks in the volume

• New disks available for a new or existing volume.



New disks

- Empty slots available for expansion.





- Failed or missing disks.



Missing disks

Storage capacity and distribution

Factors that determine the storage capacities for data, protection, and expansion:

- The amount of disks in the enclosure
- The storage capacity of each disk (see note below on mixed capacities)
- RAID mode
- Single-disk or double-disk security

Examples:

RAID 0 configuration with five disks. The only color is dark blue for data capacity since RAID 0 has no
protection.



RAID 0: Five disks

• LaCie SimplyRAID configuration with two disks. Dark and light blue for data and protection, respectively. Both disks are the same capacity.

IyRAID	SimplyRAID) 🖉 🚺	Manage Format
	Capacity 2 TE	3 of 2 TB	
	Mode Sim	olyRAID	
Drive	details		×
Drive	Status	Capacity	
1	OK	2 TB	
2	OK	2 TB	
Availa	ble for data	d for protection	i for expansion

SimplyRAID: Five disks

• **RAID 6 configuration with five disks.** All colors are represented since the RAID 6 uses double-disk security and the disks are of mixed capacities.

Volume 1		/olume 1 🖋		age Format Delet
	Cap	acity 2.9 TB of 2.	9 TB	
	Mod	de RAID 6 🕜		
	Drive o	letails	×	
	Drive	Status	Capacity	
	1	OK	2 TB	
	2	OK	2 TB	
	3	OK	1 TB	
	4	OK	2 TB	
	5	OK	2 TB	

RAID 6: Five disks