CHECK THE VIRTUAL DISK FOR ERRORS

LaCie RAID Manager can help you maintain optimal performance on a virtual disk using *Consistency check* and *Consistency fix*.

A consistency check scans and reports the integrity of parity or mirrored data on the virtual disk. Periodic consistency checks are highly recommended as part of regular maintenance for virtual disks. Users should also run a consistency check when a virtual disk is not performing as expected.

A consistency fix scans, reports, and fixes parity or mirrored data on the virtual disk. You can choose to run the consistency fix instead of the consistency check if you suspect that your virtual disk is experiencing problems. A consistency fix can take longer to run than a consistency check.

RUNNING A FULL INITIALIZATION BEFORE RUNNING A CONSISTENCY CHECK/FIX

As described in <u>Create Arrays and Virtual Disks</u>, LaCie RAID Manager runs an initialization on a virtual disk when it is first created. Similar to a consistency fix, the initialization scans the virtual disk's hard drives for errors and performs repairs if necessary. There are two types of initialization:

- **Fast initialization:** Fast initialization is a destructive process that erases all data on the virtual disk, including the Master Boot Records (MBR) on all physical disks. This is a good option if you wish to perform a cursory consistency check before starting a project.
- **Full initialization:** A through consistency check of the virtual disk's hard drives. A full initialization can take many hours to several days based upon the total capacity of the virtual disk.

The option to run a consistency check/fix is available only after a full initialization has been performed on a virtual disk.

Full initializations: background and foreground

A full initialization can be run as one of the following:

- **Background initialization:** A thorough, non-destructive consistency check of the physical disks. Since it runs in the background, the demand on the processor is reduced when compared with a foreground initialization. However, performance can be impacted, especially when working on high-end video or graphic projects. A background initialization can take many hours to several days based upon the total capacity of the virtual disk.
- **Foreground initialization:** This option is similar to a fast initialization since the MBR for all the physical disks are erased. Therefore, it is also a destructive process. Since it performs a thorough consistency check, this option can take many hours to several days based upon the total capacity of the virtual disk. As its name indicates, a foreground initialization runs in the foreground and can take a good amount of processing power which will affect performance. Choose foreground initialization when you want you want to wipe the hard drives and you do not anticipate starting high-end video or graphic projects within the week.

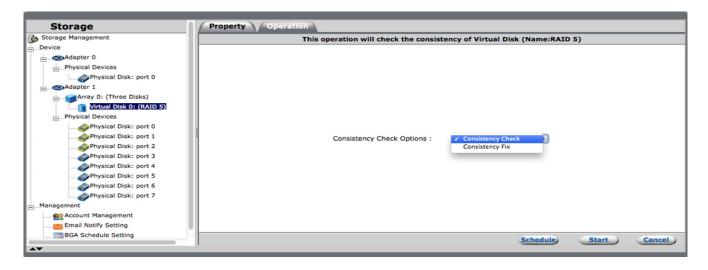
PERFORMING A CONSISTENCY CHECK/FIX

Follow the instructions below to run a consistency check/fix:

1. Choose the virtual disk in the Storage pane and roll over the Operation tab.

Storage	(Proporting)	Operation	_			_	_
Storage	Property	Operation					
Storage Management		Initialization				Modify	Restore
Device	ID	Consistency Check					
Adapter 0 Adapter 0 Adapter 0	Name	Delete VD					
Physical Disk: port 0	Cache Setting		• On(Pe	rformance)	Off(Reliable)		
Adapter 1	Write Cache Sta	tus	On				
Physical Devices	RAID Level		RAID 5				
	Status		Function	al			
Physical Disk: port 1	Size		7,451.9 GB				
	Member Count		3				
Physical Disk: port 3	Stripe Size	256 K					
Physical Disk: port 5							
Physical Disk: port 6 Physical Disk: port 7							
Management							
Account Management							
Email Notify Setting							
BGA Schedule Setting							
**	1						

- 2. Choose Consistency Check.
- 3. In the pull-down menu, select **Consistency Check** or **Consistency Fix**.



4. Choose Submit

The consistency check/fix will take many hours to several days based upon the total capacity of the virtual disk. You can continue to use the hard drives but performance can be affected by the consistency check/fix.

Storage	Property Operation
Storage Management	This operation will check the consistency of Virtual Disk (Name:RAID 5)
Device	
🚊 🥶 Adapter 0	
Physical Devices	
Physical Disk: port 0	
- CAdapter 1	
Array 0: (Three Disks)	
Virtual Disk 0: (RAID 5)	
Physical Devices	
Physical Disk: port 0	
Physical Disk: port 1	Consistency Check Options : Consistency Check
Physical Disk: port 2	Consistency Fix
Physical Disk: port 3	
Physical Disk: port 4	
Physical Disk: port 5	
Physical Disk: port 6	
Physical Disk: port 7	
Management	
eee Account Management	
🔀 Email Notify Setting	
BGA Schedule Setting	Schedule) Start (Cancel)
AT	

SCHEDULING A CONSISTENCY CHECK/FIX OR BACKGROUND INITIALIZATION

LaCie RAID Manager gives you the option to schedule regular consistency checks/fixes and background initializations. Regular maintenance on the hard drives can help to prevent data errors and improve the health of the virtual disk.

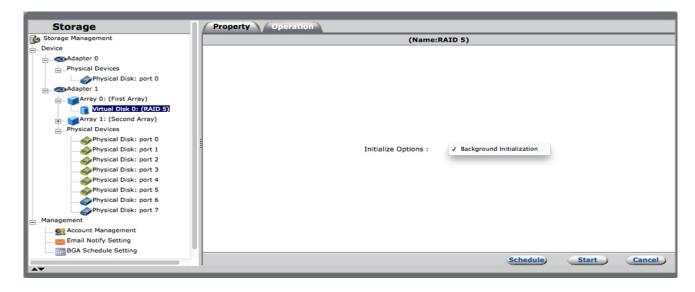
1. Choose the virtual disk in the Storage pane and roll over the Operation tab.

				1			
Storage	Property	Operation					
Storage Management		Initialization				Modify	Restore
Device	ID	Consistency Check					
Adapter 0	Name	Delete VD					
Physical Devices	Name	Delete VD					
Physical Disk: port 0	Cache Setting		 On(Perfor 	mance)	Off(Reliable)		
	Write Cache Sta	atus	On				
Virtual Disk 0: (RAID 5)	RAID Level		RAID 5				
Array 1: (Second Array) Status Physical Devices Size	Status		Functional				
	Size		7,451.9 GB				
Physical Disk: port 1	Member Count		3				
Physical Disk: port 2 Physical Disk: port 3	Stripe Size		256 K				
Physical Disk: port 4							
Physical Disk: port 6							
Physical Disk: port 7							
Management							
🔮 Account Management							
📷 Email Notify Setting							
BGA Schedule Setting							
A T	1						

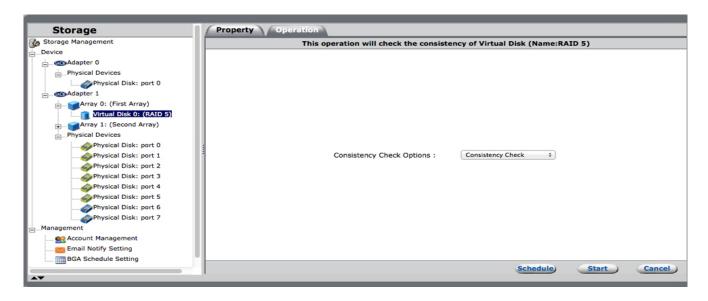
- 2. Choose Initialization or Consistency Check.
- 3. Click on the pull-down menu to choose:
 - Consistency Check or Consistency Fix.

Storage	Property Operation
Storage Management	This operation will check the consistency of Virtual Disk (Name:RAID 5)
Device	
- Mapter 0	
Physical Devices	
Physical Disk: port 0	
Adapter 1	
🖨 🧊 Array 0: (First Array)	
Virtual Disk 0: (RAID 5)	
Array 1: (Second Array)	
Physical Devices	
	Consistency Check Options : Consistency Check
	Consistency Fix
Physical Disk: port 5	
Physical Disk: port 6	
Physical Disk: port 7	
Management	
Account Management	
🧱 Email Notify Setting	
BGA Schedule Setting	
	Schedule Start Cancel
A V	

• **Background Initialization**. **Note:** The option for a foreground initialization is not available when a full initialization has been performed on the virtual disk.



4. Choose Schedule.



5. Select the frequency and choose **Submit**. See below for scheduling options.

Scheduling options

Storage	Property Operation	ation	
Storage Management	Schedule Time Setting	g	
Device	Start time :	10:13	
@Adapter 0			
Physical Devices	1		
Physical Disk: port 0		Date : 05/12/2014	
Adapter 1	 Only once 	ce	
🚽 🥁 Array 0: (First Array)	1		
Virtual Disk 0: (RAID 5)	1		
Array 1: (Second Array)	1		
Physical Devices	Daily		
	Dally		
Physical Disk: port 1	f i i i i i i i i i i i i i i i i i i i		
Physical Disk: port 2	1		
Physical Disk: port 3			
Physical Disk: port 4	Weekly		
Physical Disk: port 5			
Physical Disk: port 6			
Physical Disk: port 7	1		
Management			
	Monthly		
Email Notify Setting	1		
BGA Schedule Setting			
		Previous Submit Cano	el
A V	and the second se		

Consistency checks/fixes and initializations can be scheduled:

• Only once: Click on the calendar icon to choose a time and enter the time in the Start time field.

r	
Storage	Property Operation
Storage Management	Schedule Time Setting
Device	Start time : 10:13
Adapter 0	
Physical Devices	
Physical Disk: port 0	Date : 05/12/2014
E	Only once
Array 0: (First Array)	
Virtual Disk 0: (RAID 5)	1 2 3
Array 1: (Second Array)	4 5 6 7 8 9 10
Physical Devices	Daily 11 12 13 14 15 16 17
	18 19 20 21 22 23 24
Physical Disk: port 1	25 26 27 28 29 30 31
Physical Disk: port 2	Close
Physical Disk: port 3	<< < Today > >>
	Weekly
Physical Disk: port 5	
Physical Disk: port 6	
Physical Disk: port 7	
Management	
Account Management	Monthly
📷 Email Notify Setting	
BGA Schedule Setting	
	Previous Submit Cancel
A V	

• **Daily:** Choose the frequency and enter the time in the **Start time** field. For example, *Recur every* **1** *day(s)* or *Recur every* **3** *day(s)*. The former will run each day and the latter will run every three days.

Storage	Property Operation	
Storage Management	Schedule Time Setting	
Device	Start time : 10:13	
Adapter 0		
Physical Devices		
Physical Disk: port 0		Recur every day(s)
	Only once	
Array 0: (First Array)		
Virtual Disk 0: (RAID 5)		
Array 1: (Second Array)		
Physical Devices	 Daily 	
Physical Disk: port 0	Conty	
Physical Disk: port 1		
Physical Disk: port 2		
Physical Disk: port 3		
Physical Disk: port 4	Weekly	
Physical Disk: port 5		
Physical Disk: port 6		
Physical Disk: port 7		
Management	<u></u>	
	OMonthly	
🧱 Email Notify Setting		
BGA Schedule Setting		
		Previous Submit Cancel
A V		

• Weekly: Choose the frequency, day of the week, and enter the time in the **Start time** field. For example, *Recur every* **1** *week(s)* or *Recur every* **3** *week(s)*. The former will run once a week and the latter will run once every three weeks.

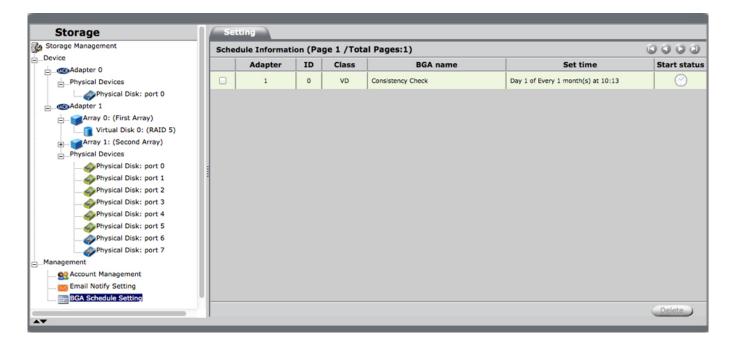
Storage	Property Operation	
Storage Management	Schedule Time Setting	
Device	Start time : 10:13	
Adapter 0		
Physical Devices		
Physical Disk: port 0		Recur every week(s) on :
EMapter 1	Only once	Sunday
Array 0: (First Array)		Sunday Orionday Oriosday
Virtual Disk 0: (RAID 5)		Thursday Friday Saturday
Array 1: (Second Array)		
Physical Devices	Daily	
Physical Disk: port 0	00000	
Physical Disk: port 1		
Physical Disk: port 2		
Physical Disk: port 3		
Physical Disk: port 4	💽 Weekly	
Physical Disk: port 5		
Physical Disk: port 6		
Physical Disk: port 7		
Management	Monthly	
👷 Account Management	Orionality	
Email Notify Setting		
BGA Schedule Setting		
AV		Previous Submit Cancel
AV		

• **Monthly**: Choose the day of the month, the frequency, and enter the time in the **Start time** field. For example, *Recur day* **1** *of every* **1** *month(s)* or *Recur day* **28** *of every* **3** *month(s)*. The former will run once a month on the first day of the month. The latter will run once every three months on the twenty-eighth day of the month. To avoid potential confusion with certain months, it is recommended that you choose a date between 1 - 28.

Storage	Property Operation				
Storage Management	Schedule Time Setting				
Device	Start time : 10:13				
Physical Devices	Only once	of every month(s)			
Array 0: (First Array)					
Physical Devices Physical Disk: port 0 Physical Disk: port 1	Obily				
 Physical Disk: port 2 Physical Disk: port 3 Physical Disk: port 4 Physical Disk: port 5 Physical Disk: port 6 Physical Disk: port 7 	Weekly				
Management	Monthly				
			Previous	Submit	Cancel

REVIEWING SCHEDULED CONSISTENCY CHECKS/FIXES AND INITIALIZATIONS

To see scheduled operations, go to the Storage pane and choose **Management > BGA Schedule Setting**.



Deleting scheduled consistency checks/fixes and initializations

- 1. Go to the Storage pane and choose **Management > BGA Schedule Setting**.
- 2. Click on the check box for the operation you want to delete.

Storage	Set	ting						
🚱 Storage Management	Schedule Information (Page 1 /Total Pages:1)							
evice		Adapter				Set time	Start status	
Adapter 0		Adapter	1					
- Physical Devices		1	0	VD	Consistency Check	Day 1 of Every 1 month(s) at 10:13		
Physical Disk: port 0								
Adapter 1								
Array 0: (First Array)								
Virtual Disk 0: (RAID 5)								
Array 1: (Second Array)								
Physical Devices								
Physical Disk: port 0	:							
Physical Disk: port 1	1							
Physical Disk: port 2								
Physical Disk: port 3								
Physical Disk: port 4								
Physical Disk: port 5								
Physical Disk: port 6								
Physical Disk: port 7								
ent ccount Management								
mail Notify Setting								
BGA Schedule Setting								
box benedule becang							(Delete)	
	1						Delete	

3. Choose Delete.

Storage	Set	ting							
Storage Management	Schee	Schedule Information (Page 1 /Total Pages:1)							
Device		Adapter	ID	Class	BGA name	Set time	Start status		
Adapter 0	ø	1	0	VD	Consistency Check	Day 1 of Every 1 month(s) at 10:13			
Physical Devices	•	1	0	VD	Consistency Check	Day 1 of Every 1 month(s) at 10:13			
Physical Disk: port 0									
Adapter 1									
Array 0: (First Array)									
Virtual Disk 0: (RAID 5)									
Array 1: (Second Array)									
Physical Devices									
Physical Disk: port 0									
Physical Disk: port 1									
Physical Disk: port 2									
Physical Disk: port 3									
Physical Disk: port 4									
Physical Disk: port 5									
Physical Disk: port 6									
Physical Disk: port 7									
1anagement									
Account Management									
BGA Schedule Setting									
BGA Schedule Setting							(
-	1						Delete		