MANAGE THE ARRAY AND VIRTUAL DISK

LaCie RAID Manager has a number of management functions to help you:

- Add disk capacity to the array
- Migrate the RAID
- Receive updates on the health of the enclosure
- Enhance performance

EXPANDING THE ARRAY'S DISK CAPACITY

1. Select the array in the Storage pane and roll over the Operation tab.

Storage	Property Create VD Ope	ration			
Storage Management	Rebu	ulid		Modify Restore	
- Device	Disk array 1 current storage alloca	rate		assigned free	
Adapter 0	Dele	to Array			
Array 0: (Inree Disks)	VD1	the Array			
Array 1: (Four Disks)					
Virtual Disk 1: (RAID 6)	ID		1		
Physical Devices	Name		Four Disks		
Physical Disk: port 0 Physical Disk: port 1	Disk Write Cache		● ON ○ OFF		
Physical Disk: port 2	RAID Level		RAID 6		
Physical Disk: port 3	Status		Functional		
Physical Disk: port 5	Total Size		7,451.9 GB		
Physical Disk: port 6	Number of Parity Disk		2		
Management	Background Activity State		None		
Account Management	Disk Block Size		512 B		
BGA Schedule Setting	Stripe Size		256 K		
box screeping					
A.					

- 2. Choose Migrate.
- 3. Click on one or more available disks to add to the array. A checkmark appears next to a selected disk.

Storage	Property	Create VD Opcircle	Ion							
Storage Management	Migrate Array	Select Migrate RAID Level :	RAID 6 =			N	lumber of parity disk : 2	•		
Device					Select dis	ks below for migr	ration			
Constant of the provided	SATA 3,725.0 08 (3,725.3 68) (5 : 8									
BCA Schedule Setting	0	riginal Array Info		Member Disks						
and a second second	ID	1		۵ 🎻	۲	ە 🅪	۵ 🎻			
	RAID Level	RAID 6		SATA 3.726.0 GB	SATA 3.726.0 GB	SATA 3.726.0 GB	SATA 3.726.0 GB			
	Size	7,451.9 GB		(0.0 GB)	(0.0 GB)	(0.0 GB)	(0.0 GB)			
Useable Capacity of Volume 11,177.9 GB										
A T									Submit	Cancel

- 4. Choose Submit.
- 5. The Property tab provides a status bar letting you know the progress of the expansion.



MIGRATING TO A HIGHER RAID

See <u>Discover LaCie RAID Manager Storage Management</u> for details on RAID levels available to your LaCie professional DAS. Make certain that you know the RAID level and its requirements before following the steps below.

1. Select the array in the Storage pane and roll over the Operation tab.

Storage	Property Create VD	Operation					
Storage Management		Rebuild			Modify	Restore	
- Device	Disk array 1 current storage alloca	Migrate			assigned	free	
Adapter 0		Delete Array					
Virtual Disk 0: (RAID 5)	VD1						
Array 1: (Four Disks)						_	
Virtual Disk 1: (RAID 6)	ID			1			
Physical Devices	Name			Four Disks			
Physical Disk: port 0	Disk Write Cache			ON OFF			
Physical Disk: port 2	RAID Level			RAID 6			
Physical Disk: port 3	Status			Functional			
Physical Disk: port 5	Total Size			7,451.9 GB			
Physical Disk: port 6	Number of Parity Disk			2			
Management	Background Activity State			None			
Account Management	Disk Block Size			512 B			
Email Notify Setting	Stripe Size			256 K			
47	1						

- 2. Choose Migrate.
- 3. If necessary, click on one or more available hard drives to add to the array. For example, you must add at least one hard drive when migrating from RAID 1 to RAID 5. However, you do not need to add hard drives if you migrate from a RAID 10 array with four hard drives to RAID 6.

		_							
Storage	Property	Create VD	Operatio	in a second s					
Storage Management	Migrate Array	Migrate Array Select Migrate RAID Level : RAID 5 :							
EDevice				Select di	sks helow for mi	oration	•		
Adapter 0	SATA 3,726.0 GB (3,725.9 GB) ID : 3	SATA 3,726.0 GB (3,725.9 GB) ID : 4	SATA 3,726.0 GB (3,725.9 GB) ID : 5	SATA 3,726.0 GB (3,725.9 GB) ID : 6	SATA 3,726.0 GB (3,725.9 GB) ID : 7	SATA 3,726.0 GB (3,725.9 GB) ID : 8			
Physical Disk: port 5	Origin	al Array Info				Member Disk	s		
Physical Disk: port 6 Physical Disk: port 7 Management Management	ID RAID Level Size	0 RAID 1 3,726.0	GB (SATA 726.0 GB 3 0.9 GB)	SATA ,726.0 GB (0.9 GB)				
BGA Schedule Setting	Useable Capa	city of Volume	2		1 3	7,451.9 GB	Submit	Cancel	

4. Click on the RAID pull-down menu to choose the RAID level.

			_					
Storage	Property	Create VD	Operati	on				
Storage Management	Migrate Array	Select Migrate	R ID Level	RAID 10				
Device				RAID 5	disks below for mig	ration		
Adapter 0				RAID 6				
Array 0: (Two Disks)	SATA	CATA	SATA	SATA	SATA	SATA		
Virtual Disk 0: (RAID 1)	3,726.0 GB	3,726.0 GB	3,726.0 GB	3,726.0 GB	3,726.0 GB	3,726.0 GB		
Physical Devices	(3,725.9 GB) ID : 3	(3,725.9 GB) ID : 4	(3,725.9 GB) ID : 5	(3,725.9 GB ID : 6	(3,725.9 GB) ID : 7	(3,725.9 GB) ID : 8		
Physical Disk: port 0								
Physical Disk: port 1								
Physical Disk: port 2								
Physical Disk: port 3								
Physical Disk: port 4								
Physical Disk: port 5	Origina	I Array Info				Member Disks		
Physical Disk: port 6	ID	0		۵ 🥪	۵ 🕪			
Physical Disk: port 7	RAID Level	RAID 1		SATA	SATA			
Management	Size	3 726 0 0	B 3	,726.0 GB	3,726.0 GB			
Account Management	5126	3,720.0 0		10 - 1	10 - 2			
Email Notify Setting	Useable Capac	ity of Volume			3	,726.0 GB		
BGA Schedule Setting							(Submit)	Cancel
A T								

- 5. Choose Submit.
- 6. The Property tab provides a status bar letting you know the progress of the RAID migration.

ENHANCING PERFORMANCE: CONTROLLING THE RATE OF BACKGROUND ACTIVITIES

Storage	Property Operation	
Storage Management	Supported Stripe Size	Power-off Identify Mute Modify Restore
Adapter 0	Maximum PD per Adapter	8
Array 0: (Three Disks)	Supported VD Cache	Write
Physical Devices	Maximum VD per Adapter	48
Physical Disk: port 0	Maximum VD per Array	1
Physical Disk: port 2	Maximum PD per VD	24
Physical Disk: port 3	Maximum Port Multiplier	8
Physical Disk: port 5	Synchronization Rate	Low High 77%
Physical Disk: port 6	Initialization Rate	Low High 91%
Management	Rebuild Rate	Low High 68%
Account Management	Migration Rate	Low High 76%
BGA Schedule Setting	Media Patrol Rate	Low , High 18%
	Auto-Rebuild	
	Poll S.M.A.R.T Status	ON OFF
A V		

The LaCie professional DAS prioritizes background activities based on the specified control rates. When background activities are in progress, the device is still available to the operating system for normal operations. However, the response time may be slower depending on the background activity control rate.

The rate of various background activities can be modified from the Property tab for the Adapter. Move the slider to adjust the rates and choose **Modify** to confirm the changes.

Modifying the virtual disk cache

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S	torage			Property	Operation					
Storage Management								Modify	Restore	
E Device	Device ID			ID		1				
	Array	0: (Three Disks)	- 11	Name		RAID 1				
Ī	Vir	tual Disk 0: (RAID 5)	- 11	Cache Setting		On(Performance)	Off(Reliable)			
Ð	Array	1: (Two Disks) tual Disk 1: (BAID 1)	- 11	Write Cache Sta	tus	On				
	Physical D	evices	- 11	RAID Level		RAID 1				
	Ph	ysical Disk: port 0		Status		Functional				
	- Sph	ysical Disk: port 2		Size		3,725.0 GB				
	Physical Disk: port 3 Member Count		Member Count		2					
	- September 2015	ysical Disk: port 4 ysical Disk: port 5	- 11	Stripe Size	256 K					
	Ph	ysical Disk: port 6	- 11							
Manage	Ph	ysical Disk: port 7	- 11							
E_Manay	Account M	anagement								
	Email Noti	fv Setting								
AT.			_							
Event Logs(217~236/Total Events:236) Save Clear O O								0000		
	Adapter	Class		Time	Description					
0	0	VD Event	04/	30/2014 12:07	Fast initialization on Virtual Disk 1 completed					
0	0	VD Event	04/	30/2014 12:07	Fast initialization on Virtual Disk 1 started					
0	0	VD Event	04/	30/2014 12:07	Virtual Disk 1 is created					

The choice between protection and performance can vary with projects. To accommodate such changes, the cache mode for a virtual disk can be modified from the Property tab for the virtual disk. Select between the options and choose **Modify** to confirm changes.

VIEWING PROPERTIES AND RENAMING

Viewing properties: array, virtual disk, and physical disk

To view the properties of an array, virtual disk, or physical disk, select the item in the Storage pane. The Property tab gives you all the pertinent details.

Renaming the array

Storage	Probany Create VD Operation	
Re Storage Management		(Mediler) (Restern)
Device	Dick array 1 current storage allocation:	
Adapter 0	bisk array 2 carrent storage anotation.	essigned mee
Array 0: (Three Disks)	V01	
Virtual Disk 0: (RAID 5)		
Array 1: (Two Disks)	10	,
Virtual Disk 1: (RAID 1)	10	1
Physical Devices	Name	Two Disks
Physical Disk: port 0	Disk Write Cache	ON OFF
Physical Disk: port 2	RAID Level	RAID 1
Physical Disk: port 3	Status	Functional
Physical Disk: port 4	3/8/05	Functional
	Total Size	3,726.0 GB
Physical Disk: port 6	Background Activity State	None
Physical Disk: port 7	Disk Block Size	512 B
E_Management	Strine Size	256 K
Email Notify Setting	Suipe Size	230 K
Event Logs(217~236/Total Events:23	36) Save Clear	0000
Adapter Class	Time	Description
0 VD Event 04/30	0/2014 12:07 Fast initialization on Virtual Disk 1 completed	1
0 VD Event 04/30	0/2014 12:07 Fast initialization on Virtual Disk 1 started	
0 VD Event 04/30	0/2014 12:07 Virtual Disk 1 is created	

The name for an array can be modified from the Property tab for the array. Type a new name in the Name field and select **Modify** to confirm the change.

Renaming the virtual disk

Storage	Property Operation	property Operation							
Storage Management									
Device	ID	1							
Array 0: (Three Disks)	Name	New_VD							
Array 1: (Four Disks)	Cache Setting	On(Performance)	Off(Reliable)						
	Write Cache Status	On							
+ Physical Devices	RAID Level	RAID 6							
	Status	Functional							
	Size	7,451.9 GB							
	Member Count	4							
	Stripe Size	256 K							

The name for a virtual disk can be modified from the Property tab for the virtual disk. Type a new name in the Name field and select **Modify** to confirm the change.