## **REPAIRING RAID CONFIGURATIONS**

You may need to recreate the Mirrored and/or RAID 5 volumes if a disk should fail.

**Important info:** In the event that an individual hard disk fails in the 5big Office/Office+, contact your LaCie reseller or LaCie Customer Support for technical assistance. If the problem drive was purchased from LaCie and it is within the warranty period, please replace it with a hard drive provided by LaCie. LaCie will not replace a non-LaCie hard drive or any hard drive purchased from a third party. Please note that the replacement disk capacity should be equal to the original disk. While you may use a disk with more capacity, RAID configurations only recognize the size of the original disk.

## REPAIRING THE MIRRORED AND RAID 5 VOLUMES AFTER A DISK FAILURE

The steps below will illustrate how to repair Mirrored and RAID 5 volumes following disk failure. Partitions from the failed hard drive, Disk 1, had been tied to each volume.

Use Disk Management to repair or change RAID configurations in Windows:

- Launch the Dashboard from a Windows workstation on the same network as your LaCie 5big Office/Office+.
  Start > All Programs > Windows Home Server 2011/Windows Storage Server 2008 R2 > Windows Home Server 2011 Dashboard/Windows Storage Server 2008 R2 Dashboard
- 2. Select the **Home** tab.
- 3. Click once on **COMMON TASKS**.



4. Click once on **Disk Management**.

🐼 Windows Storage Server 2008 R2 Dashboard	
Home Users Computers Server Folders Add-ins LaCe	Windows Storage Server 2008 82 Essential
GETTING STARTED TASKS    • COMMON TASKS      Shortcuts to common tasks.    • Compound tasks      Environmental common tasks.    • Constructions      Internet Settings    • Internet Settings      Internet Settings    • Printer Settings      Internet Settings    • Contornies this fast	O O O O O O O O O O O O O O O O O

5. Note that Disk 1 is Missing and that both the Mirrored and RAID 5 volumes have *Failed Redundancy*.

🔡 Disk Managem	ent										
File Action V	iew Help										
(+ + 🔟 🖬											
Volume	Layout	Туре	File System	Status	Capacity	Free Spa	% Free	Fault Tolerance	Overhead		
Data	RAID-5	Dynamic	NTFS	Failed Red	3485.65 GB	3485.45	100 %	Yes	20%		
Data 2 (E:)	RAID-5 Dynamic NTFS Healthy 120.20 GB 120.10 GB 100 % Yes			100 %	Yes	33%					
Windows (C:)	Mirror	Dynamic	NTFS	Failed Red	60.00 GB	34.41 GB	57 %	Yes	30% 50%		
GD44.0	-										
Dynamic	System		Wind	ows (C:)					Data		
931.51 G8	100 MB NTFS		60.00	GB NTFS					871.41 GB NTFS		
Online	Failed Redundance	cy (System)	Failed	Redundancy (B	oot, Page File, Cr	ash Dump)			Failed Redundancy		
Disk 2											
Dynamic 021 51 CD	Data 2 (E:)							Data			
Online	60.10 GB NTFS							871.41 GB NTF5 Failed Redundancy			
	1.000										
Gillet 3											
Dynamic	Data 2 (E:)							Data			
931.51 G8	60.10 GB NTFS							871.41 GB NTFS			
Unine	Healthy							Pairea redundancy			
Disk 4											
Dynamic	Data 2 (E:)							Data			
931.51 G8 Online	60.10 GB NTFS							871.41 GB NTFS Exited Reductance			
	relative r										
Missing											
Dynamic 921 51 GR	System		Wind	ows (C:)					Data STA 41 CD AVTEC		
Missing	Failed Redundance	cy (System)	Failed	Redundancy (B	oot, Page File, Cr	ash Dump)			Failed Redundancy		
Unallocated	Mirrored volume	RAID-5 vo	lume								
,											

- 6. Remove the failed Disk 1 and insert the replacement. See <u>Removing and Installing Disks</u> for instructions on adding new drives into the 5big enclosure.
- 7. The replacement disk is listed as *Unallocated*.

System 100 MB NTFS Failed Redundancy (System)	Windows (C) 60.00 GB NTFS Failed Redundancy (Boot, Page File, Crash Dump)		Data 871.41 GB NTF5 Failed Redundancy	ſ	
931.51 GB Unallocated				1	
Data 2 (E3 60.10 GB NTFS Healthy			Data 871,41 GB NTFS Failed Redundancy		
Data 2 (f.) 60.10 GB NTFS Heathy					
Data 2 (E) 60.10 GB NTFS Healthy		Data 871.41 GB NTFS Failed Redundancy			
System 100 MB NTFS Failed Redundancy (System)	Windows (CJ) 60.00 GB NTFS Failed Redundancy (Boot, Page File, Crash Dump)		Data 87.141.08 NTF5 Failed Redundancy	-	
	System 100 A& NTFS Failed Redundancy (System) 922.51 GB Unallocated Data 2 (E) 60.01 GB NTFS Healthy Data 2 (E) 60.01 GB NTFS Healthy Data 2 (E) 60.01 GB NTFS Healthy System Failed Redundancy (System)	System 100 MR NTTS Faird Redundancy (System)      Windows (C.) 60.00 GB NTTS Faird Redundancy (Boot, Page File, Crash Dump)        921.51 GB Unalocated         Data 2 (E) 60.01 GB NTTS Heathy         System 100 MB NTTS Faird Redundancy (System)         System 200 MB NTTS Faird Redundancy (System)         State Redundancy (Staten)         State Redundancy (System)         State Redundancy (System)         State Redundancy (Staten)	System 100 MR NTTS Failed Redundancy (System)      Windows (C) 0.00 GE NTTS Failed Redundancy (Boet, Page File, Crash Dump)        921.51 GB Unallocated      Data 871.41 GB NTTS Healthy      Data 871.41 GB NTTS Failed Redundancy        0.042 (E) 0.01 GB NTTS Healthy      Data 871.41 GB NTTS Failed Redundancy      Data 871.41 GB NTTS Failed Redundancy        0.042 (E) 0.01 GB NTTS Healthy      Data 871.41 GB NTTS Failed Redundancy      Data 871.41 GB NTTS Failed Redundancy        0.042 (E) 0.01 GB NTTS Healthy      Data 871.41 GB NTTS Failed Redundancy      Data 871.41 GB NTTS Failed Redundancy        5ystem Failed Redundancy (System)      Windows (C) 60.00 GB NTTS Failed Redundancy (Boot, Page File, Crash Dump)      Failed Redundancy	System 100 MR MTPS Failed Redundancy (System)  Windows (C) 0.0.0 GR MTPS Failed Redundancy (Beet, Page File, Crash Dump)  Data BT.A. GB NTPS Failed Redundancy    PLAS (GR Unalocated  Data BT.A. GB NTPS Failed Redundancy  Bata BT.A. GB NTPS Failed Redundancy    PLAS (GR Unalocated  Data BT.A. GB NTPS Failed Redundancy    PLAS (GR Unalocated  Data BT.A. GB NTPS Failed Redundancy    PLAS (GR GB 0.0 GB NTPS Heathy  Data BT.A. GB NTPS Failed Redundancy    PLAS (GR GB 0.0 GB NTPS Heathy  Data BT.A. GB NTPS Failed Redundancy    System (SL) GB NTPS Heathy  Data BT.A. GB NTPS Failed Redundancy    System (SL) GB NTPS Heathy  Windows (C) GLO CG NTPS Failed Redundancy (System)	

8. The mirror must be broken before rebuilding it with the replacement disk. Right-click on the **System** volume to select **Remove Mirror...** 

Dynamic 931.51 GB Online	System 100 MB NTFS Failed Redundancy (System)	Open Explore	Dump)		Data 871-41-08 ATTS Failed Redundancy	Î	
Basic 931.51 GB Online	931.51 GB Unallocated	Remove Mirror Break Mirrored Volume Change Drive Letter and Paths Format				l	
Disk 2 Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy	Repair Volume Reactivate Volume Delete Volume Properties		Data 871.41 GB NTFS Failed Redundancy		82.,	
Disk 3 Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy	Help		Data 871.41 GB NTFS Failed Redundancy			
Disk 4 Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy			Data 871.41 GB NTFS Failed Redundancy		I	
Oynamic 931.51 GB Missing	System 100 MB NTFS Failed Redundancy (System)	Windows (C) 60.00 GB NTFS Failed Redundancy (Boot, Page File, Crast	h Dump)		Data 871.41 QB NTF5 Failed Redundancy		
Unallocated	Mirrored volume RAID-5 volume	- F				Rem	ονε

## Mirror - System

9. In the *Remove Mirror* pop-up window, select **Missing**. Click **Remove Mirror**.

Remove Mirror
Removing a mirror from this volume removes one copy of the volume's data. The volume will no longer contain redundant data.
Select a disk from which to remove a mirror of C: (Windows).
Disks:
Disk 0  Missing
Remove Mirror Cancel

10. Click **Yes** at the Disk Management prompt.

Disk Mana	gement	23
<u>^</u>	Are you sure you want to remove the mirror?	
	Yes No	

11. Right-click on the **Windows** volume to select **Remove Mirror...**.

Optimize Indire  Spetem Healthy (System)  Windows (C) Sol GR NTS: Failed Redundancy (Root, Page Faile, Crash Dump)  Open Explore    * Diak 1 Basic Ninne  93.33 GB Unallocated  Remove Mirer    * Diak 3 Diane  Regain Volume    * Diak 3 Diane  Date 2 (G) Poperties    * Diak 3 Diane  Date 2 (G)
CP Data 1 Baix SS3.51 GB Unallocated  Panore Miror    Poparnic SS3.51 GB Unallocated  Panore Miror    CP Data 2 0.50 GB NTFS 0.50 GB NTFS Online  Papair Volume    Popartic SS3.51 GB Unallocated  Papair Volume
Basic Online  B13.51 GB Unallocated  BTeak Minored Volume    Object  Format    Change Drive Letter and Paths Format    Drive Letter and Paths Format    Diaz (t2) Online    Diaz (t2) Nonine    Diaz (t2) Online
Sk15.0 of Online  Sk15.0 of Formal  Chage Drive Letter and Paths    Formal  Formal    Formal  Repair Volume    Formal  Peter Volume    Potent Volume  Properties    Formal  Properties
CrOids 2 Dynamic  Data 2 (E)  Repair Volume    Stas 6 Online  Data 2 (E)    Wibik 3 Dynamic  Data 2 (E)    Data 2 (E)  Hajp
Dynamic Data 2 (E) Data 2 (E)
Outer price  Detect Volume    Properties    Properties    Help
Zólak 3      Properties        Jynamic      Date 2 (E)
Profek 3 Profession Pr
Dynamic Data 2 (E)
131.53.66 (63.10 GE NTFS Dinline Healthy Falled Redundancy
Chik4
Dynamic B11.51 GB Online Healthy Falled Redundancy
@Mixing
Dynamic Billa GB Missing Missing Missing Missing Dia Gents Failed Redundancy (Boot, Page File, Crash Dump) Data Billa GB Failed Redundancy (Boot, Page File, Crash Dump)
Unaliscated Simple volume Minrored volume RAD-5 volume

Mirror - Windows

12. In the *Remove Mirror* pop-up window, select **Missing**. Click **Remove Mirror**.

Remove Mirror
Removing a mirror from this volume removes one copy of the volume's data. The volume will no longer contain redundant data.
Select a disk from which to remove a mirror of C: (Windows). Disks:
Disk 0
Remove Mirror Cancel

13. Click **Yes** at the Disk Management prompt.

Disk Manag	gement	23
	Are you sure you want to remove the mirror?	
	Yes No	

14. The mirror has been successfully removed.

Dynamic 931.51 G8 Online	<mark>System</mark> 100 MB NTFS Healthy (System)	Windows IC3 60.00 (6) NTPS Healthy (Boot, Page File, Crash Dump)	Data 187,41 (B) NTPS Failed Redundancy					
Disk 1 Basic 931.51 G8 Online	93.51 G8 Unallocated							
Disk 2 Dynamic 931.51 GB Online	Data 2 (E) 60.10 GE NTFS Healthy		Deta BTJALI GE NTFS Failed Redundancy					
Clisk 3 Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy		Data 87.4 GB HTFS Failed Redundancy					
Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy		Data 871.41 GB HTFS Failed Redundancy					
GMissing Dynamic 871.41 G8 Missing	Mixing samic Al 66 Failed Redundancy							
Unallocated	Unallocated Simple volume RAD-S volume							

15. Right-click on the **System** partition to select **Add Mirror...** 

Disk 0 Dynamic 931.51 GB	System 100 MB NTF5	Windows (C) 60.00 GB NTFS			Data 87.44 GB NTFS
Online	Healthy (System)	Open Explore	Dump)		Failed Redundancy
Basic 931.51 GR	021 51 69	Extend Volume Shrink Volume			
Online	Unallocated	Add Mirror			
Disk 2		Change Drive Letter and Paths Format			
Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy	Reactivate Volume		Data 871.41 GB NTFS Failed Redundancy	
		Delete Volume			
Clisk 3		Properties			
931.51 GB Online	60.10 GB NTFS Healthy	Help		Data 871.41 GB NTFS Failed Redundancy	
CRINK 4				-	
Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy			Data 871.41 GB NTFS Failed Redundancy	
Missing	Data				
871.41 GB Missing	871.41 GB NTFS Failed Redundancy				
Unallocated	Simple volume RAID-	5 volume			

16. From the *Add Mirror* pop-up window, select your replacement disk (in this example, **Disk 1**). Click **Add Mirror**.

Add Mirror				
Adding a mirror to an existing volume provides data redundancy by maintaining multiple copies of a volume's data on different disks.				
Select a location for a mirror of System.				
Disks:				
Disk 1				
Add Mirror Cancel				

17. Click **Yes** at the Disk Management pop-up window.



18. Right-click on the **Windows** partition to select **Add Mirror...** 

Dynamic 931.51 GB	System Windows (C3) 100 MB NTPS 00.00 GB NTPS 00.00 GB NTPS		Cash Daved	Data BTLR GENTTS				
	Preastry (bystem) Preastry (bystem)			Open 9 Explore				
Djnamic 931.51 GB Online	System 100 MB NTFS Healthy (System)		931.41 GB Unallocated	Edend Values Seek Values				
Disk 2 Dynamic 931.51 GB Online	Dava 2 83 03.3 cd W155 Andry Dava 2 83 03.2 cd W155 Nation Nation			Charge Drive Letter and Pathan Formut				
Dynamic 931.51 GB Online				Properties Help Failed Redundancy				
Dynamic 931.51 GB Online	Data 2 (E3) (033) 08 X175 Healby			Data 17141 GA NTFS Faled Roburdancy				
Oynamic B71.41 GB Missing	2 One Digit (di Antri Digit (di Antri Digit (di Antri							
Unallocated	Simple volume 📕 Mirrored volume	RAID-5 volume						

19. From the *Add Mirror* pop-up window, select your replacement disk (in this example, **Disk 1**). Click **Add Mirror**.

Add Mirror						
Adding a mirror to an existing volume provides data redundancy by maintaining multiple copies of a volume's data on different disks.						
Select a location for a mirror of System.						
<u>D</u> isks:						
Disk 1						
Add Mirror Cancel						

- 20. Disk Management will begin resynching the Windows Mirror. To save time, you may resync the Data RAID 5 volume while the Windows Mirror is building.
- 21. Right-click on one of the **Data** partitions (do not use the *Missing* disk). Choose **Repair Volume...**

Disk 0 Dynamic 931.51 GB Online	System Windows (CJ 500 MB NTFS 6000 GB NTFS Healthy (System) Resynching : (89%) (Boot, Page File, Crash Dump)			Data 871.41 GB NTF5 Failed Redundancy			Î
Sectors Contract Sectors Secto	System 200 MB NTFS Healthy (System)	Windows (C.) 60.00 GB NTF5 Resynching : (69%) (Boot, Page File, Crash Dump)		871.41 GB Unallocated			
Dynamic 931.51 GB Online	Data 2 (E:) 60.10 GB NTFS Healthy		Data 871.41 GB NTFS Failed Redundancy		Open Explore		=
Generation States State	Data 2 (E:) 60.10 GB NTFS Healthy		Data 871.41 GB NTFS Failed Redundancy		Change Drive Letter and Paths Format Repair Volume Reactivate Volume		
Dynamic 931.51 GB Online	Data 2 (Ed) 6010 GB NTFS Healthy		Data 871.41 GB NTFS Failed Redundancy		Delete Volume Properties Help		
Contemporation Operation Wissing	Data 87.4.1 GB NTFS Failed Redundancy						
Unallocated Minured volume RAID-3 volume							

22. In the *Repair RAID-5 Volume* window, choose the disk to repair the Data volume (in our example, **Disk 1**). Click **OK**. The Data volume will start resynching. Please be patient since it will take 15 to 40 hours to resync the RAID 5 volume, depending upon the capacity.

Repair RAID-5 Volume	×
Select one of the disks listed below. It will be used as a replacement for the broken RAID-5 volume.	
Disks: Disk 1	
OK	

## **REMOVING THE MISSING DISK**

Disk Management must be told to remove the *Missing* disk once resynching has begun. Follow the easy steps below to delete the *Missing* disk from the list of drives.

- 1. If you have not closed Disk Management after following the steps to repair the Mirrored and RAID 5 volumes, the *Missing* disk may be listed as a member of the Data volume.
- Go to the the Action pulldown menu and choose Refresh (Action > Refresh) to refresh the list of drives. If the *Missing* disk is still listed as Data, exit and relaunch Disk Management.
- 3. The Missing disk will remain in the list of Disk Management disks. However, it should no longer be a part of the Data volume.
- 4. Right-click on Missing to select Remove Disk.

Disk 0 Dynamic 931.51 GB 100 MB NTFS Online Healthy (System)			Windows (CJ) 60.00 GB NTFS Resynching I (80%) (Boot, Page File, Crash Dump)		Data 87.41.08 NTF5 Reynching	î
Gilisk 1 Dynamic 931.51 GB Online	System 100 MB NTFS Healthy (System)		Windows (C) 60.00 GB NTFS Resynching : (90%) (Boot, Page File, Crash Dump)		Data R7J, 41 GB NTF5 Resynching	
Dynamic 931.51 GB Online	Data 2 (E:) 60.10 GB NTFS Healthy	2 (83) 68 XTFS hy		Deta 871.41 G8 NTF5 Respecting		
Dynamic 931.51 GB Online	Data 2 (E) 60.10 GB NTFS Healthy			Data BTL41 GB NTFS Resynching		
Dynamic 931.51 GB Online	Data 2 (Ed) 6610 68 NTFS Healthy		Data 871.41.68 HTFS Resynching			
©Missing Dynamic	Reactivate Disk					
Missing	Remove Disk Properties					
Unallocated	Help minimuse vouume volume					

5. The *Missing* disk should now be removed from the **Disk Management** list.

Dynamic	System	Windows (CJ)		DMa	Î
931.51 GB	100 MB NTFS	6030 GB NTFS		STA1 GBHTTS	
Online	Healthy (System)	Resynching ; (BHS) (Best, Page File, Crash Durng)		Raynching	
GEDisk 1 Dynamic 931.51 GB Online	System 100 MB NTFS Healthy (System)	Windows (C) 60.00 08 HTF5 Resynching : (90%) (Boot, Page File, Crash Dump)		DMa STALGBHTTS Raynching	
Dynamic	Data 2 (E)		Data		
931.51 GB	60.10 GB NTFS		1924 GBNT15		
Online	Healthy		Reynolowy		
Disk 3 Dynamic 931.51 GB Online	Data 2 (E) 6030 G9 NTS Healby		Data DEL GENTIS Resynchring		
Dynamic	Data 2 (6)		Dola		
931.51 GB	6030 69 NTS		Di La Gantifs		
Online	Healby		Resynching		