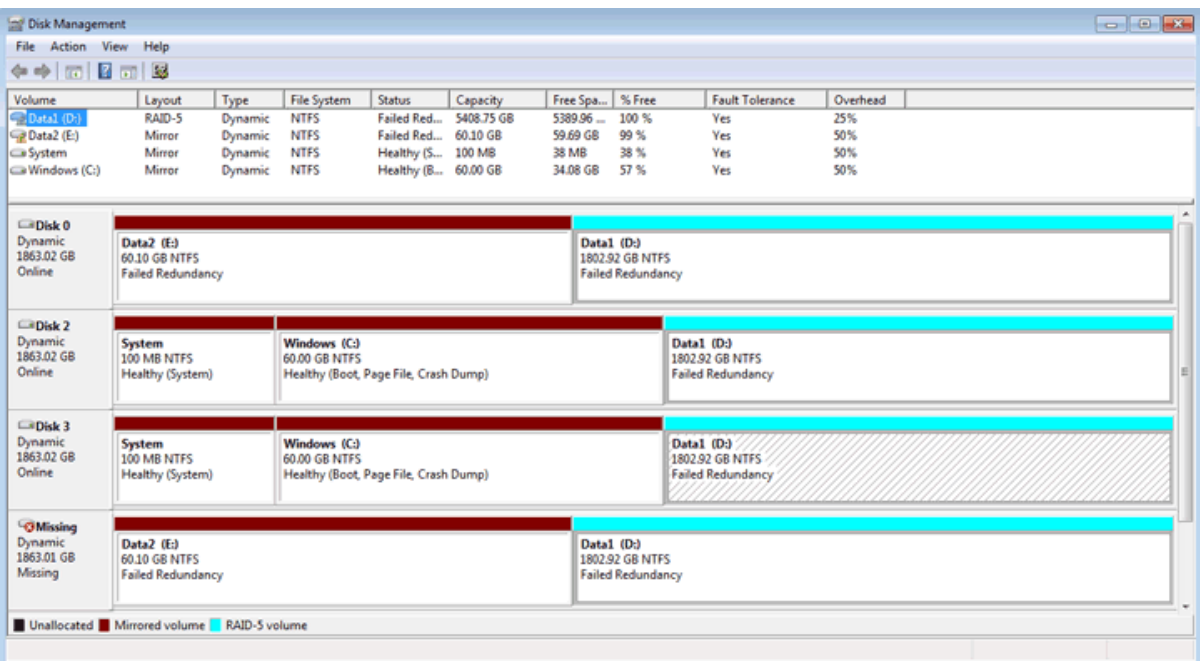


REPAIRING RAID CONFIGURATIONS

In the event that an individual hard disk fails in the 4big Rack Office, contact your LaCie reseller or LaCie Customer Support for technical assistance. If the server is within the warranty period, please use the replacement hard drive provided by LaCie.

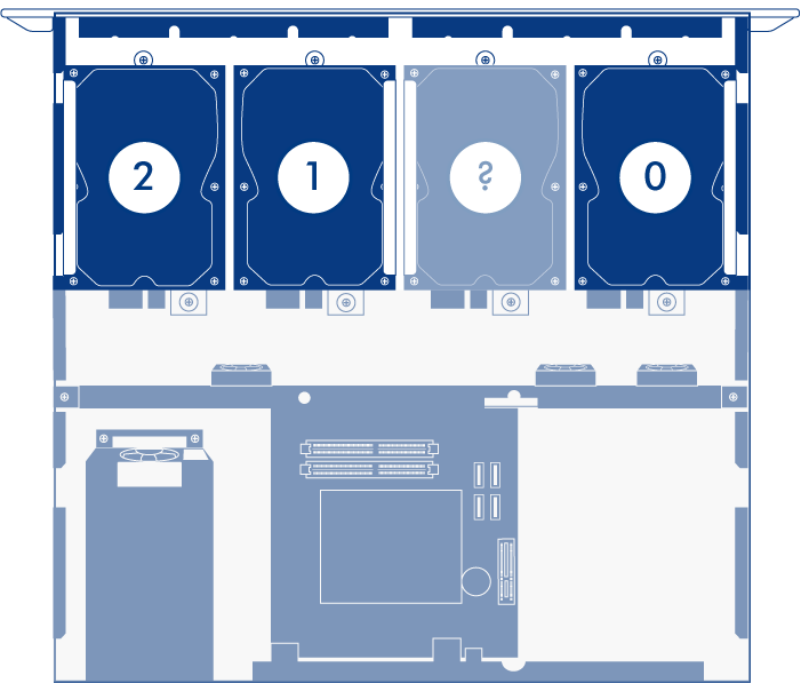
In the example below, Disk 1 is Missing and both the Mirrored and RAID 5 arrays have *Failed Redundancy*.



The screenshot shows the Windows Disk Management console. At the top, a table lists volumes with columns: Volume, Layout, Type, File System, Status, Capacity, Free Space, % Free, Fault Tolerance, and Overhead. Below this, four disks are shown: Disk 0, Disk 2, Disk 3, and a Missing disk. Each disk contains data for RAID 5 (Data1) and Mirrored (Data2) volumes. The status of the RAID 5 volumes is 'Failed Redundancy'.

Volume	Layout	Type	File System	Status	Capacity	Free Space	% Free	Fault Tolerance	Overhead
Data1 (D:)	RAID-5	Dynamic	NTFS	Failed Red...	5408.75 GB	5389.96 ...	100 %	Yes	25%
Data2 (E:)	Mirror	Dynamic	NTFS	Failed Red...	60.10 GB	59.69 GB	99 %	Yes	50%
System	Mirror	Dynamic	NTFS	Healthy (S...	100 MB	38 MB	38 %	Yes	50%
Windows (C:)	Mirror	Dynamic	NTFS	Healthy (B...	60.00 GB	34.08 GB	57 %	Yes	50%

Disk	Layout	Type	File System	Status	Capacity	Free Space	% Free	Fault Tolerance	Overhead
Disk 0	Data2 (E:)	Dynamic	NTFS	Failed Redundancy	60.10 GB	59.69 GB	99 %	Yes	50%
Disk 2	System	Dynamic	NTFS	Healthy (System)	100 MB	38 MB	38 %	Yes	50%
Disk 3	System	Dynamic	NTFS	Healthy (System)	100 MB	38 MB	38 %	Yes	50%
Missing	Data2 (E:)	Dynamic	NTFS	Failed Redundancy	60.10 GB	59.69 GB	99 %	Yes	50%



Once the disk has been replaced, please make certain to repair the RAID arrays in the following order:

1. Mirror (Data2 in this example but the same order is in effect if one of the Disk 3 in the System Mirror fails.)

2. RAID 5

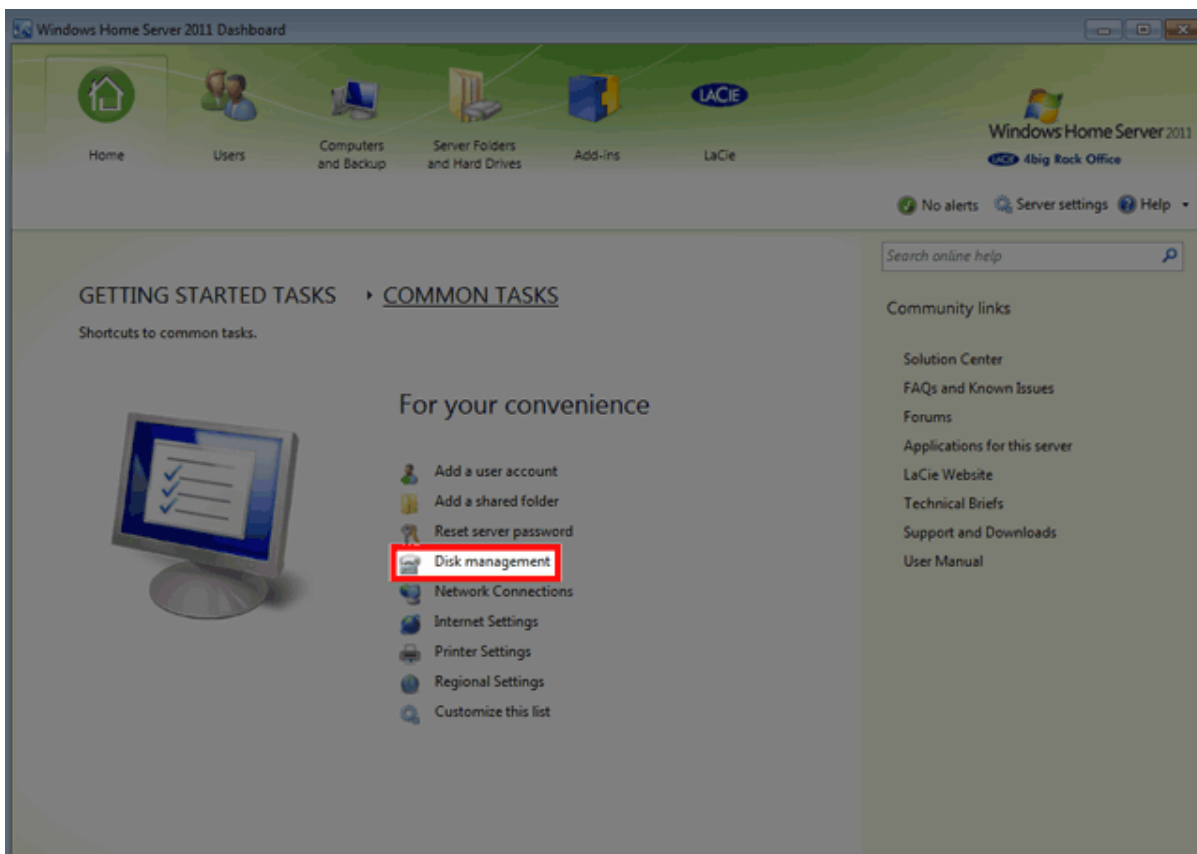
Important info on Disk 2 failure: If Disk 0, Disk 1, or Disk 3 must be replaced, please continue with the instructions in [Repair the Mirror Array](#). If Disk 2 has failed, please see [Disk 2 Failure and Boot Order](#).

REPAIR THE MIRROR ARRAY

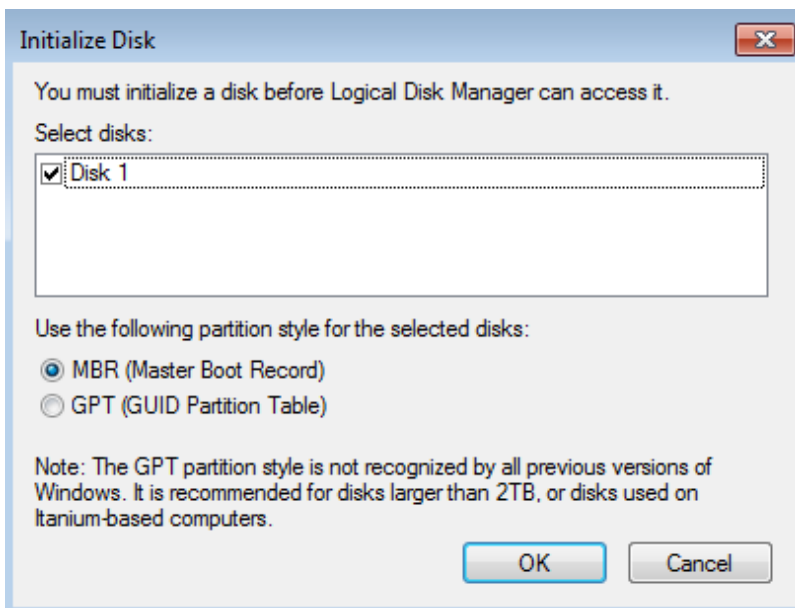
The steps below will illustrate how to repair Mirrored and RAID 5 arrays following disk failure. The two partitions from the failed hard drive, Disk 1 in this example, are used for both Mirrored and RAID 5 arrays.

Note: Please wait until you have received and installed the replacement disk before attempting to repair the RAID.

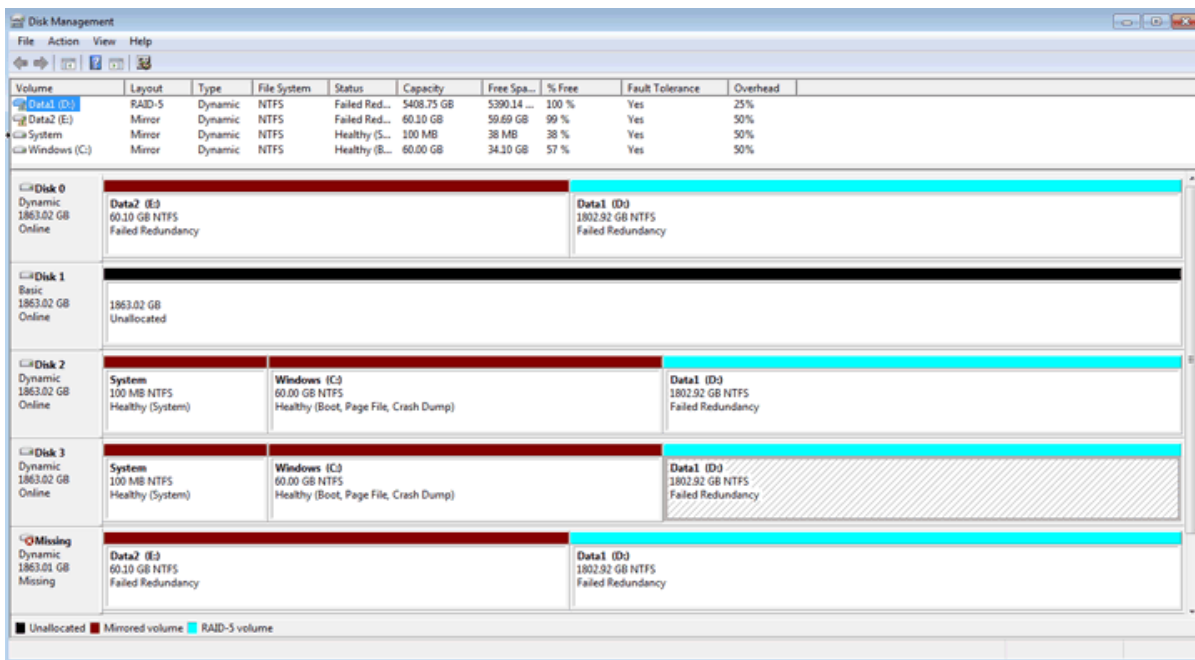
1. Remove the failed Disk 1 and insert the replacement. See the [Hardware Maintenance](#) section of the 4big Rack Office User Manual for instructions on adding new drives. Please make certain that you replace the correct drive.
2. Power on the server. It may take 5 to 10 minutes for the server to be ready.
3. Launch the Dashboard from a Windows workstation on the same network as your LaCie 4big Rack Office.
Start > All Programs > Windows Home Server 2011 > Windows Home Server 2011 Dashboard
4. Select the **Home** tab.
5. Click once on **COMMON TASKS**.
6. Click once on **Disk Management**.



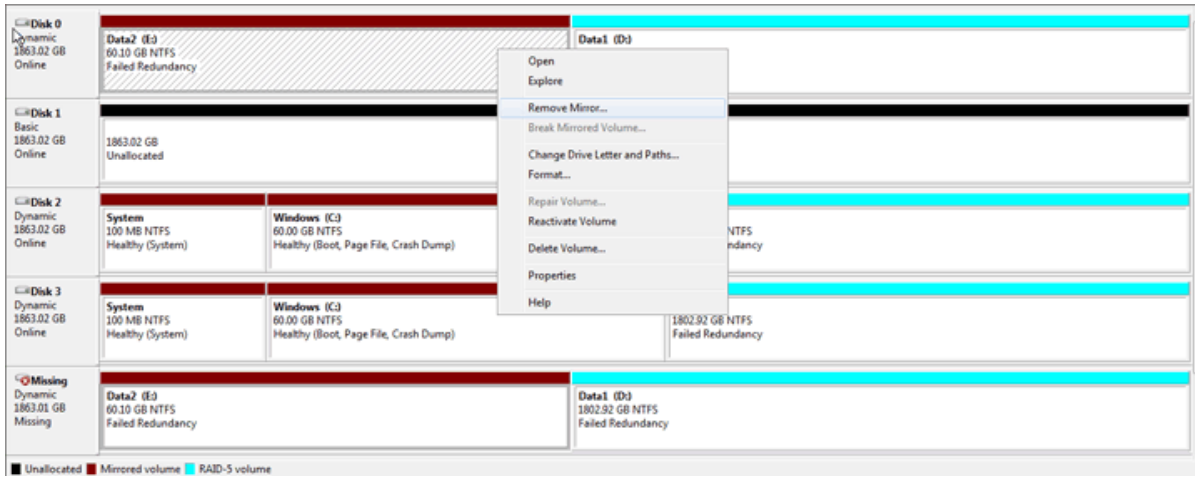
7. Upon launch Disk Management will prompt you to initialize the drive. LaCie recommends initializing the disk as MBR to match the default configuration. Click “OK” to continue.



8. The replacement disk is listed as *Unallocated*.

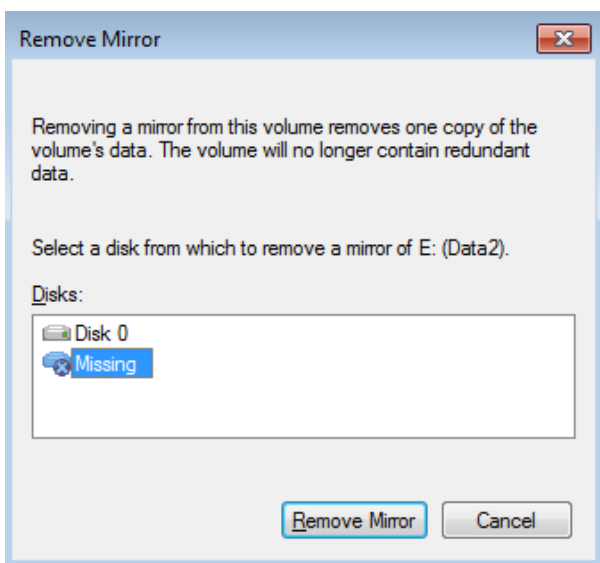


9. The mirror must be broken before rebuilding it with the replacement disk. Right-click on the **Data2** volume to select **Remove Mirror...** Please note that the same procedure should be followed if one of the disks in the System mirror has failed.

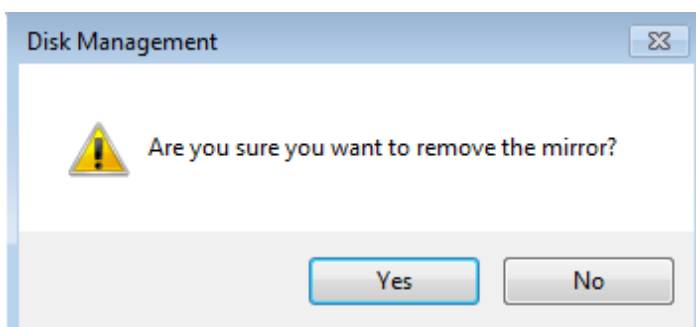


Mirror - Data2

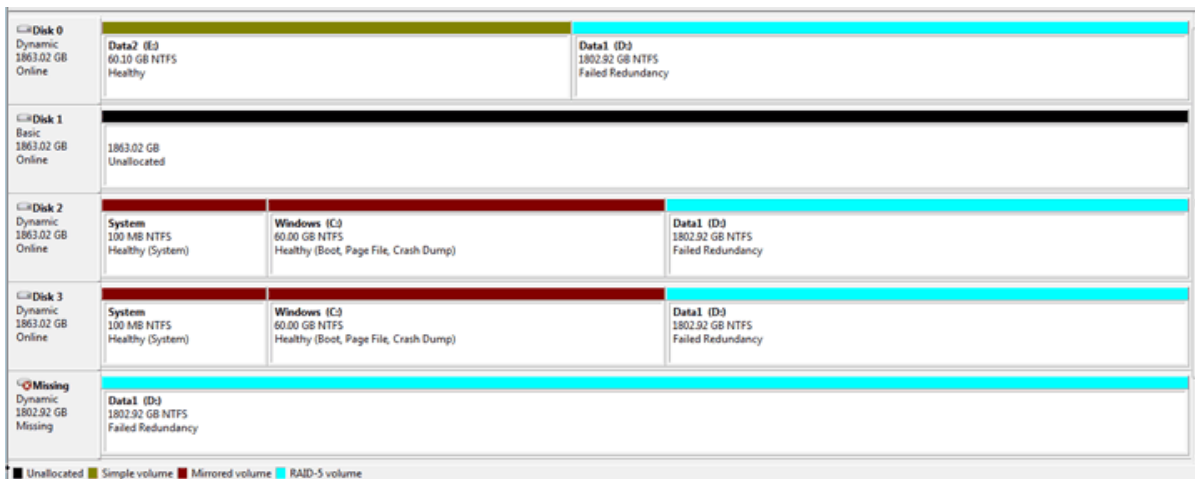
10. In the *Remove Mirror* pop-up window, select **Missing**. Click **Remove Mirror**.



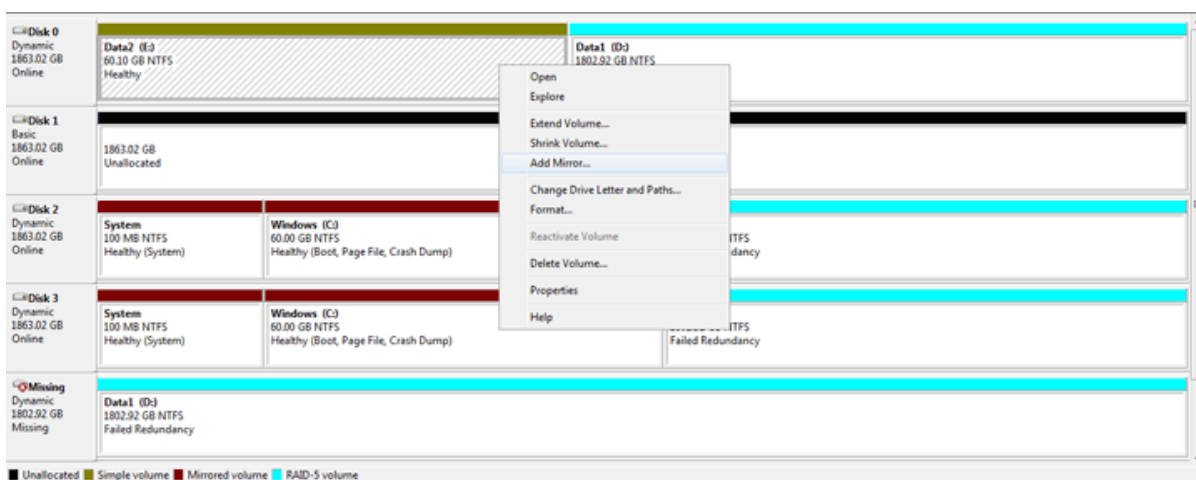
11. Click **Yes** at the Disk Management prompt.



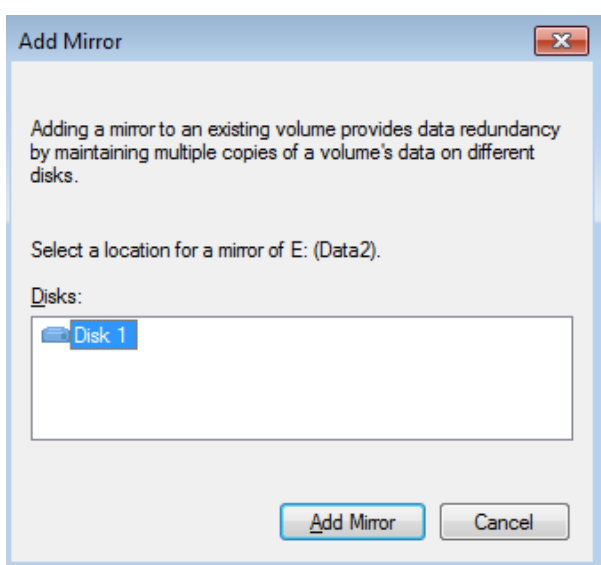
12. The mirror has been successfully removed.



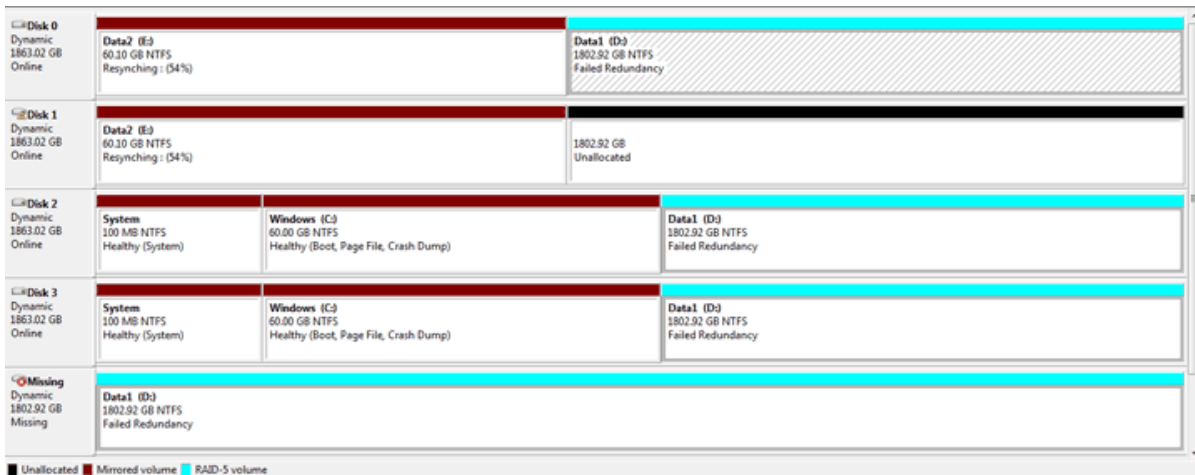
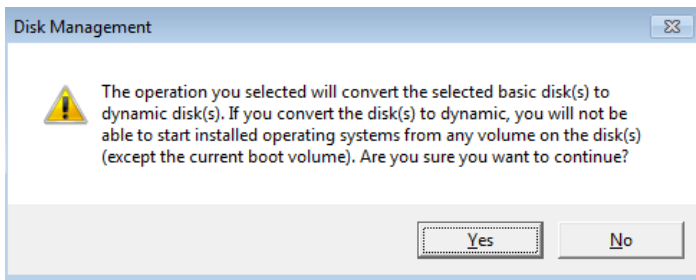
13. Right click on the **Data2** partition to select **Add Mirror...**



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



15. Click **Yes** at the Disk Management pop-up window. The Mirror will begin the resynching operation.

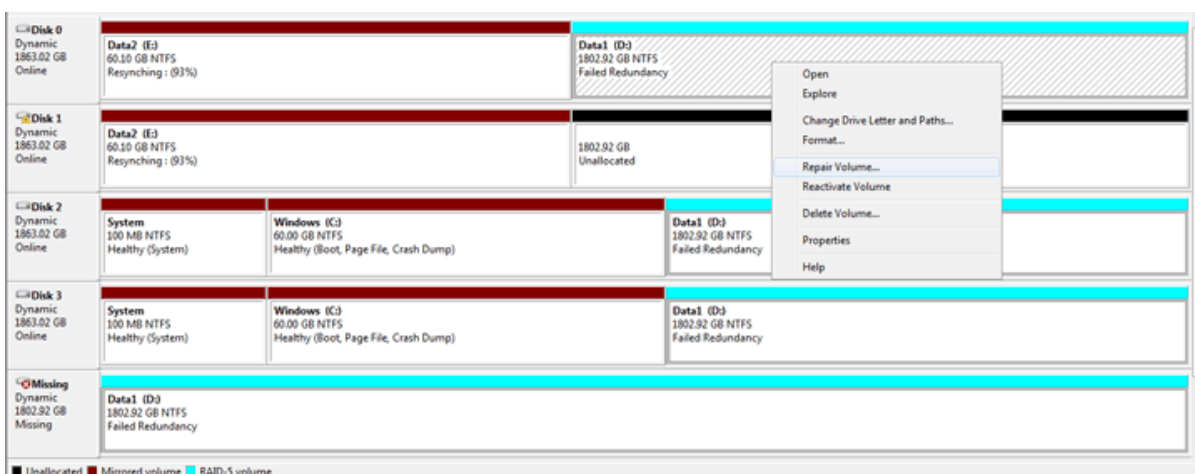


16. Go to [Repair the RAID 5 Array](#) to continue. You may repair the RAID 5 array while the Mirror is resynching.

Repair the RAID 5 array

Please follow the instructions in [Repair the Mirror Array](#) before attempting the steps below.

1. Right click on any volume in the RAID 5 array except for the *Missing* disk. Select **Repair volume**.



2. In the *Repair RAID-5 Volume* window, choose the disk to repair the Data1 volume (in our example, **Disk 1**). Click **OK**. In most instances, the Data1 volume will start resynching (See [Plex Error When Resynching RAID 5](#) if you receive a *plex* error.) Please be patient since the repair might take more than 40 hours depending upon the type of drive used. While there may be a slight reduction in performance, you may use the RAID 5 array while it is resynching.

