
2. Creating RAID Arrays

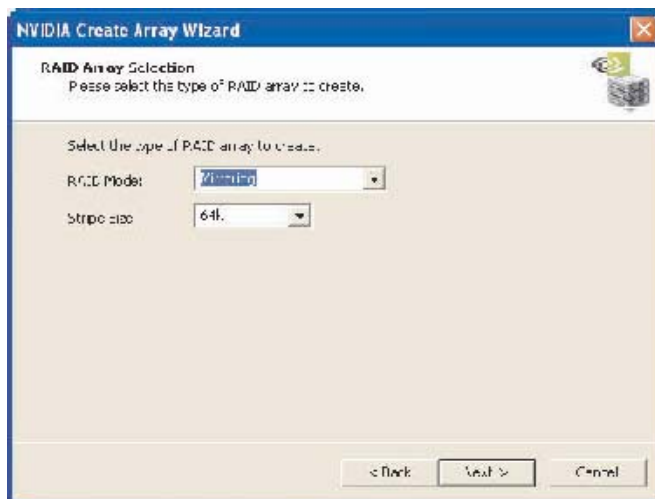
Creating RAID 0 (Striping)

NVRAIDMAN can be used to create a striped array from one disk up to the maximum supported number of disks in the system. To create a two-disk Striped Array do the following.

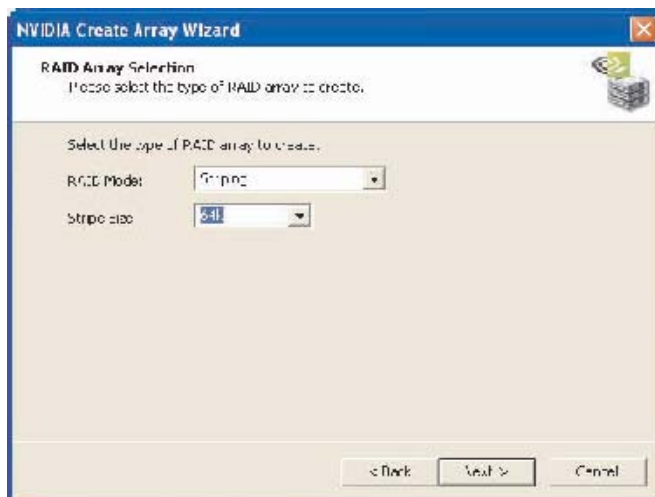
1. Go to the system BIOS and make sure that the drives that you want to use are RAID enabled.
2. Boot to Windows and launch the NVRAIDMAN application.
3. Create Array and the following screen will appear.



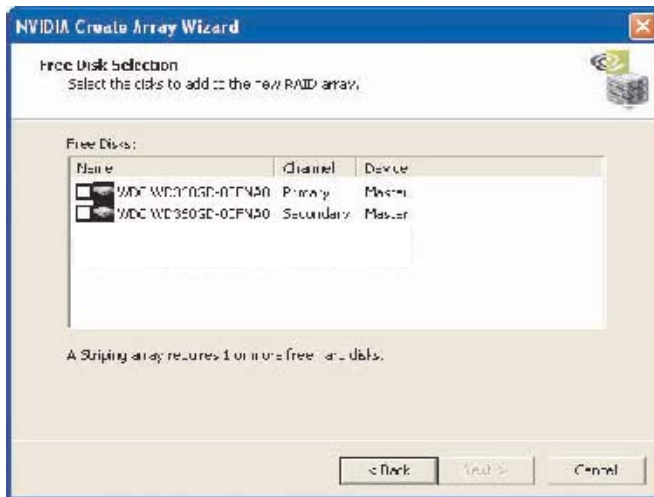
4. Click Next and the following screen shot will appear.



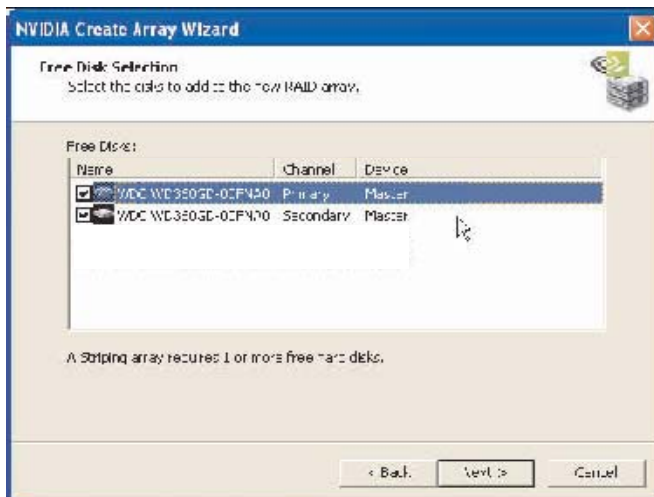
5. Click the RAID Mode list arrow and select Striping, and leave the "Stripe Size" with its default value as shown in the following screen shot.



6. Click Next, and the following screen shot will appear.

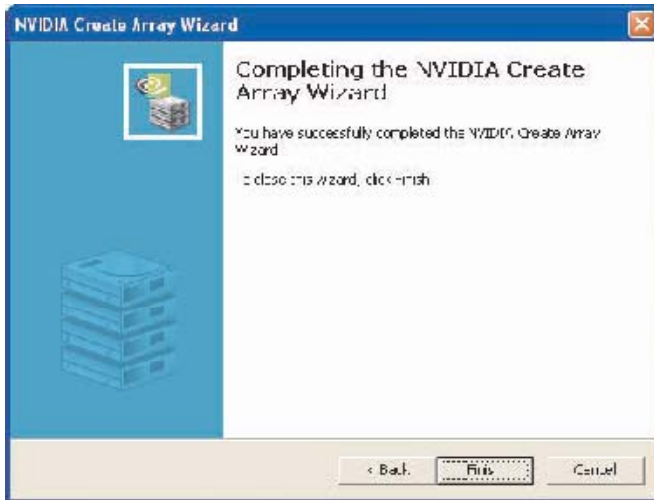


7. Select the two disks that you want to include in the stripe set.

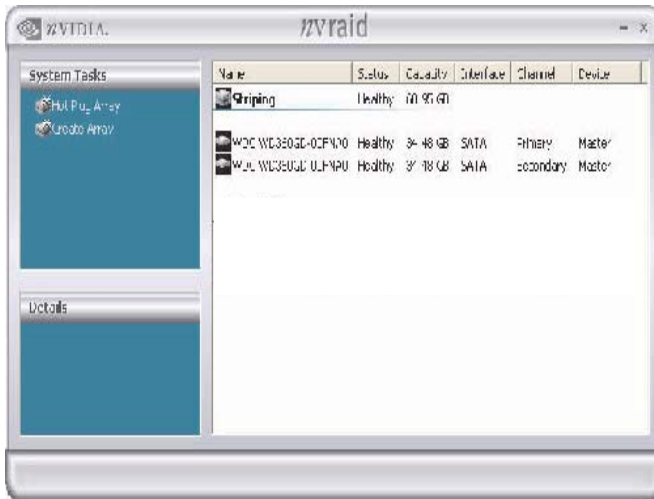


To create a striped array with more disks, select additional disks from the list.

8. Click Next and the following screen shot will appear.



9. Click Finish and the following screen shot will appear.



The RAID 0 is created successfully.

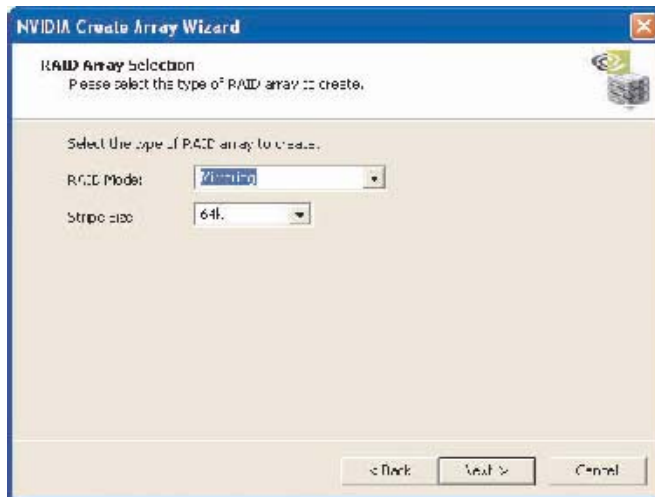
Creating RAID 1 (Mirroring)

The NVRAIDMAN application can be used to create a Mirror Array. By definition, a mirrored array consists of two drives. Data is written to both two drives, and if one drive fails then data can be recovered from the other drive. To create a Mirrored Array, do the following.

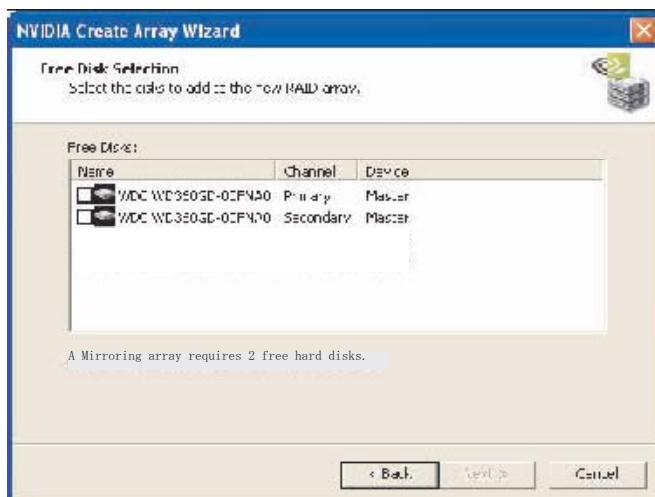
1. Go to the system BIOS and make sure that the drives that you want to use are RAID enabled.
2. Boot to Windows and launch the NVRAIDMAN application, then click on Create Array and the following screen will appear.



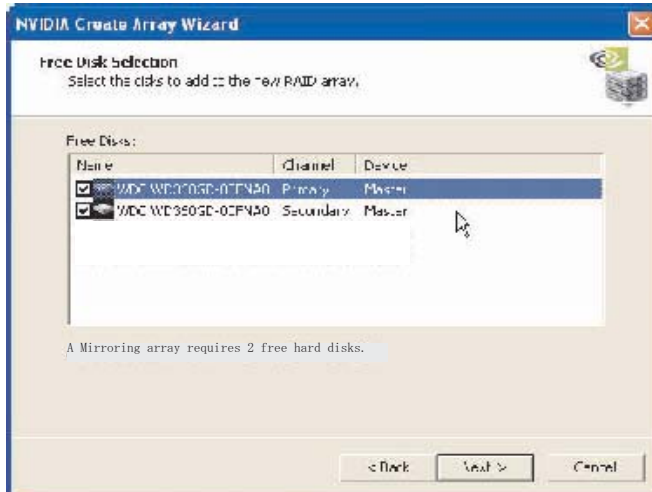
3. Click Next and the following screen shot will appear.



4. Click Next and the following screen shot will appear.



5. Select the two drives that you want to use in the Mirrored array.



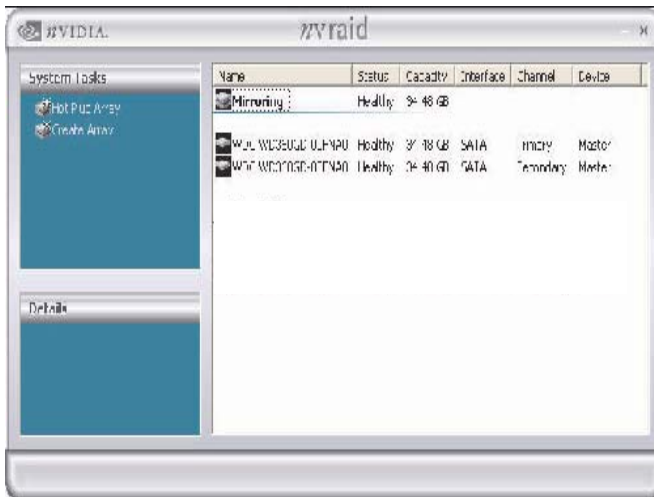
6. Click Next and the following screen shot will appear.



7. If you want to start rebuilding the array right away (copy data from one disk to the other), select the disk that you wish to preserve. Do not select a disk if you do not want to rebuild the array at this time.
8. Click Next and the following screen shot appears.



9. Click Finish. If you selected a disk to preserve in step 7, the rebuilding process begins.



A mirrored array has been created, while the other two disks are set to free disks.

Creating JBOD (Spanning)

NVRAIDMAN can be used to create a Spanning Array which requires at least one disk to start such an array. To create a Spanning Array do the following:

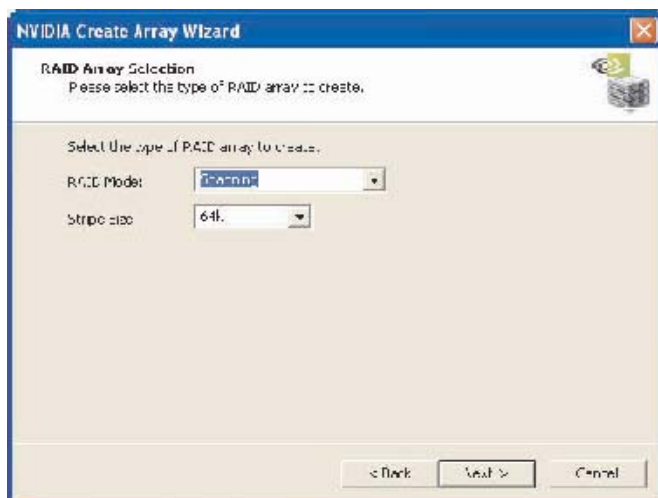
1. Go to the system BIOS and make sure that the drives that you want to use are RAID enabled.
2. Boot to Windows and launch the NVRAIDMAN application, then click on Create Array and the following screen will appear.



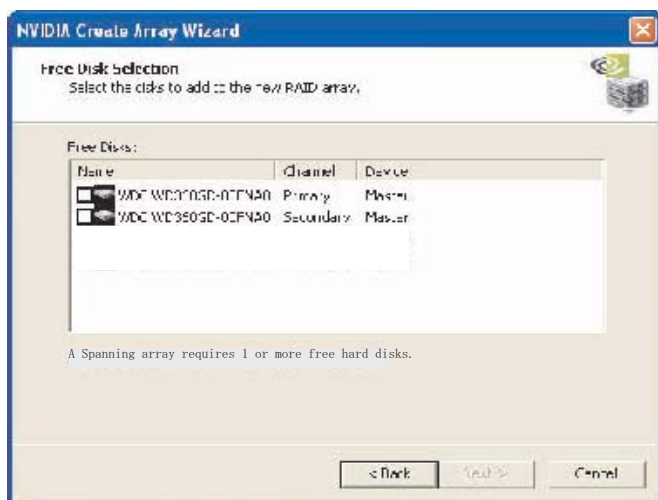
3. Click Next and the following screen will appear.



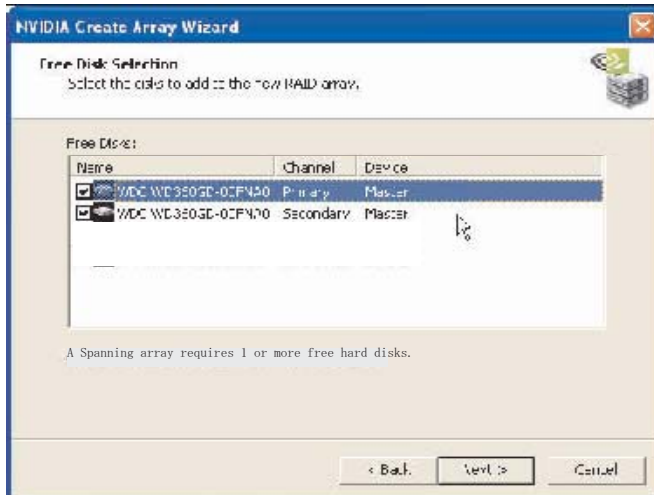
-
4. Click the RAID Mode list arrow and select "Spanning" while leaving the Stripe Size set to its default value as shown in the following screen shot.



5. Click Next and the following screen shot will appear.



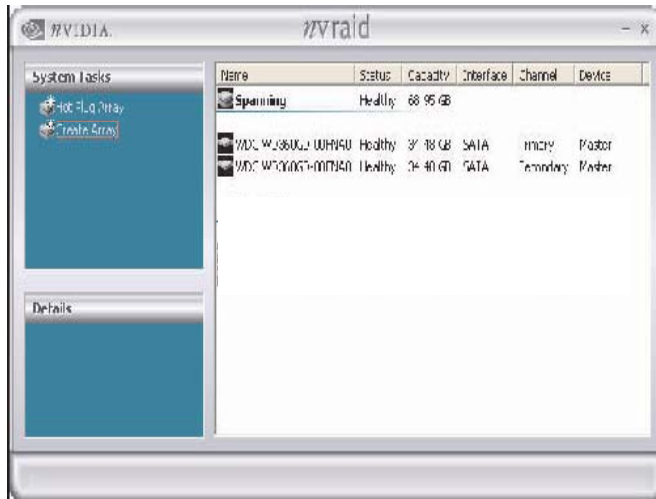
6. Select the two drives that you want to use in the Spanned array.



7. Click Next and the following screen shot will appear.



8. Click Finish and the following screen shot will appear.

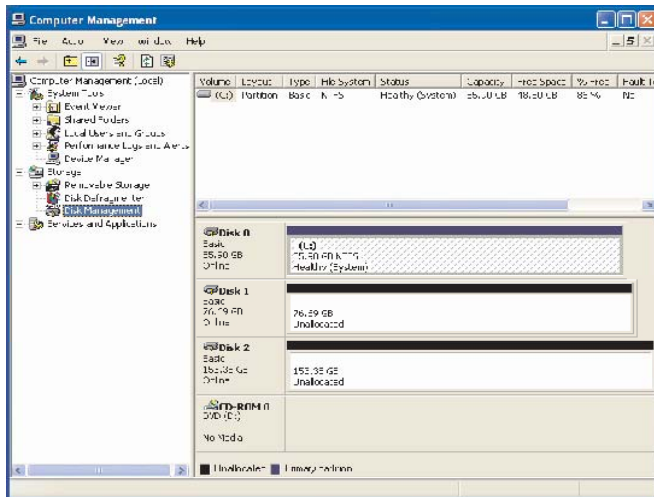


A Spanned Array has been created.

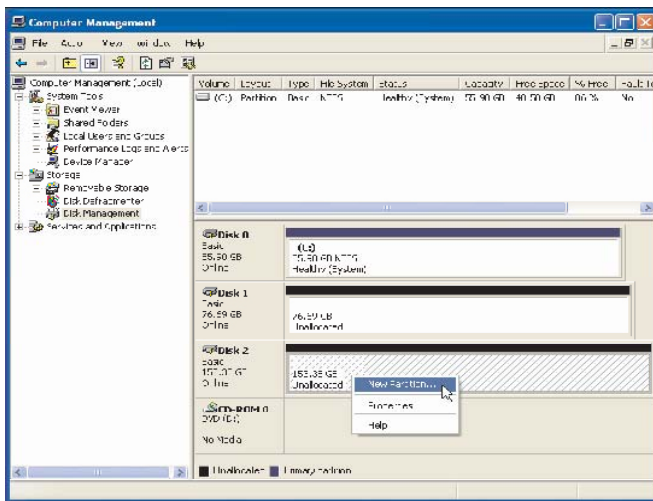
3. Initializing NVRAID Array Disks

Now that the two-disk array has been created, it needs to be partitioned and formatted.

1. Click on Start→Settings→Control Panel.
2. Double click on Administrative Tools.
3. Double click on Computer Management.
4. Click on Disk Management. The following screen is displayed.



-
- The 153.38 GB is for the two disk striped array that was created earlier.
To create a partition on it, right click on the Unallocated partition and select New Partition.



- Follow the Wizard for setting up and formatting the partition. Once that is done, you can start using the newly created striped array.

4. Deleting a RAID Array

NVRAIDMAN can be used to delete an Array. To delete an Array do the following.

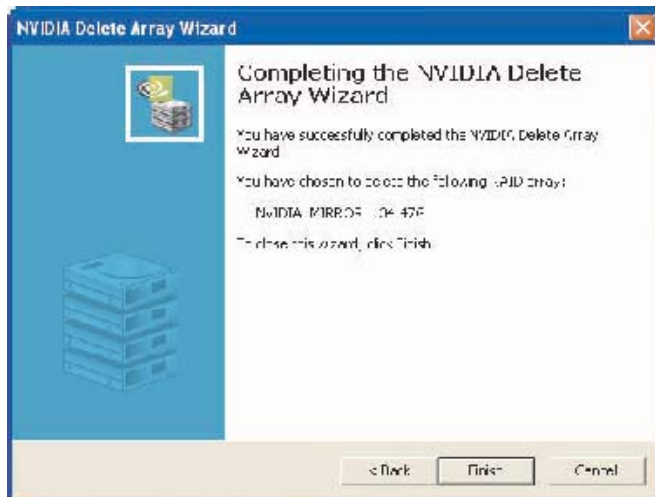
1. Launch the NVRAIDMAN application and right click on the RAID array that you want to delete (assuming that you have a RAID array already created) as shown in the following screen shot.



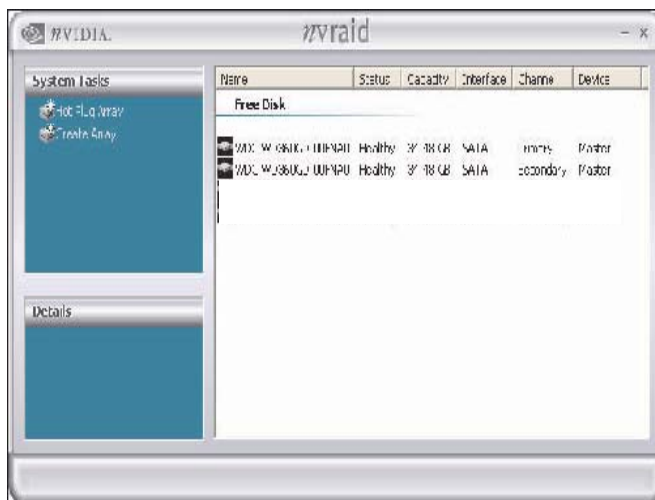
The above screen shot shows that there is a Mirrored array that will be deleted. After the "Delete Array..." has been selected, the following screen shot appear.



2. Click Next and the following screen shot will appear.



3. Click Finish and the array will be deleted and the following screen shot will appear showing all the free disks.

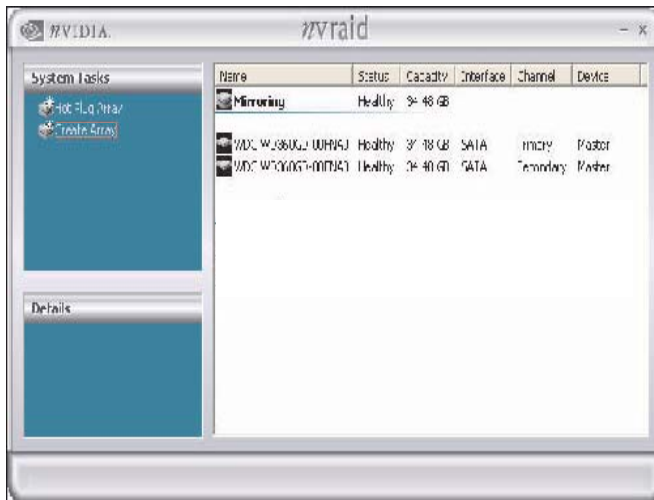


A similar process can be applied to delete any array created by NVIDIA RAID.

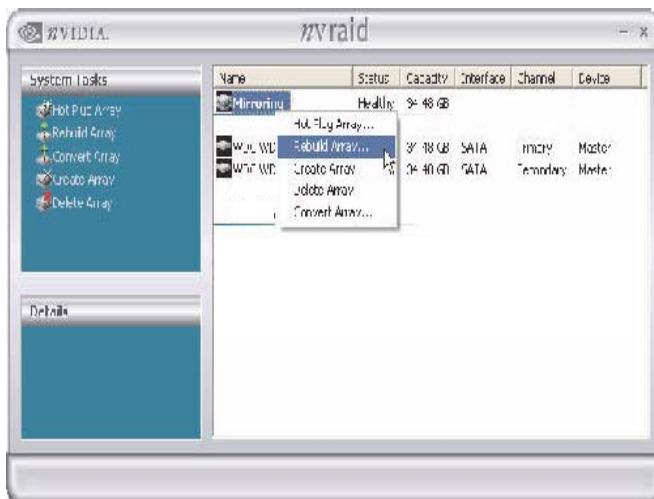
5. Rebuilding a RAID 1 Array

Rebuilding is the process of recovering data from one hard drive to another. All data is copied from one hard drive to another and then the data is synchronized between the two hard drives. After creating a mirrored array, you can rebuild the array using the following steps:

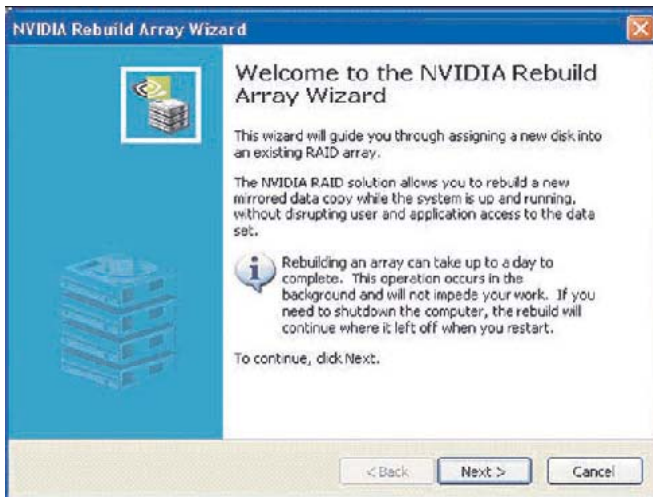
1. Go to Windows and run the NVIDIA RAID Management utility.



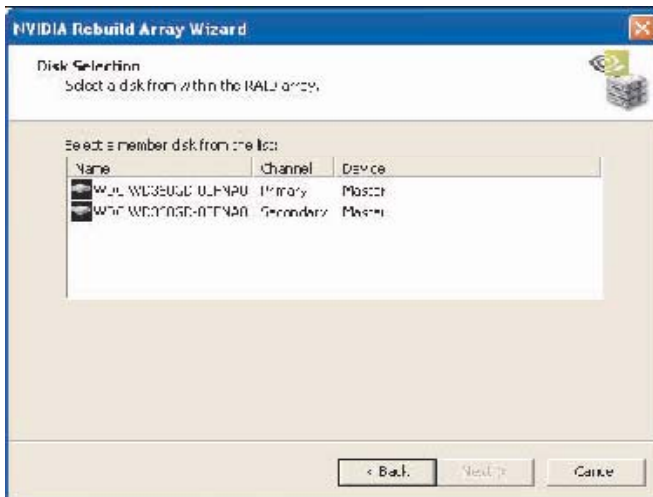
2. Right-click on Mirroring. Then the popup menu appears.



3. From the popup menu, click Rebuild Array. The NVIDIA Rebuild Array Wizard appears.



4. Click Next. The Disk Selection page appears.



-
5. Select the drive that you want to rebuild by clicking it from the list, then click Next. The Completing the NVIDIA Rebuild Array page appears.



6. Click Finish.

More About Rebuilding Arrays

- Rebuilding Occurs in the Background
The rebuilding process takes some time to complete, and occurs in the background so as not to affect the performance of the system.
- Rebuilding Applies Only to RAID 1
Rebuilding an array works only when using RAID 1. Rebuilding does not apply to RAID 0 and JBOD arrays.
- Rebuilding applies to a degraded fault tolerant array
You can rebuild a degraded mirrored array using any available Free Disk or Dedicated Disk.