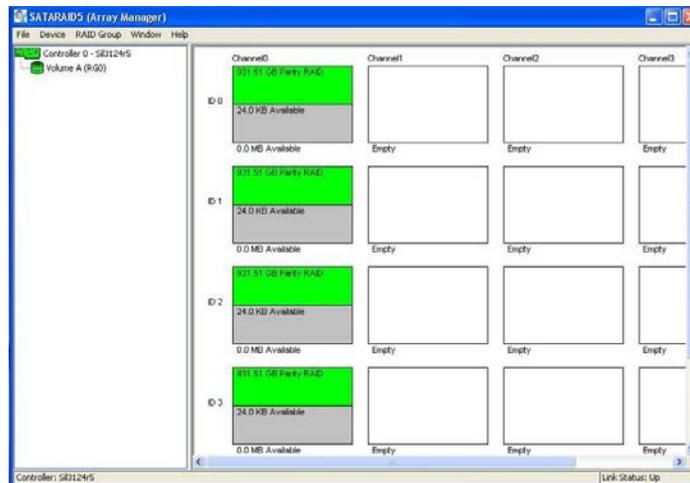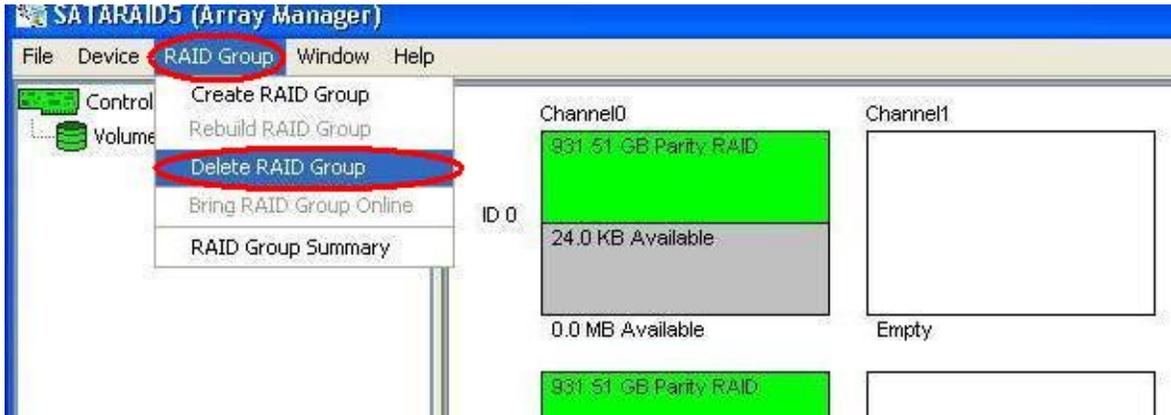Cavalry™
Service and Support

Guide: Re-Configuring the RAID5 CADA-SA4 to 2 mirrored RAID1 sets of 2 hard drives each. (Guide is applicable to each channel of 4 drives of the CADA-SA8)

NOTE: This guide is useful if you are running an operating system that **only supports MBR partitions** (Windows XP and older, Mac OS v10.4 and older) because MBR partitions only support volumes up to 2TB. Thus, to use a disk array with a total capacity exceeding 2TB, you must break the capacity down into smaller partitions. Those running newer operating systems that support GPT partitions (Windows Vista, XP x64, 2003 Server SP2, Mac OS 10.5) can access partitions over 2TB, and should thus partition their RAID 5 Disk Array into as few partitions as possible (one partition for the CADA-SA4 and two for the CADA-SA8) i.e. not using this guide. For regular partitioning instructions that are optimal for those with a GPT-compatible OS, see the "Driver & Software Installation Guide" found on our product manuals page: http://www.cavalrystorage.com/manuals.htm.
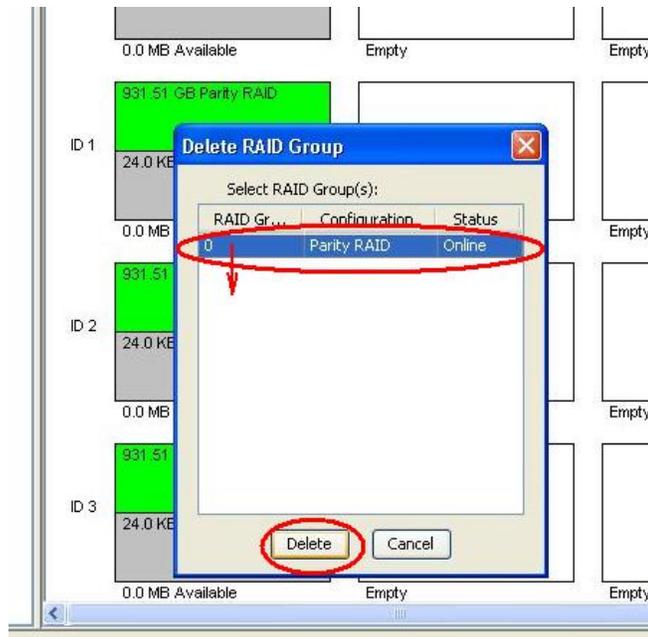
1. Go to the Silicon Image SATARAID Tools RAID5 Configuration Manager Utility. You should have your CADA00XSA4 unit already connected turned on and the driver and the Configuration manager utility already installed. If you need help on installing the unit and the drivers and software see the online guide "Driver & Software Installation Guide" under "CADA-SA4" http://www.cavalrystorage.com/downloads.htm

2. First delete all existing RAID configurations on the channel 0 set. Go to top menu "RAID Group" -> Select "Delete RAID Group"
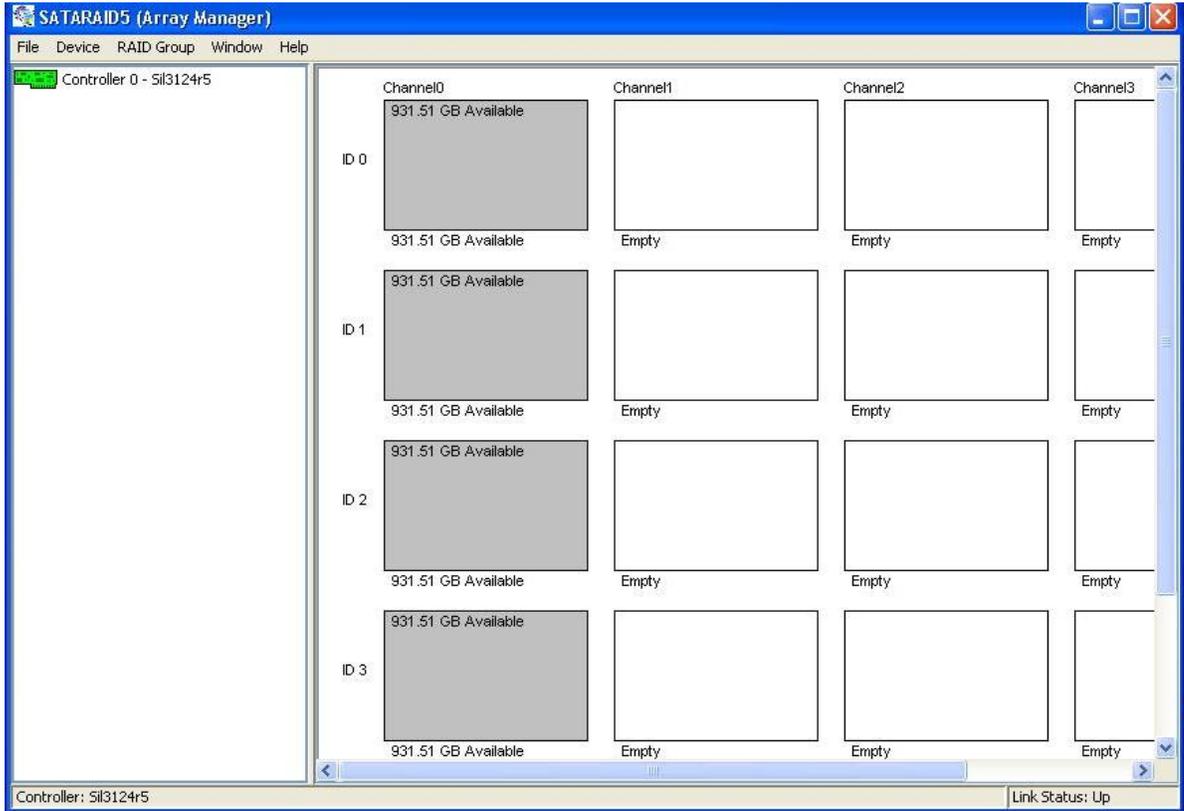

3. The "Delete RAID Group" window will pop up. It should list all the current configured RAID groups. You can select them all by highlighting them with the mouse: hold a left-click at the top, then drag down with the mouse pointer to include any other RAID groups. Alternatively, you can hold the ctrl or shift key to select multiple drives.

Click the "Delete" button. A small warning message box will pop-up. Just click "Yes" to continue.

4. Now the RAID configuration should display all drives as grayed out, indicating cleaned and un-configured drives.

5. Create a new RAID group. Go to top menu "RAID Group" again and select "Create RAID Group" to start the "Create RAID Group" settings window.

6. In the "Create RAID Group" settings window. Leave the "RAID Group label" and "RAID Group" parameters alone as the wizard does this for you. For "Configuration" use the pull down menu box to select "Mirrored". For "Capacity" make sure to pick MAX to use free available space for each drive. Leave "Rebuild Priority" alone, then select the **first two drives** shown in this example under "Target ID" as 0 and 1. Select multiple drives by holding the ctrl key. Click "Create" to create the first mirrored RAID group.
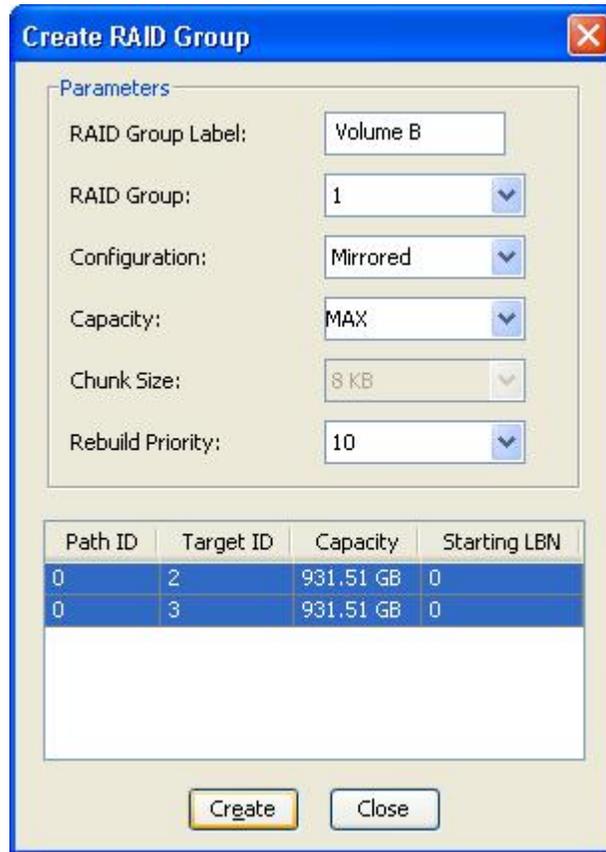
7. The "Create RAID Group" window will reappear, ready to do the next RAID group. Choose the same settings as before. This time choose the last two remaining drives for your second mirrored RAID group. Click "Create".
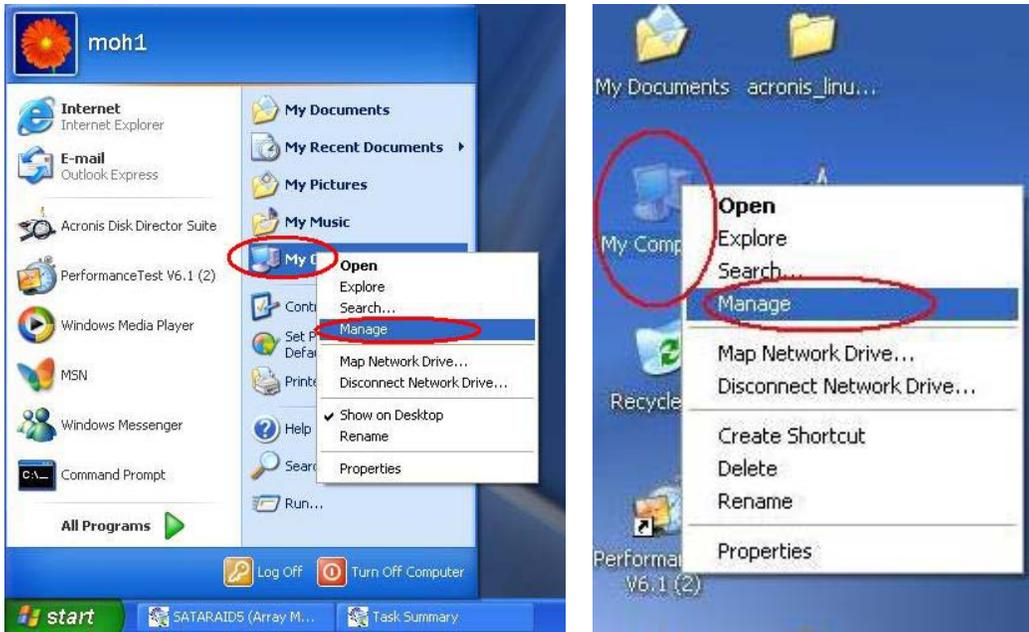

After you are done, the "Create RAID Group" window will appear again. This time just click "Close" to exit. Then exit the RAID utility. You now have TWO mirrored RAID1 groups.

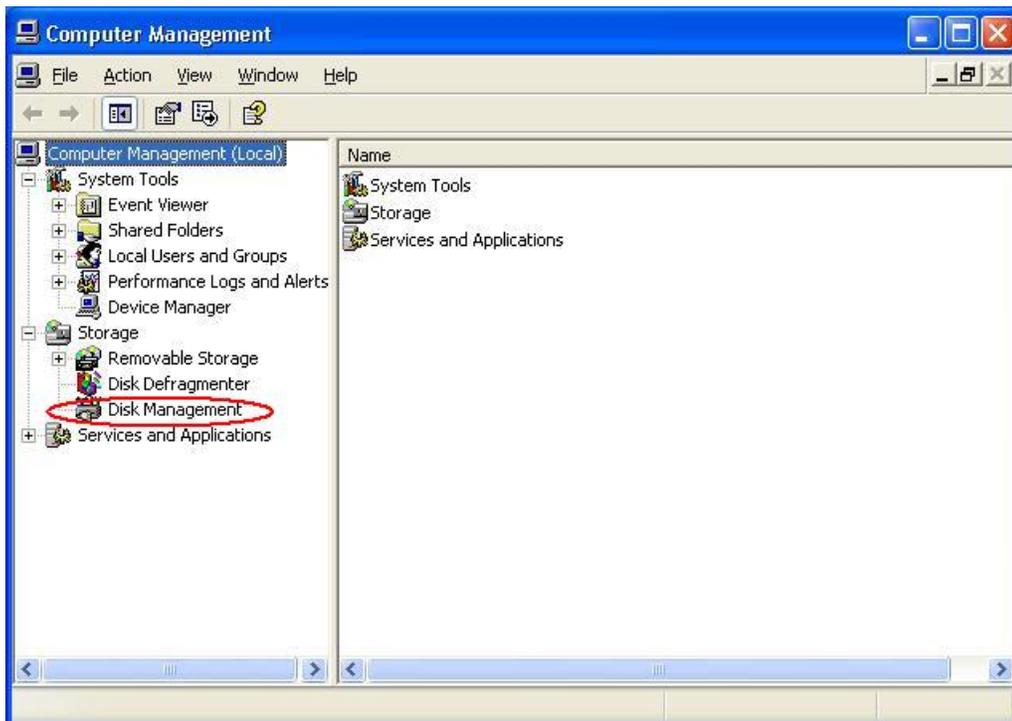NOTE: If you have a CADA-SA8 you will have to repeat this procedure for the other channel of drives.

Continue to **Step 8** to partition and format your new volumes. If you have an operating system other than Windows XP/NT/2000/2003 Server, please see our formatting guide by following this link and opening the PDF:
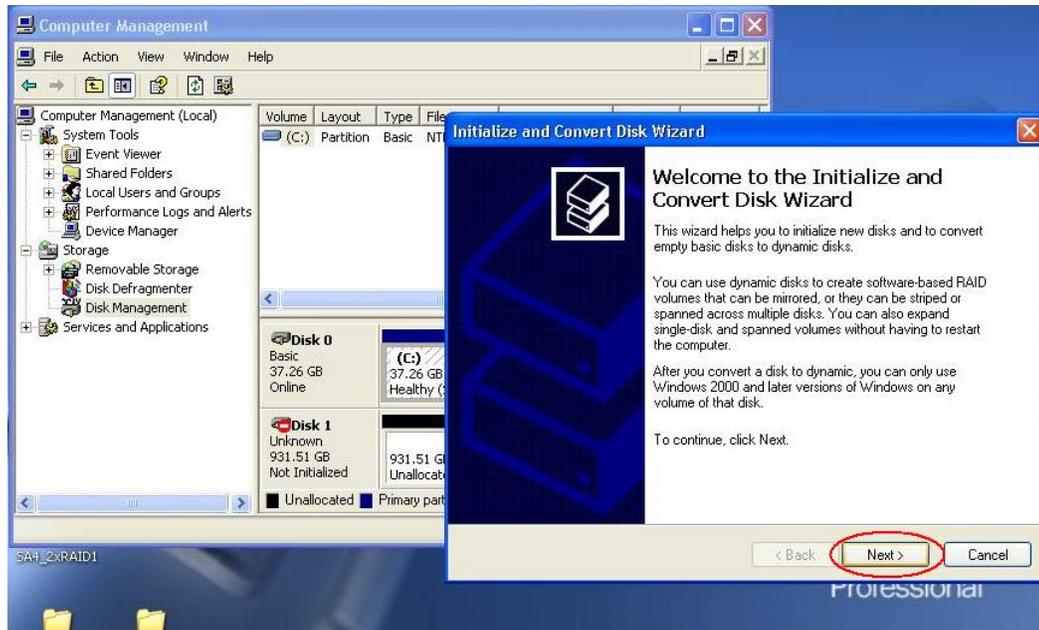http://www.cavalrystorage.com/products/manuals/Formatting_Instructions.pdf

8. Now go to disk management: Click on the "Start Menu" -> right-click "My Computer" -> left-click "Manage". Alternatively, you can right-click on "My Computer" icon on your desktop then left-click "Manage" to start computer management.
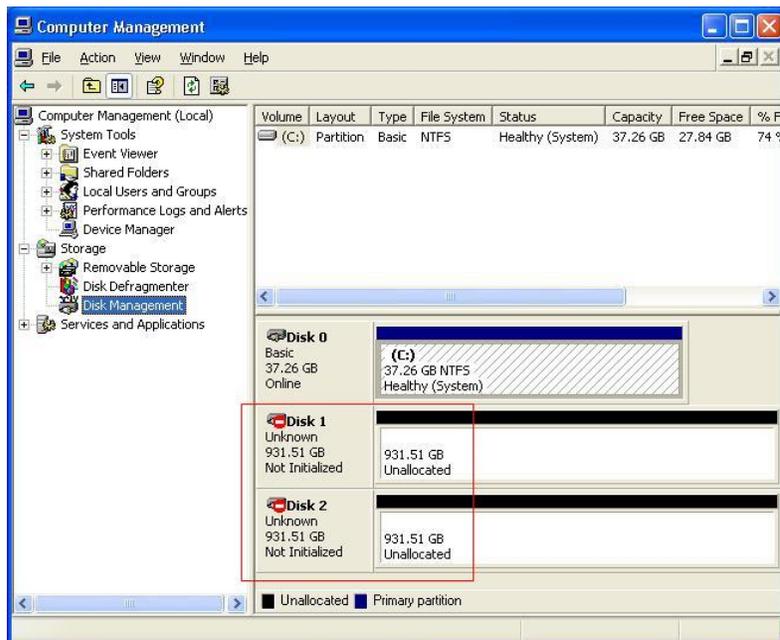

9. When the "Computer Management Console" window shows up. Click on the "Disk Management" sub-header under the "Storage" header to start the Disk Management service. This shows the physical hard drives and Windows volumes and partitions (or empty unallocated space) on the right pane.
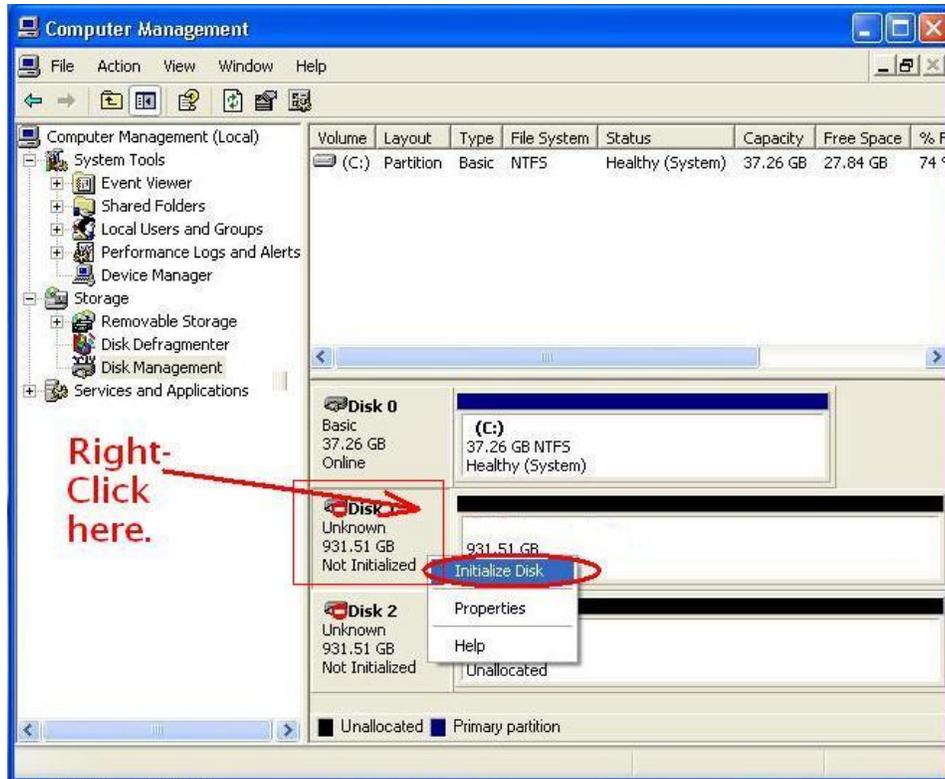
10. The two new volumes will show up in your disk management. (4 if you configured 4 RAID groups for a CADA-SA8) If a wizard asks you to initialize a drive, go ahead and click "Next". The "Initialize and Convert Disk Wizard" automatically starts.
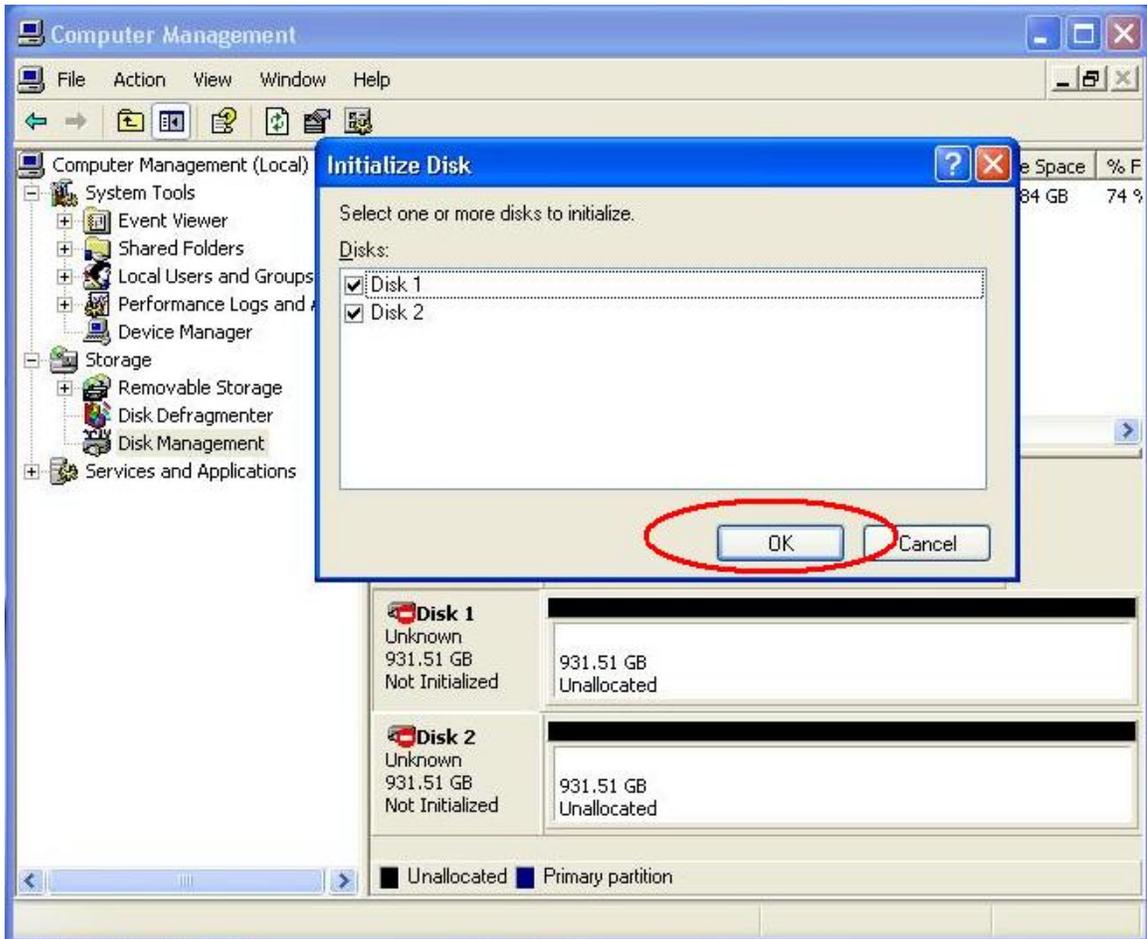

If you don't get the drive initialization wizard right away, or you need to redo the step manually, navigate back to Disk Management so you can see your uninitialized drives.

Now you need to manually start the disk initialization. Right click on Box area with the "Disk # , Unknown, xxx.xx GB, Not Initalized" information. This will show a pop-up menu. Click on "Initialize" to start the "Initialize and Convert Disk Wizard".
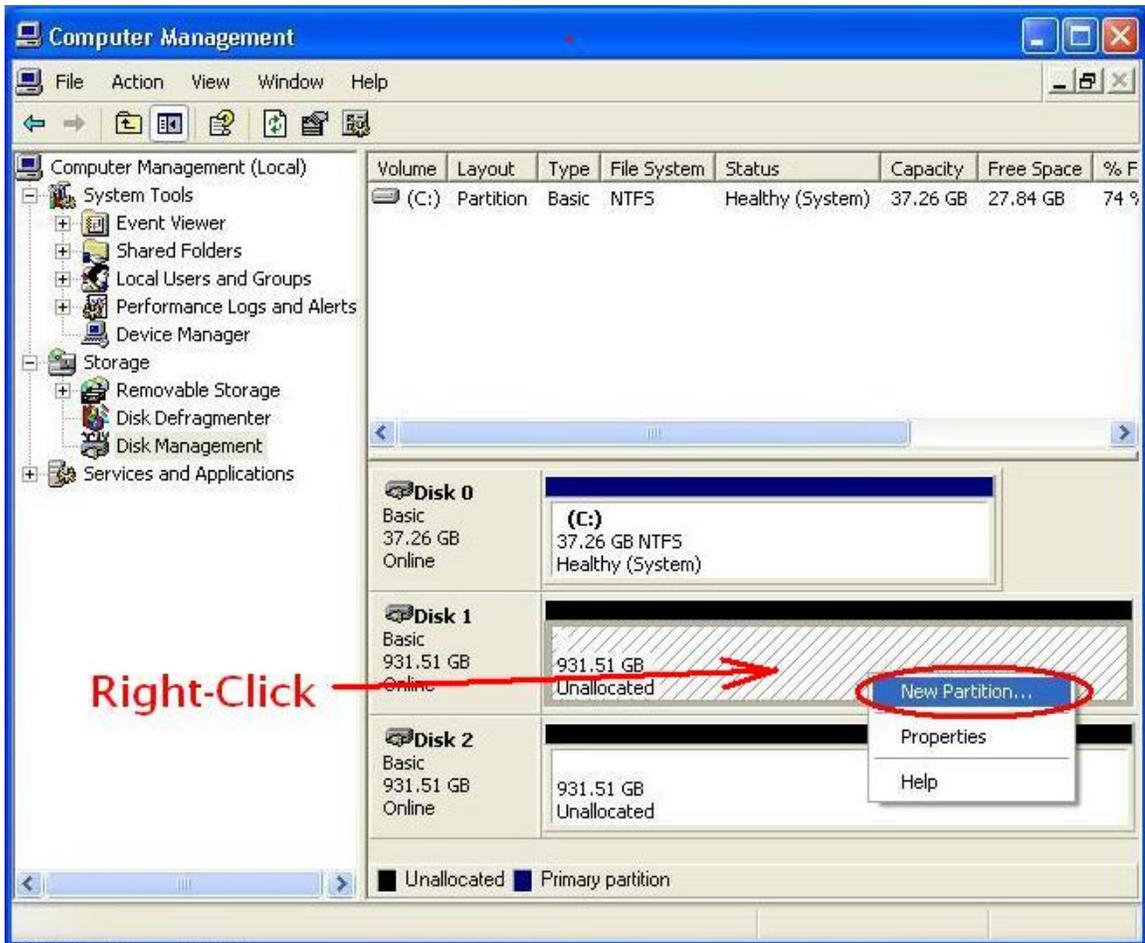
11. The "Initialize and Convert Disk Wizard" will start. On the first page, make sure BOTH of the new unallocated RAID group drives are checkbox selected to initialize. Then continue through the wizard completely by clicking "Next" until you click "Finish". Ignore any other selections in the wizard. After the wizard is done, both volumes [all four, in the case of the CADA-SA8] are initialized although still unallocated.

12. Now you can create a new partition and format the volume for each drive. Right-click on the unallocated volume (anywhere under or including the black top bar) and left-click "New Partition" to start the "Create new partition wizard". If you have trouble using the "Create new partition wizard", see the Cavalry Formatting Guide at:

http://www.cavalrystorage.com/products/manuals/Formatting_Instructions.pdf

Repeat this step for the other unallocated volume(s).

13. You now have two finished partitions and volumes (four in the case of the CADA-SA8). You can go to "My Computer" to access them.