



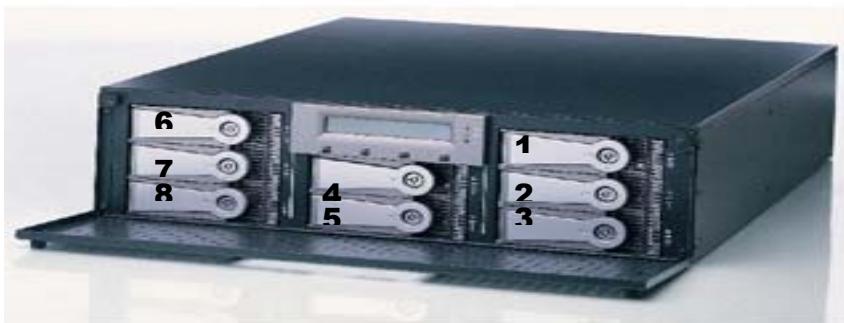
TECH TIP

VICON TECHNICAL SERVICES GROUP

Subject: RAID/KOL Troubleshooting - Tips
Product: RAID products
Number: 1400-0001-46-00
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RAID Troubleshooting Tips:

1. The original physical order of drives is critical and any moving of drives either in the same box or between boxes will cause critical failures.



2. Replacement HDD's must have equal or faster RPM's than the HDD being removed.
3. Replacement HDD's must have equal or larger hard drive space than the HDD being removed.

Example: An existing 80GB HDD can be replaced with a 80, 100, 120 GB HDD but nothing more than 80GB would be available for storage, therefore replacing a 80 GB HDD with a 120GB HDD will not increase storage capacity.

4. RAID(s) 1, 3, and 5 are capable of handling 1 HDD failure at a time, a failure of two drives occurring at the same time will result in data loss and array off line.
5. A RAID indicating failure can be attributed to a true physical failure or to a simply parity error, it is always recommended to allow the RAID to rebuild itself prior to replacing a HDD. Unless there is noise originating from that failed HD or the RPM's for that drive are lower than all other HDD's in the array, the unit should be allowed to rebuild itself.
6. Removing and re-inserting the failed HDD will start the rebuild process automatically. This should be tried before deciding the HDD must be replaced. This may take up to 6 hours to complete.
7. Mixing manufacturers of HDD's is possible but it is preferred to keep them all the same whenever possible.
8. HDD suspected as being bad should be tested outside of the RM8000, each HDD manufacturer has its own software which can be downloaded off their website. The diagnostic programs from the disk drive manufacturers are designed for testing individual disk drives in personal computers. For this reason, the suspect drive must be connected to a computer as if it were a single, non-array drive.

9. The RAID box should always be turned on before the Kollector.

10. Vicon part numbers for service/replacement are as follows:

80GB	5400RPM	8008-8698-14	Maxtor 4K080H4 or 6Y080L0
120GB	7200RPM	8001-8698-21	Maxtor 6Y120L0
160GB	5400RPM	8001-8698-18	Maxtor 4G160J8 or 4A160J0

- It will be the responsibility of the Vicon Sales representative to submit a sales order and to determine if the HDD replacement will be a billable item.

Note:

- **All removal/servicing of HDD can result in a wait time up to 6 hours for rebuild.**
- **This document is to be used as a supplement to the manufacturers manual provided with the RAID product.**

In preparation for replacing a failed HDD:

1. Make sure you have a HDD with **AT LEAST** the same RPM as the one you are swapping.
2. Make sure you have **AT LEAST** the same size (memory) of HD as the one you are swapping.
3. Mixing HDD manufacturers is possible, but not suggested.
4. Get the BAD HD outside by opening the clip on the drawer.
5. Take the power cable and IDE connection from the HD to the drawer off.
6. Replace the HD on the drawer and connect the power cable and IDE connection to the new HD.
7. The Raid should recover itself.

In case the Raid is not updated or you don't see the Updated DB size on the Picture Database Utility.

1. Turn the Raid off.
2. Turn the Kollector off
3. Turn the Raid on
4. Wait 5 min
5. Turn the Kollector on
6. You should see the full Raid capacity on the Raid and the Kollector normally.