creo

Workflow Systems ArrayManager
ArrayManager Disk Replacement for Dell

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1. INTRODUCTION

This doc will describe how to locate and replace a faulted disk in a Dell with a Perc RAID Controller with Array Manager 2.7.1. The following controllers are supported with this document;

- Perc2/DC, Perc3/DC Dell PE6400
- Perc2/Si Dell PE2400
- Perc3/Di Dell PE4400, PE2500

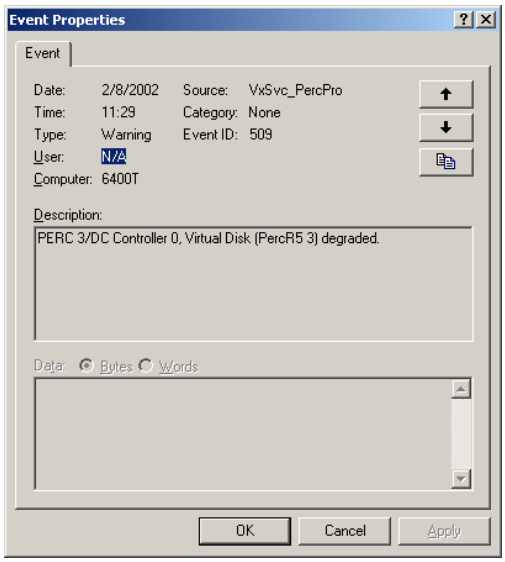
2. WHEN A FAILURE OCCURS

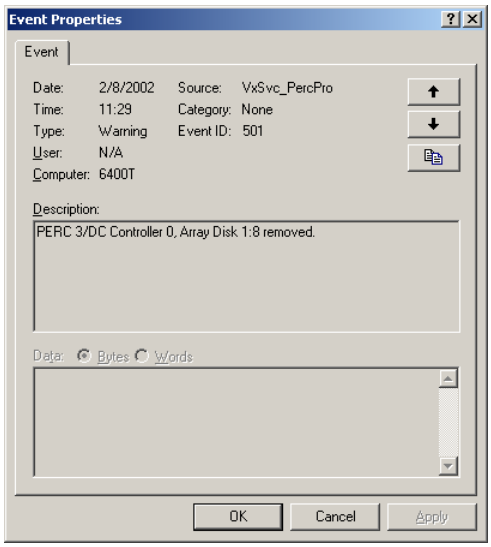
You should be notified of a failure in following ways;

A. You should hear an audible alarm.

B. You should se a service light on one of the drives.

C. You should see the following event in your **NT EventLog / Application**





1) In the above example you will note that the Perc3/DC controller 0 (your only controller) disk 1:8 failed. The important info is broken as follows:

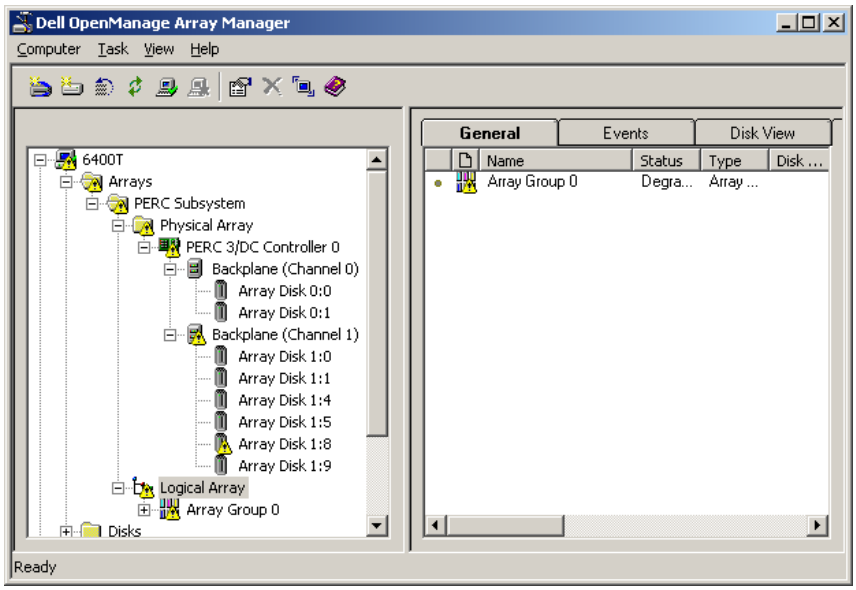
Perc3/DC	This will be different for the different servers.
Controller 0	Which Perc controller in your system. This should always be 0.
Disk 1:8	1 – The Bus number on the Perc. Percs have between 1 and 4 busses. Starting with bus 0. 8 – The SCSI ID of the disk on the bus. This is NOT the physical location. Refer to the Disk placement chart at the end of this doc for a cross reference.

2.1 Starting ArrayManager

2.2 Silence the alarm

The sound of continuous warning beeps is probably driving everyone nuts. To turn off the alarm do the following:

1) Start Array Manager Console by selecting **Start / Programs / Dell OpenManage Applications / Array Manager / Array Manager Console**. You should see something like the following.



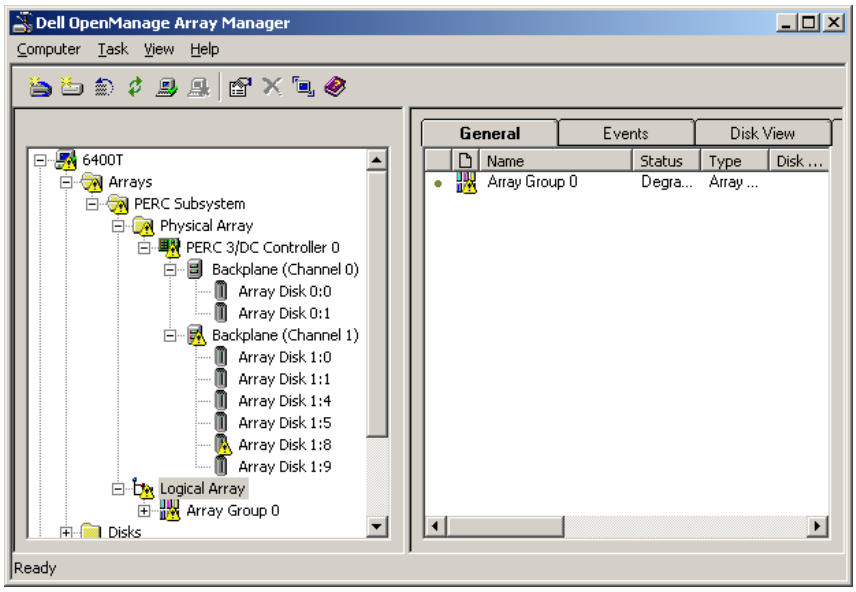
2) Select from the top of the tree **Server / Arrays / Perc Subsystem / Physical Array / Perc x Controller 0**.

3) Right click the **Perc x Controller 0** and select **Quiet Alarm**. Note that Enable Alarm should be grayed out to indicate that the audible alarm is enabled. Change to enabled if required.

2.3 Which Disk Failed (Dell's Array Manager)

1) Open up Array Manager and select **Arrays / PERC Subsystem / Physical Array / Perc x Controller 0 / Backplane (as noted above).**

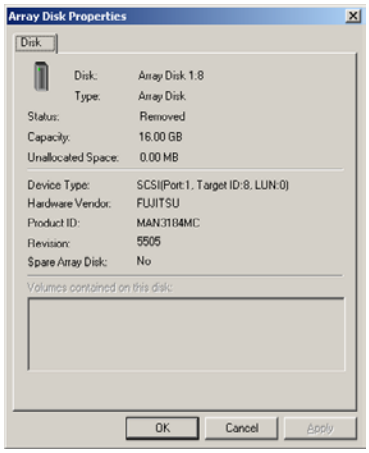
   From here you should be able to dig down into the failure and you should see something like the following. Notice the Failure Flag bubbles up to the highest level in the tree.



2) The disk ID here does NOT correctly reflect the physical location of the disk. To determine the disk failure location you must refer to the **Disk Location vs. Physical ID chart** at the end of this doc.

3) Determine the Disk Type. From the above disks window above right click the failed disk and select Properties. This should give you the **Disk Size**, **Manufacturer**, and **Model Number** of the Disk as follows:

Figure 1



4) Get the **Service Tag Number** of the Server. This should be located on the back of the server and is a 7 digit Alpha/Numeric id.

5) Call **Dell Support** at **(800) 387-5751**.

6) Leave the failed disk in the RAID until a new disk arrives. A customer can replace the disk themselves. Tell the customer not to worry about redundancy. By default the Hot Spare will have taken over the redundancy of the RAID set.

2.4 Testing a suspect disk

Occasionally a disk may give some indications that it has failed but then starts working again. This “suspect” disk should be tested to see if it has failed in the past. You will need to use the Dell Elite Disk Utility and follow the procedure in the kit. You will need DiskDupe to make the Bootable Floppy image this kit contains.

Both kits are available on the TechLibrary under Dell Servers / Downloads

- XX0307 Dell's Elite disk check utility.
- XX0166 DiskDupe Duplication Factory.

3. REPLACING A DISK

3.1 Adding a New Disk

1) When a new disk arrives verify again the failed disk location.

a) Use Array Manager + the lookup table in the Appendix to determine the location.

b) Check the Disks for a Fault Light. A Disk with a Fault Light should correspond to the location you determined in step (a).

2) Ensure Array Manager is started.

3) Replace the failed drive with the new drive. The rebuild should start automatically.

4. APPENDIX

4.1 Disk Location Table

An example of the disk numbering layout is displayed below.

