

## Re: Maxtor one touch image?

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- *From:* Paul <nospam@xxxxxxxxxxx>
  - *Date:* Tue, 24 Apr 2007 11:15:37 -0400
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bikini browser wrote:

Hello...

I want to know if a Maxtor One Touch III can make an image of your disk..? Can I restore the entire operating system (AND programs and files) if it crashes?

Please advise....

Dale

There is one technique for this. Asus offers EZbackup on some of their motherboards. Basically, the concept is there is a RAID controller on the motherboard. There is one SATA port on the motherboard (that is where your boot drive goes). There is an ESATA port on the back of the computer. You connect an ESATA external enclosure to the ESATA port.

When you install the OS, you use a RAID 1 driver for the RAID controller. RAID 1 forms a mirror of two drives.

If you plug in the ESATA drive, to the back of the computer, the RAID driver can "rebuild" the mirror. That involves a sector by sector copy of the internal hard drive, to the external one. When the RAID status is "rebuild complete", then you know the backup is finished. The mirroring operation has made an exact backup, and it can even be done with the OS running. You can continue to work while the mirror is rebuilding. (For total consistency in the image, you could always shut down after the rebuild is complete, as I don't know if the "Safely Remove" icon is available with this setup or not. At shut down, all the open files would be flushed to disk, and any system or disk caches emptied out onto the platters.)

Then you unplug the external ESATA drive and store it in a safe place.

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If, at some point, the internal drive fails, in theory it is as simple as connecting the external ESATA again. You shouldn't even need to change the boot order. The RAID mirror can work with only 1 of the 2 drives available (the internal one or the external one).

So, the thing is a bit of a fiddle, but it can be used to make exact copies. One thing you have to be careful of, though, is the exact size of drives. For example, it is possible to go to a computer store, and buy two hard drives, and think they are exactly the same. You get them home, and one might report 180,000,000,000 bytes, and the other one 179,990,987,654 bytes. The reason for this, is changes to firmware or to the layout of the info on the platters, makes minor changes to the capacity. The problem that would come up, is trying to mirror the 180,000,000,000 drive, to the 179,990,987,654 one. AFAIK, you can always back up to a slightly larger disk (like a 200GB in this example). But ideally, for best flexibility, it would help if they reported the same size – that way they can swap roles at any time. Once the mirror rebuild is complete, the disk cannot pull any fast ones on you, so the size issue would only be apparent when trying to make a backup. That is when you'd get warned about it, or stopped in your tracks.

If you want to implement such a scheme on a motherboard without a RAID controller, it might take the purchase of a controller card with one internal and one external connector. The reason for the external connector, is to make it easier to put the drive in a safe place, after the backup/rebuild is complete. You can also put your backup drive inside the computer, and it is only a slight nuisance to disconnect the internal cable on the backup volume, when you are finished.

Could you leave both disks connected all the time, and just run in mirror mode ? The answer is yes. But the advantage of disconnecting the backup drive, is that if the power supply in your computer fails, it cannot burn both of the drives out at the same time. Physically removing the disk is intended to improve the security of the backup copy. Makes it harder for a virus or Trojan to mess about as well (just go get your most recent backup disk).

Not as much fun as the Maxtor OneTouch, but it is another way to get the job done.

Paul

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