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From Behind the Service Counter

Here comes the next stage in modern computing. High capacity (Enterprise capacity) drives as big as 6 terabytes are now entering the market place.

But before everyone starts to jump up and down in glee, there are a few caveats that you need to know about. While these high performance drives are primarily for servers, of course human nature being what it is, it's only a matter of time before the demand pushes them into gaming and home systems.

So... what's old is new. By that I mean, once upon a time when hard drive capacities exceeded your computer's BIOS' ability to recognize the larger sizes, we had special controller cards that handled the heavy lifting and quarterbacked the drive space to enable the user to have access to the full capacity.

For those who didn't want to put out the huge dollars to buy the controllers, the manufacturers gave us drive manager software that reformatted the drive into a proprietary configuration so the lesser computers could see and access the space that normally would be out of reach. Drive managing software added a whole new level of complexity to drive install and made drive and file service a nightmare if things went south.

And now it's all back!

To begin, the new drive configuration is referred to as SAS (Serial Attached SCSI) and is part of a new system in which the device controllers are linked directly to the disk drives. You can connect up to 128 multiple drives of different sizes and types, simultaneously with thinner and longer cables. At a transfer rate capable of 3.0Gb/s and the ability to be added or removed on the fly, these drives are a dream come true. In the days of bigger, faster, better, we have a new star.

SAS drives require a distinct and different connection to a controller, whether it's on your motherboard or on a third party controller card that installs into a PCI-E slot. Of course the motherboards are significantly more expensive ($400+), highly specialized and harder to come by.

And after you've resolved the controller issue, then it on to configuration. As of this writing, these drives can not be recognized as the main drive but work as slave drives for data storage only. The user can partition the drive, producing a smaller sized primary partition but that runs counter-intuitive to the reason for the drive. If the end user has the capacity to purchase a SAS drive, then typically they can afford a solid state drive (SSD) to load the O/S (Windows v??) onto. The Enterprise drive then becomes a slave drive and the full 6Tb capacity can be realized, plus the added advantage of a faster boot using the SSD. Now that makes sense.

If history truly repeats itself, the drives will become more affordable as the marketplace embraces them and then the physical size will be reduced and then the performance will improve.

What a great time to be alive!

Regards,
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