

# Re: best practice for hard drive upgrade

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<http://www.tech-archive.net/Archive/Windows/microsoft.public.windows.server.sbs/2009-03/msg02852.html>

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- *From:* M. Murphy <[MMurphy@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:MMurphy@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx)>
  - *Date:* Tue, 31 Mar 2009 12:57:02 -0700
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ok, I know this thread is now getting a little old, but what was suggested by SuperGumby did not work. I pulled 1 250, added a 500, rebuilt array then pulled 2nd 250, rebuilt array, and ended up with a 250gb array. Apparently this RAID card – promise tx4310 – will not resize the array. Windows disk management did not see the blank space on the drive, so there was no way to take control of that space. I flirted with the idea of using a partition manager, but decided that since its not really supported, I won't do it.

So its off to restore from backup to a fresh array.

I did read somewhere that this techniqe does work on a FastTrak S150 SX4.

"SuperGumby [SBS MVP]" wrote:

hmmm, interesting that the Promise tech suggested that. The TX4310 data sheet suggests:  
Online Capacity Expansion – add capacity on the fly  
RAID Level Migration – change array levels on the fly  
[http://www.promise.com/marketing/datasheet/file/FT\\_TX4310\\_DS\\_032206\\_web.pdf](http://www.promise.com/marketing/datasheet/file/FT_TX4310_DS_032206_web.pdf)

but we hit a couple of ideas about how RAID controllers handle such change.

1) larger drives get treated as same size. I haven't seen this since using an older HP SCSI RAID. If the original array consisted of 36GB drives a, say, 73GB drive could be used but the controller actually formatted the drive as 36GB. This refers NOT to Windows level 'format' but to LLF (Low Level Format), to all intents the larger capacity drive was converted to lower capacity.

2) apparent size of array and RAID volumes. RAID volumes are not to be confused with Windows volumes. To a degree modern controllers hide most of this from you. The controller also may not support multiple volumes.

Enter the wayback machine and we have a RAID controller and a bunch of drives (spindles). Connect it, fire it up, you have no available drive space. You must first create your RAID set(s), tell the controller that it should use the spindles. This is so far back that I'm actually getting

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sketchy on the details, I'll go with what I think is right. At this point you still have no space available for use, you must create RAID volumes, at which time space is still not available, until you create RAID drives. The array is now at a point where (each) RAID drive becomes available to the OS (or install). We might have 10 spindles in the set, two RAID volumes, and four RAID drives.

(for pity's sake Mick, get to the point)

I haven't used the TX4310 but doubt it performs as described in 1 above. For the most part because current SATA HDD's will not (TTBOMK) allow such operation. I expect that if you built a RAID1 from your existing 250GB drive to a 500 that it would more simply just use 250GB of space and leave the rest unused. You could then remove the 250 and replace it with a 500, rebuild the array. At this point we have two 500's in RAID1 supplying a single RAID set/volume/drive of 250GB capacity and having unused space. You may be able to a) create another RAID volume in the unused space or b) use online capacity expansion to consume the space.

In either a) or b) the existing Windows partitions will not be adjusted, and I suspect this is what the Promise tech may have suggested, however the extra space will either be available for use (to the OS) as an apparently new drive OR unpartitioned space on the existing drive.

It's worth a go. Step 1 is full backup and step 2 is to remove one of the existing 250's, giving you a fallback point if all this is some madness running around my head. Stop SMTP coming in and shutdown all attached systems.

Shut down and remove drive0 (existing 250). Put it in a static bag out of harm's way, this is our fallback.

Plug in one of your 500's and rebuild the array between the 250 and it.

When rebuild is complete inspect the array management, what does it say about the attached drives? Does it offer unused space? We don't actually want to do anything at this point but knowing how the controller is handling the drives may be of benefit.

Shutdown and replace the 250 with your 2nd 500. Rebuild the array and inspect array management, what does it now say about the drives?

Go into both the RAID Level Migration (not likely to say anything) and Online Capacity Expansion areas of the management interface, is the additional space available for use in any manner? (either as additional space for the existing array or as free space for a new array).

If we can't 'migrate' in this manner simply shut down and disconnect all drives, return Drive0 (the one on the shelf) to service, start the system, shutdown, re-establish your (250) array, and we look for PLAN B.

The advantage here is that we do everything from the RAID controller. The additional space we create becomes an additional drive or partition to the OS, no 'imaging' or 'partition adjustment' is performed so the system remains in a 100% MS supported state.

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Guaranteed? no.  
Worth a try? Up to you.

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SBS remote support services. (Fees apply)  
mickm at mickmalloy dot dyndns dot org

"M. Murphy" <MMurphy@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message  
news:1D98DCBD-5386-4733-98CB-CEC702FD4224@xxxxxxxxxxxxxxxxxxxx

Thanks Larry,  
That sounds like a very logical plan, my backups (according to the log  
file)  
take a few hours including the verify part. I guess this means the server  
and  
email will be offline for most of the day.

I spoke to Promise support just now, and the tech there assured me that I  
can not reclaim that extra space if I put the bigger drives in and rebuild  
the array, so its looking like your method is my only real choice. I will  
have the old drives to fall back to if there is a problem.

Thanks for your support!

"Larry Struckmeyer [SBS-MVP]" wrote:

While that would work, I suggest this is a perfect change to  
test your  
backup/recovery plans. Make a good backup. Test it.  
Remove the  
existing  
drives, install the new ones, create the array, partition it  
however you  
like, so long as each partition is as large or larger than the old  
one.  
Restore from backup according to this document:

[http://www.microsoft.com/smallbusiness/support/articles/backup\\_restore\\_sbs2003.msp](http://www.microsoft.com/smallbusiness/support/articles/backup_restore_sbs2003.msp)

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Larry  
Please post the resolution to your  
issue so that others may benefit.

"M. Murphy" <MMurphy@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>  
wrote in message  
news:9734A58B-30CD-4470-B3B6-5D4218A6BE87@xxxxxxxxxxxxxxxxxxxx

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Thanks for the reply Larry,

here is my setup – SBS 2003 R2  
I have 2 250gb drives in a raid 1 setup.  
Raid is hardware, and its a promise tx4310  
card  
The "logical drive" is partitioned – c: is for  
the system and its 30gb,  
f:  
is about 203gb and exchange and all the  
other data is on the larger non  
system drive.

May I run this scenario by you and everyone  
else:

1) I pull out 1 of the old 250gb and replace  
with 500gb, then rebuild  
the  
array

2) then pull out the other 250 and replace  
with 500 and rebuild again

could I then make another logical drive out  
of the unused space (with  
the  
disk management console)? If that would  
work, I think it would be less  
painful and less stressful, and I would still  
have the old drive to put  
back  
in, in case of something going haywire. This  
would also not require  
any  
3rd  
party software.

I have been reading about using acronis true  
image to do this , and its  
scaring me into not using it. The price tag is  
also pretty  
frightening!!

"Larry Struckmeyer [SBS-MVP]" wrote:

Hi:

What version of SBS?

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Windows 2008 allows for resizing the partitions. Also, you could use 250 + 250 and not mess with the backup restore.

However, to answer your question, the only fully MS supported way is backup the old drives, install the new ones, create the array, install CD1, install the appropriate Windows Service Pack, and restore from backup.

Having said that, Storage Craft and Accronis have both been mentioned here with success. If you are brave, there are third party utilities that would allow you to extend the 250 to 500 once the new drives are in place.

I hope these are data drives and not system drives, as you should be separating the system and programs (c:\) from user data (d:\ or whatever is next available).

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Larry  
Please post the resolution to your issue so that others may benefit.

"M. Murphy"  
<MMurphy@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>  
wrote in message

Re: best practice for hard drive upgrade

news:FA071495-58B6-47F6-BD00-BAC47F1361CA@xxxxxxxxxxxxxxxxxxxx

Hi,  
Anyone  
here have  
any info on  
upgrading  
hard drive  
size?  
I am using a  
raid 1 setup,  
my WD  
250gb  
drives are  
approaching  
the  
end  
of  
their  
expected  
lifetimes.  
Boss bought  
WD 500gb  
drives for  
server.  
They  
are  
all  
enterprise  
WD5002abys  
drives.  
We had  
thought that  
we could  
just put the  
bigger  
drives in 1  
at a  
time  
and  
rebuild the  
array, but  
found out  
that the end  
result would  
still be  
a  
250gb  
drive.  
Looking  
into acronis

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to image the  
original  
drives,  
anyone  
have any  
gotchas  
to look out  
for when  
doing this?  
Is this the  
best way to  
go?

Thanks to  
all!!