

Re: Beginning to think about VMware and SCO 5.0.5

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- *From:* "Steve M. Fabac, Jr." <smfabac@xxxxxxx>
 - *Date:* Wed, 25 Jun 2008 18:06:38 -0500
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Bob Bailin wrote:

Steve,

Being in a similar hardware situation as your client, (Gigabyte dual PIII @ 1.4GHz, 512GB, DPT 3420 with 256MB cache, a RAID 10 with 4 Seagate 18GB drives), I would suggest that keeping the underlying hardware similar to what you have now would be the simplest solution.

Adding VMware running under some version of Linux adds 2 extra layers of complexity that someone's going to have to deal with in the future. You're able to deal with this client's 8 yr old system confidently because it's very straightforward and easily understood after all these years. Do you think the system you're proposing will be as understandable 8 years from now?

Agreed.

A new box (actually two new boxes) running SCO 5.0.7 should still be good. VMware, I don't know. And I don't know the impact of virtualized hardware on SCO. Somewhere I read someone running SCO under VMware was reporting better performance than the same SCO OS installed natively on the same hardware. (Might have been 5.0.5 which will not run at full speed on P4's.)

You didn't mention the number of users on this system or whether they consider the current performance adequate. Upgrading to a dual or quad-core Core 2

They have 28-30 logged in users with SAR showing 96-97% idle average throughout the day except during a period in the morning and at 17:00 where daily reports are run

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from cron and at 3:00am when the backup to tape is running.

processor might be preferable to switching over to Xeon processors simply because of their more likely future widespread availability. Even these lowly desktop processors will provide a 5–10x performance improvement, especially combined with a gigabyte network switch (I assume users are connected with telnet or ssh?)

Telnet as all are local. I use ssh for remote administration. The application programmer uses VPN to connect to the LAN and then telnet to the SCO Box(s).

A newer RAID supporting SCO and switching over to RAID10 using smaller, faster 15K drives will provide an additional boost, along with a Quantum DDS5 tape

By smaller, are you referring to 2.5" drives?

Raid–10 is total overkill for this application. The systems are running with RAID1 on two 36G drives with 14G remaining un–assigned drive space.

Besides, I am now gun shy of SCSI RAID: On 6/12 I was called at 19:50 when they had been down for 4 hours after losing building power. They tell me that the servers had all been shutdown before the UPS batteries ran down.

When I arrived, the two RAID1 disks in the primary were down and would not come back up. (Subsequently attaching the SCA cage to the adapted 29160 controller POST'ed the disks as "Failed Start Unit Request.") There were two disks in RAID1 in the backup server and two disks listed as hot spares at ID4 and ID5. The RAID controller listed the disks as ID9, ID11, ID14, and ID15. THE RAID would not boot, getting partially into loading the kernel and then hanging. I found that the disk at physical ID4 (a hot spare) had been swapped into the RAID (ID0 & ID1) and I was able to pull all the disks, move ID4 to ID0, boot unix.old and it came up very slowly, taking 10 times as long as usual to get to the "press Ctl–D..." prompt and the RAID alarm sounding all the while.

I ran fsck –ofull and fsck finished without an error message. I rebooted and the system came up normally. I used the dpt raidutil command to silence the alarm for the critical RAID1.

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The disk from ID5 was moved to the primary system ID0 position, and the nightly backup was restored to it. Both servers were back up and running at 02:15 am.

Two systems now running on one disk each: The primary just restored from backup, the backup system still showing as a critical RAID1 with a missing disk.

On 6/14, I put two new Fujitsu 10K drives in the primary system as RAID1, The backup system was still running on the old Seagate 10K drive.

On 6/19, I added three new Seagate 15K 146G disks to the mix by removing Fujitsu disk ID0 from the primary system and installing one of the 15K disks and allowed the controller rebuild from the 36G disk at ID1. I installed a 15K disk in the backup system at ID1, shutdown and created a RAID1 out of the 36G 10K Seagate at ID0 and the new 15K disk at ID1. Both RAID's completed the rebuild and went "optimal."

During the night of 6/19 they lost power again after the night shift had left. The UPS(s) battery ran down. The next morning, None of the disks would come up. All showed "no media" for the block size in the RAID controller setup screen. All drives connected to the Adaptec 29160 controller POST'ed as "Failed Start Unit Request."

So, in two weeks we lost four of the original six 10k 36G Seagate drives, Two new Fujitsu 10K 36G drives, the remaining two original 10K 36 Seagate drives, and three new 15K 146G Seagate drives. All these drives report "Failed Start Unit Request."

6/20 I got the customer up and running on two borrowed Fujitsu 36G 10K drives, one in each server on the RAID controller but not in a RAID.

I called DTI Data and talked to Scott. He indicated that the Failed Start Unit Request is totally hardware related. The drive would have to be opened and an engineer will have to determine why the drive is reporting "not ready." That's what I got from Seagate and Fujitsu technical support and they said that I must get an RMA for the in-warranty drives and send them in for replacement.

How the hell can all the disks in two servers go bad in less than two weeks? So I'm a little shell shocked and gun shy concerning RAID10 at this time.

backup solution (we switched over from an SDT11000 earlier this year) and gigabyte transfer speeds between the two servers will improve things noticeably, even if they aren't state-of-the-art.

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We are looking to upgrade the Microlite Backup Edge 1.1 to Edge 2.2 and perform full system backups to an FTP server that is backed up with a separate tape drive.

I was pleased to find that the Backup Edge RE2 boot media created will perform a bare metal restore from the FTP archive. I tested this at another client's co-location site when they moved the 5.0.7 system from in-house to the co-location center and the on-site technicians would not agree to rotate the tapes through the system.

Your client ends up with a spiffier, faster system that's still the same one they're used to after all these years. You must, however, upgrade to 5.0.7 before the hardware upgrade. You'll then be able to transfer to the new systems by using BackupEdge and a BTLN for the new disk controller.

Been there and done that before. Looks like I'm about to quote two new systems with two upgrades to 5.0.7 along with the attendant 25 user licenses on each box.

Now I'm torn between SCSI SCA and SAS or SATA for these boxes. Any SAS RAID's working on 5.0.7?

I have used Adaptec 2420SA SATA RAID on another client's 5.0.7 system and would plan to use it again with WD Raptor 10K SATA drives.

However, the client just orders six more Seagate 146G 15K drives, so the new hardware will likely be SCA to accept the new drives when we move.

Bob

"Steve M. Fabac, Jr." <smfabac@xxxxxxx> wrote in message news:<4861F85D.3090502@xxxxxxx>...

I have not touched VMWare and don't know where to start to investigate this issue. So I thought I'd post it here where several users have implemented various systems for their own use or client's to solicit recommendations on suitable system configurations to replace the client's current servers.

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The client running SCO 5.0.5 Enterprise on two servers, one is the live production and the other is a "hot spare."

These are identical SuperMicro PIII 1.4Ghz machines with 512M RAM and a DPT 3754U2 RAID controller with 16M cache RAM, and two 36G SCA 10K disks in RAID1.

Both machines are backed up each night to their own Sony SDT-9000 DAT drive. And the application data directories and user home directories are copied from the live server to the backup server before the tape backup runs.

Charged with upgrading this hardware, it makes sense to plan to migrate to a single CPU system board hosting a 2-3 GHz dual or quad core Xeon CPU. I would then replace the full length DPT RAID controllers with a current technology RAID controller either SATA or SAS with suitable 76G to 146G hard drives in RAID1

Clearly, moving both live and backup systems to modern hardware will require upgrading the SCO 5.0.5 OS to either 5.0.7 or SCO Openserver 6.0 on both machines.

What's the current opinion on a solid system that will run either 5.0.7 or 6.0 and have drivers for a RAID controller?

An alternative strategy I'd like to offer the client is a configuration using VMWare to Virtualize both the primary and backup 5.0.5 servers.

I've checked the VMWare web site and I see VMW products ranging in price from \$3624 to \$21824 and I have no clue on how to specify the product the client needs.

Please comment on the following:

- 1) One or two hardware platforms? The client desires to maintain hardware redundancy so that if the primary box goes down, we can switch operations to the secondary box.
- 2) Then should I use one platform to host the primary (live) 5.0.5 instance and a second VMWare platform hosting a running instance of the current backup server? This continues to require we take the time to copy the application data from the primary instance to the backup instance so that the backup instance is ready to go should the primary box fail.
- 3) Or, not bother to keep a backup 5.0.5 server running on the redundant VMWare host but just migrate the live 5.0.5 image from the primary VMWare host to the backup VMWare host as needed? Can that even be

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done?

4) How do we back up the live 5.0.5 server? Continue to use a dedicated SONY tape drive and BackupEdge running in the live 5.0.5 instance? Or is backup performed at the VMWare level? Is that reliable?

5) where is the UPS communication and monitoring software installed? under 5.0.5 or VMWare? Do we shutdown the 5.0.5 instance and then shutdown VMWare and power off the UPS to preserve the UPS battery?

I'm sure that there are other questions that I have not thought of that will have to be answered to design the optimal strategy for the client. If you can answer any of the above questions or offer insights into other important considerations, please post them.

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