



With Mike Laverick (VCI,VCP,CCI,CCEA,MCT,MCSE)

Product Review esXpress
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<http://www.rtfm-ed.co.uk/>

WebEX on Backup Vendors - esXpress by PHD Technologies

For the last couple of weeks I've been doing a couple of web-ex sessions with 3rd party "virtual machine" only backup vendors – esXpress from PHD Technologies, Veeam Backup & Replication and VizionCore's VRanger. I've yet to do the webex with VizionCore just yet – as everyone is pretty busy (including myself) preparing for this year VMworld 2009 in SanFran.

My plan after completing the webex phase is to download and use each of the big 3 vendor's technologies and report back my findings. But I thought I would begin with "heads up" approach first, with quick webex session where I could see the various products demonstrated, and ask a few pertinent questions along the way. The kind of thing I had in mind was seeing how mature the various vendors technologies had become, what their future directions might be, and generally suss out where are we in the world of VM backup. I was also kind of inspired to do this research because of vSphere's own vDR appliance – and the question of what this development might mean for the 3rd party VM backup companies.

My first webex was with PHD Technologies and their esXpress product. (<http://www.phdvirtual.com/>)

I was chatting to Mike Luca. He's got a great job title "Sr. Complexity Simplifier". I kinda like that, as that's something I think I have to do every time I teach a VMware course. I have to make what might seem complicated, seem simple. Often my students tell me how easy everything is, to which I always respond tongue firmly in my cheek – "yes, that's because you've got the best VMware instructor on the planet". That's always makes the guys laugh, hopefully without too much irony.

esXpress ships in two formats – Professional & Enterprise. The nice thing about this that the two versions have no features lost between professional and enterprise. They are just away of bundling esXpress in different sizes and different SKU type. Instead the different SKU types merely reflect that businesses are of different sizes and requirements. It means you don't end up buying an enterprise product for a small business just to get a particular feature you want. If only other software vendors took the same approach (he said without mentioning any names!). So Professional can backup 4VM's concurrently, whereas Enterprise can do 16 VM's concurrently. At the moment, the esXpress product does have "agent" this is installed to the ESX "Service Console". But Mike told me that ESX4i support is on their roadmap. esXpress does offer 24/7 based support in the U.S. English only.

Increasingly the 3rd party vendors are offering de-duplication of backup data and the ability to back up the entire VM once, and then merely backup block changes after that.

esXpress is no different in that respect, offering 25:1 de-duplication ratio. I asked Mike, whether he found customers concerned about the reliability of and scalability of de-duplication. Mike said most customers are happy with the benefits of de-duplication for archiving purposes, and that it was more production data (de-duplication of live data) that worried customers.

The advantages of de-dupe for backup seems to be such a compelling one, that no-one disputes its usage. My worry is if multiple backup reference the same data, and that data turns out to be incorrectly backed up or corrupted it does have knock on affect. However, it became clear that these algorithms have been in circulation for some time, and the verification by calculation long checksums is one that can be relied on.



> Beyond the Manual

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So that's pretty much a standard. So I was keen to see what made esXpress different from a feature spec. What did stand out is how esXpress has its own method of triggering a backup on the fly without having to create a specific job for VM. Simply by including specific wildcards into the name of VM you can trigger a backup.

For example:

- [x0] in the VMs name indicates to exclude a VM from a backup
- X22 indicates to backup a VM at 22:00hrs
- xNOW] indicates to backup the VM immediately
- [01] [02] indicates what order to backup VMs

Then we moved on to a product demo. All the vendors did this – and it allowed me to hit them with my top questions:

- * If a snapshot is not removed from a VM after a backup. What systems are there in place to resolve that? Is it logged and am I alerted?
- * Do you communicate by vCenter exclusively to manage the backup and restore the VM?
- * How easy is it to restore an individual file from a backup set?
- * Do you use Microsoft VSS call?
- * Do you support vSphere4?
- * What do you think about VMware's request to as Veeam not to support the free ESXi release?

Of course that last question was very political – and none of my vendors were particularly keen to be drawn about especially when it concerns a competitor. But generally, I would say none of the 3rd party vendors either within the backup field or elsewhere were especially impressed. True, it's not VMware endorse or promote the use of APIs that are not fully certified. But most felt the situation could have been handled better. However, it seems pretty much for the course that most "partner" relationships involved inevitability some power imbalance, with one of the vendors humorously describing it times as akin to an "abusive spouse" situation!

In esXpress if VMware snapshots are not removed after the backup – this does get logged and tracked/traced. In esXpress they do commit orphaned snapshots – additionally if you configure the snap-on-snap feature it will even clean up VCB orphaned snapshots as well – neat! The reason I raised this issue, is that it is THE most common compliant (regardless of vendor) of VM backups. Specifically, they can be cause by events outside the control of the backup solution – so you hear it of VCB, vDR and the 3rd parties.

It does seem like orphaned snapshots from backups are something we are just going to have to live with. The question always then is – what does the vendor offer in terms of alarms, alerts, logging and remediation of the lost snapshots.

esXpress does use vCenter to locate the VM before a backup. But it seems like lot of the backup vendors, including esXpress have cottoned on to the fact that this represents a point of failure if the vCenter unavailable. So esXpress does support (like other backup vendors) the ability to restore a VM from the Service Console without a need their restore engine or vCenter. This really appeals to me, because I always like "Plan B" and "Plan C" if "Plan A" doesn't work out. Even if "Plan B" and "C" are undesirable. It's comforting to know there is a fallback position.



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Restoring individual files is relatively easy in esXpress. Of course where most 3rd party backup vendors shine is in complete backups and restores of a lost VM. But you must ask yourself how common is that? Except in extreme cases where a VM is riddled with a virus; an idiot powers of VM and then choose "Delete from disks" OR you have lost entire VMFS volume, and you don't have array snapshots – then the most common reason to trigger a restore process is individual file such as word or excel document has become bad, and needs replacing with the last good backup.

Historically, 3rd party VM only backup vendors have struggled with this. This is because there isn't an easy way to open a VMDK file, navigate the disk contents, and then fire it back into the original VM. For the moment esXpress allows you to download the files you want to restore form a .zip file, and then copy this .zip file to the affected VM using Windows Shares – from which the .zip file can be extracted, and the files restored. Its pretty meat in that respect – but it does mean some work for the operator at the end of the day.

As for the vSphere4 support - since webex, PHD Technologies have announced the fully support vSphere4. In fact they have gone down the road of creating virtual appliance to assist in the backup and restore process. That sounds eerily familiar to VMware's vDR, in fact some of my sources tell me – that it may be that the idea of vDR actually came from PHD Technologies in the first place...

It does seem that this approach is the way forward for the 3rd party backup vendors to make file-restores easier. Basically, the concept is that the backup appliance, can mount the VMDK's of the VM to start the backup process but also additionally, use this process to facilitate the restore of files – with restore data being re-assembled from de-duplication files to present back to the VM a virtual disk.

The next thing that's needed is a simple wizard in the VM which can be used to select files and their restore location.

Anyway, you can see more of this new esXpress virtual appliance below in this YouTube video.
<http://www.youtube.com/watch?v=5-LFpsW8y7w>

This review can be found at: <http://www.rtfm-ed.co.uk/?p=1474>

Mike Laverick is a freelance/contract instructor/trainer, specializing in Citrix and VMware Products. His customers and partners include IBM, HP (France, Belgium, Finland, Denmark) SureSkills (Ireland) and CDG (Netherlands).

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