

Don't hyperventilate over Hyper-V backups!

Executive Summary

Hyper-V backup is like one of those brain bending puzzles. It raises the blood pressure and sends even the most experienced I.T. professionals into fits of frustration. But like most puzzles, it's easy to do it - once you know how!

This Whitepaper outlines the causes of stress that go with Hyper-V backups. It also tells how BackupAssist can provide a simple solution that eliminates all the confusion and frustration once and for all, while delivering fast, reliable Hyper-V backup and restore at price you can easily afford.

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Part 1: The causes of discomfort and concern.

Backing up a traditional server is one thing...

With traditional server backups, you connect a backup device to the server, schedule a backup and let it run. There are 6 recovery scenarios you need to cater for – everything from Bare Metal Server Recovery to restoring Exchange Server and individual mail items. Fortunately, the recovery procedures are generally well documented and straightforward when using well designed backup solutions.

...but it's not so simple with Hyper-V backups.

In a Hyper-V environment, things start to get more complicated.

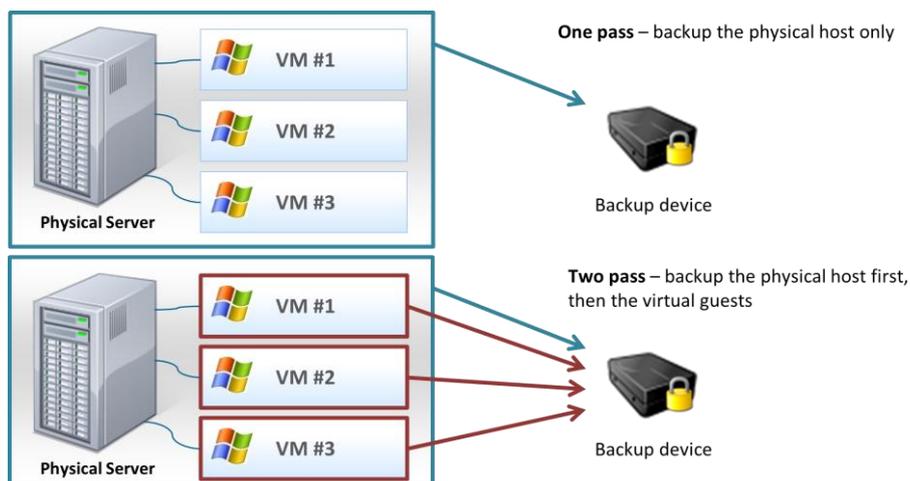
For starters, there are another 4 recovery scenarios you need to deal with, all involving recovery of Guest VMs.

Recovery scenarios with a normal server	Recovery scenarios with a Hyper-V server
<ul style="list-style-type: none"> * Recover the entire server from bare metal * Recover specific files and folders * Recover a complete Exchange Server * Recover individual Exchange mailboxes and Outlook items * Recover SQL Server databases * Onsite & offsite data protection. 	<ul style="list-style-type: none"> * Recover the entire Host server from bare metal * Recover specific files and folders from Host * Restore all Hyper-V Guest VMs to a different Host * Restore a single Guest VM * Restore a single Guest VM to a different Host * Restore specific files & applications on a Guest VM * Recover a complete Exchange Server * Recover individual Exchange mailboxes and Outlook items * Recover SQL Server databases * Onsite & offsite data protection.

With Hyper-V, you not only have the Host Server to backup, but you also have multiple Guest VMs (Virtual Machines) within that Server to backup as well. Should you run your backups from the Host or Guests?

Unfortunately, Guest VMs won't have physical access to your backup device because Hyper-V cannot pass through USB, SCSI or SATA devices. And a backup of the Host itself is great for fast disaster recovery of the entire machine, but won't let you recover individual files off the Guest VMs, because they are "locked" in the Guest's VHD file.

This complication has led some backup vendors to even recommend backing up both the Host and the Guests. But that means you're forced to do a two-pass backup, taking twice the disk space and twice the time!



Is there a backup software product that solves these problems?

Well, yes. But there's a catch. Most Hyper-V software solutions on the market are usually very expensive and seldom cover all the recovery scenarios in one package. The basic cost of the leading brand starts at US\$5,000 - and that level of expense cancels out the cost savings of virtualization in the first place for many SMBs!

To add insult to injury, these solutions can also be difficult to use.

So what's the solution?

Thankfully, there is now a BackupAssist solution. It's a fundamentally smarter approach that makes it easy and cost-effective to backup Hyper-V environments, caters for 10 different recovery scenarios, and means that you only have to do a one-pass backup.

Part 2: Solving the difficulty problems.

Use BackupAssist™ to create a one pass backup that allows recovery at all levels!

Because your physical Host machine has direct access to hardware, it makes sense to backup from there. And because you're backing up from the "top level", it means that you can completely restore everything from the Host down.

The BackupAssist preferred method of backup is to Drive Image the Host machine. This is also the fastest way of backing up, and with the correct backup hardware (such as eSATA connected disks with 32MB cache) you can achieve backup speeds of over 200GB/hr.

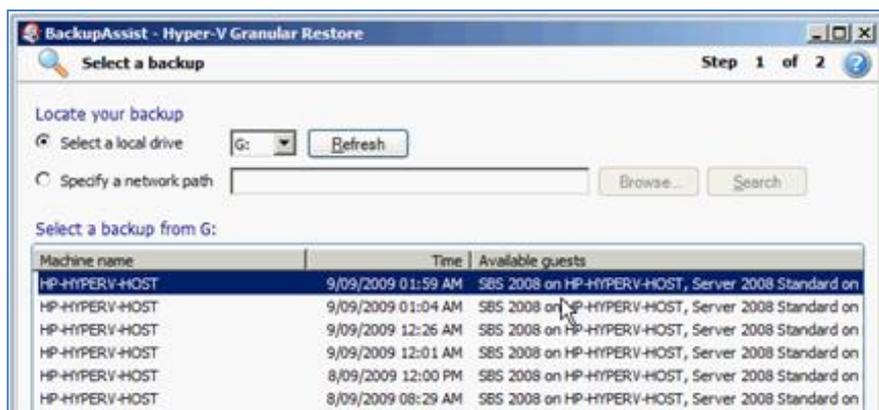
This is also a one-pass backup, which saves time and disk space. On Server 2008 R2 you can even individually select which Guest VMs to back up, which further reduces the time it takes to backup and the amount of disk space used to store backups.

The problem with most other one-pass backup solutions is that it's impossible to recover individual files and folders from a guest. However, BackupAssist gives you an ingenious solution.

The BackupAssist VM Granular Restore Console.

Granular restore technology makes it possible to restore the individual files and folders that live on a Guest VM, from the image backup of the Host. The BackupAssist VM Granular Restore Console allows you to "dig down" into the Image backup, find the restore point, choose your Guest VM, and then retrieve files from within it. You can also export a Guest VM drive volume to a .vhd file so you can easily rebuild a virtual machine in the event of a major disaster scenario. It's a simple idea that completely eliminates all the time, confusion, frustration and extra data storage hardware costs usually associated with Hyper-V backups.

It's such a straightforward process, that it takes less than 2 minutes to complete, as shown in our [demonstration video](#).



A solution that's completely compatible with Microsoft technologies.

Another great benefit of the BackupAssist Hyper-V solution is that it's completely compatible with Microsoft technologies. In fact, it actually integrates with two key features built into Windows Hyper-V Servers:

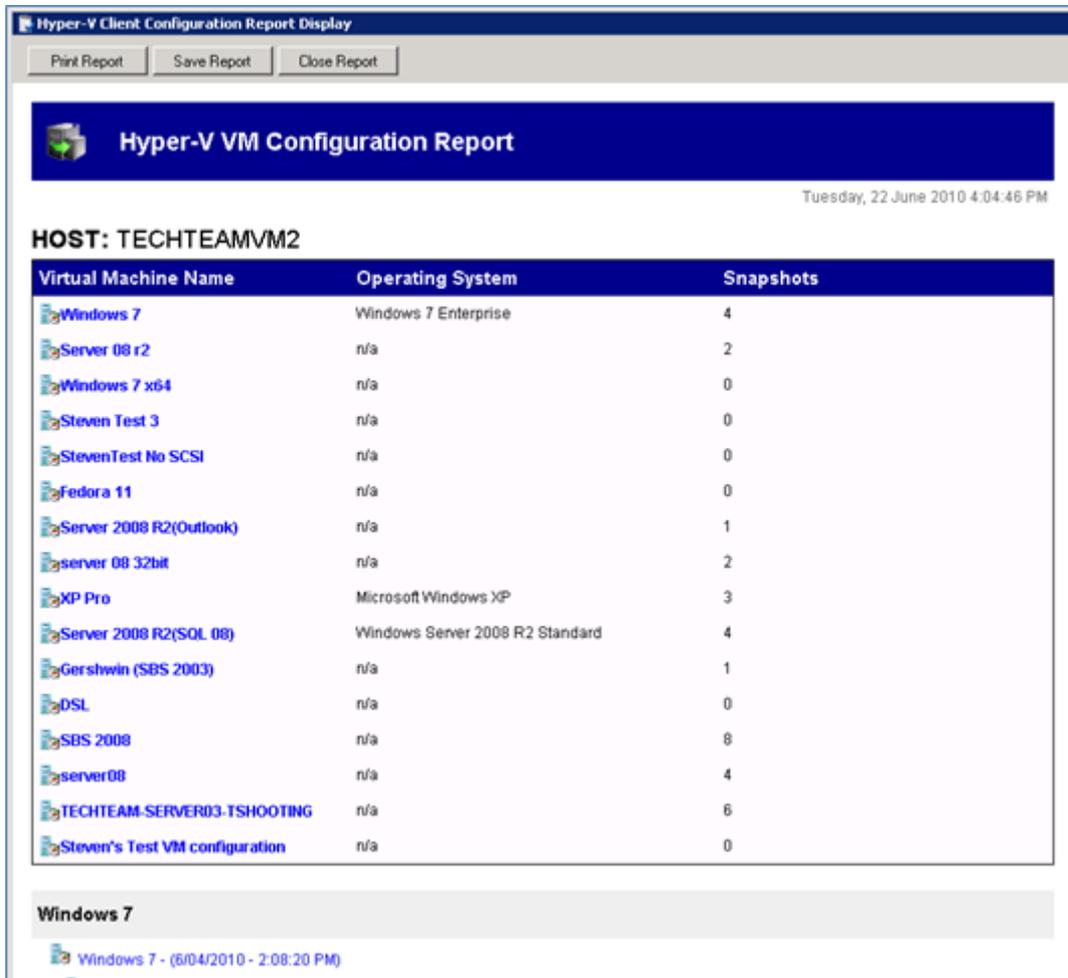
- Windows Server Backup (wbadmin) to Image the Host.
- Hyper-V Backup Integration Services – a VSS based snapshot of all Guest VMs that ensures your backups are accurately performed, even while your server is running.

This means that the BackupAssist solution is lightweight and reliable – maximizing your investment the tools and infrastructure that Microsoft has already built in, instead of reinventing the wheel.

Migrating or recreating Guest Virtual Machines

Best practice backup standards require you to document the setup of every important server so you can recreate or reconfigure it in the event of a major disaster. With Hyper-V, if you need to migrate a Guest Machine from one Host to another, or restore a Guest Machine to a new Host, you need the configuration settings of the relevant Guest(s) so you can manually create new Guest Machines that match the original Guest's configuration.

To fully document the setup of a Hyper-V Server, you need to document not only the setup of each Guest machine, but the configuration of the Host as well. The BackupAssist Hyper-V Config Reporter, which comes free with the BackupAssist VM Granular Restore Console Add-on, simplifies and automates this task: it creates a neat HTML report of the configuration settings for each Hyper-V Guest VM, and the Hyper-V Host settings, and contains everything you need to be able to recreate the Hyper-V Host so you can perform a restore at the click of a mouse.



Virtual Machine Name	Operating System	Snapshots
Windows 7	Windows 7 Enterprise	4
Server 08 r2	n/a	2
Windows 7 x64	n/a	0
Steven Test 3	n/a	0
StevenTest No SCSI	n/a	0
Fedora 11	n/a	0
Server 2008 R2(Outlook)	n/a	1
server 08 32bit	n/a	2
XP Pro	Microsoft Windows XP	3
Server 2008 R2(SQL 08)	Windows Server 2008 R2 Standard	4
Gerstwin (SBS 2003)	n/a	1
DSL	n/a	0
SBS 2008	n/a	8
server08	n/a	4
TECHTEAM-SERVER03-TSHOOTING	n/a	6
Steven's Test VM configuration	n/a	0

Windows 7

Windows 7 - (6/04/2010 - 2:08:20 PM)

Part 3: Solving the cost problem.

Software cost comparisons

Thanks to BackupAssist's fundamentally smarter approach of building upon the backup services already built into Windows, we've been able to deliver a quality solution at a fraction of the price of the competition.

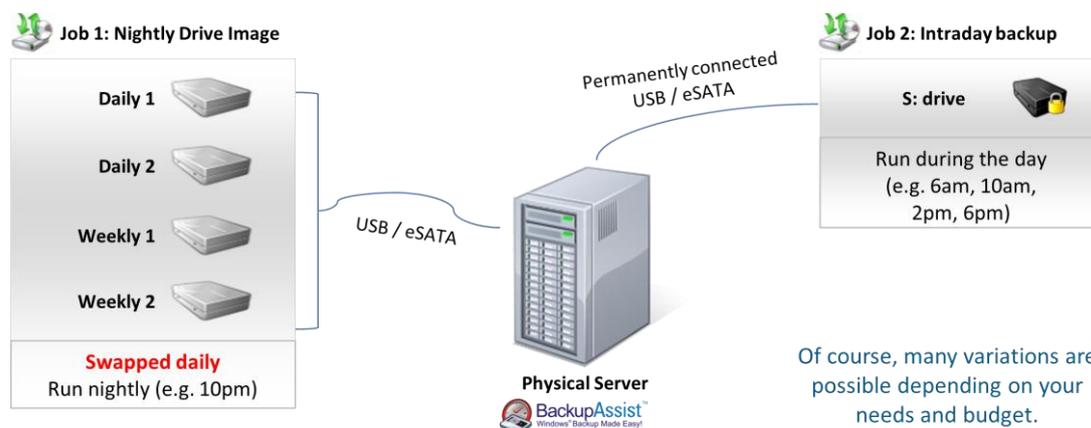
So what cost savings can you expect? Based on a standard backup scenario, including Exchange Server mailbox backup, the cost comparison table below shows how much less BackupAssist's Hyper-V solution costs compared to the leading brand.

Product	Price	Product	Price
BackupAssist plus 12 months BackupCare	\$345.85	Competitor product – for Windows Servers License + Essential 12 Months Support	\$1162.66
BackupAssist VM Granular Restore Console Add-on	\$249.00	Competitor product – Agent for Microsoft Active Directory License + Essential 12 Months Support	\$1162.66
BackupAssist Exchange Mailbox Add-on	\$129.00	Competitor product – Agent for Microsoft Hyper-V + Essential 12 Months Support	\$1863.76
		Competitor product – Agent for Microsoft Exchange + Essential 12 Months Support	\$1162.66
Total	\$723.85	Total	\$5351.74

Prices were taken from the competitors' advertised website on 30th July 2010 and are only meant to be used as a guide. For accurate price comparisons, please contact your supplier.

Hardware & labor costs

As you can see from the diagram below, the BackupAssist Hyper-V backup solution should cost no more than a setup for a regular server. Example of a BackupAssist Hyper-V backup setup:



How much time will you save with the BackupAssist Hyper-V solution? BackupAssist provides simple point and click wizards to schedule the backups. You also enjoy the ease and convenience of BackupAssist's regular features, like media rotation, reminder emails and report emails that significantly cut down on time and effort and help you make sure your backups are completed successfully, so you can rest assured your data is safe and secure (for more information visit www.backupassist.com).

Additional benefits of BackupAssist

Apart from doing an excellent job at backing up Hyper-V Servers, BackupAssist has many additional capabilities that make it the most versatile SMB backup package available:

- ✓ Drive Imaging on Server 2008
- ✓ Fast compressed data backup with our new Zip Engine to:
 - Tape (requires the BackupAssist Zip-To-Tape Add-on)
 - External/local disk
 - NAS
 - USB Flash
 - DVD and more.
- ✓ Bandwidth efficient Internet backup (requires the BackupAssist for Rsync Add-on)
- ✓ Centralized Monitoring and a comprehensive range of features for IT Professionals.

Try BackupAssist for yourself with a free trial!

BackupAssist is one of the most user-friendly backup software packages currently available on the market, suitable for any kind of SMB. What's more, at just US\$249 for a base license plus US\$249 for the BackupAssist VM Granular Restore Console Add-on, it's probably the most cost-effective Hyper-V solution around. So why not try it for yourself with our no-obligation free trial?

Interested in reselling BackupAssist to your clients? Simply indicate your interest when downloading and we'll send you a BackupAssist Reseller Evaluation Kit. Once approved as a BackupAssist Gold Reseller, you'll also receive a free NFR of the software valued at US\$249!



<http://wp.backupassist.com/hypervbackups-BA>

Need any help setting up Hyper-V backups with BackupAssist?

Download our handy Hyper-V Quickstart Guide to get yourself up and running with Hyper-V backup and restore using BackupAssist.



[Download the Hyper-V Quickstart Guide](#)