Quick-start guide: BackupAssist VM Granular Restore Console

BackupAssist™
Windows® Backup Made Easy!

Contents

QUICK-START GUIDE

BackupAssist Version 6

www.BackupAssist.com

1. Introduction

This guide is intended to help users of BackupAssist v6 set up Hyper-V backups as well as use the BackupAssist VM Granular Restore Console to perform restores of Hyper-V Guest machines.

> **Note**: to use the BackupAssist VM Granular Restore Console you must have both a **BackupAssist** license AND a **BackupAssist VM Granular Restore Console Add-on** license.

2. About the BackupAssist Hyper-V solution

Advantages

Hyper-V backup is full of confusion, despair and head scratching. It causes frustration for even the most experienced IT professionals because there are so many recovery scenarios and no straightforward method of setup that covers them all. The BackupAssist Hyper-V solution is designed to be a simple answer to this complicated problem, eliminating time consuming manual procedures and scripting, as well as overcoming the reliability issues inherent in Hyper-V backups.

BackupAssist's 'granular technology' simplifies Hyper-V backup by allowing you to do just one image backup of the Host and use it to retrieve files and documents from any Guest machine on that Host. The advantages of this are:

- ✔ Restore multiple Guest files from a single Host backup.
- ✔ No need for separate backups of the Host and Guest.
- ✔ Backup unlimited Guest machines in moments – no extra licensing costs!
- ✔ Individually select which Guests machines to back up on Server 2008 R2.
- ✔ Super simple 2 step restore process with easy to follow wizards.
- ✔ Cost-effective!

Features

Granular technology

Granular technology allows you dig into a VHD file and retrieve files from within. Without granular technology, you can only restore folders and files from regular backups created of each Guest VM within the Host and it is this that makes backup setup and recovery procedures so complicated.

The BackupAssist VM Granular Restore Console

The BackupAssist VM Granular Restore Console simplifies the whole process of digging down into a VHD file to retrieve individual files and folders. It offers you simple wizards for every restore scenario, reducing them to simple steps that take just minutes to complete.

Limitations and requirements

Host prerequisites

- Windows Server 2008 comes with Hyper-V Beta. Install KB950050 to get it up to RTM.
- Add Windows Server Backup feature.
- Use FAST disks to avoid VSS timeout problems.
- Keep partition sizes less than 2TB.

Guest guidelines

- Used fixed VHD disks – ie. Allocate all disk space up front for better performance.

- In the Guests, use Basic disks, not dynamic disks – otherwise online VSS backups won't work.

- Avoid using Hyper-V snapshots as these slow performance and make emergency migrations more difficult.

- Turn on the Backup Integration service for each Hyper-V Guest as explained here: http://www.backupassist.com/blog/support/hyper-v-backup-using-windows-server-backup/

3. Setup instructions

The following section includes instructions for setting up Hyper-V backup jobs using BackupAssist's Windows Imaging Engine.

1. Launch BackupAssist and click **File > New backup job**, and then select **Windows Imaging** under 'System backup'.

2. Select your backup destination type and click **Next**.

3. Select an appropriate schedule and click **Next**.

4. During the **Files and folders** step, where you choose which drive volumes to backup, you can also selects Guests running on your Hyper-V Host from the **Applications** tab.

   For jobs running on Windows Server 2008 or jobs backing up to a REV or rdx drive on Windows Server 2008 R2, Hyper-V Guest machines are backed up as part of a full volume snapshot. Volumes containing a Hyper-V Guest that you want to backup must be selected in their entirety. Click the **Select required volumes** button if a required volume is not in your selections.

   For jobs running on Server 2008 R2 that are not backing up to a REV or rdx drive you can actually select individual files, folders and Guests to backup.
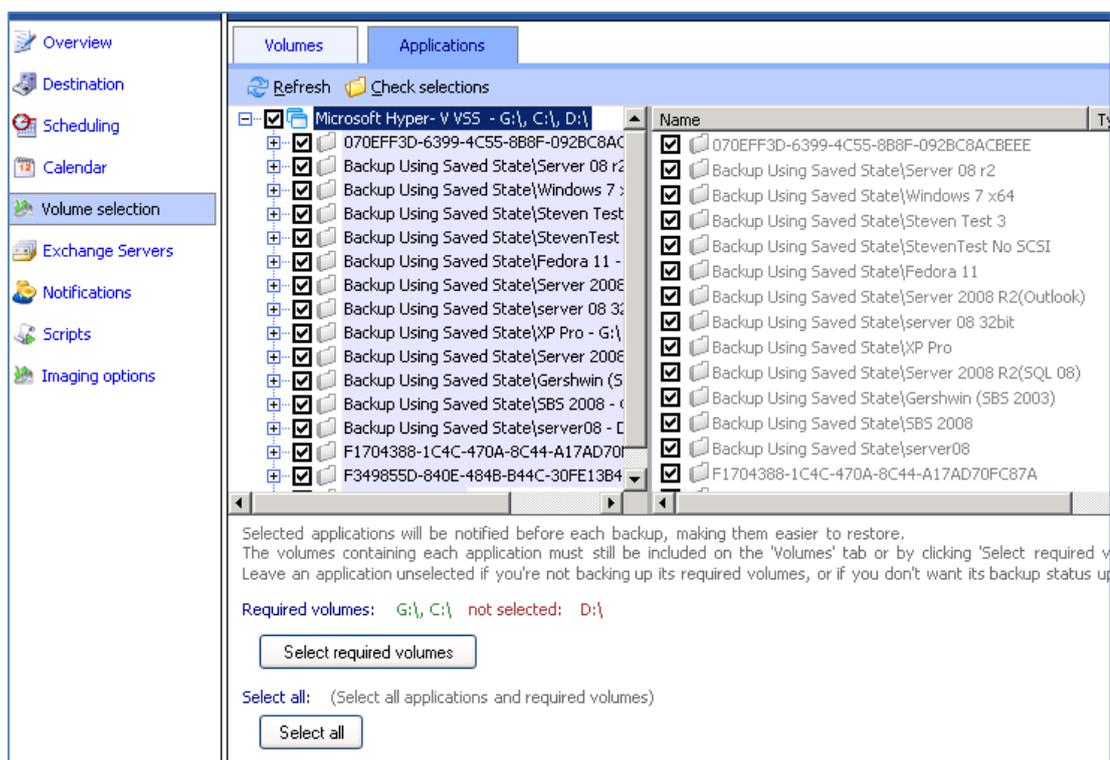
5. Click **Next** once you have selected drive volumes to backup, name your backup job and click **Finish.**

6. If you need to access the Hyper-V settings and drive volume selection settings in future click **Volume selection** from the left menu while editing a job.
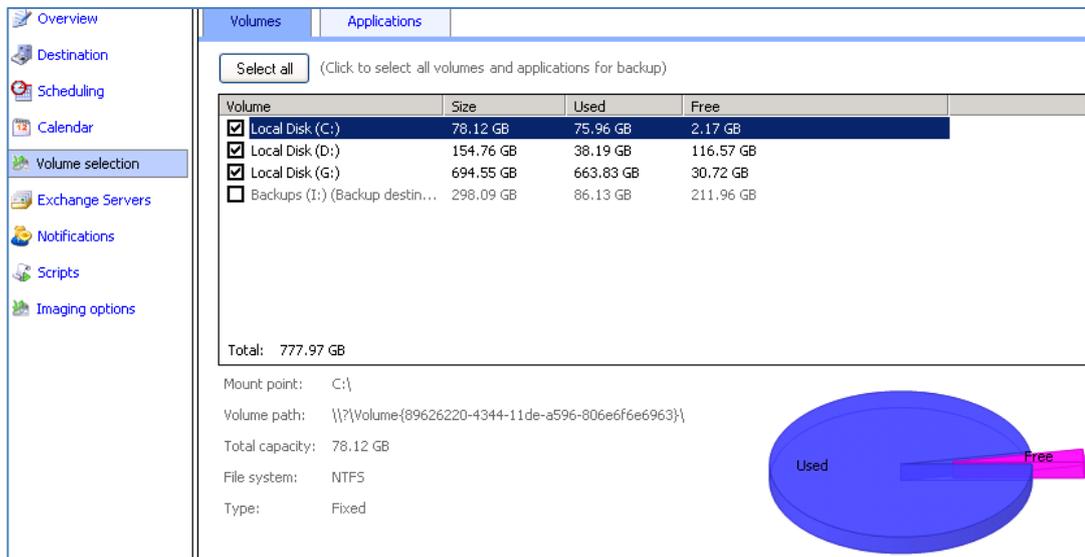
4. Restore instructions

The following section provides instructions for using the BackupAssist Hyper-V Granular Restore Console to restore files from a Hyper-V Guest machine using a Hyper-V Host backup.

Note: to use the BackupAssist VM Granular Restore Console you must have both a **BackupAssist** license AND a **BackupAssist VM Granular Restore Console Add-on** license.

Restoring files from a Hyper-V Guest machine

1. Click **Restore** in the top navigation bar and then click **Hyper-V Granular Restore**.

    Note: the **BackupAssist VM Granular Restore Console** will only run on either a 64-bit Window Server 2008 machine, or on a standalone Hyper-V server. The machine must also have the Hyper-V role, which can be added to most Server 2008 systems, and is the default for Hyper-V Server.

2. The BackupAssist VM Granular Restore Console will launch and you will be prompted with the **Select a backup** screen. BackupAssist will attempt to automatically detect and list Hyper-V backups located on local drives. Each Hyper-V backup will also display a list of Guest VMs that are available for restore under the **Available guests** column.
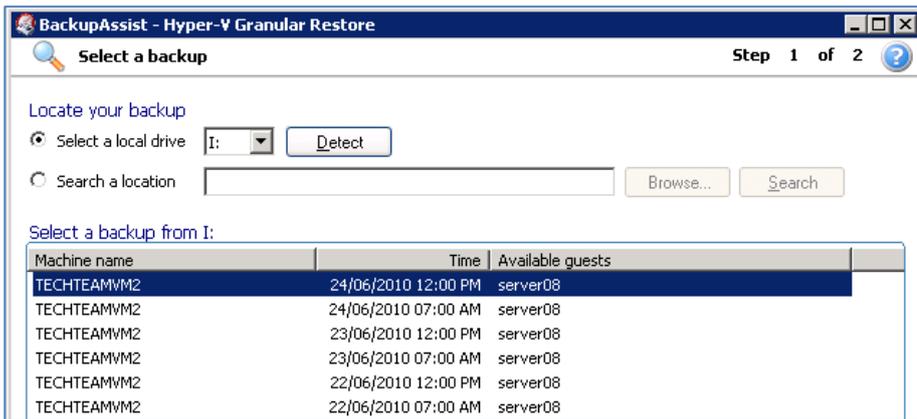
1. If no backups are listed either connect your backup device to the machine (e.g. external USB HDD) and click **Refresh,** or browse to a network path where Hyper-V Image backups are located by selecting the **Specify a network path** radio button and clicking **Browse**.

3. Once you have located your Hyper-V backups, select an appropriate backup set to restore from and click **Next**. You will then be presented with a **Mount volumes** screen similar to the following:
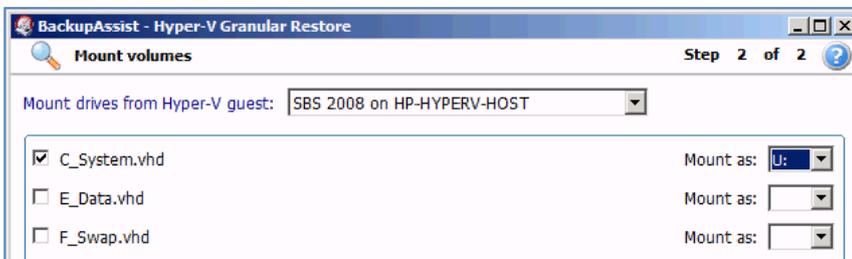
4. You now have two options:

   1. **Mount the Guest VM vhd files as drive letters**

      1. Ensure that the drop-down menu in the bottom right corner of the window is set to **Mount selected volumes to drive letter**.

      2. Use the **Mount drives from Hyper-V guest** drop-down menu to select a Guest machine on this Host to restore files from. A list of volumes that are associated with the Guest machine, and can be restored from will appear below.

      3. Once you have selected a Guest machine to restore from, check the drive letters you would like to restore files from and use the **Mount as** drop-down menu to the right to select a drive letter to mount the backup as. Mounting the .vhd backup as a drive letter will effectively create a new drive on your Host machine that you can then browse using Windows Explorer and copy files from.

      4. Click **Finish** once you have made your selections. BackupAssist will mount the Guest .vhd files selected as separate drive letters on your Host machine.

      5. Once the mount is complete click the **Open** button next to the mounted .vhd to use Windows Explorer to view the restored Guest machine's HDD:
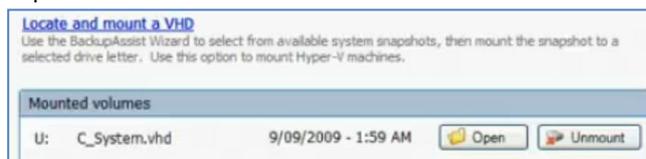
      6. Copy the files and folders you want to restore from the mounted .vhd file to a network share location that the Guest machine can access. In the below example the Exchange Server data located in the Guest machine backup will be copied back to the Guest in order to restore the Exchange Server.

      7. Once you have finished copying data to a network share you can then copy it from this location back to the original Guest machine's HDD.

8. Once all your data restoration is complete click **Unmount** in the Hyper-V Granular Restore Console, and then click **Done**.

2. **Export volumes as VHD files**

1. Ensure that the drop-down menu in the bottom right corner of the window is set to **Export selected volumes as vhd files**
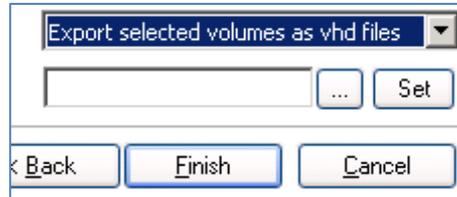
2. Use the **Mount drives from Hyper-V guest** drop-down menu to select a Guest machine on this Host to restore files from. A list of volumes that are associated with the Guest machine, and can be restored from will appear below.

3. Check the drive letters you would like to export as separate vhd files.

4. Set the location that you would like to export the vhd files to in the field location in the bottom right hand corner of the window and then click **Finish** to export the selected volumes as vhd files.

For more information, and a live demonstration, see our **BackupAssist VM Granular Restore Console Video Demonstration** here**:** http://www.youtube.com/watch?v=pXCVSqS67xE

5. The Hyper-V Config Reporter

It is good practice to document the setup of every important server so you can recreate or reconfigure it in the event of a 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 can be used to simplify and automate 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. The Hyper-V Config Reporter comes free as part of the BackupAssist VM Granular Restore Console Add-on purchase.

To create a Hyper-V report using the Hyper-V Config Reporter:

1. Run the Hyper-V Config Reporter from the Windows Start Menu on the Hyper-V Host machine.

2. When first started the Hyper-V Config Reporter will load and display a list of Guests VMs that are configured on the Hyper-V Host.
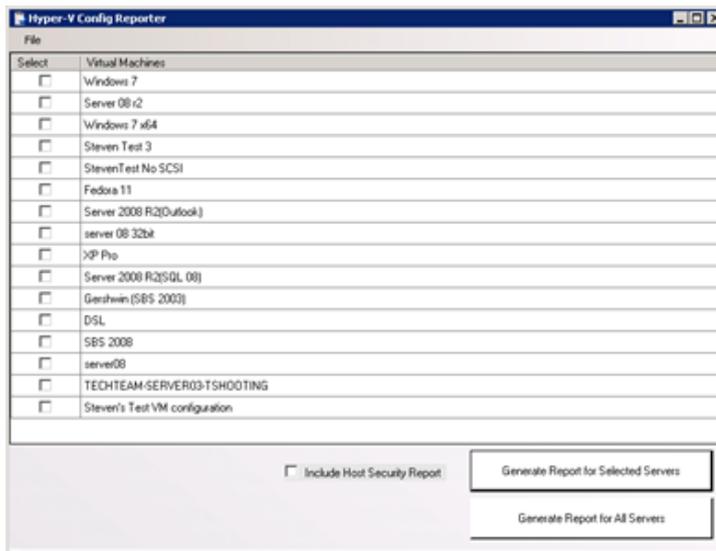
3. To generate a report of your Guest VM settings, either select the individual Guest VMs from the list that you want and click **Generate Report for Selected Servers**, or, if you want the report to include settings for all the Guest VMs configured on the Host, click **Generate Report for All Servers**.

    o   **[Optional]** Check **Include Host Security Report** if you want the report generated to include security and access settings that have been configured on the actual Hyper-V Host .

4. A HTML report will then be created and displayed in a new window.
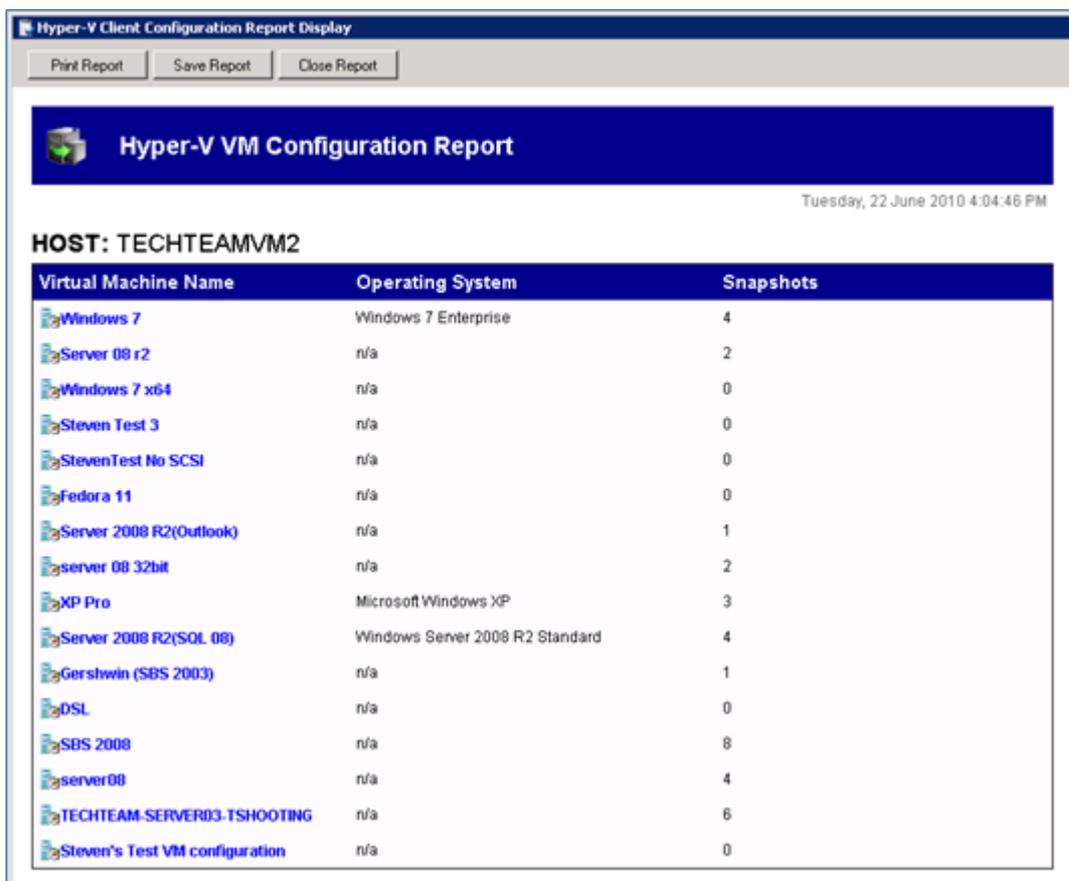
5. At the top of the report is a list of all the Guest VMs selected during the previous step. If you click the Virtual Machine Name link of any Guest VM in the list you will be directed to a list of settings for the latest running configuration for that VM.

6. Under the list is a further list of each VM and its associated snapshots. You can click the link for any available snapshot to view the specific settings associated with that snapshot.

7. Each VM included in the report will contain a full description of the VM settings for the latest running configuration at the top, and then a list of any further snapshots available underneath that, in date order.

8. The Host Security Report will be located at the very bottom of the overall report:

Host Security Configuration - InitialStore.xml

Hyper-V Services

Role Definitions

Role Definition - Administrator

General Settings

Name	Administrator
Description	

Operation Definitions

	Read Service Configuration-Authorizes reading configuration of the Virtual Machine Management Service
	Reconfigure Service-Authorizes reconfiguration of Virtual Machine Management Service

9. You can use the buttons at the top of the Hyper-V Config Reporter window to either print a copy of the report, save the report to a HTML file that can be opened with a web browser, or close the report window.

Hyper-V Client Configuration Report Display

[Print Report] [Save Report] [Close Report]

Hyper-V VM Configuration Report