

# BACKING UP AN IMAGE OF YOUR HARD-DRIVE



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ImageBackup.lwp

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## GENERAL IMAGE BACKUP TIPS

- For an overview of backing up, see my "A Stress Free PC" article at <http://www.jimopi.net>
- Image backups are a complete image of your entire hard drive and can be used to restore your PC to operational status quickly.
- There are three basic ways to backup images. Back-up to: 1) A second Internal Hard-drive, 2) A separate partition on the C Drive, or 3) An external hard-drive (USB, eSATA, Firewire, or NAS).
- External hard-drives are preferred because of their portability to be taken off-site for safety. Details on choosing an external hard-drive can be found in my GENERAL INFO & TIPS document at <http://www.jimopi.net>
- Always keep external hard-drives powered off when not in use. This helps protect them from infection if your system gets bitten by a malware bug.
- I recommend keeping an external hard-drive that contains a full image backup of all your PC's in a safe place off-site. I have two identical external hard-drive that I swap out of my safe-deposit box every 6 months.
- The use of free or shareware backup programs is discouraged. "Your data is too valuable to risk". Don't choose foolish frugality over common sense.
- Programs that come with the purchase of an External Hard-drive are adequate, but I and many LACS members prefer Acronis True Image Home.
- To speed up regular image backups and to save space on the external hard-drive, one idea to put all your large files like PHOTOS, VIDEOS, MUSIC onto either a second internal hard drive or a second partition on the main hard drive. This way, those files can be backed up separately and less frequently, thus speeding up the back-ups of the main hard-drive.
- I use the checklist on the last page of this sheet and I backup each month.
- Dell Recovery (Hidden) Partition: For problems after imaging this partition, see my GENERAL TIPS sheet.
- Cloning: Another way to save an image is to clone a hard-drive. This method makes the new drive identical to the original drive. The new drive is bootable and ready to go. Cloning is not normally used for regular image backup archiving since the clone drive must be physically able to replace the original drive. Also multiple backups on the same drive are not possible. The only advantage is that the cloned drive can be stored away and used to get a PC immediately back in service by installing it in the PC.

## WINDOWS 7 IMAGE BACKUPS:

- Open the "Backup/Restore Center" and select "Create a System image". Select the drive to hold the backup.
- Backups to a drive on a network is not supported by Win7 Home Premium. You need Win 7 Professional or Ultimate for this feature.
- Win7 Image backup will erase old images to make room for new ones. So far, it seems like the user has little control over the process.

## ACRONIS TRUE IMAGE HOME TIPS:

**ACRONIS TUTORIAL:** <http://www.techrepublic.com/downloads/how-do-i-create-a-reliable-backup-with-acronis/2338455>

### GENERAL NOTES:

- **BUYING ACRONIS:** Acronis TI Home is available for about \$30.00 from Gene Barlow at: <http://ugr.com/> and includes a free tutorial. I recommend paying a little extra for the physical CD rather than the download version. The current User Group order code to get the good price can be found at: <http://ugr.com/nl0811.html> (Announcing Acronis True Image Home 2012)

- **VERSIONS:** To avoid complications, you should be using Acronis TI Home ver 10, ver 11, TIH2009, or later for XP, and True Image Home 2010 or newer for Windows 7. (Note: For XP systems, TIH versions older than version 10 have shown strange behavior and may fail to restore an image).
- **USER INTERFACE DIFFERENCES:** For some strange reason, the User Interface of just about EVERY SINGLE VERSION of ACRONIS TI HOME is uniquely different than other versions and so makes it difficult for me to give general advice on its operation. My comments on using Acronis TIH can be followed in general but in actual use details will vary.
- **MULTIPLE PARTITIONS ON THE HARD-DRIVE.** If you bought a PC with Windows 7 or XP already on it, there may be two or more partitions on the main hard-drive. YOU MUST BACK UP ALL THE PARTITIONS on the main drive or the system will not boot after you recover/restore the image to a new drive.
- **"ACRONIS TI HOME 2010" FIRST TIME USE:** When you first open the program after installing, it will ask you if you want to run the "One Touch" or "One Click" Wizard. If you do, it will automatically look for an external drive and set up a scheduled task to do a FULL backup to it each week. It names the backup file "MyBackup.tib". I do not like this Wizard. Setting up Acronis TI manually using the Backup Wizard or Create new Scheduled Task Wizard is much better. Try to get a knowledgeable friend to help you get started. Also view the Gene Barlow Tutorial on the Acronis TI CD you received.
- **RESCUE CD:** As soon as you have created your first backup, you should create a Bootable Rescue CD. You should then boot that CD and make sure that it not only boots, but also recognizes all the hard drives on your system. You can go through a partial "Create Backup" process to see if all the drives are visible.
- **NAMING BACKUP FILES:** My preference is to give a personalized name to my backup folders and files. I suggest that before running a "Backup" task for the first time, you create a folder on your external hard-drive (using XP) to use for your Acronis TI backup archives, ie: "Acronis TI BACKUPS". Go to the next step.
- **USING THE BACKUP WIZARD: Creating a Backup:** When you select "Backup", the "Create Backup Wizard" walks you through the entire backup process. My only hangup when I first used the program was when I got to the "Backup Archive Location" window, I could not figure out what to enter for my first backup. I suggest this:
  - 1) Select the folder created in the step above (The path will show up in the "File name" box.),
  - 2) Go to the "File name" box and append a filename that has meaning to you, (ie: F:\TI BACKUPS\DELL\_20081012). Click <Next>, and continue the wizard.
- **SECURE ZONE Feature:** I recommend against using the "Secure Zone" feature. It can cause partitioning issues on your main hard-drive. Also, it is a far better idea to back up to a different hard-drive in case of a hardware failure of your main hard-drive.
- **FULL BACKUPS vs INCREMENTAL BACKUPS:** I do not recommend doing a full backup every time as it wastes hard drive space. The best idea is one full backup, then 5 incremental backups, then another full backup and adding 5 incremental backups to it, etc, etc, etc. This can done manually each month or a Scheduled Task can be created that will accomplish it automatically. My preference is to do a monthly image backup plus weekly backups of my personal data.
- **VALIDATE IMAGES:** This function ensures the image is usable. *NOTE: If you upgrade to a newer build or newer version of Acronis, you may not be able to validate an image taken with an earlier build/version. This does not mean the image is not usable, it justs means you cannot validate it. To be safe, I suggest you do a full backup using the new build/version of Acronis, validate the new image, then burn a fresh "Rescue" CD.*
- **"MOUNT" - ACCESSING BACKED UP DATA:** To see the data inside one of your a Backup Archive files, you need to "Mount" the archive as a "Virtual Hard-Drive". (On some versions of Acronis TI you must select the "Validate" option to get to the "Mount" Option). Acronis will assign a drive letter to the virtual drive. After that, go to "My Computer" in XP and open the virtual drive as a regular hard drive. Be sure to un-mount the drive as soon as you are done.
- **SATA DRIVES:** Earlier versions of Acronis TI Home (versions 9 and older) did have problems recognizing SATA Drives. Current versions are fine (TI Home 10, TI Home 11, and TI Home 2009).
- **DEFAULT BACKUP OPTIONS:** It is a good idea to change the Default Backup Options so that .bak & .tmp files are not excluded from the backup process. (*Tools > Options > Default Backup Options > Source files exclusion > uncheck the box "Exclude files matching \*.bak and \*.tmp"*). Problems with Microsoft Office can occur if you do not do this.
- **NORTON GoBack WARNING:** Norton GoBack is NOT compatible with Acronis True Image. See my GoBack workaround below.

## DELL ISSUES: HOW TO CLONE A DELL HARD DRIVE:

1. Install TrueImage on your hard drive and restart.
2. Burn an Acronis Recovery CD and shut down.
3. Install your second drive (properly cabled).
4. Boot and press F12 for a one-time setup.
5. Insert the Acronis Recovery CD and select CD Drive as boot device.
6. After TrueImage appears select Clone Disk. Follow the prompts. Be careful!
7. Source drive is the original drive - destination drive is the new empty drive.
8. Do not choose to verify image. Do not choose manual options.
9. Select DO NOT DESTROY DATA ON SOURCE DRIVE!!!!
10. After cloning is complete, shut down and immediately swap drives. Do not try to start with both drives installed or drive corruption will occur.

## LENOVO/IBM THINKPAD ISSUES:

- When backing up, always backup the entire hard drive, not just the C partition. Otherwise Boot issues will occur after a recovery.
- When Cloning Lenovo/IBM thinkpad drives, follow these instructions:  
[http://pl887.pairlitesite.com/misc/config-stories/cloning\\_a\\_thinkpad.pdf](http://pl887.pairlitesite.com/misc/config-stories/cloning_a_thinkpad.pdf)

## TROUBLESHOOTING RESTORE FAILURES

- If the PC Blue Screens during boot after restoring an image, make sure the drive C was partitioned so it has plenty of extra space. If it does not, either rerun Acronis Restore and correct your errors while setting up the partition/s on the restore, or repartition the drive with a non-destructive partition manager like : EASEUS Partition manager.

## GETTING DATA OFF OF A CORRUPTED HARD-DRIVE.

- Create an Image of the bad drive using the option "Ignore bad sectors". Once the image is completed, you should be able to access most of the data. (This option is only available in TI version 11 or higher). Try this before running recovery programs like SpinRite or Recuva.

## NORTON GOBACK & ACRONIS ---- **WARNING!**

1. Per Acronis:
  - a. True Image does not like Norton GoBack.
  - b. Disable GoBack before taking each backup image, then re-enable it.
  - c. Do not use the standalone Rescue version of TI on a system with GoBack enabled.
  - d. You cannot use the SecureZone feature with GoBack enabled. Partitioning conflicts.
2. *Under certain conditions, re-enabling GoBack after an Image Restore will make your PC totally unbootable (You cannot even get to Safe Mode).*
3. **WORKAROUND:** If you are doing a Restore, and GoBack was running when the backup image was taken, GoBack will be "disabled" after you restore that image to a new PC or hard drive. (You will get a message "GoBack has been disabled, do you want to Enable GoBack?Yes/No". Select "No" and then LEAVE IT DISABLED. As soon as possible, uninstall GoBack from the "Add/Remove Programs" Window. I suggest removing LiveUpdate & LiveReg as well if you do not have any other Norton Products installed. After all the dust has settled, re-install GoBack from scratch. Then do a LiveUpdate to get the latest version.

## CANNOT BACK UP IMAGE TO DVD's (*Tip from www.infopackets.com*)

**Problem:** I've run into a problem being able to record my image backups directly to DVD. According to Acronis, I need to install packet-writing software in order for this to work. What is packet writing software and why isn't it included as part of the Acronis package? "

### **Answer:**

In short: Packet Writing software is a "plugin" (per se) for Windows that allows you to use your CD or DVD record much like you would a floppy disk or hard drive. In other words: packet writing allows you to write to recordable optical media "on the fly", rather than on a per-session basis (as with CD Mastering Software).

For example: with packet writing software installed on my system, I could write a document in MS Word and then save it directly to my CD or DVD recordable disc without having to launch a special CD / DVD recording program (I.E.: CD Mastering Software).

Packet Writing software isn't included with Acronis True Image because it isn't entirely necessary. And to this day I am unaware of any freeware packet writing software programs (if you happen to know, please email me). Currently, the two most popular packet writing programs are Roxio / Adaptec DirectCD and Ahead [Nero Burning ROM] InCD -- and they both cost money.

If you want to burn your backups to DVD using True Image, you have two options. You can:

- a. Burn direct to DVD during the backup process: this will require third-party Packet Writing software (supplied by Roxio [DirectCD] or Ahead [Nero InCD], for example), or
- b. Write the image backup to the hard drive, and then burn to DVD recordable later: this method does not require Packet Writing software.

With respect to option (b): if you have another hard drive partition ("D drive") or another physical hard drive, you can write the image backup temporarily to D drive, then burn it to DVD afterward using your favorite CD / DVD software.

An alternate method is to Create a backup location folder on the C: Drive, set up the compression for maximum, and max file size to 4.4 GB (yes 4.4 GB). This will break up the image into 4.62 GB pieces that can be manually burned to DVDs. Estimate: With maximum compression, 35GB of drive files compresses to about 18GB. This is about 4 DVD's .

## "UNIVERSAL RESTORE" FEATURE

- This feature allows you to take an image from a PC and restore it onto a completely new PC. Currently the Universal Restore feature is only available with Acronis TI Echo Workstation which costs about \$130.00. This could be used in a disaster recovery situation where the original PC is damaged beyond repair. Universal Restore helps you load the correct drivers, etc into windows in a situation where a normal restore may not boot. Universal restore seems to work OK even with backup archives made with Home versions of Acronis.

## PROBLEMS USING "NAS" DRIVES WITH ACRONIS

- NAS or Network Attached Storage drives connect via your local ethernet and have their own IP address. They do work fine with Acronis with a few cautions.
- You need to select an NAS Drive that uses either EXT2, EXT3, XFS, or ReiserFS 3.6 formatting and NOT FAT32.
- NAS Drives cannot be formatted as NTFS (as of this date 9-2009), because they all have Linux based controllers and Linux does not currently support writing in NTFS format. If you try to backup your image to a drive formatted as FAT32, the drive controller breaks up the very large files into 4GB segments. When TI attempts to validate the image, things go nuts, and if it works at all, "Validate" will take many, many hours to run. The Linux controller works like crazy and may fail.
- For more about NAS hard-drives, see the NAS hard-drive tips on my NETWORKING TIPS sheet at [www.jimopi.net](http://www.jimopi.net)

## CLONED DRIVE WILL NOT BOOT

- If the new drive will not boot, run "HD Tune" on the original drive to make sure there are no bad sectors. If sectors are bad, you can try SpinRite, but the drive may be toast.
- If SpinRite is not available, try making a backup image using the "Ignore bad sectors" option. If putting that image on a new drive does not boot, you may have to reinstall windows.

**NORTON "GOBACK" ISSUES:** See the writeup in my UTILITY PROGRAMS Sheet.