Re: Back up data to USB?

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- *From*: "Rock" <Rock@xxxxxxxxxx>
- *Date*: Sun, 13 May 2007 19:12:28 −0700

"CLS" <CLS@xxxxxxxxxxxxxxxxxxxxxxxxx> wrote

> I've been reading many posts on the different back up SW. Looks like Acronis
> is a good one. Is it a good idea to back up to a USB jump drive? I have a
> small business with 3 pc's. I'm looking for something simple and automatic so
> my partners don't have to touch it (program or any external drive).
> Also, I'm not yet familiar with saving images of systems. Will the imaging
> be compressed so I can save it to a 2 or 4G jump drive? Or should I save the
> program images to a larger externdal HD let frequently as the data?

How much data is on the drives you want to image? The compression ratio depends on what the data is, but at best you won't get more than a 2:1 ratio, and certain files can't be compressed at all. So the max you would get on a 4GB USB flash drive is
< 8GB of of actual data.

A flash drive is fine as a secondary means for storing backups of particular files, but I don't think it's suitable for storing drive images unless the amount of data is very small, nor would I rely on a USB flash drive as the only media for the backup of data.

I recommend using a large external drive for storing images. There is no difference in user interaction between a flash drive or an external hard drive. You can purchase a preassembled external drive or put one together quite easily and for much less cost by putting a bare drive in an external drive enclosure. Enclosures are in the $20 range. The cost for a 320GB setup, for drive and enclosure, is less than $100 dollars.

For greatest safety you should have redundancy in backups. Software like Acronis True Image Home version 10 automates the process of imaging. It also can do file backups and disk cloning.

Anna has posted a very detailed step by step guide to creating images with Acronis True Image and restoring from those images. Here is a copy of that post.

"Step−by−Step Instructions for Using the Acronis True Image Program to Backup
& Restore One's Hard Drive...

Using the Acronis True Image program there are two different approaches one
can take to back up the entire contents of one's day−to−day working HDD,
i.e., the operating system, all programs & applications, and user−created
data − in short, *everything* that's on one's HDD...

1. Direct disk−to−disk cloning, or,
2. Creating disk images

By using either of these strategies the user can restore his or her system should their day−to−day working HDD become inoperable because of mechanical/electronic failure of the disk or corruption of the system resulting in a dysfunctional operating system.

In undertaking either of these two backup & recovery processes you're dealing with two hard drives − the so−called source & destination disks − the source disk being the HDD you're backing up and the destination disk being the HDD that will be the recipient of the cloned contents of the source disk or the recipient of the disk image you will be creating.

When using either process it's usually best for most users to use an external HDD as the destination drive, i.e., the recipient of the cloned contents of the source disk or the recipient of the created disk image. This can be either a USB or Firewire or SATA external HDD. While another internal HDD can also serve as the destination disk there's an additional element of safety in using an external HDD since that drive will be ordinarily disconnected from the system except during the disk cloning or recovery process.

One other suggestion. After you install the Acronis program on your computer it's a good idea to create what Acronis calls their "Bootable Rescue Media" (CD). In most cases the recovery process (described below) will utilize that Acronis bootable CD to restore your system. This "rescue" CD is easily created from the program by clicking on the "Create Bootable Rescue Media" icon on the opening Acronis screen and simply going through the screens to create the bootable CD. The following are step−by−step instructions for using the Acronis True Image 9 program to clone the contents of one HDD to an external HDD. (The steps are essentially the same using the newer ATI 10 version):

1. With both hard drives (source & destination disks) connected, boot up. Ensure that no other storage devices, e.g., flash drives, ZIP drives, etc., are connected. It's also probably a good idea to shut down any programs you may have working in the background − including any anti−virus anti−spyware programs − before undertaking this disk−to−disk cloning operation.

2. Access the Acronis True Image 9 program and under "Pick a Task", click on "Clone Disk". (In the ATI 10 version click on "Manage Hard Disks" in the "Pick a Tool" area and on the next screen click on "Clone Disk").

3. On the next "Welcome to the Disk Clone Wizard!" window, click Next.

4. On the next "Clone Mode" window select the Automatic option (it should be the default option selected) and click Next.

5. On the next "Source Hard Disk" window, ensure that the correct source

HDD (the disk you're cloning from) has been selected (click to highlight). Click Next.

6. On the next "Destination Hard Disk" window, ensure that the correct destination HDD (the disk you're cloning to) has been selected (again, click to highlight). Click Next.

7. On the next window, select the option "Delete partitions on the destination hard disk". Understand that all data presently on the disk that will be the recipient of the clone will be deleted prior to the disk cloning operation. Click Next.

8. The next window will reflect the source and destination disks. Again, confirm that the correct drives have been selected. Click Next. 9. On the next window click on the Proceed button. A message box will display indicating that a reboot will be required to undertake the disk cloning operation. Click Reboot.

10. The cloning operation will proceed during the reboot. With modern components and a medium to high−powered processor, data transfer rate will be somewhere in the range of about 450 MB/min to 800 MB/min when cloning to a USB external HDD; considerably faster when cloning to another internal HDD.

11. When the disk cloning operation has been completed, a message will (usually) appear indicating the disk cloning process has been successful and instructs you to shut down the computer by pressing any key. Do so and disconnect your USB external HDD. If, however, the destination drive (the recipient of the clone) has been another *internal* HDD, see the NOTE below.

12. Note that the cloned contents now residing on the USB external HDD take on the file system of the source drive. For example, if prior to the disk−cloning operation your USB external HDD had been FAT32−formatted and your XP OS was NTFS−formatted, the cloned contents will be NTFS−formatted. There is no need to format the USB external HDD prior to the disk−cloning operation. Similarly, there is no need prior to the disk−cloning operation to format an internal HDD should you be using an internal HDD as the destination drive .

13. Restoration of the system can be achieved by cloning the contents of the data residing on the external HDD to an internal HDD through the normal disk−cloning process as described above.

NOTE: Just one other point that should be emphasized with respect to the disk cloning operation should the recipient of the clone be another internal HDD and not a USB or Firewire external HDD. Immediately following the disk cloning operation the machine should be shutdown and the source HDD should be disconnected. Boot ONLY to the newly−cloned drive. DO NOT BOOT IMMEDIATELY FOLLOWING THE CLONING OPERATION WITH BOTH DRIVES CONNECTED. There's a strong possibility that by doing so it is likely to cause future boot problems with the cloned drive. Obviously there is no problem in this

area should a USB or Firewire EHD be the recipient of the clone since that device is not ordinarily bootable in an XP environment.

Disk Imaging: The following are step−by−step instructions for using the Acronis True Image 9 Program to create disk images for backup purposes and using those disk images for recovery of the system. (The steps are essentially the same using the newer ATI 10 version):

Note: The recipient of the disk image, presumably a USB external HDD or an internal HDD, ordinarily must be a formatted drive and have a drive letter assigned to it. Recall that in the case of a disk−to−disk cloning operation as previously described, an unformatted or "virgin" HDD can be used as the destination disk.

Before undertaking this disk imaging process it's probably best to close all programs running in the background including your anti−virus and other anti−malware programs.

1. With both your source and destination hard drives connected, access the Acronis program and click "Backup" on main menu.

2. The "Create Backup Wizard" screen opens. Click Next.

3. The "Select Backup Type" screen opens with two options: a. The entire disk contents or individual partitions. b. Files and folders. Select a. and click Next.

(In the ATI 10 version four options will be listed: My Computer, My Data, My Application Settings, and My E−mail. Select the My Computer option and click Next.)

4. The "Partitions Selection" screen opens. Disk 1 and Disk 2 are listed with their drive letter designations. Check the disk to be backed up − presumably Disk 1 − and click Next.

5. An informational message appears recommending an incremental or differential backup if an original full backup had previously been created.Since this will be the first backup we will be selecting, just click OK to close the message box. (You can check the box not to show that informational message in the future).

6. Next screen is the "Backup Archive Location". In the "File name:" text box, (in ATI 10 version it's the "Folder:" text box) enter your backup drive letter and enter a file name for the backup file, e.g., "F:\Backup 1−25". The Acronis program will automatically append the ".tib" file extension to the filename. Click Next.

7. "Select Backup Mode" screen opens. Select "Create a new full backup archive" option and click Next.

8. "Choose Backup Options" screen opens with two options: a. Use default options b. Set the options manually

If you select the b. option, you can select various options listed on the next screen. Two of them are of interest to us:

Compression level − Four options − None, Normal (the default), High, Maximum. There's a "Description" area that shows the estimated size of the backup archive depending upon the option chosen, and the estimated "creation time" for each option.

Backup priority − Three options − Low, Normal, or High Low − "backup processed more slowly, but it will not influence other processes running on computer."
(Default) Normal − "normal speed but backup process will influence other processes running on computer." High − "normal speed but backup process will strongly influence other processes running on computer."

With respect to the compression levels, we've found that when using the Normal option the original data is compressed by about 20% − 25% and that the High and Maximum options will result in a compressed backup file only slightly higher than that. However, the amount of time to create the backup files when using the High or Maximum compression level is substantially greater than when using the Normal compression level. So unless disk space is very tight on the destination drive, i.e., the drive where the backup file will be saved, we recommend using the Normal compression level (at least initially).

NOTE: You can set the Compression level and Backup priority defaults from the Acronis Tools > Options > Default backup options menu items.

9. "Archive comments" screen opens allowing you to add comments to the backup archive which you can review during the Recovery process. Click Next.

10. The next screen summarizes the backup operation to be performed. Review the information for correctness and click the Proceed button.

11. The next screen will display status bars reflecting the progress of the backup operation. After the backup operation finishes, an informational message will appear indicting the operation was successfully completed.

Incremental Backups (Disk Images)
1. After the initial backup archive has been created you can create incremental backups reflecting any data changes since the previous backup operation. This incremental backup process proceeds considerably faster than the initial backup operation. This, of course, is a major advantage of creating disk images rather than undertaking the disk−to−disk cloning process. Then too, since these created disk images are compressed files they are reasonable in size. And because the incremental disk images can usually be created very quickly (as compared with the direct disk−to−disk cloning

process), there's an incentive for the user to keep his/her system up−to−date backup−wise by using this disk imaging process on a more frequent basis than the disk−cloning process.

Note that you must create the incremental backup files on the same HDD where you stored the original backup archive and any subsequent incremental backup files.

2. Access the Acronis program as detailed above and move through the screens. When you arrive at the "Backup Archive Location" screen, click on the original backup archive file, or if one or more incremental backup files were previously created, click on the last incremental backup file and verify that the correct drive letter and file name are shown in the "File name:" text box. After clicking Next, the program will automatically create a file name for the incremental backup archive file, using the original file name and appending a consecutive number − starting at 2 − at the end of the file name. For example, say you named the original backup archive file "Backup 1−25". The first incremental backup file will be automatically named "Backup 1−252" and the next incremental file "Backup 1−253", etc.

NOTE THAT ALL YOUR INCREMENTAL BACKUP FILES MUST BE PRESENT FOR RECOVERY PURPOSES. DO NOT DELETE ANY OF YOUR PREVIOUSLY−CREATED INCREMENTAL BACKUP FILES FOLLOWING THE CREATION OF A CURRENT INCREMENTAL BACKUP FILE. YOU CAN DELETE THE INCREMENTAL FILES ONLY AFTER CREATING A FULL BACKUP ARCHIVE AS DESCRIBED IN THE PREVIOUS SECTION.

3. On the following "Select Backup Mode" screen, select the "Create incremental Backup" option, click Next, and proceed through the screens as you did in creating the initial backup archive.

Recovery Process (Disk images): We'll assume the recovery will be to either a non−defective HDD that has become unbootable for one reason or another, or to a new HDD. The HDD to be restored need not be partitioned/formatted since the recovery process will take care of that function.

Note that in most cases you will be using the Acronis "bootable rescue media" (CD) that you created when you originally installed the Acronis program. If you didn't create that bootable CD at that time, you can create it now from the Acronis program (assuming You can access the program at this time) by clicking on the "Create Bootable Rescue Media" icon on the opening Acronis screen and simply going through the screens to create the bootable CD.

Note: If the recovery will be made to a HDD that is still bootable and you're able to access the Acronis program on that drive, then you can undertake the recovery process without the need for using the "bootable rescue" CD.

1. With both the drive containing the backup disk images and the drive you want to restore connected and with the bootable rescue CD inserted, boot up.

2. At the opening screen, click on "Acronis True Image Home (Full Version)".

3. The program will open after some moments. On the "Pick a Task" screen that opens, click on "Recovery".

4. The "Welcome to the Restore Data Wizard!" screen opens. Click on Next.

5. The "Archive Selection" screen opens. Navigate to the drive containing the backup archive file(s) and select the last incremental backup file or the original full backup file if no incremental backup files were subsequently created. Ensure that the correct drive letter and filename are entered in the "File name:" text box. Click Next.

6. In the Acronis version 9 program, the "Archive Date Selection" screen opens. Select (highlight) the last incremental backup file from the listing and click Next. This screen does not appear in version 10.

7. The "Restoration Type Selection" screen opens. Select the option, "Restore disks or partitions" and click Next.

8. The "Partition or Disk to Restore" will open. Click on "Disk 1" and click Next.

9. After some moments the "Restored Hard Disk Drive Location" screen opens. Select (highlight) the HDD to be restored and click Next.

10. On the next screen select the "Yes" option to delete all current partitions on the destination HDD. Click Next.

11. On the next screen select the "No" option and click Next.

12. On the next screen you have the option to validate the backup archive before restoration. Click Next.

13. The final screen before the restoration operation begins will open. Confirm that the information as shown is correct. Click Proceed.

14. Click OK when following completion of the recovery operation a message appears indicating a successful recovery operation.

15. Remove the Acronis bootable rescue CD and close the Acronis program. The system will reboot. A Windows "Found New Hardware" message followed by the "System Settings Change" message box may appear on the Desktop. If they do, click Yes for a reboot.

Note: While the Acronis program is not designed to clone individual partitions − it can clone only the entire contents of one HDD to another HDD − you can backup & recover individual partitions through the disk imaging process as described above.
Anna "

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Rock [MS−MVP User/Shell]

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