
**Backing up a complete system with either
“Image” or “Cloning” software.
What’s the difference?**

Image (true image, mirror image)

An **image** is a file containing a compressed snapshot of the operating system partition, which can later be extracted to recreate a clone of the original partition. Think of an image like a zipfile, just on a grander scale. You probably know that with WinZip, PKZip, and other zip programs, you can compress groups of files and even entire directories into one zipfile, which can later be unzipped to restore all the encapsulated files and even the directory structure. An image is like a zipfile: it's not an exact duplicate of the original files, but it contains within it the means to restore exact duplicates--in this case not just a set of files, but an entire partition. Like a zipfile, an image is meant to be for storage--an archive. Like a zipfile, you can't directly use an image. To make use of a zipfile, you must extract the files from within it. To make use of an image, you must extract the partition within it onto a hard disk.

Image vs. Clone

The two procedures are similar, but yet so different in how they are formed and how they can be used. To *clone* a hard drive the clone should be copied directly to another hard drive. That hard drive can either be external or internal. They need not be of the same size. To *image* a hard drive the image is much smaller than the original and can be placed on many different storage devices such as CD, DVD and other hard drives. They can be internal or external.

To recover with a clone it is only necessary to boot up the clone. Nothing else needs to be done. To recover an image a boot up disc (often the disk that made the clone) is placed in the CD drawer and the computer is booted from that. It then needs the image disc to restore the computer to its original state. Different programs handle this recovery in different ways

Recovery with a clone is faster and in my opinion more reliable, but it does necessitate having a second hard drive, preferable internal.

Another point in favor of a clone is that it is simple to check the clone to see if it works. Just reboot the computer and in the BIOS change the boot order of the drives. To check an image it is destructive and if it is not good you have ruined your day. You can check the validity of a backup image by running a backup validate which completely rebuilds the disk image in memory and validates that the whole backup could be restored without error. Still?

More about Cloning

- Computer cloning, is a process that involves copying the operating system, drivers, software, patches and all setups on a hard drive. The clone then can be used to replace a damaged or unreliable hard drive in this same computer
- The clone is independently bootable and will operate your computer in the exact same form as the original without any degradation of the system. No reentry of passwords or registry of software. Disadvantage of cloning is time, and for the clone to be really useful it needs to be on a separate hard drive.

A program that uses cloning is

CASPER

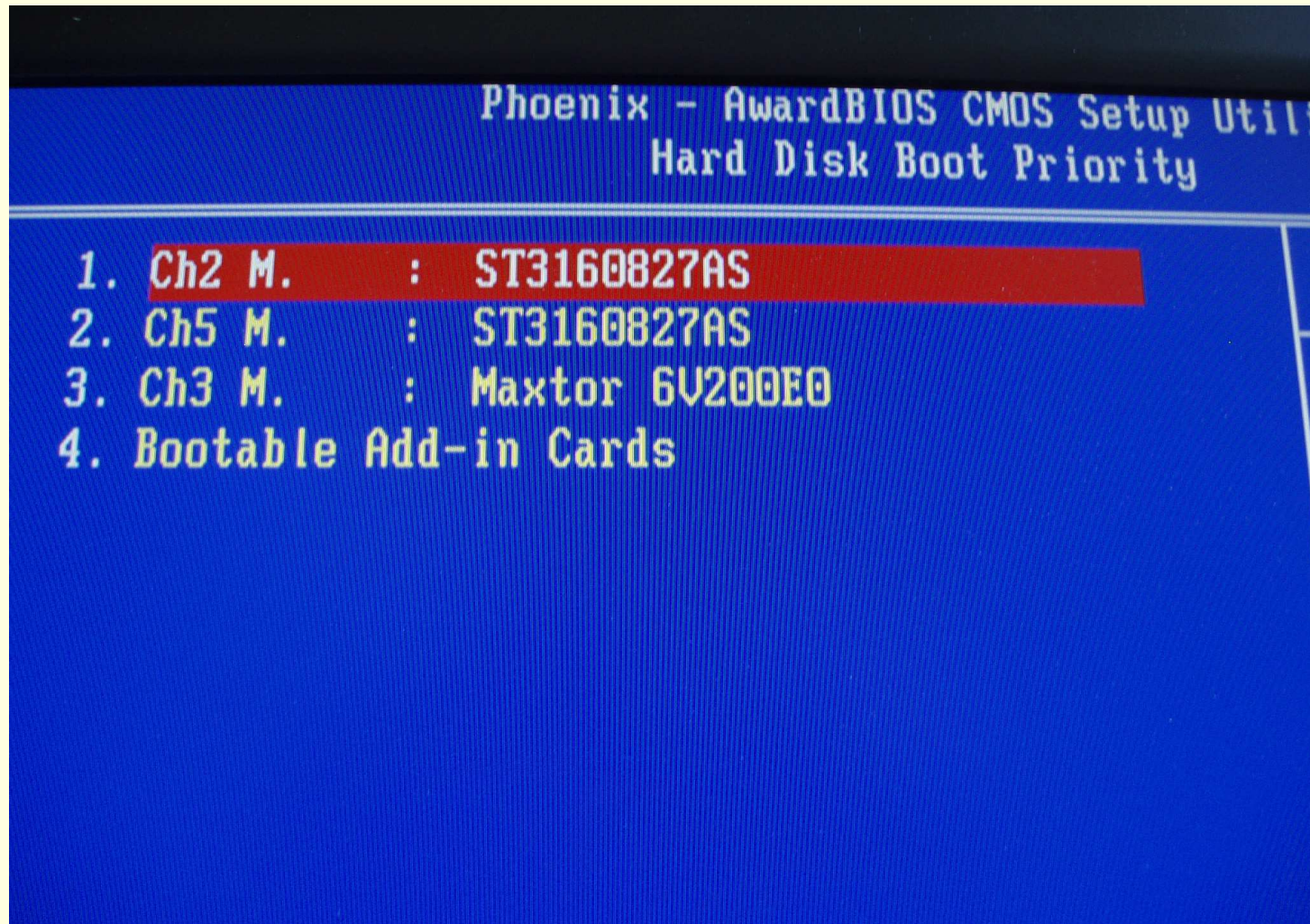


I said that the disadvantage of cloning was the length of time that is required. Casper has developed a program they call *smart clone*. It checks the system to find out what has changed from the last back up, and then only copies and overwrites those files. I backup automatically once a day after the system has had a successful boot, and the average time is 6 minutes.

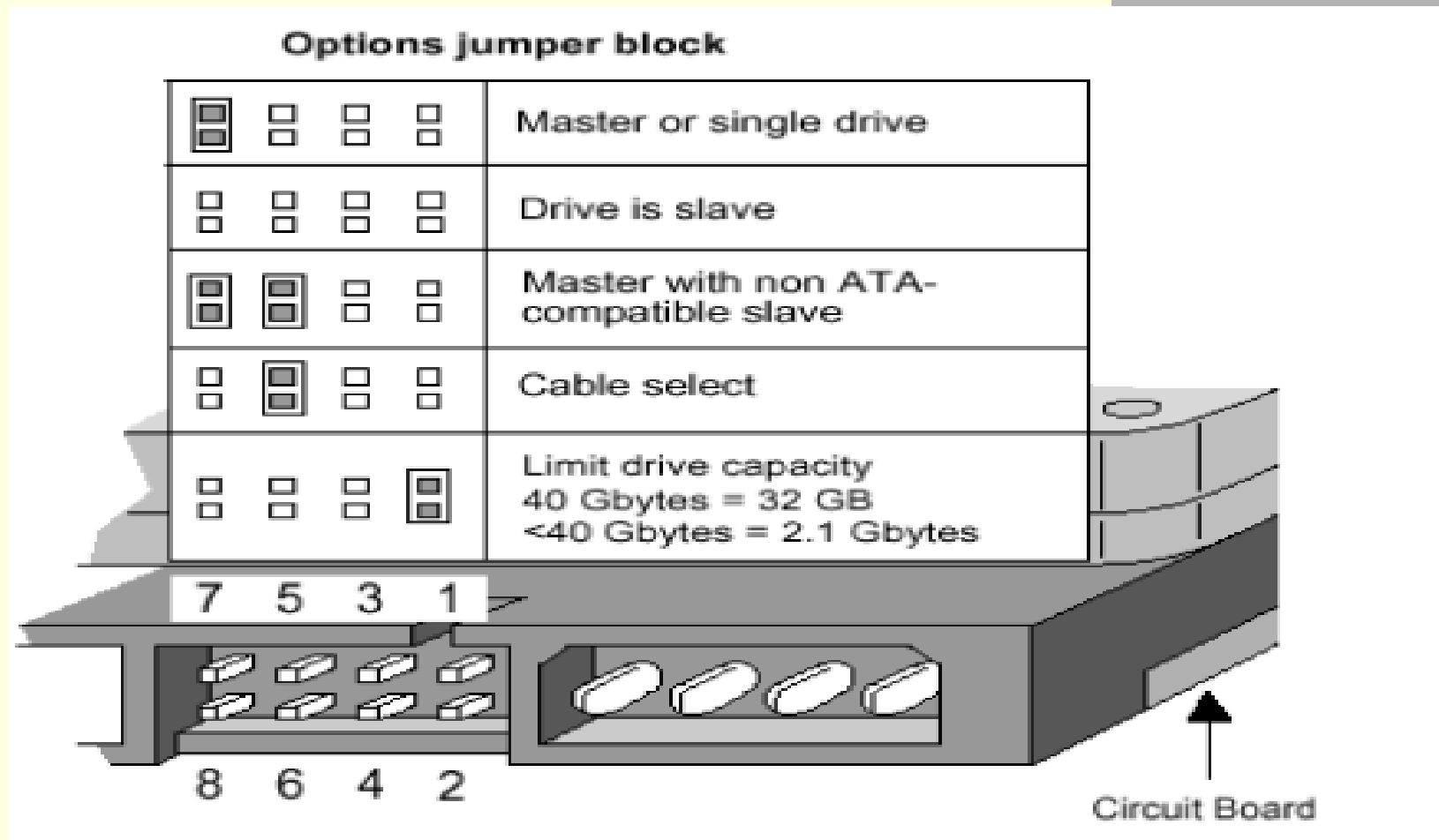
Casper

- **System Requirements**
- Windows Vista, Windows XP, or Windows 2000 Workstation
- NOTE: Casper is not designed for use with Windows NT, Windows Server 2003, Windows 2000 Server, and Windows 2000 Advanced Server.
- 100MB available disk space
- 128MB RAM (512MB or more recommended)

In a SATA system the top listed drive in the BIOS is the boot drive. There are no pins to change on the hard drive in a SATA drive.



If you are using PATA drives Jumper settings must be changed to reverse the master and slave drives



Mr. Boley.

Thank you for your kind words.

I am happy to provide you with five copies of Casper 5.0 as “give-aways” for members of your SIG. How you determine who the lucky recipients are is your call (door prizes?). Just provide me with their names and email addresses and I’ll take it from there.

Plus, the following is a \$15.00 coupon code for use by your membership towards the purchase of Casper. It’s good until midnight, 12/31/08: **DWSCUG08**

To use this coupon, they would add Casper 5.0 to their shopping cart (see <http://www.fssdev.com/shop>) and then copy and paste the coupon code into the Coupon box during the checkout process. The \$15.00 adjustment will be reflected in the final price before orders are completed.

Thank you for your support of Casper.

Regards,

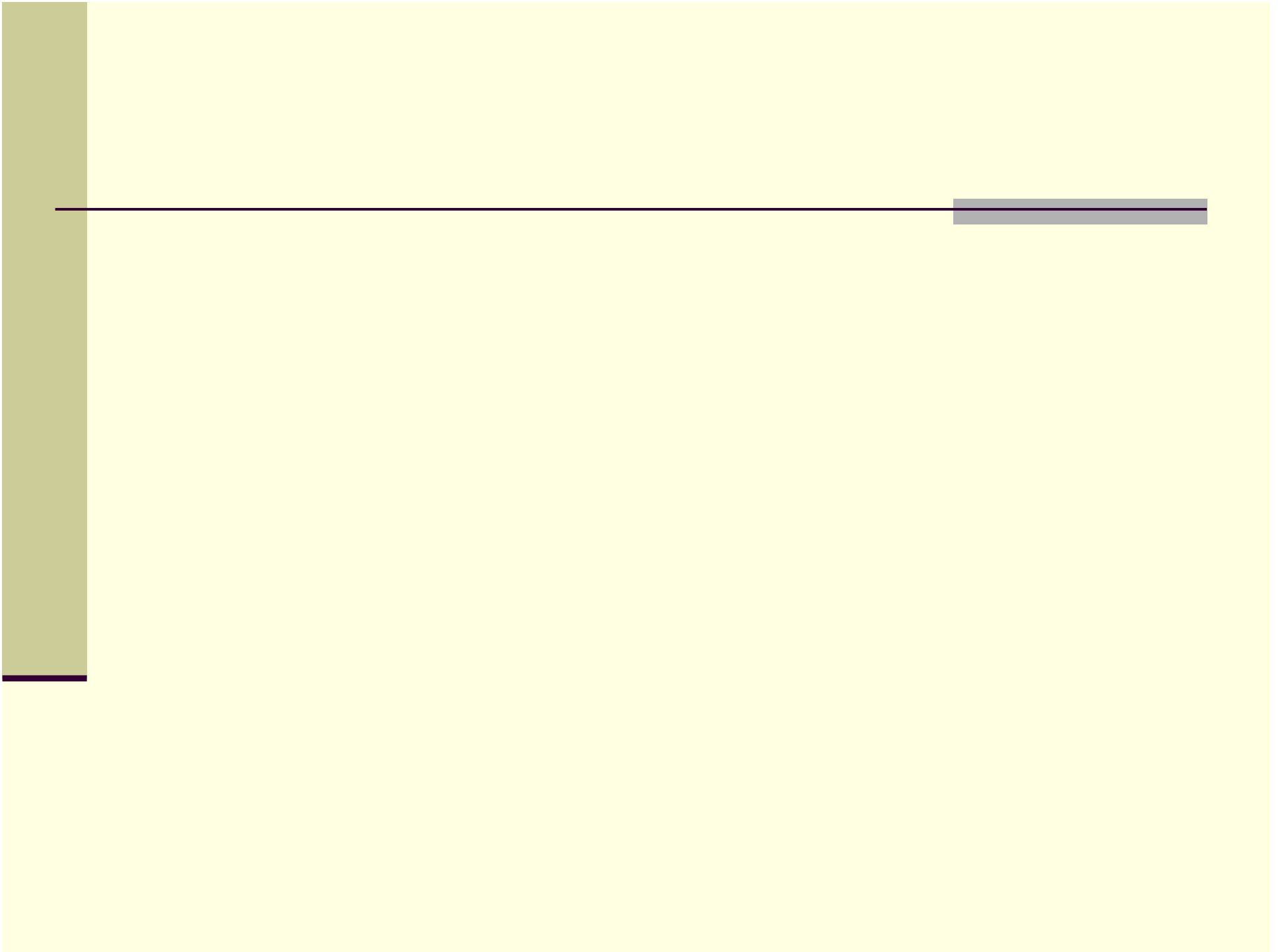
Marty

Marty Rubenstein

V.P. – Marketing

Future Systems Solutions, Inc.

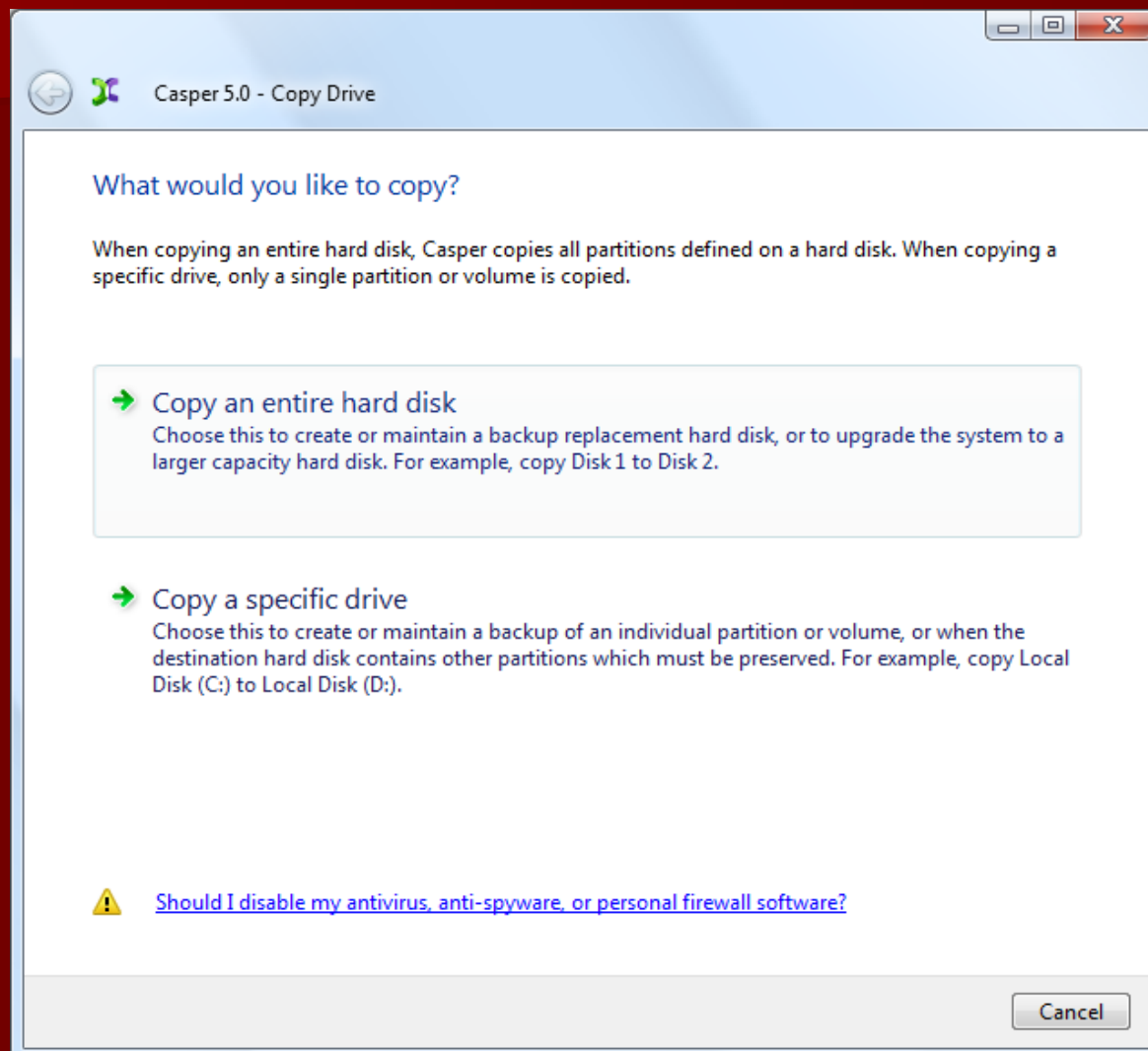
www.fssdev.com



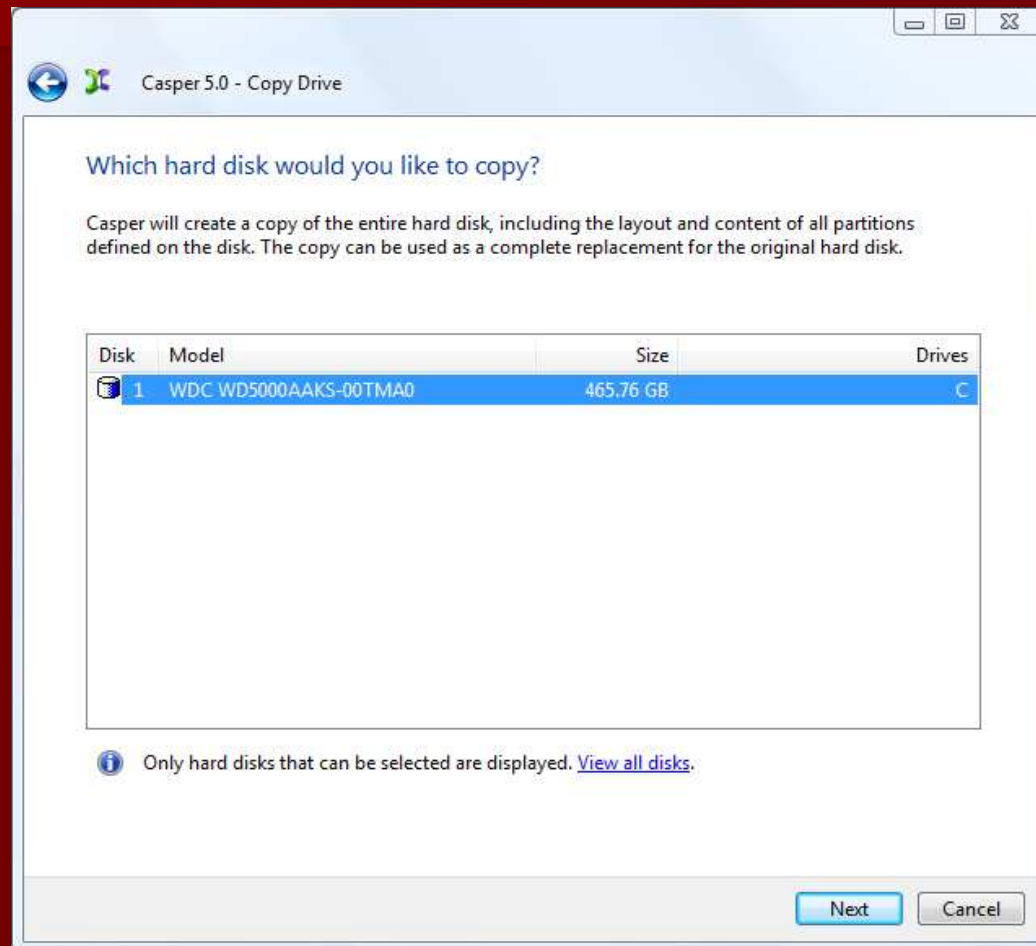
I like computer maintenance to be automated. At 10 pm Superantispyware auto loads, checks the system and auto shut down. The next morning BIOS turns my system on at 5 am and runs AVG. One hour later the C: drive Auto clones to the D: drive.



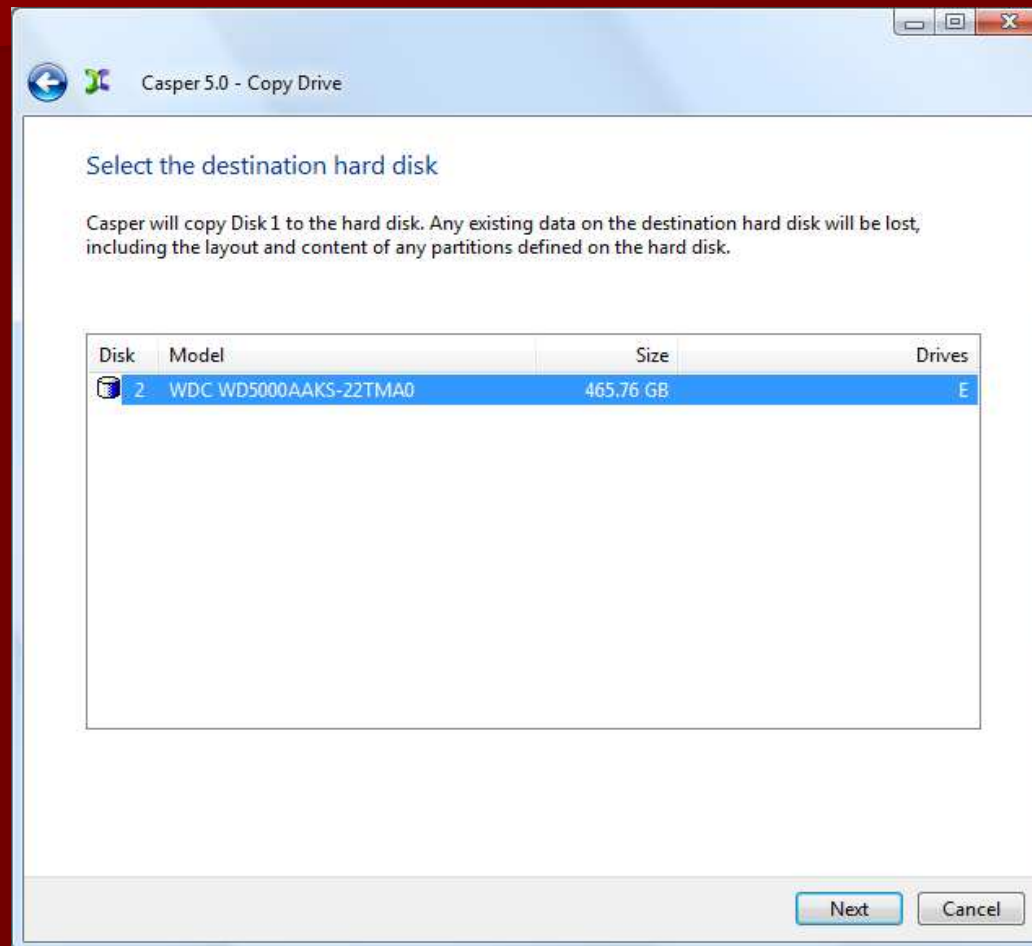
2. Select **Copy an entire hard disk.**



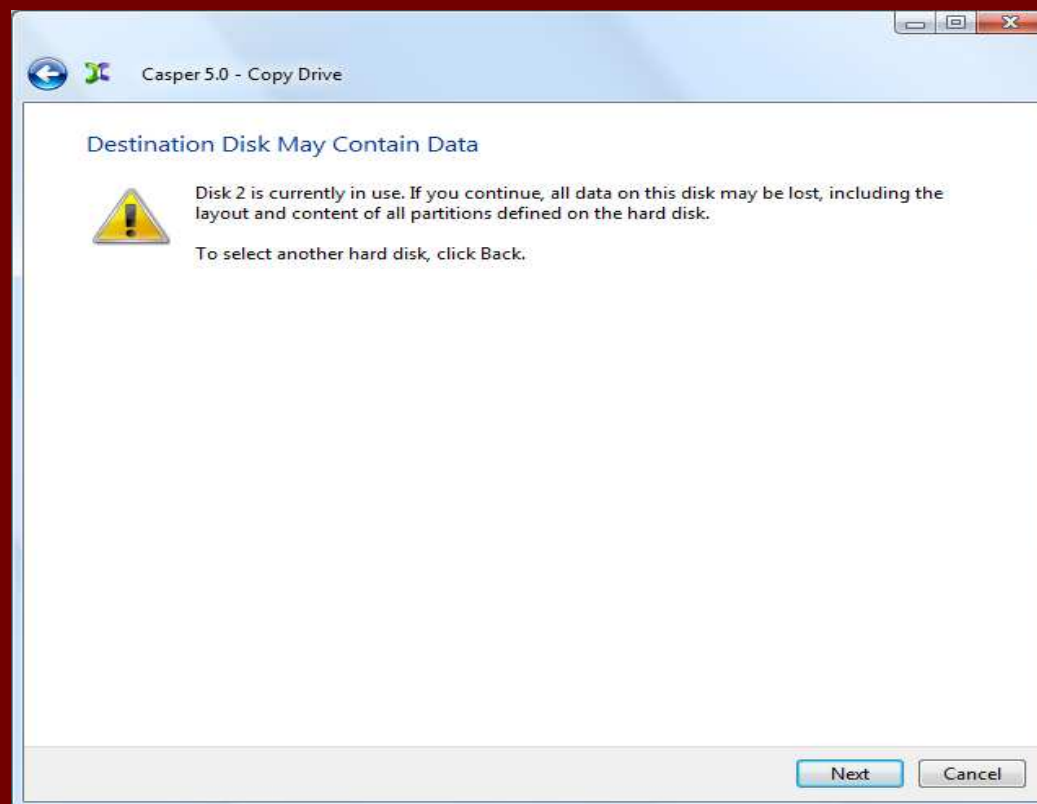
3. Select the hard disk to backup (the hard disk on which Windows is installed) as the disk to copy, and click **Next**



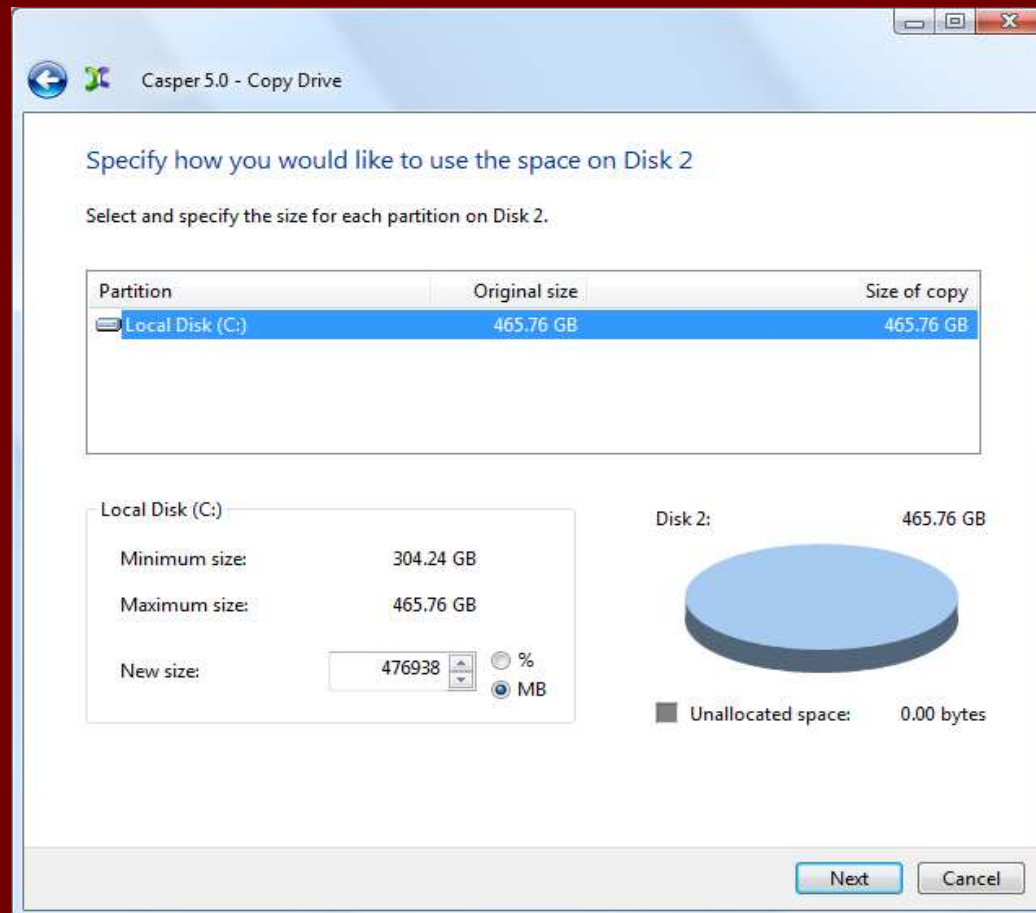
4. Select the backup hard disk as the destination, and click **Next**



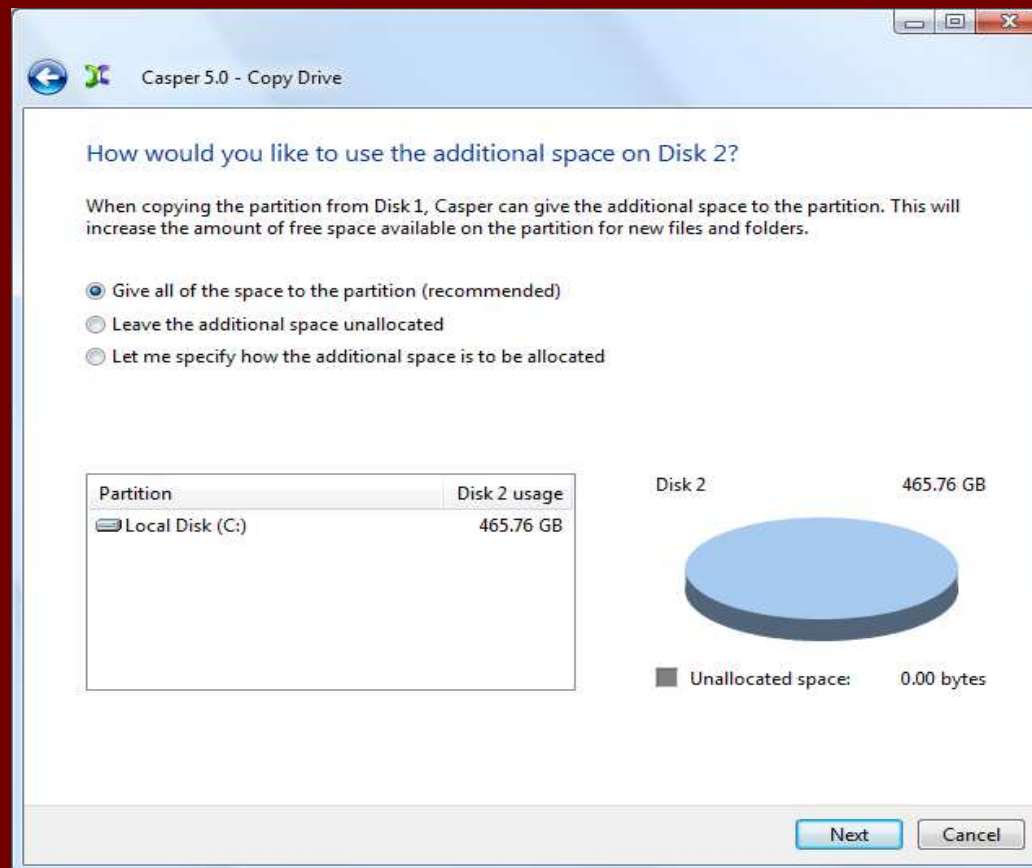
5. If the selected hard disk contains data, Casper will warn you that the contents will be overwritten. Confirm you have selected the correct hard disk to receive the backup, and click **Next** to proceed.



6. When prompted to specify how the space on the backup hard disk is to be used, retain the default selection and click **Next**. If the destination hard disk is the same size or smaller than the source hard disk, Casper will ask you to manually configure how the space is to be used.

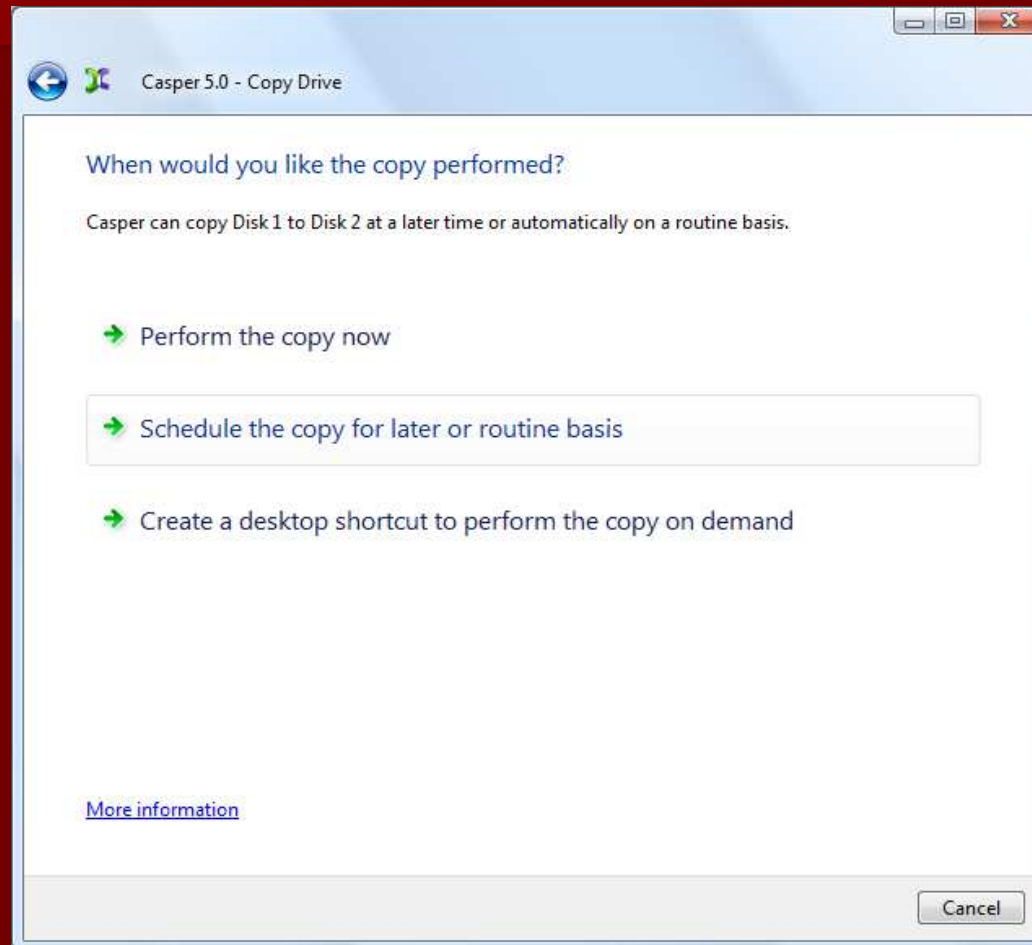


When the destination hard disk is larger than the source, the default option will be *Give all of the space to the partition*, or *Proportionally distribute the space to all partitions* when there is more than one partition defined on the source disk.

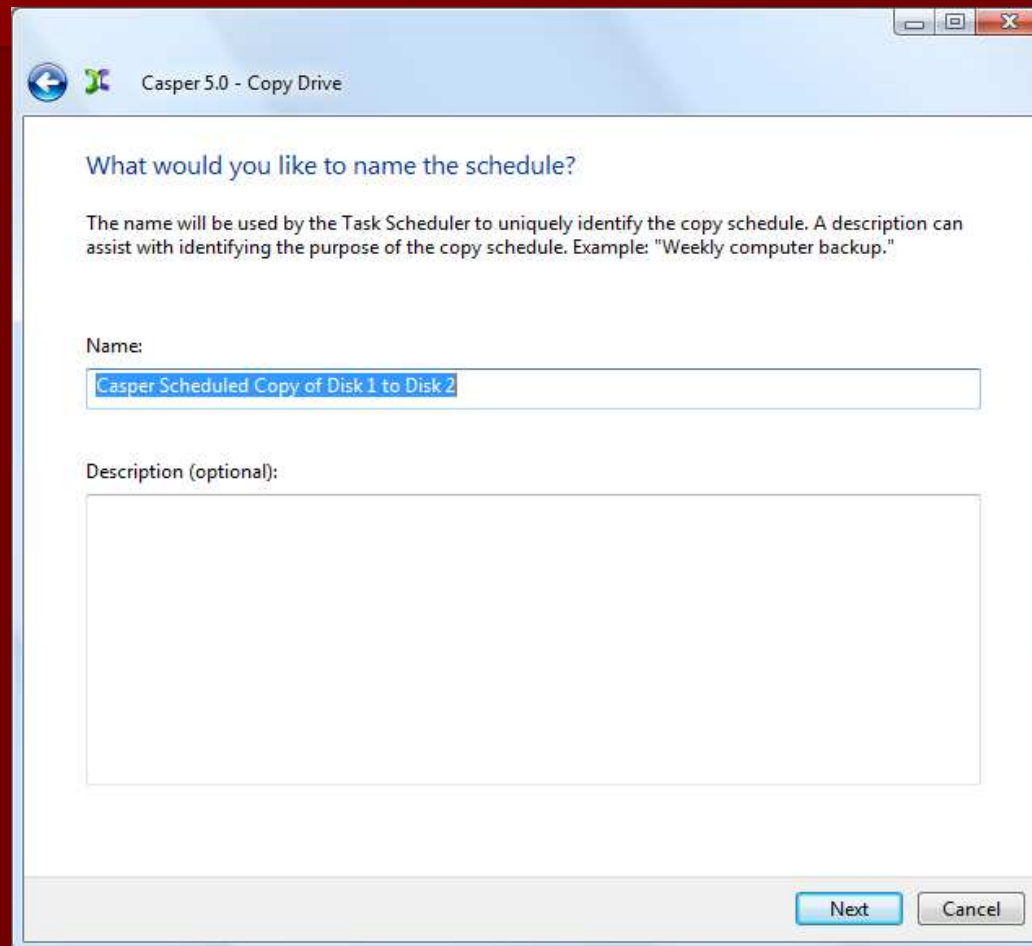


Simply clicking **Next** to accept the default selection or value is generally best.

7. Click **Schedule the copy for later or routine basis**



8. Enter a name for the schedule, or retain the name suggested by Casper, and click **Next**.



Casper 5.0 - Copy Drive

What would you like to name the schedule?

The name will be used by the Task Scheduler to uniquely identify the copy schedule. A description can assist with identifying the purpose of the copy schedule. Example: "Weekly computer backup."

Name:

Casper Scheduled Copy of Disk 1 to Disk 2

Description (optional):

Next Cancel

9. Select the schedule you would like Casper to follow to maintain the backup, and then click **Create schedule** to add the copy schedule to your Windows Scheduled Tasks.

The screenshot shows a Windows-style dialog box titled "Casper 5.0 - Copy Drive". The main heading is "How often would you like the copy performed?". Below this, there is a label "Select how often you want the copy performed:" followed by a dropdown menu set to "Weekly".

The "Weekly Copy Schedule" section contains two rows of settings:

- "Every:" with a dropdown menu set to "Friday" and "At:" with a time picker set to "02:00 AM".
- "Beginning:" with a date picker set to "Wednesday, April 30, 2008".

The "Power Management" section has two checked checkboxes:

- Wake the computer to perform the copy
- Turn off the computer after the copy has been completed

Below these is a "Method:" label and a dropdown menu set to "Stand by".

At the bottom right of the dialog are two buttons: "Create schedule" and "Cancel".

10. Click **Close** to return to the Casper console.

