

Advantages and disadvantages of hard drive partitioning

You can easily create partitions to separate different types of data. Here's what you need to know about partitions and the benefits and disadvantages of this.

When you set up a new hard drive or buy a computer, the drive may have only one partition. That is, everything is put into the logical sector of the drive.

But you can easily create partitions to separate different types of data. Here's what you need to know about partitions and the benefits and disadvantages of this.

What are the benefits and limitations of hard drive partitioning?

1. What is disk partitioning?
2. Advantages of hard drive partitioning
 1. 1. Easy to reinstall Win
 2. 2. Backup is simpler
 3. 3. (Possible) Improved security
 4. 4. Better organization
 5. 5. Install multiple operating systems
 6. 6. Using multiple file systems
3. Disadvantages of hard drive partitioning
 1. 1. Bring a false sense of data security
 2. 2. Complicated and at risk of errors
 3. 3. Must solve many partitions at the same time and the space is wasted
 4. 4. Not really necessary for the average user
 5. 5. The SSDs deny many past benefits
4. Partition the HDD drive against SSD
5. How to partition the drive in Windows

What is disk partitioning?



When installing Windows on a new hard drive, the installer will treat the drive as an unallocated space. A segment needs to be created so that the operating system knows which part of the hard drive can be used. This is called a partition. When a partition is formatted with a specific file system to use, it is called a volume.

Each standard Windows installation has a unique partition containing everything, including OS files, personal data, installed programs, etc.

If you purchase a pre-installed computer, it may also have a small secondary partition for recovery purposes. This secondary partition is separate from the primary partition so that even if Windows installation fails, users can still restore it with the backup partition.

Advantages of hard drive partitioning

Why do you need to partition your hard drive? Here are some reasons for this.

1. Easy to reinstall Win

Keeping Windows system files separate from personal information makes it easy to perform tasks on Windows.

For example, it is easy to reinstall Windows if it is on a separate partition. All you need to do is format the Windows partition and reinstall the operating system. Installed programs and files will remain in the same location.

You can copy Windows partitions to back up all operating system settings and restore as needed.

2. Backup is simpler

Backing up files is very important. Although placing files on a separate partition is not a backup operation, it makes this process much simpler.

Like Windows installation, users can copy the entire partition to get an exact copy for all data. For a simpler approach, you can focus on your backup application to protect the entire drive, rather than having to choose individual folders.

3. (Possible) Improved security

Partitioning a drive can also help make data safer, avoiding malware attacks. If ransomware is on the Windows partition, it will be less likely to lock individual files on another partition. Therefore, it is easy to reinstall Windows.

Of course, this depends on each specific attack, so it is best to take measures to protect yourself from malware with the top 10 Internet security software proposed by TipsMake.com.

4. Better organization

Maybe you are someone who likes to put everything in a certain place dedicated to it. Partitioning allows for different types of data to be partitioned separately. Such as creating a partition for games, applications and another partition for documents, music and similar files.

If you find that the organizational methods available on a single partition are not enough to use, adding new methods can help keep the data organized better.

5. Install multiple operating systems

The article discussed the separation of OS files and personal data in most of the above. But that is not only used to partition the hard drive. You can also add a partition to the drive to install another operating system on it.

Perhaps you want to run Linux with Windows, but the computer cannot handle a virtual machine. You can create a new partition for Linux without touching the current Windows system.

In addition, it is also possible to install an old version of Windows for backward compatibility.

6. Using multiple file systems

Another use of partitions is the ability to work with multiple file systems. Although it may not be necessary to do this in some specific circumstances, it makes external drives more useful if you use them with multiple operating systems.

For example, you can split a 1TB external hard drive into partitions, or create a FAT32 or exFAT that works with Windows, while others like Mac OS Extended will be compatible with Macs. This allows users to use the best available space for personal needs.

Disadvantages of hard drive partitioning

Besides, there are some reasons to avoid hard drive partition as follows:

1. Bring a false sense of data security

If not careful, having multiple partitions can lead to data loss disaster. Although Windows displays separate items for each partition that has been created, those partitions remain on the same physical drive.

Therefore, if the hard drive is broken, destroyed by a natural disaster or stopped working, you will lose everything on it. This can be a big shock for users who only use a single physical device to store all data.

Therefore, it is very important to back up data in Windows, regardless of the partition.

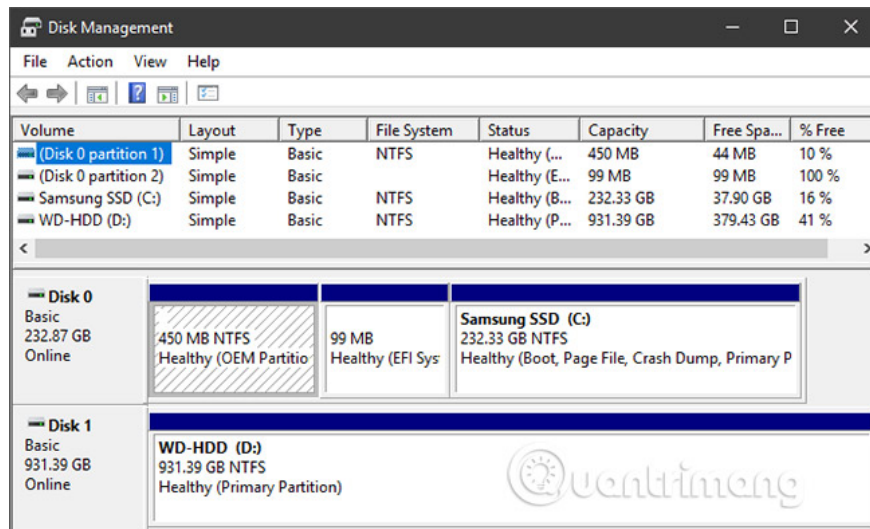
2. Complicated and at risk of errors

One of the biggest problems with having a few partitions is keeping them from getting into trouble. With more than three or four partitions, the benefits from data organization will no longer exist. Instead, users must spend more time trying to track the partitions and try not to let them fail.

And even if you only have one or two more partitions, you'll still have to set up Windows to save your files and software on other partitions. This is more complicated than storing everything on a single partition.

In addition, having multiple partitions poses a risk of creating more errors. When formatting a partition, you can accidentally delete another partition.

3. Must solve many partitions at the same time and the space is wasted



With a single partition, you don't have to worry about capacity (ie, comfortably save data until the drive is full). But if there are multiple partitions, you may face a lack of storage space on one partition, but there is too much free space on another partition.

Restricted storage space can cause 'bad crying' situations. For example, a major update for Windows 10 may need more space on the existing partition. After that, you have to delete some games on your private partition, minimize the partition, and then expand the partition to install Windows.

Fortunately, scaling and expanding partitions in Windows is relatively easy, so users won't have to struggle with the initial partition sizes. However, changing the partition size frequently is also quite inconvenient.

4. Not really necessary for the average user

Many high-end users want to partition for great reasons listed above. But for the average user, hard drive partitioning is often not necessary. Ordinary users do not have multiple files to the extent that they need another partition to manage them. And they also often don't install other operating systems.

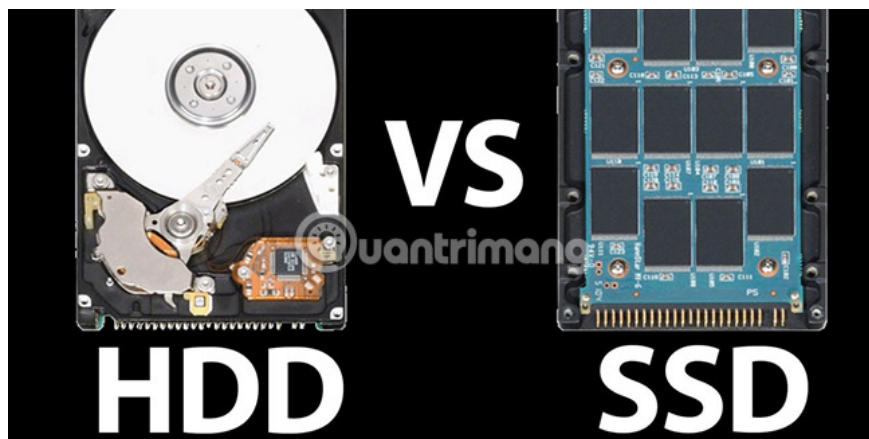
Although partitioning is not too complicated, it also brings some troubles for novices. Therefore, after all, it is not worth it for ordinary users to partition their drives.

5. The SSDs deny many past benefits

There are many reasons why partitioning is not as important as before. One of them is the appearance of SSDs in modern computers. Please proceed to the next section to find out more about this.

Partition the HDD drive against SSD

1. How to check Windows computer using SSD or HDD?



As you know, the old hard drives (HDD) are mechanical. They have moving platter, along with a read and write data.

Therefore, organizing data on the drive affects how quickly users can access it. If the drive must access data at a distance, performance will be affected.

Previously, partitioning was a useful solution for this. The main partition where Windows is installed will be located in the external platter for the fastest reading time. Less important data, such as downloads and music, may be in the platter inside. Splitting data also helps defragment. Defragmentation is an important part of the hard drive maintenance process and helps it run faster.

But none of these applies to SSD drives. SSDs use flash memory to quickly access information, no matter where it is located on the drive. Therefore, optimizing the location of files on the drive is no longer a special concern. And no need to defragment SSD anymore.

By the way, don't worry about damaging the SSD when partitioning it. SSDs organize files themselves regardless of which partition it is on, so there is no 'uneven wear' problem. And modern SSDs are designed for an unlimited number of read / write cycles, so the chances of an SSD being broken before you replace it are very low anyway.

How to partition the drive in Windows

If you decide you want to create a new partition on your hard drive, please refer to the following articles on TipsMake.com:

1. Partition to create the second hard drive on Windows
2. 2 ways to hide hard disk partitions on Windows
3. How to create a separate data partition in Windows?

The article looked at some of the benefits and limitations of disk partitioning. In short, the potential problems associated with the benefits that partitioning offers to the average user are relatively small, so it's best to keep everything intact.

However, the partitioning of the drive is of great benefit to advanced users who want reasonable data separation and no problem with regularly adjusting the amount of free space on each partition.

Good luck!

See more:

1. Instructions to divide and merge drives right in Windows 7
2. Hide disk partitions in Windows
3. Instructions for dividing hard drives right in Windows 10

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