# Effects of Compression on Moving and Copying Files

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Moving and copying files and folders in disk volumes can change their compression state. The compression state of these files and folders, and the file system in which they were created, can impact the way they are affected while being moved or copied. The compression state of an NTFS file or folder is controlled by its compression attribute.
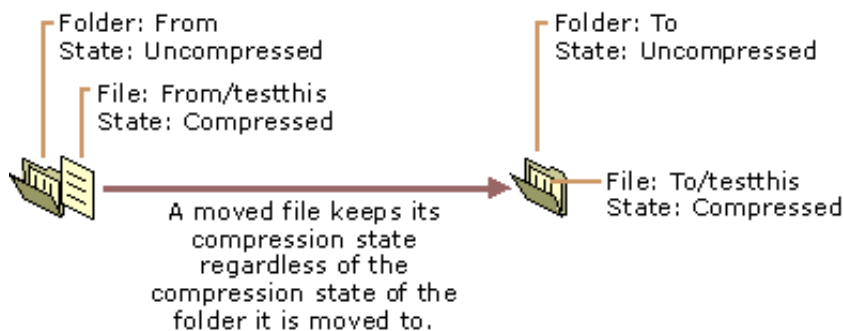
Moving Files or Folders on NTFS Volumes

When you move an uncompressed file or folder to another folder, the file remains uncompressed after the move, regardless of the compression state of the folder it was moved to. For example, if you move an uncompressed file to a compressed folder, the file remains uncompressed after the move, as illustrated in Figure 3.7.
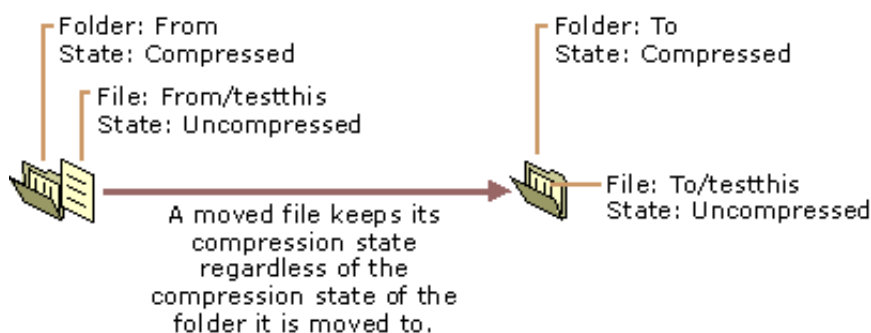
Figure 3.7 Moving an Uncompressed File to a Compressed Folder

When you move a compressed file or folder to another folder, the file remains compressed after the move, regardless of the compression state of the folder it was moved to, as illustrated in Figure 3.8.
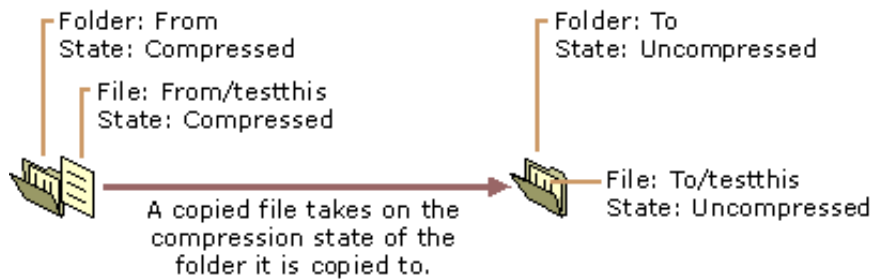

Figure 3.8 Moving a Compressed File to an Uncompressed Folder
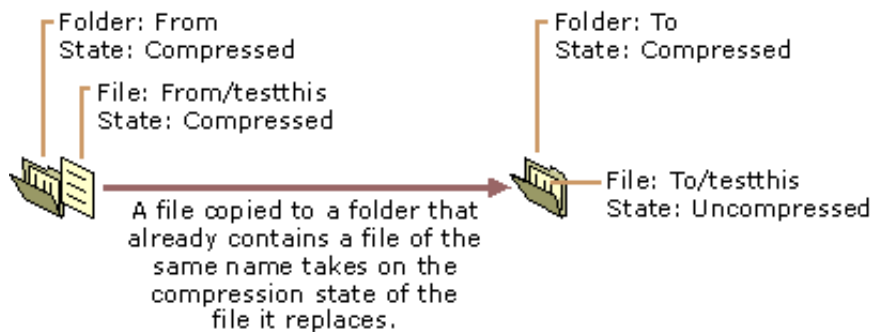
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Copying Files or Folders on NTFS Volumes

When you copy a file to a folder, the file takes on the compression attribute of the target folder. For example, if you copy a compressed file to an uncompressed folder, the file is automatically uncompressed when it is copied to the folder, as illustrated in Figure 3.9.

Figure 3.9 Copying a Compressed File to an Uncompressed Folder

When you copy a file to a folder that already contains a file of the same name, the file that is copied takes on the compression attribute of the target file, regardless of the compression state of the folder, as illustrated in Figure 3.10.

Figure 3.10 Copying a File to a Folder That Already Contains a File of the Same Name

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Moving and Copying Files Between FAT16, FAT32, and NTFS Volumes

Like files copied between NTFS folders, files moved or copied from a FAT folder to an NTFS folder always assume the compression attribute of the target folder. Because Windows 2000 supports compression only on NTFS volumes, any compressed NTFS files moved or copied to a FAT volume are automatically decompressed. Similarly, compressed NTFS files copied or moved to a floppy disk are automatically decompressed.

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Adding Files to an Almost Full NTFS Volume

When adding files to an NTFS volume that is almost full, you can get error messages that indicate there is not enough disk space to write the entire file if the file cannot be compressed, regardless of the degree of compression in the file when it is opened. For this reason, it is possible to get a read error when you are trying to open a compressed file.

If you copy files to a compressed NTFS folder that does not have enough room for all of the files in their uncompressed state, you will receive a message indicating that there is not enough space on the disk even though the files will all fit when compressed. Because NTFS allocates space based upon the uncompressed size of the file, you can get this error when the uncompressed size of the file exceeds the size of the volume. NTFS does not wait for the compression and writing of one file to complete before it begins work on subsequent files, and the system does not get the unused space back from compression until after the buffer is compressed.

When you are running a program and saving files to a compressed folder on a volume that is almost full, the success of the save depends on factors such as how much the file compresses and whether the beginning of the file compresses well.

If you cannot delete any files or do not have any files that you can compress, you can usually copy all of the files if you first copy the largest or the ones that compress best. You can also try copying them in smaller groups rather than all at once.

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