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[6. File Systems supported by Parted](#)

[6.1 File Systems Supported by GNU Parted](#)

Parted has support for these operations:

- Filesystem detect create resize copy check
- ext2 * * *1 *2 *3
- ext3 * *1 *2 *3
- fat16 * * *4 *4 *
- fat32 * * * * *
- hfs *
- jfs *
- linux-swap * * * * *
- ntfs *
- reiserfs * *5 *1,5 *5 *3,5
- ufs *
- xfs * NOTES: (1) The start of the partition must stay fixed for ext2, ext3 and reiserfs. (2) The partition you copy to must be bigger (or exactly the same size) as the partition you copy from. (3) Limited checking is done when the file system is opened. This is the only checking at the moment. All commands (including resize) will gracefully fail, leaving the file system intact, if there are any errors in the file system (and the vast majority of errors in general). (4) The size of the new partition, after resizing or copying, is restricted by the cluster size for fat (mainly affects FAT16). This is worse than you think, because you don't get to choose your cluster size (it's a bug in Windows, but you want compatibility, right?). So, in practise, you can always shrink your partition (because Parted can shrink the cluster size), but you may not be able to grow the partition to the size you want. If you don't have any problems with using FAT32, you will always be able to grow the partition to the size you want. Summary: you can always shrink your partition. If you can't use FAT32 for some reason, you may not be able to grow your partition. (5) Reiserfs support is enabled if you install libreiserfs, available at <http://reiserfs.osdn.org.ua>. (It is likely to be available soon from www.namesys.com... tell us if/when this happens!)

[6.2 GNU Parted and the Second Extended Filesystem](#)

Parted doesn't directly support for copying ext2 file systems (yet). There are a few ways of achieving this, however:

- Use Parted's mkfs command (or mkfs.ext2), and then run at the shell: FIXME!!! this doesn't work quite right - but it should be OK for most people...

```
# mount -t ext2 /dev/hda2 /mnt/dst
# find /mnt/src -depth | cpio -pm /mnt/dst
```

- If the duplicate partition is going to bigger than the original, this can also be done: first, create the new ext2 partition. Then:

```
# dd if=/dev/src-device of=/dev/dst-device bs=1024 count=old_size
# parted /dev/hda resize 2 start end
```

where *old_size* is the size of the original partition in kilobytes. *start* and *end* are the new start and end for the duplicate partition.

[6.3 Legacy Microsoft File System Support](#)

Parted can not grow the cluster size of FAT file systems (yet). This places restrictions on resizing and copying partitions. This is often quite bizarre, because Parted can convert file systems between FAT16 and FAT32, which have different restrictions on what the cluster size can be.

For example, lets say have a 100Mb partition with a cluster size 4k. This partition can't be resized to 400Mb, because the cluster size would need to be changed to 16k. However, it can be resized to 600Mb if you use FAT32. The reverse is true for 600Mb FAT32 file systems.

Note: when you copy or resize a file system, Parted will ask you if you want to convert between FAT16 and FAT32 (if it is possible). Therefore, if you just want to convert a partition to FAT32 (without resizing), you can just resize the partition to the same size.

6.3.1 MS DriveSpace partitions

MS DriveSpace is a program that comes with MS Windows 95 that can be used to compress FAT file systems. I believe this works the same way as DoubleSpace, so everything said here applies should apply to DoubleSpace as well.

It is possible to use Parted to resize and copy these partitions, but you have to do a few extra things...

6.3.1.1 Growing a DriveSpace partition

To increase the size of a DriveSpace partition, do the following

1. Use Parted's resize command to grow the partition to the desired size.
2. Use MS DriveSpace to shift the free space from the host drive to the compressed drive.

6.3.1.2 Shrinking a DriveSpace partition

To decrease the size of a DriveSpace partition, do the following:

1. Use MS DriveSpace to shift the free space from the compressed drive to the host drive. The amount of free space shifted corresponds to the desired amount by which to shrink the partition.
2. Use Parted's resize command to shrink the partition to the desired size. NOTE: Parted doesn't give good feedback on what the numbers, to know how much to shrink the partition by. This is on the TODO list.

6.3.1.3 Copying a DriveSpace partition

If you want to copy a DriveSpace partition to a partition that is bigger, then you can follow the instructions for growing a DriveSpace partition, except you copy rather than resize the desired partition, and make sure you use the new partition in DriveSpace.

However, if you want to copy a DriveSpace partition to a partition that is smaller, things get a bit more complicated:

1. Use MS DriveSpace to shift free space from the compressed drive to the source host drive. The amount of space shifted should be more than difference between the source partition, and the desired size of the duplicate partition.
2. Use Parted to copy the source partition to the duplicate partition.
3. Use MS DriveSpace to shift the free space from the source host drive back to the compressed drive.
4. Use MS DriveSpace to shift the free space from the duplicate host drive back to the compressed drive.

6.4 Reiserfs Journalling File System

Parted supports reiserfs if libreiserfs is installed. Parted detects this at runtime, and automatically enables support. You can download libreiserfs from:

<http://reiserfs.linux.kiev.ua>

Note that libreiserfs is new software, and hasn't been tested widely yet.

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