# You can create an infinitely recursive directory tree

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It is possible to create an infinitely recursive directory tree. This throws many recursive directory-traversal functions into disarray. Here's how you do it. (Note: Requires NTFS.)

Create a directory in the root of your C: drive, call it C:\C, for lack of a more creative name. Right-click My Computer and select Manage. click on the Disk Management snap-in.

From the Disk Management snap-in, right-click the C drive and select "Change Drive Letter and Paths…".

From the "Change Drive Letter and Paths for C:" dialog, click "Add", then where it says "Mount in the following empty NTFS folder", enter "C:\C". Click OK.

Congratulations, you just created an infinitely recursive directory.

```
C:\> dir


 Volume in drive has no label
 Volume Serial Number is A035-E01D


 Directory of C:\


08/19/2001  08:43 PM                 0 AUTOEXEC.BAT
12/23/2004  09:43 PM    <JUNCTION>     C
05/05/2001  04:09 PM                 0 CONFIG.SYS
12/16/2001  04:34 PM    <DIR>          Documents and Settings
08/10/2004  12:00 AM    <DIR>          Program Files
08/28/2004  01:08 PM    <DIR>          WINDOWS
               2 File(s)           0 bytes
               4 Dir(s)   2,602,899,968 bytes free


C:\> dir C:\C


 Volume in drive has no label
 Volume Serial Number is A035-E01D


 Directory of C:\C


08/19/2001  08:43 PM                 0 AUTOEXEC.BAT
12/23/2004  09:43 PM    <JUNCTION>     C
05/05/2001  04:09 PM                 0 CONFIG.SYS
12/16/2001  04:34 PM    <DIR>          Documents and Settings
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               2 File(s)           0 bytes
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C:\> dir C:\C\C\C\C\C\C


 Volume in drive has no label
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 Directory of C:\C\C\C\C\C\C


08/19/2001  08:43 PM                 0 AUTOEXEC.BAT
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```

Go ahead and add as many "\C"s as you like. You'll just get your own C drive back again.

Okay, now that you've had your fun, go back to the "Change Drive Letter and Paths for C:" dialog and Remove the "C:\C" entry. Do this before you create some real havoc.

Now imagine what happens if you had tried a recursive treecopy from that mysterious C:\C directory. Or if you ran a program that did some sort of recursive operation starting from C:\C, like, say, trying to add up the sizes of all the files in it.

If you're writing such a program, you need to be aware of reparse points (that thing that shows up as `<JUNCTION>` in the directory listing). You can identify them because their file attributes include the `FILE_ATTRIBUTE_REPARSE_POINT` flag. Of course, what you do when you find one of these is up to you. I'm just warning you that these strange things exist and if you aren't careful, your program can go into an infinite loop.

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