

Why does a non-recursive ReadDirectoryChangesW still report files created inside subdirectories?

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A customer used the `ReadDirectoryChangesW` function to monitor a directory for changes, asking for notifications only for changes directly in the directory being monitored (`bWatchSubtree = false`). But they found that the `ReadDirectoryChangesW` function reported a change even when they created a file in a subdirectory, rather than in the directory being monitored.

For example, if they asked to monitor the directory `C:\dir1`, and a file was created at `C:\dir1\dir2\file`, the `ReadDirectoryChangesW` function reported a change, even though the file was created in a subdirectory, and the request was for a non-recursive monitor.

What gives?

We saw [some time ago](#) that the purpose of the `ReadDirectoryChangesW` function is to allow you to maintain a local copy of the contents of a directory: The idea is that you make an initial pass over the directory with `FindFirstFile` / `FindNextFile`, and then you use the notifications from the `ReadDirectoryChangesW` function to make incremental updates to your local copy.

And what happened here is that the contents of an enumeration of the `C:\dir1` directory did in fact change. What changed is the last-modified date on `C:\dir1\dir2` !

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