

# It's an unfortunate choice of data type for the file system redirection cookie

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If you want to disable 64-bit file system redirection, you call the `Wow64DisableWow64FsRedirection` function. This function gives you a cookie. When you are finished, you call `Wow64RevertWow64FsRedirection`, passing the cookie you received from the previous call. Like this:

```
void* cookie;
if (Wow64DisableWow64FsRedirection(&cookie)) {
    ... do stuff ...
    Wow64RevertWow64FsRedirection(cookie);
}
```

The unfortunate thing is that the data type for the cookie is an untyped pointer: `void*`. This means that the following mistake goes undetected:

```
// Remember: Code in italics is wrong.
void* cookie;
if (Wow64DisableWow64FsRedirection(&cookie)) {
    ... do stuff ...
    Wow64RevertWow64FsRedirection(&cookie);
}
```

The erroneous parameter to `Wow64RevertWow64FsRedirection` goes undetected because `void**` is implicitly convertible to `void*`. Because *any pointer* is implicitly convertible to `void*`, because `void*` is a generic pointer.

In retrospect, the type of the cookie used by the file system redirection functions should have been something other than `void*`. It could have used `DECLARE_HANDLE`, which declares a pointer to a dummy structure with a unique name. Or it could have been a pointer to a uniquely-named incomplete type.

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