

My window has the `WS_EX_NOACTIVATE` extended style, but it got activated anyway

 devblogs.microsoft.com/oldnewthing/20240919-00

September 19, 2024



If you set the `WS_EX_NOACTIVATE` extended window style, Windows won't activate the window when it is clicked on, Windows will skip the window when looking for a new window to activate when the active window is destroyed, and the window won't show up in `Alt + Tab` or the taskbar by default. You can still activate it programmatically, usually by calling `SetActiveWindow` or `SetForegroundWindow`.

If you override the default and make the window appear in `Alt + Tab` and the taskbar, then those UI surfaces will call `SetForegroundWindow` when the window is selected, so that's one way an end-user can activate a no-activate window.

But there's one oft-overlooked way the user can activate a no-activate window: Use the "Activate a window by hovering over it with the mouse" setting (known programmatically as "active window tracking"), and hover over the window.

When this happens, the "active window tracking" code doesn't check the `WS_EX_NOACTIVATE` style.¹ It goes directly to sending the window a `WM_MOUSEACTIVATE` message to ask whether the window should be activated, and `DefWindowProc` will say "Sure, activate me!"

If you want to prevent the window from being activated by mouse hover, you need to handle the `WM_MOUSEACTIVATE` message and return `MA_NOACTIVATE` or `MA_NOACTIVATEANDEAT`, depending on what you want to happen to the mouse event.

¹ This is arguably an oversight in the activate window tracking feature code when it was originally written.