RegNotifyChangeKeyValue sucks less

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One of the gotchas of the RegNotifyChangeKeyValue function is that the notification registration has thread affinity. This is a problem if you want the notification registration to outlive the thread that generated it. In particular, if you register the notification from a nonpersistent thread pool thread, you get into an infinite loop:

- 1. Thread pool task calls RegNotifyChangeKeyValue, and waits for the associated event via RegisterWaitForSingleObject.
- 2. Thread pool thread goes idle.
- 3. Thread pool destroys the idle thread.
- 4. Due to thread affinity, this signals the handle.
- 5. The thread pool queues a task to process the handle that was signaled.
- 6. The task checks the registry key (observes that nothing changed) and calls RegNotify-ChangeKeyValue again.
- 7. Repeat.

Windows 8 added a new flag to the RegNotifyChangeKeyValue function: REG_NOTIFY_THREAD_AGNOSTIC . If you pass this flag, then the notification registration does not have thread affinity. If the thread that called RegNotifyChangeKeyValue exits, the notification registration remains active.

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