Subject: New Windows 10 Warning
Posted by mikeaudet on Sun, 03 Jul 2016 14:04:58 GMT
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Hi All,

I'm deeply suspicious that a recent Windows 10 update cause the DPC subsystem of Windows 10 to perform much more poorly, causing crackles and pops in the ASIO driver at 64 and 128 sample buffer sizes.

This definitely wasn't the case a few weeks ago.

I can't figure out which update caused the problem because Windows 10 doesn't allow the updates to be removed. I can't test what update specifically caused this, and I can't fix it.

Windows 7 is still working perfectly at 64 and 128 sample buffers sizes, even with all the latest updates applied.

I did a whole bunch of digging to try and figure this out, and I got my first clue running DPC Latency Checker.

Under Windows 10, if the computer does anything, even loading a web page, the DPC latency on my system shoots up to 1000 microseconds. That's 2/3 the way through a buffer at 64 samples.

Under Windows 7, the DPC latency on my system never gets much higher than 30 microseconds, no matter what the computer is doing. The hard disk light can be on solid, and it's still around 30 microseconds.

I hope this helps someone. I'm going to wait about a month, and if Windows 10 isn't fixed, Windows 7 is going back as my main OS.

All the best,

Mike

Subject: Re: New Windows 10 Warning
Posted by mikeaudet on Thu, 07 Jul 2016 17:38:39 GMT
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Just an update:

I just did a bunch of tests, and I can't reproduce the issue anymore.

I've been corresponding with Peter Brown at Microsoft, and he's offered to try to get someone at Microsoft to help, which is very cool!

He also said that it can take a day or more for Windows 10 to "settle."

I ran a utility called Latency Monitor, and if it's numbers are accurate, there is no significant latency at all in Windows 10's scheduler. It shows just a few microseconds from IRQ to process notification. It completely contradicts DPC Latency Checker.

I've been going over my code with a fine toothed comb and creating tests to try to find any kind of synchronization issue between the main loop than runs on the EDS card and the ASIO loop. Everything is in perfect sync.

Maybe an update did just need a couple of days to "settle." I have no idea. I'm going to try to look at the new memory compression feature to see if it could have been involved.

I've added an option to the ASIO driver control panel so that we can chose between using the IRQ and polling for buffer switches. Polling uses more CPU time, but it was working when using the IRQ wasn't working.

I'm at a loss.

All the best,

Mike

Subject: Re: New Windows 10 Warning
Posted by Micha on Sat, 30 Jul 2016 05:04:31 GMT
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ok good to know, so far I have tested Win 10 on a friends PC and i cant see the point in upgrading.

So far Win 7 was best!

Hahahahahah--- Time to Settle down. Allright.
