

Re: 70% CPU Usage Due to Hardware Interrupt Conflicts

Source:

<http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.general/2005-07/msg15359.html>

- *From:* "TZar" <TZar@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Fri, 29 Jul 2005 09:15:08 -0700
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Bert,

Here's a link to my latest reply:

<http://www.microsoft.com/windowsxp/expertzone/newsgroups/reader.msp?dg=microsoft.public.windowsxp.general&>

"Bert Kinney" wrote:

> Hi,
>
> I would suggest looking for updated usb drivers from Dell.
> <http://support.dell.com/support/downloads/index.aspx?c=us&cs=19&l=en&s=dhs>
>
> --
> Regards,
> Bert Kinney MS-MVP Shell/User
> <http://bertk.mvps.org>
>
>
> TZar wrote:
>> The short version:
>> My Dell Dimension 8250 with an "as shipped" configuration
>> has a Hardware Interrupt issue which constantly keeps the
>> CPU 70% utilized (as measured by Windows Task Manager)
>> even with no applications/processes actively utilizing
>> the CPU (also as measured by Windows Task Manager).
>> Device Manager shows no apparent hardware conflicts, but
>> a process management tool (Process Manager by
>> Sysinternals) shows that the 70% background CPU
>> utilization is caused by Hardware Interrupts. The
>> details on my devices and associated IRQs are listed
>> further down in this post. Can anyone advise as to how
>> to resolve the interrupt issue and free up the CPU?
>>
>> The Long Version:
>> For several weeks, I've been trying to debug an issue
>> with very slow system performance and constant high CPU
>> usage. I have tried everything from multiple anti-virus

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>> tools, multiple anti-adware tools, system restore, using
>> alternate hardware profiles to temporarily disable
>> potentially conflicting devices, MSconfig to temporarily
>> turn off non-essential services and applications, XP
>> recovery console, the MS User Profile Hive clean-up tool,
>> Dell Diagnostics, clearing NVRAM, XP repair install, and
>> eventually a full XP re-install. Nothing has corrected
>> the problem. Prior to the re-install, I was on Service
>> Pack 2 and was fully up to date with any XP updates.
>>
>> With this problem, Windows Task Manager shows conflicting
>> results. The overall CPU usage is always over 70% (as
>> reflected in the lower status bar, in the "Performance"
>> tab, and in the system tray icon of Task Manager),
>> however the at the same time Task Manager "Processes" tab
>> shows that the system is 99% idle (System Idle Process
>> for the CPU is 99%, with no other processes showing any
>> CPU usage over 1%).
>>
>> In addition to the CPU utilization issue, before the XP
>> reinstall, I also had a "blue screen"
>> Driver_IRQL_Not_Less_or_Equal stop error.
>>
>> I recently found a tool (Process Manager by Sysinternals)
>> which is similar to Windows Task Manager, which
>> identifies the hidden CPU usage. It identifies that the
>> 70% CPU usage is being consumed by Hardware Interrupts.
>>
>> To simplify the debugging, for the XP re-install, I
>> disconnected any peripherals (e.g. printer, DSL Modem,
>> wireless router) that did not come with the original
>> configuration. I also disconnected the Dazzle Mojave
>> device, but left the associated card in the slot. These
>> were part of a standard Dell "Movie Studio Premium"
>> package.
>>
>> After the re-install, although several devices share the
>> same IRQs, Device Manager shows no apparent hardware
>> conflicts (other than a missing driver for the Multimedia
>> controller resulting from having the Dazzle Mojave device
>> unplugged).
>>
>> I have a Dell Dimension 8250 with the following PCI
>> devices which could be causing the Hardware Interrupt
>> conflict:
>>
>> IRQ 10:
>> - Multimedia Controller (supporting the Mojave Dazzle
>> Device which came with the Dell "Movie Studio Premium"
>> package)
>>

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>> IRQ 11:
>> – Intel 82801BA/BAM SMBus Controller 2443
>>
>> IRQ 16:
>> – 64MB DDR NVidia GeForce4 MX 420 w/ TV Out (Dell)
>> – VIA USB 2.0 Enhanced Host Controller
>>
>> IRQ 17:
>> – Conexant HSF v.92 56 RTAD Speakerphone PCI Modem
>> – VIA Rev5 or later USB Universal Host Controller
>>
>> IRQ 18:
>> – Intel Pro/100M Network Connection
>> – Santa Cruz (Voyetra Turtle Beach sound card)
>> – VIA Rev5 or later USB Universal Host Controller
>> – VIA Rev5 or later USB Universal Host Controller
>>
>> IRQ 19:
>> – Texas Instruments OHCI Compliant IEEE 1394 Host
>> Controller (also supporting the Mojave Dazzle Device
>> which came with the "Movie Studio Premium" package)
>> – VIA Rev5 or later USB Universal Host Controller
>> – VIA USB 2.0 Enhanced Host Controller
>>
>> The entire configuration that I am working with for the
>> debugging is "as shipped" originally. The only exception
>> is that I unplugged the external Dazzle Mojave device
>> when doing the XP re-install, and tried to add it in
>> later. After the re-install, with the Dazzle Mojave
>> device disconnected, I got rid of the
>> Driver_IRQL_Not_Less_or_Equal stop error, but I still had
>> the CPU utilization issue. When I reconnected the Dazzle
>> Mojave device, I get a Driver_IRQL_Not_Less_or_Equal stop
>> error back. I also used the latest driver for this
>> device from the Dell website for the Movie Studio
>> package.
>>
>> I've used alternate hardware profiles to selectively
>> disable potentially offending devices through Device
>> Manager,. The only thing that stops the CPU consumption
>> is systematically disabling the USB Root Hubs first, and
>> then disabling the USB controllers. That stops the CPU
>> consumption; however it renders my USB ports inoperable,
>> and upon re-boot the system hangs.
>>
>> One final note: my BIOS is upgraded to the most recent
>> version. BIOS setup shows different IRQs for the PCI
>> devices than the IRQs shown in Device Manager.
>>
>> My gut tells me that the problem is with the components
>> of the Dell "Movie Studio Premium" package. I've

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>> systematically disabled, via Device Manager, all the
>> components associated with it but I still have the CPU
>> utilization issue. I will probably try to uninstall them
>> via Device Manager and/or try removing the card from the
>> slot next to see if that resolves it.
>>
>> Before taking this final step, any recommendations or
>> advice would be greatly appreciated. This debugging
>> process has been an excellent learning tool for me to
>> find obscure techniques in an attempt to resolve it, but
>> I'm ready for it to be over!!
>>
>> Any help would be greatly appreciated!
>>
>> Thanks!
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• **References:**

- ◆ **70% CPU Usage Due to Hardware Interrupt Conflicts**
 ◇ From: TZar
- ◆ **Re: 70% CPU Usage Due to Hardware Interrupt Conflicts**
 ◇ From: Bert Kinney

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