

Re: MSDN volatile sample

Source: <http://www.tech-archive.net/Archive/VC/microsoft.public.vc.language/2007-12/msg01039.html>

- *From:* "Alexander Grigoriev" <alegr@xxxxxxxxxxxxx>
 - *Date:* Fri, 28 Dec 2007 08:19:24 -0800
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The compiler is not allowed to optimize Sentinel check out of the loop, because it doesn't know if Sleep() could modify Sentinel. Whether with volatile or not. What volatile does in this sample is only guarantee that CriticalData modification is visible before Sentinel is set.

Anyway, the sample illustrates very poor synchronization practice which should not be followed. Proper signalling using events makes volatile qualifier unnecessary.

"George" <George@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:987FBEA6-277E-43F6-B45D-16FA4E6B4888@xxxxxxxxxxxxxxxxxxxxx

Thanks Alex,

1.

You are correct. Now I am confused about the MSDN sample. What is its purpose? Telling us we have to put volatile keyword to thread sharing data to make program function well as designed? In my past experience, I have never used volatile to all shared data between threads.

2.

Now I strongly suspect whether compiler will generate any wrong code -- functional wrong code. In MSDN sample, variable Sentinel is used to act as a shared variable between thread1 and thread2. Compiler should guarantee that both threads can read/write the correct value of Sentinel.

It seems that volatile will make wrong optimization to prevent thread1 from reading the most recent correct value set by thread2? I think it will bring high risks to careless developers, who does not know about volatile and forget to put it ahead of the variable, which will result in the wrong

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optimization of compiler.

What is your perspective on such optimization?

regards,
George

"Alex Blekhman" wrote:

"George" wrote:

Could you provide a link to your quoted Sleep method
description
please?

I am reading from,

[http://msdn2.microsoft.com/en-us/library/d00bd51t\(VS.80\).aspx](http://msdn2.microsoft.com/en-us/library/d00bd51t(VS.80).aspx)

not the same as you quoted.

You're reading in the wrong place. Didn't you noticed that this
page belongs to .NET framework documentation? It has nothing to do
with Win32 API function `Sleep`.

"Sleep"
[http://msdn2.microsoft.com/en-us/library/ms686298\(VS.85\).aspx](http://msdn2.microsoft.com/en-us/library/ms686298(VS.85).aspx)

Alex