

Re: Multithread safety

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.win32.programmer.networks/2005-11/msg00236>

- *From:* "Alun Jones" <alun@xxxxxxxxxxxxxx>
 - *Date:* Mon, 14 Nov 2005 20:00:00 -0800
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Eugene Gershnik wrote:

> Nathan Evans wrote:

>> You got me quite worried then :-)

>

> Well given m's point and thinking some more I will have to go back to my
> original statement. You must synchronize calls to WSARcv in one way or
> another. Otherwise it is impossible to correctly reassemble read results
> after completion notification. Same story (streams are not thread safe)
> but with a different twist.

Sort of.

If your protocol is TCP, then yes, you need to reassemble the read results.

If your protocol is UDP, then it depends on the protocol at the next layer up, as to whether you need to assemble anything.

TCP is, by its nature, a serial protocol per-socket – as such, it makes very little sense to consider multiple threads reading from the same socket at the same time. Multiple threads writing to the same socket – now that is something that might make sense, but there are some caveats there. You should generally use a mutex to prevent two writes on the same socket from interfering.

This is true even for an overlapped socket, because the WSASend() calls might find their data is interleaved.

I know, not what you wanted to hear – you wanted to hear that Microsoft had done this work for you. Sadly, no.

Alun.

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[Please don't email posters, if a Usenet response is appropriate.]

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- *Follow-Ups:*
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- *References:*
  - ◆ **Multithread safety**
    - ◇ *From:* Mike Gleason Jr Couturier
  - ◆ **Re: Multithread safety**
    - ◇ *From:* Eugene Gershnik
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