

Re: Receive no data

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.win32.programmer.networks/2007-12/msg00073>

- *From:* "Roger Hunen" <rhunen@xxxxxxxx>
 - *Date:* Thu, 6 Dec 2007 12:38:13 +0100
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"Volodymyr Shcherbyna" <v_scherbina@xxxxxxxxxxxxxxxx> wrote...

You should erase this line from your code:

```
err = shutdown(sockfd, SD_SEND);
```

There is absolutely nothing wrong with this. It is a best practice to shutdown a socket for sending once all data has been sent. The code follows this best practice perfectly.

Nit pick: in order to also shutdown the receive direction cleanly, a "shutdown(sockfd, SD_RECEIVE);" should be inserted before closesocket();

"mmlab_js" <mmlabjs@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote...

I write a web client which downloads a specific file from specific web server. The link of code is here: [\[http://src.wtgstudio.com/?Ydw5Nc#\]](http://src.wtgstudio.com/?Ydw5Nc#)
I try to download this file
["http://mail.google.com/mail/help/images/logo.gif](http://mail.google.com/mail/help/images/logo.gif) by command: [Download <http://mail.google.com/mail/help/images/logo.gif>].
After sending GET request, I check the return value of function recv and find the value is 0.

I see multiple recv() statements in the code (lines 117 and 146). It is unclear which one returns 0. I assume it is the one on line 117.

The recv() on line 117 may return 0 bytes. This is a normal case which may arise due to various circumstances. 0 bytes does not mean "no data sent". It means "no data available at this time, but there was a reason to return". This case is not handled by the code.

When debugging the code, timing will be totally different. By the time the recv() call at line 117 is executed in debug mode, data will be available and is returned.

The receive data processing in the code is a typical example of misunderstanding winsock TCP sockets. There is an invalid implicit assumption that all headers will be delivered by the first recv() call and that the data is delivered by the second

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recv() call.

There is no guarantee that this happens. Each recv() call may return an arbitrary amount of data (up to the specified buffer size) which is unrelated to the chunks in which the data is sent.

TCP is a byte stream protocol with no message boundaries!! Never ever forget this.

The correct way to do this:

- send the request //OK
- shutdown the socket for send //OK
- receive all data in a single recv() loop and process the incoming data a stream in accordance with the HTTP protocol semantics
- shutdown the socket for receive
- close the socket

Regards,

-Roger

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