

Re: Should a socket client detect loss of network connection

Source:

<http://www.tech-archive.net/Archive/Development/microsoft.public.win32.programmer.networks/2007-04/msg00089>

- *From:* "Alexander Nickolov" <agnickolov@xxxxxxxx>
 - *Date:* Tue, 10 Apr 2007 11:31:37 -0700
-

The following is what RFC 1122 has to say on the subject:

4.2.3.6 TCP Keep-Alives

Implementors MAY include "keep-alives" in their TCP implementations, although this practice is not universally accepted. If keep-alives are included, the application MUST be able to turn them on or off for each TCP connection, and they MUST default to off.

Keep-alive packets MUST only be sent when no data or acknowledgement packets have been received for the connection within an interval. This interval MUST be configurable and MUST default to no less than two hours.

It is extremely important to remember that ACK segments that contain no data are not reliably transmitted by TCP. Consequently, if a keep-alive mechanism is implemented it MUST NOT interpret failure to respond to any specific probe as a dead connection.

An implementation SHOULD send a keep-alive segment with no data; however, it MAY be configurable to send a keep-alive segment containing one garbage octet, for compatibility with erroneous TCP implementations.

Microsoft's implementation certainly conforms.

TCP keep-alives are certainly not good enough for maintaining bindings at NAT routers.

=====
Alexander Nickolov
Microsoft MVP [VC], MCSD
email: agnickolov@xxxxxxxx
MVP VC FAQ: <http://vcfaq.mvps.org>

Re: Should a socket client detect loss of network connection

=====
"Roger Hunen" <rhunen@xxxxxxxx> wrote in message
news:461bd016\$0\$323\$e4fe514c@xxxxxxxxxxxxxxxxxxxxx

"Alexander Nickolov" <agnickolov@xxxxxxx> wrotel...

That "apart from" statement answers your question. It's the only way.

setsockopt (...., SO_KEEPALIVE,) looks like that other way to me.

The only problem with SO_KEEPALIVE is that the Windows default keepalive timeout is very long (2 hours) and that you cannot set this timeout at the socket level (it is a system wide registry setting).

Regards,

–Roger

--

E–mail: rhunen@xxxxxxxx

Home: <http://www.xs4all.nl/~rhunen>

ADSL: <http://adsl.hunen.net>

"Angus" <nospam@xxxxxxxx> wrote in message
news:ewX3O44eHHA.4136@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Thank you, I have checked with the client and it is a router causing this problem. So what you suggest sounds like the easiest solution.

It would be most convenient if the client could 'detect' that the connection 'session' was no longer valid. Is there any way of checking this apart from sending data to the server? I assume not.

Angus

"Alexander Nickolov" <agnickolov@xxxxxxx> wrote in message
news:uXVPrbseHHA.5052@xxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Re: Should a socket client detect loss of network connection

Sounds like a NAT router in between dropping its TCP bindings for your connection due to inactivity. You must include some sort of keep-alive mechanism in your protocol in case of regular data inactivity, otherwise you are subject to the NAT router issue. BTW, before you ask there's no standard threshold when a NAT router considers a TCP connection inactive. Personally I wouldn't trust a connection with 5 minutes inactivity alive through a NAT router.

--

=====
Alexander Nickolov
Microsoft MVP [VC], MCSD
email: agnickolov@xxxxxxx
MVP VC FAQ: <http://vcfaq.mvps.org>
=====

"Angus" <nospam@xxxxxxx> wrote in message
<news:uicy3KseHHA.5056@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>

Hello

I have written a socket client and a server. When I test on my test system it seems to work fine. But a user has reported that if they leave the system running with no activity for over an hour then the server stops sending data to the client.

I have setup on a test system on different computers and I don't see

this

problem after one hour.
Most of the activity is server

Re: Should a socket client detect loss of network connection

to client.

So in my testing I tried taking the ethernet cable out of the server

PC.

Neither my server or client seemed to detect this.

Should they be

able

to?

If so how?

Has anyone seen this type of problem? Any ideas on how

to

troubleshoot

it

and resolve? It is only a problem apparently after a long period of inactivity. If there is data sent from server to client within a reasonable period there is no problem. I think if the user goes to lunch (or away for a period) then the way the system works there would be no data from the server. If they get back after an hour or so then they need to

re-connect

from client to see any further data communication.

Angus

Re: Should a socket client detect loss of network connection