

## Backport186 - Backport #670

### select doesn't handle fd's > FD\_SETSIZE very well

10/21/2008 08:01 AM - rogerdpack (Roger Pack)

<b>Status:</b>	Rejected	
<b>Priority:</b>	Normal	
<b>Assignee:</b>	usa (Usaku NAKAMURA)	
<b>Description</b>		
=begin The main motivation for reporting this bug is that currently on win32 [any version] if you try to pass more than 64 sockets to select, it ignores the 65th onward. This limit is not obeyed by Ruby currently and therefore some sockets will never select.  I'd first suggest raising an error if more than 64 total sockets are passed [to the most recent thread that called select?]  While examining it, this same aspect [too many or too high of numbered selects] is also seen to cause some problems on other platforms.  In the test cases attached, sometimes Mac OS X consistently crashes, sometimes Linux does. Depends on the test.  I'd bet that these problems also continue for Ruby 1.9 as well.  How to run tests: first touch file 'abc' # used for some tests then run ulimit -n 2000 # if this fails, you may need to run "sudo bash" first then run the files.  To ruby's credit, without having first run the ulimit, above, most platforms don't seg fault [though windows still has the difficulty mentioned], so this isn't life critical.  Note that in Linux/OS X if a file descriptor's "number" is > FD_SETSIZE then it will be ignored by select. In Windows if the "total number of descriptors" past to select is > FD_SETSIZE then those past FD_SETSIZE will be ignored.  Thanks much! -=Roger =end		
<b>Related issues:</b>		
Related to Ruby master - Bug #755: select in windows errantly accepts too man...	<b>Closed</b>	<b>11/16/2008</b> <b>12/24/2008</b>

### History

#### #1 - 12/27/2008 03:28 AM - rogerdpack (Roger Pack)

=begin  
<http://redmine.ruby-lang.org/issues/show/755> patch helps with the 'hangs\_windows' test case.  
=end

#### #2 - 02/03/2009 11:44 AM - shyouhei (Shyouhei Urabe)

- Assignee set to usa (Usaku NAKAMURA)

=begin

=end

#### #3 - 02/27/2009 09:01 PM - usa (Usaku NAKAMURA)

- Priority changed from Normal to 3

- ruby -v set to -

=begin

When the patch is applied, every select call uses the stack by 112KB (about 1.8KB at present).  
And, if you pass 4097 sockets to select, the same problem occurs again.  
So this approach is not preferable.

In 1.9, this problem has already been solved, because we didn't have to consider the binary level compatibility. But in 1.8, we should give priority to maintenance of compatibility more than such a rare case.

Of course, it is necessary to correct this problem if we can.  
I leave this problem as Open until another effective ideas arise.  
=end

#### #4 - 02/28/2009 01:00 AM - rogerdpack (Roger Pack)

=begin  
Two things come to mind, if 4096 is not an acceptable option :)  
1) check for fd number count before doing a select. If it's > FD\_SETSIZE raise error.  
2) A compromise, ex: setting FD\_SETSIZE to 512, since that's the limit of MSVCRT 6, which is used by 99% of 1.8.x compilers. I put 4096 as a conservative number.

Thanks for looking into this.

--r  
=end

#### #5 - 07/07/2009 10:51 AM - usa (Usaku NAKAMURA)

- Status changed from Open to Assigned

=begin  
=end

#### #6 - 10/06/2009 08:58 AM - rogerdpack (Roger Pack)

=begin  
Would it be possible to at least set FD\_SETSIZE to 256 so that it works with VC6/mingw (which is 99% of ruby on windows distros)?

That would be good--currently there it is hard for extensions to use select correctly because they overflow the FD set and cannot reset it because it is hard compiled to too small on windows.

Thanks!

-r  
=end

#### #7 - 02/08/2010 11:13 PM - rogerdpack (Roger Pack)

- File socket.diff added

=begin  
Attaching new patch that has a smaller FD\_SETSIZE, with test (fails without FD\_SETSIZE, succeeds with).  
Possible to commit this one, perhaps?

-r  
=end

#### #8 - 04/23/2010 04:13 AM - rogerdpack (Roger Pack)

=begin  
Another option might be something like the following (any feedback?)  
Thanks!

Index: win32/win32.h

```
=====
--- win32/win32.h (revision 26621)
+++ win32/win32.h (working copy)
@@ -23,6 +23,9 @@
#ifdef BORLANDC
#define USE_WINSOCK2
#endif
+#ifndef FD_SETSIZE
+#if defined MINGW32
+# define FD_SETSIZE 256 // larger default for msvcrt 6
+#endif
+#endif
#ifdef USE_WINSOCK2
#include
#include
=
```

**#9 - 10/21/2017 10:32 AM - usa (Usaku NAKAMURA)**

- *ruby -v deleted (-)*
- *Status changed from Assigned to Rejected*
- *Description updated*
- *Project changed from Ruby 1.8 to Backport186*
- *Tracker changed from Bug to Backport*

1.8.6 is out of date

**Files**

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test_crashes_os_x.rb	1020 Bytes	10/21/2008	rogerdpack (Roger Pack)
test_select_crashes_linux.rb	1003 Bytes	10/21/2008	rogerdpack (Roger Pack)
test_select_hangs_on_linux.rb	998 Bytes	10/21/2008	rogerdpack (Roger Pack)
test_select_hangs_windows.rb	1017 Bytes	10/21/2008	rogerdpack (Roger Pack)
socket.diff	1.86 KB	02/08/2010	rogerdpack (Roger Pack)