### Ruby master - Bug #4934

**winsock listen backlog may only be set once, and is set to 5**

06/27/2011 07:19 AM - ghazel (Greg Hazel)

<table>
<thead>
<tr>
<th>Status</th>
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<tbody>
<tr>
<td>Priority</td>
<td>Normal</td>
</tr>
<tr>
<td>Assignee</td>
<td>akr (Akira Tanaka)</td>
</tr>
<tr>
<td>Target version</td>
<td>2.0.0</td>
</tr>
<tr>
<td>ruby -v:</td>
<td>-</td>
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**Description**

This is commonly observed as a bug in Windows servers, where under light load clients begin to get ECONNREFUSED. This occurs even if the listen backlog is set to a high value, like 1024. The bug is that Ruby sets the value to 5 on creation of a TCPServer socket, and it is not valid in Winsock to set the listen backlog size a second time.


"If the listen function is called on an already listening socket, it will return success without changing the value for the backlog parameter."

Here's where ruby sets it:


So one of two things needs to happen. Either:

- on WIN32 Ruby should avoid setting the listen backlog by default, which would allow the user to choose the value but could conceivably break applications where being lazy and not setting it at all
- on WIN32 and maybe all platforms, Ruby should set the default listen backlog to SOMAXCONN (or something large) instead of 5. This will not break any existing code today, as an overly high listen backlog is not really a problem.

Other default listen backlog values of servers:

- Mongrel tries to use 1024 (but silently fails on Windows because of this bug): [https://github.com/mongrel/mongrel/blob/74290abc9ebd287542b2dcd0133fa41d33e5177b/lib/mongrel/tcphack.rb#L13](https://github.com/mongrel/mongrel/blob/74290abc9ebd287542b2dcd0133fa41d33e5177b/lib/mongrel/tcphack.rb#L13)
- Unicorn uses 1024: [https://github.com/defunkt/unicorn/blob/b3b6b0df5f19f8a22a96525bba22b061d03c3fc5/lib/unicorn/socket_helper.rb#L27](https://github.com/defunkt/unicorn/blob/b3b6b0df5f19f8a22a96525bba22b061d03c3fc5/lib/unicorn/socket_helper.rb#L27)
- Tornado uses 128: [https://github.com/facebook/tornado/blob/9d1a05323f9a7941e2336ce50972de65e18bddd/tornado/httpserver.py#L214](https://github.com/facebook/tornado/blob/9d1a05323f9a7941e2336ce50972de65e18bddd/tornado/httpserver.py#L214)

**Related issues:**

- Has duplicate Ruby 1.8 - Bug #4933: winsock listen backlog may only be set on... [Closed 06/27/2011](http://svn.ruby-lang.org/cgi-bin/viewvc.cgi/trunk/win32/win32.c?view=markup&pathrev=27529#l3365)

### History

#### #1 - 06/27/2011 07:22 AM - ghazel (Greg Hazel)

Also set on win32 in ruby for socketpair here:


#### #2 - 06/27/2011 07:53 AM - ghazel (Greg Hazel)

- File listen_backlog_increase.patch added

Here is a patch to set the default value to 1024.

#### #3 - 07/25/2011 08:03 PM - usa (Usaku NAKAMURA)

- Category set to ext
- Status changed from Open to Assigned
- Assignee set to akr (Akira Tanaka)
- Target version set to 2.0.0

About the socketpair implementation of ruby on windows, I reject your patch.
It accepts only one connection internally, so there is no need to expand the backlog.

About default value of TCPServer#initialize, I have no opinion. akr-san, how do you think about this?

#4 - 07/25/2011 09:29 PM - akr (Akira Tanaka)
- ruby -v changed from ruby 1.9.3dev (2011-06-17 trunk 32136) [i386-mingw32] to -

2011/7/25 Usaku NAKAMURA redmine@ruby-lang.org:

    About default value of TCPServer#initialize, I have no opinion. akr-san, how do you think about this?

    I feel we can challenge SOMAXCONN for trunk (but not for 1.9.3).

    Tanaka Akira

#5 - 11/01/2011 08:58 PM - akr (Akira Tanaka)
- Status changed from Assigned to Closed

Files

<table>
<thead>
<tr>
<th>File</th>
<th>Size</th>
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<th>Author</th>
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<tr>
<td>listen_backlog_increase.patch</td>
<td>780 Bytes</td>
<td>06/27/2011</td>
<td>ghazel (Greg Hazel)</td>
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