

## Ruby trunk - Bug #13107

### def\_delegators causes random errors in MRI 2.4.0

01/05/2017 07:34 PM - twalpole@gmail.com (Thomas Walpole)

<b>Status:</b>	Closed	
<b>Priority:</b>	Normal	
<b>Assignee:</b>		
<b>Target version:</b>		
<b>ruby -v:</b>		<b>Backport:</b> 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: DONE

#### Description

In the Capybara project we use the rack\_test gem which uses def\_delegators to forward last\_reponse to @rack\_mock\_session - <https://github.com/brynary/rack-test/blob/master/lib/rack/test.rb#L29>

When running the Capybara test suite calling last\_reponse on a rack\_test Session object will sporadically result in a TypeError from forwardable.rb

```
TypeError:
  wrong argument type Integer (expected Proc)
```

Patching around the delegator with

```
class Rack::Test::Session
  def last_response
    @rack_mock_session.last_response
  end
end
```

stops the error from occurring, so it appears that something def\_delegators is doing is causing problems. Unfortunately I have not yet been able to establish exactly what causes the issues to produce a simple test case.

#### Associated revisions

##### Revision ff3496b0 - 01/09/2017 02:55 AM - nobu (Nobuyoshi Nakada)

vm\_inshelper.c: block argument at tailcall

- vm\_inshelper.c (vm\_call\_iseq\_setup\_tailcall): check interrupts after set up the new frame, not the passed block to be clobbered by invoked finalizers and so on. [ruby-core:78981] [Bug #13107]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@57293 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

##### Revision 57293 - 01/09/2017 02:55 AM - nobu (Nobuyoshi Nakada)

vm\_inshelper.c: block argument at tailcall

- vm\_inshelper.c (vm\_call\_iseq\_setup\_tailcall): check interrupts after set up the new frame, not the passed block to be clobbered by invoked finalizers and so on. [ruby-core:78981] [Bug #13107]

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##### Revision 66487605 - 03/11/2017 04:24 PM - naruse (Yui NARUSE)

merge revision(s) 57293: [Backport #13107]

```
vm_inshelper.c: block argument at tailcall
```

```
* vm_inshelper.c (vm_call_iseq_setup_tailcall): check interrupts
after set up the new frame, not the passed block to be clobbered
by invoked finalizers and so on. [ruby-core:78981] [Bug #13107]
```

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby\_2\_4@57853 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

### Revision 57853 - 03/11/2017 04:24 PM - naruse (Yui NARUSE)

merge revision(s) 57293: [Backport #13107]

```
vm_inshelper.c: block argument at tailcall
```

```
* vm_inshelper.c (vm_call_iseq_setup_tailcall): check interrupts
after set up the new frame, not the passed block to be clobbered
by invoked finalizers and so on. [ruby-core:78981] [Bug #13107]
```

## History

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### #1 - 01/05/2017 08:59 PM - twalpole@gmail.com (Thomas Walpole)

Forgot to add the location reported for the error

```
/home/travis/.rvm/rubies/ruby-2.4.0/lib/ruby/2.4.0/forwardable.rb:228:in `last_response'
```

### #2 - 01/08/2017 02:11 AM - eugeneius (Eugene Kenny)

- File 0001-forwardable.rb-use-public\_send-to-call-method.patch added

The mongo gem is also affected by this bug (<https://jira.mongodb.org/browse/RUBY-1191>). Running the tests in the spec/mongo/grid/stream/read\_spec.rb file reliably reproduces it.

I bisected the changes to forwardable.rb between v2.3.0 and v2.4.0, and determined that the bug was introduced in r55376.

I've attached a patch that fixes the problem, although it effectively reverts the optimisation from r55376, so there may be a performance impact.

### #3 - 01/08/2017 02:34 AM - eugeneius (Eugene Kenny)

- File 0001-forwardable-impl.rb-include-trace-instruction.patch added

Here's another patch that also fixes the problem, while keeping the optimisation from r55376.

I'll admit that I have no idea what this option does or how it could cause this bug - I noticed that the "portable" implementation of forwardable/impl.rb wasn't affected, and fiddled with the MRI-specific one until it worked. Please review this patch carefully if you intend to use it!

Removing tailcall\_optimization also appears to work, although I think we need that option to get a sensible stack trace. Maybe trace\_instruction: false, tailcall\_optimization: true is an invalid combination?

### #4 - 01/09/2017 12:32 AM - nobu (Nobuyoshi Nakada)

- Status changed from Open to Feedback

Enabling trace instruction disables tail call optimization, too.  
It seems like a bug of the optimization and GC.  
How can I reproduce it briefly?

### #5 - 01/09/2017 12:34 AM - nobu (Nobuyoshi Nakada)

- Description updated

### #6 - 01/09/2017 02:55 AM - nobu (Nobuyoshi Nakada)

- Status changed from Feedback to Closed

Applied in changeset r57293.

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```
vm_inshelper.c: block argument at tailcall
```

- vm\_inshelper.c (vm\_call\_iseq\_setup\_tailcall): check interrupts after set up the new frame, not the passed block to be clobbered by invoked finalizers and so on. [ruby-core:78981] [Bug [#13107](#)]

**#7 - 01/09/2017 03:01 AM - nobu (Nobuyoshi Nakada)**

When interrupted by a finalizer during setting up tailcall frame, a block argument on the stack was overwritten by the magic number in the finalizer frame which looks an Integer.

I tried in vain to make a test case, but a failure in mongo-ruby-driver seems fixed. Could you try the latest trunk?

**#8 - 01/09/2017 09:47 PM - twalpole@gmail.com (Thomas Walpole)**

This appears to be fixed in latest trunk now. Is there any info on when a 2.4.1 will be released - seems like a pretty serious issue.

**#9 - 01/17/2017 02:26 PM - vo.x (Vit Ondruch)**

- Backport changed from 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: UNKNOWN to 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: REQUIRED

**#10 - 01/18/2017 09:13 AM - vo.x (Vit Ondruch)**

Just FTR, this is causing failures in Mongo gem test suite [1]. Applying this patch fixed the issues.

[1] <https://jira.mongodb.org/browse/RUBY-1194>

**#11 - 01/18/2017 09:15 AM - vo.x (Vit Ondruch)**

And I can confirm that also rack-test test suite is passing with this patch [1].

[1] <https://apps.fedoraproject.org/koschei/package/rubygem-rack-test?collection=f26>

**#12 - 03/11/2017 04:24 PM - naruse (Yui NARUSE)**

- Backport changed from 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: REQUIRED to 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: DONE

ruby\_2\_4\_r57853 merged revision(s) 57293.

**#13 - 03/17/2017 03:25 PM - Benoit\_Tigeot (Benoit Tigeot)**

[twalpole@gmail.com](mailto:twalpole@gmail.com) (Thomas Walpole) wrote:

This appears to be fixed in latest trunk now. Is there any info on when a 2.4.1 will be released - seems like a pretty serious issue.

I am in the same situation actually. Locked because of this issue. Any idea when 2.4.1 will be released?

**Files**

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0001-forwardable.rb-use-public_send-to-call-method.patch	789 Bytes	01/08/2017	eugeneius (Eugene Kenny)
0001-forwardable-impl.rb-include-trace-instruction.patch	773 Bytes	01/08/2017	eugeneius (Eugene Kenny)