

## Ruby trunk - Bug #5828

### Non anonymous classes can't be frozen, cloned and then inspected

12/31/2011 10:06 AM - agrimm (Andrew Grimm)

<b>Status:</b> Closed	
<b>Priority:</b> Normal	
<b>Assignee:</b> akr (Akira Tanaka)	
<b>Target version:</b>	
<b>ruby -v:</b> ruby 2.0.0dev (2011-11-27 trunk 33860) [x86_64-darwin10.8.0]	<b>Backport:</b>
<b>Description</b>	
<p>=begin If you assign a class to a constant (that is, it isn't anonymous), and you freeze it and then clone it, you can't call to_s on it.</p> <pre>MyClass = Class.new ; MyClass.freeze.clone.to_s RuntimeError: can't modify frozen Class   from (irb):1:in `to_s'   from (irb):1   from /Users/agrimm/.rvm/rubies/ruby-head/bin/irb:16:in `&lt;main&gt;'  MyConstantObject = Object.new ; MyConstantObject.freeze.clone.to_s # =&gt; "#&lt;Object:0x00000100884d60&gt;" MyClass_2 = Class.new ; MyClass_2.clone.to_s # =&gt; "#&lt;Class:0x00000100872930&gt;" MyClass_3 = Class.new ; MyClass_3.freeze.to_s # =&gt; "MyClass_3" MyClass_4 = Class.new.freeze ; MyClass_4.clone.to_s # =&gt; "#&lt;Class:0x0000010088d4d8&gt;" MyClass_5 = Class.new.freeze ; MyClass_5.freeze.clone.to_s # =&gt; An exception local_variable_class = Class.new ; local_variable_class.freeze.clone.to_s # =&gt; "#&lt;Class:0x00000100964028&gt;"</pre> <p>Presumably this is caused by class only determining whether it's assigned to a constant when it's first inspected.</p> <p>I don't have a use case for freezing and cloning a class.</p> <p>=end</p>	

#### Associated revisions

##### Revision 4169440f - 06/07/2014 02:41 AM - akr (Akira Tanaka)

- object.c (rb\_mod\_initialize\_clone): Override Kernel#initialize\_clone to avoid an exception on Class.new.freeze.clone.to\_s. Reported by Andrew Grimm. [ruby-core:41858] [Bug #5828]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@46370 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

##### Revision 46370 - 06/07/2014 02:41 AM - akr (Akira Tanaka)

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##### Revision 46370 - 06/07/2014 02:41 AM - akr (Akira Tanaka)

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## History

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**#1 - 03/11/2012 05:12 PM - ko1 (Koichi Sasada)**

- Assignee set to akr (Akira Tanaka)

Tanaka-san says he found the reason of this issue.

**#2 - 03/18/2012 06:46 PM - shyouhei (Shyouhei Urabe)**

- Status changed from Open to Assigned

**#3 - 05/06/2014 01:50 PM - akr (Akira Tanaka)**

- Status changed from Assigned to Feedback

The name of anonymous class is searched and cached when it is first inspected.  
The cache is implemented as a hidden instance variable of the class.  
If the class is frozen, the cache is failed as the exception because the instance variable is not assignable.

Note that Class.new.freeze.to\_s doesn't raise the exception.  
This is because Kernel#freeze is redefined by Module#freeze and it caches the class name before freezing.

Kernel#clone is not redefined.  
So there is not such trick to avoid the exception.

I'm not sure that it is worth to fix this problem.

**#4 - 05/06/2014 11:01 PM - agrimm (Andrew Grimm)**

I'm happy for this bug to be closed, as I don't have a need to freeze and clone a class.

**#5 - 06/07/2014 02:41 AM - akr (Akira Tanaka)**

- Status changed from Feedback to Closed

- % Done changed from 0 to 100

Applied in changeset [r46370](#).

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**#6 - 06/07/2014 02:49 AM - akr (Akira Tanaka)**

I decided to fix this problem because to\_s method is useful for debugging and exception on to\_s can be irritating.