

## Ruby master - Bug #7958

### include FileUtils::Verbose gives NoMethodError when installing files with a different mode

02/26/2013 04:05 AM - drbrain (Eric Hodel)

<b>Status:</b> Closed	
<b>Priority:</b> Normal	
<b>Assignee:</b> drbrain (Eric Hodel)	
<b>Target version:</b> 2.1.0	
<b>ruby -v:</b> ruby 2.1.0dev (2013-02-26 trunk 39490) [x86_64-darwin12.2.1]	<b>Backport:</b>
<b>Description</b> =begin Seems like (({fu_stream_blksize})) isn't included when (({FileUtils::Verbose})) is. Changing to plain FileUtils works, though.  \$ cat test.rb require 'fileutils' require 'tmpdir'  include FileUtils::Verbose  Dir.mktmpdir 'test' do  dir  install <b>FILE</b> , dir, mode: 0600 install <b>FILE</b> , dir, mode: 0640 end  \$ ~/.rubies/trunk/bin/ruby -v test.rb ruby 2.1.0dev (2013-02-26 trunk 39490) [x86_64-darwin12.2.1] install -c -m 0600 test.rb /var/folders/87/twjsm89x01161gp5d9qwlx2m0000gn/T/test20130225-53176-197q6me install -c -m 0640 test.rb /var/folders/87/twjsm89x01161gp5d9qwlx2m0000gn/T/test20130225-53176-197q6me /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:898:in compare_stream': undefined methodfu_stream_blksize' for main:Object (NoMethodError) from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:882:in block (2 levels) in compare_file' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:881:inopen' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:881:in block in compare_file' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:880:inopen' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:880:in compare_file' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:926:inblock in install' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:1620:in block in fu_each_src_dest' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:1633:infu_each_src_dest0' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:1618:in fu_each_src_dest' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:925:ininstall' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/fileutils.rb:137:in install' from test.rb:8:inblock in ' from /Users/drbrain/.rubies/trunk/lib/ruby/2.1.0/tmpdir.rb:88:in mktmpdir' from test.rb:6:in' =end	
<b>Related issues:</b>	
Related to Ruby master - Feature #4970: FileUtils refactored	<b>Closed</b> <b>07/04/2011</b>
Related to Backport200 - Backport #7992: Backport r39544 - Fixes FileUtils bu...	<b>Closed</b> <b>03/01/2013</b>

#### Associated revisions

Revision 874f8c04 - 03/01/2013 02:09 AM - drbrain (Eric Hodel)

- lib/fileutils.rb: Revert r34669 which altered the way metaprogramming in FileUtils occurred. [ruby-trunk - Bug #7958]
- test/fileutils/visibility\_tests.rb: Refactored tests of FileUtils options modules to expose bug found in #7958

- test/fileutils/test\_dryrun.rb: ditto.
- test/fileutils/test\_nowrite.rb: ditto.
- test/fileutils/test\_verbose.rb: ditto.

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@39544 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

**Revision 39544 - 03/01/2013 02:09 AM - drbrain (Eric Hodel)**

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#### Revision a5d40b28 - 04/11/2013 05:00 PM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 39544,39546: [Backport #7992]

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git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby\_2\_0\_0@40251 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

## History

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### #1 - 02/26/2013 08:28 AM - ko1 (Koichi Sasada)

- Assignee set to nobu (Nobuyoshi Nakada)
- Target version set to 2.1.0

### #2 - 02/26/2013 10:24 AM - drbrain (Eric Hodel)

- File fileutils.rb.verbose\_install\_fix.patch added

This patch fixes it, but I'm unsure how to test it.

It seems this was broken by r34669.

### #3 - 02/26/2013 09:44 PM - trans (Thomas Sawyer)

=begin  
It's b/c of Module Inclusion Problem. StreamUtils\_ is included into FileUtils and FileUtils is included in FileUtils::Verbose. So one would expect it to work, but b/c the later include is done first, StreamUtils\_ only actually makes it as far as FileUtils.

The simplest solution is probably to move lines 90-125 from the top of the file to the bottom. But that's unfortunate b/c it would make the code less readable.

Eric's patch can work but it might need to add extend StreamUtils\_ as well, in order to fully work.

Taking a moment to think about this more in depth, it becomes clear this will be a problem if anyone ever wants to extend FileUtils with some other module (for whatever reason). So perhaps a more robust solution would be to work around the module include problem altogether with an included callback, e.g.

```
module FileUtils
  def self.include(mod)
    Verbose.send(:include, mod)
    NoWrite.send(:include, mod)
    DryRun.send(:include, mod)

    # re-extend self
    extend self
    Verbose.send(:extend, Verbose)
    NoWrite.send(:extend, NoWrite)
    DryRun.send(:extend, DryRun)
  end
end
```

See any problems with that approach?

=end

### #4 - 02/27/2013 07:14 AM - drbrain (Eric Hodel)

- File fileutils.rb.verbose\_install\_fix.2.patch added

It appears that [#4970](#) is the culprit.

I think r34669 should be reverted. Trading one set of metaprogramming for another that requires extra patches seems dangerous.

I don't see how you could extend FileUtils with another module usefully. The existing modules are wrappers around adding default options.

### #5 - 02/27/2013 07:16 AM - tenderlovmaking (Aaron Patterson)

[drbrain \(Eric Hodel\)](#) it looks good to me!

### #6 - 02/27/2013 07:21 AM - drbrain (Eric Hodel)

- Assignee changed from nobu (Nobuyoshi Nakada) to drbrain (Eric Hodel)

As FileUtils has no maintainer, I will assign this to myself.

### #7 - 02/27/2013 08:46 AM - trans (Thomas Sawyer)

There are reasons for the changes and they are an improvement to code, reverting just because there is an issue that had to be ironed out is anathema to progress of the language.

### #8 - 03/01/2013 11:09 AM - drbrain (Eric Hodel)

- % Done changed from 0 to 100

- Status changed from Open to Closed

This issue was solved with changeset r39544.

Eric, thank you for reporting this issue.

Your contribution to Ruby is greatly appreciated.

May Ruby be with you.

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**#9 - 03/01/2013 11:16 AM - drbrain (Eric Hodel)**

There's no reason r34669 cannot be fixed and re-applied at a future date.

I cannot determine what user-facing feature r34669 added to FileUtils as `define_command` was private, so reverting it seemed to be the safest course of action to ensure that FileUtils will work in a future 2.0.0 patchlevel.

**#10 - 03/01/2013 05:29 PM - trans (Thomas Sawyer)**

- File *fileutils.patch* added

Here is a patch with the fix the r34669 code.

Sorry, I do not know what you mean by "I cannot determine what user-facing feature r34669 added to FileUtils as `define_command` was private".

If it helps to clarify, the `define_command "dsl"` method was added and `extend self` used instead of `module_function` to facilitate clean extension of FileUtils. The old code made doing so properly cumbersome.

The code passes all the tests, so I do not see why it would need to be reverted. In so far as the tests are lacking, we are never going to know until people put the code to use. Which would be preferable in the Ruby 2.0.0 preview releases rather than later on.

**#11 - 03/14/2013 02:36 AM - drbrain (Eric Hodel)**

Your patch is a band-aid, overriding `Module#extend` is not a good practice, so I can't apply it. The ruby standard libraries are a place to work with ruby, not around it.

This issue is closed.

Please create a new issue with a complete patch that can be evaluated. The goal of this issue is to fix RubyGems installation as quickly as possible as it affects many more people..

**#12 - 03/14/2013 03:55 AM - trans (Thomas Sawyer)**

It is not a band-aid. You are not even aware of the code enough to know it is not `#extend`, but `#include`. And it fits precisely to the design of FileUtils. FileUtils is included into `FileUtils::Verbose`, `FileUtils::NoWrite` and `FileUtils::DryRun`, therefore whenever a module is included into FileUtils, FileUtils must also be re-included into those sub-modules b/c of Ruby's well know Inclusion Problem. So it's not working around Ruby at all, but with the very facts of it's design.

I took the time and effort to understand how FileUtils works b/c I have written extensions for FileUtils and have learned the difficulties of doing so because of the old structure of the code. Which is why I took the time and effort to improve the API for the benefit of everyone in the future. You have swept in and summarily issued an edict to revert that work over a single very easily fixable issue, without the first clue of what's really going on with the code as a whole.

It's was clear from the beginning that you had no real interest in what's best for this code, or an appropriate dialog on how to properly address it. Your premature closure of the issue a deterrent to Ruby. (And for what I suspect to be purely personal and petty reasons, which is exceptionally shameful.) There is no point in a new issue for which I have already provided the solution. You will just ignore it or find another excuse to dismiss it as well, as you have demonstrated by never engaging in an earnest conversation about it to begin with.

**Files**

fileutils.rb.verbose_install_fix.patch	477 Bytes	02/26/2013	drbrain (Eric Hodel)
fileutils.rb.verbose_install_fix.2.patch	23.4 KB	02/27/2013	drbrain (Eric Hodel)
fileutils.patch	1.81 KB	03/01/2013	trans (Thomas Sawyer)