Ruby master - Bug #16904
rubygems: psych: superclass mismatch for class Mark (TypeError)
05/20/2020 02:09 PM - jaruga (Jun Aruga)

<table>
<thead>
<tr>
<th>Status:</th>
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<td>Priority:</td>
<td>Normal</td>
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<tr>
<td>Assignee:</td>
<td>hsbt (Hiroshi SHIBATA)</td>
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<td>Target version:</td>
<td>ruby -v:</td>
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<td>Backport:</td>
<td>2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: DONE</td>
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Description
Is it possible to backport the following commits into Ruby?

Remove explicit psych activation
https://github.com/rubygems/rubygems/commit/1ccf0912a161d20e0c4a7b139fd76e8739a411ba

bundler: Remove explicit psych activation.
https://github.com/rubygems/rubygems/commit/88478bb56945ffa9868491cadc0bc74d79d73c848

It causes the following kind of error when psych is installed as not default gem but regular gem. It's a Fedora Ruby specific case. **This is not the case of Ruby built from source normally.**

```ruby
$ cat test.rb
require 'psych'
Gem.load_yaml # <= The error happens.

$ ruby test.rb
/usr/lib64/gems/ruby/psych-3.1.0/psych.so: warning: already initialized constant Psych::Parser::ANY
.../
/usr/share/gems/gems/psych-3.1.0/lib/psych/parser.rb:34:in `<class:Parser>': superclass mismatch for class Mark (TypeError)
```

It is possibly also related to https://github.com/ruby/psych/issues/386.

Thank you.

History

#1 - 05/20/2020 06:04 PM - jaruga (Jun Aruga)
The error does not happen in Ruby 2.6.
So, it's great if it is backported to Ruby 2.7.

#2 - 05/21/2020 02:26 AM - nobu (Nobuyoshi Nakada)
I can't see that error in 2.7 too.

```ruby
$ for ruby in ruby2.0..7; do $ruby -rpsych -e 'p [RUBY_VERSION, Gem.load_yaml, Psych::VERSION]'; done
"["2.0.0", true, "2.0.0"]"
["2.1.9", true, "2.0.5"]
["2.2.10", true, "2.0.8"]
["2.3.8", true, "2.1.0"]
["2.4.10", true, "2.2.2"]
["2.5.8", true, "3.0.2"]
["2.6.6", true, "3.1.0"]
["2.7.1", true, "3.1.0"]
```

#3 - 05/21/2020 02:36 AM - nobu (Nobuyoshi Nakada)
After installing psych 3.1.0, no error found.
What's wrong in Fedora?

```ruby
$ for ruby in ruby2.2..7; do $ruby -rpsych -e 'p [RUBY_VERSION, Gem.load_yaml, Psych::VERSION]'; done
["2.2.10", true, "3.1.0"]
["2.3.8", true, "3.1.0"]
```
What is wrong with Ruby?

```
$ ruby -v
ruby 2.7.1p83 (2020-03-31 revision a0c7c23c9c) [x86_64-linux]
```

```
$ gem env
RubyGems Environment:
  - RUBYGEMS VERSION: 3.1.2
  - RUBY VERSION: 2.7.1 (2020-03-31 patchlevel 83) [x86_64-linux]
  - USER INSTALLATION DIRECTORY: /builddir/.gem/ruby/2.7.0
  - RUBY EXECUTABLE: /usr/local/bin/ruby
  - GIT EXECUTABLE: /usr/bin/git
  - EXECUTABLE DIRECTORY: /usr/local/bin
  - SPEC CACHE DIRECTORY: /builddir/.gem/specs
  - SYSTEM CONFIGURATION DIRECTORY: /usr/local/etc
  - RUBYGEMS PLATFORMS:
    - ruby
    - x86_64-linux
  - GEM PATHS:
    - /usr/local/lib/ruby/gems/2.7.0
    - /builddir/.gem/ruby/2.7.0
  - GEM CONFIGURATION:
    - :update_sources => true
    - :verbose => true
    - :backtrace => false
    - :bulk_threshold => 1000
  - REMOTE SOURCES:
    - https://rubygems.org/
  - SHELL PATH:
    - /usr/local/bin/
    - /usr/bin
    - /bin
    - /usr/sbin
    - /sbin
    - /usr/local/sbin
```

```
$ gem list | grep psych
psych (default: 3.1.0)
```

```
$ gem install psych --user-install
Fetching psych-3.1.0.gem
WARNING: You don't have /builddir/.gem/ruby/2.7.0/bin in your PATH, gem executables will not run.
Building native extensions. This could take a while...
Successfully installed psych-3.1.0
Parsing documentation for psych-3.1.0
Installing ri documentation for psych-3.1.0
Done installing documentation for psych after 0 seconds
1 gem installed
```

```
$ gem list | grep psych
psych (3.1.0)
```

```
$ RUBYOPT="--disable-gems" ruby -r psych -e 'require "rubygems"; Gem.load_yaml'
/builddir/.gem/ruby/2.7.0/gems/psych-3.1.0/lib/psych.so: warning: already initialized constant Psych::Parser::ANY
/builddir/.gem/ruby/2.7.0/gems/psych-3.1.0/lib/psych.so: warning: already initialized constant Psych::Parser::UTF8
/builddir/.gem/ruby/2.7.0/gems/psych-3.1.0/lib/psych.so: warning: already initialized constant Psych::Parser::UTF16LE
/builddir/.gem/ruby/2.7.0/gems/psych-3.1.0/lib/psych.so: warning: already initialized constant Psych::Parser::UTF16BE
/builddir/.gem/ruby/2.7.0/gems/psych-3.1.0/lib/psych/class_loader.rb:7: warning: already initialized constant Psych::ClassLoader::BIG_DECIMAL
/usr/local/lib/ruby/2.7.0/psych/class_loader.rb:7: warning: previous definition of BIG_DECIMAL was here
/builddir/.gem/ruby/2.7.0/gems/psych-3.1.0/lib/psych/class_loader.rb:8: warning: already initialized constant Psych::ClassLoader::COMPLEX
```

09/24/2021
Just FTR, the patch just hides this issue, it does not resolve it.

The hacks with default gems are hiding a lot of issues. It would be nice if somebody helped to make them less exceptional 1. Or the --disable-gems option should possibly be removed if it is not properly supported anymore.

#5 - 05/21/2020 07:59 AM - vo.x (Vit Ondruch)

Also, I believe that call to require 'psych' should result to subsequent calls of require 'psych' to be no-op. This is apparently not the case.

#6 - 05/21/2020 08:07 AM - vo.x (Vit Ondruch)

vo.x (Vit Ondruch) wrote in #note-4:

Just FTR, the patch just hides this issue, it does not resolve it.

BTW this 1 is my original RubyGems ticket which you can use to get pointers to various related issues such as 2.

#7 - 05/21/2020 09:53 AM - jaruga (Jun Aruga)

What's wrong in Fedora?

Thank you for checking the issue on your environment.
In Fedora Ruby, there is no default gem psych gemspec: there is no file such as /usr/share/gems/specifications/default/psych-*_gemspec . You can see https://github.com/rubygems/rubygems/issues/3629#issuecomment-630288731 for detail.

This is the wrong point. That's why I wrote "It's a Fedora Ruby specific case. This is not the case of Ruby built from source normally.".
Though this issue can happen in Upstream Ruby too, according to https://github.com/ruby/psych/issues/386, I has not tried it on my environment.

And I was able to reproduce the error by Vit's way on upstream Ruby (Ruby built from the source).

```shell
$ which ruby
/usr/local/ruby-2.7.1/bin/ruby
$ ruby -v
ruby 2.7.1p83 (2020-03-31 revision a0c7c23c9c) [x86_64-linux]
$ gem install psych --user-install
$ gem list psych
*** LOCAL GEMS ***
psych (3.1.0)
$ RUBYOPT="--disable-gems" ruby -r psych -e 'require "rubygems"; Gem.load_yaml'
... /home/jaruga/.gem/ruby/2.7.0/gems/psych-3.1.0/lib/psych/parser.rb:34:in `<class:Parser>`: superclass mismatch for class Mark (TypeError)
```

#8 - 05/21/2020 11:29 AM - vo.x (Vit Ondruch)

BTW I don't understand how this could work:

```shell
$ for psych in psych{1..3}; do mkdir $psych; echo "puts "$psych"" > $psych/psych.rb; done
$ find .
.
./psych2/psych.rb
./psych1/psych.rb
./psych3/psych.rb
$ ruby -e '(1..3).each {|psych| $:.unshift("psych#{psych}"); require "psych" }'
psych1
psych2
psych3
```

In my opinion, the call to require "psych" should succeed only once, no matter on the state of $LOAD_PATH. I can report this as separate ticket ...

#9 - 05/21/2020 11:31 AM - vo.x (Vit Ondruch)

vo.x (Vit Ondruch) wrote in #note-8:

Actually my original intention was to try this with disabled gems and it seems Ruby itself behaves as I would expect:

```shell
$ ruby --disable-gems -e '(1..3).each {|psych| $:.unshift("psych#{psych}"); require "psych" }'
psych1
```

#10 - 05/21/2020 11:51 AM - vo.x (Vit Ondruch)

vo.x (Vit Ondruch) wrote in #note-8:

Upstream ticket: https://github.com/rubygems/rubygems/issues/3647

#11 - 05/24/2020 05:24 PM - vo.x (Vit Ondruch)

There was merged this 1 PR, which should resolve the issue even without removal of the gem call. I have not verified it myself, but the test case was modeled after my test case in comment #note-10, so I am positive about its functionality.

#12 - 06/24/2020 12:34 PM - jaruga (Jun Aruga)

Is it possible to do backport the fixes to Ruby 2.7?

For Fedora Ruby, we applied the following 4 patches (merged pull-requests) to fix this issue in Fedora.

https://github.com/rubygems/rubygems/pull/3124
https://github.com/rubygems/rubygems/pull/3133
https://github.com/rubygems/rubygems/pull/3153
#13 - 06/24/2020 01:01 PM - vo.x (Vit Ondruch)
- Backport changed from 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: UNKNOWN to 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: REQUIRED

This was fixed in master:

https://github.com/ruby/ruby/commit/a18e81d797135de6e143a600e4f4d2b0ab23bf9
https://github.com/ruby/ruby/commit/5aa5aad48a9a3effce60de3559d9bd107bc9a91d
https://github.com/ruby/ruby/commit/07dca6c029f0322a39b373705d3ac876ba3db0ac
https://github.com/ruby/ruby/commit/f0f138aa5d44356f9a95201d533056d5d
https://github.com/ruby/ruby/commit/b9d431a7b129635556d03bbd695b5060a35729

Closing this to trigger backport request.

#14 - 06/24/2020 01:02 PM - vo.x (Vit Ondruch)
- Status changed from Open to Closed

#15 - 07/10/2020 12:17 AM - hsbt (Hiroshi SHIBATA)
jaruga (Jun Aruga) wrote in #note-12:

Is it possible to do backport the fixes to Ruby 2.7?

For Fedora Ruby, we applied the following 4 patches (merged pull-requests) to fix this issue in Fedora.

https://github.com/rubygems/rubygems/pull/3124
https://github.com/rubygems/rubygems/pull/3133
https://github.com/rubygems/rubygems/pull/3153
https://github.com/rubygems/rubygems/pull/3639

After releasing RG 3.1.5 contains the above patches, We will request to merge it to ruby_2_7 branch.

#16 - 01/25/2021 11:10 AM - hsbt (Hiroshi SHIBATA)
- Assignee set to hsbt (Hiroshi SHIBATA)

#17 - 01/26/2021 12:03 PM - hsbt (Hiroshi SHIBATA)
I released RubyGems 3.1.6 https://blog.rubygems.org/2021/01/26/3.1.6-released.html and create the backport request for this into ruby_2_7 branch.

#18 - 01/30/2021 11:51 AM - nagachika (Tomoyuki Chikanaga)
- Backport changed from 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: REQUIRED to 2.5: UNKNOWN, 2.6: UNKNOWN, 2.7: DONE

I have backported "Merge RubyGems-3.1.6" at https://github.com/ruby/ruby/commit/99b4f20fd65075d2d9e02f8c7a6b5d6a914ce31. I think the changeset may be related with this issue too.