Ruby - Bug #19896

Ruby method refinement memory leak

09/20/2023 06:05 PM - HParker (Adam Hess)

Status:	Closed		
Priority:	Normal		
Assignee:			
Target version:			
ruby -v:		**Backport:**	3.0: UNKNOWN, 3.1: REQUIRED, 3.2: DONE

Description

GitHub pull request: https://github.com/ruby/ruby/pull/8487

When method redefinitions happen, sometimes the final definition does not get cleaned up,

Reproducable with the same script from: https://bugs.ruby-lang.org/issues/19894

```
10.times do
  20_000.times do
    $c = Class.new do
      def foo; end
    end

    $m = Module.new do
      refine $c do
        def foo; end
      end
    end

    Class.new do
      using $m

      def initialize
        o = $c.new
        o.method(:foo).unbind
      end
    end.new
  end

  puts `ps -o rss= -p #{$$}`
end
```

before:

```
19792
20944
22224
23504
24784
26064
27344
28624
29776
31056
```

after:

```
18560
18560
18560
18560
18560
```

```
18560
18560
18560
18560
18560
```

Associated revisions

Revision 8b236e0c66da8f92e9fc33de66cfbc8e4b0c0763 - 09/22/2023 01:44 PM - HParker (Adam Hess)

[Bug #19896]

fix memory leak in vm_method

This introduces a unified reference_count to clarify who is referencing a method.
This also allows us to treat the refinement method as the def owner since it counts itself as a reference

Co-authored-by: Peter Zhu peter@peterzhu.ca

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Revision 8b236e0c - 09/22/2023 01:44 PM - HParker (Adam Hess)

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Revision 97b7070ebd5493de8d3a6a9b0ecc91bef5068d3f - 09/30/2023 04:46 AM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 8b236e0c66da8f92e9fc33de66cfbc8e4b0c0763: [Backport #19896]

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    Co-authored-by: Peter Zhu <peter@peterzhu.ca>
    ---
     gc.c                     |   4 +-
     method.h                 |   6 +--
     rjit_c.rb                |   6 +--
     test/ruby/test_module.rb |   4 +-
     vm_insnhelper.c          |   2 +-
     vm_method.c              | 105 +++++++++++++++++++------------------------
     6 files changed, 54 insertions(+), 73 deletions(-)
```

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Revision 97b7070e - 09/30/2023 04:46 AM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 8b236e0c66da8f92e9fc33de66cfbc8e4b0c0763: [Backport #19896]

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         vm_method.c             | 105 +++++++++++++++++++-----------------------
         6 files changed, 54 insertions(+), 73 deletions(-)
```

History

#1 - 09/20/2023 06:57 PM - peterzhu2118 (Peter Zhu)

- Backport changed from 3.0: UNKNOWN, 3.1: UNKNOWN, 3.2: UNKNOWN to 3.0: UNKNOWN, 3.1: REQUIRED, 3.2: REQUIRED

#2 - 09/22/2023 01:58 PM - HParker (Adam Hess)

- Status changed from Open to Closed

Applied in changeset git|8b236e0c66da8f92e9fc33de66cfbc8e4b0c0763.

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Co-authored-by: Peter Zhu peter@peterzhu.ca

#3 - 09/30/2023 07:07 AM - nagachika (Tomoyuki Chikanaga)

- Backport changed from 3.0: UNKNOWN, 3.1: REQUIRED, 3.2: REQUIRED to 3.0: UNKNOWN, 3.1: REQUIRED, 3.2: DONE

ruby_3_2 97b7070ebd5493de8d3a6a9b0ecc91bef5068d3f merged revision(s) 8b236e0c66da8f92e9fc33de66cfbc8e4b0c0763.