

Ruby - Bug #20213

zsuper with keyword splat without explicit keywords incorrectly uses mutable keyword splat

01/25/2024 09:49 PM - jeremyevans0 (Jeremy Evans)

<div>Status:Closed</div> <div>Priority:Normal</div> <div>Assignee:</div> <div>Target version:</div> <div>ruby -v:</div>	<div>Backport:3.0: DONTNEED, 3.1: DONTNEED, 3.2: DONTNEED, 3.3: DONE</div>
<div>Description</div> <div>As the subject states, the super call in this code is compiled incorrectly:</div> <div><pre>extend(Module.new{def a(**k) k[:a] = 1 end}) extend(Module.new{def a(**k) p k; super; p k end}) a</pre><div># Expected output, actual output on Ruby 2.0-3.2:</div><div><pre>{}</pre><pre>{}</pre></div><div># Actual output on Ruby 3.3 and master</div><div><pre>{}</pre><pre>{:a=>1}</pre></div></div> <div>The zsuper call here uses VM_CALL_KW_SPLAT_MUT:</div> <div><pre>invokesuper <calldata!argc:1, FCALL SUPER ZSUPER KW_SPLAT KW_SPLAT_MUT> , nil</pre></div> <div>That is not correct, because as the example shows, if the super method accepts a keyword splat, the super method can modify the keyword splat, and changes are reflected in the caller.</div> <div>I submitted a pull request to fix this: https://github.com/ruby/ruby/pull/9710, and marked this for backporting to 3.3.</div>	

Associated revisions

Revision 69cee6fee50f63cd52d59325dc3780a6fc4e5ae2 - 03/20/2024 11:05 AM - NARUSE, Yui

merge revision(s) 771a2f039b9a059a73e8f111d1d46590fa697f63: [Backport #20213] (#10297)

Fix incorrect use of VM_CALL_KW_SPLAT_MUT in zsuper with keyword splat

For zsuper calls with a keyword splat but no actual keywords, the keyword splat is passed directly, so it cannot be mutable, because if the callee accepts a keyword splat, changes to the keyword splat by the callee would be reflected in the caller.

While here, simplify the logic when the method supports literal keywords. I don't think it is possible for a method with has_kw param flags to not have keywords, so add an assertion for that, and set VM_CALL_KW_SPLAT_MUT in a single place.

Revision 69cee6fee50f63cd52d59325dc3780a6fc4e5ae2 - 03/20/2024 11:05 AM - NARUSE, Yui

merge revision(s) 771a2f039b9a059a73e8f111d1d46590fa697f63: [Backport #20213] (#10297)

Fix incorrect use of VM_CALL_KW_SPLAT_MUT in zsuper with keyword splat

For zsuper calls with a keyword splat but no actual keywords, the keyword splat is passed directly, so it cannot be mutable, because if the callee accepts a keyword splat, changes to the keyword splat by the callee would be reflected in the caller.

While here, simplify the logic when the method supports literal keywords. I don't think it is possible for

a method with `has_kw` param flags to not have keywords, so add an assertion for that, and set `VM_CALL_KW_SPLAT_MUT` in a single place.

Revision 69cee6fe - 03/20/2024 11:05 AM - NARUSE, Yui

merge revision(s) 771a2f039b9a059a73e8f111d1d46590fa697f63: [Backport #20213] (#10297)

Fix incorrect use of `VM_CALL_KW_SPLAT_MUT` in `zsuper` with keyword splat

For `zsuper` calls with a keyword splat but no actual keywords, the keyword splat is passed directly, so it cannot be mutable, because if the callee accepts a keyword splat, changes to the keyword splat by the callee would be reflected in the caller.

While here, simplify the logic when the method supports literal keywords. I don't think it is possible for a method with `has_kw` param flags to not have keywords, so add an assertion for that, and set `VM_CALL_KW_SPLAT_MUT` in a single place.

History

#1 - 01/26/2024 04:54 AM - jeremyevans0 (Jeremy Evans)

- Status changed from Open to Closed

Fixed by [771a2f039b9a059a73e8f111d1d46590fa697f63](#)

#2 - 03/20/2024 12:48 PM - naruse (Yui NARUSE)

- Backport changed from 3.0: DONTNEED, 3.1: DONTNEED, 3.2: DONTNEED, 3.3: REQUIRED to 3.0: DONTNEED, 3.1: DONTNEED, 3.2: DONTNEED, 3.3: DONE

ruby_3_3 69cee6fee50f63cd52d59325dc3780a6fc4e5ae2 merged revision(s) 771a2f039b9a059a73e8f111d1d46590fa697f63.