

Ruby - Bug #21439

Crash with PM_SPLAT_NODE compiler error (Prism)

06/11/2025 08:35 PM - bendrissou (Bachir Bendrissou)

Status:	Closed	Backport: 3.2: UNKNOWN, 3.3: UNKNOWN, 3.4: DONE
Priority:	Normal	
Assignee:	prism	
Target version:		
ruby -v:	3.5.0	

Description

Hi Ruby team,

I'm encountering a crash when using a splat (*) on the left-hand side of a for loop in the latest Ruby build from master. The error occurs during compilation, and seems related to Prism's handling of PM_SPLAT_NODE.

Input

The following minimal script crashes:

```
for *y in [4, 5]
  p y
end
```

Expected Output

```
[4]
[5]
```

Actual Output

```
bug-1.rb: [BUG] Unexpected node type for index in for node: PM_SPLAT_NODE
ruby 3.5.0dev (2025-06-11T18:07:43Z master 970813d982) +PRISM [x86_64-linux]

-- Control frame information -----
c:0001 p:0000 s:0003 E:000720 DUMMY [FINISH]

-- Threading information -----
Total ractor count: 1
Ruby thread count for this ractor: 1

-- C level backtrace information -----
/lib/x86_64-linux-gnu/libasan.so.5(__interceptor_backtrace+0x40) [0x7f13b793bd40] ../../../../../../src/
libsanitizer/sanitizer_common/sanitizer_common_interceptors.inc:4022
/home/ruby/build/ruby(rb_print_backtrace+0x11) [0x558d33041da9] ../vm_dump.c:843
/home/ruby/build/ruby(rb_vm_bugreport) ../vm_dump.c:1175
/home/ruby/build/ruby(rb_bug_without_die_internal+0xc5) [0x558d32704b21] ../error.c:1097
/home/ruby/build/ruby(rb_bug) ../error.c:1115
/home/ruby/build/ruby(pm_compile_for_node_index+0x117) [0x558d32ee742c] ../prism_compile.c:5340
/home/ruby/build/ruby(pm_compile_scope_node) ../prism_compile.c:6911
/home/ruby/build/ruby(pm_compile_node+0x1b50) [0x558d32e88490] ../prism_compile.c:10201
/home/ruby/build/ruby(pm_iseq_compile_node+0x437) [0x558d32eea437] ../prism_compile.c:10512
/home/ruby/build/ruby(pm_iseq_new_with_opt_try+0x3e) [0x558d32824c5e] ../iseq.c:1050
/home/ruby/build/ruby(rb_protect+0x30f) [0x558d327183ff] ../eval.c:1059
/home/ruby/build/ruby(pm_iseq_new_with_opt+0x482) [0x558d32832c12] ../iseq.c:1103
/home/ruby/build/ruby(pm_new_child_iseq+0x19a) [0x558d32dbdc7a] ../prism_compile.c:1261
/home/ruby/build/ruby(pm_compile_node+0x15296) [0x558d32e9bbd6] ../prism_compile.c:9199
/home/ruby/build/ruby(pm_compile_node+0x529d) [0x558d32e8bbdd] ../prism_compile.c:10330
/home/ruby/build/ruby(pm_compile_scope_node+0x3f42) [0x558d32ee3382] ../prism_compile.c:7012
/home/ruby/build/ruby(pm_compile_node+0x1b50) [0x558d32e88490] ../prism_compile.c:10201
```

```
/home/ruby/build/ruby (APPEND_LIST+0x0) [0x558d32eea2a4] ../prism_compile.c:10502
/home/ruby/build/ruby (pm_iseq_compile_node) ../prism_compile.c:10506
/home/ruby/build/ruby (pm_iseq_new_with_opt_try+0x3e) [0x558d32824c5e] ../iseq.c:1050
/home/ruby/build/ruby (rb_protect+0x30f) [0x558d327183ff] ../eval.c:1059
/home/ruby/build/ruby (pm_iseq_new_with_opt+0x482) [0x558d32832c12] ../iseq.c:1103
/home/ruby/build/ruby (pm_iseq_new_main+0xbc) [0x558d328332ac] ../iseq.c:951
/home/ruby/build/ruby (process_options+0x2d32) [0x558d329d2b12] ../ruby.c:2641
/home/ruby/build/ruby (ruby_process_options+0x3f0) [0x558d329d5290] ../ruby.c:3199
/home/ruby/build/ruby (ruby_options+0x2a7) [0x558d32715407] ../eval.c:117
/home/ruby/build/ruby (rb_main+0x19) [0x558d327067ff] ../main.c:42
/home/ruby/build/ruby (main) ../main.c:62
/lib/x86_64-linux-gnu/libc.so.6(__libc_start_main+0xf3) [0x7f13b7487083]
/home/ruby/build/ruby (_start) [0x558d32707dce]
```

-- Other runtime information -----

* Loaded script: bug-1.rb

* Loaded features:

- 0 enumerator.so
- 1 thread.rb
- 2 fiber.so
- 3 rational.so
- 4 complex.so
- 5 ruby2_keywords.rb
- 6 set.rb

Aborted

Environment

Ruby version: ruby 3.5.0dev (2025-06-11 commit 970813d982) +PRISM

Platform: x86_64-linux

Built from source using latest master

Parser backend: Prism (default)

Associated revisions

Revision 5ec9a392 - 06/12/2025 03:33 PM - Ufuk Kayserilioglu

[Bug #21439] Fix PM_SPLAT_NODE compilation error in for loops (#13597)

[Bug #21439] Fix PM_SPLAT_NODE compilation error in for loops

This commit fixes a crash that occurred when using splat nodes (*) as the index variable in for loops. The error "Unexpected node type for index in for node: PM_SPLAT_NODE" was thrown because the compiler didn't know how to handle splat nodes in this context.

The fix allows code like for *x in [[1,2], [3,4]] to compile and execute correctly, where the splat collects each sub-array.

Revision 585469af - 07/14/2025 09:04 PM - k0kubun (Takashi Kokubun)

merge revision(s) 5ec9a392cdf7f971221dc073dd466bce877d8acb: [Backport #21439]

[Bug #21439] Fix `PM\_SPLAT\_NODE` compilation error in for loops (#13597)

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The fix allows code like `for \*x in [[1,2], [3,4]]` to compile and

execute correctly, where the splat collects each sub-array.

History

#1 - 06/12/2025 12:39 PM - byroot (Jean Boussier)

- Assignee set to prism

#2 - 06/12/2025 02:32 PM - ufuk (Ufuk Kayserilioglu)

- Backport changed from 3.2: UNKNOWN, 3.3: UNKNOWN, 3.4: UNKNOWN to 3.2: UNKNOWN, 3.3: UNKNOWN, 3.4: REQUIRED

I have a PR for it here: <https://github.com/ruby/ruby/pull/13597>

#3 - 06/12/2025 03:33 PM - Anonymous

- Status changed from Open to Closed

Applied in changeset [git|5ec9a392cdf7f971221dc073dd466bce877d8acb](https://github.com/ruby/ruby/commit/5ec9a392cdf7f971221dc073dd466bce877d8acb).

[Bug [#21439](#)] Fix PM_SPLAT_NODE compilation error in for loops ([#13597](#))

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#4 - 07/14/2025 09:08 PM - k0kubun (Takashi Kokubun)

- Backport changed from 3.2: UNKNOWN, 3.3: UNKNOWN, 3.4: REQUIRED to 3.2: UNKNOWN, 3.3: UNKNOWN, 3.4: DONE

ruby_3_4 [585469aff3de855a9f3db8e51f12bf87300981af](#) merged revision(s) [5ec9a392cdf7f971221dc073dd466bce877d8acb](#).