

Ruby - Bug #21289

Fix C level backtraces for USE_ELF

04/28/2025 05:26 PM - dodecadaniel (Daniel Colson)

Status:	Closed	
Priority:	Normal	
Assignee:		
Target version:		
ruby -v:	ruby 3.4.3 (2025-04-14 revision d0b7e5b6a0) +PRISM [x86_64-linux]	Backport: 3.2: UNKNOWN, 3.3: UNKNOWN, 3.4: DONE
Description After upgrading GitHub to Ruby 3.4 we noticed that we stopped getting useful C level backtrace information in our crash reports. We traced it back to https://github.com/ruby/ruby/commit/7dd2afbe3a14d021e5554288517709f5778c3d58. Passing 0 instead of -1 makes sense for the Mach-O version of fill_lines, but there is a separate ELF version of fill_lines that still has special handling for -1: https://github.com/ruby/ruby/blob/58e3aa02240a9ec1b5fe6ce60d63828c2cf0c73a/addr2line.c#L2178-L2209. More details in the corresponding PR: https://github.com/ruby/ruby/pull/13195		

Associated revisions

Revision 48a360ba - 05/01/2025 11:58 PM - dodecadaniel (Daniel Colson)

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Without this special handling for the main executable, we don't have the right base_addr when reading debug info, and so we fail to populate the information for that line: <https://github.com/ruby/ruby/blob/58e3aa02240a9ec1b5fe6ce60d63828c2cf0c73a/addr2line.c#L1948> Then we get to <https://github.com/ruby/ruby/blob/58e3aa02240a9ec1b5fe6ce60d63828c2cf0c73a/addr2line.c#L2649>, and potentially (depending on how things were run) get back "ruby" as info.dli_fname instead of the absolute path for the executable. We set that as the binary_filename and then try to open it inside the next call to fill_lines, but that fails (unless you happen to be in the directory where the ruby executable lives) and break out of filling lines entirely: <https://github.com/ruby/ruby/blob/58e3aa02240a9ec1b5fe6ce60d63828c2cf0c73a/addr2line.c#L2673-L2674>

This commit treats offset 0 as the main executable, rather than having a special meaning for -1 (which gets turned into 0 anyway).

[Bug #21289]

Revision ac311437 - 05/02/2025 04:02 PM - dodecadaniel (Daniel Colson)

[Backport 3.4] Fix C level backtraces for USE_ELF

[Backport #21289]

History

#1 - 04/28/2025 05:44 PM - k0kubun (Takashi Kokubun)

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

#2 - 04/28/2025 05:48 PM - dodecadaniel (Daniel Colson)

- Description updated

#3 - 05/01/2025 11:59 PM - dodecadaniel (Daniel Colson)

- Status changed from Open to Closed

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[Bug [#21289](#)]

#4 - 05/14/2025 12:13 AM - 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 [ac311437d3c4d60fe4ac100e9652b0cbc3e5f481](#).