Ruby master - Bug #17865
clang 12 -Wcompound-token-split-by-macro warning in ruby.h
05/16/2021 10:07 AM - _dim (Dimitry Andric)

Status: Closed
Priority: Normal
Assignee: 
Target version: 
ruby -v:
ruby 2.7.3p183 (2021-04-05 revision 6847ee089d) [amd64-freebsd14]
Backport: 2.6: REQUIRED, 2.7: REQUIRED, 3.0: DONTNEED

Description
As reported in pull request #4504 (originally via FreeBSD PR 255910), certain ruby gem native extensions (such as thrift, see here and here), with clang 12.0.0 or later fails, because they have -Werror in their CFLAGS, resulting in complaints about the expansion of the rb_intern() macro:

current directory: /wrkdirs/usr/ports/devel/rubygem-thrift/work/stage/usr/local/lib/ruby/gems/2.7/gems/thrift-0.14.0/ext
make "DESTDIR="
compiling binary_protocol_accelerated.c
VALUE thrift_binary_protocol_class = rb_const_get(thrift_module, rb_intern("BinaryProtocol"));
^^^^^^^^^^^^^^^^^^^^
/usr/local/include/ruby-2.7/ruby/ruby.h:1847:23: note: expanded from macro 'rb_intern'
__extension__ (RUBY_CONST_ID_CACHE((ID), (str))) : \ ^
binary_protocol_accelerated.c:404:68: note: '(' token is here
VALUE thrift_binary_protocol_class = rb_const_get(thrift_module, rb_intern("BinaryProtocol"));
^^^^^^^^^^^^^^^^^^^^
/usr/local/include/ruby-2.7/ruby/ruby.h:1847:24: note: expanded from macro 'rb_intern'
__extension__ (RUBY_CONST_ID_CACHE((ID), (str))) : 
^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
/usr/local/include/ruby-2.7/ruby/ruby.h:1832:5: note: expanded from macro 'RUBY_CONST_ID_CACHE'
{\ ^
Part of the rb_intern() macro expands to (RUBY_CONST_ID_CACHE((ID), (str))), and in turn RUBY_CONST_ID_CACHE() expands to a brace enclosed compound statement. The intended effect is to get a gcc statement expression, which is normally delimited by ({ ... }).

However, clang 12.0.0 and later have a warning enabled by default, about pasting together the ( and { tokens via different macros (see llvm-project@0e00a95).

In the pull request I have submitted a possible fix for ruby 2.7 (and 2.6), because the above warnings do not occur on 3.0 and master: in GitHub commit 6ecf07ab35 (for pull request #2991) the symbol.h header got split off from the main ruby.h, and at the same time the code that emits the warning was removed. Later in commit 9e6e39c351 this got merged into master.

History
#1 - 05/16/2021 12:46 PM - nobu (Nobuyoshi Nakada)
- Backport changed from 2.6: UNKNOWN, 2.7: UNKNOWN, 3.0: UNKNOWN to 2.6: REQUIRED, 2.7: REQUIRED, 3.0: DONTNEED

#2 - 05/16/2021 12:47 PM - nobu (Nobuyoshi Nakada)
- Status changed from Open to Closed

Backport-ready.

#3 - 09/06/2021 03:16 PM - Eregon (Benoit Daloze)
This looks like it was not yet backported to 2.7: https://github.com/ruby/ruby/blob/ruby_2_7/include/ruby/ruby.h#L1847
However it seems the PR is ready: https://github.com/ruby/ruby/pull/4504
nobu (Nobuyoshi Nakada) Could you review/approve that PR?

09/15/2021
Could you integrate it?

The PR looks ok to me. The current ruby_2_7 branch maintainer is usa-san.