[PATCH] file.c (rb_group_member): kill 256K of stack usage

04/11/2011 04:01 PM - normalperson (Eric Wong)

Status: Closed
Priority: Normal
Assignee: kosaki (Motohiro KOSAKI)
Target version: 2.0.0

Description

It was using 256K stack on my x86_64 machine.

Found with scripts/checkstack.pl in the Linux kernel source:

    objdump -D ./ruby | ~/linux-2.6/scripts/checkstack.pl x86_64

Also pushed to my repo: git pull git://bogomips.org/ruby stack-reduce

History

#1 - 04/11/2011 05:23 PM - normalperson (Eric Wong)

    =begin
    Lowering RUBY_STACK_MIN_LIMIT to 64KB across the board in
    thread_pthread.c seems to work fine for check, test-rubyspec,
    benchmark-each.

    No real code, though, and I also don't know what outside C extensions
    do, but 64KB is the PTHREAD_STACK_MIN for my platform (and I've always
    felt it was too high).

    diff --git a/thread_pthread.c b/thread_pthread.c
    index ad6f716..a015873 100644
    --- a/thread_pthread.c
    +++ b/thread_pthread.c
    @@ -630,11 +630,7 @@ use_cached_thread(rb_thread_t *th)
       }

       enum {
       -#ifdef SYMBIAN32
       
       #define RUBY_STACK_MIN_LIMIT = 64 * 1024, /**< 64KB: Let's be slightly more frugal on mobile platform */ -#else
       
       RUBY_STACK_MIN_LIMIT = 512 * 1024, /**< 512KB */ -#endif

       RUBY_STACK_MIN_LIMIT = 64 * 1024, /**< 64KB */ RUBY_STACK_SPACE_LIMIT = 1024 * 1024 );

       --

       Eric Wong
       =end

#2 - 04/11/2011 09:19 PM - kosaki (Motohiro KOSAKI)

    - Status changed from Open to Closed
    - Assignee set to kosaki (Motohiro KOSAKI)

    =begin
    Committed by r31259.
    =end

#3 - 04/12/2011 08:18 PM - normalperson (Eric Wong)

    =begin
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-    RUBY_STACK_MIN_LIMIT = 64 * 1024, /* 64KB: Let's be slightly more frugal on mobile platform */ -#else
-    RUBY_STACK_MIN_LIMIT = 512 * 1024, /* 512KB */ -#endif
-    RUBY_STACK_MIN_LIMIT = 64 * 1024, /* 64KB */ 
    RUBY_STACK_SPACE_LIMIT = 1024 * 1024);

--
Eric Wong
=end
```

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Eric Wong
normalperson@yhbt.net
wrote:

Lowering RUBY_STACK_MIN_LIMIT to 64KB across the board in thread_pthread.c seems to work fine for check, test-rubyspec, benchmark-each.

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I was wrong about 64KB on my system 16KB is the minimum with NPTL :x

The lowest successful stack size I've been able to run is 48K, I get stack corruption and GC failures with 44K and lower.

I've also run my Rainbows! web server integration/torture test suite with several threaded options and everything passed with 48K and didn't notice ill effects. 44K seemed fine, too, I think, but 32K failed Rainbows! tests miserably.

To be on the safe side with existing code/extensions and maybe some overaggressive alloca() calls, I think 64KB is reasonable.


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Eric Wong
=end

Files
0001-file.c-rb_group_member-kill-256K-of-stack-usage.patch 1.21 KB 04/11/2011 normalperson (Eric Wong)