

Ruby - Bug #9225

[patch] add WB to NODE_CREF

12/07/2013 11:39 PM - tmm1 (Aman Karmani)

Status:	Closed	
Priority:	Normal	
Assignee:	ko1 (Koichi Sasada)	
Target version:	2.1.0	
ruby -v:	trunk	
		Backport: 1.9.3: UNKNOWN, 2.0.0: UNKNOWN
Description		
In our rails app, there are a lot of long-lived NODE_CREF:		
<pre>p ObjectSpace.count_nodes => {:NODE_IF=>3, :NODE_CREF=>45810, :NODE_IFUNC=>11}</pre>		
These are static objects, but are considered SHADY and contribute to the size of the remembered set:		
<pre>GC.stat[:remembered_shady_object] => 49667</pre>		
With the following patch, NODE_CREF are no longer shady and can be promoted: https://github.com/tmm1/ruby/commit/c5e8341		
This reduces the size of the remembered set in our app, and speeds up minor GC from 22ms to 18ms per run. After the patch:		
<pre>GC.stat[:remembered_shady_object] => 10506</pre>		
The patch is passing make test-all with RGENGC_CHECK=2		

Associated revisions

Revision 8f77cfb308061ff49de0a47e82816c8dafa27963 - 12/08/2013 02:28 AM - tmm1 (Aman Karmani)

gc.c: promote long-lived NODE_CREF objects to oldgen

- include/ruby/ruby.h: add RGENGC_WB_PROTECTED_NODE_CREF setting
In a large app, this reduces the size of remembered_shady_object_count by 80%. [Bug #9225] [ruby-core:58947]
- gc.c (rb_node_newnode): add FL_WB_PROTECTED flag to NODE_CREF
- class.c (rewrite_cref_stack): insert OBJ_WRITE for NODE_CREF
- iseq.c (set_relation): ditto
- iseq.c (rb_iseq_clone): ditto
- vm_eval.c (rb_yield_refine_block): ditto
- vm_insnhelper.c (vm_cref_push): ditto
- vm_insnhelper.h (COPY_CREF): ditto

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@44059 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 8f77cfb3 - 12/08/2013 02:28 AM - tmm1 (Aman Karmani)

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History

#1 - 12/08/2013 11:28 AM - tmm1 (Aman Karmani)

- Status changed from Open to Closed

- % Done changed from 0 to 100

This issue was solved with changeset r44059.

Aman, thank you for reporting this issue.

Your contribution to Ruby is greatly appreciated.

May Ruby be with you.

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