**Ruby master - Feature #11170**

**[PATCH] use ivar indices for generic ivars**

05/23/2015 01:34 AM - normalperson (Eric Wong)

<table>
<thead>
<tr>
<th>Status:</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority:</td>
<td>Normal</td>
</tr>
<tr>
<td>Assignee:</td>
<td></td>
</tr>
<tr>
<td>Target version:</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- [PATCH 1/2] variable.c: extract common functions for generic ivar  
  [http://80x24.org/spew/m/4e9df8a150a121c894fe142bede5efc15d43e5e94.txt](http://80x24.org/spew/m/4e9df8a150a121c894fe142bede5efc15d43e5e94.txt)

- [PATCH 2/2] variable.c: use indices for generic ivars  
  [http://80x24.org/spew/m/aabb09c886a23eaa496722b13f2b39da8606b8180.txt](http://80x24.org/spew/m/aabb09c886a23eaa496722b13f2b39da8606b8180.txt)

This reduces memory overhead of ivars for common types such as T_DATA the same way T_OBJECT does it.

For 9992 accepted clients on an OpenSSL server, this reduces RSS memory from 77160K to 69248K on x86-64 with the attached ossl.rb script.

Connecting client process was reduced from 246312K to 230724K RSS.

OpenSSL 1.0.1e-2+deb7u16 on Debian 7

**Associated revisions**

Revision 9d9aeafa7f - 05/29/2015 11:42 PM - normalperson (Eric Wong)

variable.c: use indices for generic ivars

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For 9992 accepted clients on an OpenSSL server, this reduces memory from 77160K to 69248K with the script in [https://bugs.ruby-lang.org/issues/11170](https://bugs.ruby-lang.org/issues/11170)


git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@50678 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 50678 - 05/29/2015 11:42 PM - normalperson (Eric Wong)

variable.c: use indices for generic ivars

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Revision 6cd5825 - 05/30/2015 12:20 AM - normal
variable.c: avoid compatibility table with generic ivars

This recovers and improves performance of Marshal.dump/load on Time objects compared to when we implemented generic ivars entirely using st_table.
This also recovers some performance on other generic ivar objects, but does not bring Marshal.dump/load performance up to previous speeds.

Benchmark results:
Minimum results in each 10 measurements.

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<tr>
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<th>trunk</th>
<th>geniv</th>
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<td></td>
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<td>0.334</td>
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<td></td>
<td>0.487</td>
<td>0.527</td>
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<td>1.262</td>
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Speedup ratio: compare with the result of 'trunk' (greater is better)

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- internal.h (rb_attr_delete): declare
- marshal.c (has_ivars): use rb_ivar_foreach (w_iivar): ditto (w_object): update for new interface
- time.c (time_mload): use rb_attr_delete
- variable.c (generic_ivar_delete): implement (rb_ivar_delete): ditto (rb_attr_delete): ditto [ruby-core:69323] [Feature #11170]

Revision 50680 - 05/30/2015 12:20 AM - normalperson (Eric Wong)

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#4 - 05/29/2015 11:43 PM - Anonymous
- Status changed from Open to Closed

Applied in changeset r50678.

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Files

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<tbody>
<tr>
<td>ivar-reduce-combined.patch</td>
<td>17.2 KB</td>
<td>05/23/2015</td>
<td>normalperson (Eric Wong)</td>
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<tr>
<td>ossl_11170.rb</td>
<td>1.74 KB</td>
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