YAML.load_stream should process documents as they are read

<table>
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<th>Status:</th>
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<tr>
<td>Priority:</td>
<td>Normal</td>
</tr>
<tr>
<td>Assignee:</td>
<td>tenderlovemaking (Aaron Patterson)</td>
</tr>
<tr>
<td>Target version:</td>
<td>2.0.0</td>
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ruby -v: ruby 1.9.3p0 (2011-10-30 revision 33570) [x86_64-linux]

Backport:

**Description**

Psych say YAML.load_documents is deprecated and say to use YAML.load_stream instead.

Looking at the implementation for load_stream(), looks to me as if it waits for all documents in the stream to load before anything can be done with it.

```ruby
# File 'lib/psych.rb', line 221
def self.load_stream yaml
  parse_stream(yaml).children.map { |child| child.to_ruby }
end
```

I don't think this should be the case. Ideally load_stream() would take a block, and if an IO object is given, read a document, yield it and then read the next document, and so on.

I imagine an Enumerator might be applicable to this as well.

**Associated revisions**

Revision a2e3de1b - 03/08/2012 09:21 PM - tenderlove

- ext/psych/lib/psych.rb (parse_stream, load_stream): if a block is given, documents will be yielded to the block as they are parsed. [ruby-core:42404] [Bug #5978]
- ext/psych/lib/psych/handlers/document_stream.rb: add a handler that yields documents as they are parsed
- test/psych/test_stream.rb: corresponding tests.

Revision 34953 - 03/08/2012 09:21 PM - tenderlove

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• ext/psych/lib/psych/handlers/document_stream.rb: add a handler that yields documents as they are parsed

• test/psych/test_stream.rb: corresponding tests.
* ext/psych/lib/psych.rb: updating version to match gem
* ext/psych/lib/psych/visitors/to_ruby.rb: fixing deprecation warning
* ext/psych/lib/psych.rb: define a new BadAlias error class.
* ext/psych/lib/psych/visitors/to_ruby.rb: raise an exception when deserializing an alias that does not exist.
* test/psych/test_merge_keys.rb: corresponding test.
* ext/psych/lib/psych.rb (load, parse): stop parsing or loading after the first document has been parsed.
* test/psych/test_stream.rb: pertinent tests.
* ext/psych/lib/psych.rb (parse_stream, load_stream): if a block is given, documents will be yielded to the block as they are parsed. [ruby-core:42404] [Bug #5978]
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* test/psych/test_stream.rb: corresponding tests.
* ext/psych/lib/psych/core_ext.rb: only extend Kernel if IRB is loaded in order to stop method pollution.
* ext/psych/lib/psych.rb: default open YAML files with utf8 external encoding. [ruby-core:42967]
* test/psych/test_tainted.rb: ditto
* ext/psych/parser.c: prevent a memory leak by protecting calls to handler callbacks.
* test/psych/test_parser.rb: test to demonstrate leak.
* ext/psych/parser.c: set parser encoding based on the YAML input rather than user configuration.
* test/psych/test_encoding.rb: corresponding tests.
* test/psych/test_parser.rb: ditto
* test/psych/test_tainted.rb: ditto
* ext/psych/parser.c: removed external encoding setter, allow parser to be reused.
* ext/psych/lib/psych/parser.rb: added external encoding setter.
* test/psych/test_parser.rb: test parser reuse
* ext/psych/lib/psych/visitors/to_ruby.rb: Added support for loading subclasses of String with ivars
* ext/psych/lib/psych/visitors/yaml_tree.rb: Added support for dumping subclasses of String with ivars
* test/psych/test_string.rb: corresponding tests
* ext/psych/lib/psych/visitors/to_ruby.rb: Added ability to load array subclasses with ivars.
* ext/psych/lib/psych/visitors/yaml_tree.rb: Added ability to dump array subclasses with ivars.
* test/psych/test_array.rb: corresponding tests
* ext/psych/emitter.c: fixing clang warnings. Thanks Joey!
* ext/psych/lib/psych/visitors/to_ruby.rb: BigDecimals can be restored from YAML.
* ext/psych/lib/psych/visitors/yaml_tree.rb: BigDecimals can be dumped to YAML.
* test/psych/test_numeric.rb: tests for BigDecimal serialization
* ext/psych/lib/psych/scalar_scanner.rb: Strings that look like dates should be treated as strings and not dates.
Bug #5978: YAML.load_stream should process documents as they are read
https://bugs.ruby-lang.org/issues/5978

Author: Thomas Sawyer
Status: Open
Priority: Normal
Assignee:
Category:
Target version: 2.0.0
ruby -v: ruby 1.9.3p0 (2011-10-30 revision 33570) [x86_64-linux]

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```ruby
# File 'lib/psych.rb', line 221

def self.load_stream yml
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I don't think this should be the case. Ideally load_stream() would take a block, and if an IO object is given, read a document, yield it and then read the next document, and so on.

I imagine an Enumerator might be applicable to this as well.

I'd rather not change load_stream, but I want this functionality as well. What about something like this:

YAML::Reader.new(io).each do |doc|
  ...
end

Deserialized documents will be yielded as read. Does that seem acceptable? I'm hesitant to make it enumerable though because if we're truly doing stream processing, you couldn't iterate on the same object twice (imagine reading YAML from a socket or something).

--
Aaron Patterson
http://tenderlovemaking.com/

#2 - 02/09/2012 03:51 AM - trans (Thomas Sawyer)
Yea, that would suffice. It would still be nice to have a more intuitive/convenient class method though.

What about a new method, process_stream or each_document, or something like that, to wrap that code? Oh wait... why not just keep load_documents method for this and that way it will remain backward compatible with Syck API?

#3 - 02/09/2012 11:23 AM - Anonymous
On Thu, Feb 09, 2012 at 03:51:53AM +0900, Thomas Sawyer wrote:

Issue #5978 has been updated by Thomas Sawyer.

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Honestly, I think you're right about the load_stream method. I'll just make it take a block and act the same as load_documents.

--
Aaron Patterson
http://tenderlovemaking.com/

#4 - 02/10/2012 12:53 AM - trans (Thomas Sawyer)
Cool.

#5 - 03/07/2012 07:48 AM - tenderlovemaking (Aaron Patterson)
  - Assignee set to tenderlovemaking (Aaron Patterson)

#6 - 03/09/2012 06:21 AM - tenderlovemaking (Aaron Patterson)
  - Status changed from Open to Closed
  - % Done changed from 0 to 100

This issue was solved with changeset r34953.
Thomas, thank you for reporting this issue.
Your contribution to Ruby is greatly appreciated.
May Ruby be with you.

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