Ruby master - Feature #13000
Implement Set#include? with Hash#include?

12/02/2016 04:25 PM - headius (Charles Nutter)

Status: Feedback
Priority: Normal
Assignee: knu (Akinori MUSHA)
Target version: 

Description
Why does Set#include? not call Hash#include?? Currently it calls Hash#[].

The protocol of Set already use Hash#include? for ==.

diff --git a/lib/set.rb b/lib/set.rb
index 43c388c..f3dbe2d 100644
--- a/lib/set.rb
+++ b/lib/set.rb
@@ -230,7 +230,7 @@
   # See also Enumerable#include?
   def include?(o)
     @hash[o]
   end
+   @hash.include?(o)
 alias member? include?

History
#1 - 12/21/2016 06:08 AM - shyouhei (Shyouhei Urabe)
  - Status changed from Open to Assigned
  - Assignee set to knu (Akinori MUSHA)

#2 - 12/21/2016 08:11 AM - knu (Akinori MUSHA)
It originally used Hash#include?, but changed to use Hash[] to benefit from the optimized dispatch VM instruction for [] (opt_aref). (Misc #10754)

Running a benchmark, I can observe that Hash[] actually has an advantage over include? in performance (up to ~1.2x faster) but the "optimization" may only apply to CRuby. Do you think we should have a straightforward implementation for a library shared between Ruby implementations, or is it OK to leave this if I add a comment to explain why?

#3 - 10/21/2017 03:24 PM - knu (Akinori MUSHA)
  - Status changed from Assigned to Feedback

#4 - 11/28/2017 05:45 AM - headius (Charles Nutter)
I would prefer the straightforward implementation, but I have some bias.

In JRuby, the [] method generally is more expensive, because it might be String[] with a Regex, which needs to be able to set $~, so we deoptimize some things when [] is being called.

What's good for MRI here is bad for JRuby :-)

I guess the real question here is whether it would matter if JRuby just used Hash#include? in our version of the library. I think there might be some oddities around nil, but that already seems pretty odd in a Set.

#5 - 09/11/2020 08:18 PM - jeremyevans0 (Jeremy Evans)
  - Tracker changed from Bug to Feature
  - Backport deleted (2.1: UNKNOWN, 2.2: UNKNOWN, 2.3: UNKNOWN)