Ruby master - Feature #15230

RubyVM.resolve_feature_path

10/17/2018 07:35 AM - mame (Yusuke Endoh)

Status: Closed
Priority: Normal
Assignee: matz (Yukihiro Matsumoto)
Target version:

Description
I'd like a feature to know what will be loaded by require(feature) without actual loading.

```
$ ./local/bin/ruby -e 'p RubyVM.resolve_feature_path("set")'
[:r, "/home/mame/work/ruby/local/lib/ruby/2.6.0/set.rb"]

$ ./local/bin/ruby -e 'p RubyVM.resolve_feature_path("etc")'
[:s, "/home/mame/work/ruby/local/lib/ruby/2.6.0/x86_64-linux/etc.so"]
```

This feature is useful for a static analysis tool of Ruby programs. It might also be useful to check $LOAD_PATH configuration.

I don't think that RubyVM is the best place to have this method, but a good place to experiment the new feature.

Kernel#resolve_feature_path looks too aggressive.

```
diff --git a/load.c b/load.c
index dde22baf3b..dd609105ee 100644
--- a/load.c
+++ b/load.c
@@ -942,6 +942,26 @@

 return (VALUE)dln_load(RSTRING_PTR(path));
 }

+VALUE
+rb_resolve_feature_path(VALUE klass, VALUE fname)
+{
+ VALUE path;
+ int found;
+ char s[2];
+ fname = rb_get_path_check(fname, 0);
+ path = rb_str_encode_ospath(fname);
+ found = search_required(path, &path, 0);
+ if (!found) {
+ load_failed(fname);
+ }
+ s[0] = found;
+ s[1] = 0;
+ return rb_ary_new_from_args(2, ID2SYM(rb_intern2(s, 1)), path);
+}
+
+/*
 * returns
 * 0: if already loaded (false)
```

diff --git a/vm.c b/vm.c
index fababaa2ec..2a72d16f47 100644
--- a/vm.c
+++ b/vm.c
@@ -2834,6 +2834,8 @@
 static VALUE usage_analysis_operand_stop(VALUE self);
 static VALUE usage_analysis_register_stop(VALUE self);
 #endif
+VALUE rb_resolve_feature_path(VALUE klass, VALUE fname);
+`
```c
void Init_VM(void)
{

/* vm_backtrace.c */
Init_vm_backtrace();
+
+ rb_define_singleton_method(rb_cRubyVM, "resolve_feature_path", rb_resolve_feature_path, 1);
}
```

**Related issues:**
Related to Ruby master - Feature #15903: Move RubyVM.resolve_feature_path to ...

**Closed**

### Associated revisions

**Revision 0cd28199 - 12/06/2018 06:40 AM - mame (Yusuke Endoh)**
load.c (RubyVM.resolve_feature_path): New method. [Feature #15230]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@66237 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

**Revision 66237 - 12/06/2018 06:40 AM - mame (Yusuke Endoh)**
load.c (RubyVM.resolve_feature_path): New method. [Feature #15230]

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### History

**#1 - 10/30/2018 10:07 AM - Eregon (Benoit Daloze)**
What's the leading one letter Symbol in the return value?
That seems fairly cryptic.

Do you need it? I would expect such a method to return a path, i.e., a String.

**#2 - 10/30/2018 02:00 PM - mame (Yusuke Endoh)**
:r means .rb and :s means .so, I guess :-)

It is not absolutely necessary. But it would be somewhat useful for a static analysis tool of Ruby programs because such a tool typically needs to skip .so files.

**#3 - 10/30/2018 02:18 PM - Eregon (Benoit Daloze)**
If it's reliable enough (I think it is) to detect native extensions by the file extension (.so, .dylib) then I think that should be preferred as it would simplify the method's result.

**#4 - 10/31/2018 01:12 AM - duerst (Martin Dürst)**
mame (Yusuke Endoh) wrote:

:r means .rb and :s means .so, I guess :-)

If this information is kept, please make it easier to understand. .rb/':so or :.rb':'.so' at a minimum.

**#5 - 12/06/2018 06:40 AM - mame (Yusuke Endoh)**
- Status changed from Assigned to Closed

Applied in changeset trunk/r66237.

**#6 - 12/06/2018 08:37 AM - znz (Kazuhiro NISHIYAMA)**
It returns false as path when feature is already loaded.
Is it intentional?

```
$ rbenv exec irb --simple-prompt -r irb/completion
>> RubyVM.resolve_feature_path('set')
=> [:rb, false]
```

#7 - 06/05/2019 08:05 PM - Eregon (Benoit Daloze)

mame (Yusuke Endoh) should the behavior that znz (Kazuhiro NISHIYAMA) reports be fixed?

resolve_feature_path sounds like it should always resolve a feature, no matter if the feature is loaded or not.

#8 - 06/05/2019 08:14 PM - Eregon (Benoit Daloze)

- Related to Feature #15903: Move RubyVM.resolve_feature_path to Kernel.resolve_feature_path added

#9 - 06/05/2019 10:57 PM - mame (Yusuke Endoh)

Eregon (Benoit Daloze) wrote:

mame (Yusuke Endoh) should the behavior that znz (Kazuhiro NISHIYAMA) reports be fixed?

I hear nobu (Nobuyoshi Nakada) has already fixed the issue. (Thanks!)

#10 - 06/06/2019 09:28 AM - Eregon (Benoit Daloze)

Great!