

## Ruby master - Bug #11033

### OpenSSL related threading issues in Ruby 2.1 and 2.2

04/04/2015 12:08 AM - tknerr (Torben Knerr)

<b>Status:</b>	Closed	
<b>Priority:</b>	Normal	
<b>Assignee:</b>	openssl	
<b>Target version:</b>		
<b>ruby -v:</b>	2.1.5p273, 2.2.1p85	<b>Backport:</b> 2.2: UNKNOWN, 2.3: DONE, 2.4: DONE
<b>Description</b>		
<p>I'm experiencing some problems with multiple https connections in Ruby 2.1 and 2.2, whilst in Ruby 2.0 everything is working fine.</p> <p>This happens on a Windows 7 (64-bit) box in the context of installing multiple gems in parallel via bundlers BUNDLE_JOBS=&lt;n&gt; setting.</p> <p>What I see are multiple OpenSSL::SSL::SSLError: SSL_read: cert already in hash table warnings and at some more or less random point it bails out because it cannot install a gem. When I repeat the bundle install command it will get past that gem and fail at a later one. I can repeat until all gems are installed.</p> <p>This is the stacktrace I get for every of the ssl warnings:</p> <pre>... Installing polyglot 0.3.5 4: polyglot (0.3.5) from X:/home/.gem/ruby/2.2.0/specifications/polyglot-0.3.5.gemspec  OpenSSL::SSL::SSLError: SSL_read: cert already in hash table X:/tools/ruby-2.2.1/lib/ruby/2.2.0/openssl/buffering.rb:182:in `sysread_nonblock' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/openssl/buffering.rb:182:in `read_nonblock' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/protocol.rb:153:in `rbuf_fill' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/protocol.rb:134:in `readuntil' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/protocol.rb:144:in `readline' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/http/response.rb:39:in `read_status_line' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/http/response.rb:28:in `read_new' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/http.rb:1414:in `block in transport_request' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/http.rb:1411:in `catch' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/http.rb:1411:in `transport_request' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/net/http.rb:1384:in `request' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/request.rb:154:in `perform_request' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/request.rb:109:in `fetch' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/remote_fetcher.rb:346:in `request' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/remote_fetcher.rb:231:in `fetch_http' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/remote_fetcher.rb:247:in `fetch_http' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/remote_fetcher.rb:267:in `fetch_path' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/remote_fetcher.rb:302:in `cache_update_path' X:/tools/ruby-2.2.1/lib/ruby/2.2.0/rubygems/remote_fetcher.rb:168:in `download' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/rubygems_integration.rb:544:in `download_gem' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/fetcher.rb:63:in `download_gem_from_uri' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/source/rubygems.rb:370:in `fetch_gem' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/source/rubygems.rb:98:in `install' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/installer.rb:107:in `install_gem_from_spec' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/installer.rb:287:in `block in install_in_parallel' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/worker.rb:55:in `call' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/worker.rb:55:in `apply_func' X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/worker.rb:50:in `block in process_queue'</pre>		

```
X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/worker.rb:47:in `loop'  
X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/worker.rb:47:in `process_QUE'  
eue'  
X:/tools/ruby-2.2.1/lib/ruby/gems/2.2.0/gems/bundler-1.9.2/lib/bundler/worker.rb:22:in `block (2 levels) in initialize'  
...  
This is originally reported here (with a bit more details):  
https://github.com/bundler/bundler/issues/3545  
  
Any ideas?  
  
Might it be a regression of #8386?
```

---

## Associated revisions

### Revision 9eb92007 - 06/14/2017 09:49 AM - rhe

openssl: import v2.0.4

Import Ruby/OpenSSL 2.0.4. Only bug (and typo) fixes. The full commit history since v2.0.3 (imported at r57482) can be found at:

<https://github.com/ruby/openssl/compare/v2.0.3...v2.0.4>

This contains the fix for [Bug #11033].

---

Jun Aruga (1):  
Update .travis.yml and Dockerfile

Kazuki Yamaguchi (9):  
test/test\_pkey\_ec: do not use dummy 0 order  
test/test\_ssl: fix typo in test\_sysread\_and\_syswrite  
ssl: check return value of SSL\_set\_fd()  
Fix typos  
test/test\_x509store: skip OpenSSL::TestX509Store#test\_set\_errors  
tool/sync-with-trunk: 'LAS' -> 'LAST'  
x509store: clear error queue after calling X509\_LOOKUP\_load\_file()  
extconf.rb: simplify searching libraries logic  
Ruby/OpenSSL 2.0.4

SHIBATA Hiroshi (1):  
Fix typos

Vladimir Rybas (1):  
Fix documentation for OpenSSL::Cipher#final

nobu (2):  
openssl: fix broken openssl check  
openssl: fix broken openssl check

usa (1):  
Search SSL libraries by testing various filename patterns

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@59081 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

### Revision 59081 - 06/14/2017 09:49 AM - rhenium (Kazuki Yamaguchi)

openssl: import v2.0.4

Import Ruby/OpenSSL 2.0.4. Only bug (and typo) fixes. The full commit history since v2.0.3 (imported at r57482) can be found at:

<https://github.com/ruby/openssl/compare/v2.0.3...v2.0.4>

This contains the fix for [Bug #11033].

---

Jun Aruga (1):  
Update .travis.yml and Dockerfile

Kazuki Yamaguchi (9):  
test/test\_pkey\_ec: do not use dummy 0 order

test/test\_ssl: fix typo in test\_sysread\_and\_syswrite  
ssl: check return value of SSL\_set\_fd()  
Fix typos  
test/test\_x509store: skip OpenSSL::TestX509Store#test\_set\_errors  
tool/sync-with-trunk: 'LASZY' -> 'LAST'  
x509store: clear error queue after calling X509\_LOOKUP\_load\_file()  
extconf.rb: simplify searching libraries logic  
Ruby/OpenSSL 2.0.4

SHIBATA Hiroshi (1):  
Fix typos

Vladimir Rybas (1):  
Fix documentation for OpenSSL::Cipher#final

nobu (2):  
openssl: fix broken openssl check  
openssl: fix broken openssl check

usa (1):  
Search SSL libraries by testing various filename patterns

#### **Revision 59081 - 06/14/2017 09:49 AM - rhe**

openssl: import v2.0.4

Import Ruby/OpenSSL 2.0.4. Only bug (and typo) fixes. The full commit history since v2.0.3 (imported at r57482) can be found at:

<https://github.com/ruby/openssl/compare/v2.0.3...v2.0.4>

This contains the fix for [Bug #11033].

---

Jun Aruga (1):  
Update .travis.yml and Dockerfile

Kazuki Yamaguchi (9):  
test/test\_pkey\_ec: do not use dummy 0 order  
test/test\_ssl: fix typo in test\_sysread\_and\_syswrite  
ssl: check return value of SSL\_set\_fd()  
Fix typos  
test/test\_x509store: skip OpenSSL::TestX509Store#test\_set\_errors  
tool/sync-with-trunk: 'LASZY' -> 'LAST'  
x509store: clear error queue after calling X509\_LOOKUP\_load\_file()  
extconf.rb: simplify searching libraries logic  
Ruby/OpenSSL 2.0.4

SHIBATA Hiroshi (1):  
Fix typos

Vladimir Rybas (1):  
Fix documentation for OpenSSL::Cipher#final

nobu (2):  
openssl: fix broken openssl check  
openssl: fix broken openssl check

usa (1):  
Search SSL libraries by testing various filename patterns

#### **Revision 59081 - 06/14/2017 09:49 AM - rhe**

openssl: import v2.0.4

Import Ruby/OpenSSL 2.0.4. Only bug (and typo) fixes. The full commit history since v2.0.3 (imported at r57482) can be found at:

<https://github.com/ruby/openssl/compare/v2.0.3...v2.0.4>

This contains the fix for [Bug #11033].

---

Jun Aruga (1):  
Update .travis.yml and Dockerfile

Kazuki Yamaguchi (9):  
test/test\_pkey\_ec: do not use dummy 0 order  
test/test\_ssl: fix typo in test\_sysread\_and\_syswrite  
ssl: check return value of SSL\_set\_fd()  
Fix typos  
test/test\_x509store: skip OpenSSL::TestX509Store#test\_set\_errors  
tool/sync-with-trunk: 'LAS' -> 'LAST'  
x509store: clear error queue after calling X509\_LOOKUP\_load\_file()  
extconf.rb: simplify searching libraries logic  
Ruby/OpenSSL 2.0.4

SHIBATA Hiroshi (1):  
Fix typos

Vladimir Rybas (1):  
Fix documentation for OpenSSL::Cipher#final

nobu (2):  
openssl: fix broken openssl check  
openssl: fix broken openssl check

usa (1):  
Search SSL libraries by testing various filename patterns

#### Revision 127c8a21 - 06/30/2017 12:42 PM - usa (Usaku NAKAMURA)

- ext/openssl/ossl\_x509store.c: clear error queue after calling X509\_LOOKUP\_load\_file()

X509\_LOOKUP\_load\_file(), which ends up calling  
X509\_load\_cert\_crl\_file()  
internally, may leave error entries in the queue even when it returns  
non-zero value (which indicates success).

This will be fixed by OpenSSL 1.1.1, but can be worked around by  
clearing the error queue ourselves.

Fixes: [Backport #11033]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby\_2\_3@59235 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

#### Revision 59235 - 06/30/2017 12:42 PM - usa (Usaku NAKAMURA)

- ext/openssl/ossl\_x509store.c: clear error queue after calling X509\_LOOKUP\_load\_file()

X509\_LOOKUP\_load\_file(), which ends up calling  
X509\_load\_cert\_crl\_file()  
internally, may leave error entries in the queue even when it returns  
non-zero value (which indicates success).

This will be fixed by OpenSSL 1.1.1, but can be worked around by  
clearing the error queue ourselves.

Fixes: [Backport #11033]

#### Revision b08e0ade - 08/03/2017 01:43 PM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 58742,59081: [Backport #11033]

```
Search SSL libraries by testing various filename patterns
```

```
* ext/openssl/extconf.rb (find_openssl_library): should search by more flexible  
method, especially for LibreSSL on Windows.
```

```
openssl: import v2.0.4
```

```
Import Ruby/OpenSSL 2.0.4. Only bug (and typo) fixes. The full commit  
history since v2.0.3 (imported at r57482) can be found at:
```

```
https://github.com/ruby/openssl/compare/v2.0.3...v2.0.4
```

```
This contains the fix for [Bug #11033].
```

```
-----
```

Jun Aruga (1):  
Update .travis.yml and Dockerfile

Kazuki Yamaguchi (9):  
test/test\_pkey\_ec: do not use dummy 0 order  
test/test\_ssl: fix typo in test\_sysread\_and\_syswrite  
ssl: check return value of SSL\_set\_fd()  
Fix typos  
test/test\_x509store: skip OpenSSL::TestX509Store#test\_set\_errors  
tool/sync-with-trunk: 'LASy' -> 'LAST'  
x509store: clear error queue after calling X509\_LOOKUP\_load\_file()  
extconf.rb: simplify searching libraries logic  
Ruby/OpenSSL 2.0.4

SHIBATA Hiroshi (1):  
Fix typos

Vladimir Rybas (1):  
Fix documentation for OpenSSL::Cipher#final

nobu (2):  
openssl: fix broken openssl check  
openssl: fix broken openssl check

usa (1):  
Search SSL libraries by testing various filename patterns

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby\_2\_4@59489 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

#### Revision 59489 - 08/03/2017 01:43 PM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 58742,59081: [Backport #11033]

Search SSL libraries by testing various filename patterns

\* ext/openssl/extconf.rb (find\_openssl\_library): should search by more flexible method, especially for LibreSSL on Windows.

openssl: import v2.0.4

Import Ruby/OpenSSL 2.0.4. Only bug (and typo) fixes. The full commit history since v2.0.3 (imported at r57482) can be found at:

<https://github.com/ruby/openssl/compare/v2.0.3...v2.0.4>

This contains the fix for [Bug #11033].

-----  
Jun Aruga (1):  
Update .travis.yml and Dockerfile

Kazuki Yamaguchi (9):  
test/test\_pkey\_ec: do not use dummy 0 order  
test/test\_ssl: fix typo in test\_sysread\_and\_syswrite  
ssl: check return value of SSL\_set\_fd()  
Fix typos  
test/test\_x509store: skip OpenSSL::TestX509Store#test\_set\_errors  
tool/sync-with-trunk: 'LASy' -> 'LAST'  
x509store: clear error queue after calling X509\_LOOKUP\_load\_file()  
extconf.rb: simplify searching libraries logic  
Ruby/OpenSSL 2.0.4

SHIBATA Hiroshi (1):  
Fix typos

Vladimir Rybas (1):  
Fix documentation for OpenSSL::Cipher#final

nobu (2):  
openssl: fix broken openssl check  
openssl: fix broken openssl check

usa (1):  
Search SSL libraries by testing various filename patterns

## History

---

### #1 - 04/04/2015 10:52 AM - tknerr (Torben Knerr)

Just double-checked whether it might be a RubyGems issue.

So I downgraded Rubygems to 2.4.4 (the version that ships with Ruby 2.0, where everything works), but still the same behaviour => not related to RubyGems, more likely a core issue

### #2 - 04/04/2015 12:50 PM - tknerr (Torben Knerr)

Seems to be a Windows specific issue. I did NOT experience this on my Ubuntu 14.04 box with Ruby 2.1.5p273.

### #3 - 09/13/2015 03:23 AM - zzak (Zachary Scott)

- Assignee set to openssl

### #4 - 06/14/2017 01:23 AM - Iristyle (Ethan Brown)

Also seeing this issue crop up in AppVeyor - specifically under Ruby 2.4 testing. We haven't seen this in previous Ruby builds (note that RubyInstaller changed how Ruby is built in the 2.4 installers).

Such an example is at <https://ci.appveyor.com/project/puppetlabs/puppet/build/4.1.0.5694/job/jkk5rbf49ou92yc8>

### #5 - 06/14/2017 04:57 AM - rhenium (Kazuki Yamaguchi)

- Backport changed from 2.0.0: UNKNOWN, 2.1: UNKNOWN, 2.2: UNKNOWN to 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: REQUIRED

[Bug #8386] is unrelated to this. The X509\_load\_cert\_crl\_file() function called from OpenSSL::X509::Store#add\_file is leaking error in the OpenSSL error queue. This is fixed in OpenSSL's master branch a while ago.

<https://github.com/openssl/openssl/commit/c0452248ea1a59a41023a4765ef7d9825e80a62b>

I'm adding a workaround to ruby/openssl for previous versions of OpenSSL.

### #6 - 06/14/2017 09:49 AM - Anonymous

- Status changed from Open to Closed

Applied in changeset [trunk|r59081](#).

---

openssl: import v2.0.4

Import Ruby/OpenSSL 2.0.4. Only bug (and typo) fixes. The full commit history since v2.0.3 (imported at r57482) can be found at:

<https://github.com/ruby/openssl/compare/v2.0.3...v2.0.4>

This contains the fix for [Bug #11033].

---

Jun Aruga (1):

Update .travis.yml and Dockerfile

Kazuki Yamaguchi (9):

test/test\_pkey\_ec: do not use dummy 0 order

test/test\_ssl: fix typo in test\_sysread\_and\_syswrite

ssl: check return value of SSL\_set\_fd()

Fix typos

test/test\_x509store: skip OpenSSL::TestX509Store#test\_set\_errors

tool/sync-with-trunk: 'LASy' -> 'LAST'

x509store: clear error queue after calling X509\_LOOKUP\_load\_file()

extconf.rb: simplify searching libraries logic

Ruby/OpenSSL 2.0.4

SHIBATA Hiroshi (1):

Fix typos

Vladimir Rybas (1):

Fix documentation for OpenSSL::Cipher#final

nobu (2):

openssl: fix broken openssl check

openssl: fix broken openssl check

usa (1):  
Search SSL libraries by testing various filename patterns

**#7 - 06/19/2017 01:41 PM - Iristyle (Ethan Brown)**

This ticket is marked as closed - but I only see OpenSSL 2.0.4 in the trunk branch on GitHub per <https://github.com/ruby/ruby/commit/9eb92007b6c2ab2b1fe031c3681144e51e2bcc14>.

I do not see the updated OpenSSL in the 2.4 branch at [https://github.com/ruby/ruby/tree/ruby\\_2\\_4/ext/openssl](https://github.com/ruby/ruby/tree/ruby_2_4/ext/openssl)

This is becoming a fairly critical problem for our automated testing in AppVeyor. Will the fix be backported to 2.4 as the ticket originally states?

Thanks!

**#8 - 06/19/2017 03:26 PM - rhenium (Kazuki Yamaguchi)**

- *File for-ruby-2-3-backport-805882145bde.patch added*

Now that openssl is a default gem, you can just update it before running 'bundle install':

```
gem install openssl -v '~> 2.0.4'
```

Anyway, I would like that patch to go to earlier versions of Ruby, too.

2.4 stable maintainer: Can you backport r59081? (I guess r58742 needs to be applied first.)

2.3 stable maintainer: I've attached a patch that applies on top of ruby\_2\_3.

**#9 - 06/19/2017 03:37 PM - usa (Usaku NAKAMURA)**

- *Backport changed from 2.2: UNKNOWN, 2.3: UNKNOWN, 2.4: REQUIRED to 2.2: UNKNOWN, 2.3: REQUIRED, 2.4: REQUIRED*

rhenium (Kazuki Yamaguchi) wrote:

2.3 stable maintainer: I've attached a patch that applies on top of ruby\_2\_3.

Oh, thank you!  
I'll check and merge it later.

**#10 - 06/23/2017 09:28 PM - Iristyle (Ethan Brown)**

Thank you [rhenium \(Kazuki Yamaguchi\)](#) - I had not realized that openssl is packaged differently for Ruby 2.4

I have a pull request open to Puppet to address the problem by building / installing the openssl gem - <https://github.com/puppetlabs/puppet/pull/6011>. It adds roughly 3 minutes to the time it takes to execute Ruby 2.4 based jobs.

It would be nice if precompiled platform-specific Windows gems were available, which would eliminate the additional 3 minute wait, but this will work for now.

Thanks!

**#11 - 06/30/2017 12:43 PM - usa (Usaku NAKAMURA)**

- *Backport changed from 2.2: UNKNOWN, 2.3: REQUIRED, 2.4: REQUIRED to 2.2: UNKNOWN, 2.3: DONE, 2.4: REQUIRED*

**#12 - 08/03/2017 01:43 PM - nagachika (Tomoyuki Chikanaga)**

- *Backport changed from 2.2: UNKNOWN, 2.3: DONE, 2.4: REQUIRED to 2.2: UNKNOWN, 2.3: DONE, 2.4: DONE*

ruby\_2\_4 r59489 merged revision(s) 58742,59081.

**#13 - 02/17/2018 05:58 AM - nobu (Nobuyoshi Nakada)**

- *Description updated*

**Files**

---

for-ruby-2-3-backport-805882145bde.patch	2.89 KB	06/19/2017	rhenium (Kazuki Yamaguchi)
--	---------	------------	----------------------------