Ruby - Bug #15644

ThreadsWait problems with Thread#report_on_exception

03/06/2019 01:20 PM - kke (Kimmo Lehto)

Status:	Closed		
Priority:	Normal		
Assignee:	keiju (Keiju Ishitsuka)		
Target version:			
ruby -v:	ruby 2.6.1p33 (2019-01-30 revision 66950) [x86_64-darwin18]	**Backport:**	2.4: UNKNOWN, 2.5: UNKNOWN, 2.6: UNKNOWN

Description

Using ThreadsWait with Thread.report_on_exception is confusing.

ThreadsWait spawns a new thread for waiting on a thread:

```
# thwait.rb:87
def join_nowait(*threads)
  threads.flatten!
  @threads.concat threads
  for th in threads
    Thread.start(th) do |t|
      begin
        t.join
      ensure
        @wait_queue.push t
      end
    end
  end
end
```

The t.join in ThreadsWait will re-raise the exceptions that happen in the thread being waited on.

If the thread being waited on was using report_on_exception = false, the wait thread will report the exception and the report_on_exception = false effectively did nothing, as you still got an exception report.

If the thread was using report_on_exception = true, both threads will report the exception, so you get it twice.

I think this could be fixed by always setting report_on_exception = false for the wait thread.

Example 1

```
require 'thwait'

thread = Thread.new do
  Thread.current.report_on_exception = false
  sleep 1
  raise "Foo"
end

ThreadsWait.all_waits(thread) do |terminated_thread|
  puts "Thread #{terminated_thread} terminated"
end
```

Expected result

No exception reports

Actual result

The wait thread will report the exception:

```
#<Thread:0x00007fa57d092d68@/Users/user/.rbenv/versions/2.6.1/lib/ruby/2.6.0/thwait.rb:91 run> ter
minated with exception (report_on_exception is true):
```

Example 2

```
require 'thwait'

thread = Thread.new do
  sleep 1
  raise "Foo"
end

ThreadsWait.all_waits(thread) do |terminated_thread|
  puts "Thread #{terminated_thread} terminated"
end
```

Expected result

One exception report

Actual result

Two exception reports:

```
#<Thread:0x00007f9f83053320@test.rb:3 run> terminated with exception (report_on_exception is true)
:
#<Thread:0x00007f9f830530a0@/Users/user/.rbenv/versions/2.6.1/lib/ruby/2.6.0/thwait.rb:91 run> ter
minated with exception (report_on_exception is true):
Traceback (most recent call last):
```

History

#1 - 03/06/2019 02:23 PM - kke (Kimmo Lehto)

- Description updated

#2 - 03/06/2019 02:26 PM - kke (Kimmo Lehto)

- Description updated

#3 - 03/13/2019 12:04 PM - kke (Kimmo Lehto)

- Description updated

#4 - 10/17/2019 06:49 PM - jeremyevans0 (Jeremy Evans)

- Status changed from Open to Assigned

- Assignee set to keiju (Keiju Ishitsuka)

I agree this is a bug that should be fixed. I have submitted a pull request to fix it: https://github.com/ruby/thwait/pull/1

#5 - 06/08/2022 03:44 PM - jeremyevans0 (Jeremy Evans)

- Status changed from Assigned to Closed