Python in docker – RuntimeError: can't start new thread

Asked 1 year, 9 months ago Modified 1 year, 9 months ago Viewed 19k times

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I'm unable to debug one error myself. I'm running python 3.8.12 inside docker image on Fedora release 35 (Thirty Five) and I'm unable to spawn threads from python. It's required for `boto3` transfer to run in parallel and it uses `concurrent.features` to do so.

The simplest example which replicates my issue without any dependencies is (copied from python docs)

```
import concurrent.futures
import urllib.request

URLS = ['http://www.foxnews.com/',
        'http://www.cnn.com/',
        'http://europe.wsj.com/',
        'http://www.bbc.co.uk/',
        'http://some-made-up-domain.com/']

def load_url(url, timeout):
    with urllib.request.urlopen(url, timeout=timeout) as conn:
        return conn.read()

with concurrent.futures.ThreadPoolExecutor(max_workers=5) as executor:
    future_to_url = {executor.submit(load_url, url, 60): url for url in URLS}
    for future in concurrent.futures.as_completed(future_to_url):
        url = future_to_url[future]
        try:
            data = future.result()
        except Exception as exc:
            pass
```

sadly output of these lines is

```
Traceback (most recent call last):
  File "<stdin>", line 2, in <module>
  File "<stdin>", line 2, in <dictcomp>
  File "/usr/lib64/python3.8/concurrent/futures/thread.py", line 188, in submit
    self._adjust_thread_count()
  File "/usr/lib64/python3.8/concurrent/futures/thread.py", line 213, in
_adjust_thread_count
    t.start()
  File "/usr/lib64/python3.8/threading.py", line 852, in start
```

```
    _start_new_thread(self._bootstrap, ())
RuntimeError: can't start new thread
```

That's all I have. Is there place where should I look? I've already checked `ulimit` which says `unlimited`. I'm kind of despair where to look or what to change to debug this issue.

python multithreading docker concurrency

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asked Nov 23, 2021 at 20:23
Kryštof Řeháček
1,985 ● 1 ● 16 ● 28

1 Answer

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Solution to this problem was to upgrade docker from version 18.06.1-ce to 20.10.7.

Why?

> This is because the default seccomp profile of Docker 20.10.9 is not adjusted to support the clone() syscall wrapper of glibc 2.34 adopted in Ubuntu 21.10 and Fedora 35.

Source: ubuntu:21.10 and fedora:35 do not work on the latest Docker (20.10.9)

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answered Nov 24, 2021 at 8:52
Kryštof Řeháček
1,985 ● 1 ● 16 ● 28

3 To anyone who saw this in a bitbucket pipeline self hosted runner which run a dind image, this fix applies too. Upgrading to docker:20.10.24-dind did the trick. – AP22 Apr 13 at 5:06

2 Same issue on gitlab pipelines, 20.10.24 verison fixed my issue. Thank you for your comment! – Charis Moutafidis Jun 19 at 9:43

3 This is a great advice. In my case simply downgrading the base image from *bookworm* to *bullseye* solved the issue. That is, glibc of Debian 11 must be still compatible with Docker *19.03.13*. Thanks! – Yuri Pozniak Jul 19 at 21:45