(Python) webserver benchmarking

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Purpose

- How fast is my app?

Benchmarking tool

- WRK
  - Written in C
  - -t threads
  - -c connections
  - -d duration
  - -s lua scriptable
    - Json output https://github.com/wg/wrk/pull/361
    - Multiple paths
      https://github.com/tivvit/shush-benchmarks/blob/master/speed-tests/wrk/urls.lua
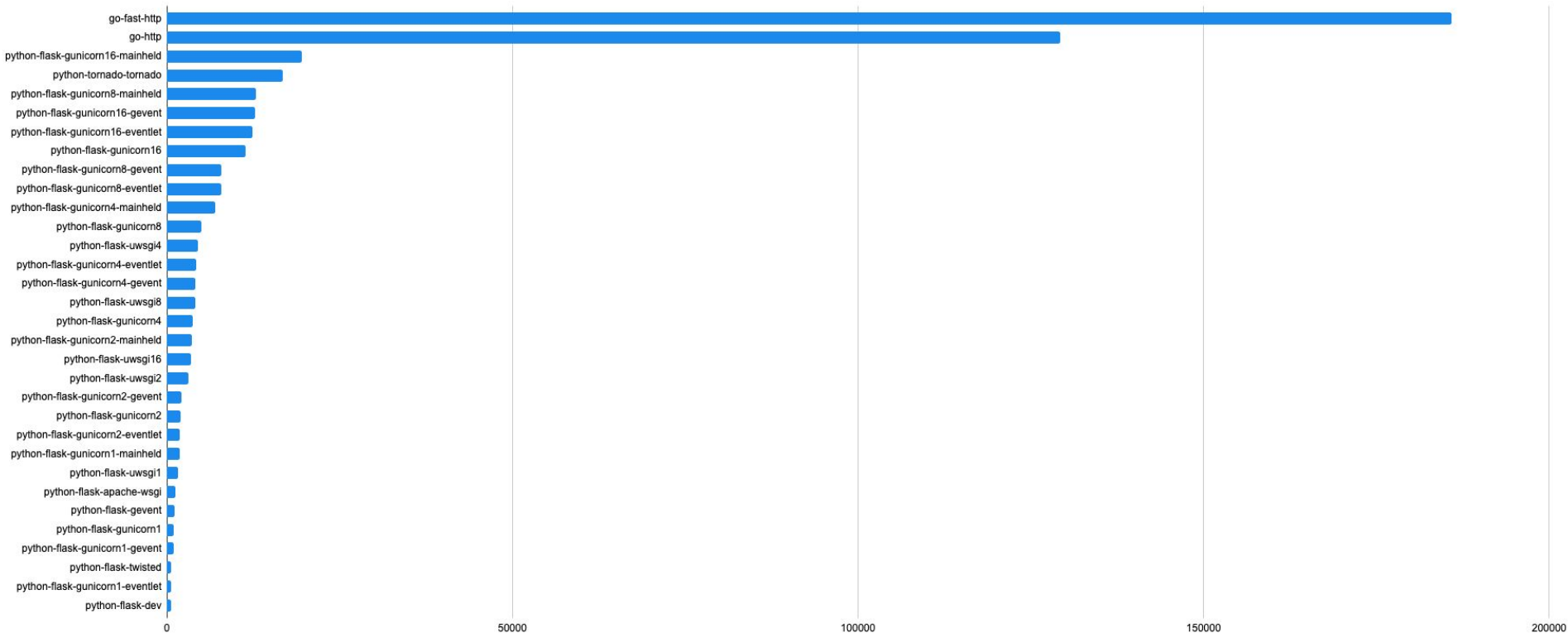- Others
  - Siege
  - Wrk2

Benchmarking env

- OS virtual machine
  - 16 CPU
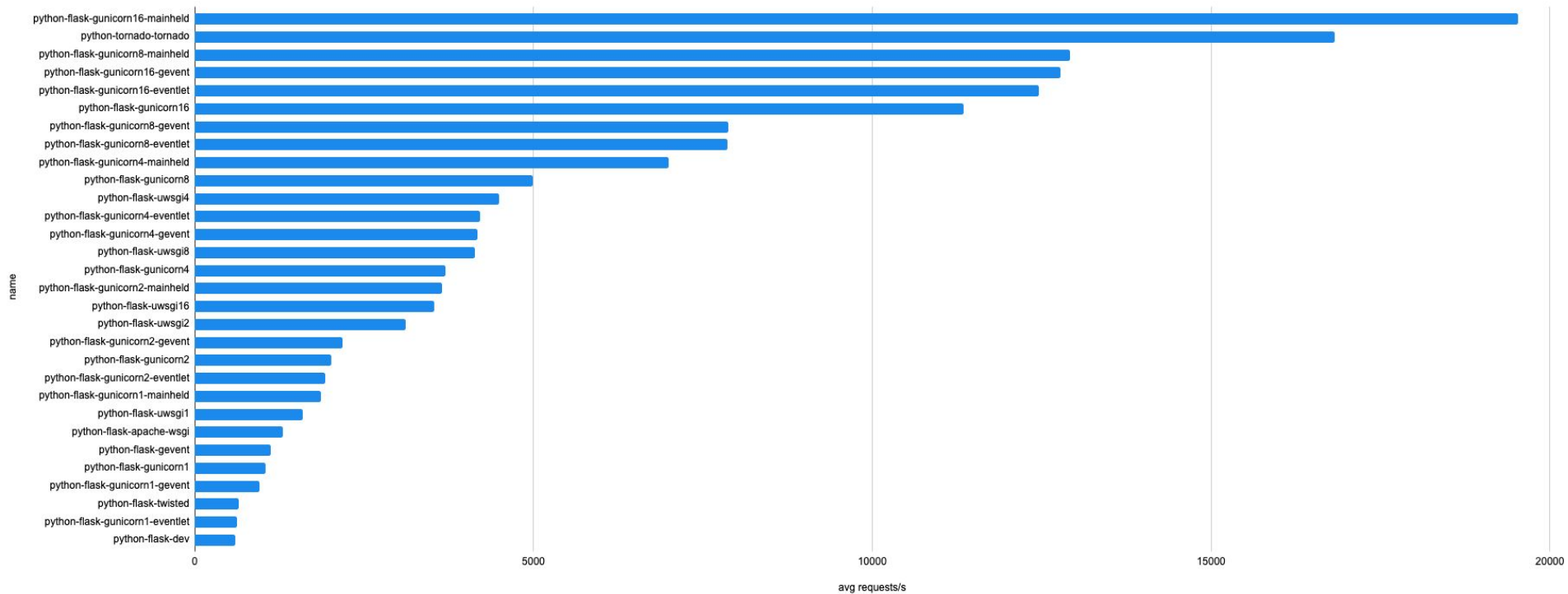 - 8 GB RAM
- Docker

Frameworks & servers

- Python
  - Flask
    - Dev
    - Gevent
    - Uwsgi
    - Apache mod_wsgi
    - Twisted
    - Gunicorn
      - Sync, Eventlet, Mainheld, Gevent
  - Tornado
- Golang
  - Http
  - Fasthttp

Results

Results

python-flask-gunicorn16-mainheld
python-tornado-tornado
python-flask-gunicorn8-mainheld
python-flask-gunicorn16-gevent
python-flask-gunicorn16-eventlet
python-flask-gunicorn16
python-flask-gunicorn8-gevent
python-flask-gunicorn8-eventlet
python-flask-gunicorn4-mainheld
python-flask-gunicorn8
python-flask-uwsgi4
python-flask-gunicorn4-eventlet
python-flask-gunicorn4-gevent
python-flask-uwsgi8
python-flask-gunicorn4
python-flask-gunicorn2-mainheld
python-flask-uwsgi16
python-flask-uwsgi2
python-flask-gunicorn2-gevent
python-flask-gunicorn2
python-flask-gunicorn2-eventlet
python-flask-gunicorn1-mainheld
python-flask-uwsgi1
python-flask-apache-wsgi
python-flask-gevent
python-flask-gunicorn1
python-flask-gunicorn1-gevent
python-flask-twisted
python-flask-gunicorn1-eventlet
python-flask-dev

name

avg requests/s

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References

- https://github.com/tivvit/shush-benchmarks
- https://github.com/the-benchmarker/web-frameworks
- https://fgimian.github.io/blog/2018/06/05/python-api-framework-benchmarks/
- https://www.appdynamics.com/blog/engineering/a-performance-analysis-of-python-wsgi-servers-part-2/
- https://klen.github.io/py-frameworks-bench/#results