

Little things that PyPy makes possible

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Python

- Python is great
- Python is a glue language
- Python is slow

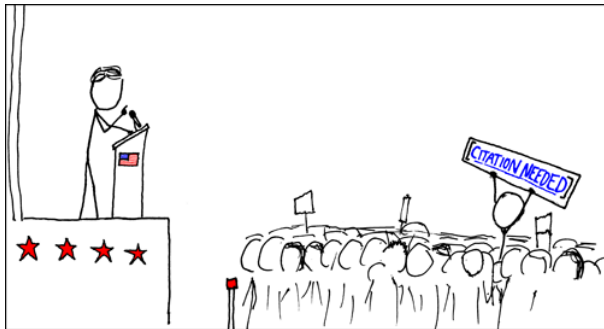
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Is python slow?



- <http://blog.bossylobster.com/2011/08/lesson-v8-can-teach-python-and-other.html>
- PyPy **29 wins**, Node.js (V8) **20 wins**, one tie

What is PyPy?

- PyPy is many things
- **just another python implementation**

`pypy x.py`

What is PyPy (2)?

- Comes with a JIT compiler
- Stackless
- **fast**

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How fast is PyPy?

PyPy 1.6 - status

- Released on 16th of August
- Python 2.7.1
- The most compatible alternative to CPython
- Most programs just work
- (C extensions might not)

PyPy 1.6 - status (2)

- numpy (in progress)
- ctypes (fast)
- stable and compatible

PyPy 1.6 - what you can do

- try using on your own programs
- a lot of libraries just work
- your programs need either no or minimal changes

Real world use case (1)

- LWN's gitdm

- ▶ <http://lwn.net/Articles/442268/>
- ▶ data mining tool
- ▶ reads the output of `git log`
- ▶ generate kernel development statistics

- Performance

- ▶ CPython: 63 seconds
- ▶ PyPy: **21 seconds**

lwn.net

[...] PyPy is ready for prime time; it implements the (Python 2.x) language faithfully, and it is fast.

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- **MyHDL:** VHDL-like language written in Python
 - ▶ <http://www.myhdl.org/doku.php/performance>
 - ▶ (now) competitive with “real world” VHDL and Verilog simulators

`myhdl.org`

[...] the results are spectacular. By simply using a different interpreter, our simulations run 6 to 12 times faster.

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Real world use case (3)

- Quora
- <http://b.qr.ae/q2Rer2>

quora.com

[...] benchmarking the site internally has shown a 2x speed increase in page load times, and we've already heard from users that the site feels faster.

Real world use case (4)

- pypy, django, piston, gunicorn, psychopg2-ct (ctypes implementation of psychopg2), thrift (without the fastbinary module), cassandra, postgresql, ELB (amazon load balancer) to nginx with 3-10 worker processes
- cpython2.6 - **12mb/s** - CPU LIMITED
- pypy - **100mb/s** - NETWORK LIMITED
- <http://bit.ly/mT2dgQ>

figure.it

[...] Give your pypy lots of memory. Give your pypy lots of time to warm up. You won't be sorry.

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Real world use case (5)

- Your application!

How you can help?

- Try it on your application
 - ▶ if it's slow, we want to know!
 - ▶ if it does not work, too :-)
 - ▶ if it works and it's fast, that as well
- Tell people about PyPy
- Contribute to PyPy! (it's not **that** hard :-))
- Donate (py3k, numpy)

Things you can do with Python using PyPy

- real time video processing
- software-rendered games
- this is just the beginning!

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Contacts, Q/A

- <http://pypy.org>
- blog: <http://morepypy.blogspot.com>
- mailing list: pypy-dev@python.org
- IRC: #pypy on freenode



Shameless ad

- Want your software to run faster?
- We can make it happen!
- fijall@gmail.com