

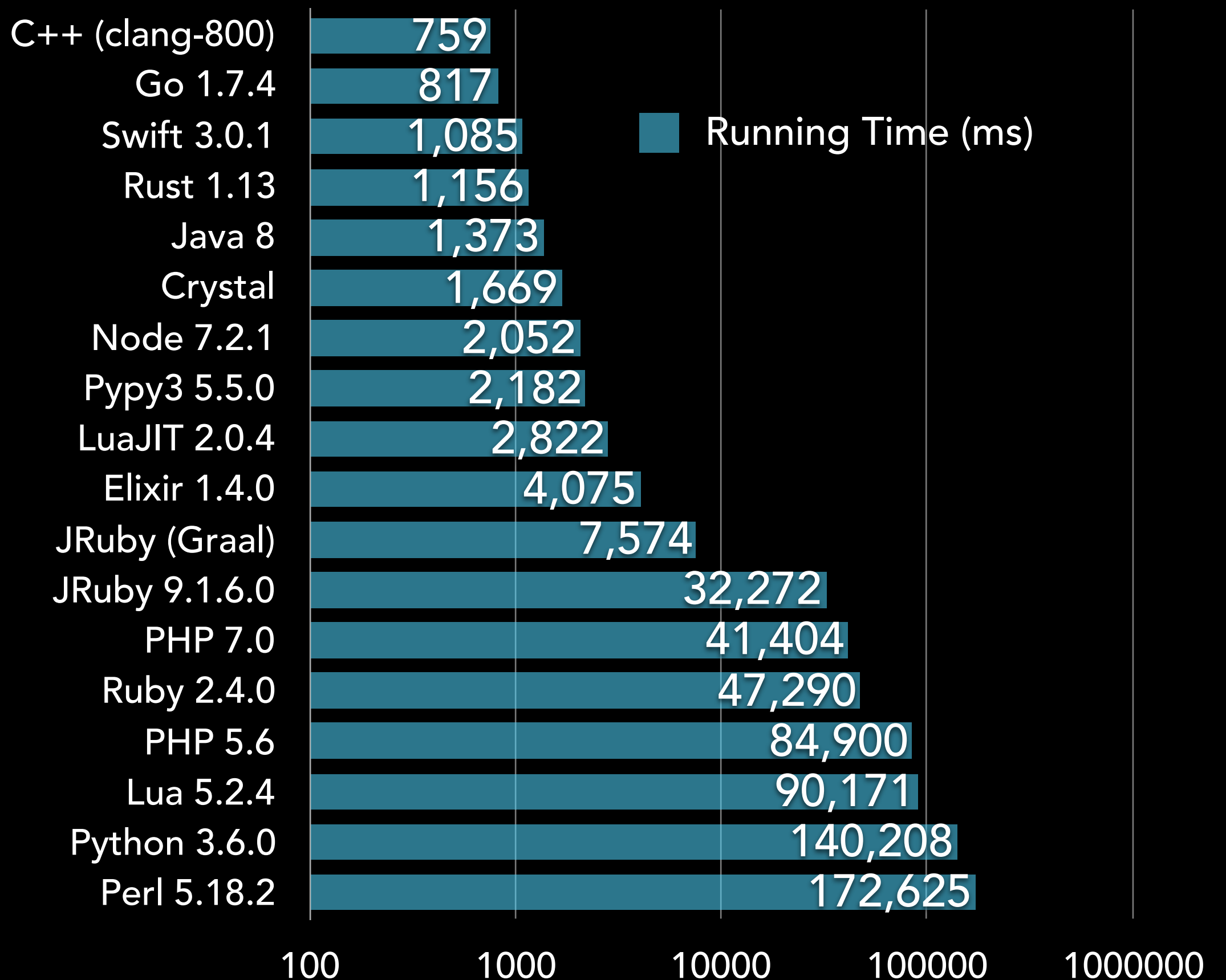
DELTON DING @东仙队长

MIDORI FROM SCRATCH



IS RUBY SLOW?

HEAP SORT (10⁷ ELEMENTS)



Use code provided in: <http://codeforces.com/blog/entry/10024>

RUBY IS SLOW,
BUT NOT THAT SLOW.

Sinatra Benchmark

Web Server	Basic	Views (Slim)	Views + DB (Sequel)
WEBrick	273 req/s	116 req/s	111 req/s
Thin	1597 req/s	174 req/s	139 req/s
Unicorn	605 req/s	121 req/s	121 req/s

MOST PERFORMANCE PROBLEMS
WERE CAUSED BY I/O BLOCKING.

MIDDLE AGES

JAVASCRIPT-STYLE RUBY

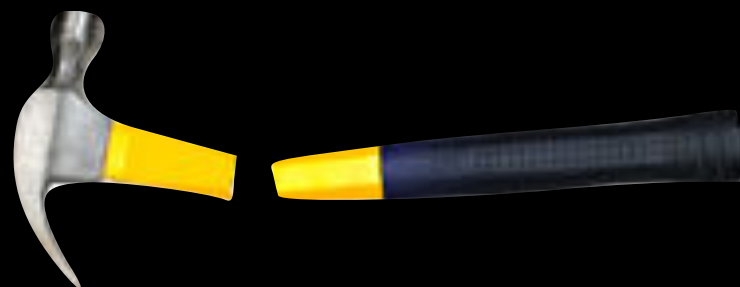
EVENTMACHINE

V.S.

NIO4R

	EVENTMACHINE	NIO4R
MRI	SCRATCH	LIBEV
JRUBY	SCRATCH	JAVA NIO
FEATURE	FULL-FEATURE	IO SELECTOR ONLY
EXTENSION	PLENTIFUL	RARE
COMMUNITY	ACTIVE?	ACTIVE

	EVENTMACHINE	NIO4R
MRI	SCRATCH	LIBEV
JRUBY	SCRATCH	JAVA NIO
FEATURE	FULL-FEATURE	IO SELECTOR ONLY
EXTENSION	PLENTIFUL	RARE
COMMUNITY	ACTIVE?	ACTIVE



```
def get(url, &callback)
  http = EM::HttpRequest.new(url).get
  http.callback do
    callback.call(http.response)
  end
end

EM.run do
  get('https://google.com/') do |result|
    puts result
    EM.stop
  end
  puts 'Requesting...'
end
```

```
pan.pourWater(function() {  
  range.bringToBoil(function() {  
    range.lowerHeat(function() {  
      pan.addRice(function() {  
        setTimeout(function() {  
          range.turnOff();  
          serve();  
        }, 15 * 60 * 1000);  
      });  
    });  
  });  
});
```



pyramid of doom

mozilla

INDUSTRIAL AGES

FIBER-OPTIMIZED RUBY

```
require "em-synchrony"
require "em-synchrony/mysql2"

EventMachine.synchrony do
  db = EventMachine::Synchrony::ConnectionPool.new(size: 2) do
    Mysql2::EM::Client.new
  end

  multi = EventMachine::Synchrony::Multi.new
  multi.add :a, db.aquery("select sleep(1)")
  multi.add :b, db.aquery("select sleep(1)")
  res = multi.perform

  p "Look ma, no callbacks, and parallel MySQL requests!"
  p res

  EventMachine.stop
end
```

<https://github.com/igrigorik/em-synchrony>

MODERN AGES

WHAT MIDORI IS?

- Event Adapter
- Lightweight Design
- Scalable Structure

CURRENT STATUS

- EventMachine -> nio4r
- HTTP/FTP Request Support
- Redis Support (Including Ohm)
- PostgreSQL, MySQL Support (Including Sequel)

Benchmark

Web Server	Basic	DB (Sequel)
Thin	2124 req/s	134 req/s
Midori	6209 req/s	3587 req/s

FUTURE AGES

FUTURE PLANS

- HTTP/2 Support
- Better macOS Support
- Support more Gems
- Fixing Lots of Bugs

DEMO