THIS IS

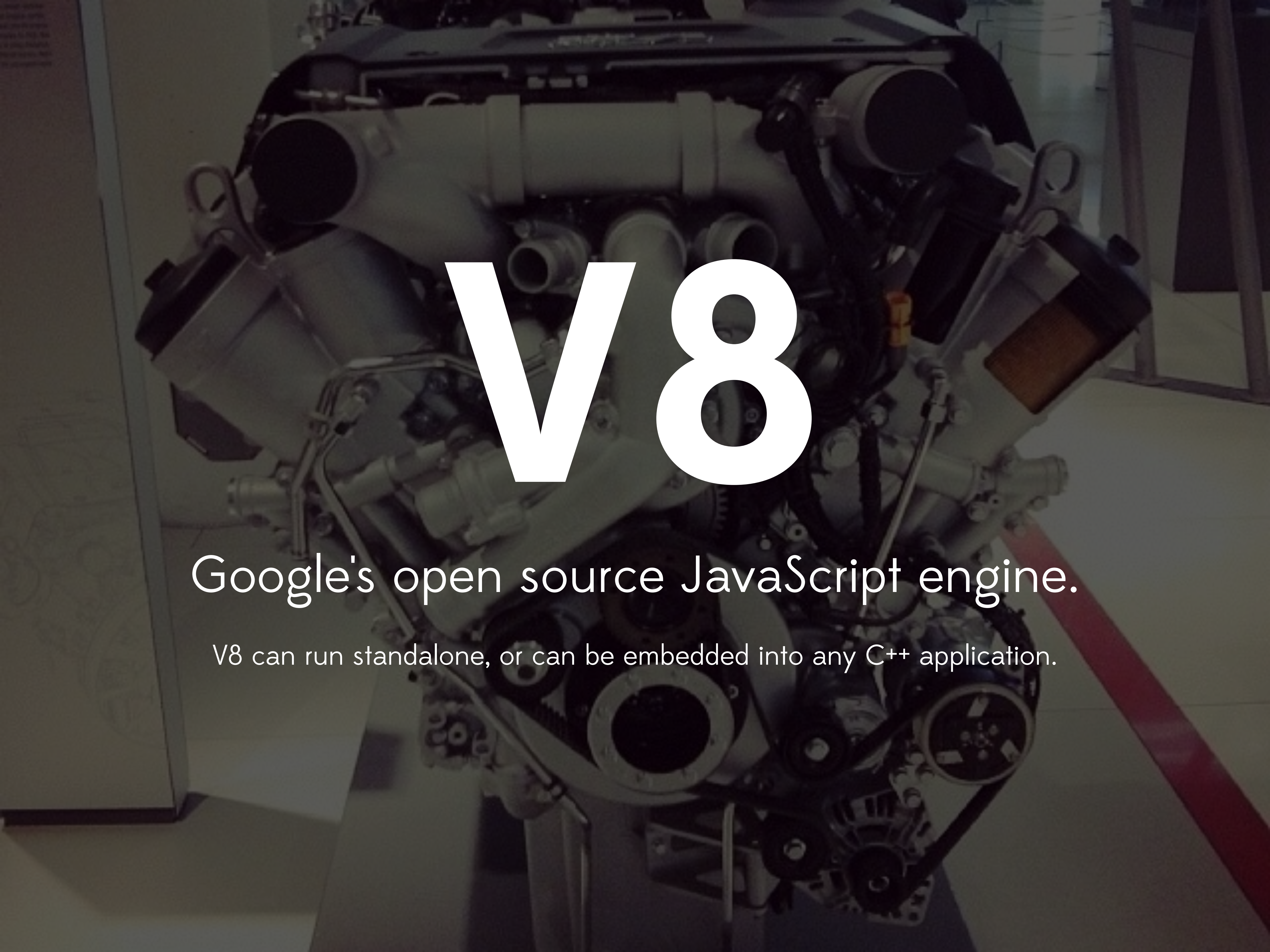
Node.JS

ceo@likeastore.com

http://beletsky.net
http://twitter.com/alexbeletsky

"I was concerned about the ability to program advanced push features into the website like I had seen in Gmail"

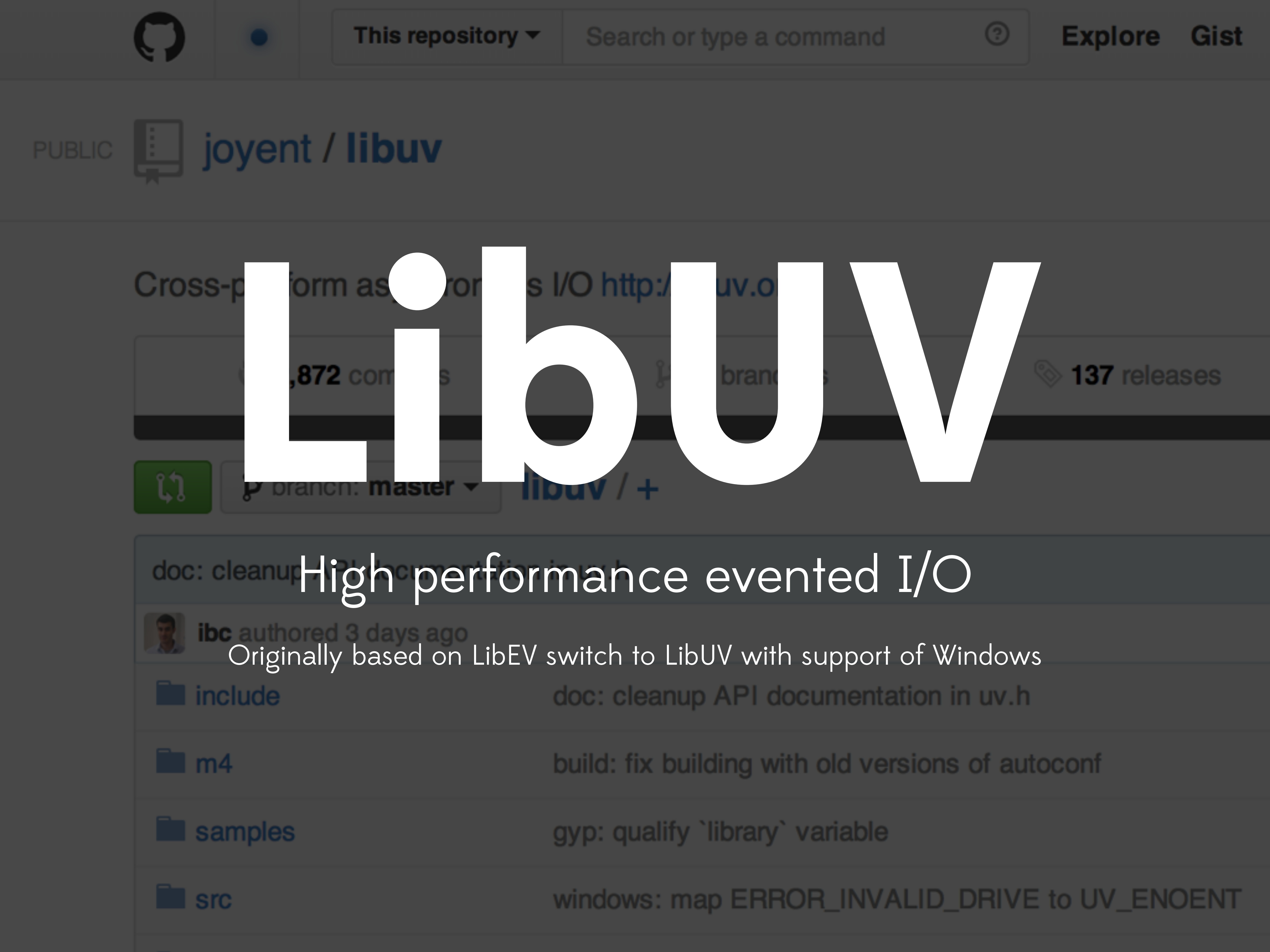
Ryan Dahl
the creator of Node.js



V8

Google's open source JavaScript engine.

V8 can run standalone, or can be embedded into any C++ application.



include doc: cleanup API documentation in uv.h
m4 build: fix building with old versions of autoconf
samples gyp: qualify `library` variable
src windows: map ERROR_INVALID_DRIVE to UV_ENOENT

ibc authored 3 days ago

LibUV

High performance evented I/O

Originally based on LibEV switch to LibUV with support of Windows

JavaScript

Dynamic, prototype-based language

Highly popular due to browser programming

```
        db.collections.save(collection, callback);
    }

    function notifyFollowers(collection, callback) {
        if (collection.public) {
            notifier('collection created', user, {collection: collection._id});
        }

        callback(null, collection);
    }
}

function remove(user, collection, callback) {
    if (!collection) {
        return callback({message: 'missing collection id', status: 400});
    }

    collection = new ObjectId(collection);

    async.waterfall([
        removeCollectionFromItems,
        removeCollection
    ], callback);

    function removeCollectionFromItems(callback) {
        db.items.findAndModify({
            query: {user: user.email, collections: {$elemMatch: {id: collection}}},
            update: {$pull: {collections: {id: collection}}}
        }, function (err) {
            callback(err);
        });
    }

    function removeCollection(callback) {
        db.collections.remove({_id: collection}, callback);
    }
```

Ryan Dahl: Node.js, Evented I/O for V8 Javascript

Ryan Dahl will present on his uber-awesome **node.js** server side JavaScript platform.

Here's a short biography:
Ryan is an American freelance programmer living in of Germany. His work invariably involves interruptible parsers, event loops, and response time histograms. He is the creator of several open source projects including the Ebb web server and the "EY" load balancer module for Nginx.

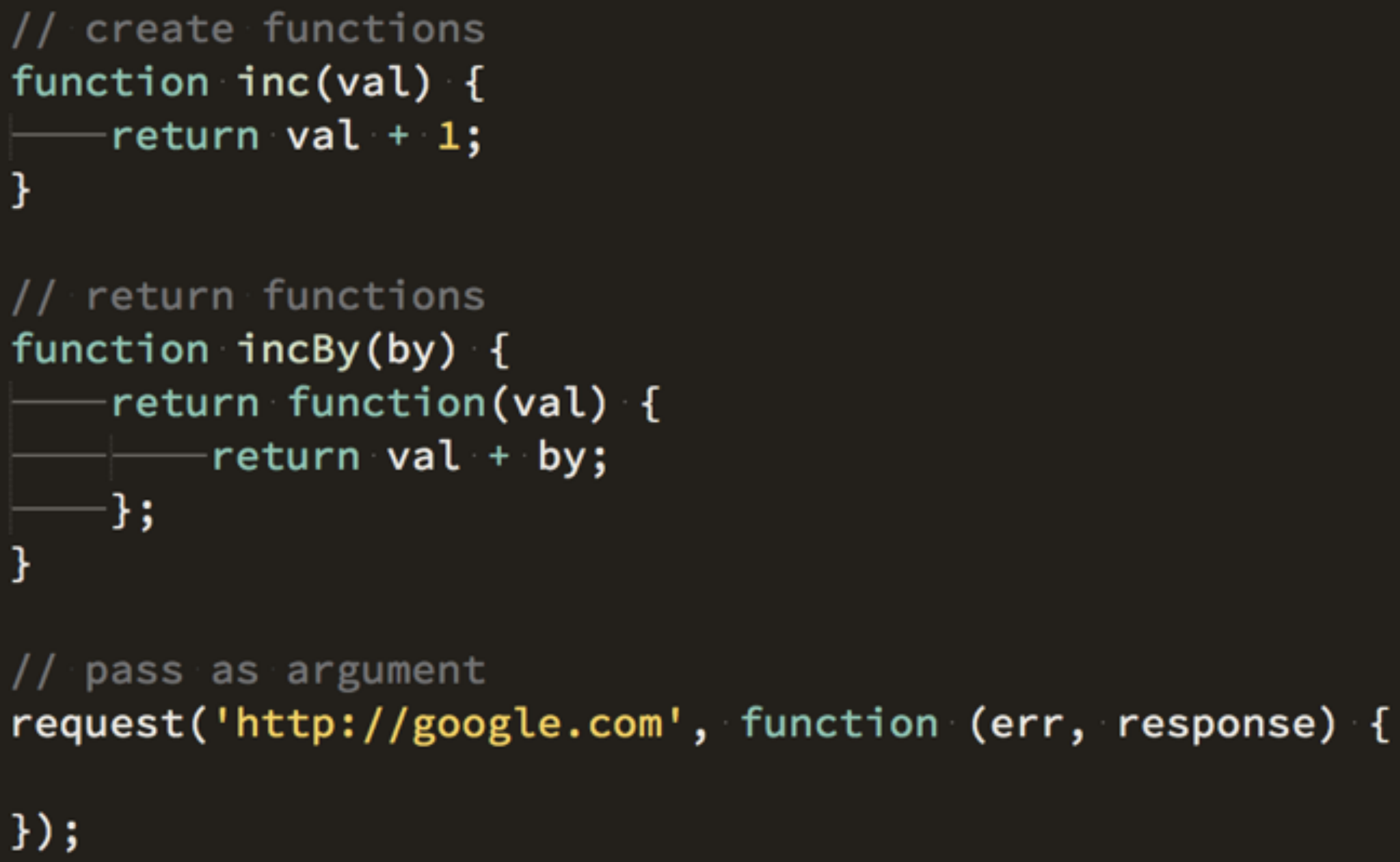
And this what he will be talking about:

Node.js, Evented I/O for V8 Javascript

http://jsconf.eu/2009/speakers.html

Why JavaScript?

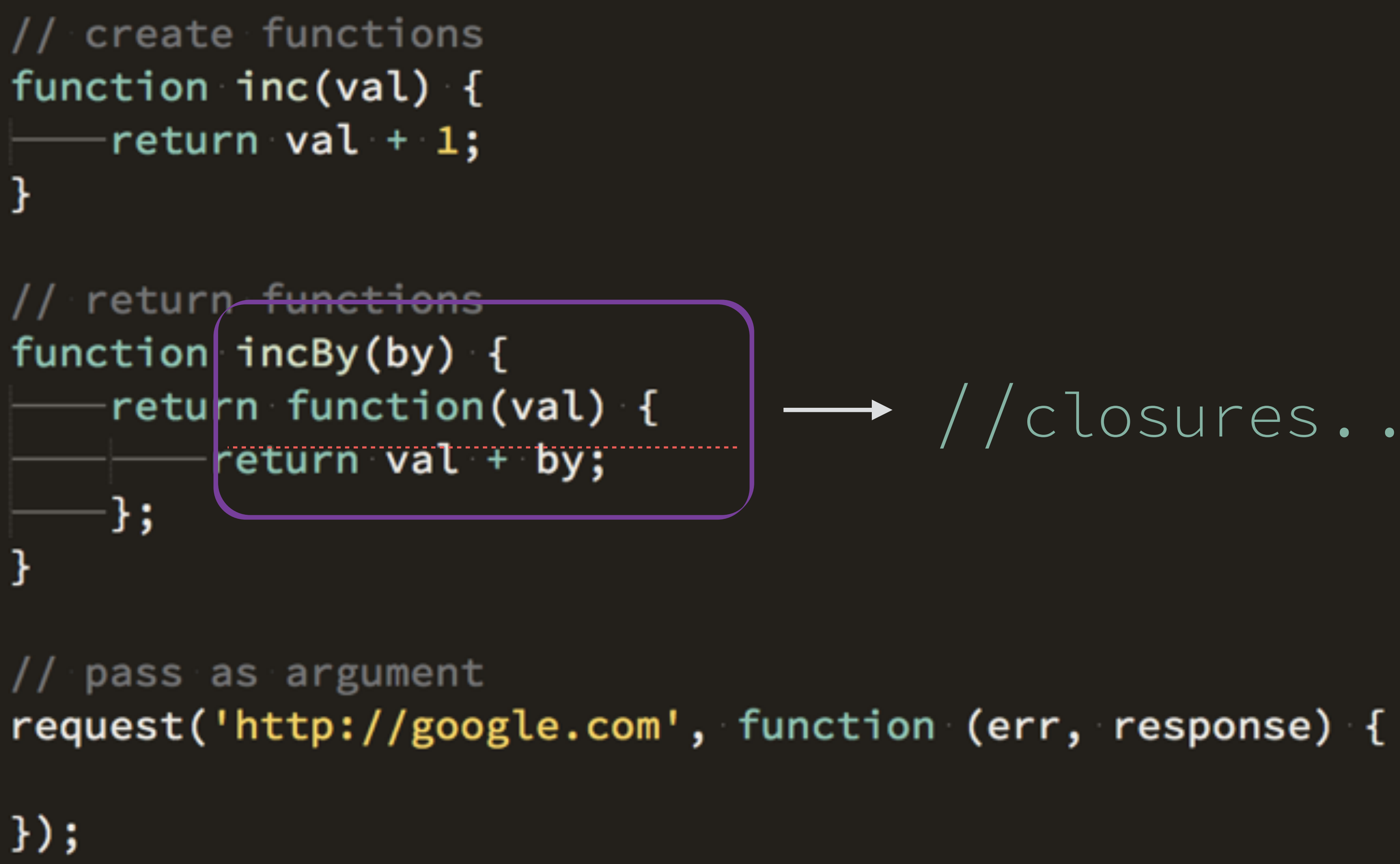
functions as first-class citizen



```javascript
// create functions
function inc(val) {
    return val + 1;
}

// return functions
function incBy(by) {
    return function(val) {
        return val + by;
    };
}

// pass as argument
request('http://google.com', function (err, response) {

});
```

Why JavaScript?

function as first-class citizen



```
// create functions
function inc(val) {
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// return functions
function incBy(by) {
    return function(val) {
        return val + by;
    };
}

// pass as argument
request('http://google.com', function (err, response) {

});
```

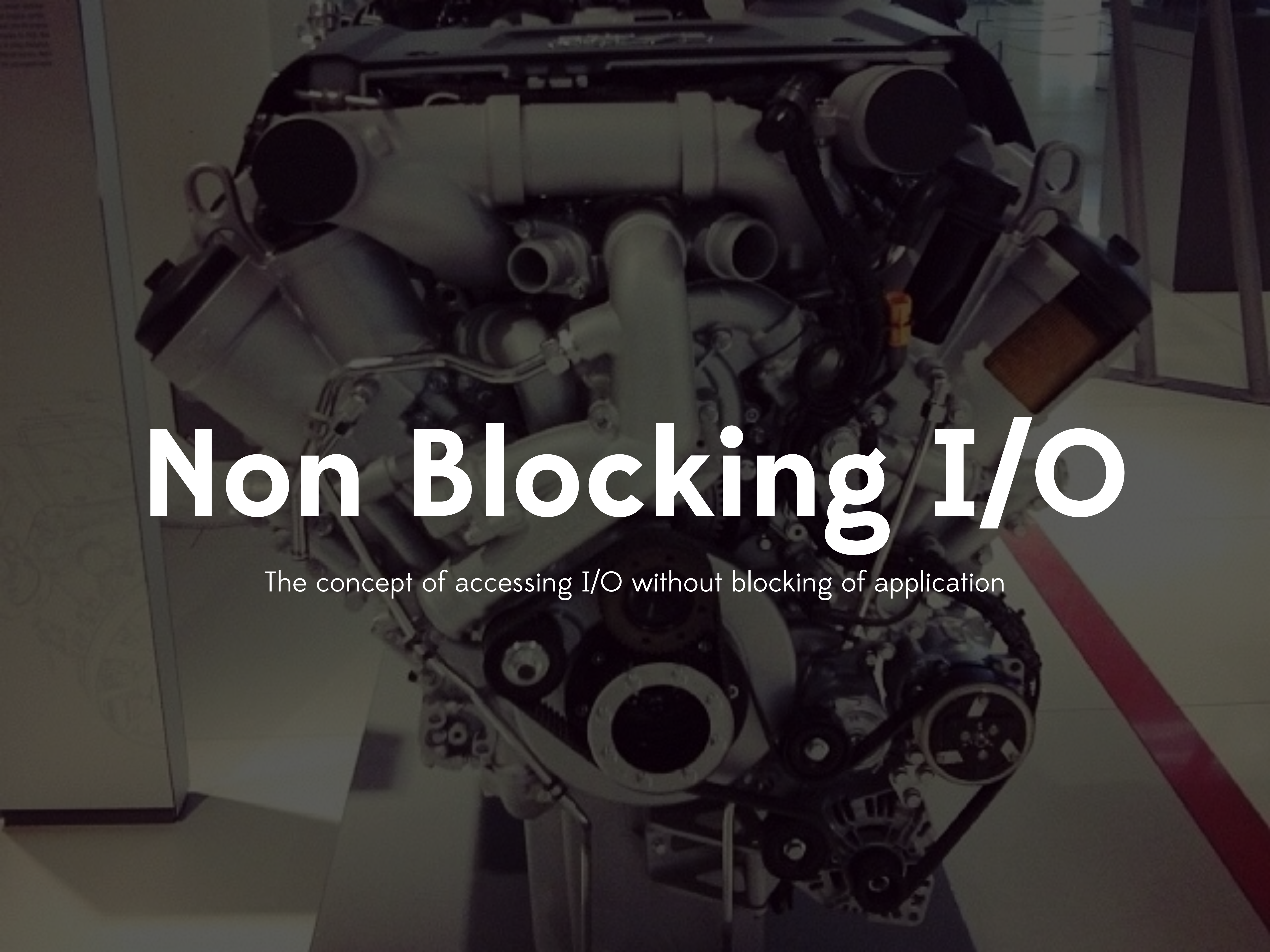
//closures..

JavaScript designed for event-oriented systems

There was a natural fit V8 + LibEV + JavaScript

“Node.js is a platform for easily building scalable network applications. Node.js uses an event-driven (single threaded), non-blocking I/O model that makes it lightweight and efficient…”

http://nodejs.org



Non Blocking I/O

The concept of accessing I/O without blocking of application

Line to ATM is blocking I/O

https://www.flckr.com/photos/papyrist/

Mac’s Drive is non-blocking I/O

```javascript
var fs = require('fs');

fs.readFile('/etc/hosts', function (err, buffer) {
    console.log('pong');
});

console.log('ping');
```

execution started from first line..

```
var fs = require('fs');

fs.readFile('/etc/hosts', function (err, buffer) {
    console.log('pong');
});

console.log('ping');
```

Output:

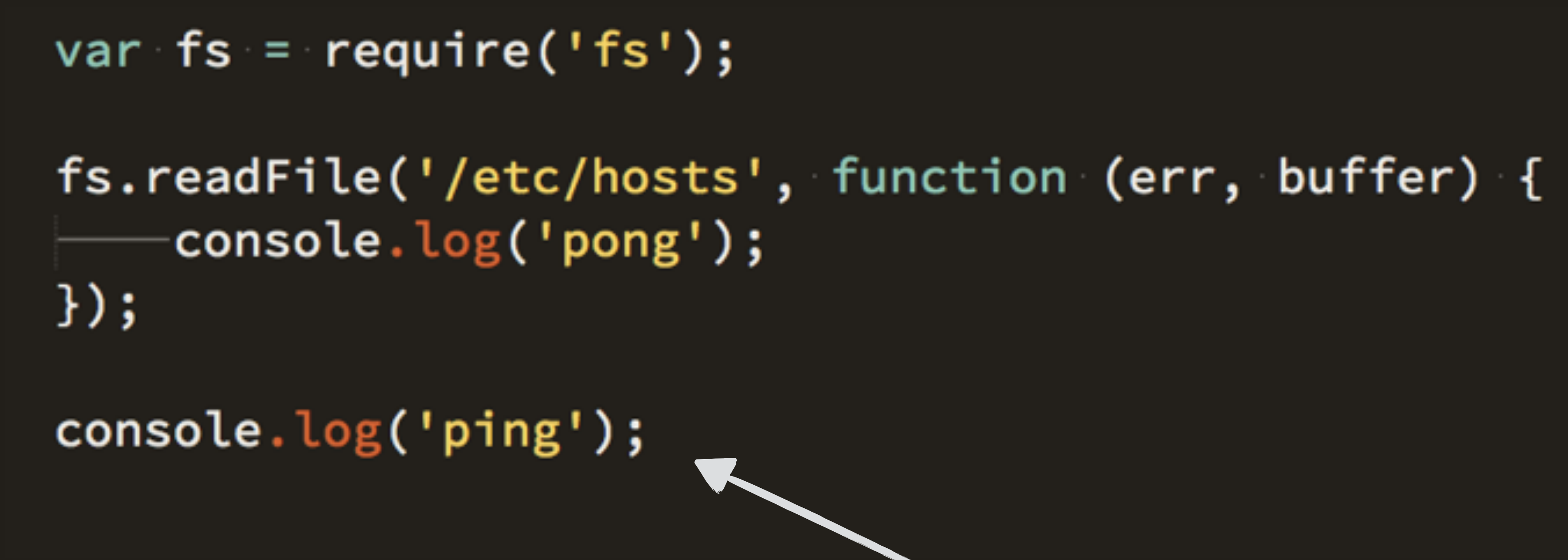
async operation started…

```
var fs = require('fs');

fs.readFile('/etc/hosts', function (err, buffer) {
    console.log('pong');
});

console.log('ping');
```

Output:



```
var fs = require('fs');

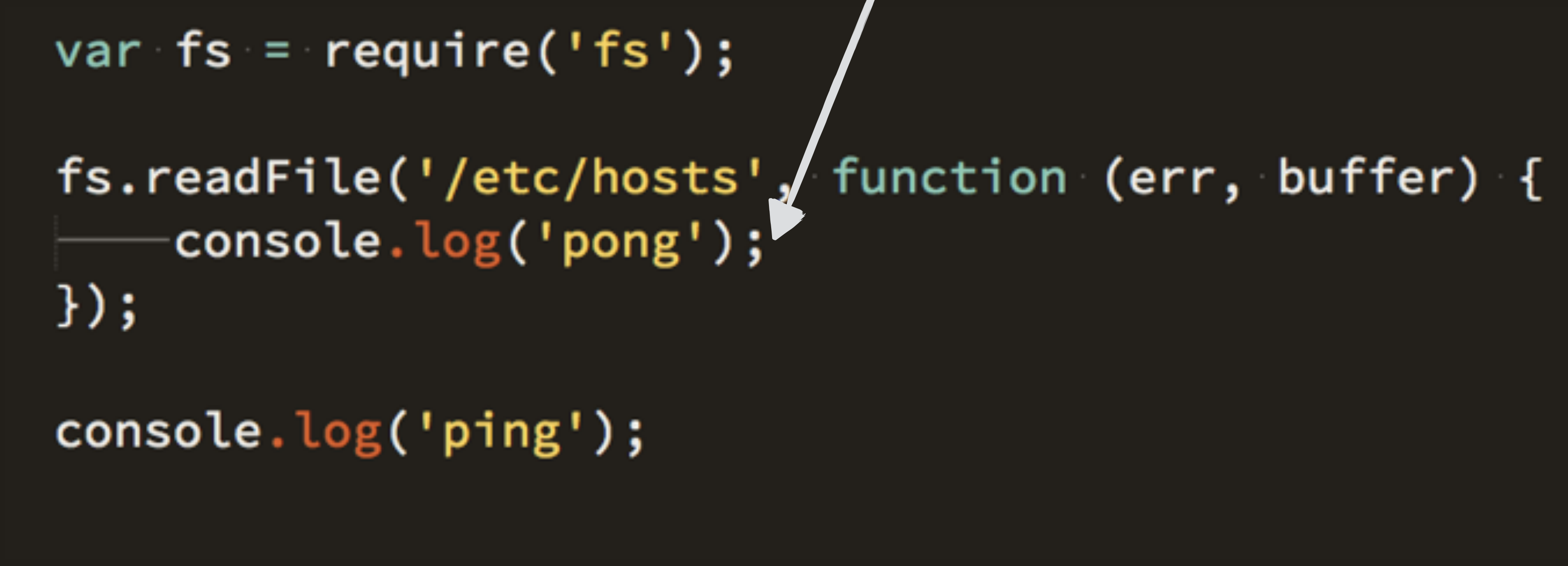
fs.readFile('/etc/hosts', function (err, buffer) {
    console.log('pong');
});

console.log('ping');
```

but execution goes on..

```
Output:
> ping
```

after ~ms file is read…



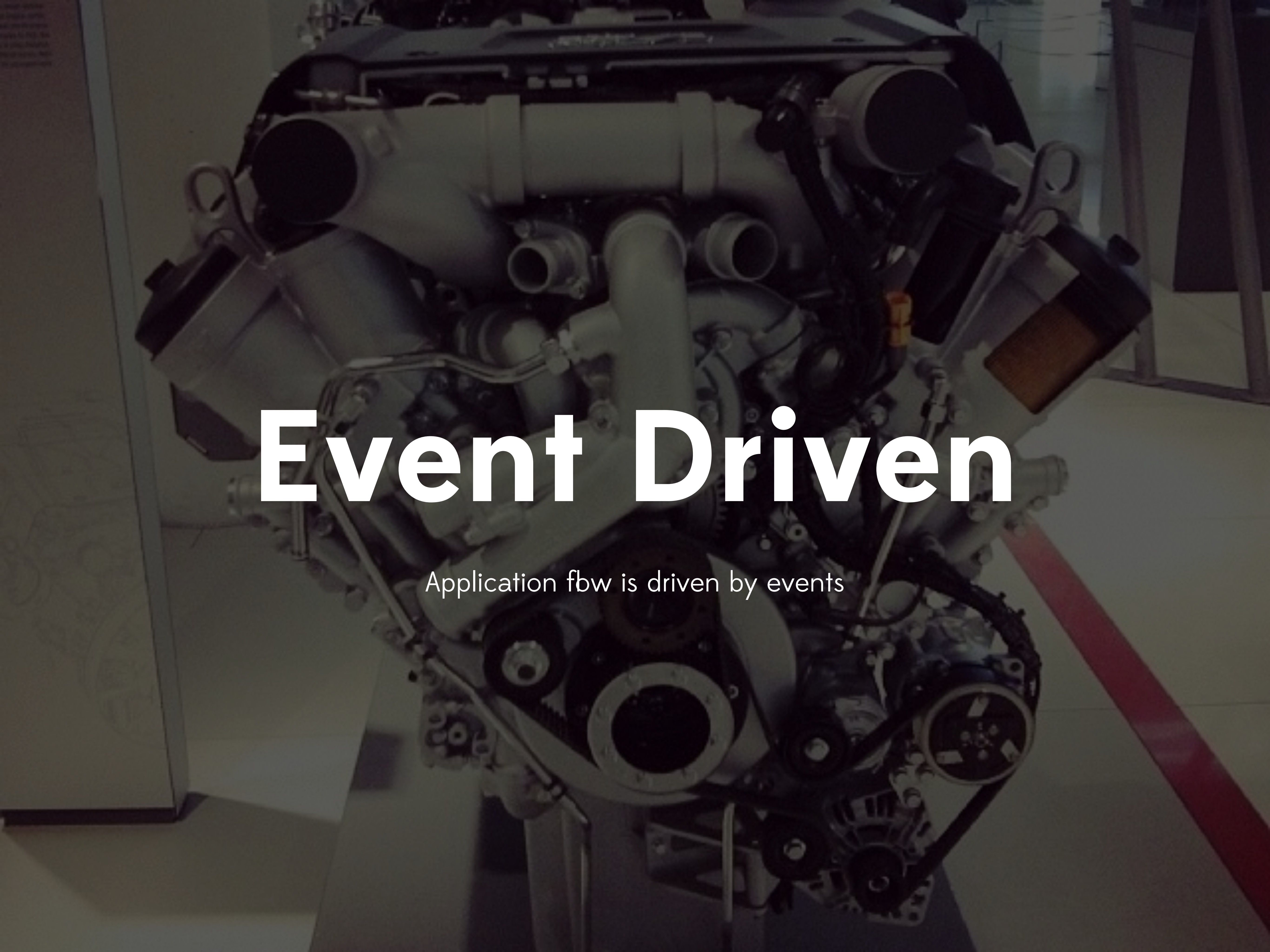
```
var fs = require('fs');

fs.readFile('/etc/hosts', function (err, buffer) {
    console.log('pong');
});

console.log('ping');
```

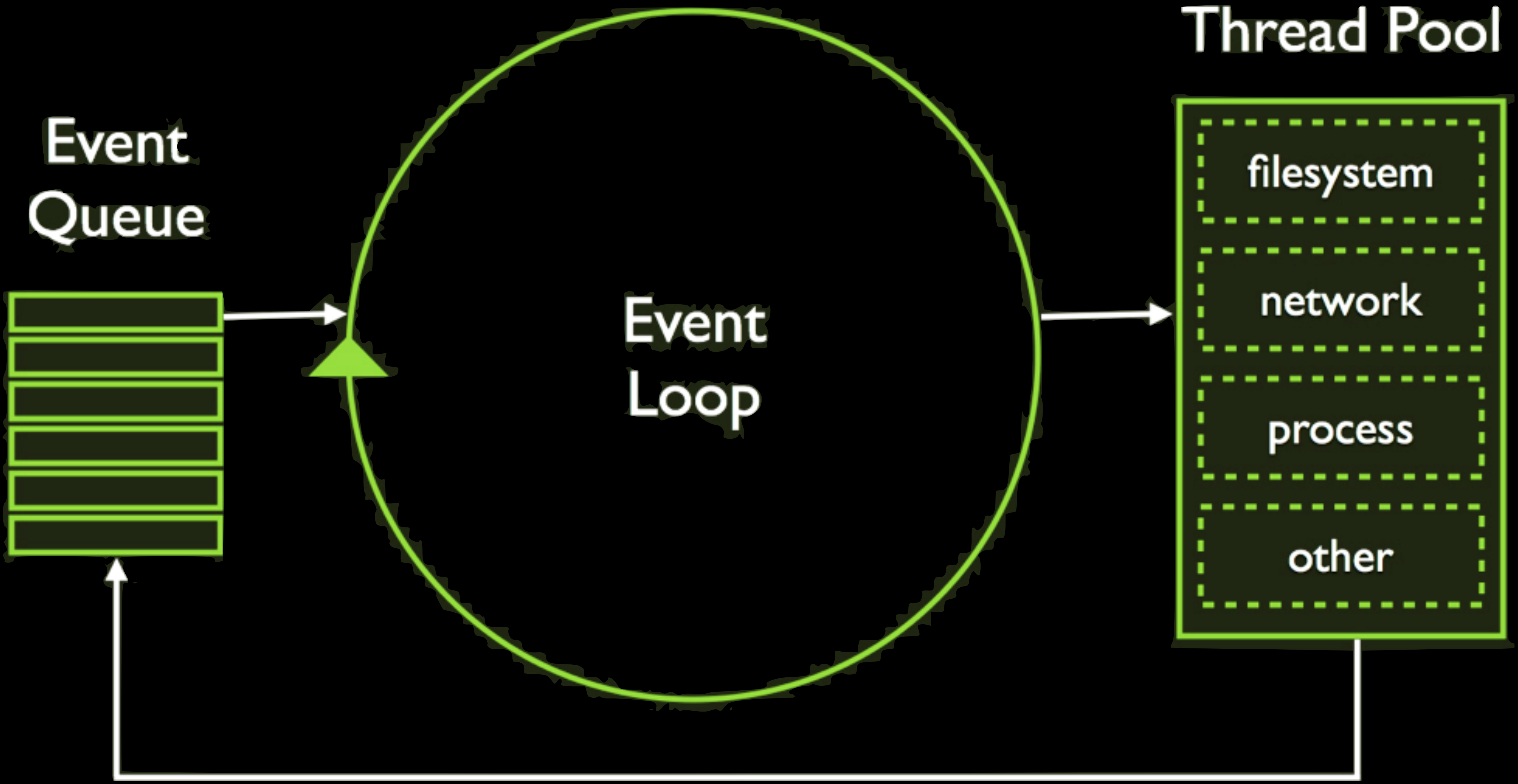
Output:

```
> ping
> pong
```

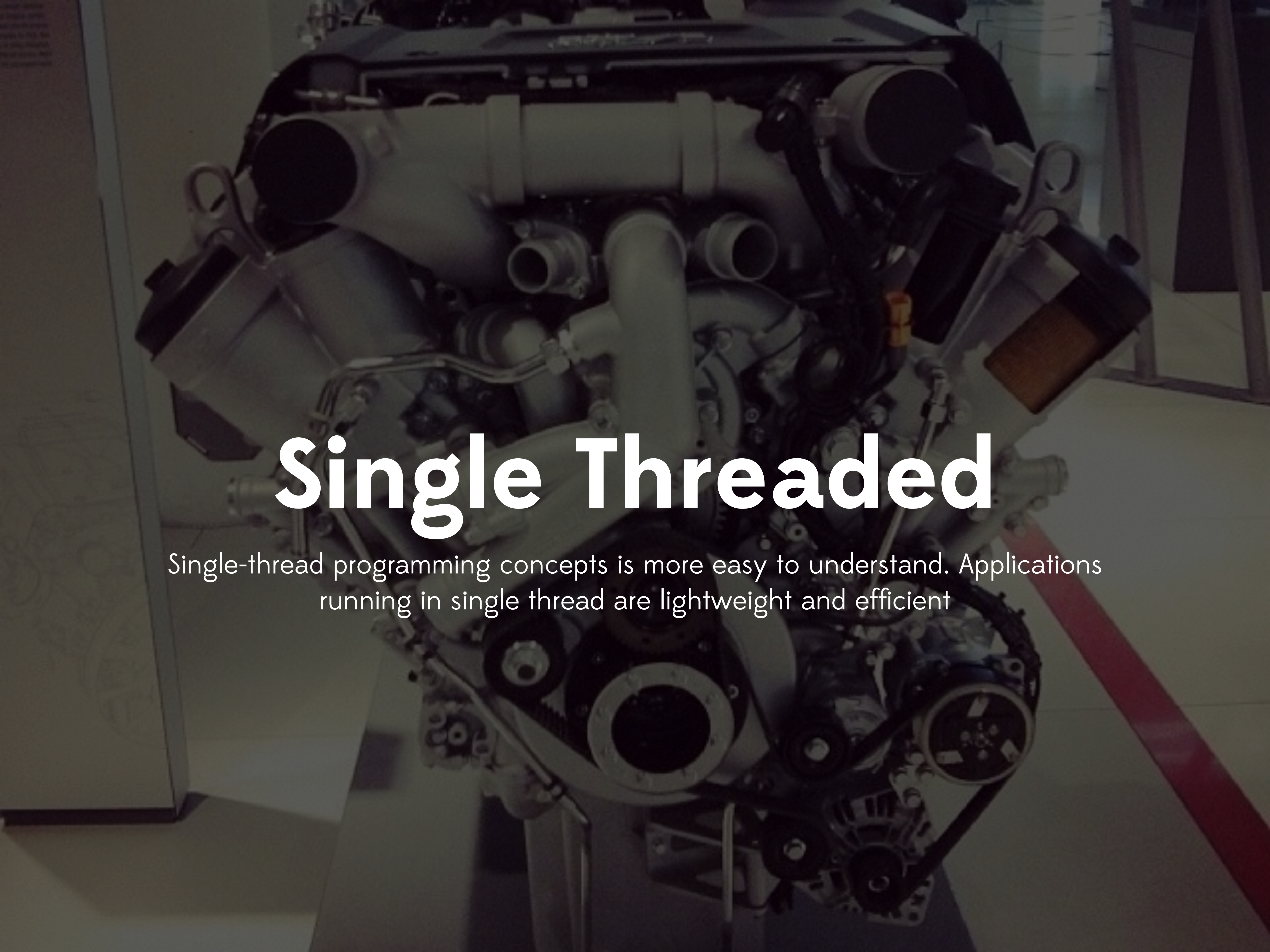


Event Driven

Application fbw is driven by events



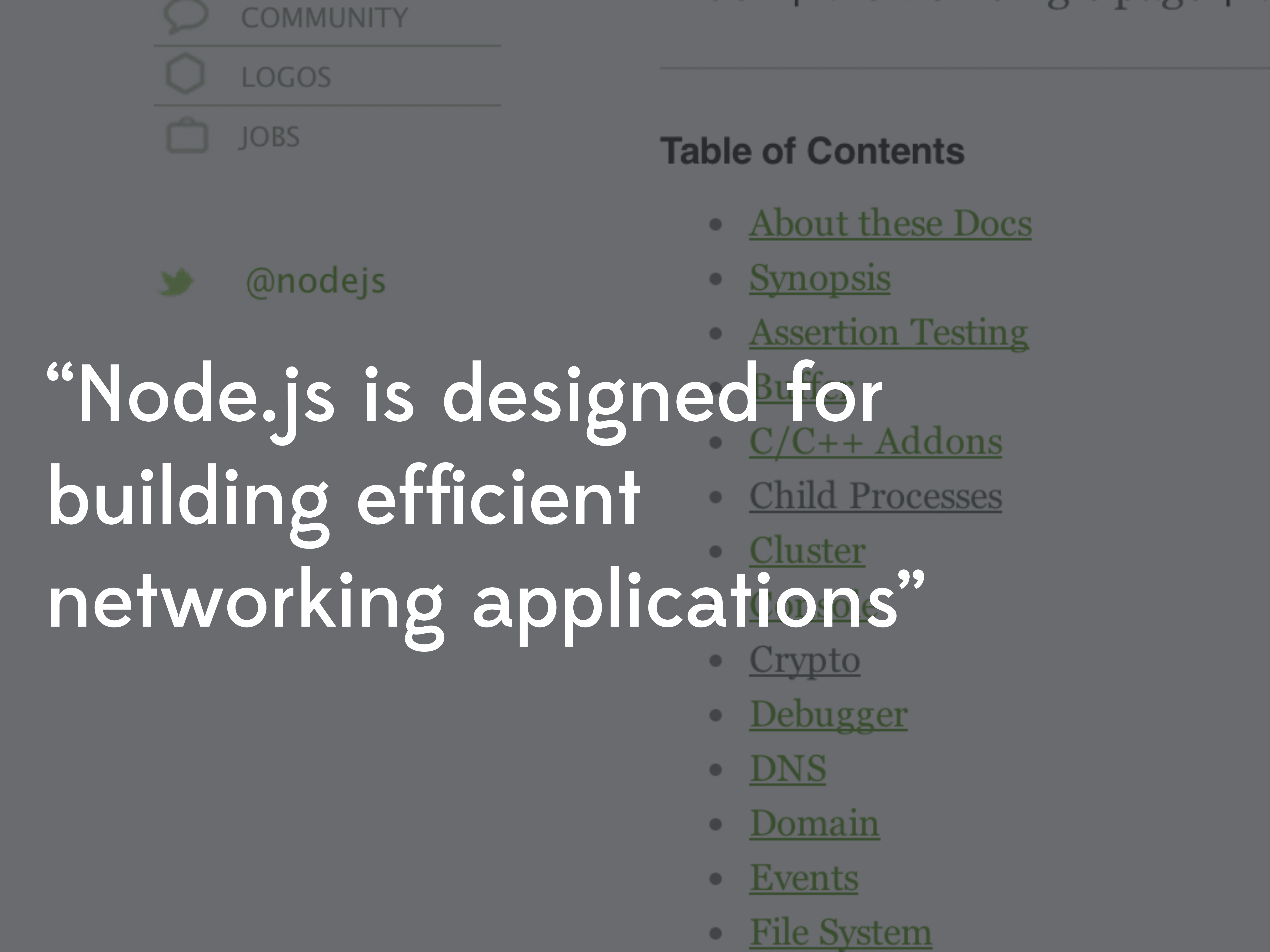
http://misclassblog.com/interactive-web-development/node-js/



Single Threaded

Single-thread programming concepts is more easy to understand. Applications running in single thread are lightweight and efficient

“Node.js is designed for building efficient networking applications”


COMMUNITY

LOGOS

JOBS

@nodejs

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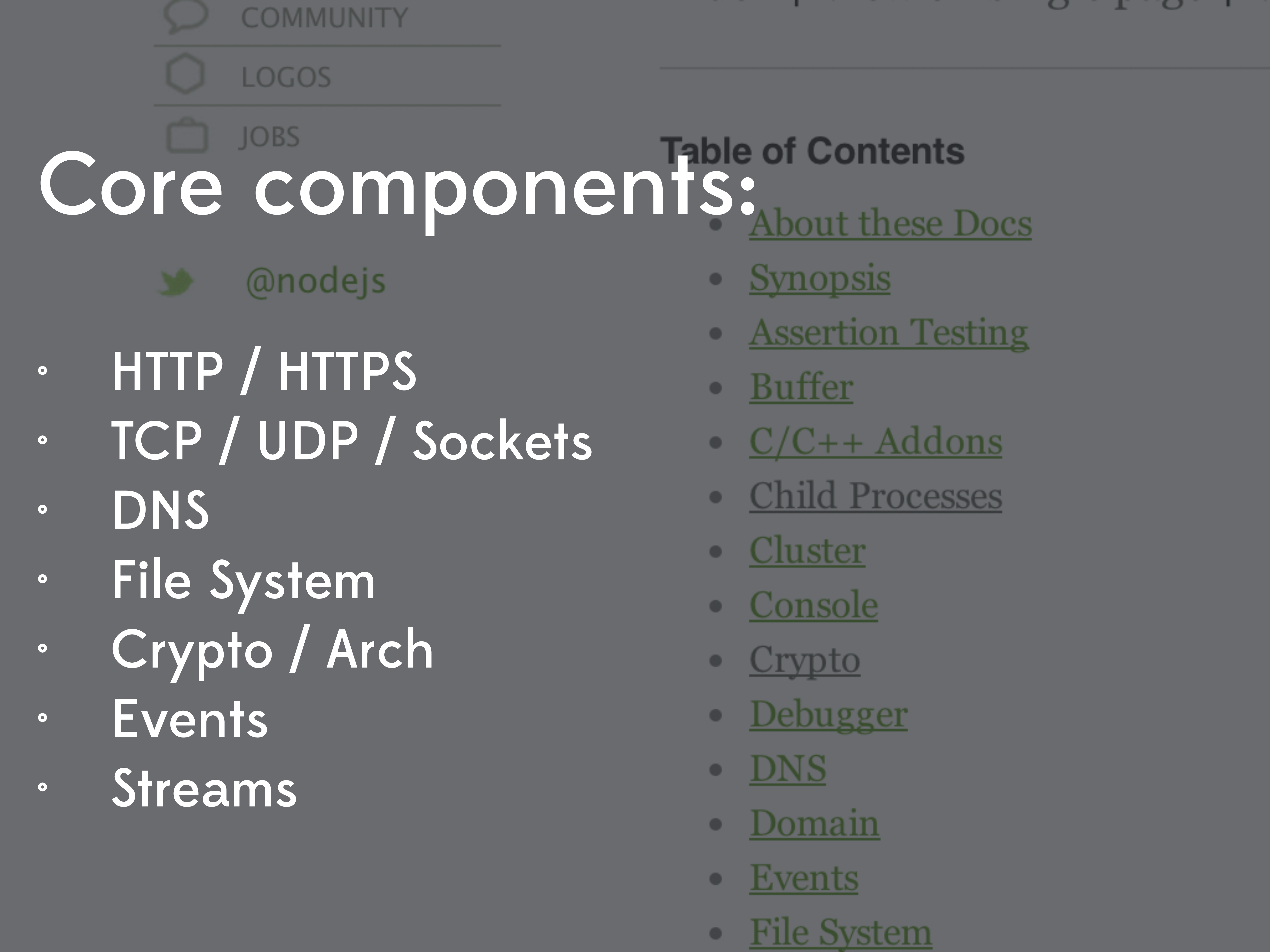
- Child Processes
- Cluster
- Console
- Crypto
- Debugger
- DNS
- Domain
- Events
- File System

Core components:

- HTTP / HTTPS
- TCP / UDP / Sockets
- DNS
- File System
- Crypto / Arch
- Events
- Streams



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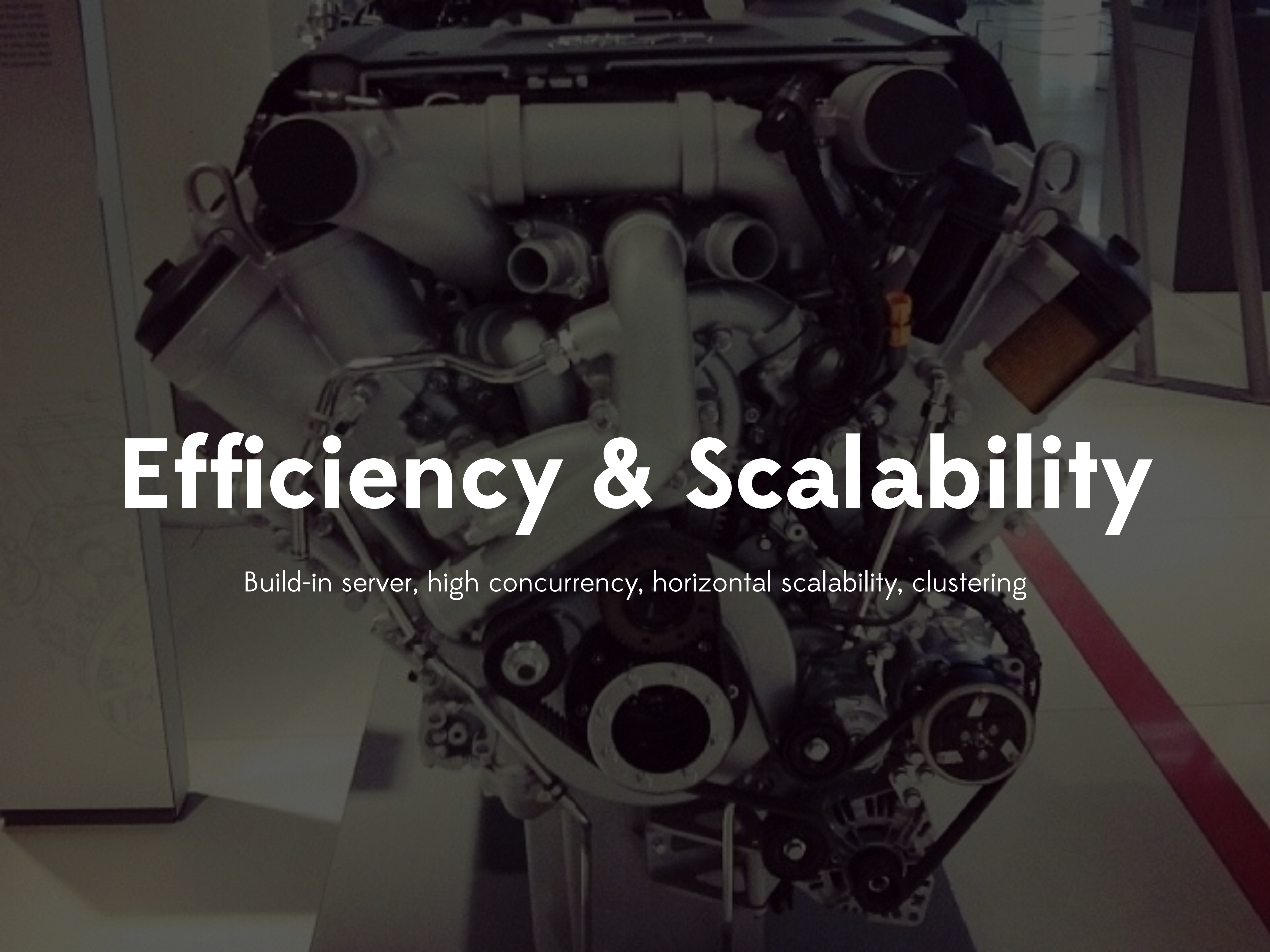
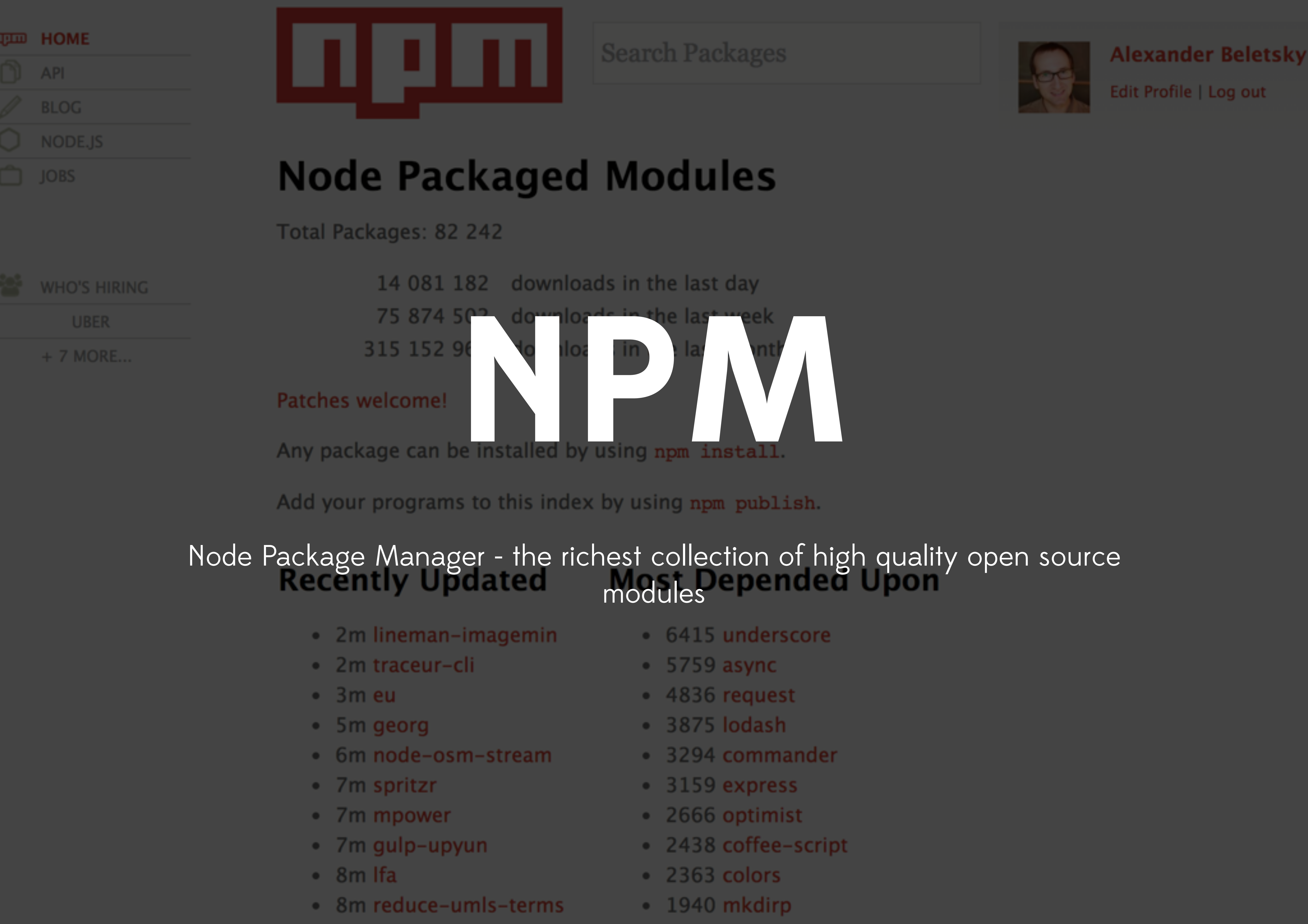


Efficiency & Scalability

Build-in server, high concurrency, horizontal scalability, clustering

NPM

Node Package Manager - the richest collection of high quality open source modules



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Node Packaged Modules

Total Packages: 82 242

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315 152 96[illegible]  downloads in the last month
```

Patches welcome!

Any package can be installed by using `npm install`.

Add your programs to this index by using `npm publish`.

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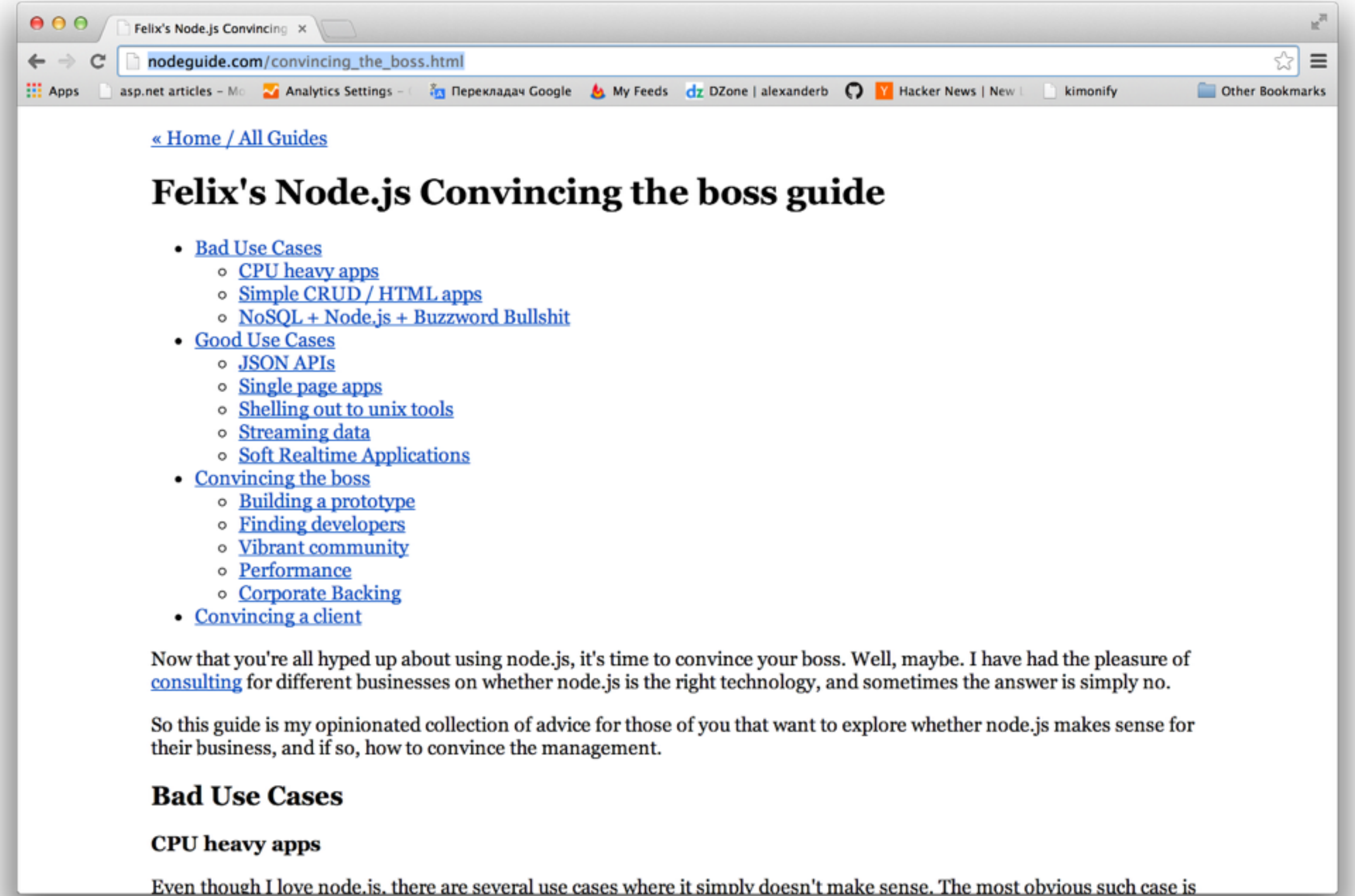
2m traceur-cli	5759 async
3m eu	4836 request
5m georg	3875 lodash
6m node-osm-stream	3294 commander
7m spritzr	3159 express
7m mpower	2666 optimist
7m gulp-upyun	2438 coffee-script
8m lfa	2363 colors
8m reduce-umls-terms	1940 mkdirp



Felix's Node.js Convincing

nodeguide.com/convincing_the_boss.html

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Felix's Node.js Convincing the boss guide

Now that you're all hyped up about using node.js, it's time to convince your boss. Well, maybe. I have had the pleasure of consulting for different businesses on whether node.js is the right technology, and sometimes the answer is simply no.

So this guide is my opinionated collection of advice for those of you that want to explore whether node.js makes sense for their business, and if so, how to convince the management.

Bad Use Cases

CPU heavy apps

Even though I love node.js, there are several use cases where it simply doesn't make sense. The most obvious such case is

Thanks,

@alexbeletsky