### The magic e

when your node app miserably crashes!

#### Who am I?

#### @lucamaraschi

- Architect @ IceMobile during the day
- Node.js and SmartOS Italian lover (during the night!)
- International speaker

# Basically... I inspect your dumps!

# Disclaimer I am NOT a Joyent employee

### But sorry...

# This magic only works on SmartOS!

# 

#### Let's check the node core source...

#### Once upon a time...

### but first...

# your app/service is going to crash!

# DON'T even think it's BUG FREE!

### 3AM and Pager Duty tells you PRODUCTION DOWN!



#### What the hell is going on?

#### Usual suspects

- Pathological performance
- Wrong behavior
- Memory problems (leaks, excessive usage)

#### Where shall I start from?

### If you say console.log()

### Change job!

### Each lap is expensive Each lap is disruptive

Production problems are often hard to

Worse, restarts often make the original problem go away

# Ditiace



#### Node.js probes

### Restify includes dtrace support as first class thing

### Now you know why you MUST use restify!

### But also bunyan has some interesting dtrace in...

# Imagine... to change the log level LIVE

#### state of the app does not change!

# Another reason to use restify!

# citiace

or die!

don't complain to me...l told you!

### Runtime debugging on CPU or off CPU

## CM CPU

#### running js code or doing GC

### classical approach is to profile Oh yeah...dtrace

## Have you already taken your DUMP?

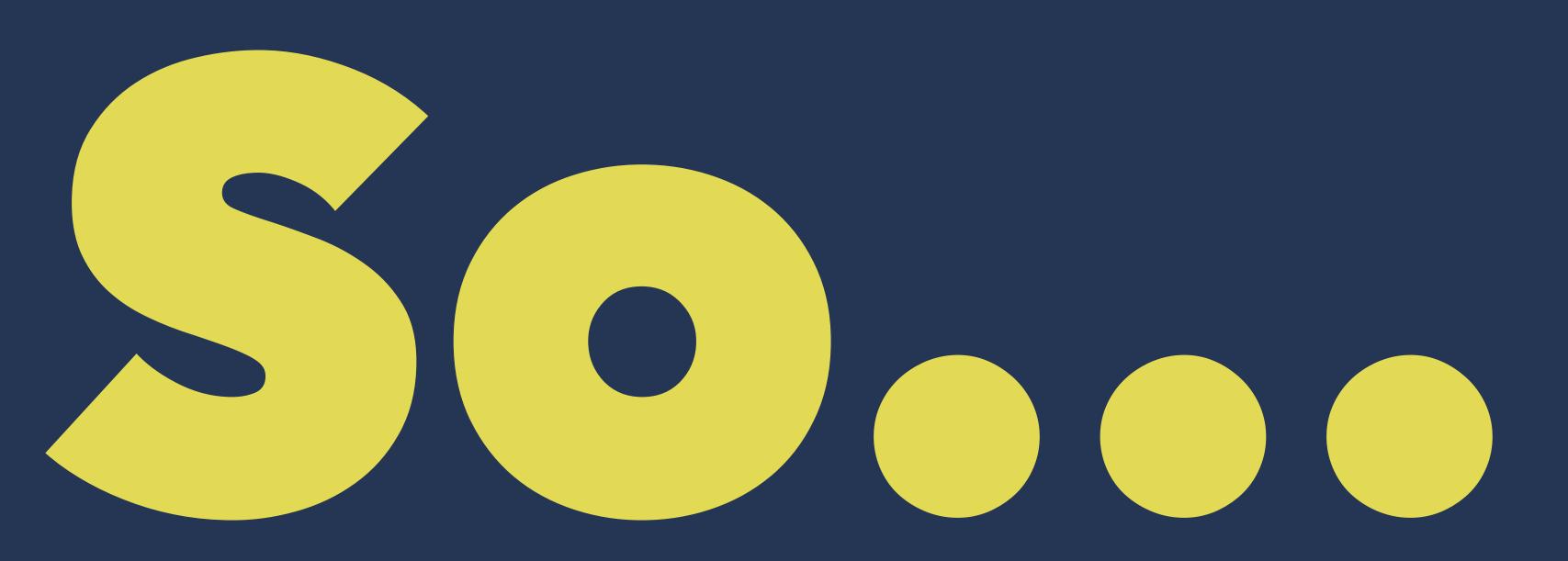
only on Solaris like OSs

#### Don't be a bad boy...

#### --abort-on-uncaught-exception

# Then I can put my hands into your dump!

MDB is the illumos modular debugger, used to debug the live kernel, kernel crash dumps, processes, and process core dumps



#### Resources

- mdb and node.js
- <u>nshttpsnoop</u>
- <u>wrk</u>

