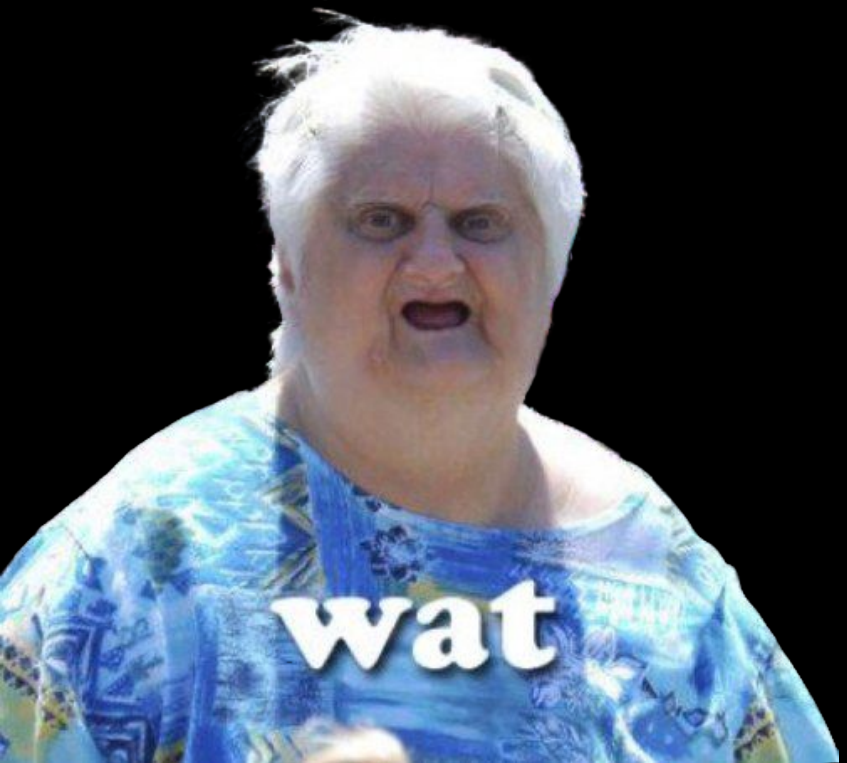
How to do SRE,
when you're not Google
Vítek Urbanec, SRE Grown-Up
Unity Technologies
Generative Art – Made with Unity
unity

Wat do I do?

Wat is this talk about?



Advertisers

Acquiring users

unity Ads

Publishers

Getting paid for their games

>1.5Bn

mobile devices

~70K

requests per sec

Terms

Site Reliability Engineering (SRE)

discipline that incorporates aspects of software engineering and applies them to infrastructure and operations problems.

DevOps

is a **set of software development practices** that comb development (Dev) and information technology operations (Ops) to shorten the systems develop ner ife cycle.

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Terms

*"Aren't these just **buzzwords** that dumb people use*

*to sound **important?***

... I'm fired, aren't I?"

-- George Mayer

The Itchy & Scratchy & Poochie Show ,The Simpsons, 1997

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In plain english:

Site Reliability Engineering

- Increase time between fails
- Recover faster
- Predict problems
- Be lazy about it

DevOps

- Devs should dev
- Devs need to fix their own stuff
- Be lazy about it

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SRE in corporations

*(If **$big_company** jumped off a cliff,*
would you do it too?)

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How big companies do SRE

- Google's doing it!

- There's even a book describing how to do it, **perfect!**

- Sysads "don't **scale**"

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How big companies do SRE

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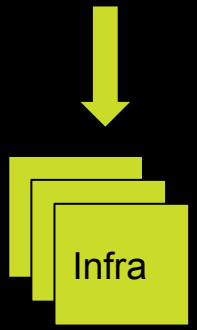
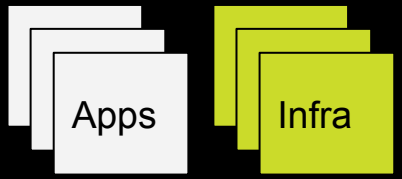
Why is this a problem?

Sysad

SRE



VM's, hypes, network, storage, etc.



Both infra and apps here are represented as code

Humans

Job involves talking to humans

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Characteristics of Sysadmin vs SRE

- Ticket killer
- Passive - receives work in tickets

- Actively seeks out reliability issues
- Creates work for others

- Infra knowledge
- Stays calm in stressful situations

- Infra knowledge
- Stays calm in stressful situations
- **Good communicator**
- **Good at managing**
- **Dev skills to build tools**
- **Knows data analytics**

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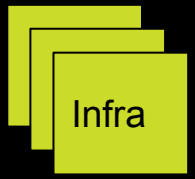
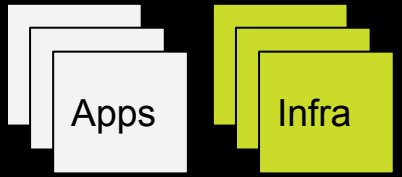
Sysad and SRE





Humans

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Enter Devops Engineer!

Devops
Engineers

SREs

Same thing?

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You don't want to do this!

(Seriously…)

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How to do the SRE thing

(and keep your sanity)

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- Provide **sanity checks**
- Find **alternative solutions**
- Make **reliability** your **priority**

Be a consultant

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- Convert infra/app data to **usable information**
- Provide **standards**
- Keep track of **technical debt**

Give information

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- Fixing an issue may mean **fixing code**
- But it also may mean **fixing the way how people work**
- **Engineering is not a substitute for culture**

Build DevOps culture

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SRE mythology

(Some of it debunked)

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You need to monitor everything!

(unless it's totally useless)

Automate everything!

(unless you don't know what you're doing)

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The incident commander

schizophrenia

(command or solve, that's the question)

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50% dev
50% sysadmin
50% incident manager

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SRE projects

(Wins & Fails)

"Reinventing wheels is not all bad"

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Log Management App
Infra Dashboard

… aka SRE fixes a service provider problem

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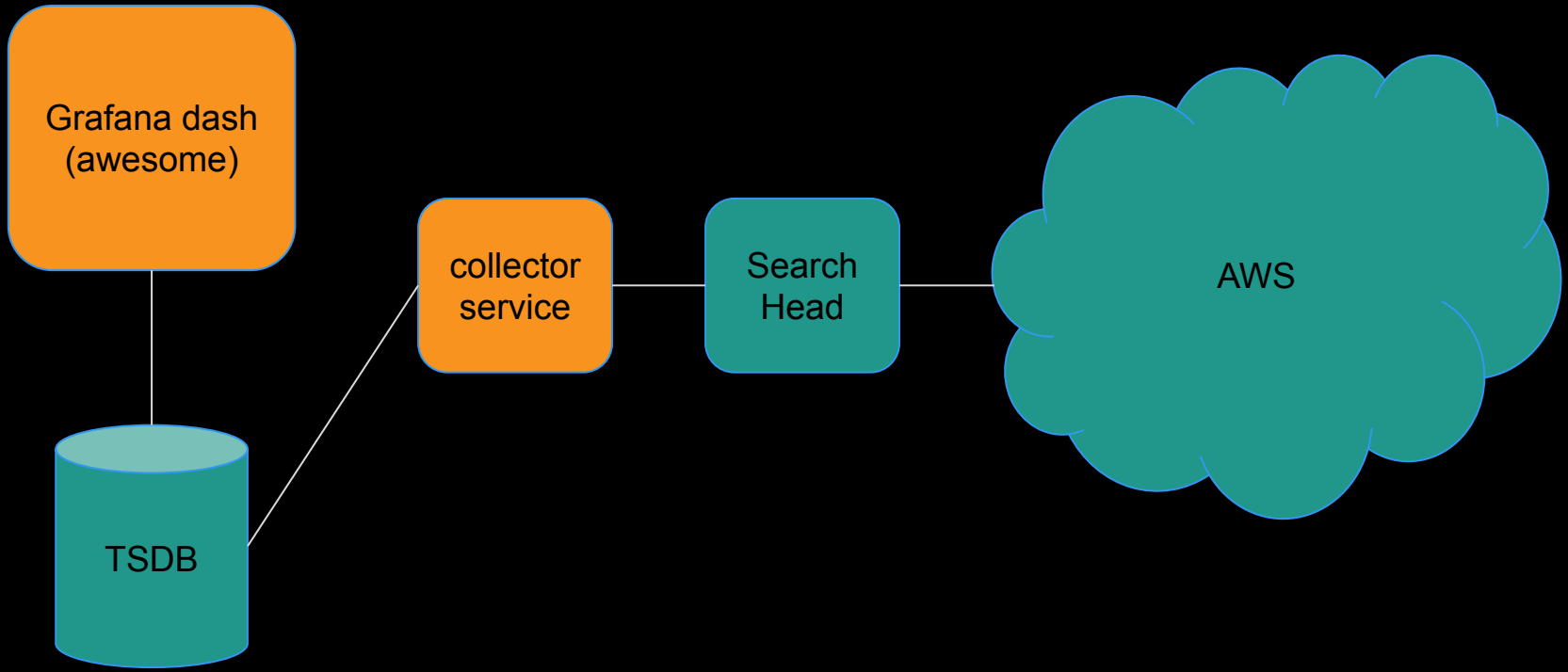
Grafana dash
(awesome)
collector
service
Search
Head
AWS
TSDB

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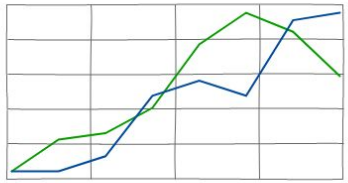
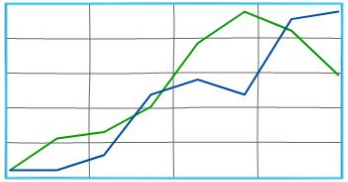
Log Managementör Dashboard

Performance today is: Rubbish!

Indexers CPU



Indexers Memory



Queries Count

Response Time

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Log Management App Infra Dashboard

Wins:

- Vendor gave us properly scaled infra & better performance
- Great dashboard layout

Fails:

- Main KPI wasn't always relevant

Lightweight
Poller Service

… aka SRE builds &
provides a service for devs

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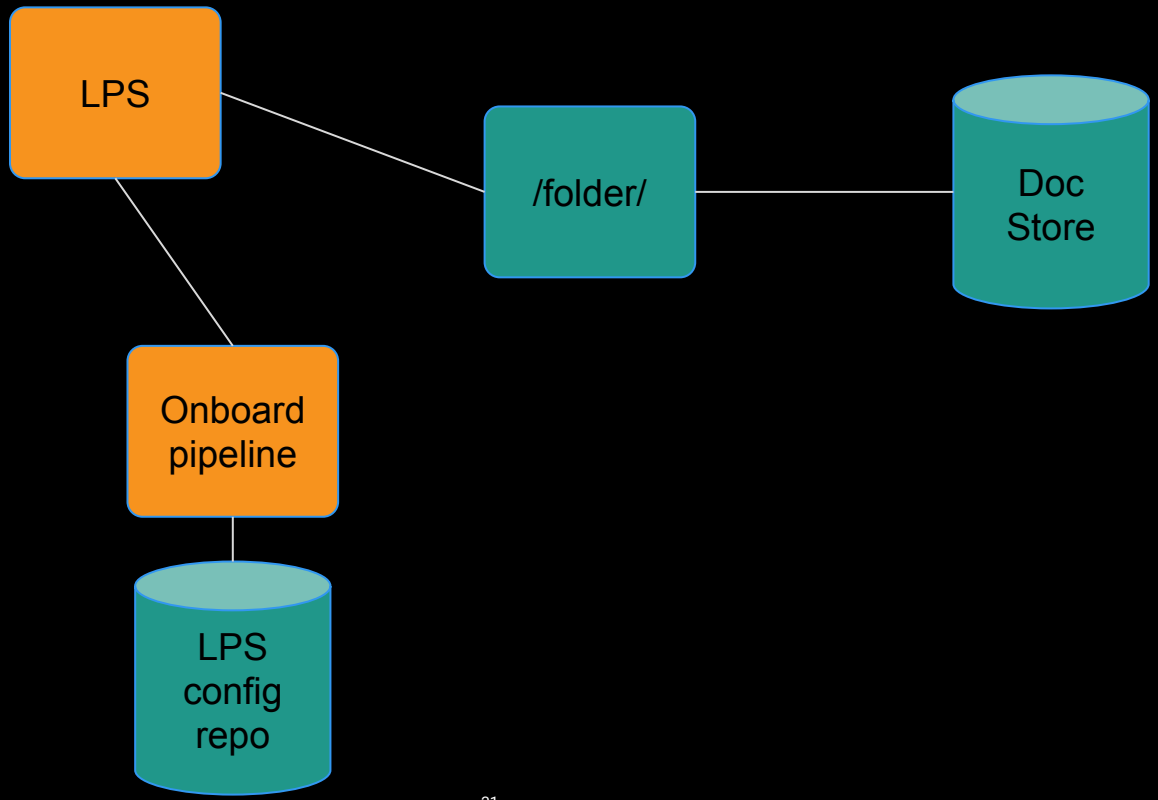

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Lightweight Poller Service

Wins:

- No more one-script VMs, reduced sprawl
- Learned to use more customer-oriented approach

Fails:

- It should have been containers

Circuit breaker
logic review

… aka SRE as consultants for app logic

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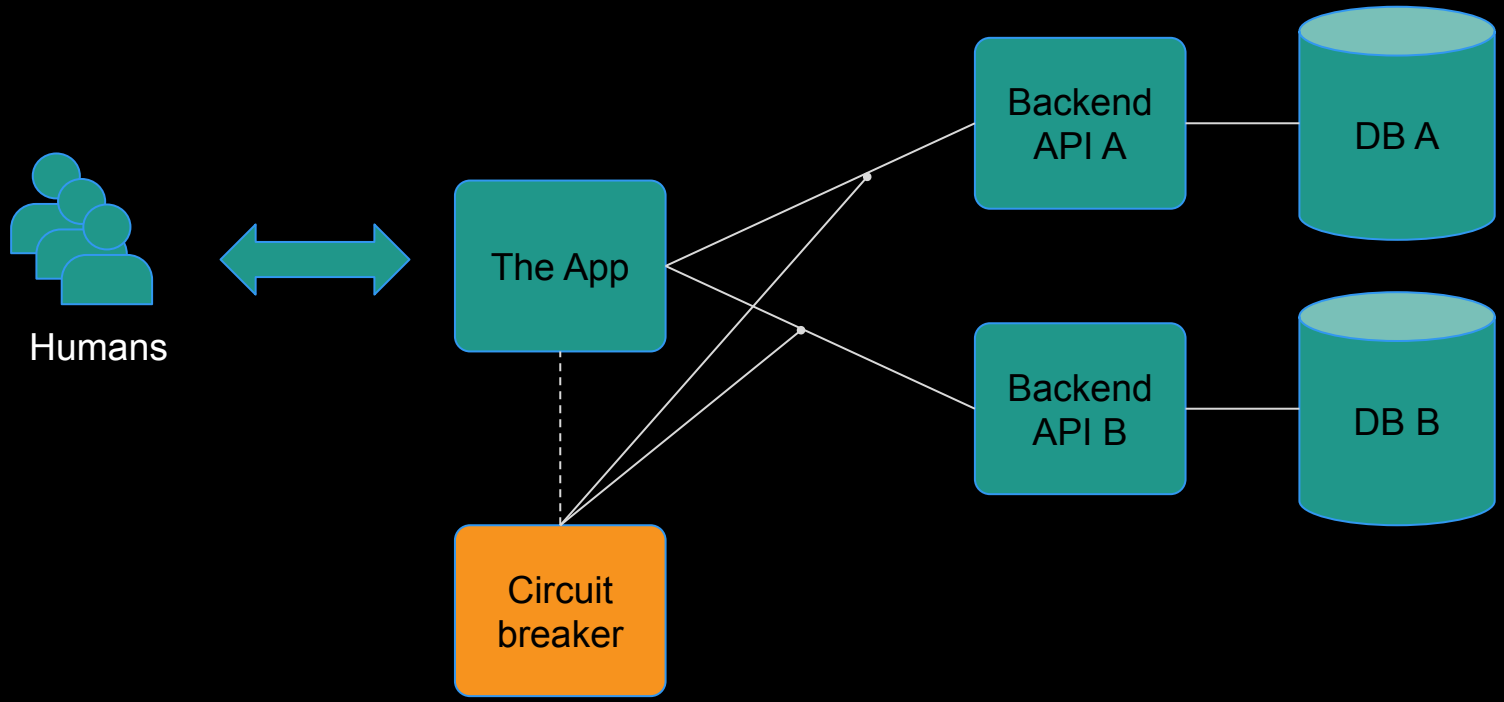
Circuit breaker logic review



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Circuit breaker logic review

Wins:

- Smaller business impact
- Learning how to deliver the consultancy projects

Fails:

- To be announced

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Do you need SRE person (or team)?

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Don't be a Google SRE,

don't be a Netflix SRE,

be *$company_name* SRE

The meaning of life

If you spawn as an SRE:

- Rejoice! It's a world of infinite possibilities!
- Find out what you know and what you need to learn
- Be proactive
- Ask basic questions *("Joo, mutta miksi?")*
- Find what fails & work with people to fix it
- Learn how to talk to people
- Educate without being a smug
- Automate with common sense
- Don't be a Google SRE, don't be a Netflix SRE, be *$company_name* SRE

The Zen of Reliability

If it has humans in it, it's never going to be 100% reliable.
Accept that.

Reliability is constant evolution & learning.

Accept that.

Shit happens. Accept that.

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Thank you.

#unity3d

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