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How to do SRE
(When you've got no SRE)

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You

Everyone else

Welcome to SREcon!
What do you mean "you're not perfect"?!

A motivational grammar lesson…

Feel inspired! (not inadequate)

(Not the official motto of SREcon EMEA 2019)

How do we start?

TLDR

When you wear your SRE HAT:

- Only pick small things to do
- Book some time for it
- Keep going

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That could have been more helpful..

Fig 1. Draw two circles   Fig 2. Draw the rest of the damn owl

The rest of the owl..

- Commit some time
- Review what you have
- Record all the terrible things
- Make <u>small</u> tasks
- Report it to your boss
- Keep going
- Rules
- Blameless Incident Reports

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How is this different to my normal work?

C.Y.A.

- Tell your boss what you're doing
- Informs them of workload
- Informs them of risk
- Chance of more resources
- **Do NOT take on another full time job**
- **Don't risk burn out**

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Your company will not hire more staff if you do this job too.

Let's go!

Worst Case Scenario

What's the worst thing that could
happen to your company in particular?

- Security Breach?
- Data loss?
- Downtime?

Know what your Kryptonite is..

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Capacity

If you don't know your limits, you can't keep safe or plan your growth.

- Do you have capacity issues?
- Got any headroom?
- What's the lead time to get more <u>anything</u>?
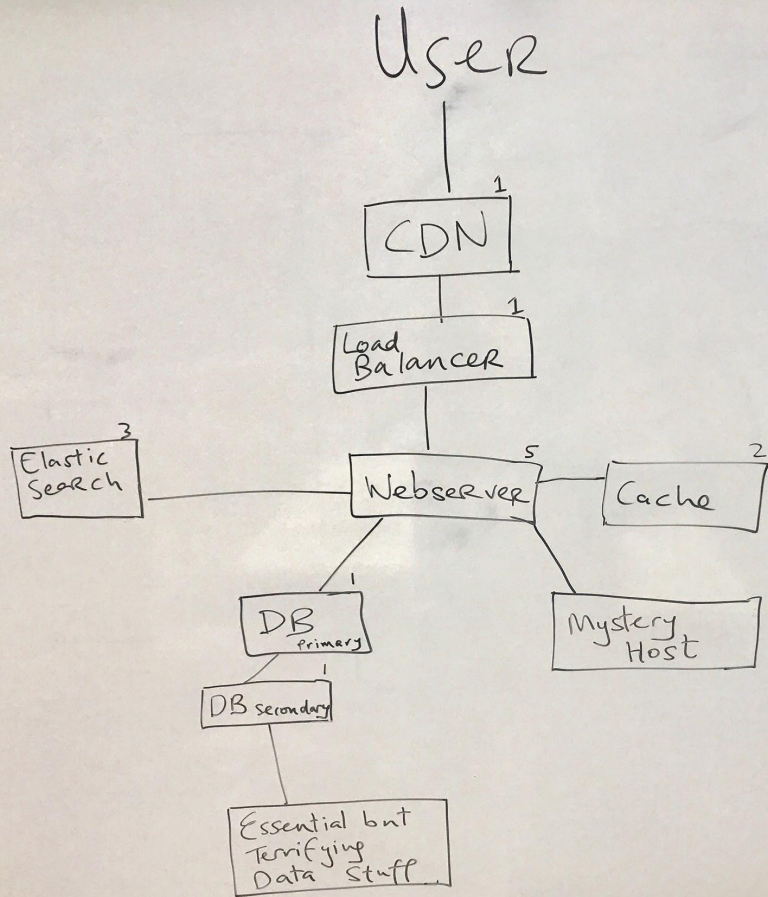- Do you have peak traffic patterns?

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Security

- Who has access to what?
- How many people can destroy you?
- Do people get offboarded?

- Password manager - get one
- Public buckets - should they be?
- Cloud accounts - turn on audit lots

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Infrastructure

- Fast Infrastructure diagram - just whiteboard it and take a photo
- Is there one of anything?
- Is it all reproducible?
- Test the backups
- Documentation
- Solve some mysteries
- Practise

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User

CDN   1

Load
Balancer   1

Elastic
Search   3

Webserver   5

Cache   2

DB   1
Primary

Mystery
Host

DB secondary   1

Essential but
Terrifying
Data Stuff

Third Parties

- Pros/Cons
- Redundant/backup services - Risk-Cost Analysis
- Contact details - both ways
- Details on the Wiki
- Check invoices to find them all*

*Fun fact, you may also find services that you're not using anymore but are still paying for.

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Domains and SSL certs

- Do you know them all?
- Domain registrar logins
- Again, contact details - both ways
- Expiry notifications
- Document update procedures
- Renewal cadence - 3yrs? then everyone who knew how to do it is now gone

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Release and Updates

- How many people can update your product?
- Individual releases/aggregates
- Visibility during updates
- Monitoring
- Can you revert updates?
- Can you block updates?

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For when you ruin an important sales demo with a badly timed update...

What now?

- Keep going
- Record your work
- Share your work
- Get some allies

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We're not done yet!

What are your rules?
Everyone working from the same script improves reliability

Rules

- Publish them
- Share them with your peers
- Discuss them
- Update them

They're not just for new hires..

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Rule Examples

- "Do not push to production from a branch"
- "If you do an update, you must hang around to see if it worked"
- "The marketing team shouldn't send messages to all our users at once, as it causes us to fall over"
- "Never/Only update code at the weekend"
- "If you break something big, please revert it immediately. Don't go for lunch first."

Surely everyone knows that?!

People are not psychic.
Or maybe you are boring and they weren't listening…

Blameless Incident Reports

Incident Reports

- Why? Another step towards SRE
- Record of Progress
- Use templates
- RW not WO
- Get an executive sponsor
- No Blame

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There are NO downsides to **Blameless** Incident Reports

Blameless

- Company size doesn't matter
- Fear causes mystery
- No such thing as human error
- Learn the lesson
- **Make it Better**

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And Finally..

It's ok to not be ok

But no matter what I do, things keep breaking!!

Main causes of problems

- **Code changes**
  - Because you're updating your product
- **Infrastructure change**
  - Because you're making things better
- **Network and 3rd Party issues**
  - Bad luck and someone else has to fix it
- **Technical Debt**
  - Happens to us all, just try not to let it happen twice
- **Capacity Issues**
  - Congratulations, people actually want to use your product!

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It doesn't have to be pretty, it just has to be BETTER.

Good Luck!