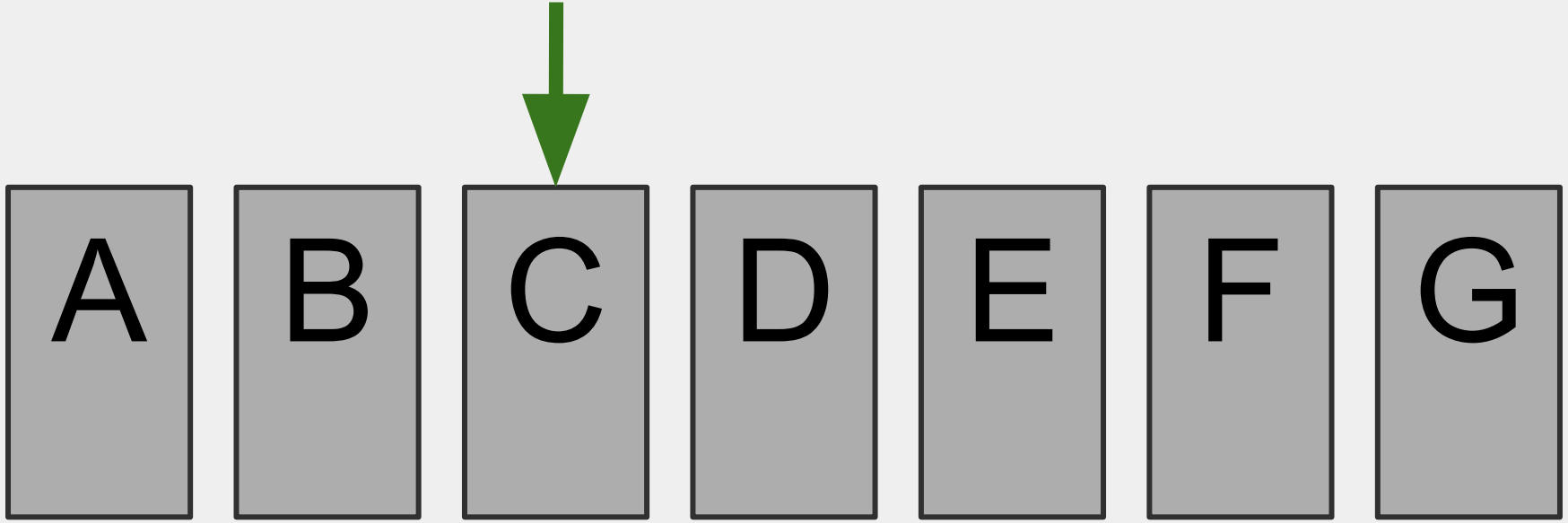
Deprecating Simplicity

@CaseyRosenthal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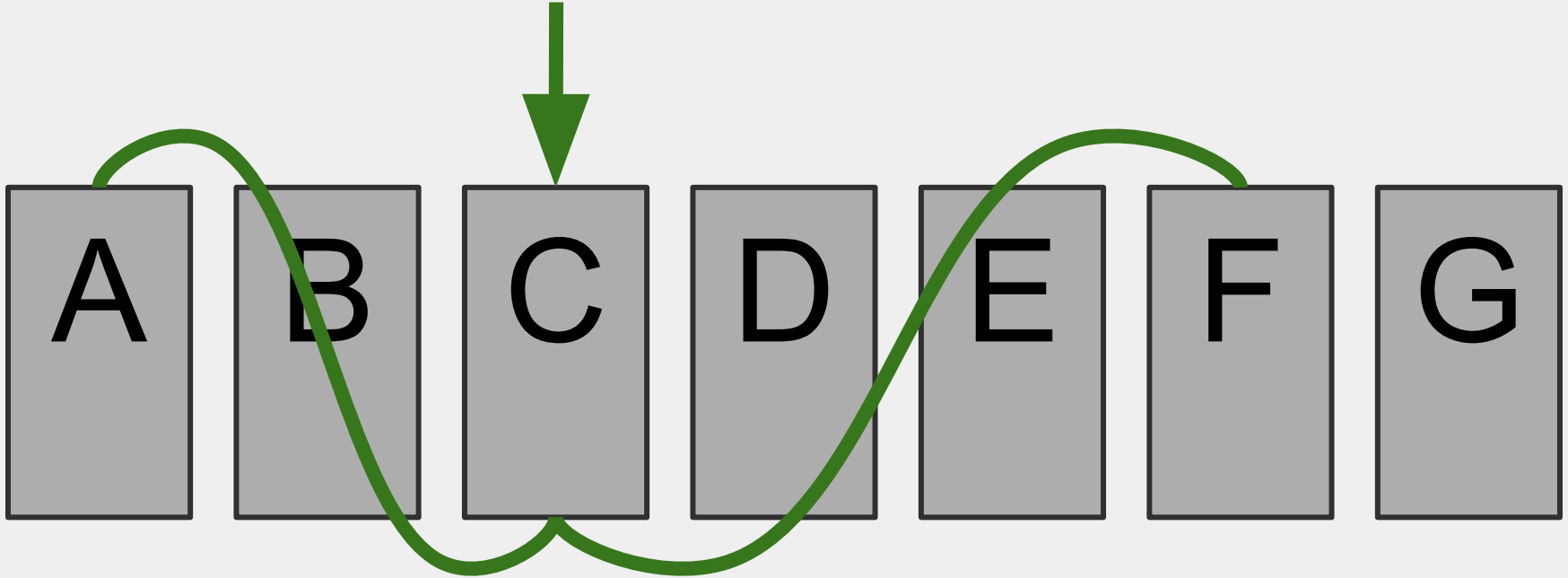
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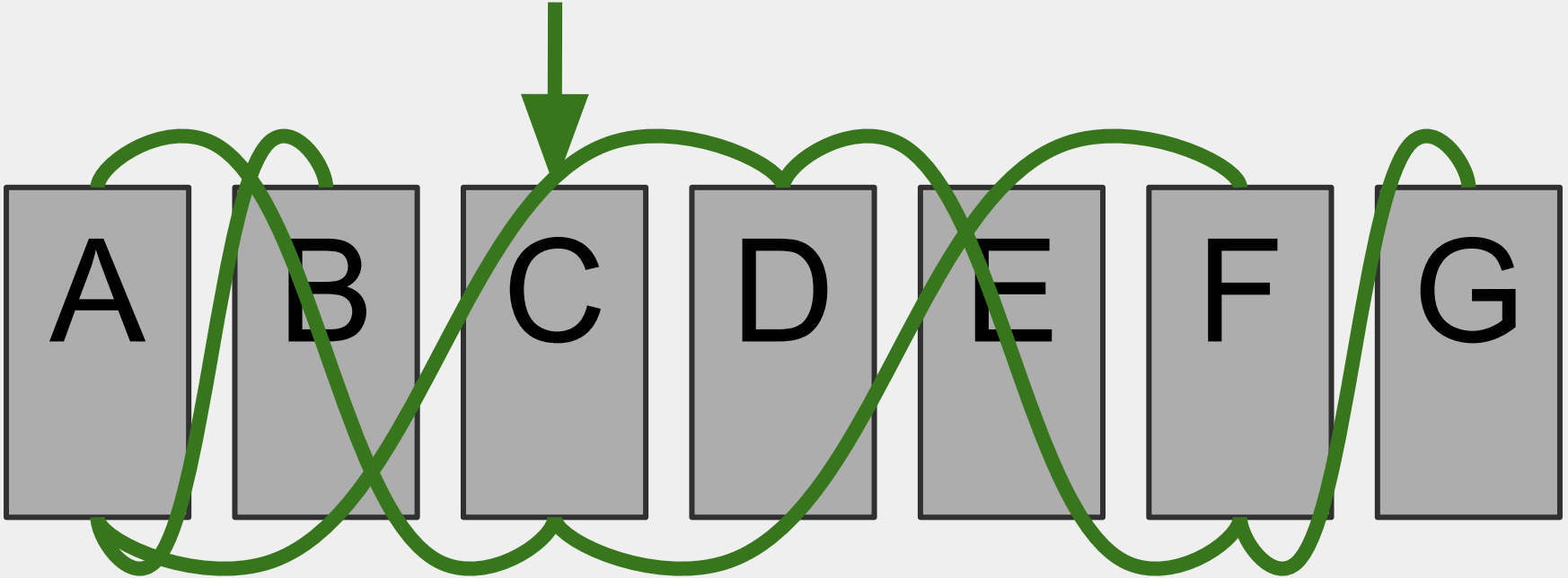
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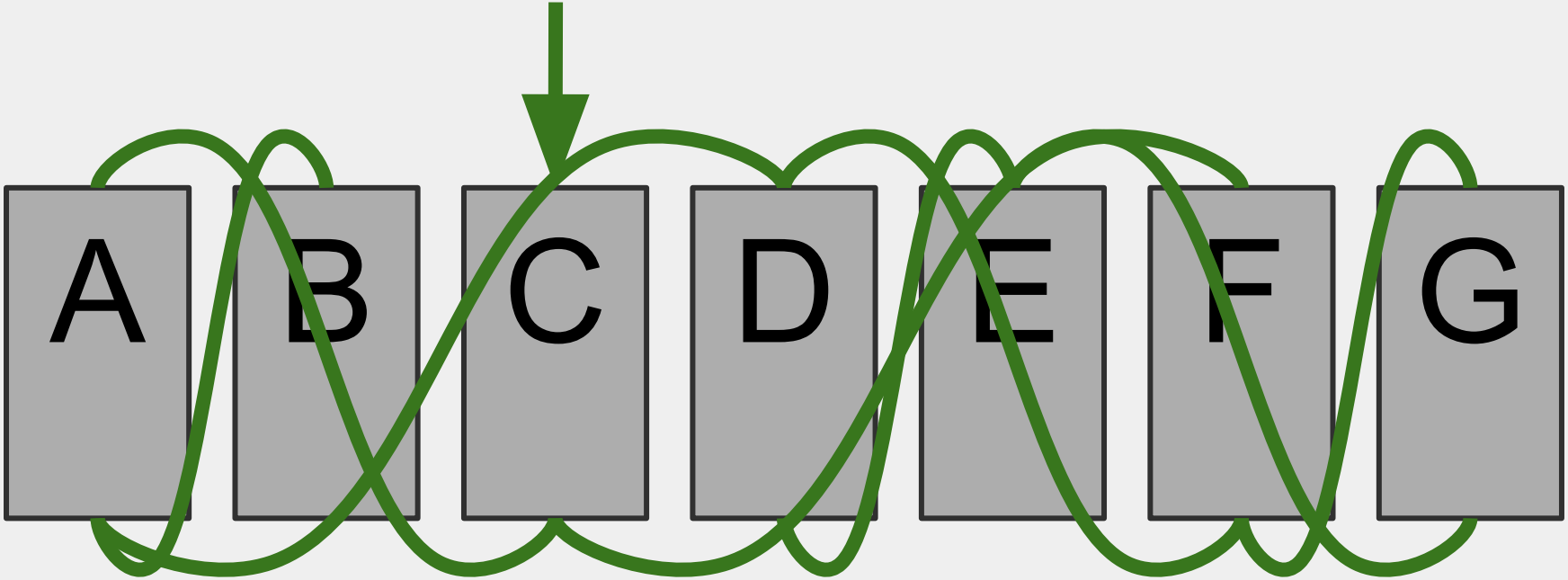
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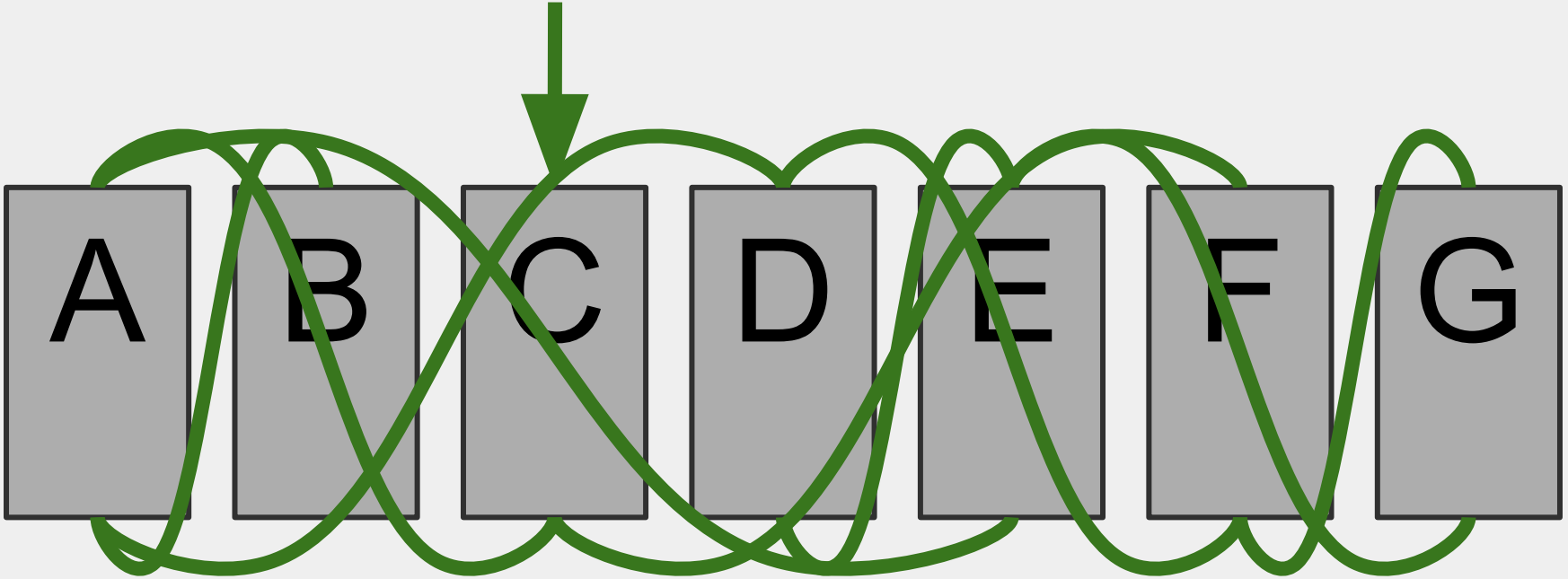
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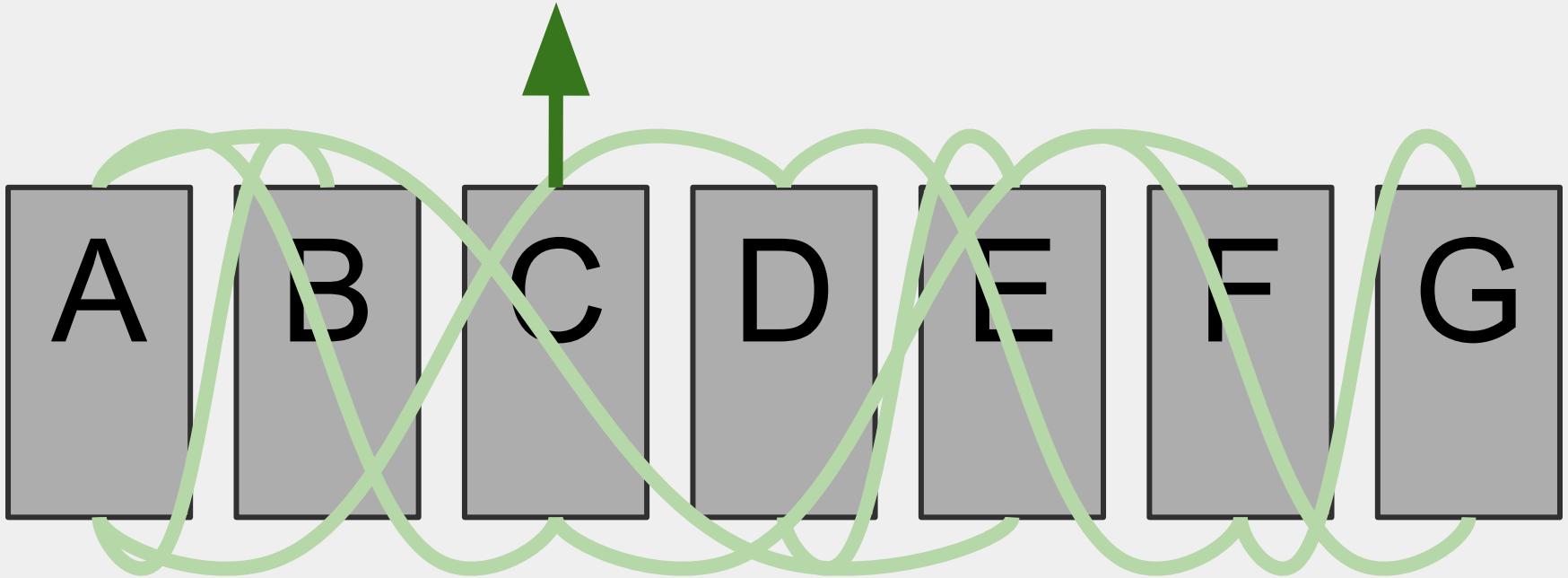
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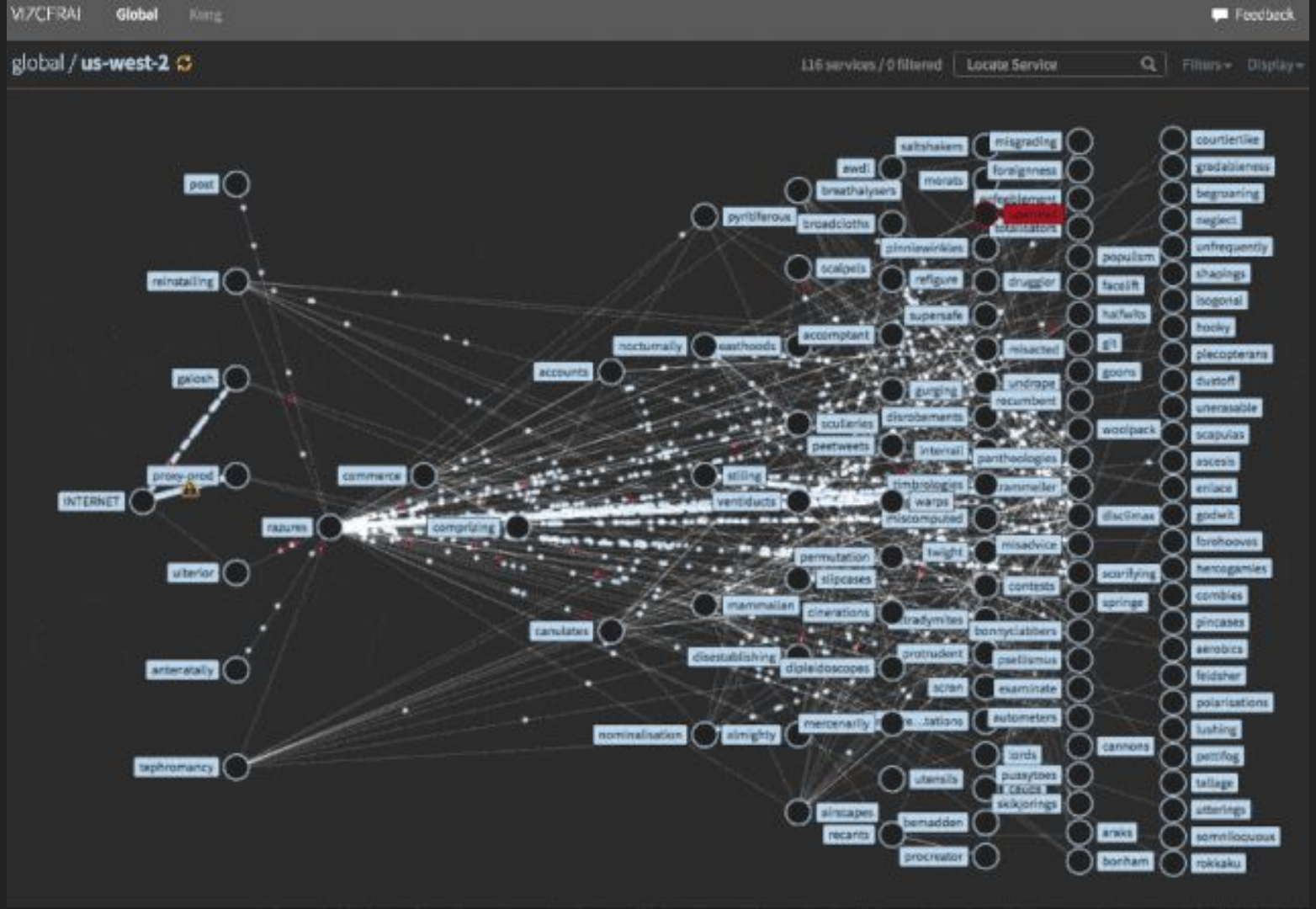
VIZCFRAI
Global
Feedback
global / us-west-2
116 services / 0 filtered
Locate Service
Filters
Display
post
reinstalling
galosh
proxy-prod
INTERNET
ulterior
anteratally
taphromancy
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commerce
comprizing
accounts
nocturnally
eastwoods
canulates
nominalisation
almighty
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broadcloths
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accomptant
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ventiducts
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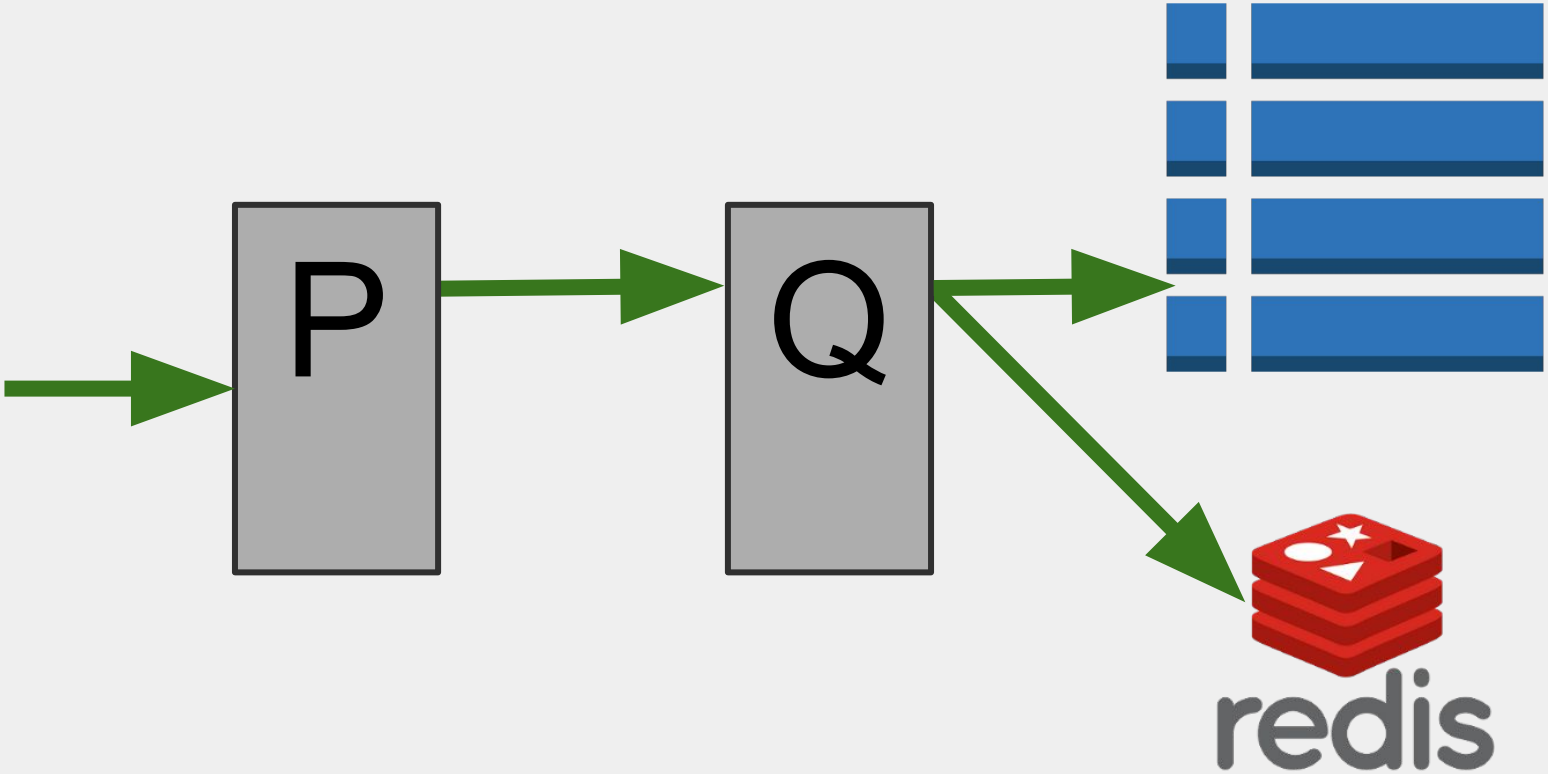
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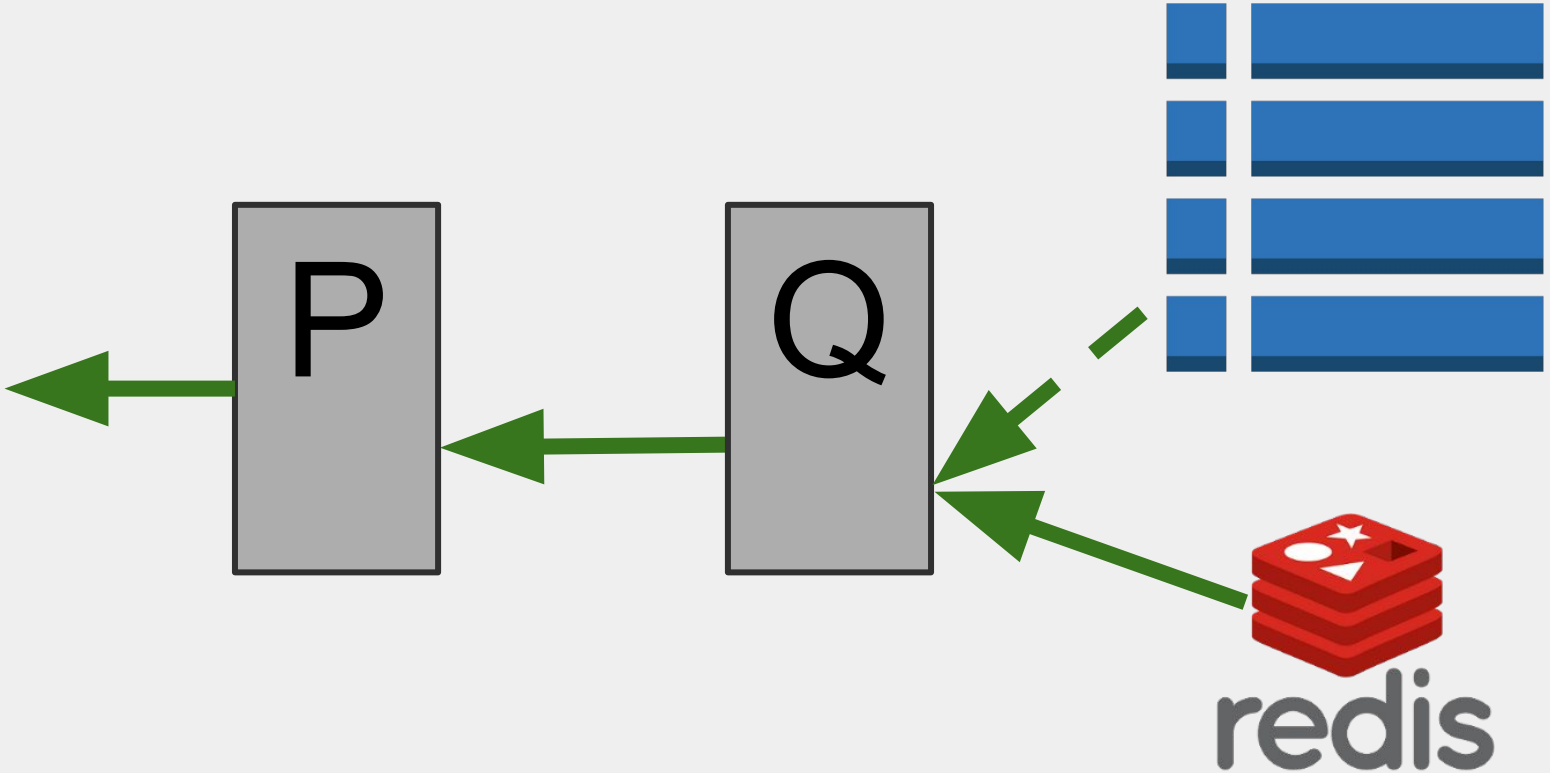
redis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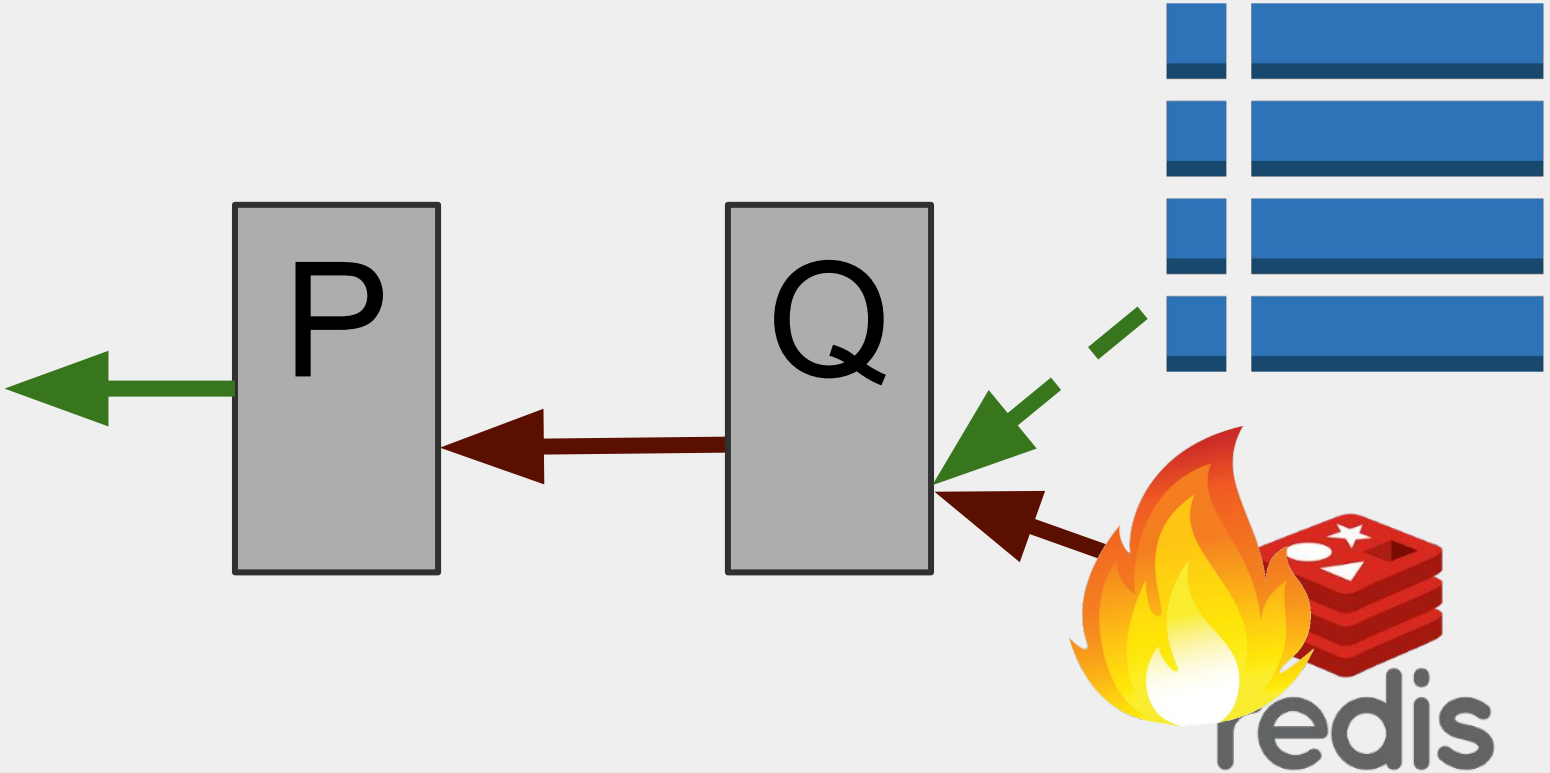
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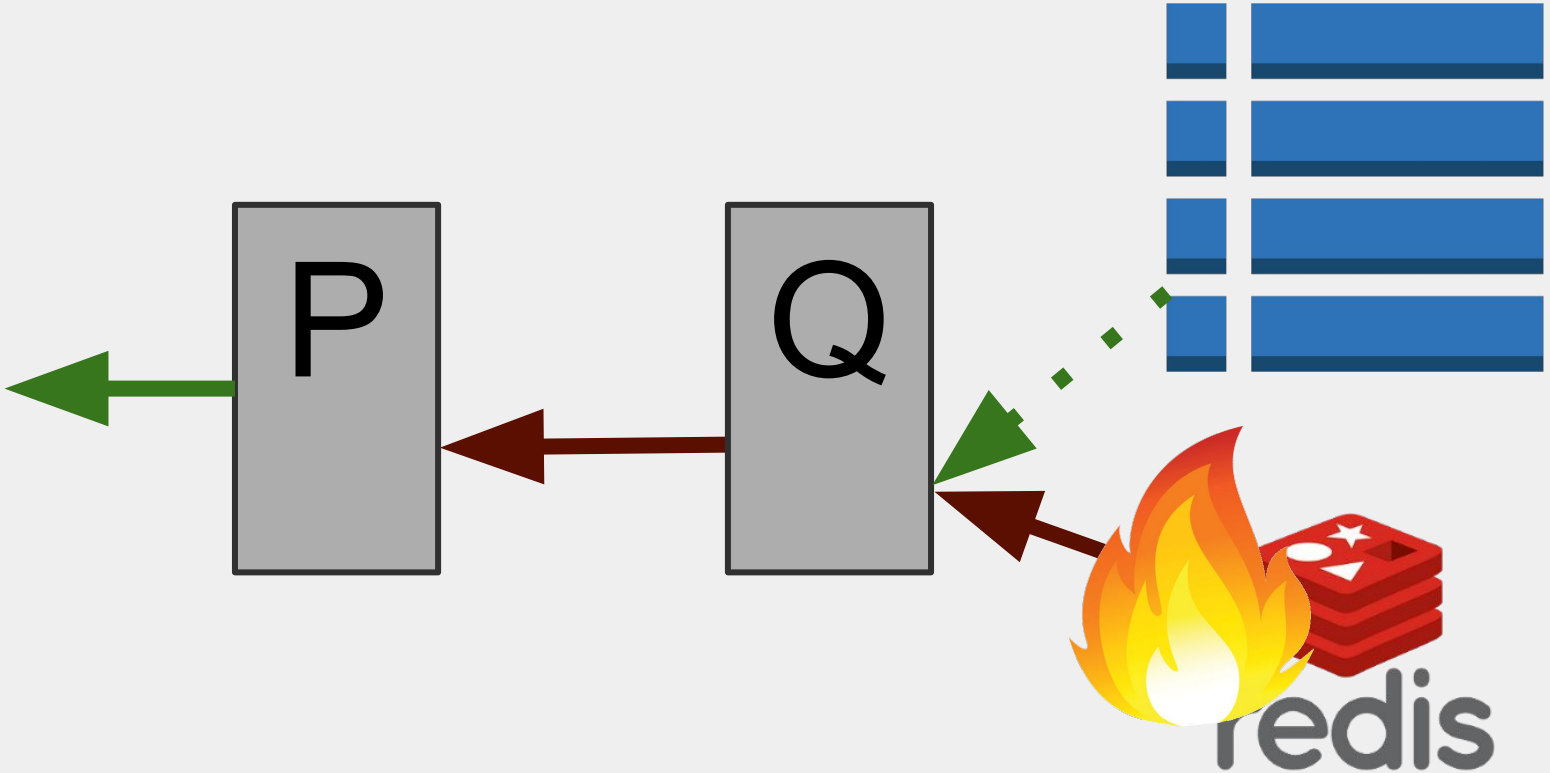
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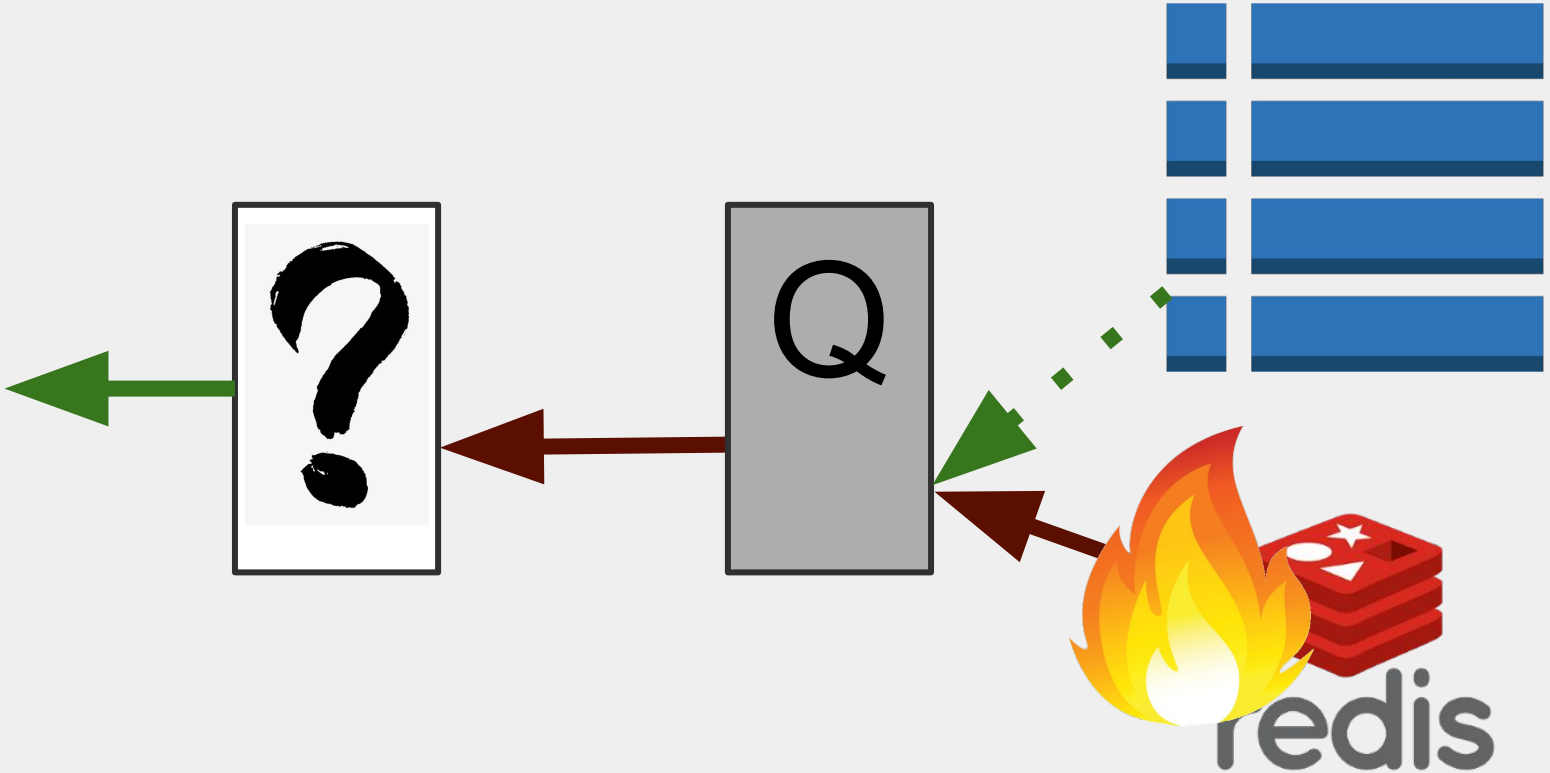
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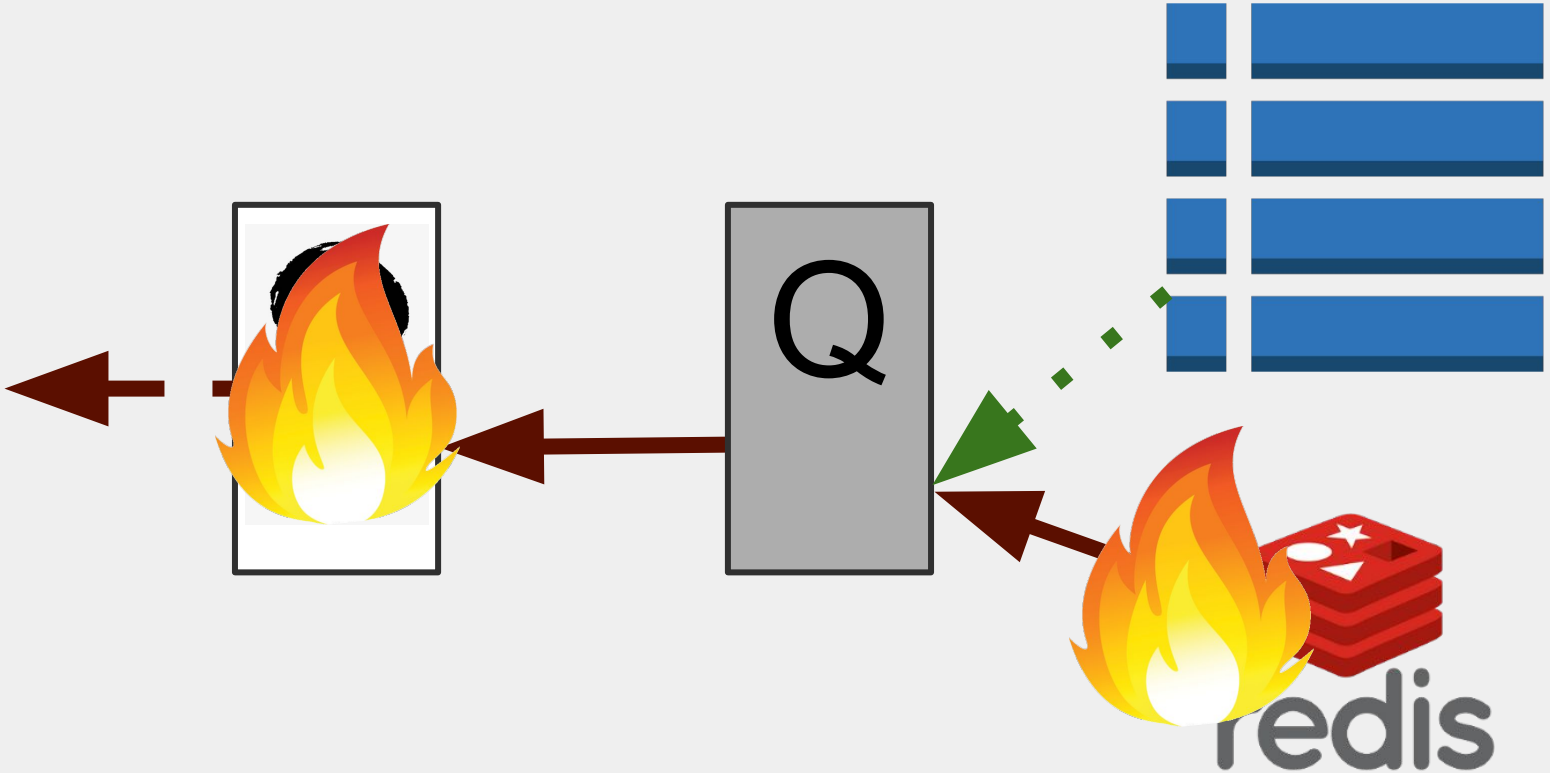
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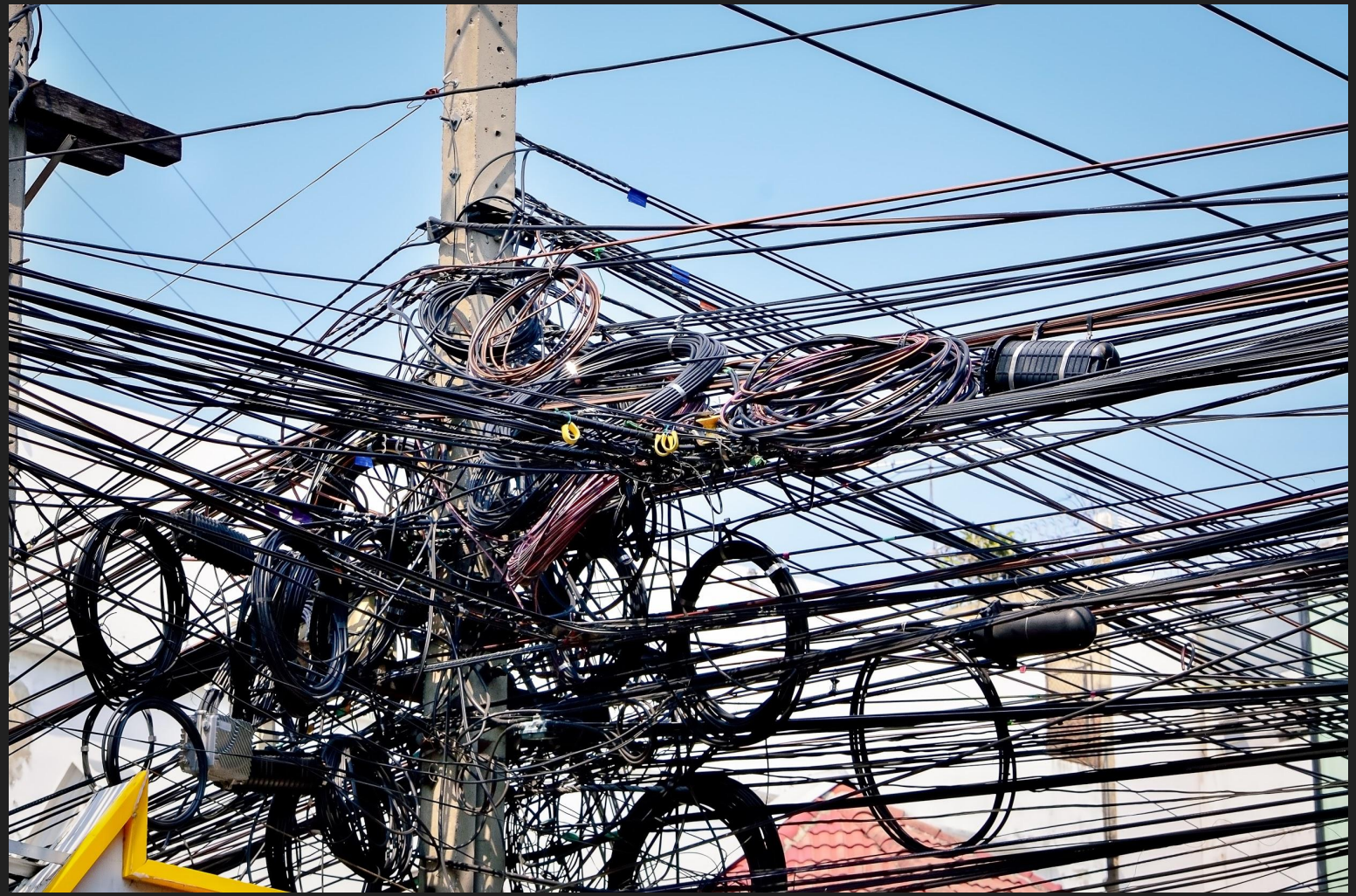
How do we survive the undesirable effects of complex systems?

@CaseyRosenthal

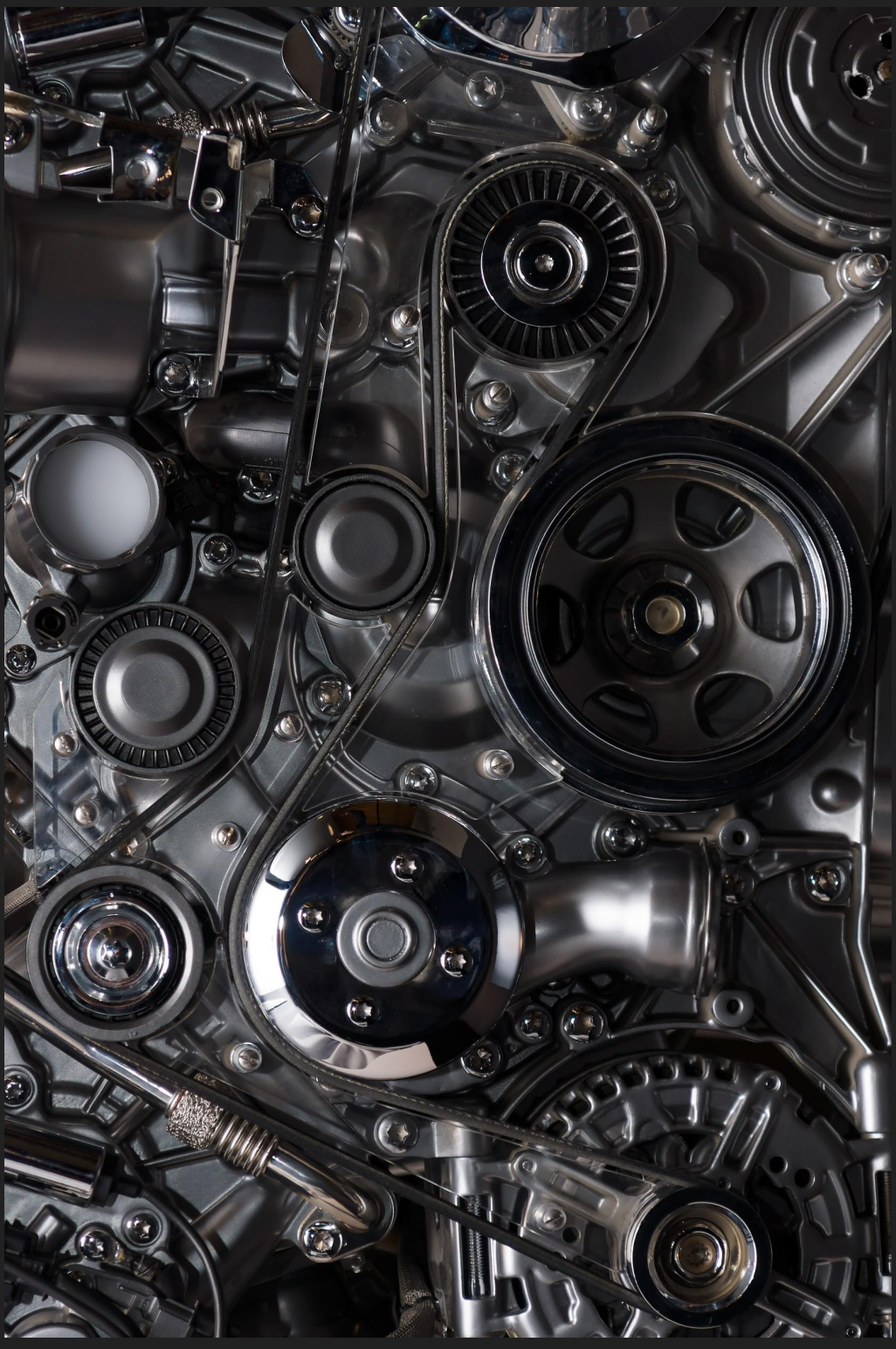
Casey, is the answer Simplicity?

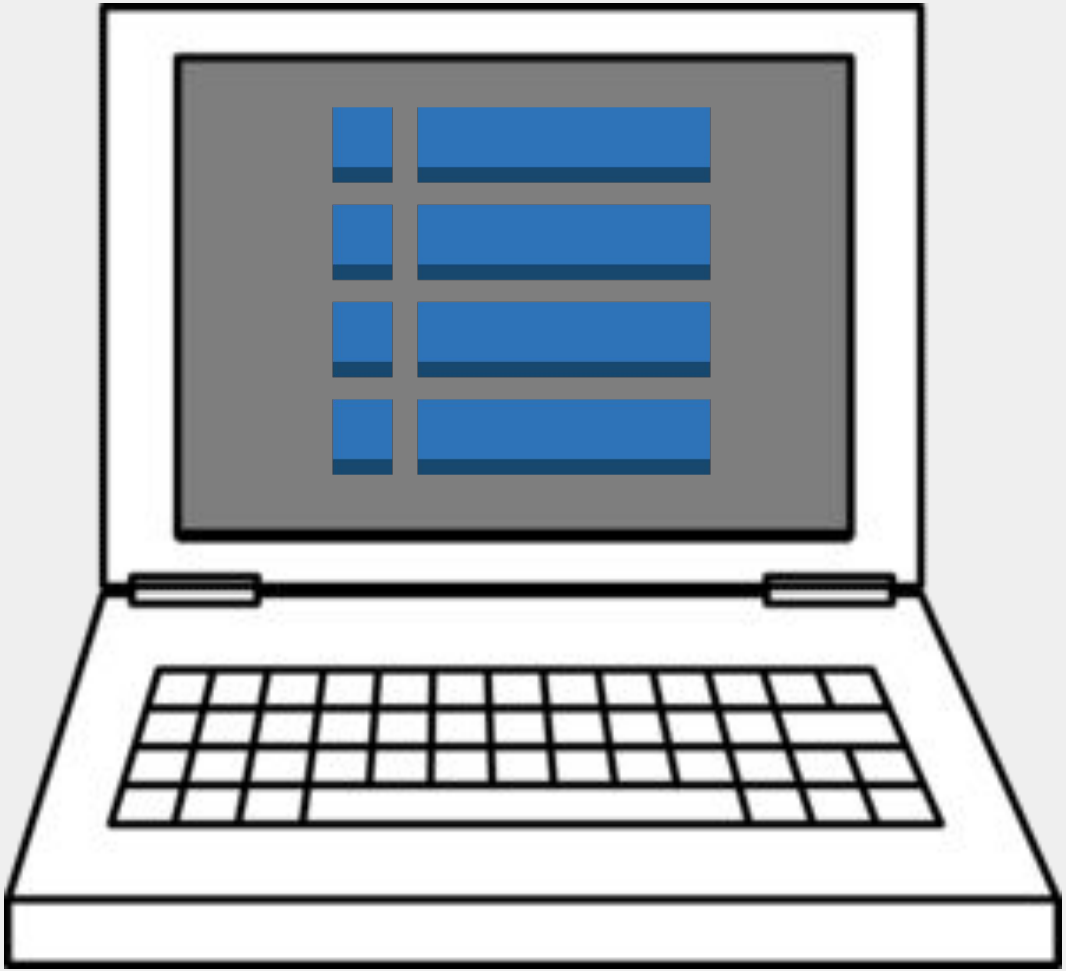
@CaseyRosenthal

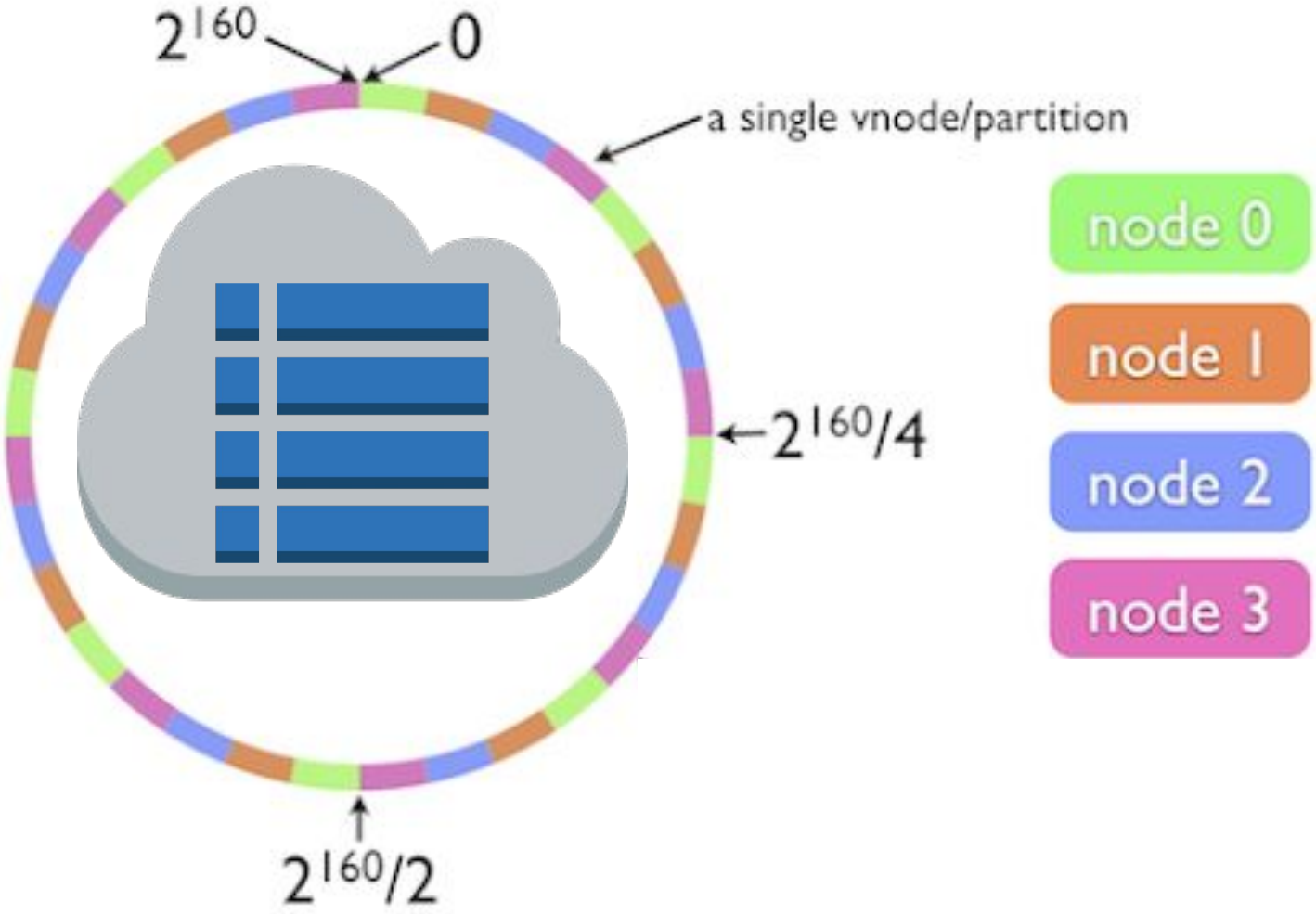


ACCIDENTAL

ESSENTIAL



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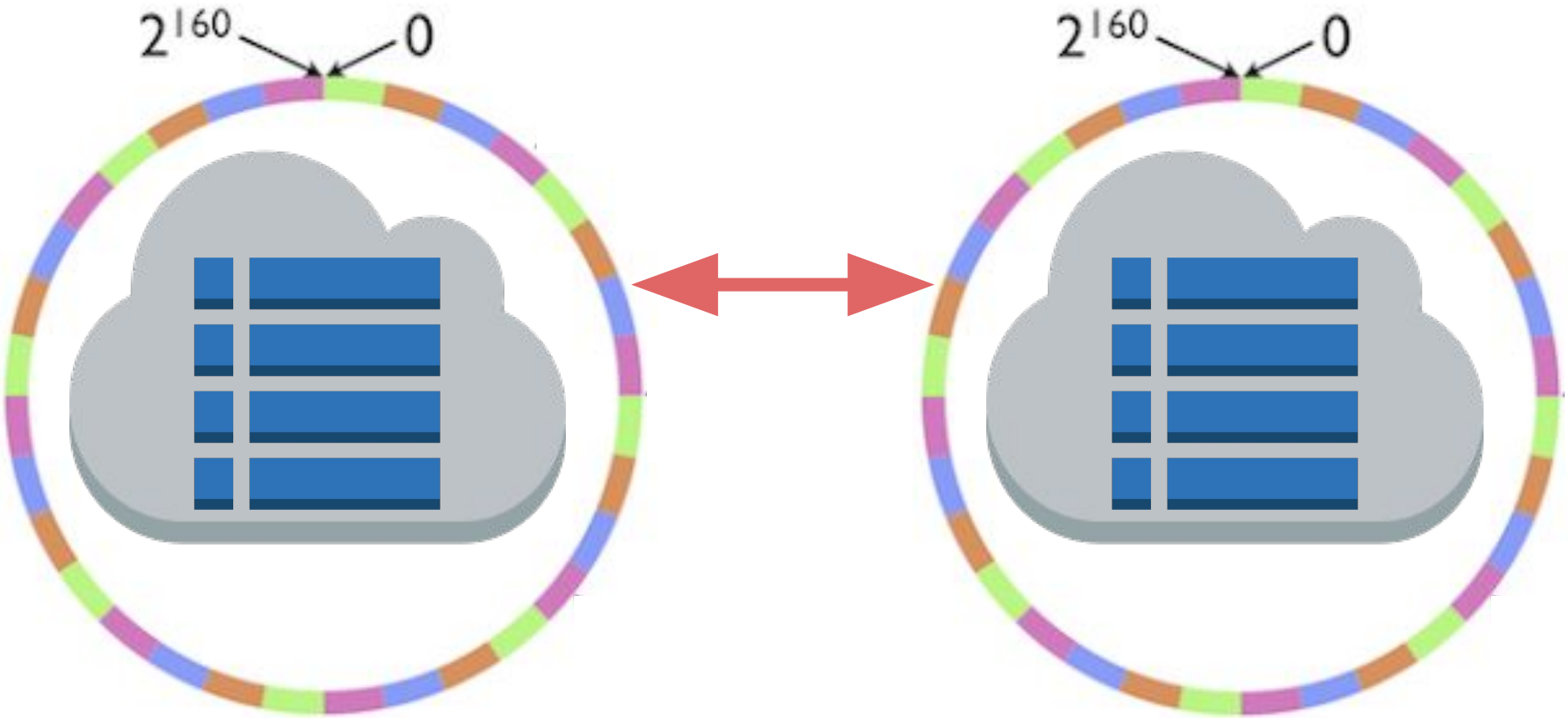
0
a single vnode/partition
$2^{160}/4$
$2^{160}/2$
node 0
node 1
node 2
node 3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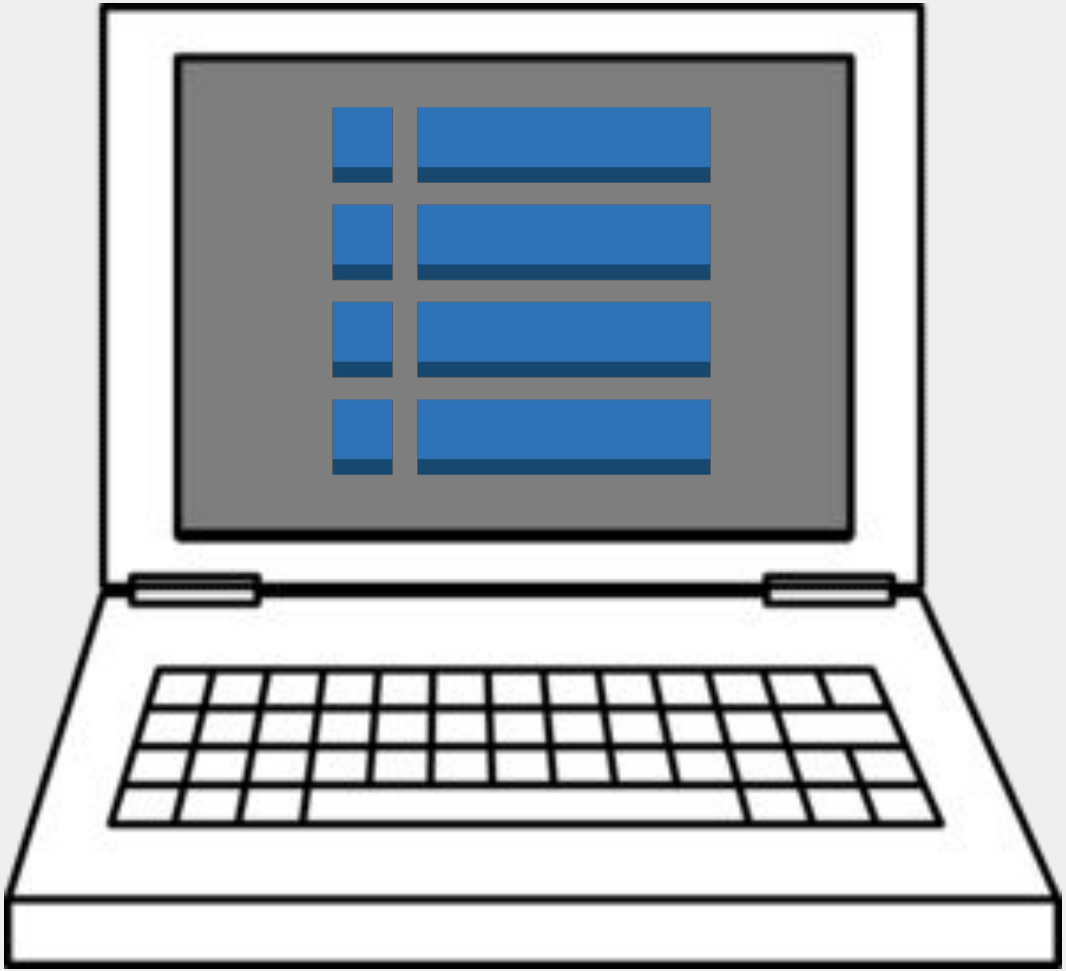


Casey, is the answer Redundancy?

@CaseyRosenthal

“Despite designers’ best intentions, redundancy can unwittingly increase the chances of an accident by encouraging operators to push safety limits well beyond where they would have, had such redundancies not been installed.”

-Snook, 2002

Casey, is the answer Observability?

@CaseyRosenthal

“Other things being equal, the more complex, interactive, tightly-coupled and opaque the system, the greater the number of resident [bugs] it is likely to contain. However, while simpler systems are usually less interactive, less centralised and more transparent, they tend to be considerably less evolved with regard to built-in defenses. Thus, relatively few [bugs] can often wreak greater havoc in simpler systems than in more advanced ones.”

-James Reason, 1991

Economic Pillars of Complexity

States

Relationships

Environment

Irreversibility

Casey, is the answer Automation?

@CaseyRosenthal

“Humans are notoriously bad at monitoring systems that rarely fail.”

-Snook, 2002

Casey, is the answer Training?

@CaseyRosenthal

As a response to an incident,

“put them through training”

is an organizational odor.

@CaseyRosenthal

Casey, is the answer Compliance?

@CaseyRosenthal

Best practices are not derived; they are subjective attributions.

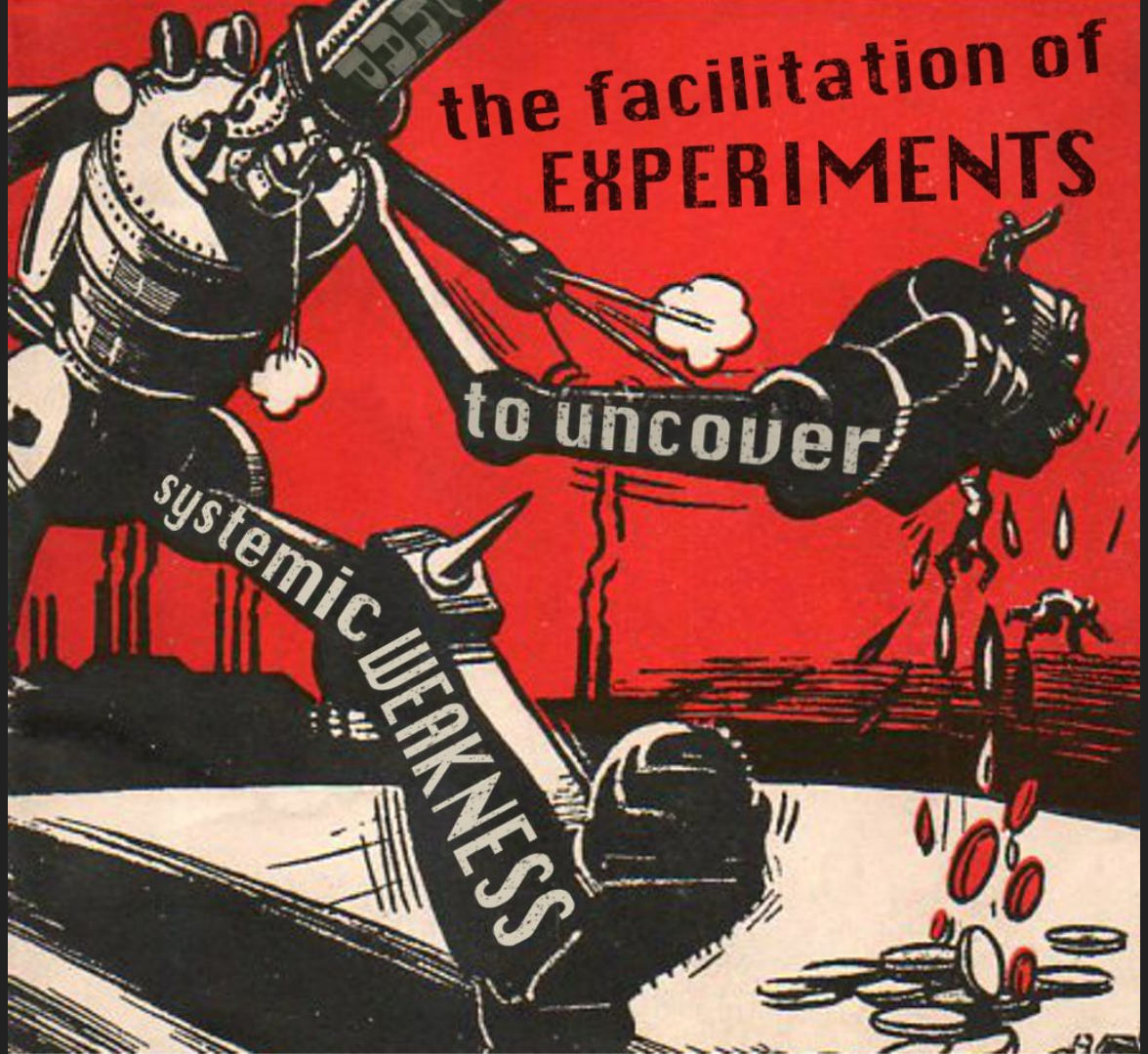
@CaseyRosenthal

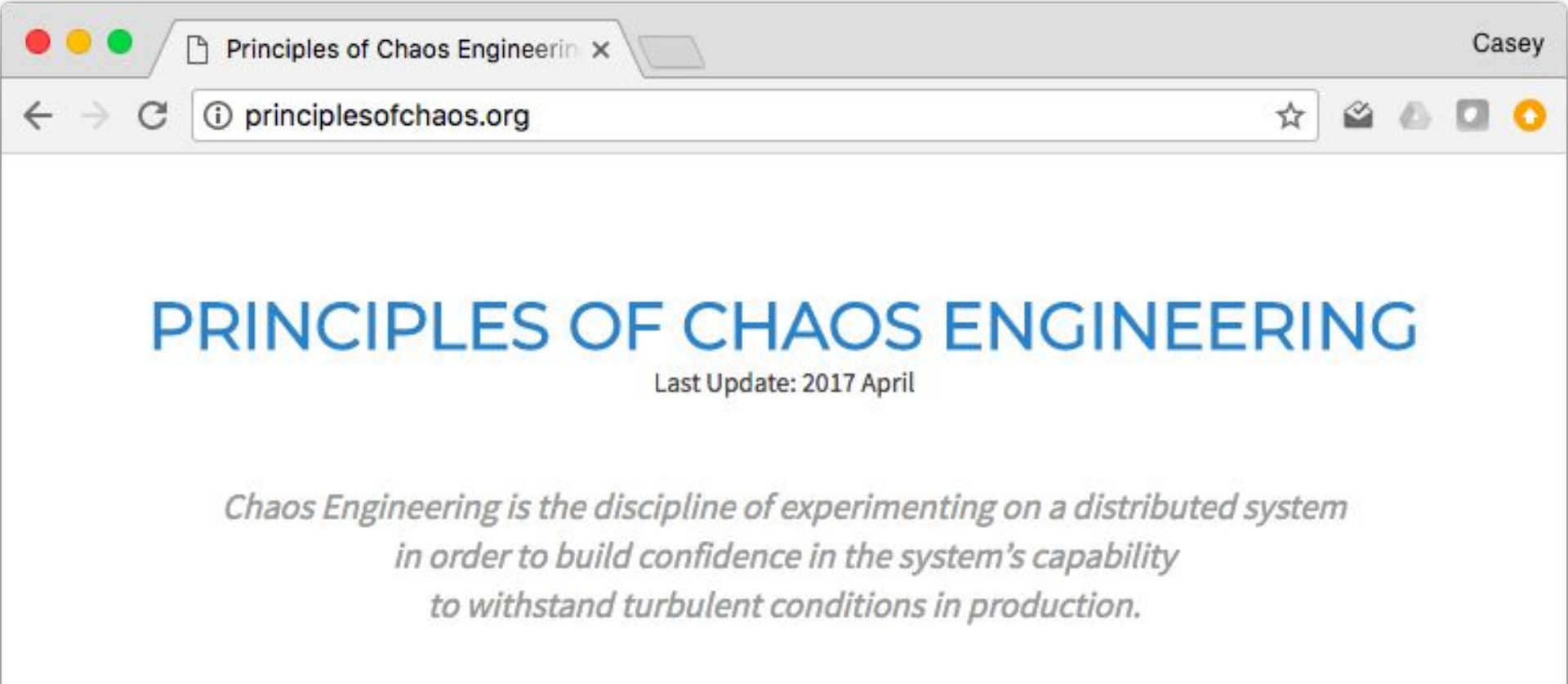
Chaos
Monkey

Economics

Workload

Safety


the facilitation of
EXPERIMENTS
to uncover
systemic WEAKNESS


Principles of Chaos Engineerin
Casey
principlesofchaos.org
PRINCIPLES OF CHAOS ENGINEERING
Last Update: 2017 April
Chaos Engineering is the discipline of experimenting on a distributed system
in order to build confidence in the system's capability
to withstand turbulent conditions in production.

ChAP

How do we survive the undesirable effects of complex systems?

@CaseyRosenthal

Think of a well-run kitchen.

@CaseyRosenthal

- Embrace complexity and navigate it.

@CaseyRosenthal

- Embrace complexity and navigate it.
- Provide opportunities for teams to practice working together.

@CaseyRosenthal

- Embrace complexity and navigate it.
- Provide opportunities for teams to practice working together.
- Tolerate inefficiencies.

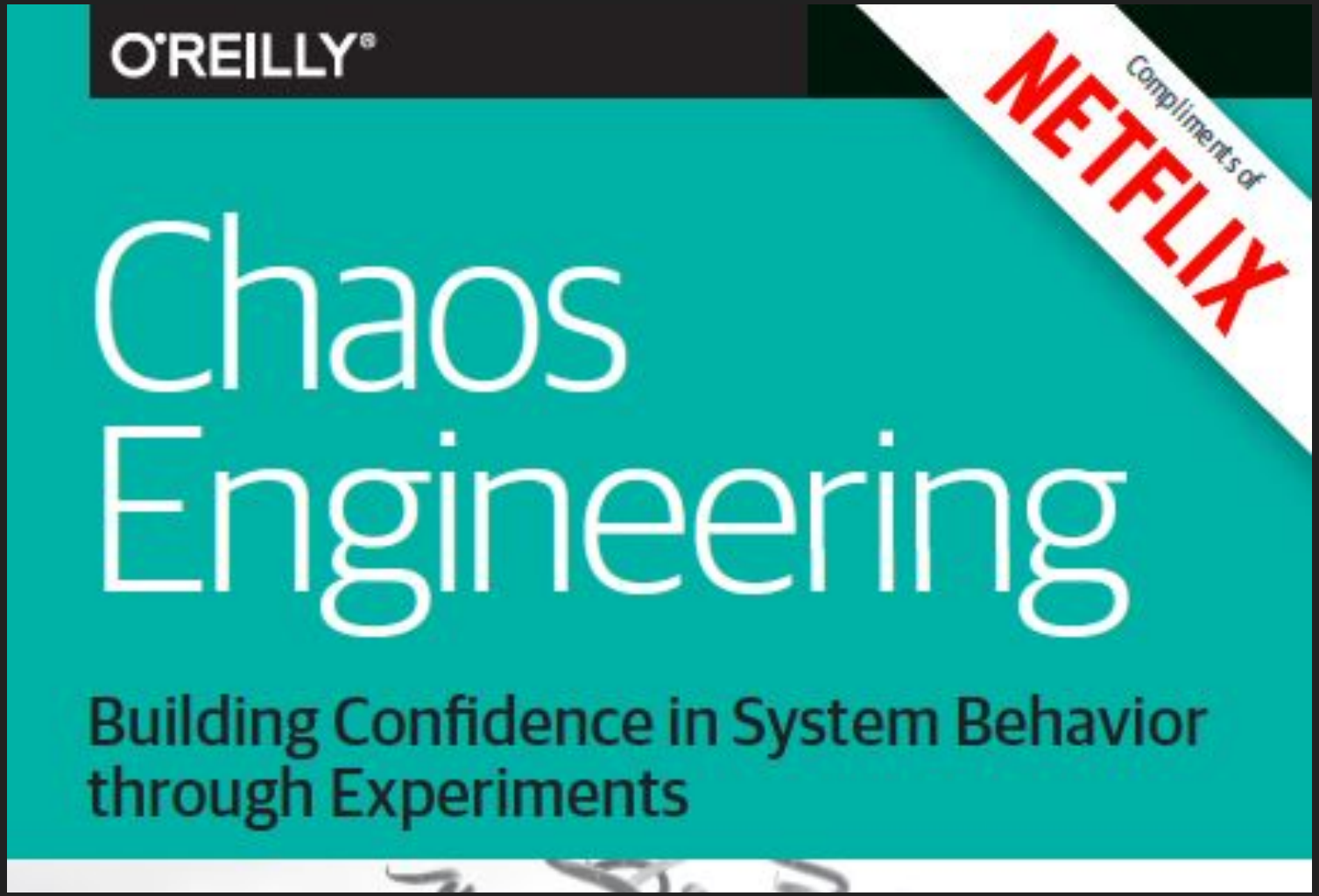
@CaseyRosenthal

- Embrace complexity and navigate it.
- Provide opportunities for teams to practice working together.
- Tolerate inefficiencies.
- Communicate the safety margin.

@CaseyRosenthal

Humans create resilience, not tools.

@CaseyRosenthal


O'REILLY®
Compliments of
NETFLIX
Chaos Engineering
Building Confidence in System Behavior through Experiments

backplane.io