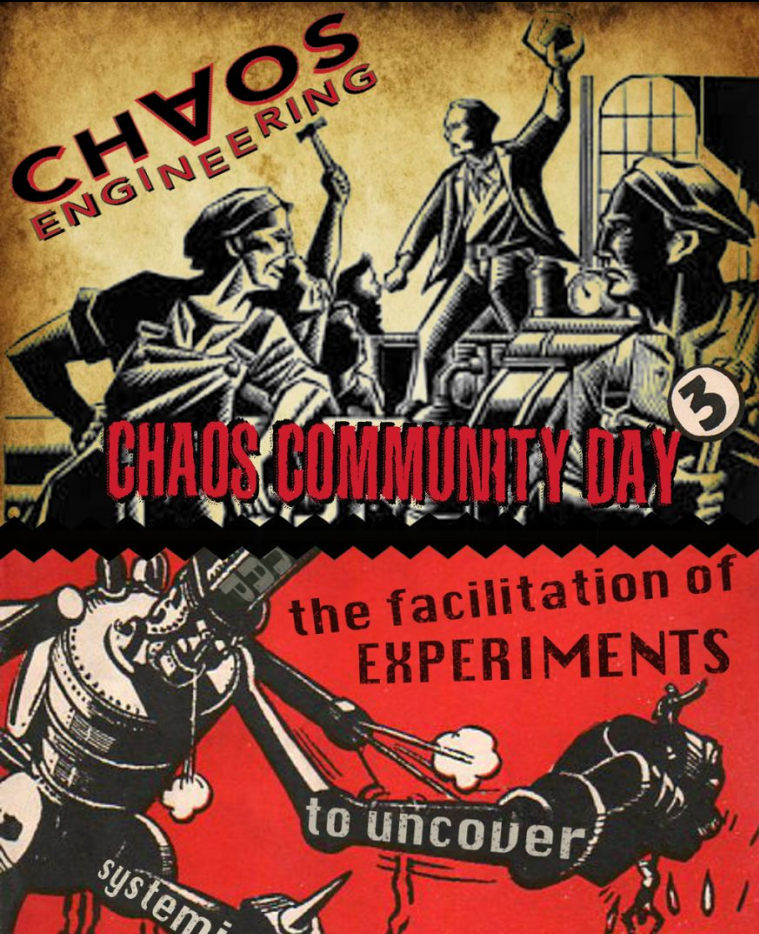


<http://principlesofchaos.org>



Casey Rosenthal
@caseyrosenthal

NETFLIX

NETFLIX

Part One.

SERVICE A

SERVICE B

SERVICE C

SERVICE D

SERVICE E

SERVICE F

SERVICE G





SERVICE A

SERVICE B

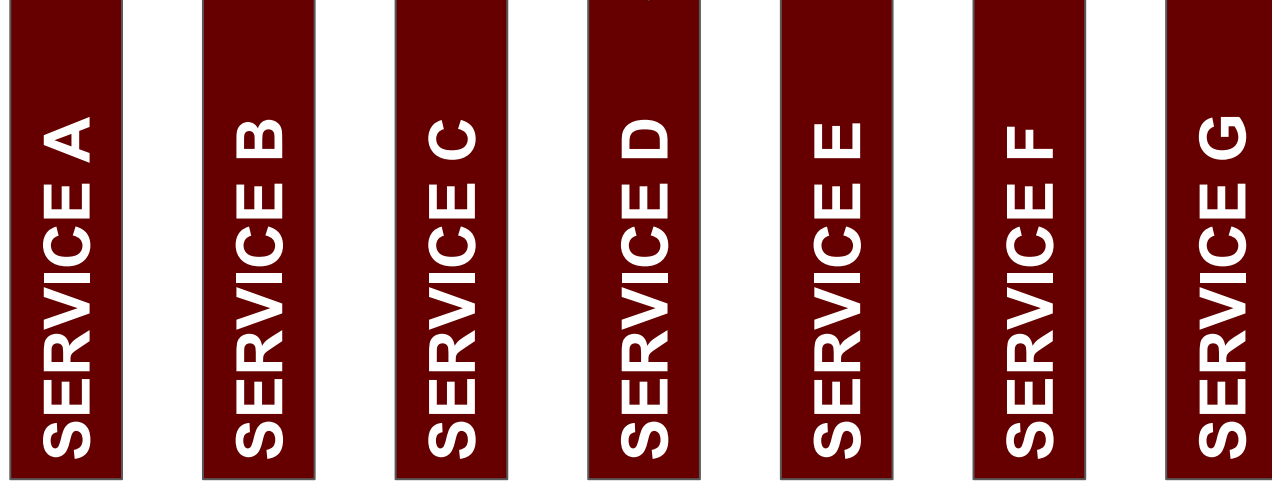
SERVICE C

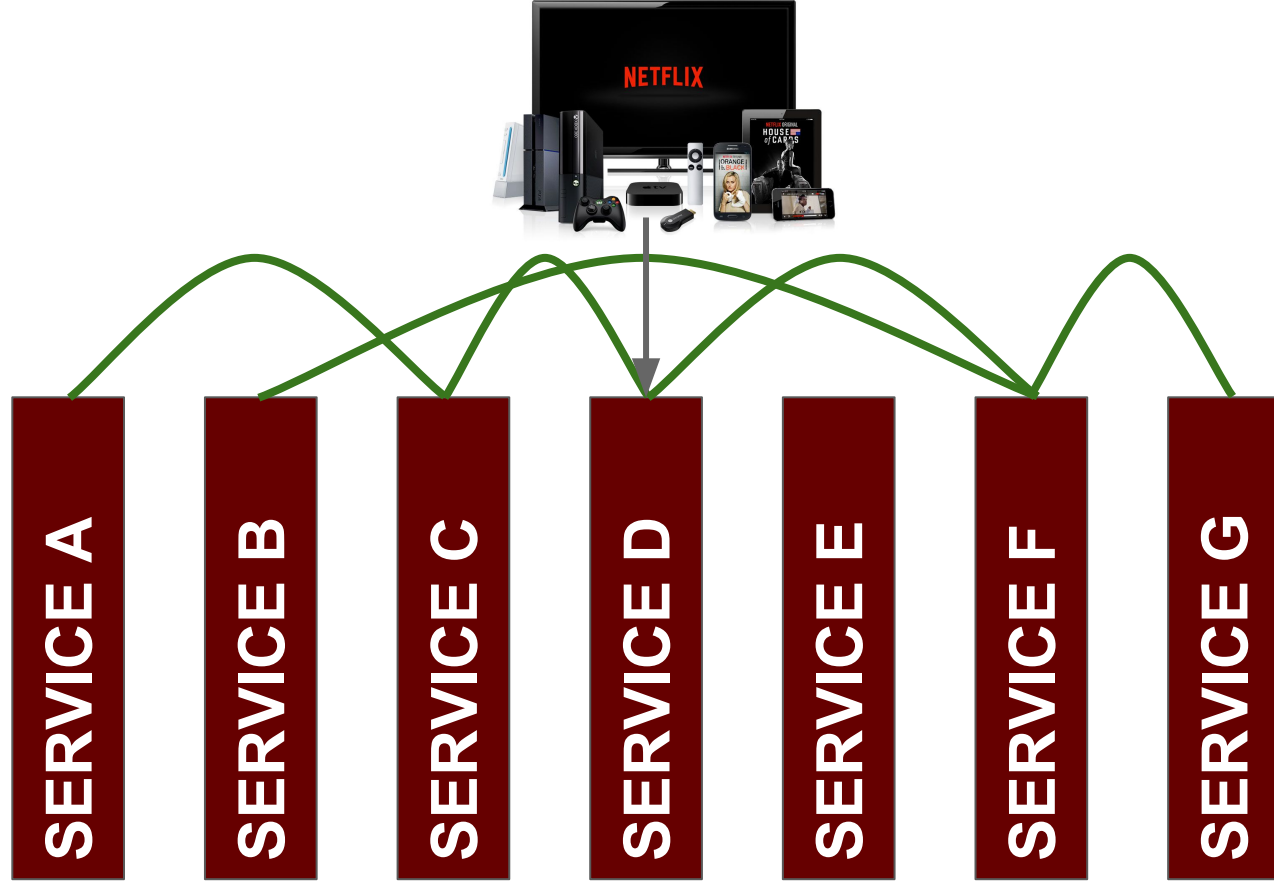
SERVICE D

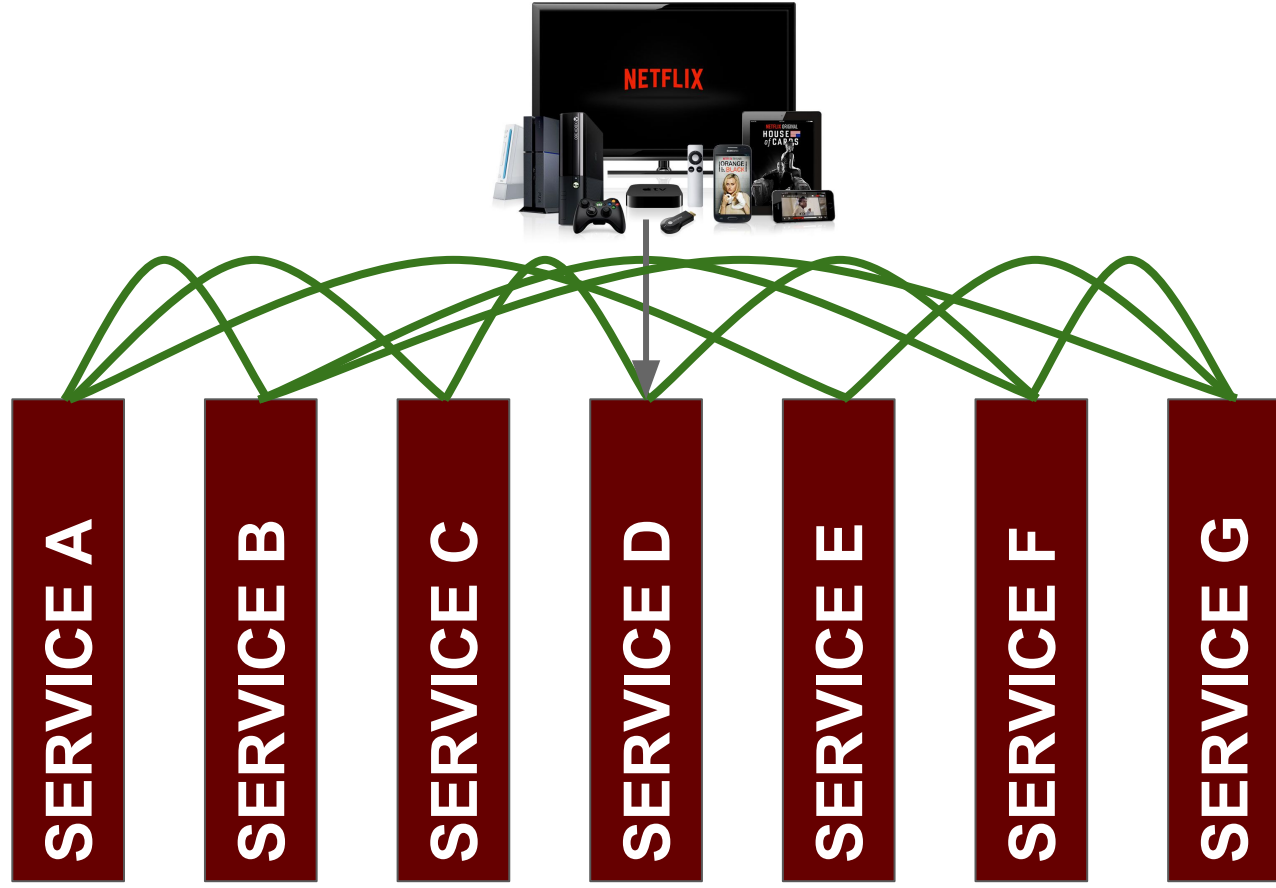
SERVICE E

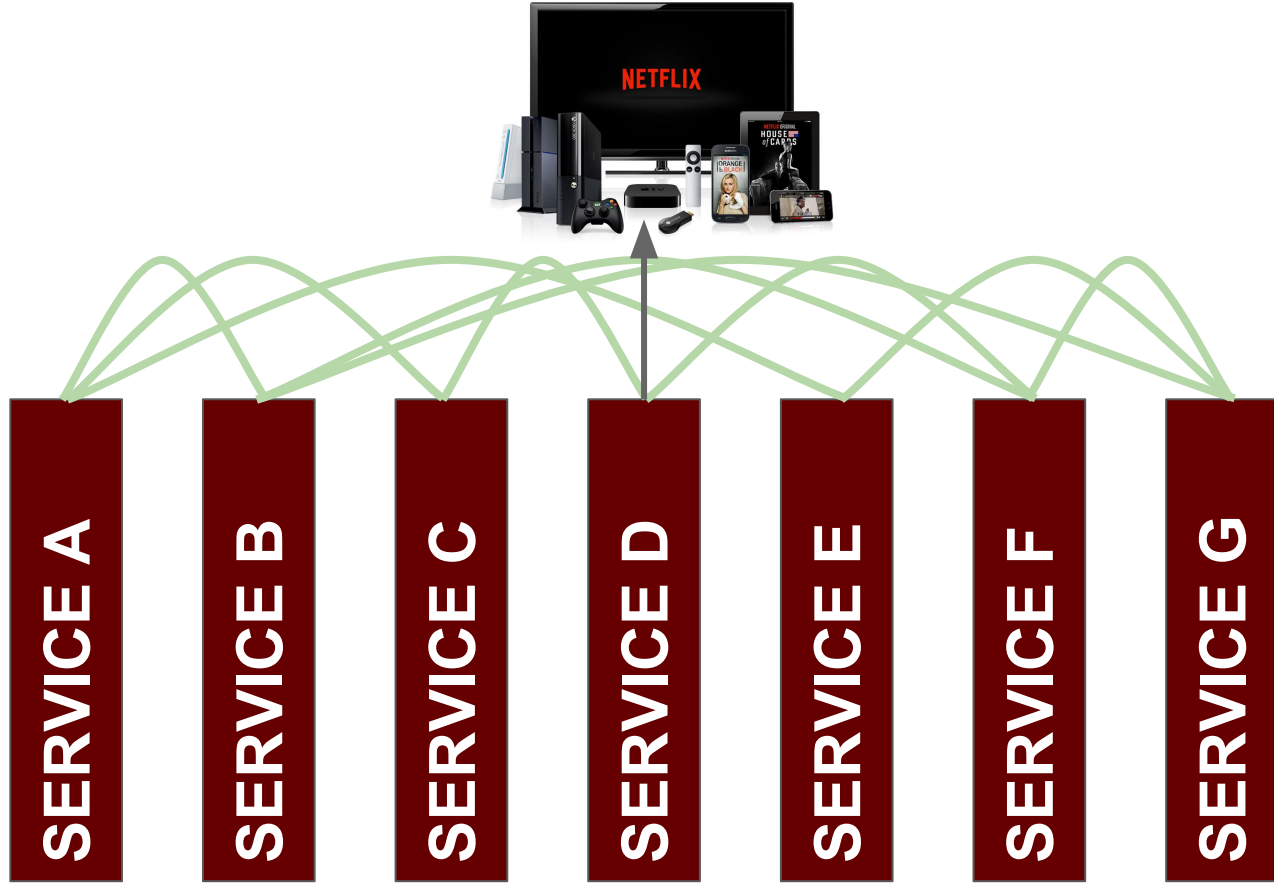
SERVICE F

SERVICE G

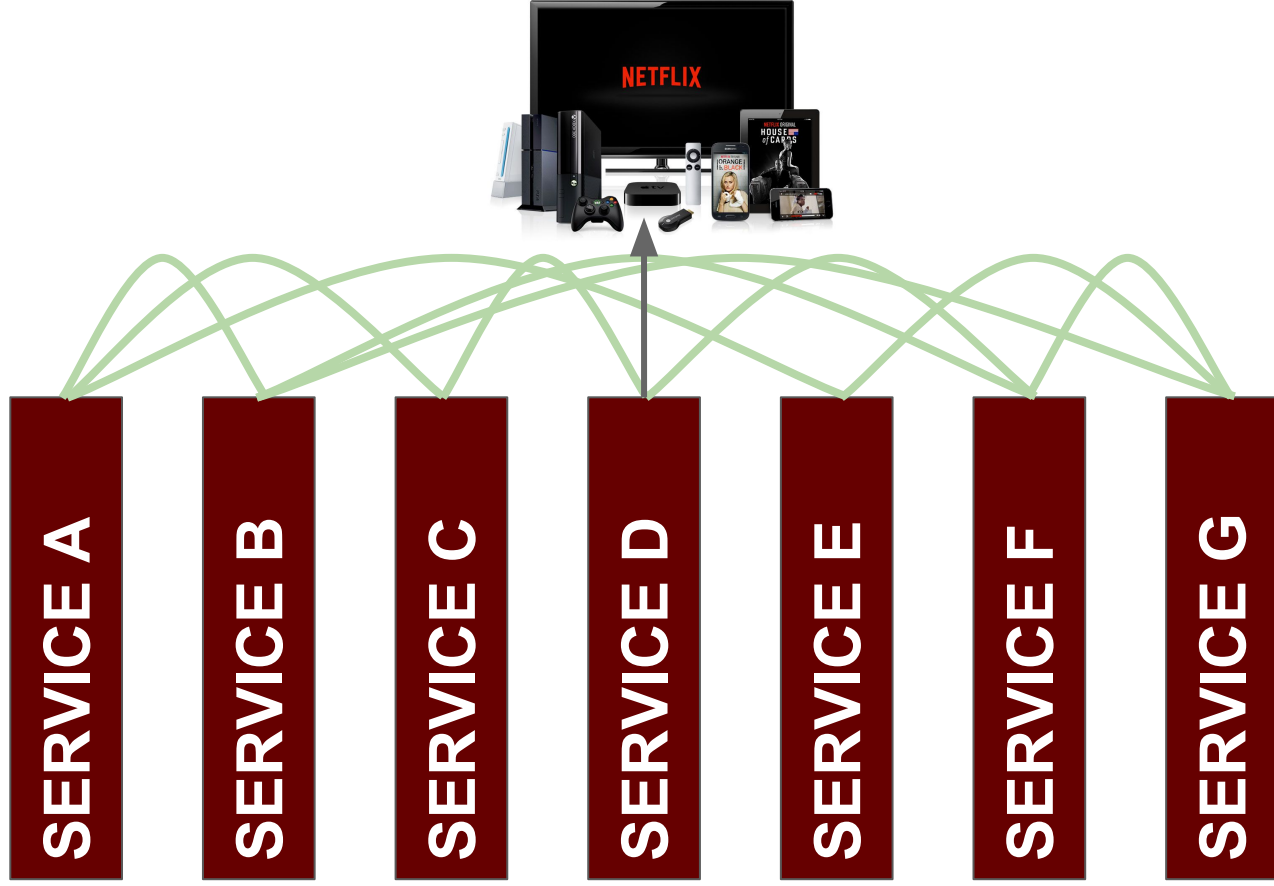












UNREASONABLE SYSTEMS

Complex systems, by their nature, are unreasonable systems. They exceed the capacity of a human mind to comprehend the interaction of parts in any predictive capacity.

Part Two.

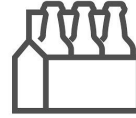
Customers



Customers



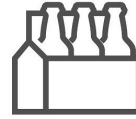
Retailer



Customers



Retailer



Brewer



Customers 

Retailer 

Brewer 

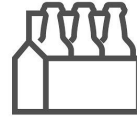
Customers		Retailer			Brewer	
Demand	Purchased	In Stock	Remaining	Ordered	Ready for Sale	Being Bottled
1	1	2	1	1	8	1



Customers



Retailer



Brewer

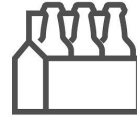


Demand	Purchased	In Stock	Remaining	Ordered	Ready for Sale	Being Bottled
1	1	2	1	1	8	1
4	2	2	-2	4	8	5

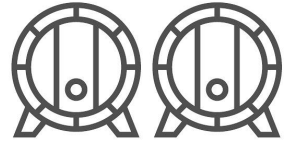
Customers



Retailer



Brewer

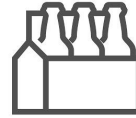


Demand	Purchased	In Stock	Remaining	Ordered	Ready for Sale	Being Bottled
1	1	2	1	1	8	1
4	2	2	-2	5	8	6
64	5	5	-59	65	11	250

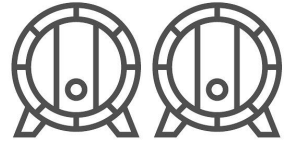
Customers



Retailer



Brewer

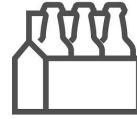


Demand	Purchased	In Stock	Remaining	Ordered	Ready for Sale	Being Bottled
1	1	2	1	1	8	1
4	2	2	-2	5	8	6
64	5	5	-59	65	11	250
3	3	11	8	0	250	0

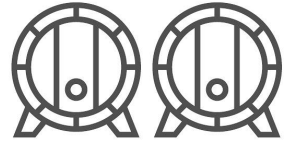
Customers



Retailer



Brewer



Demand	Purchased	In Stock	Remaining	Ordered	Ready for Sale	Being Bottled
1	1	2	1	1	8	1
4	2	2	-2	5	8	6
64	5	5	-59	65	11	250
3	3	11	8	0	250	0
1	1	62	61	0	196	0

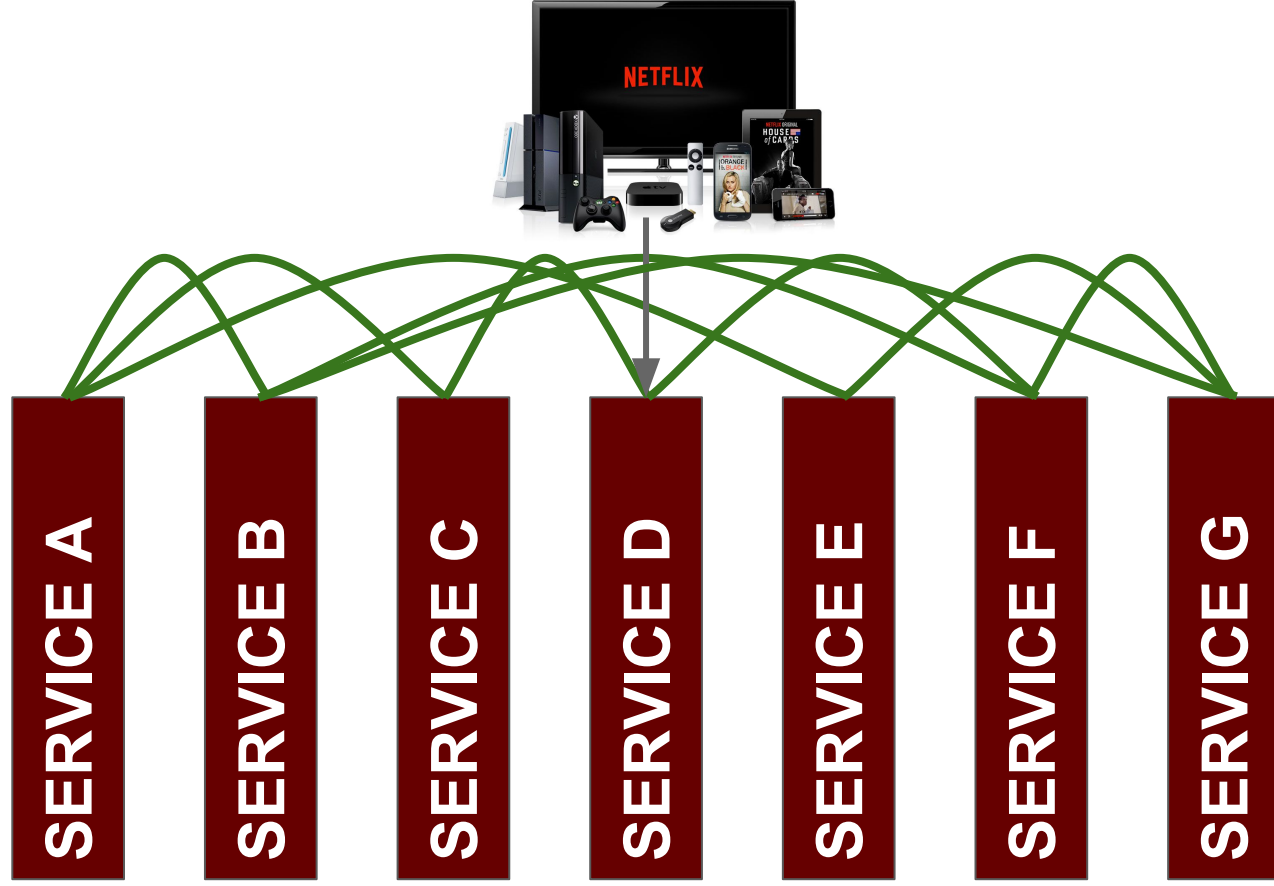
Customers

Retailer

Brewer

Demand	Purchased	In Stock	Remaining	Ordered	Ready for Sale	Being Bottled
1	1	2	1	1	8	1
4	2	2	-2	5	8	6
64	5	5	-59	65	11	250
3	3	11	8	0	250	0
1	1	62	61	0	196	0
		62	-61		196	distillery?





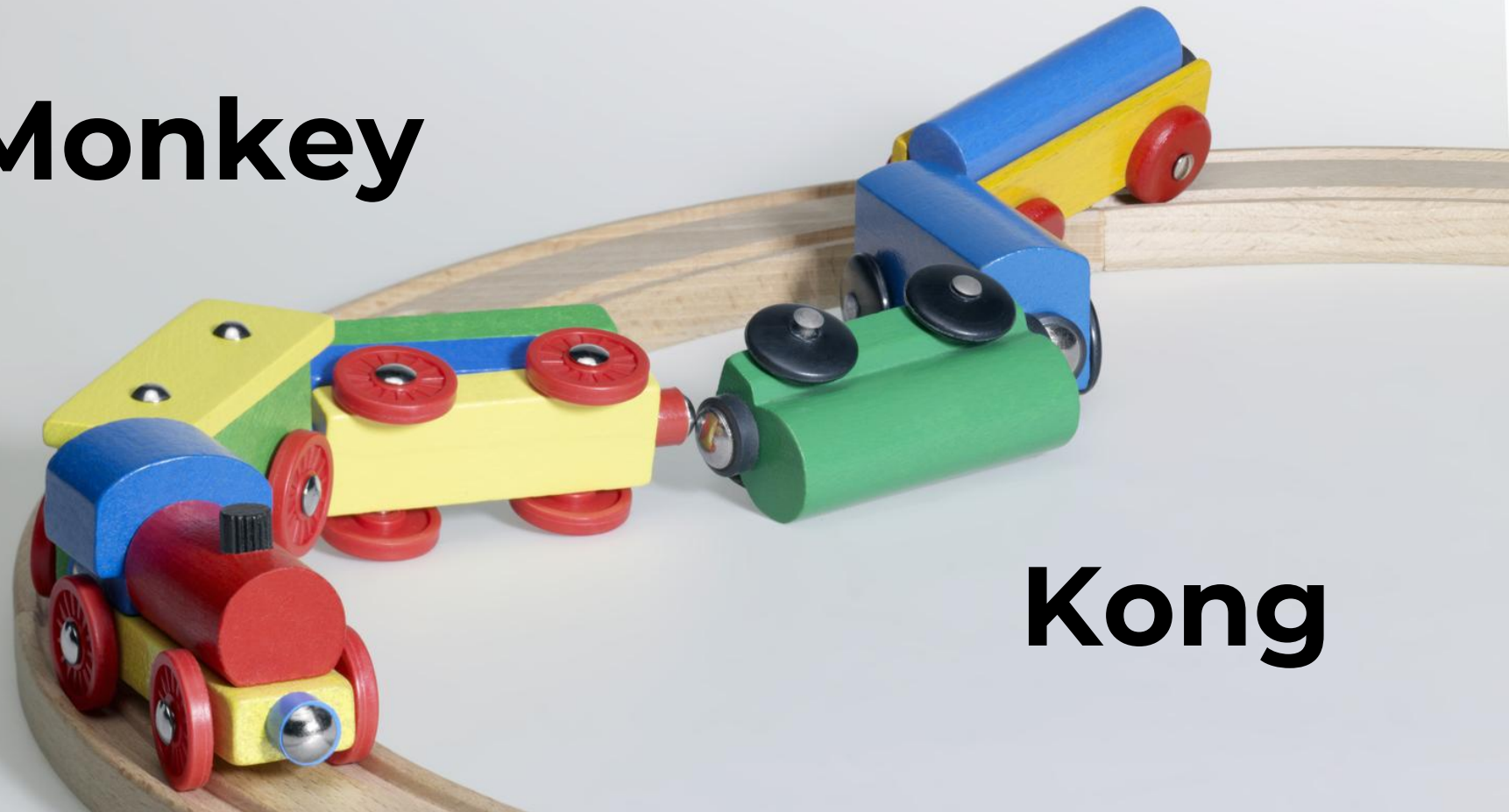
Part Three.

CHAOS



CHAOS

Monkey



Kong

CHAOS



Jens Rasmussen

ECONOMICS

WORKLOAD

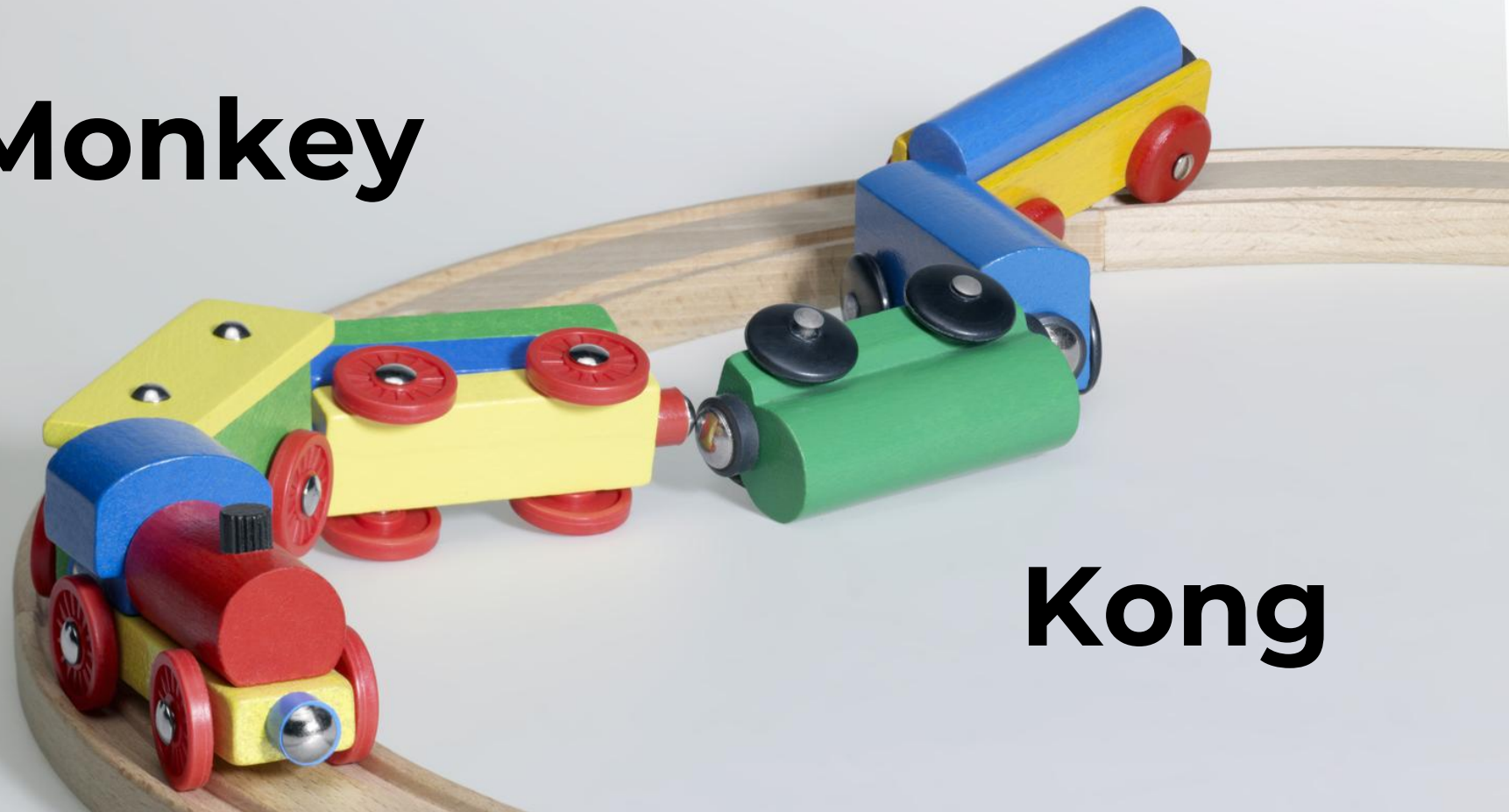
SAFETY

CHAOS



CHAOS

Monkey



Kong

<http://principlesofchaos.org>

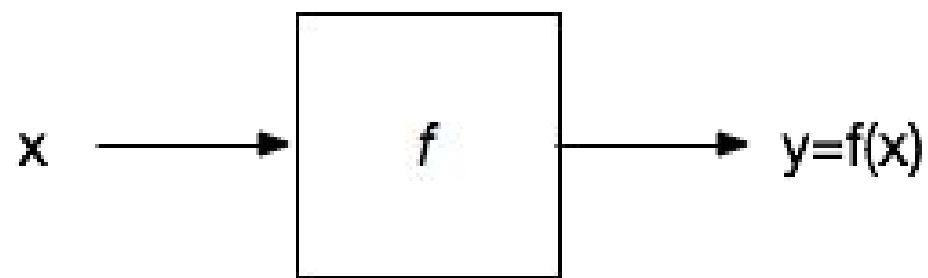
CHVOS
ENGINEERING

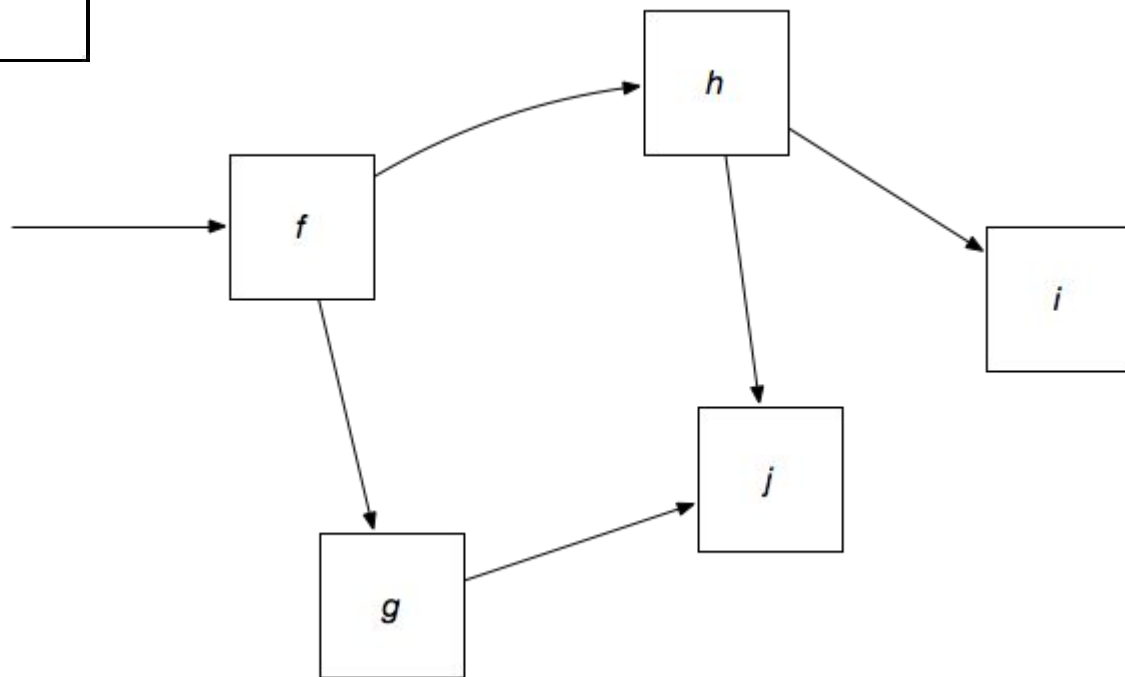
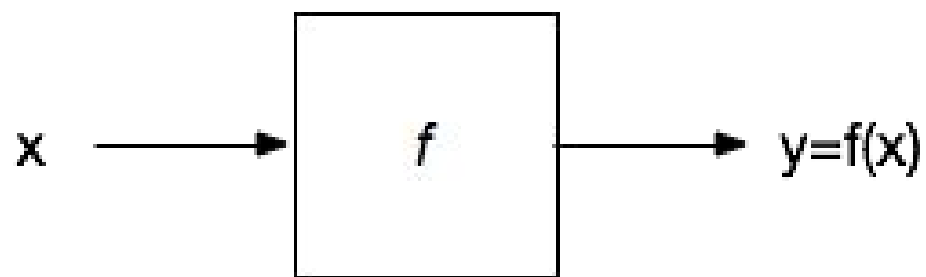
<http://principlesofchaos.org>

CHVOS ENGINEERING

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.









TESTS != EXPERIMENTS

Tests:

Define the valence of a known, asserted property.

Experiments:

Create new knowledge by nullifying a hunch.

<http://principlesofchaos.org>

- **Build a hypothesis about steady-state behavior.**

<http://principlesofchaos.org>

- Build a hypothesis about steady-state behavior.
- **Vary real-world events.**

<http://principlesofchaos.org>

- Build a hypothesis about steady-state behavior.
- Vary real-world events.
- **Experiment in production.**

<http://principlesofchaos.org>

- Build a hypothesis about steady-state behavior.
- Vary real-world events.
- Experiment in production.
- **Automate experiments to run continuously.**

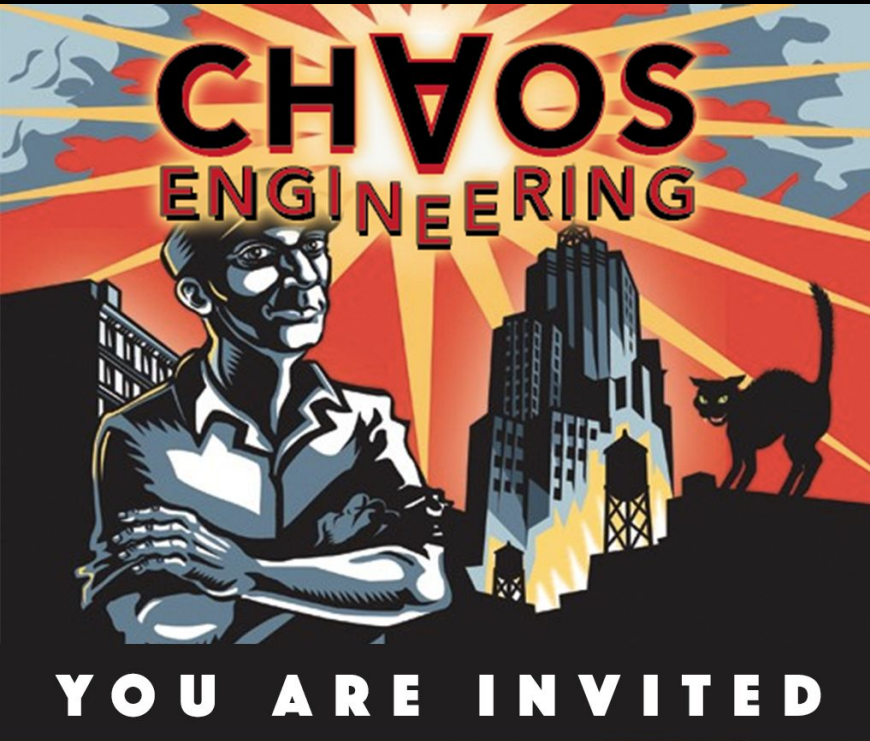
<http://principlesofchaos.org>

- Build a hypothesis about steady-state behavior.
- Vary real-world events.
- Experiment in production.
- Automate experiments to run continuously.
- **Minimize the blast radius.**

<http://principlesofchaos.org>

- **Build a hypothesis about steady-state behavior.**
- **Vary real-world events.**
- **Experiment in production.**
- **Automate experiments to run continuously.**
- **Minimize the blast radius.**

<http://principlesofchaos.org>



685 MA
SAN FR

COME

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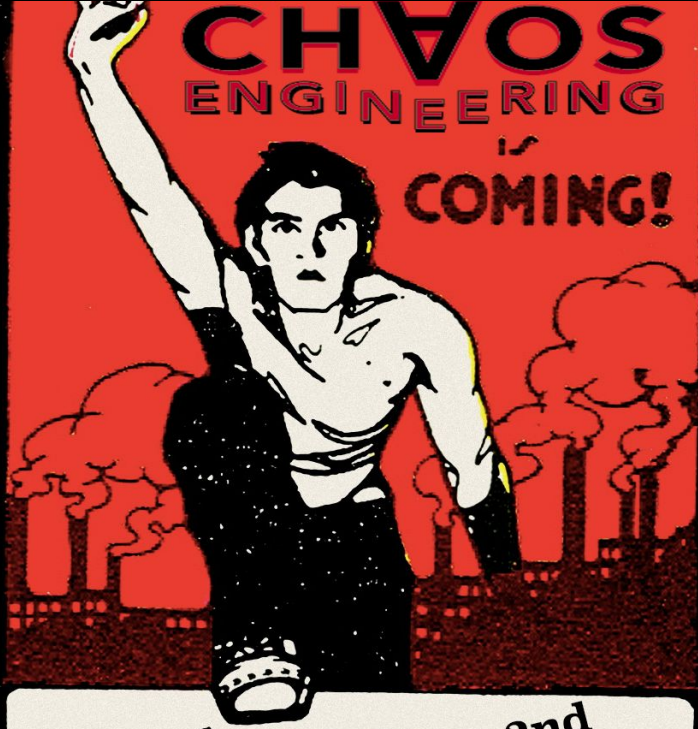


ORGA

RSVP:
RSVP:

<http://principlesofchaos.org>

CHAOS
ENGINEERING
IS
COMING!



JOIN THE 2nd
CHAOS COMMUNITY DAY

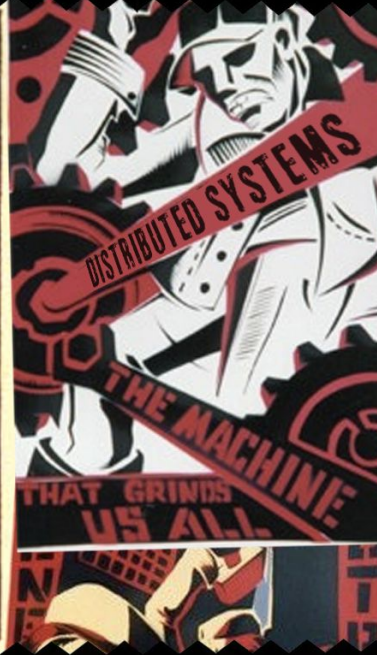
CHAOS COMMUNITY DAY

AUG 26TH!



AMAZON BLACKFOOT BUILDING
1918 8TH AVE, 10TH FLOOR
SEATTLE, WA 98101

AGENDA:

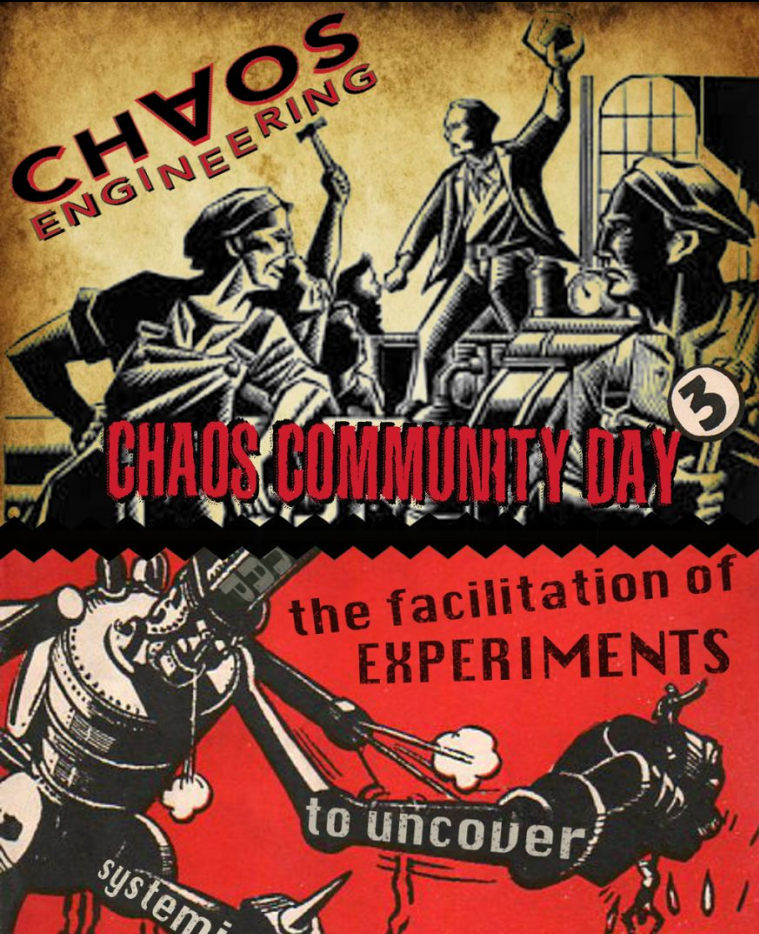


AMAZON BLACKFOOT
1918 8TH AVE, 1
SEATTLE, WA

AGENDA:
CHAOS COMMUNITY DAY
PRACTITIONERS OF CHAOS
OPPORTUNITY TO PRESENT
PROVIDED BY AWS. 9AM

RSVP: CRO

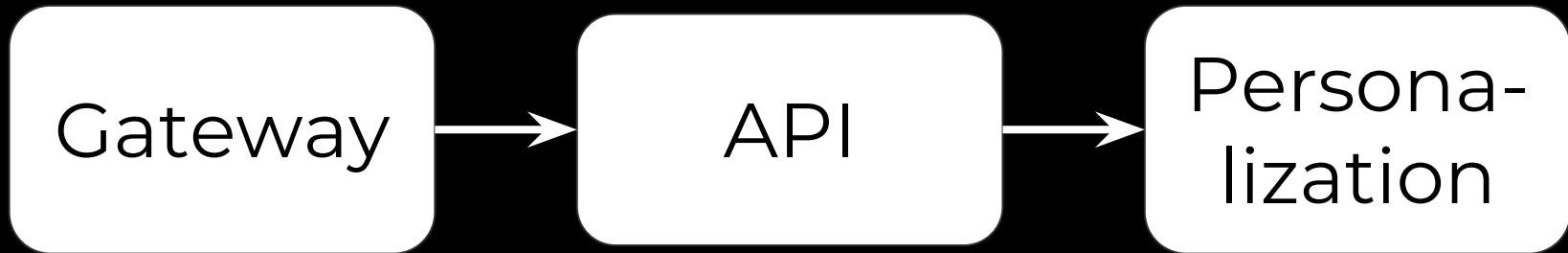
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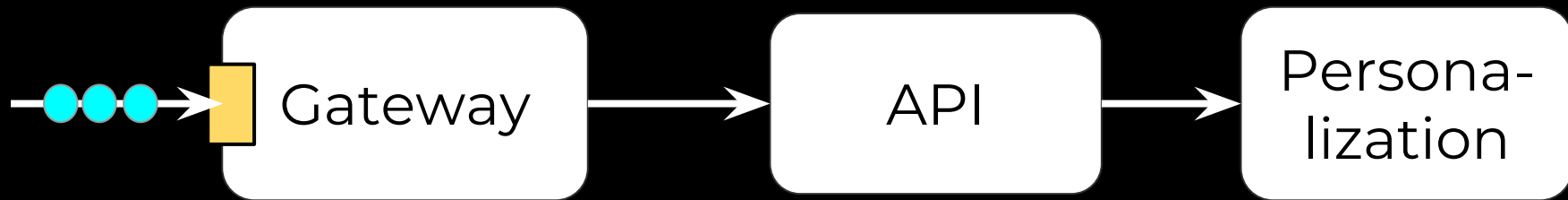


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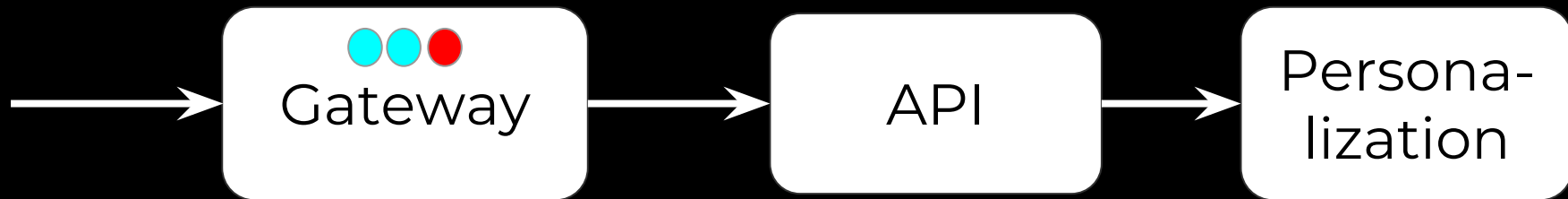
Part Four.

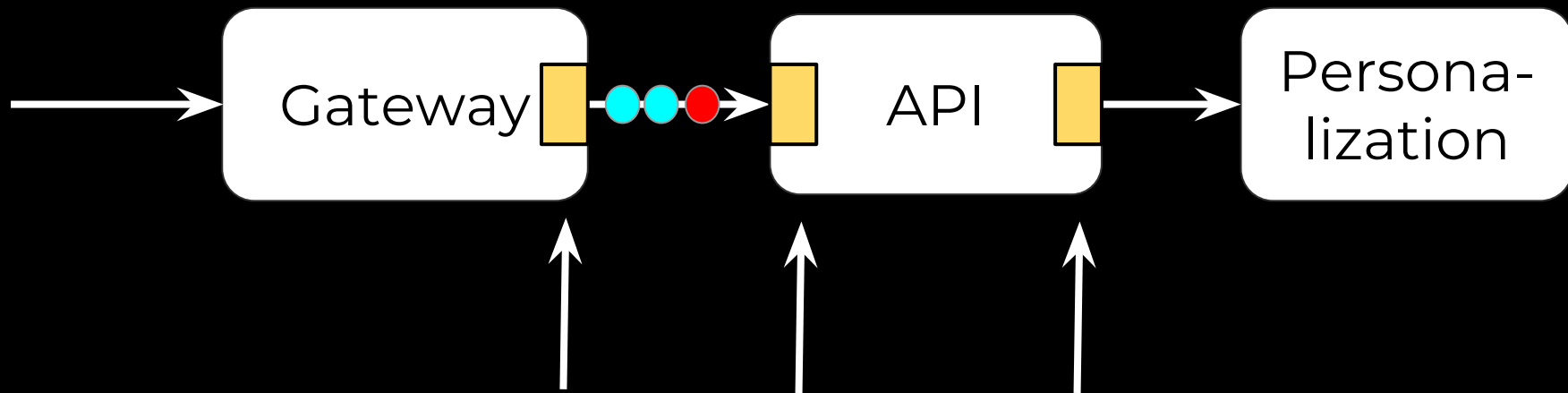
Is API resilient to failure of
Personalization?



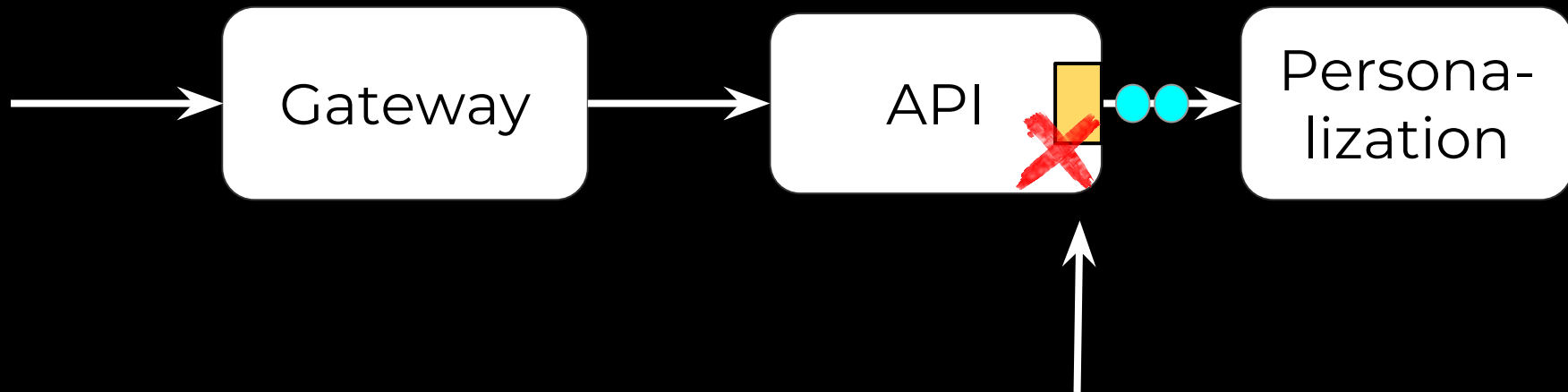


↑ Randomly select 10% of requests to participate in experiment



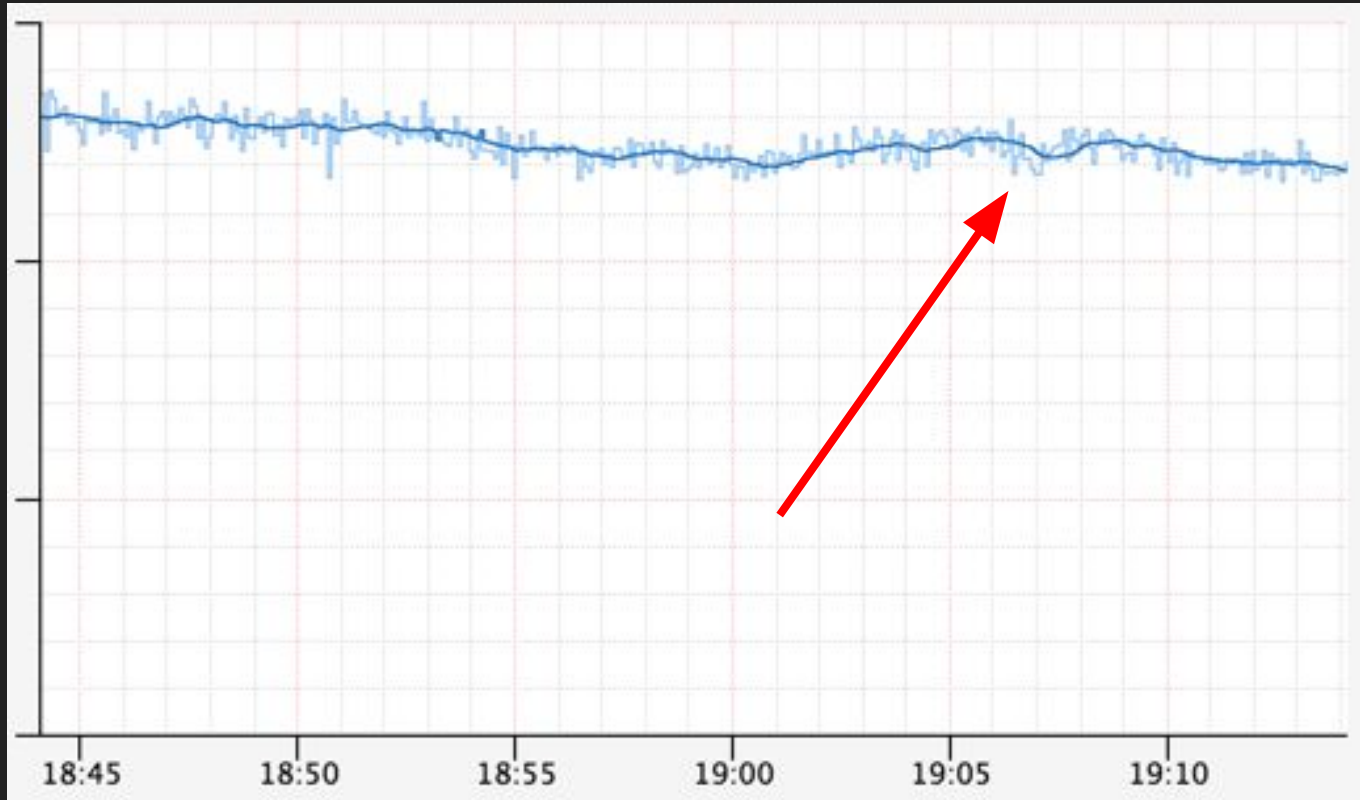


if (shouldFail == true)

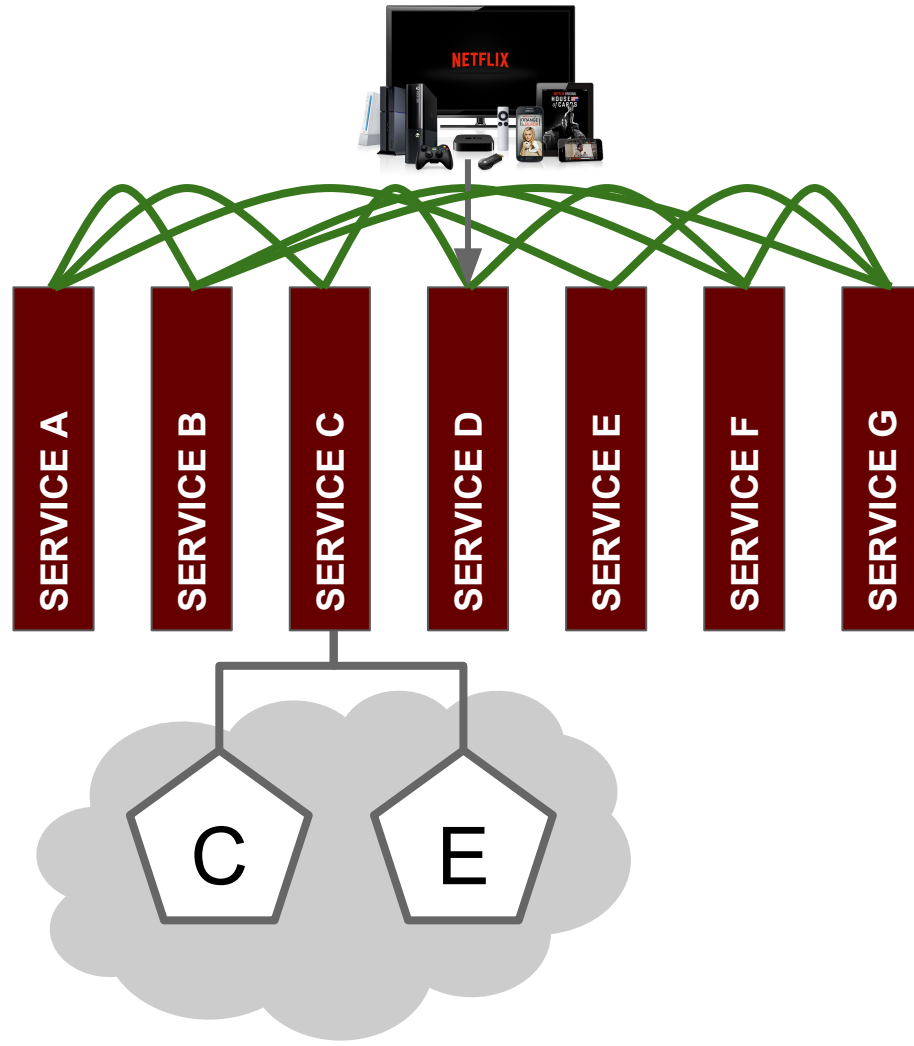


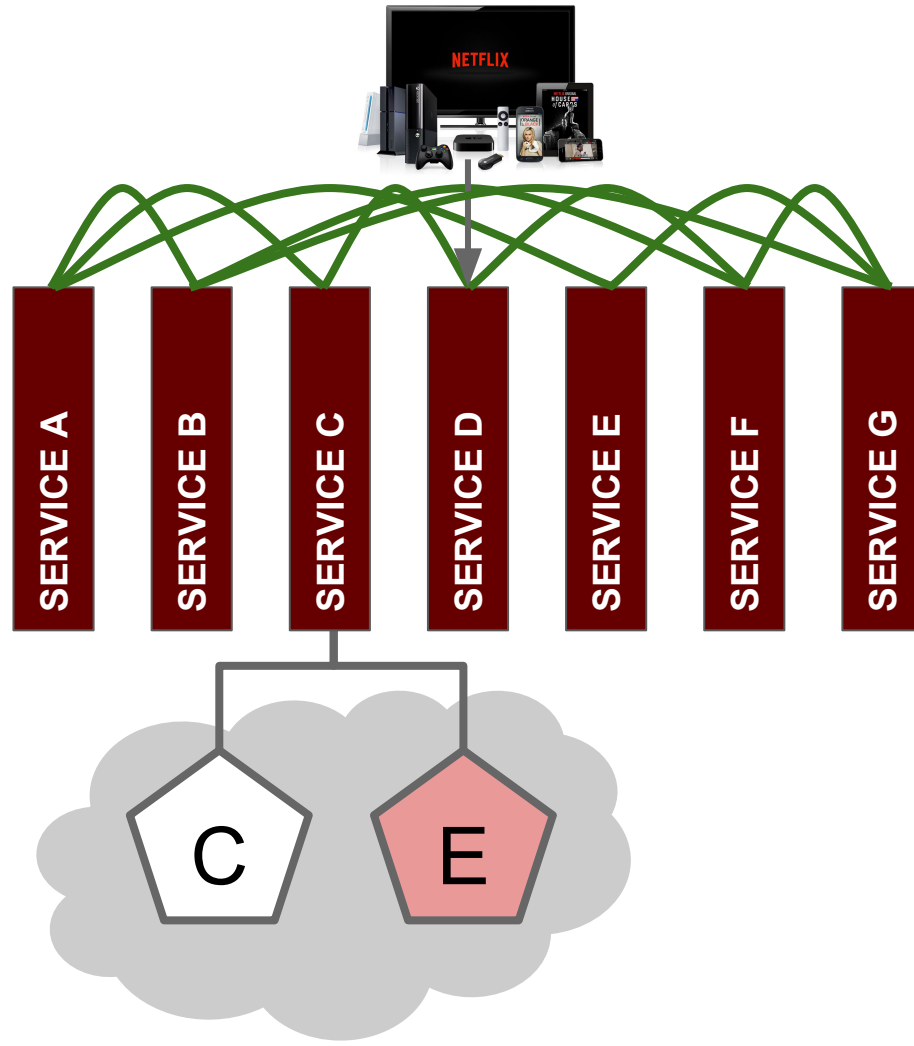
if (shouldFail == true)

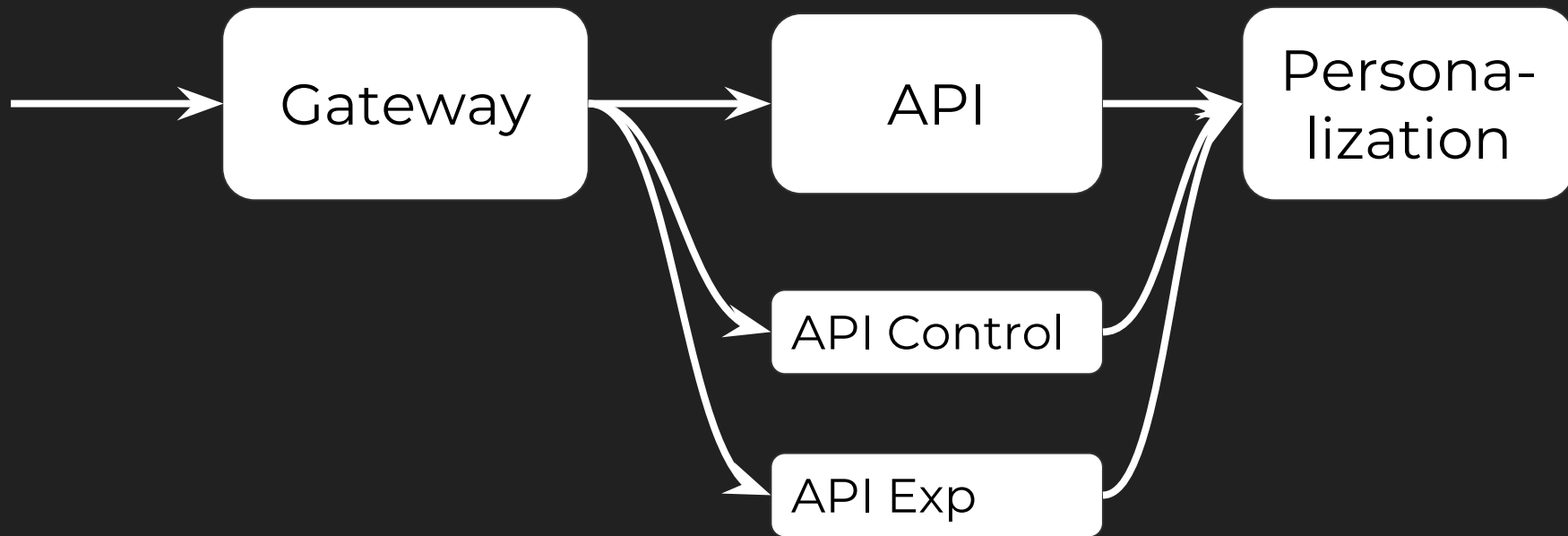
Stream Starts Per Second (SPS)

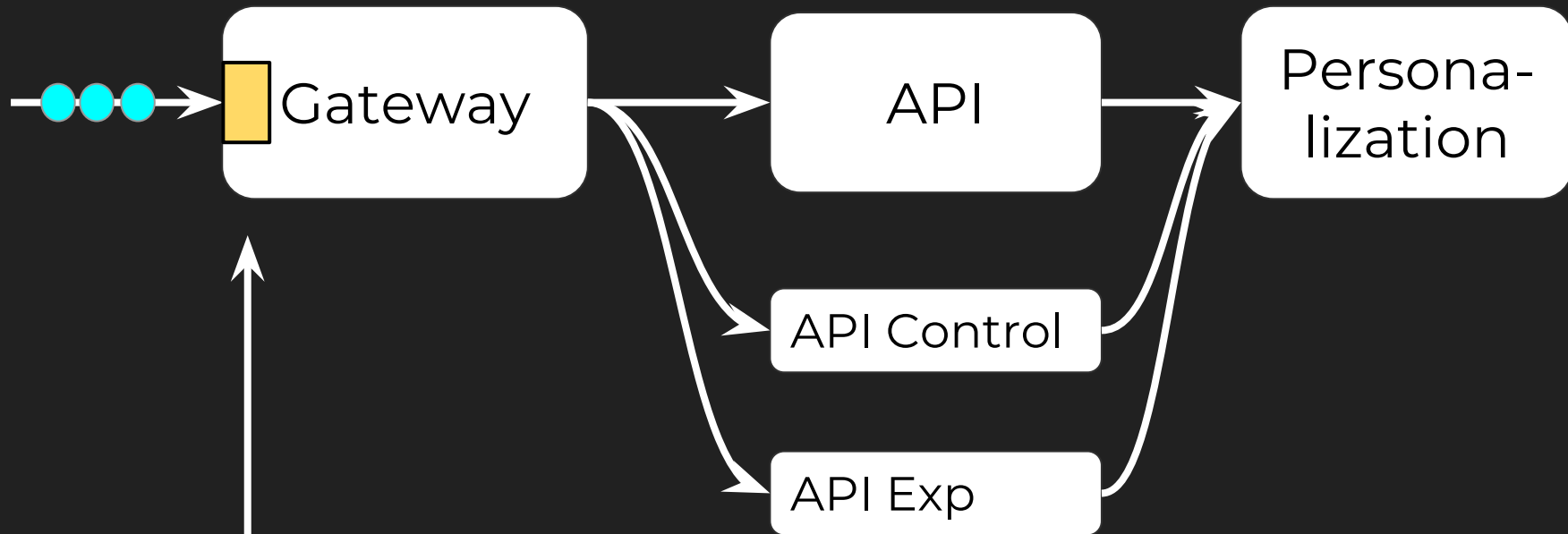






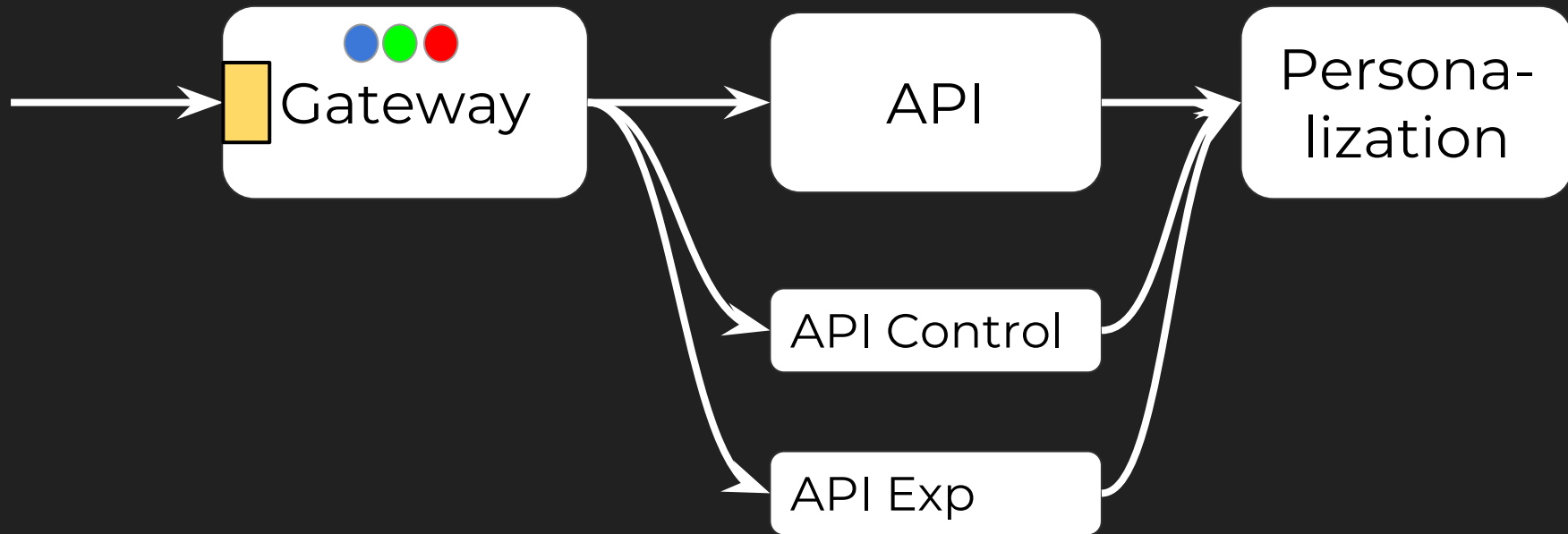


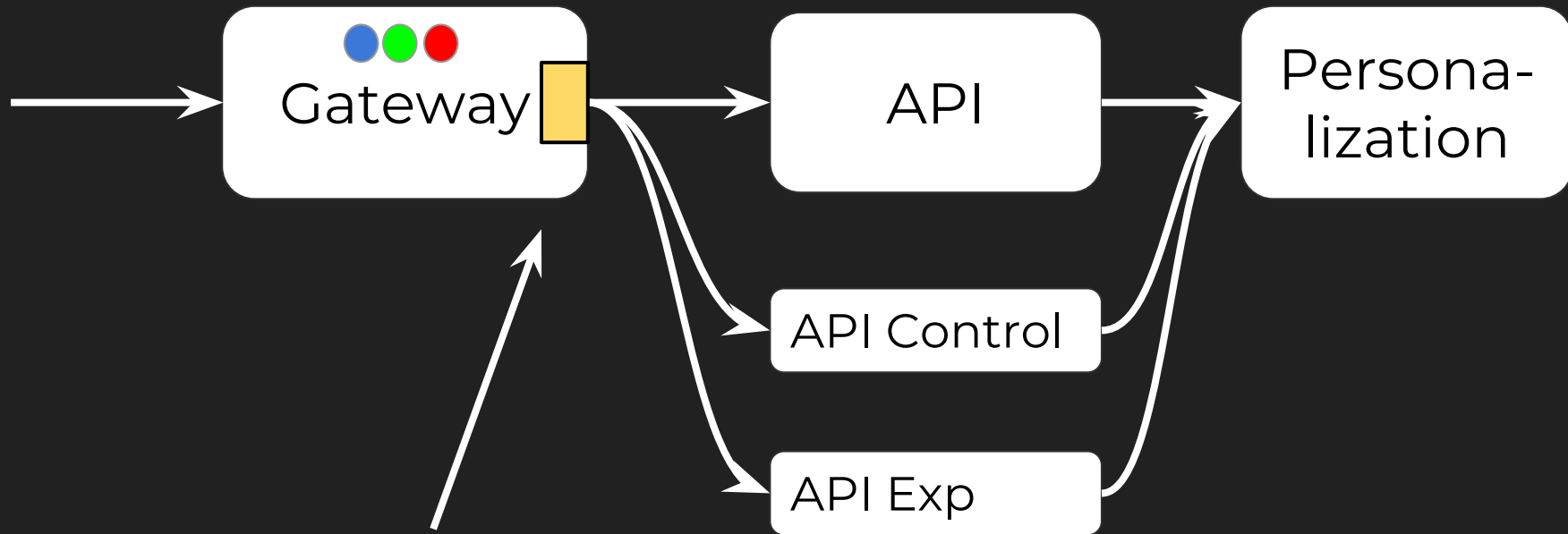




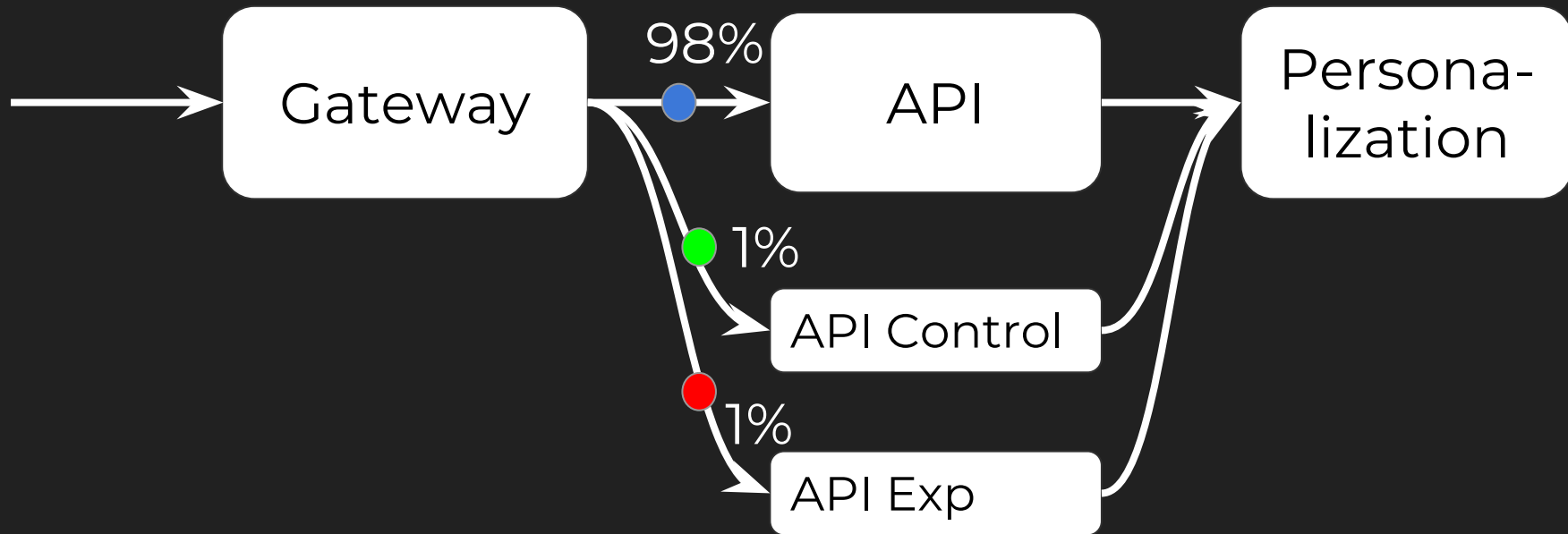
Select 1% of requests for control

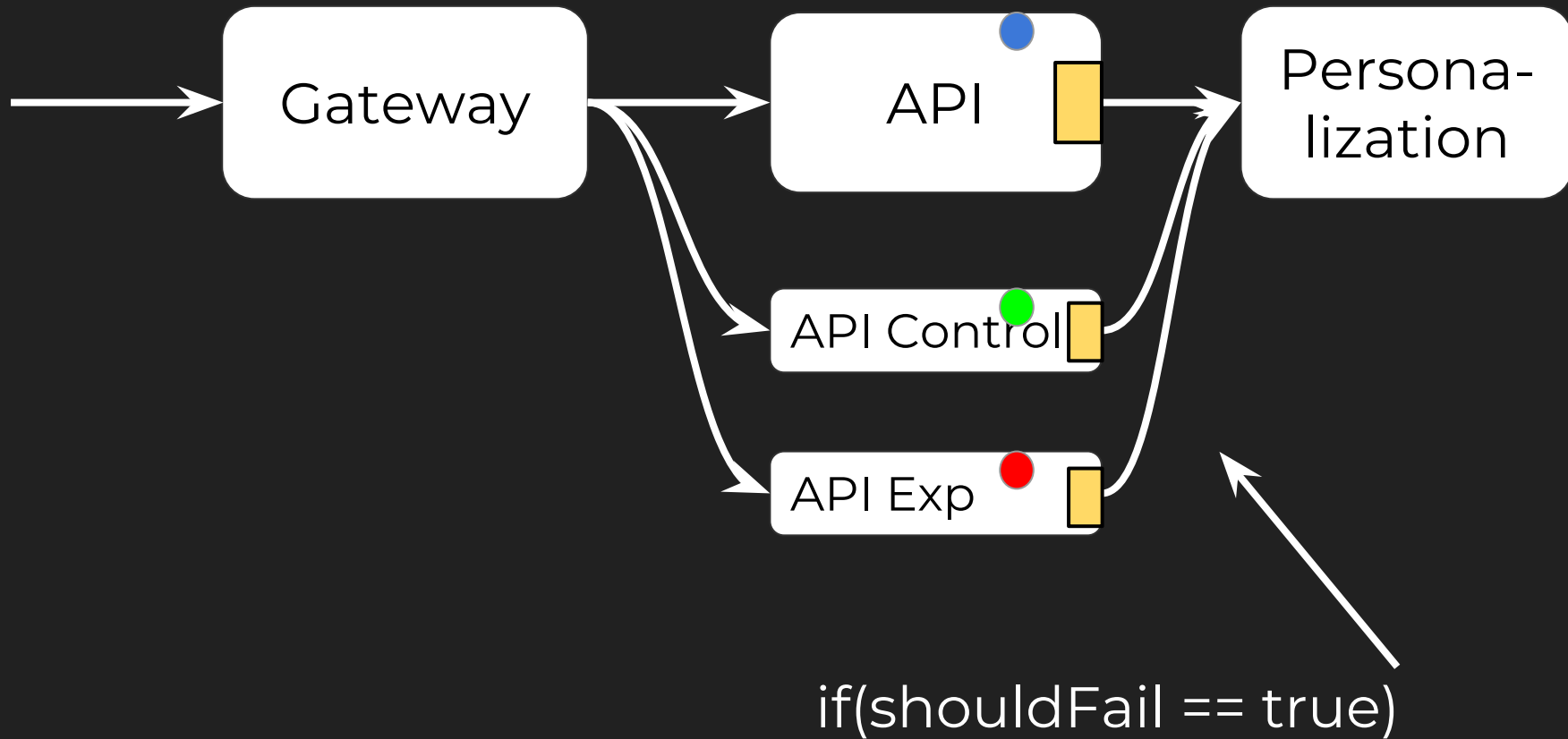
Select 1% of requests for experiment

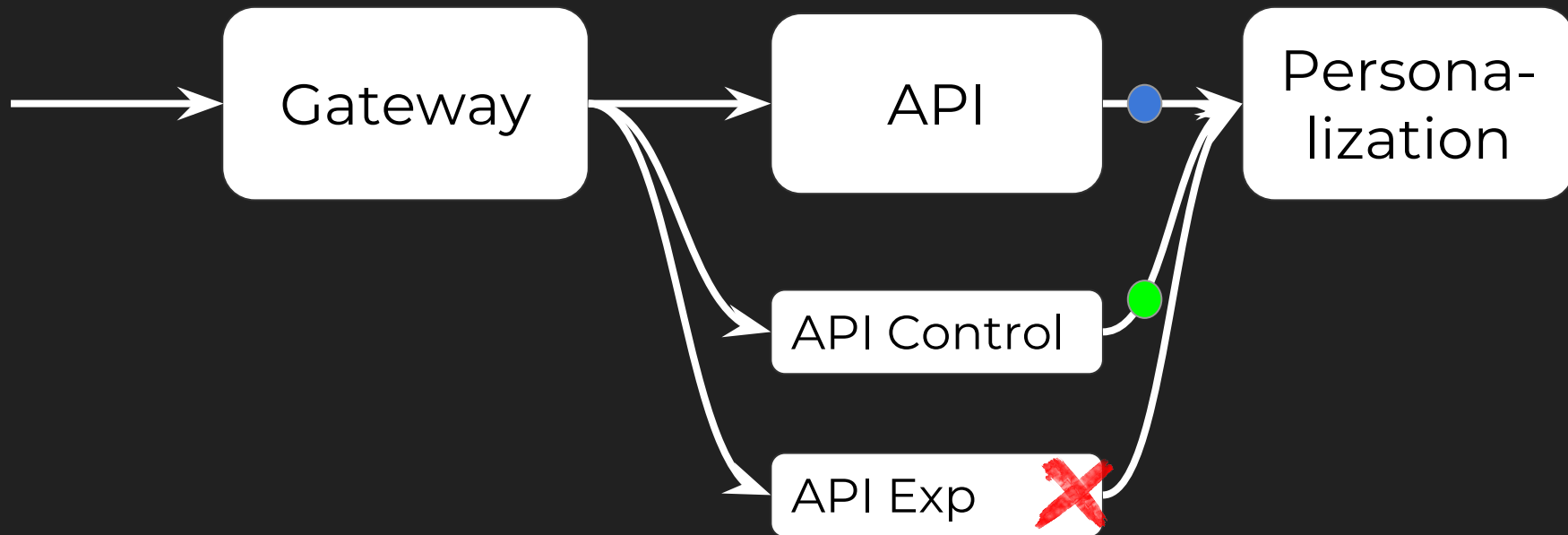




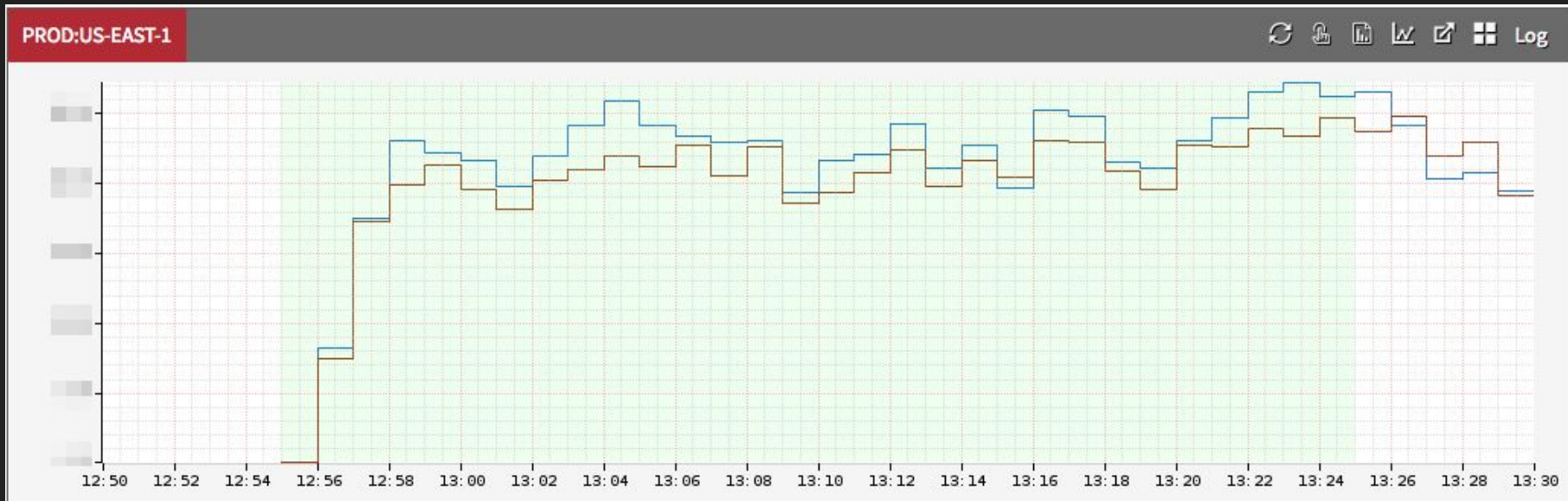
if(shouldRoute == true)



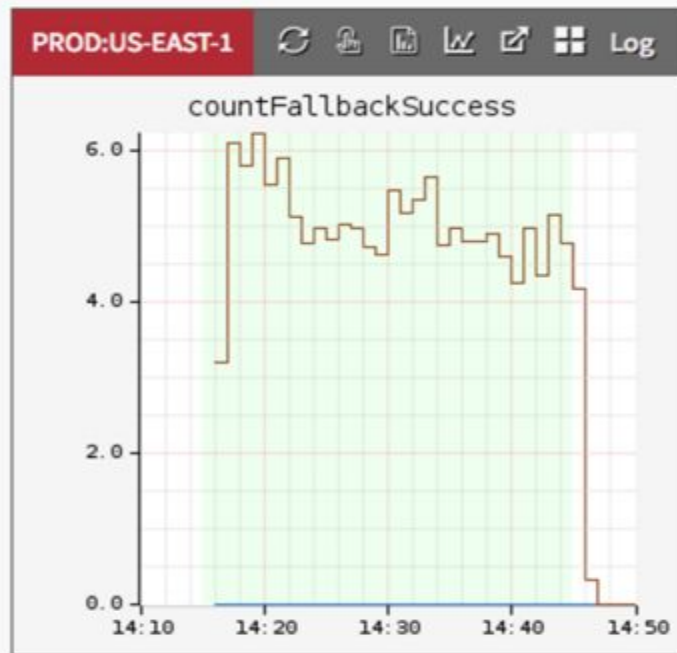
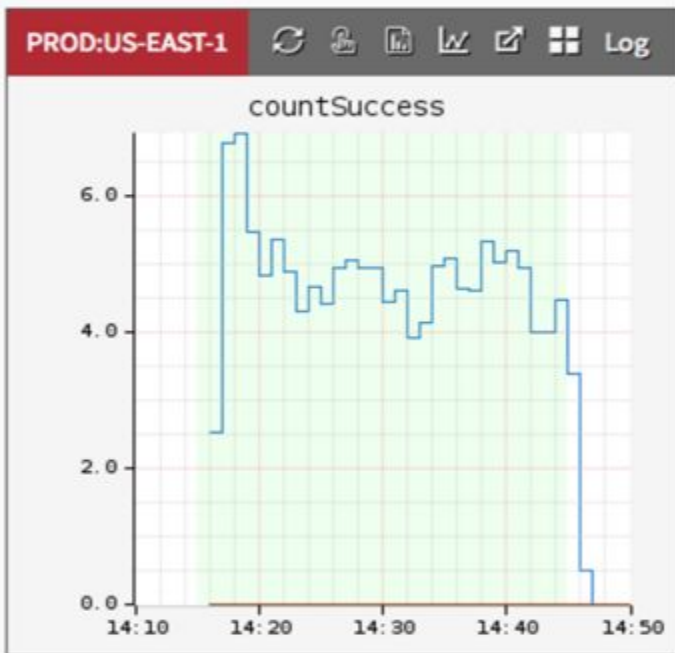




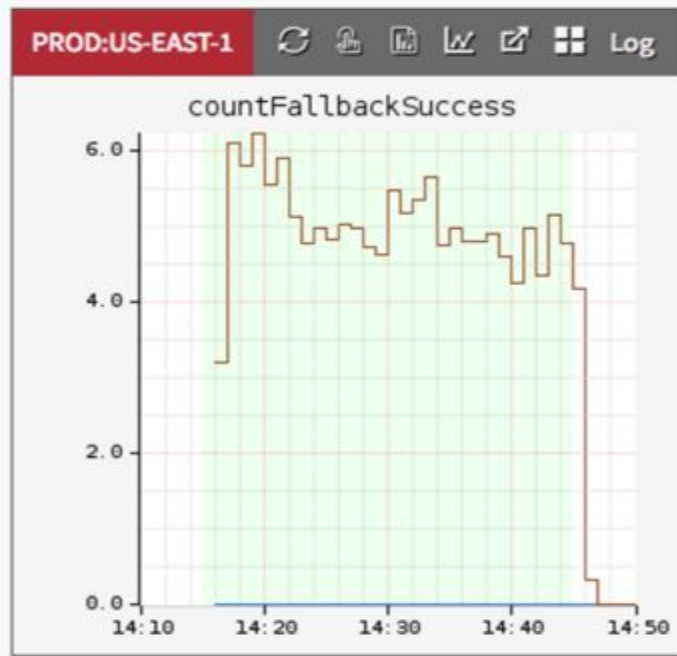
Stream Starts Per Second (SPS)



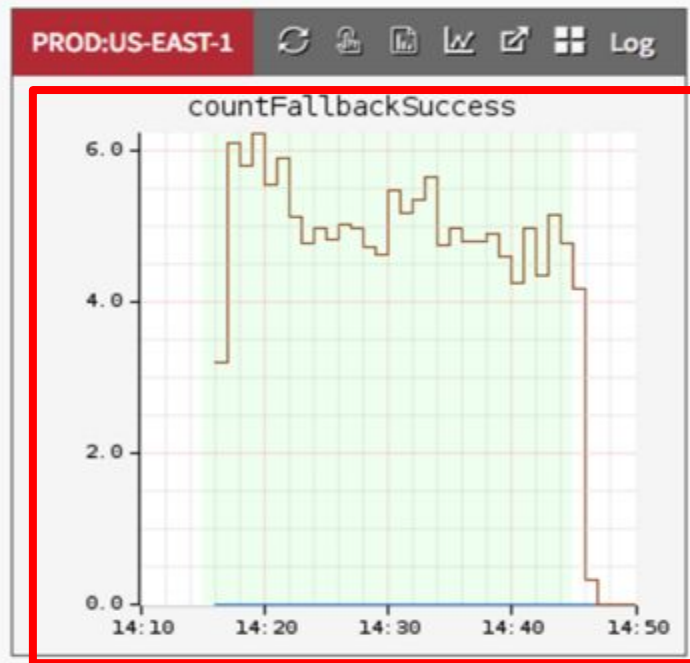
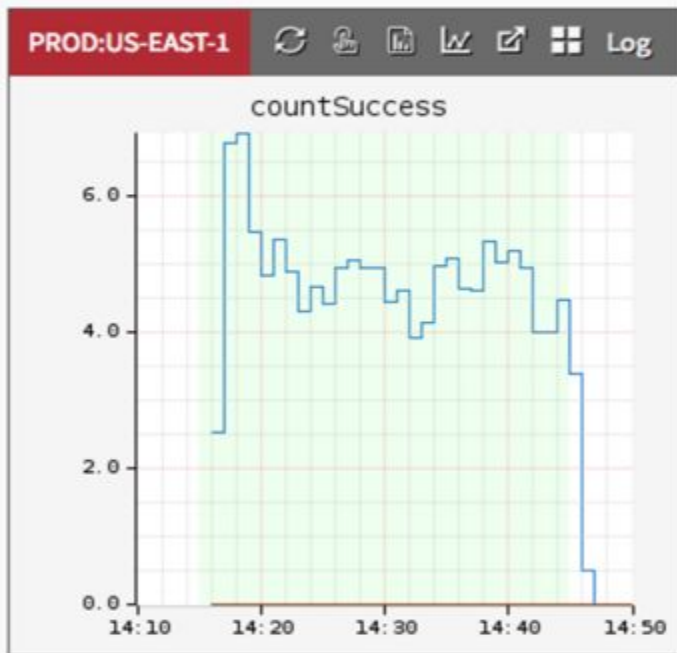
Fallback Metrics



Fallback Metrics



Fallback Metrics



CPU Utilization



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O'REILLY

Chaos Engineering

Building Confidence in System Behavior
through Experiments



Casey Rosenthal, Lorin Hochstein,
Aaron Blohowiak, Nora Jones
& Ali Basiri

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