

Casey Rosenthal
@caseyroenthal

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



SERVICE A

SERVICE B

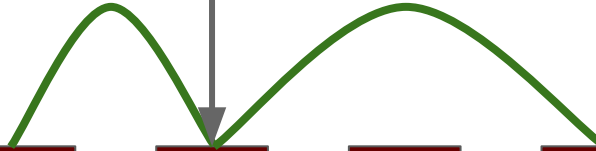
SERVICE C

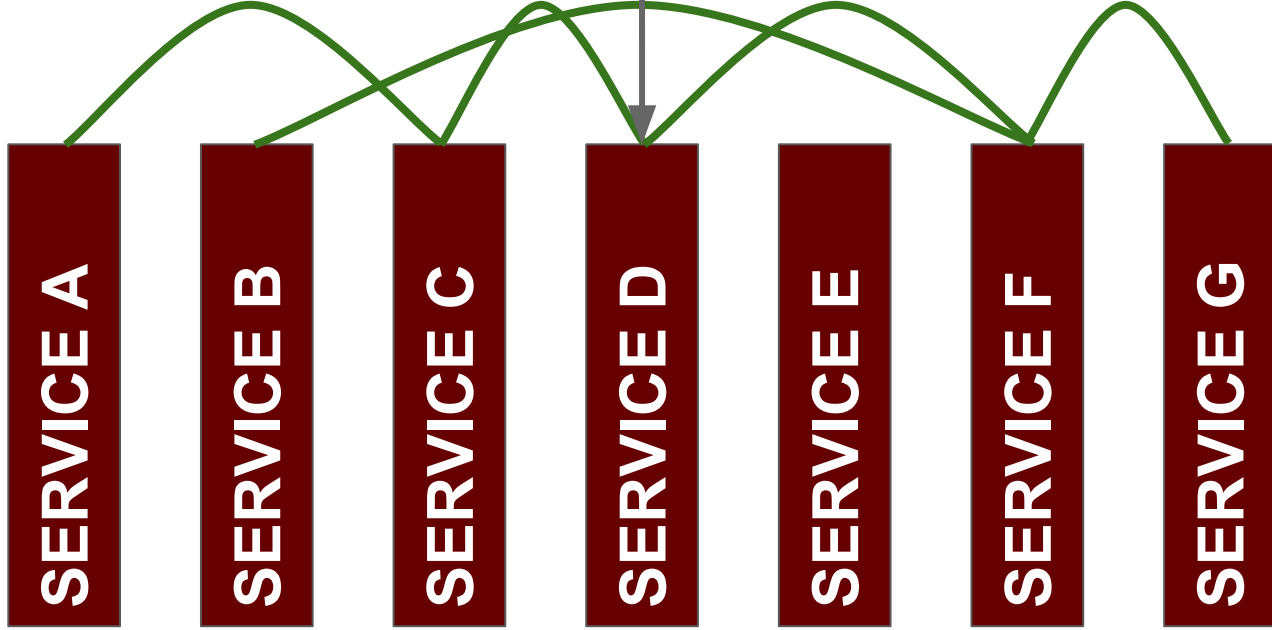
SERVICE D

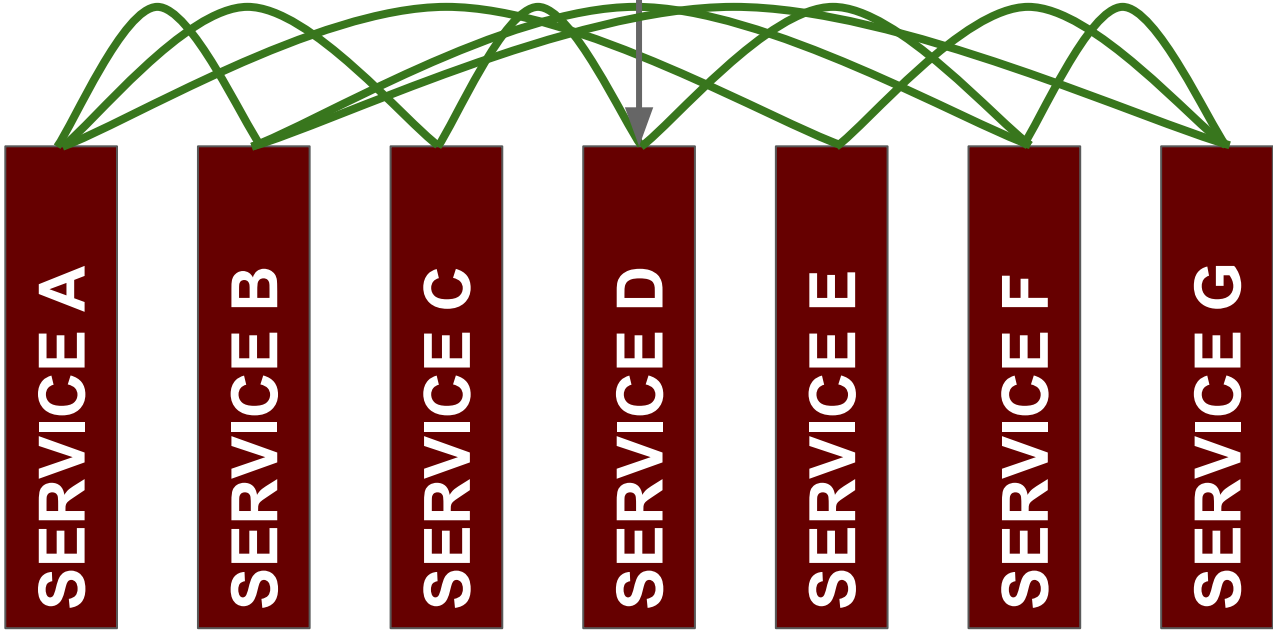
SERVICE E

SERVICE F

SERVICE G







SERVICE A

SERVICE B

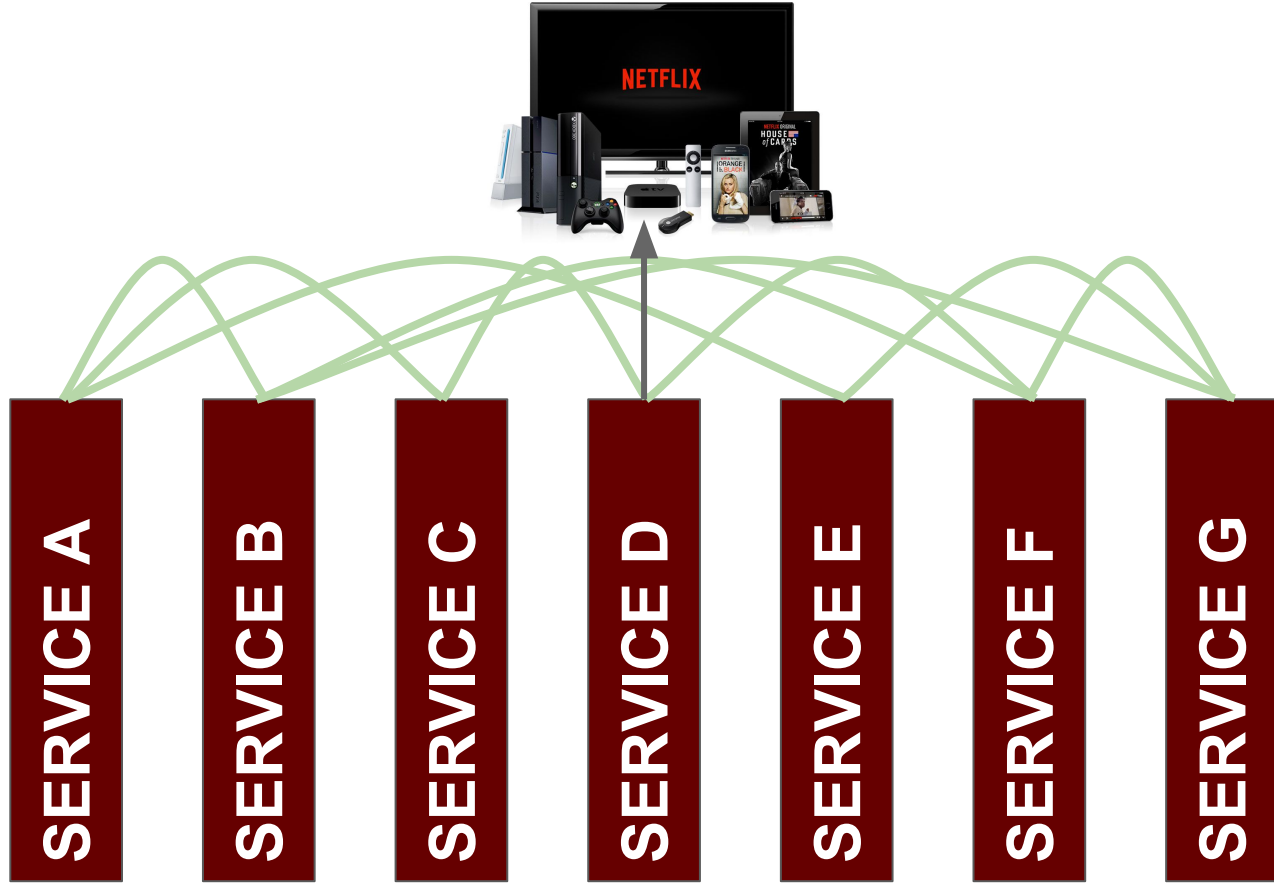
SERVICE C

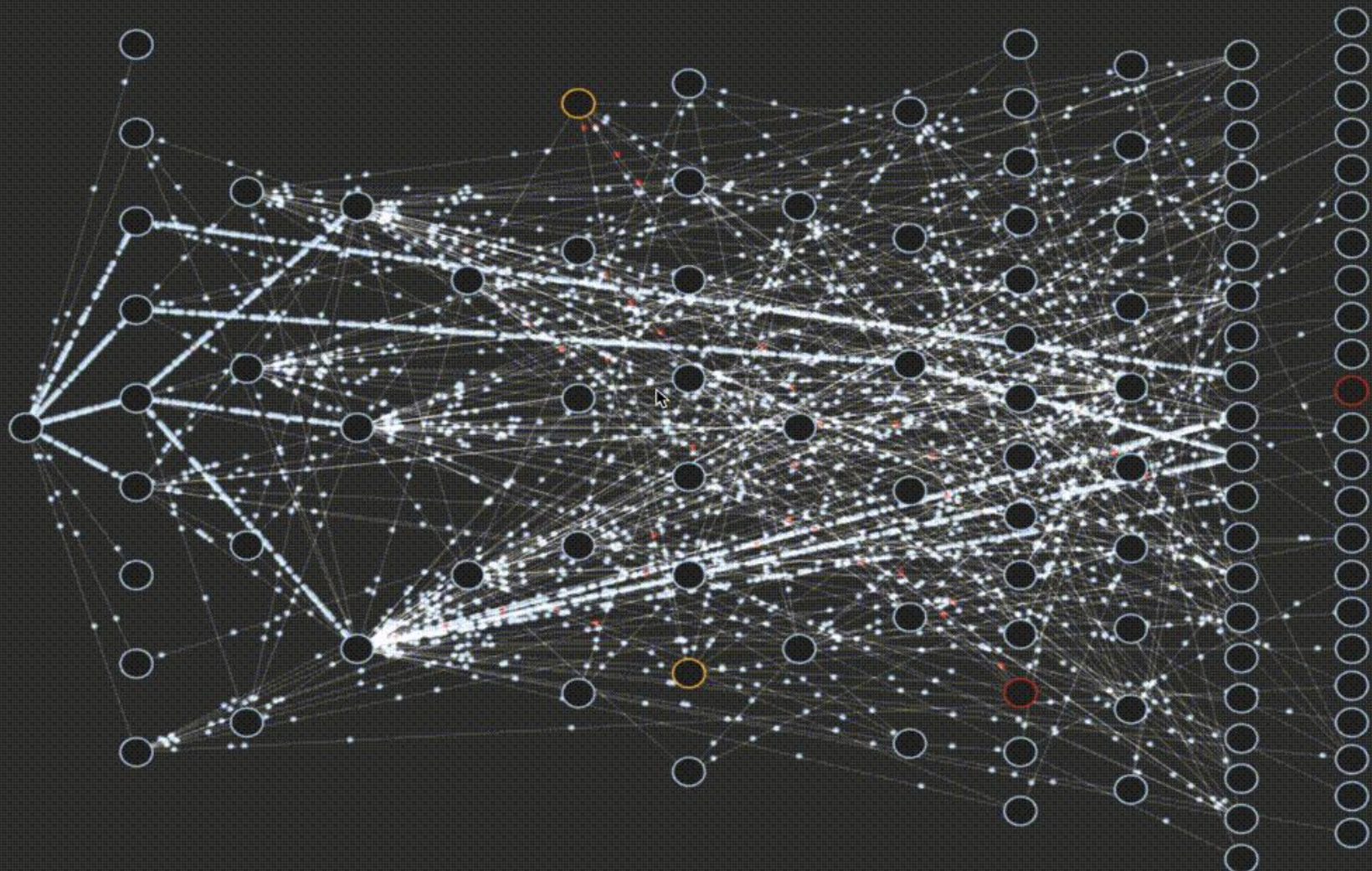
SERVICE D

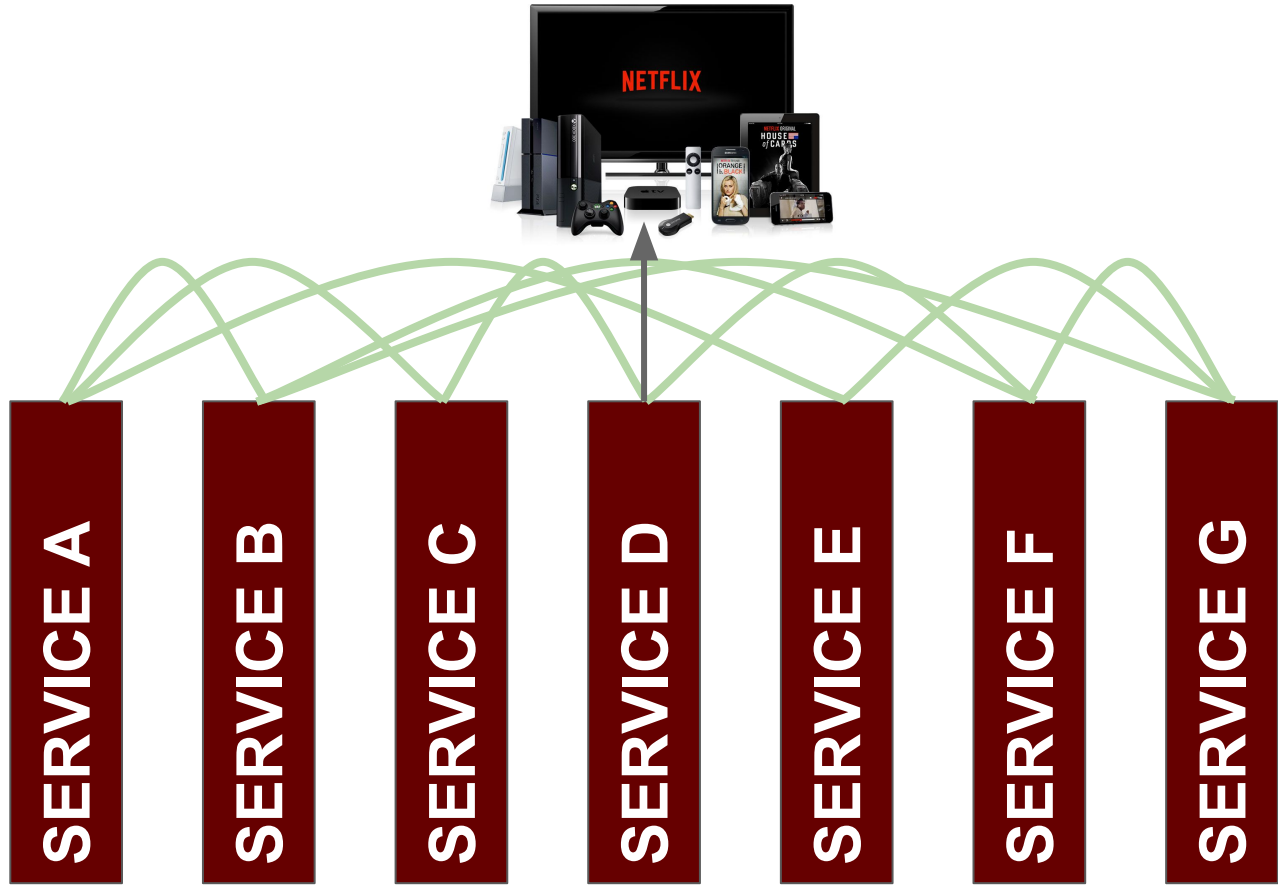
SERVICE E

SERVICE F

SERVICE G







PERFORMANCE

FAULT TOLERANCE

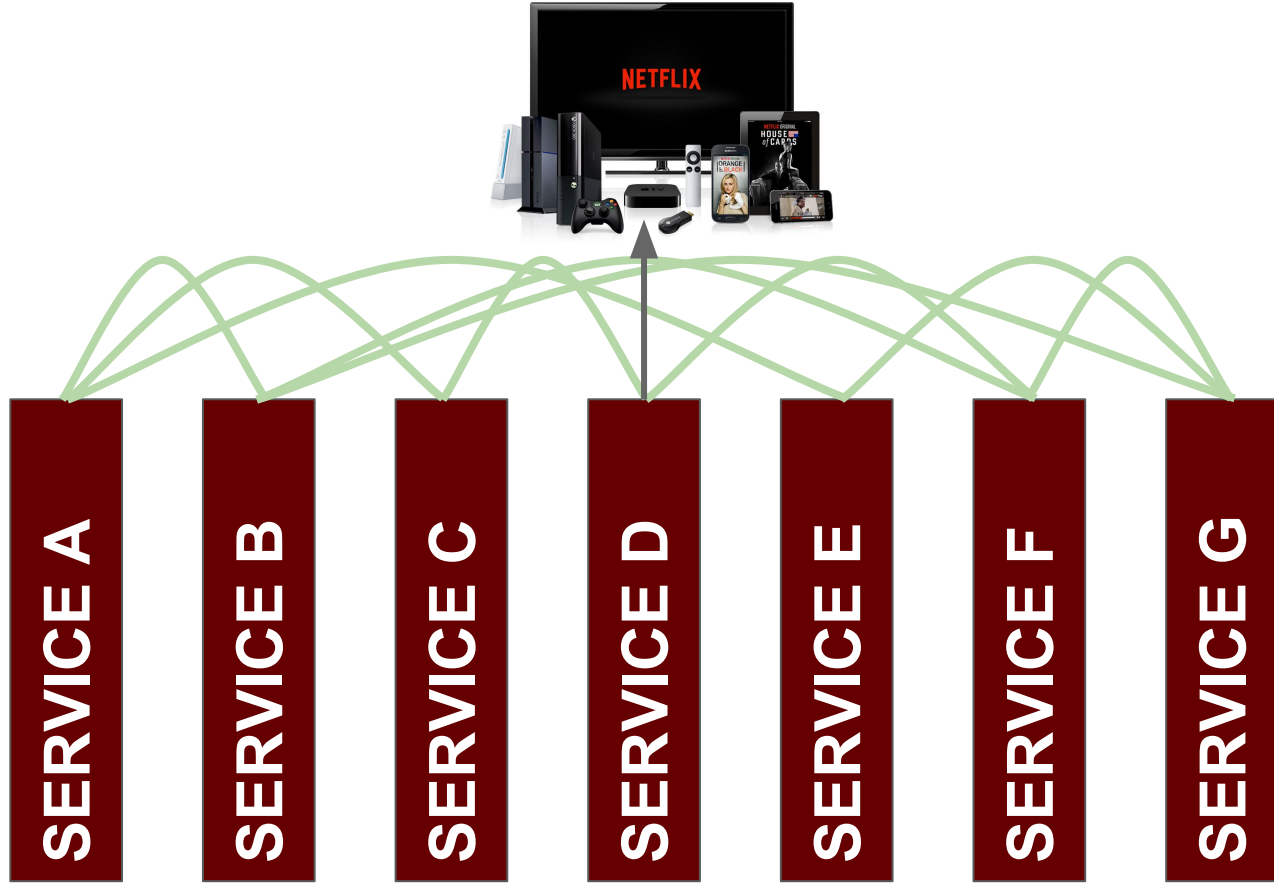
AVAILABILITY

FEATURE VELOCITY

PERFORMANCE

FAULT TOLERANCE

AVAILABILITY



Part Two.

Customers



Customers 

Retailer 

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

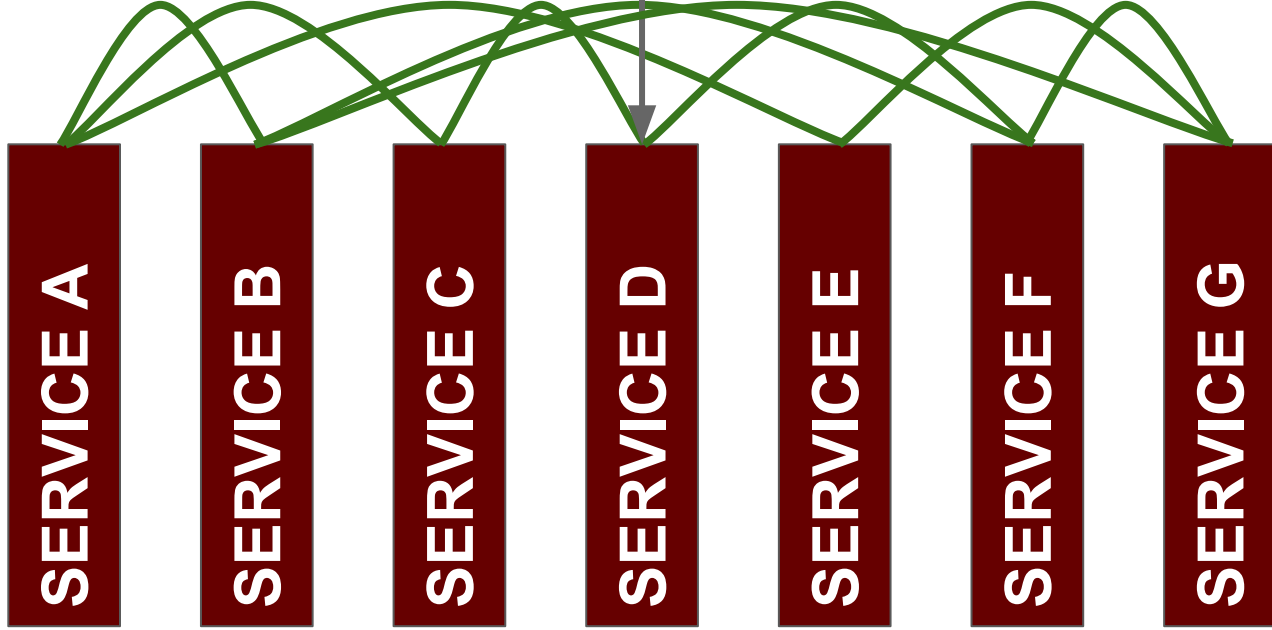
Customers

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	<i>distillery?</i>





Part Three.

CHAOS



CHAOS

Monkey



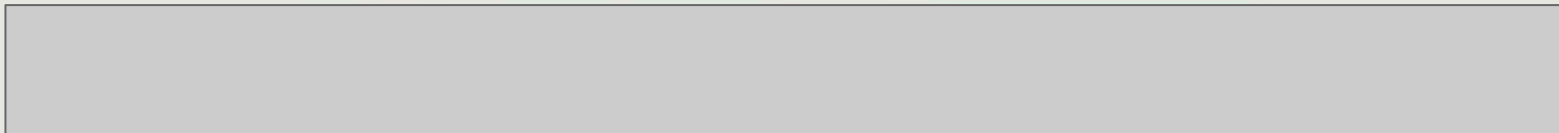
Kong

CHAOS



CHAOS





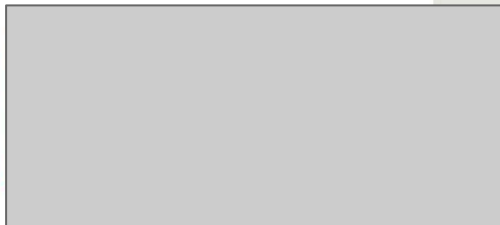
In the internet's darkest time, people are finding solace in Netflix

2 

It's the only thing we have left

by [Julia Alexander](#) | Feb 28, 2017, 3:45pm EST

 TWEET  SHARE  PIN



CHAOS

Monkey



Kong

<http://principlesofchaos.org>

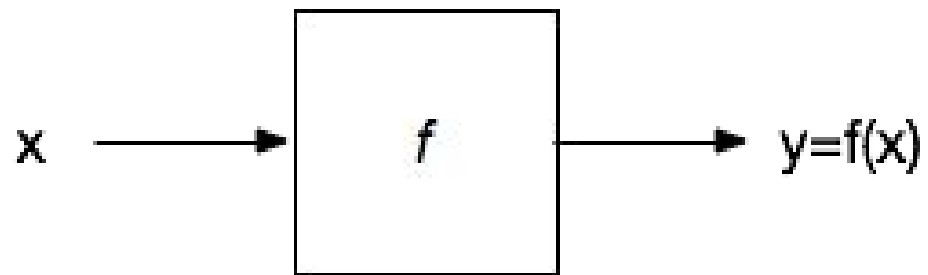
CHVOS
ENGINEERING

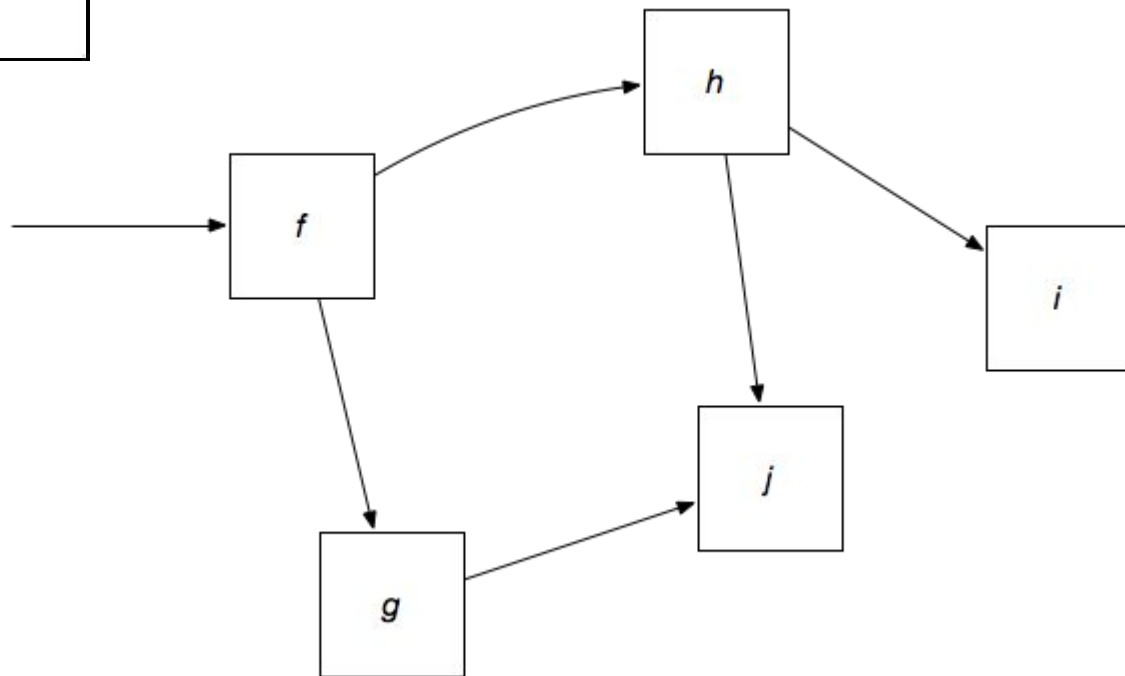
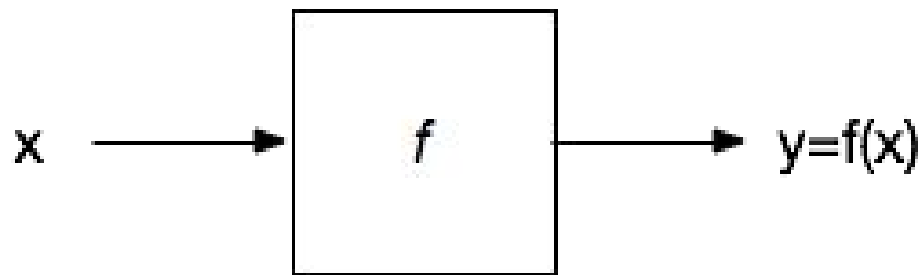
<http://principlesofchaos.org>

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.









<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>

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- **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.**

<http://principlesofchaos.org>

CHVOS
ENGINEERING

YOU ARE INVITED

YOU ARE INVITED

**CHAOS
COMMUNITY
DAY**

NOV 4, 2015
685 MARKET ST
SAN FRANCISCO 94103

BE CAREFUL

NEAR MACHINERY

685 MA
SAN FR

COME
AGIT

**CHAOS
COMMUNITY**

BE CAREFUL

COME FOR THE CHAOS, STAY FOR RICON

AGITATE!

AGENDA:
CHAOS COMMUNITY DAY IS AN
INVITATION-ONLY EVENT TO BRING

ORGA

RSVP:
RSVP:

<http://principlesofchaos.org>



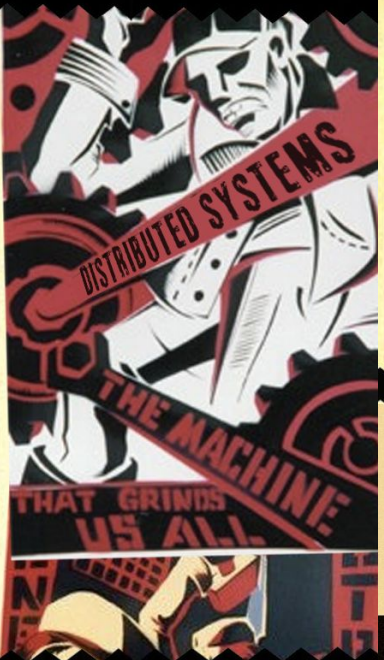
**JOIN THE 2nd
CHAOS COMMUNITY DAY**

CHAOS COMMUNITY DAY

AUG 26TH!



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



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

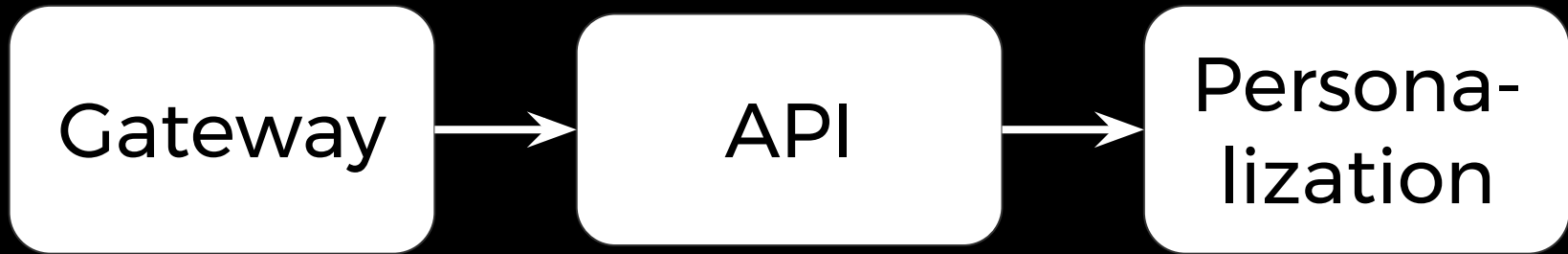
**AGENDA:
CHAOS COMMUNITY DAY
PRACTITIONERS OF CHAOS
OPPORTUNITY TO PRESENT
PROVIDED BY AWS. 9AM**

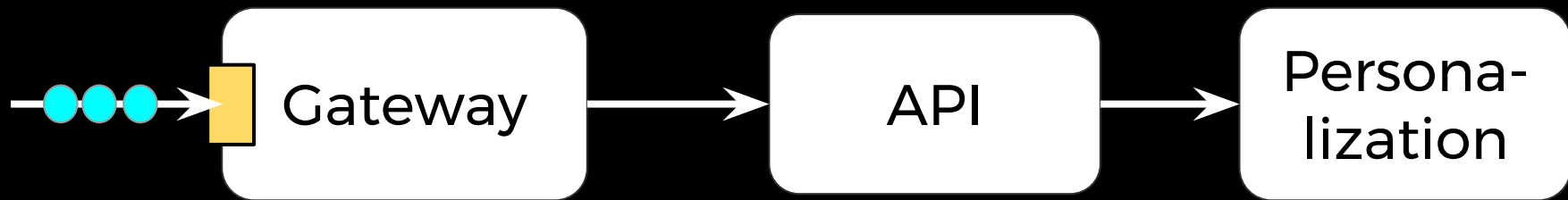
RSVP: CRO

AGENDA:

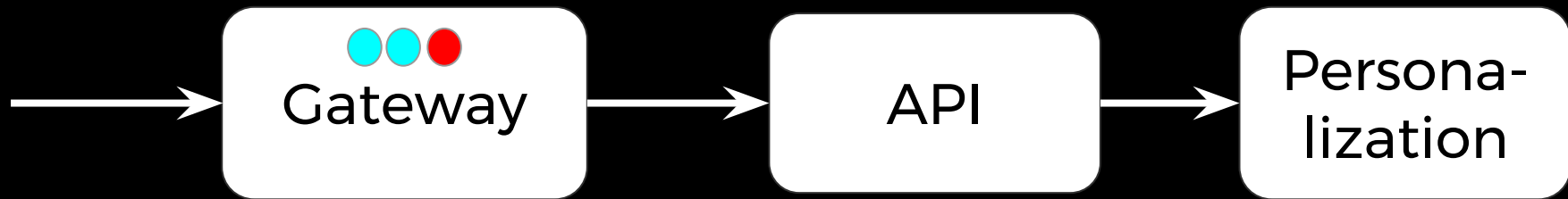
<http://principlesofchaos.org>

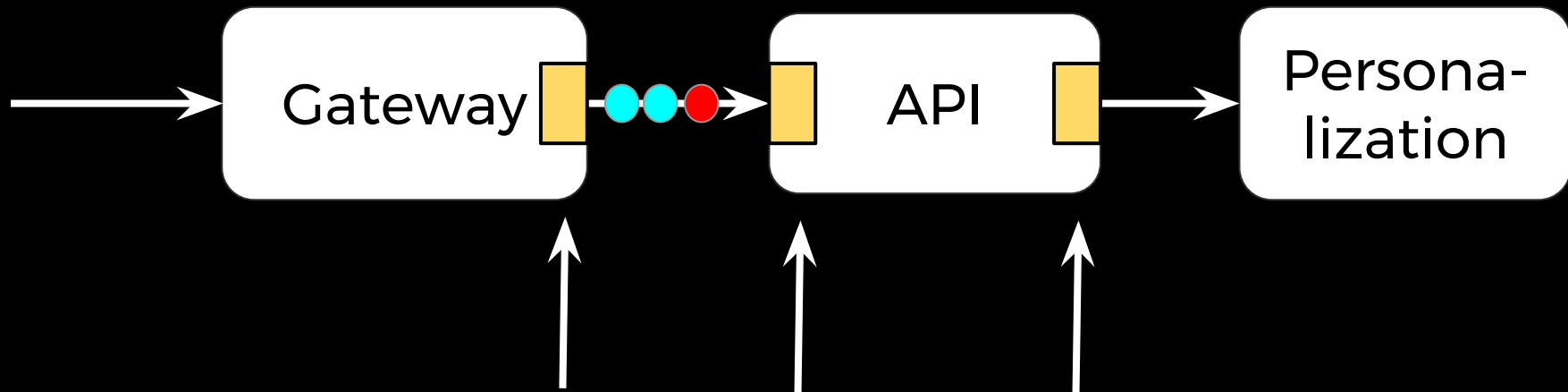
Is API resilient to failure of Personalization?



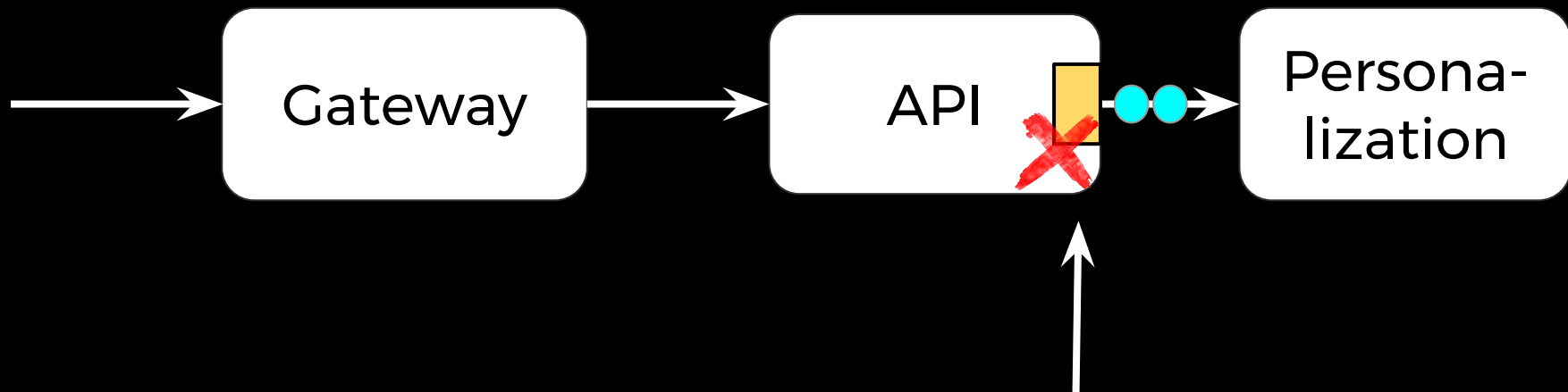


Randomly select 10% of requests to participate in experiment



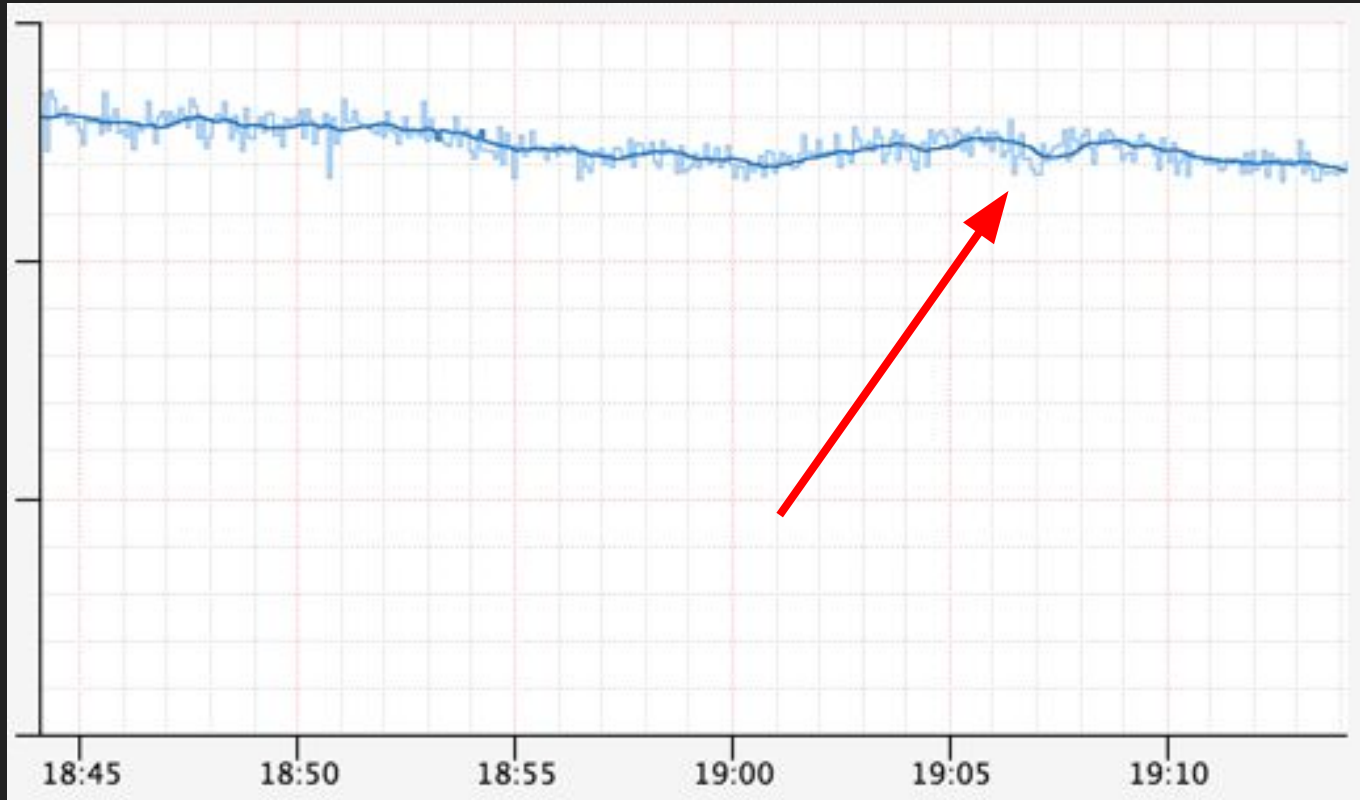


if (shouldFail == true)



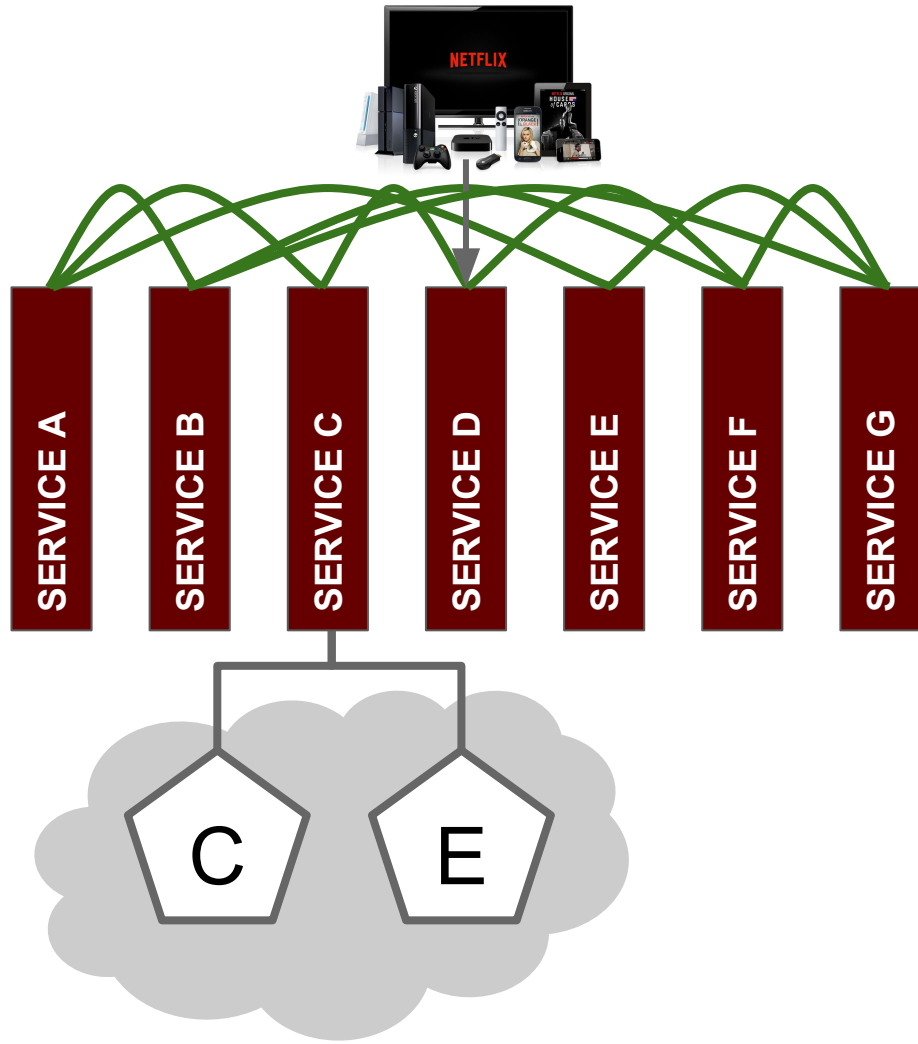
if (shouldFail == true)

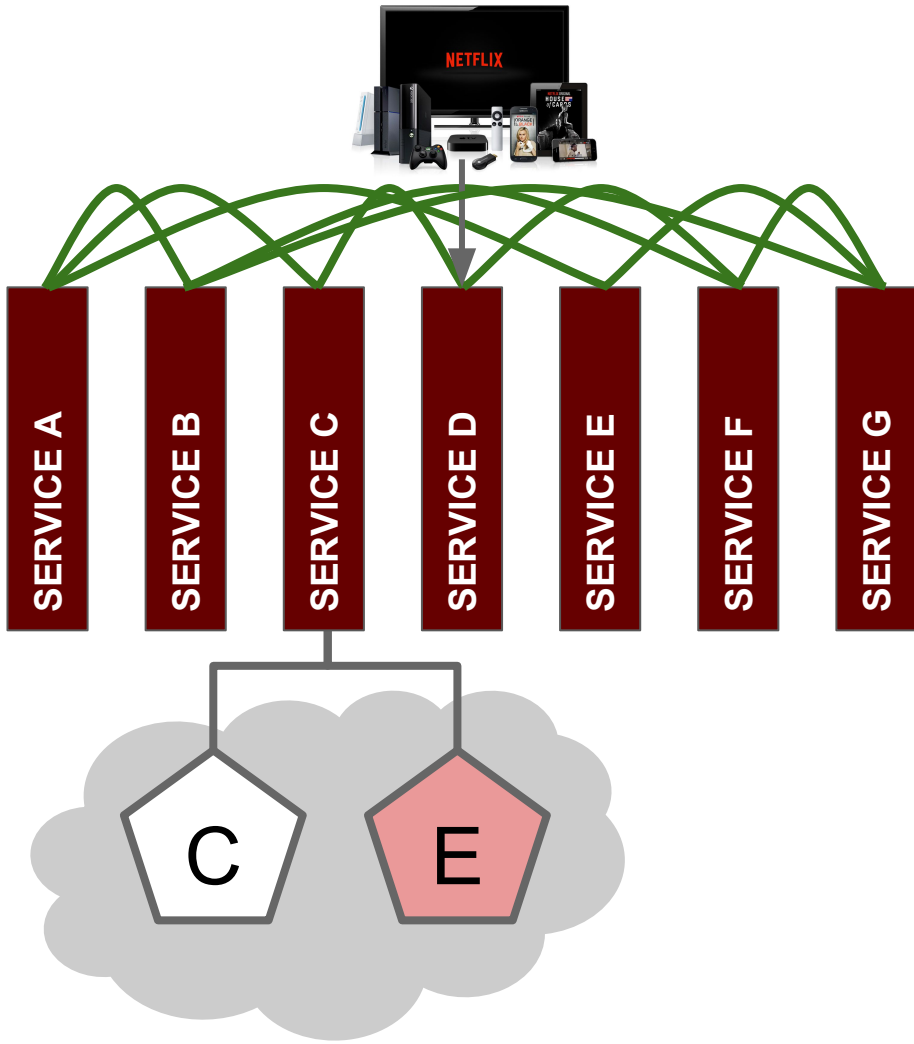
Stream Starts Per Second (SPS)

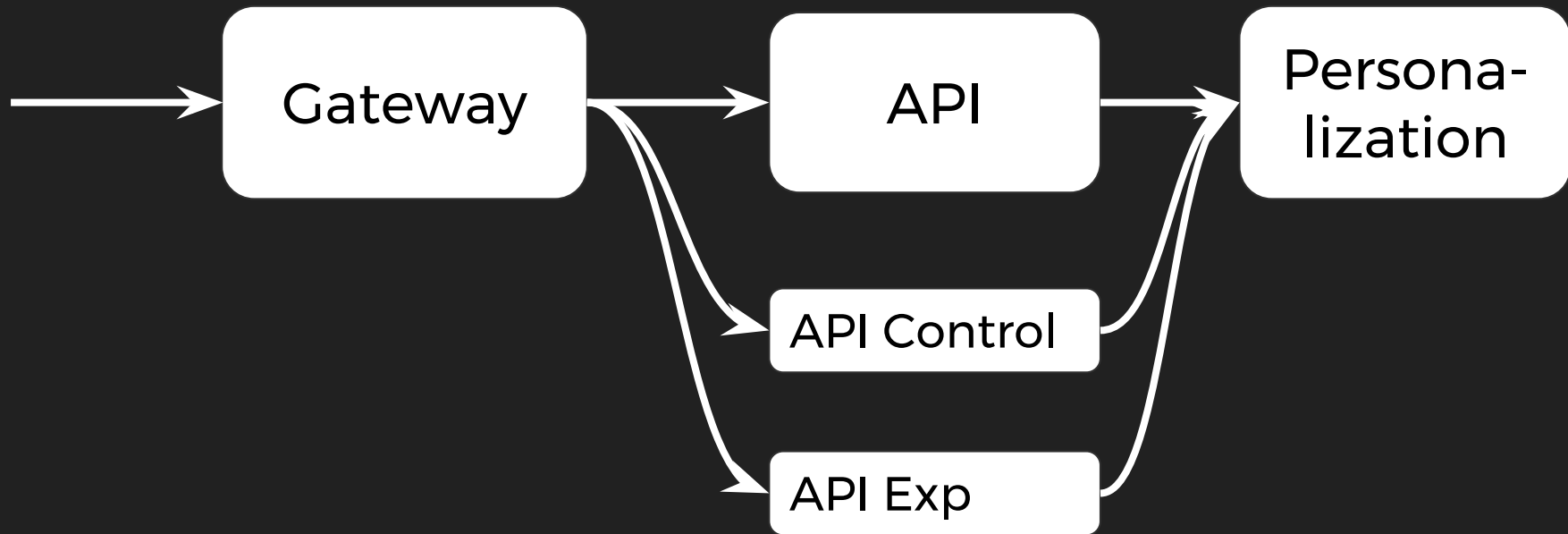


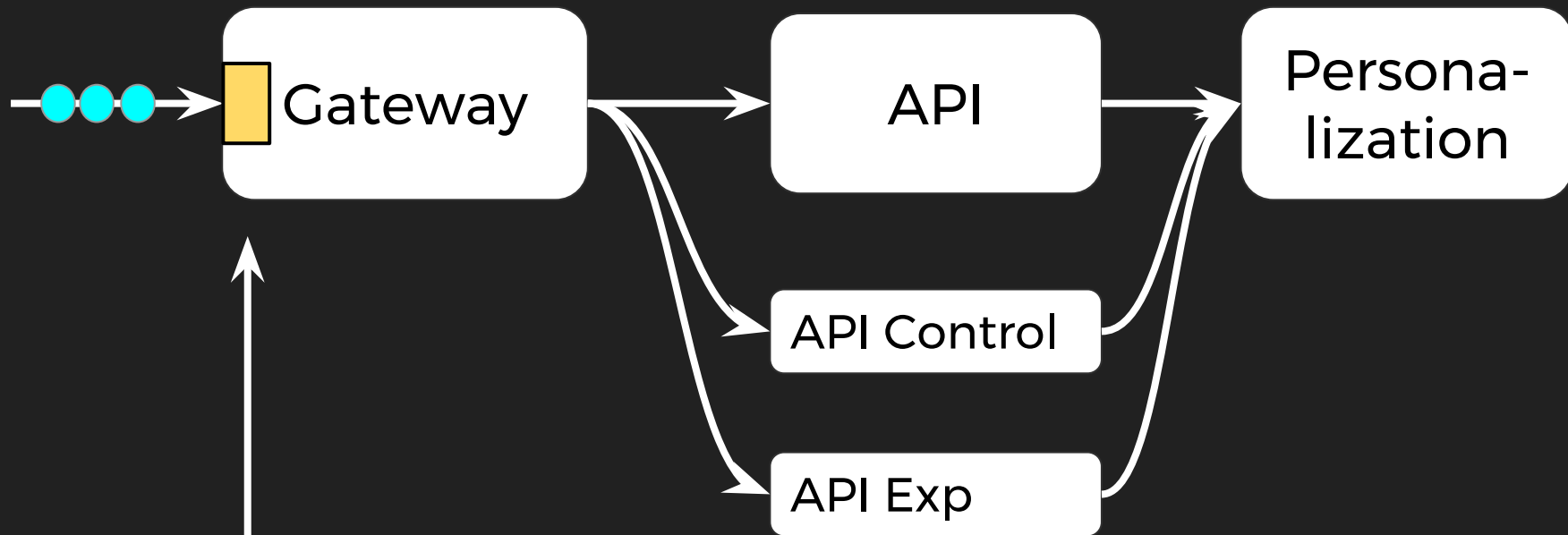
ChAP



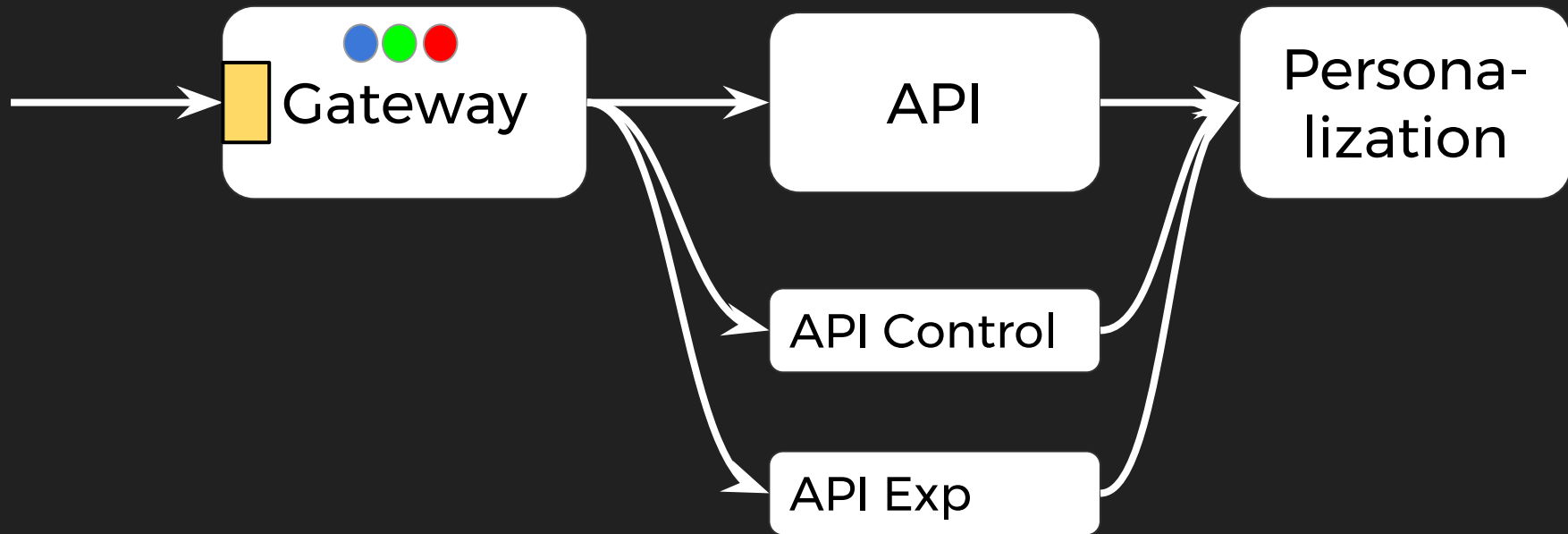


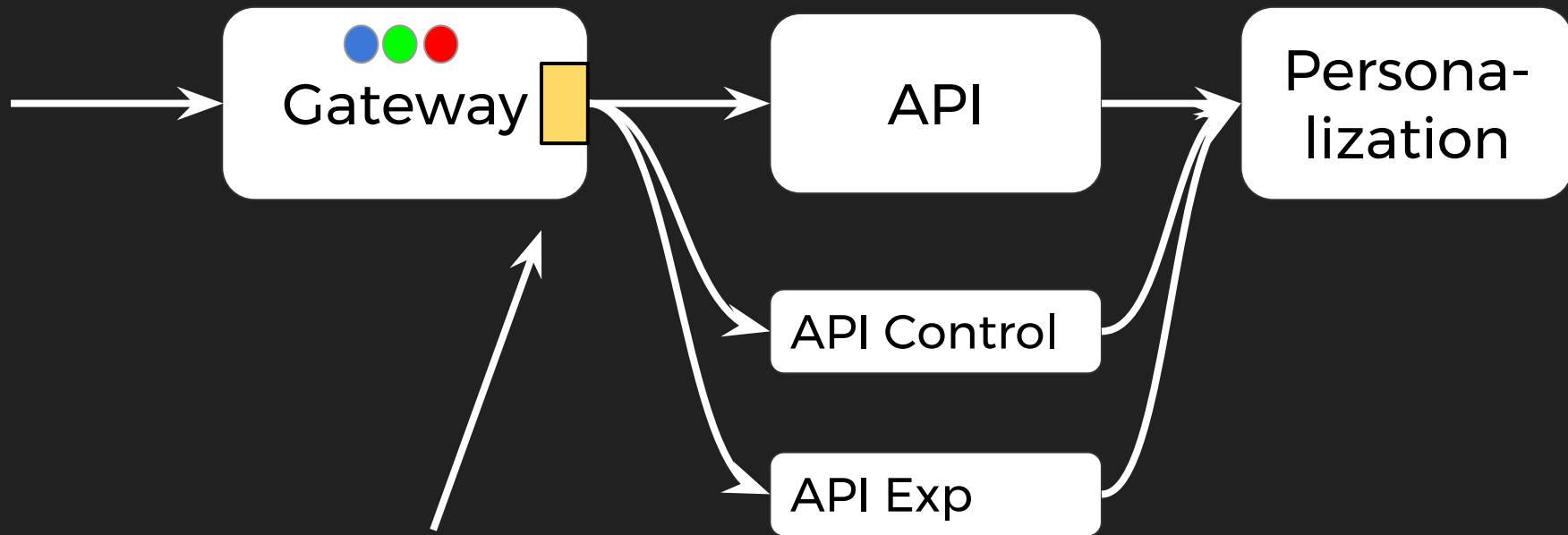




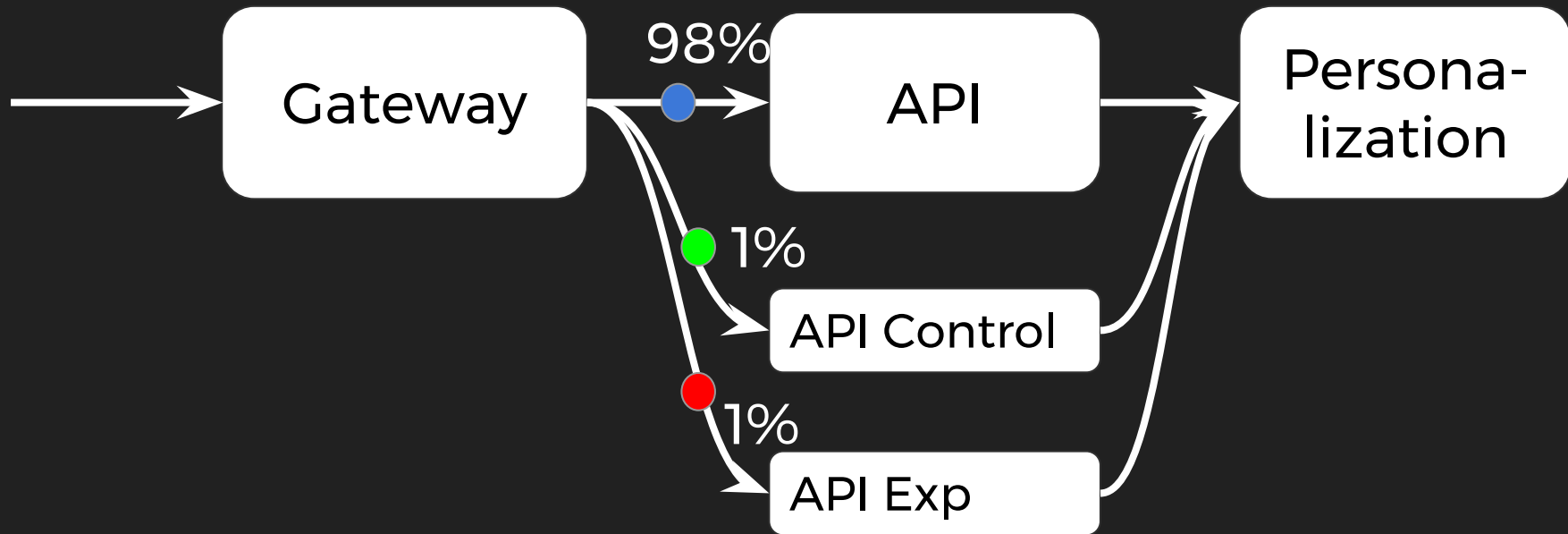


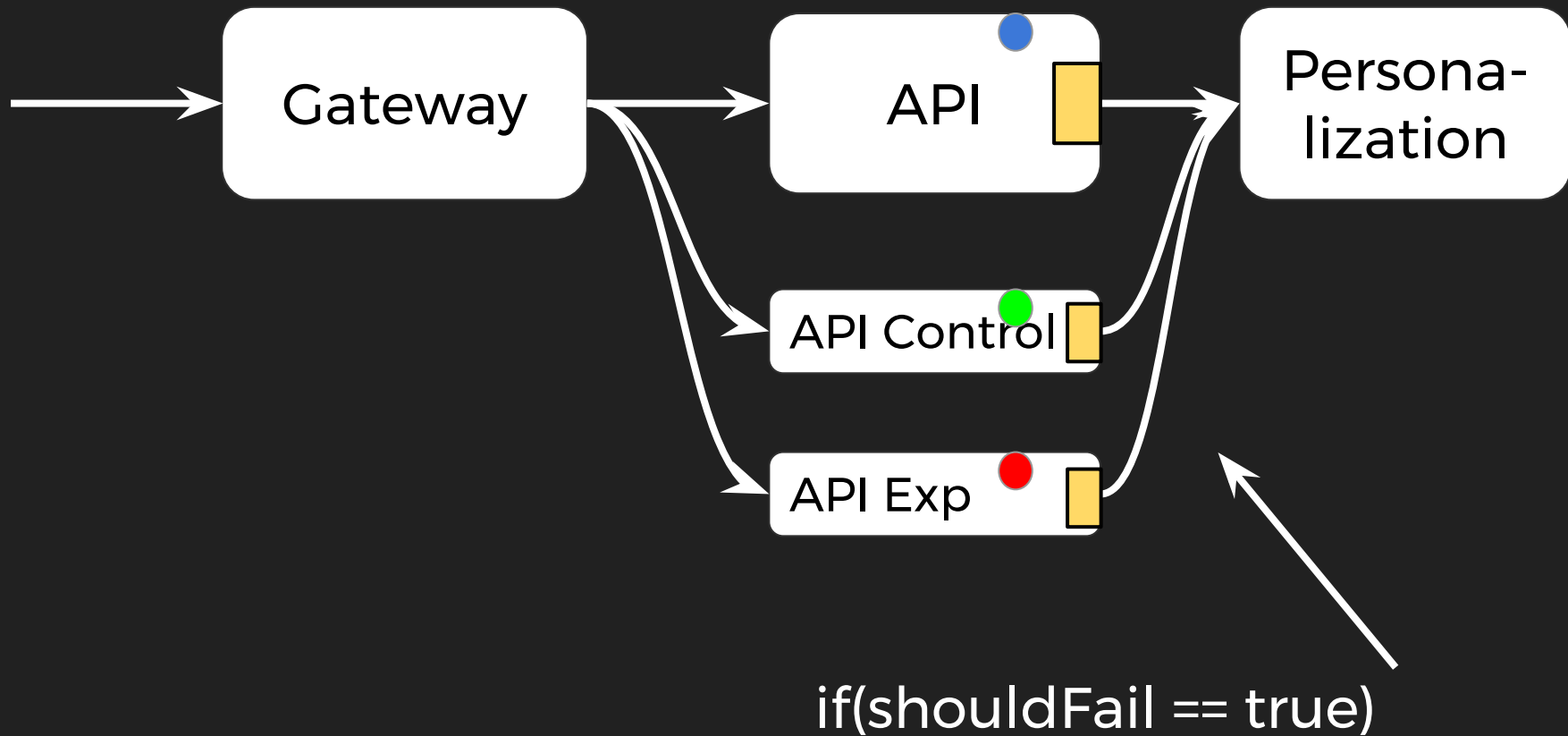
Select 1% of requests for control
Select 1% of requests for experiment

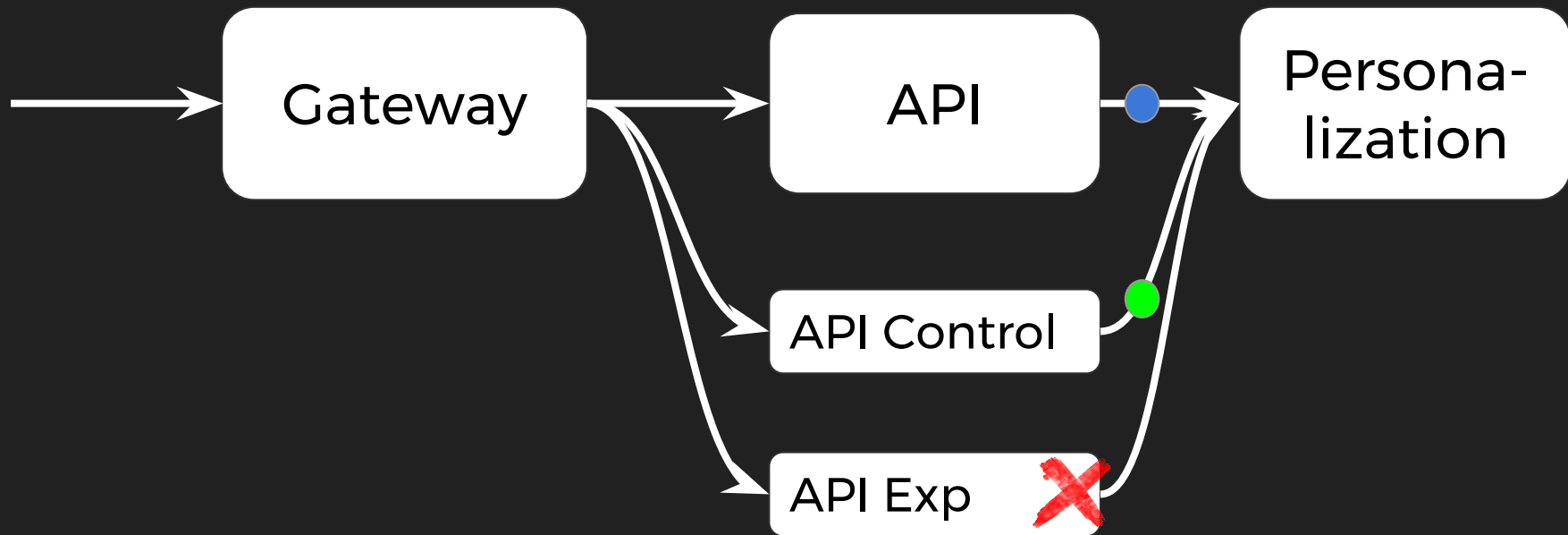




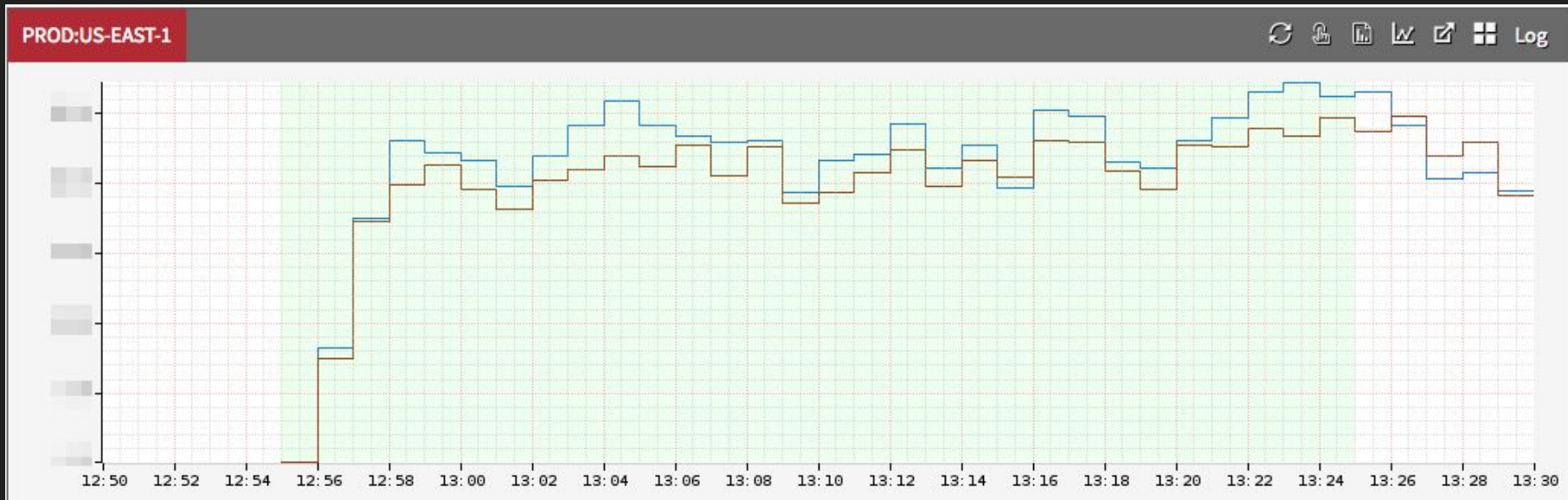
`if(shouldRoute == true)`



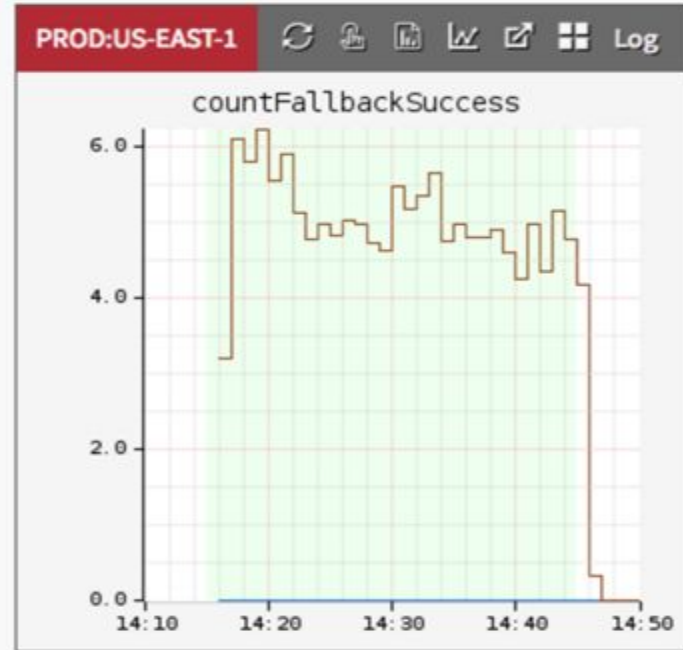
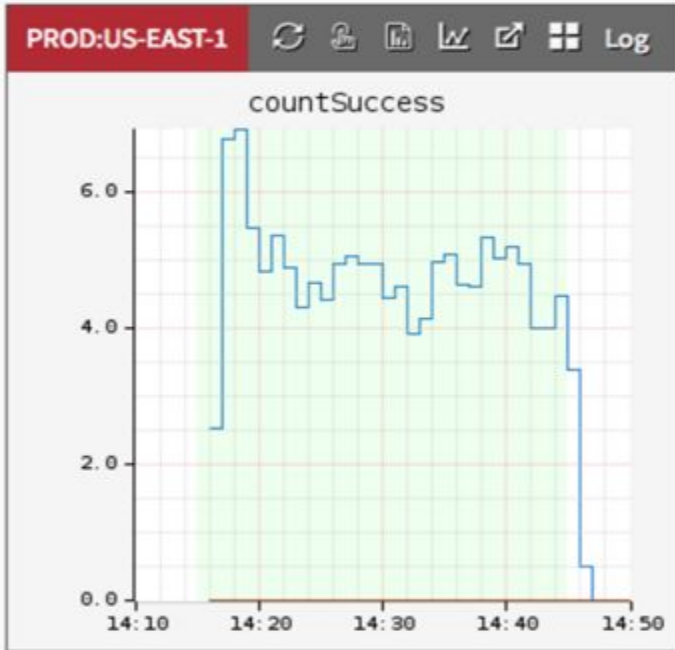




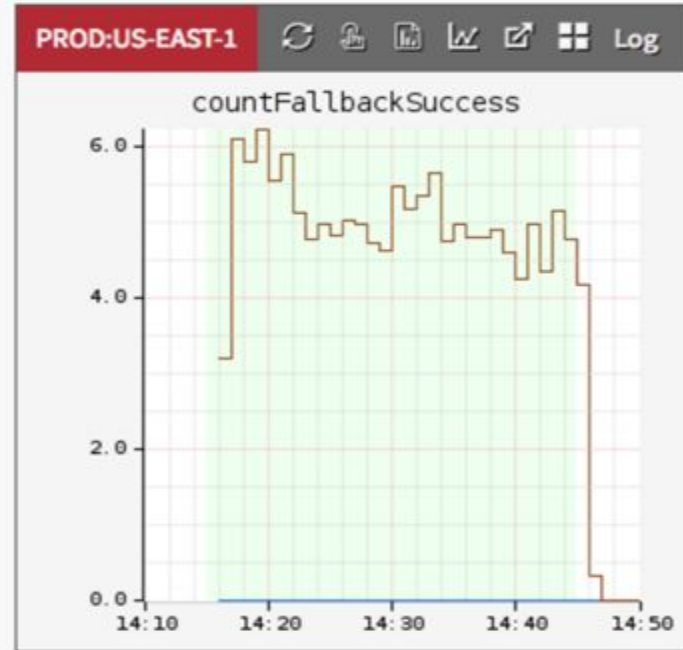
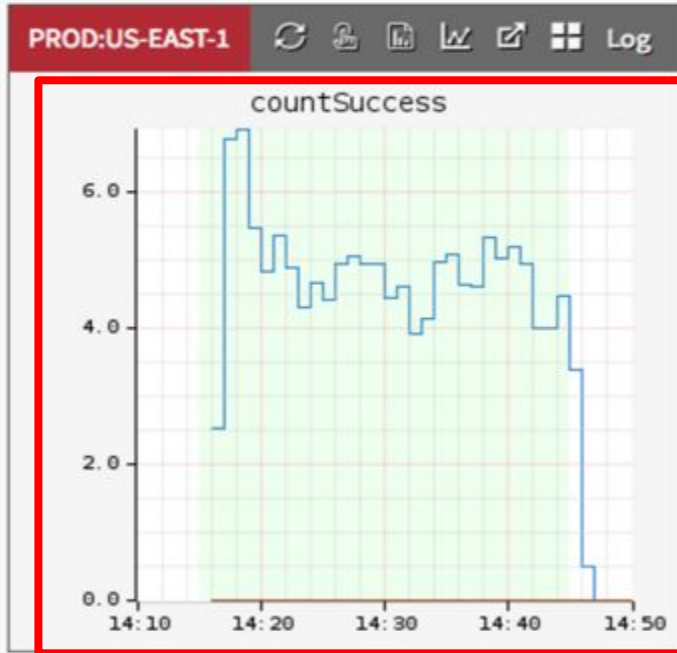
Stream Starts Per Second (SPS)



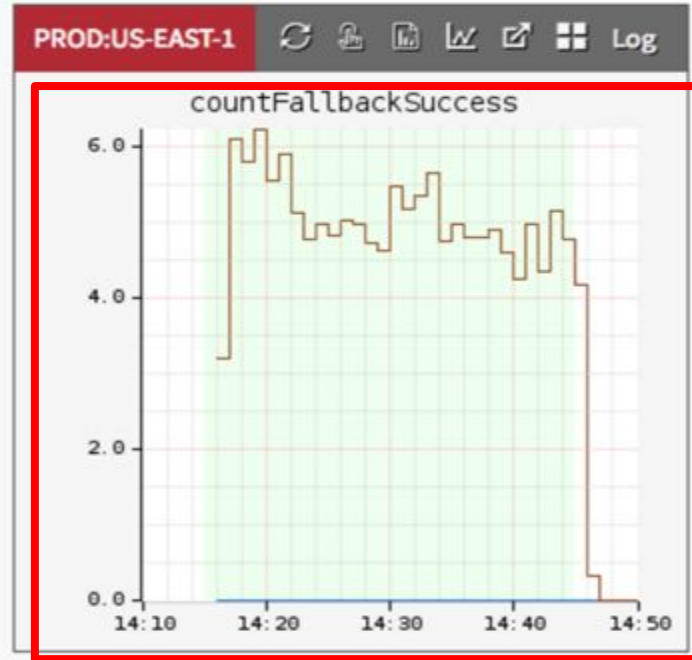
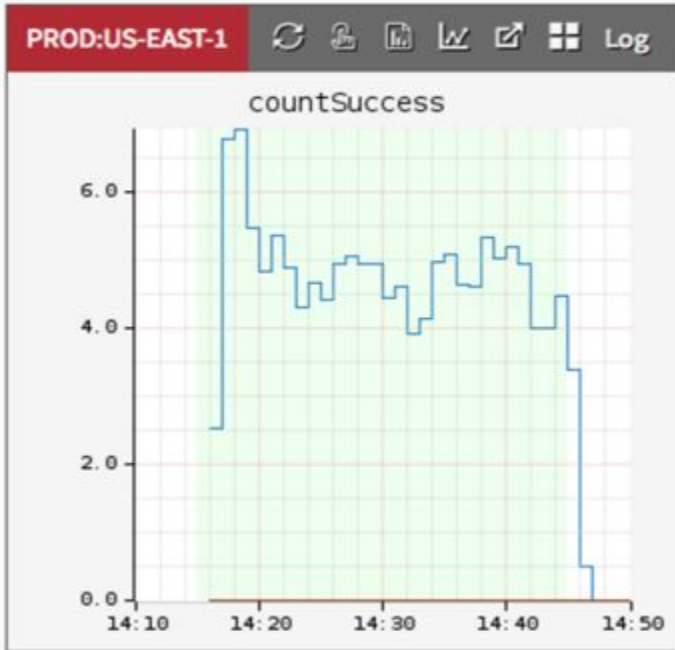
Fallback Metrics



Fallback Metrics



Fallback Metrics



CPU Utilization



Part Four.

CHAOS MATURITY MODEL



CHAOS MATURITY MODEL

Sophistication



Adoption

CHAOS MATURITY MODEL

Sophistication



CHAOS MATURITY MODEL



Adoption

CHAOS MATURITY MODEL

Sophistication



Adoption

High Sophistication

Chaos Pioneers

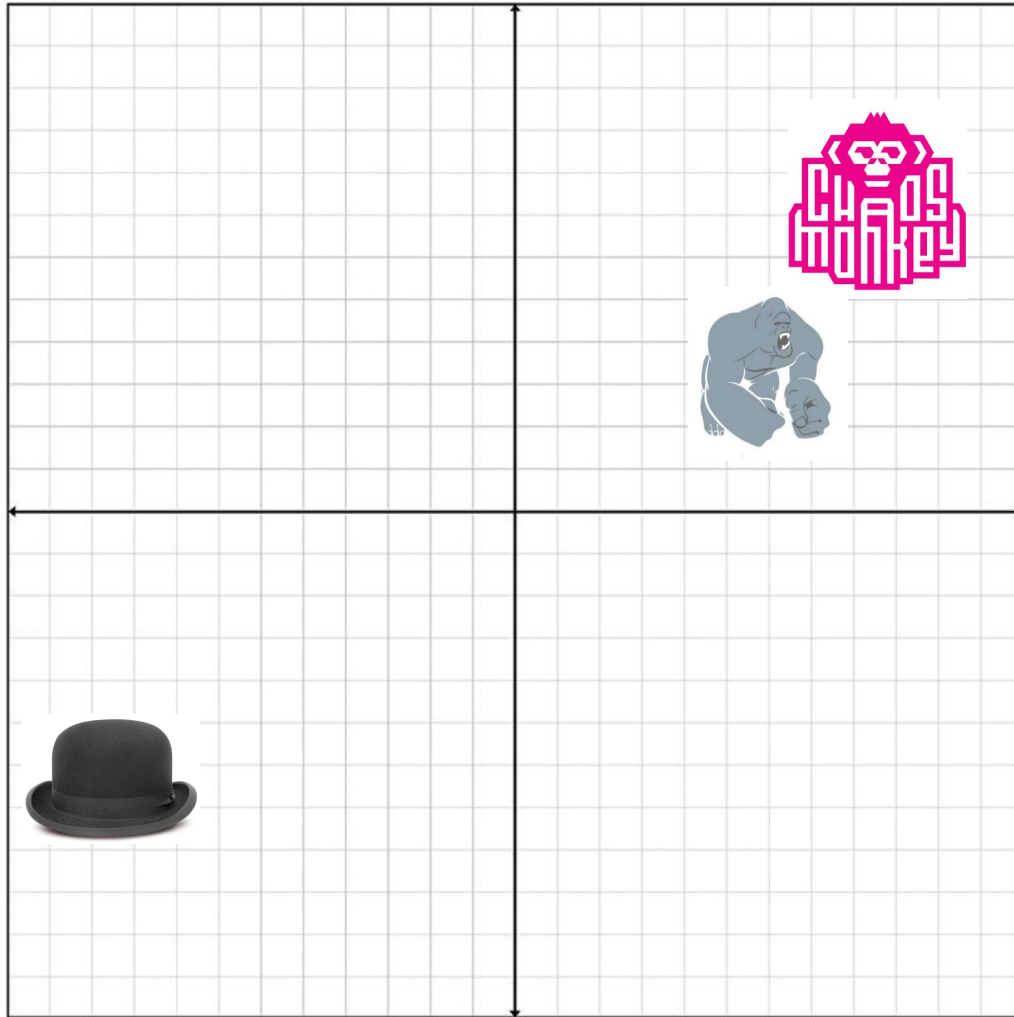


No Chaos Story

High Adoption

High Sophistication

Chaos Pioneers

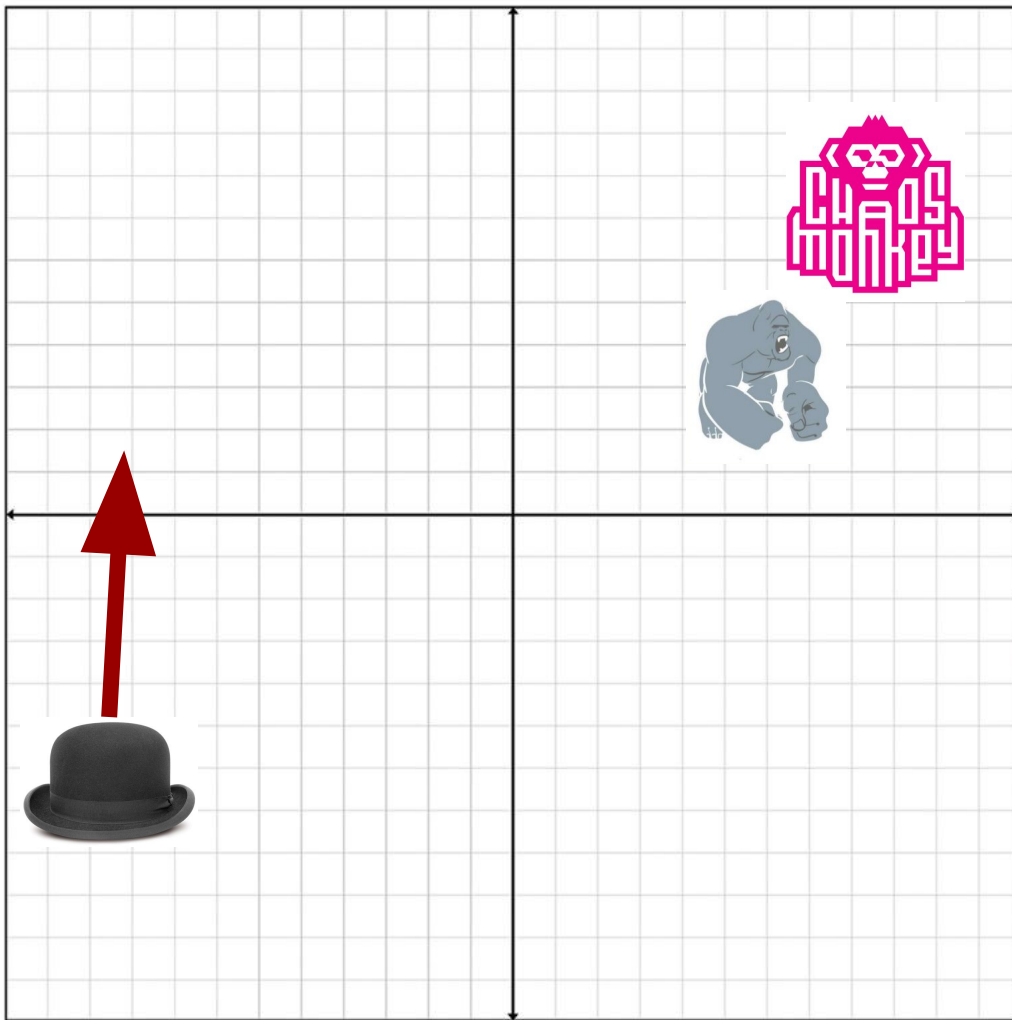
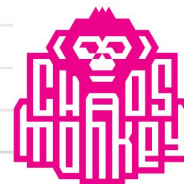


No Chaos Story

High Adoption

High Sophistication

Chaos Pioneers

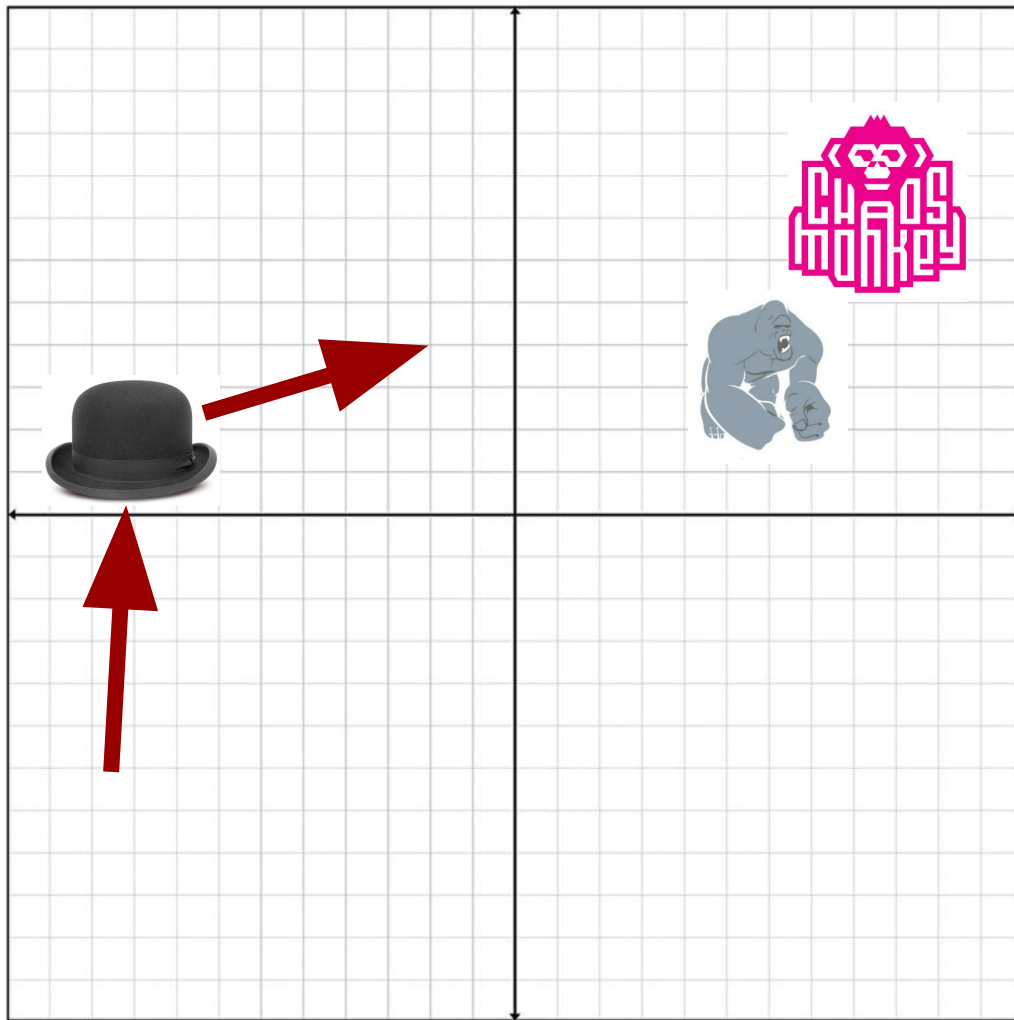


No Chaos Story

High Adoption

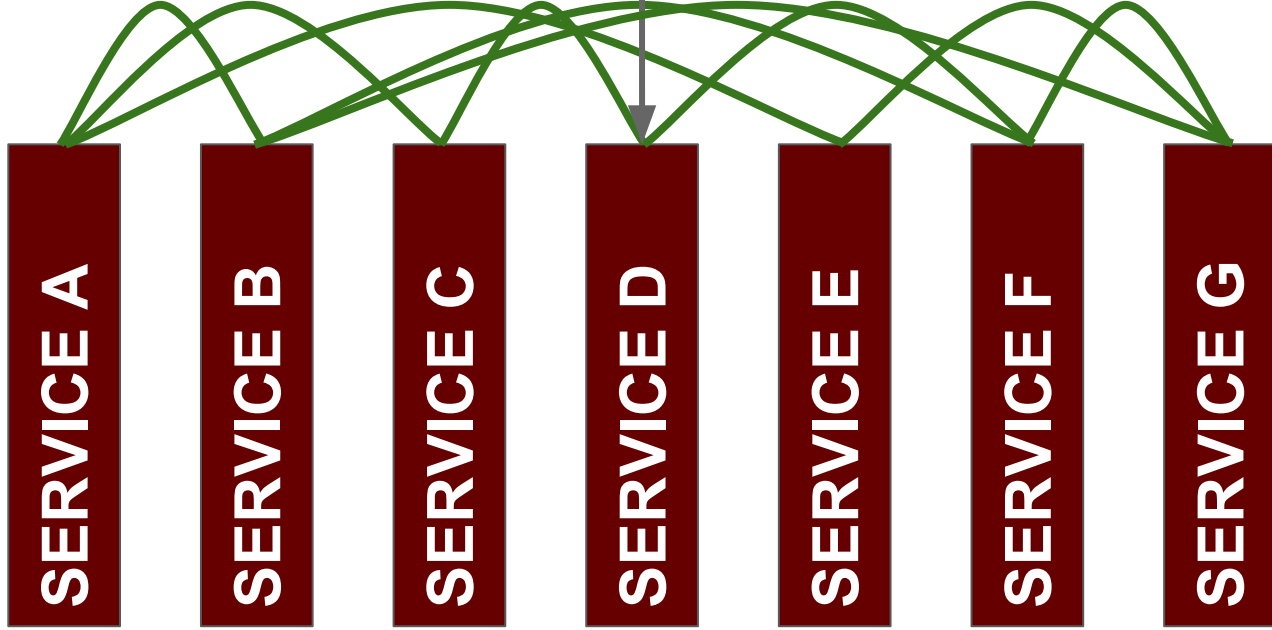
High Sophistication

Chaos Pioneers



No Chaos Story

High Adoption



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NETFLIX

Part Five.

Intuition Engineering

Intuition Engineering



VIZCERAL

Intuition Engineering



VIZCERAL

<https://github.com/Netflix/vizceral>

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