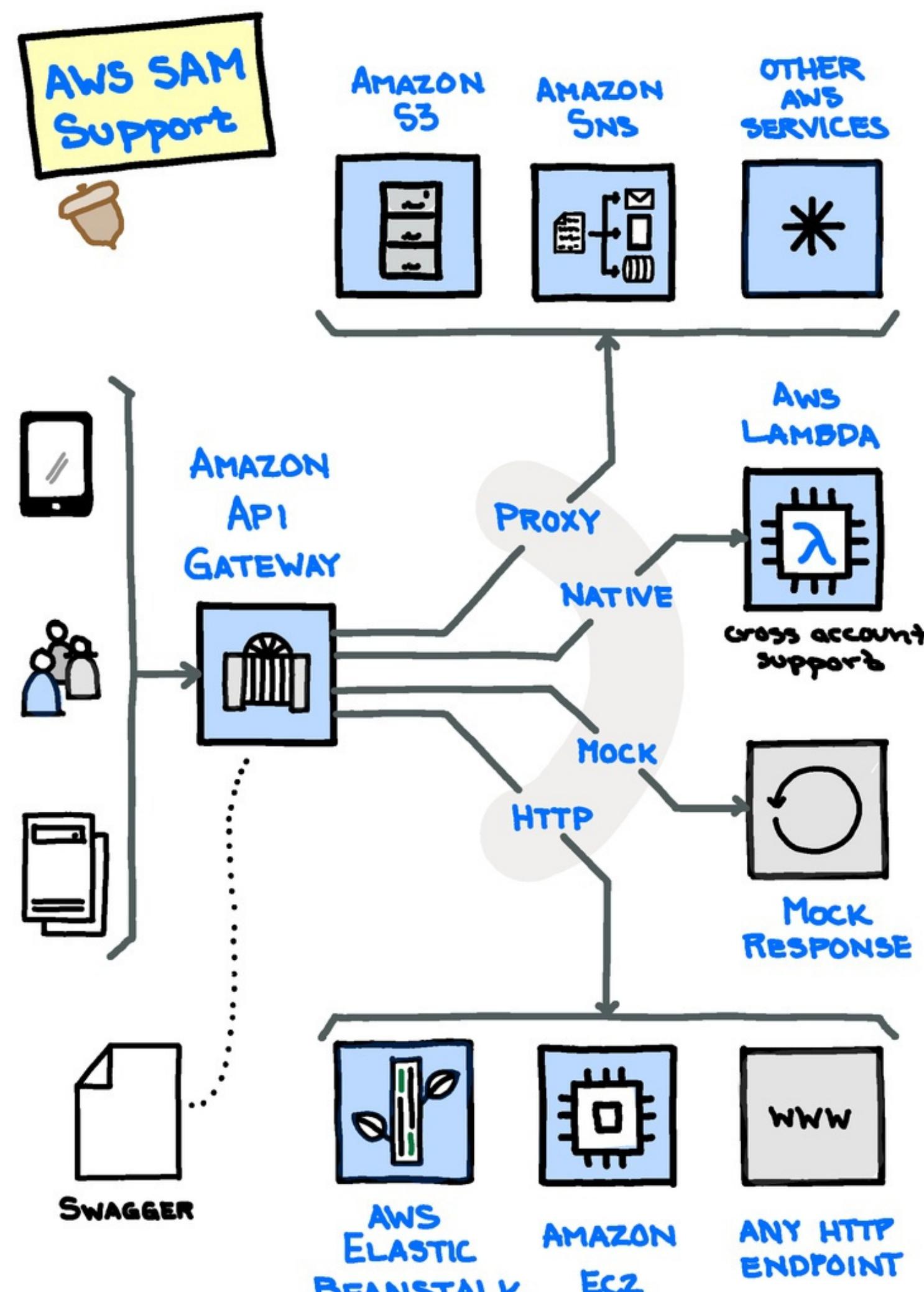


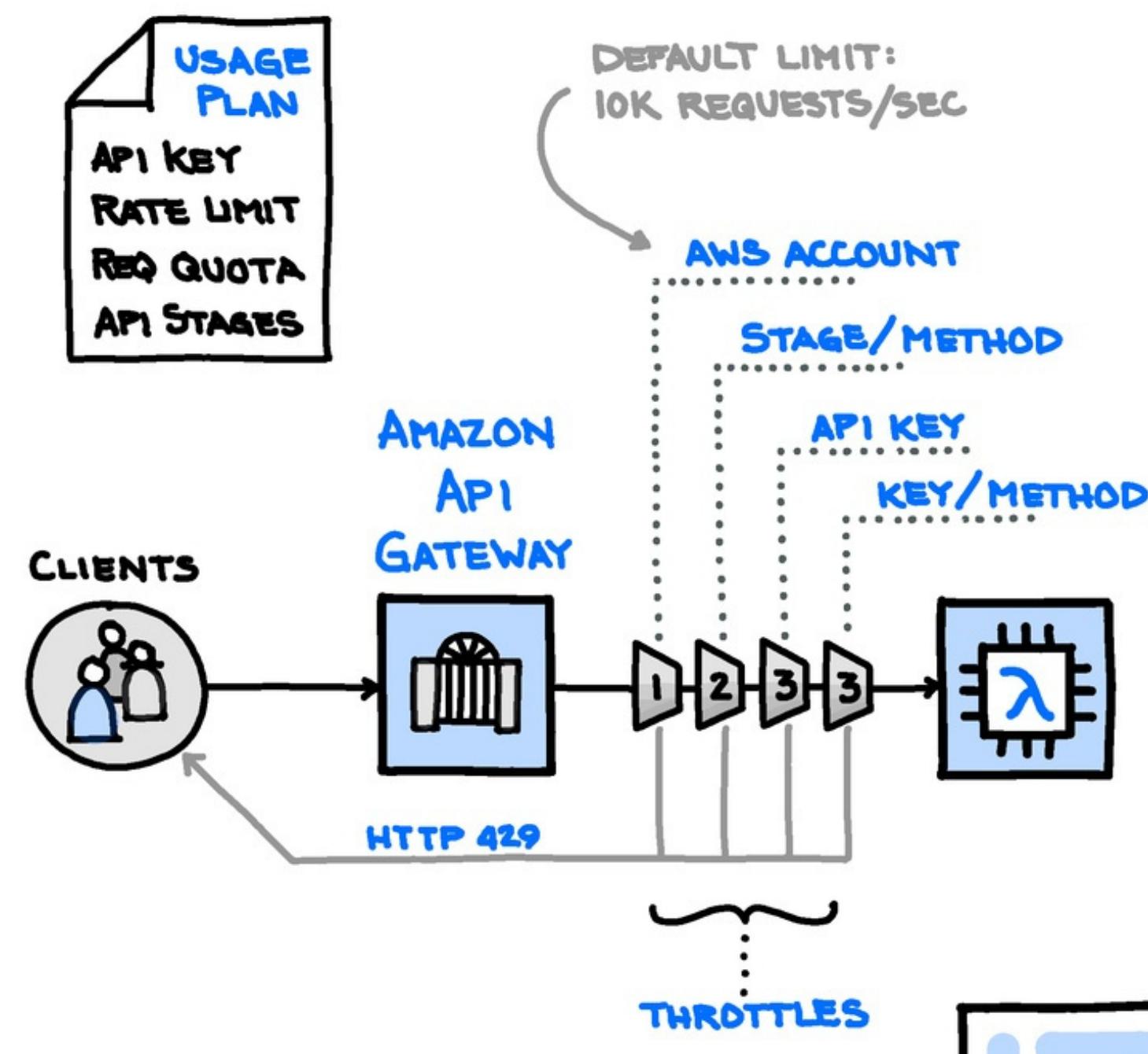
AWS Sketchbook



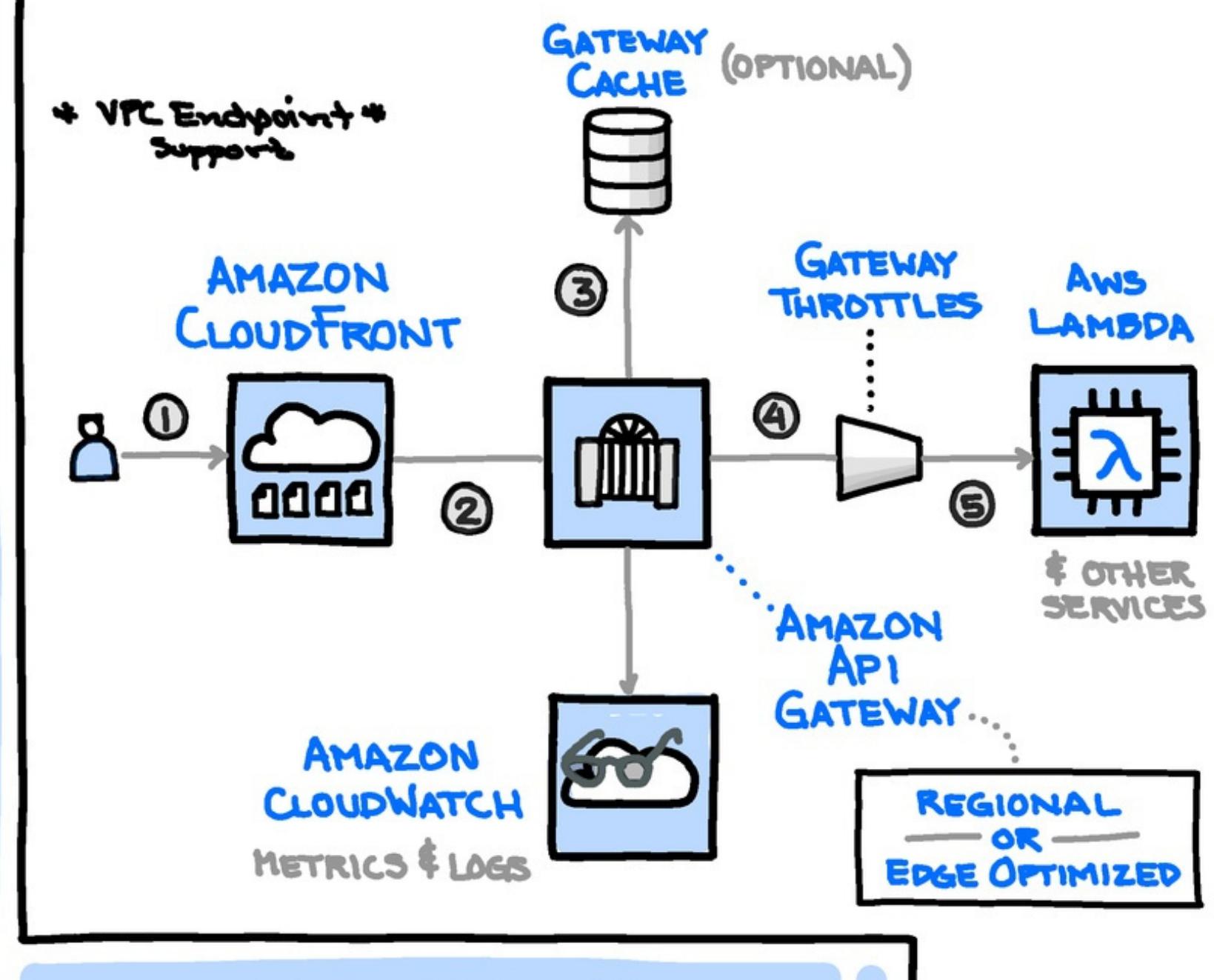
THE INTEGRATIONS



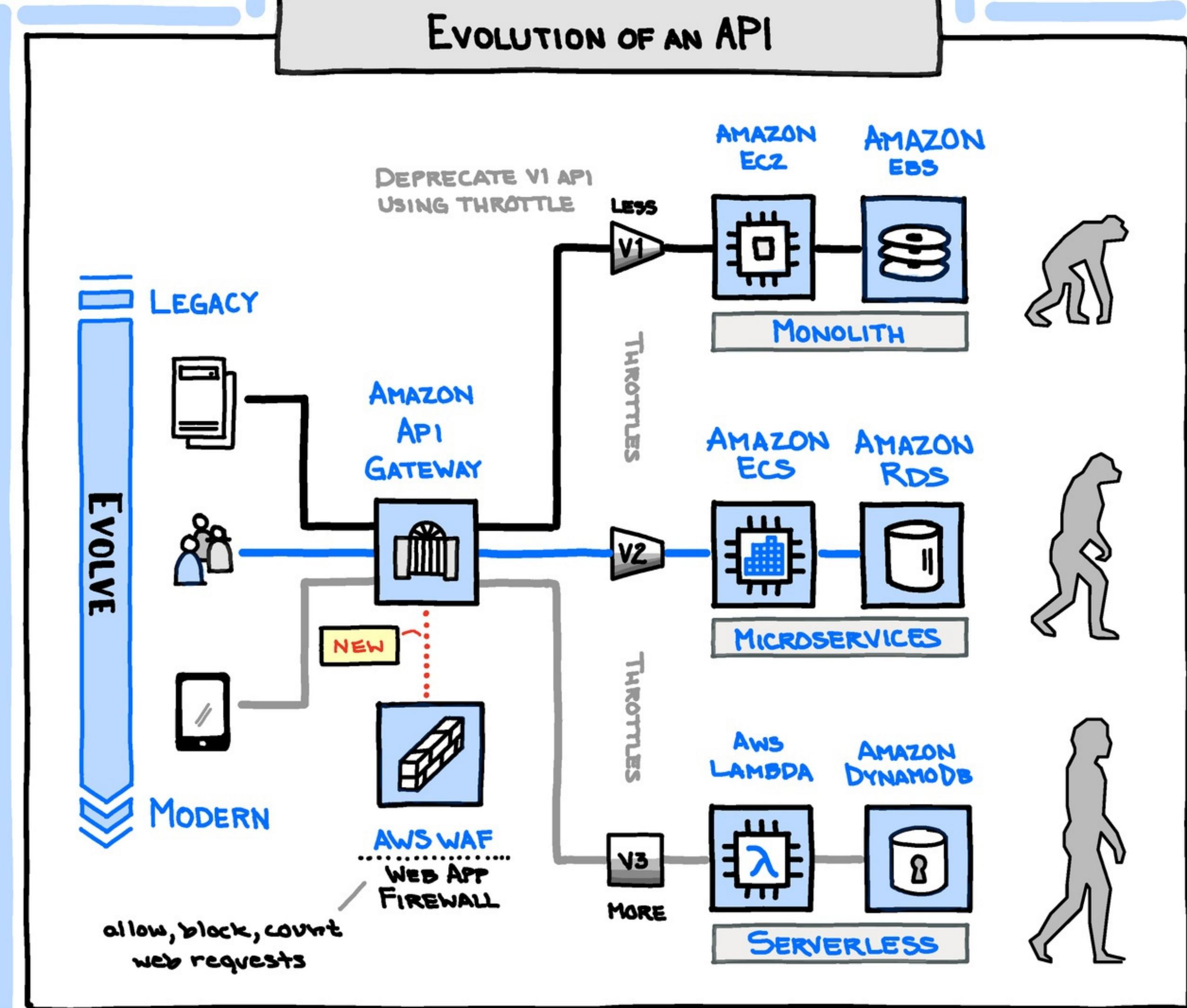
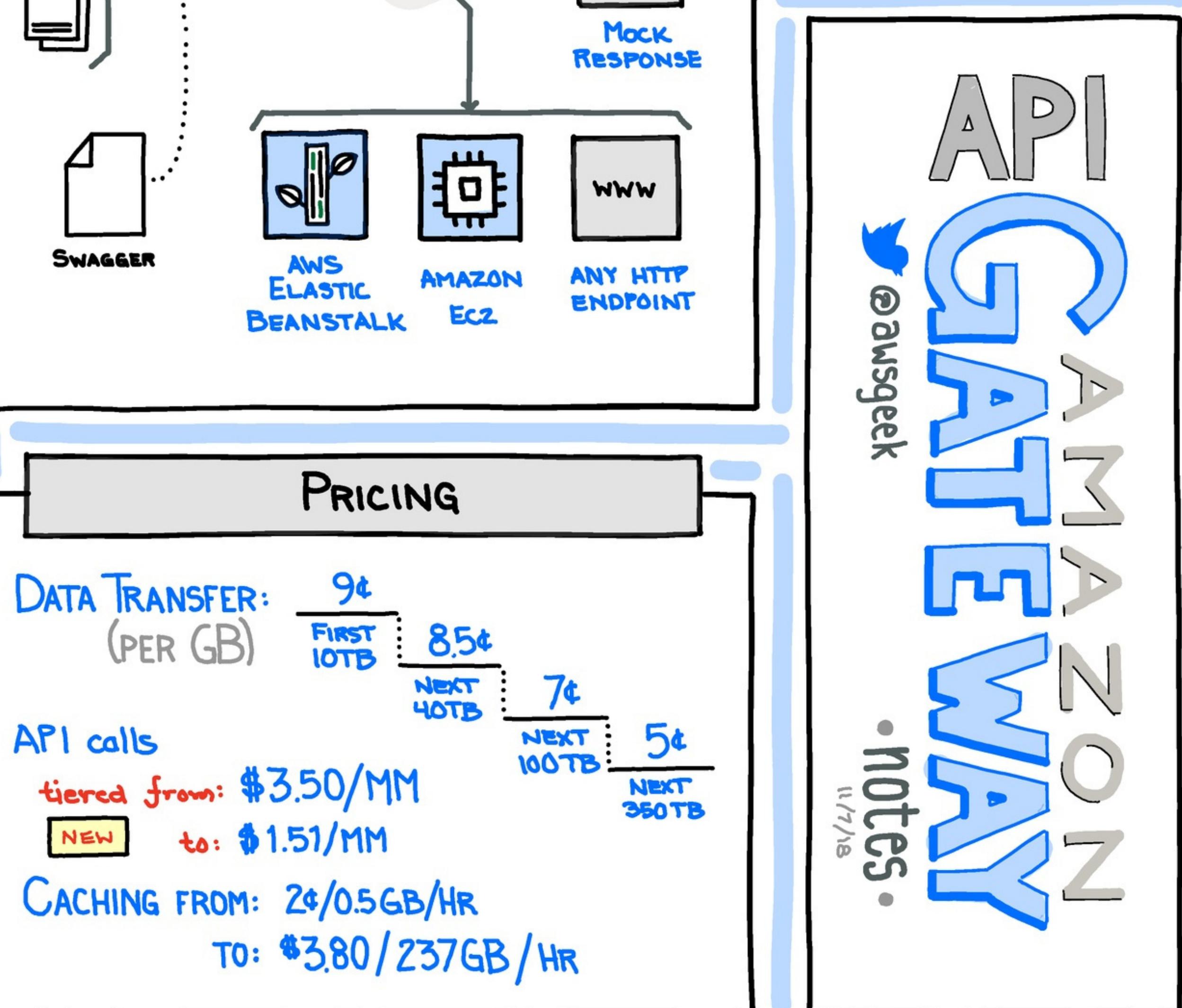
THROTTLING

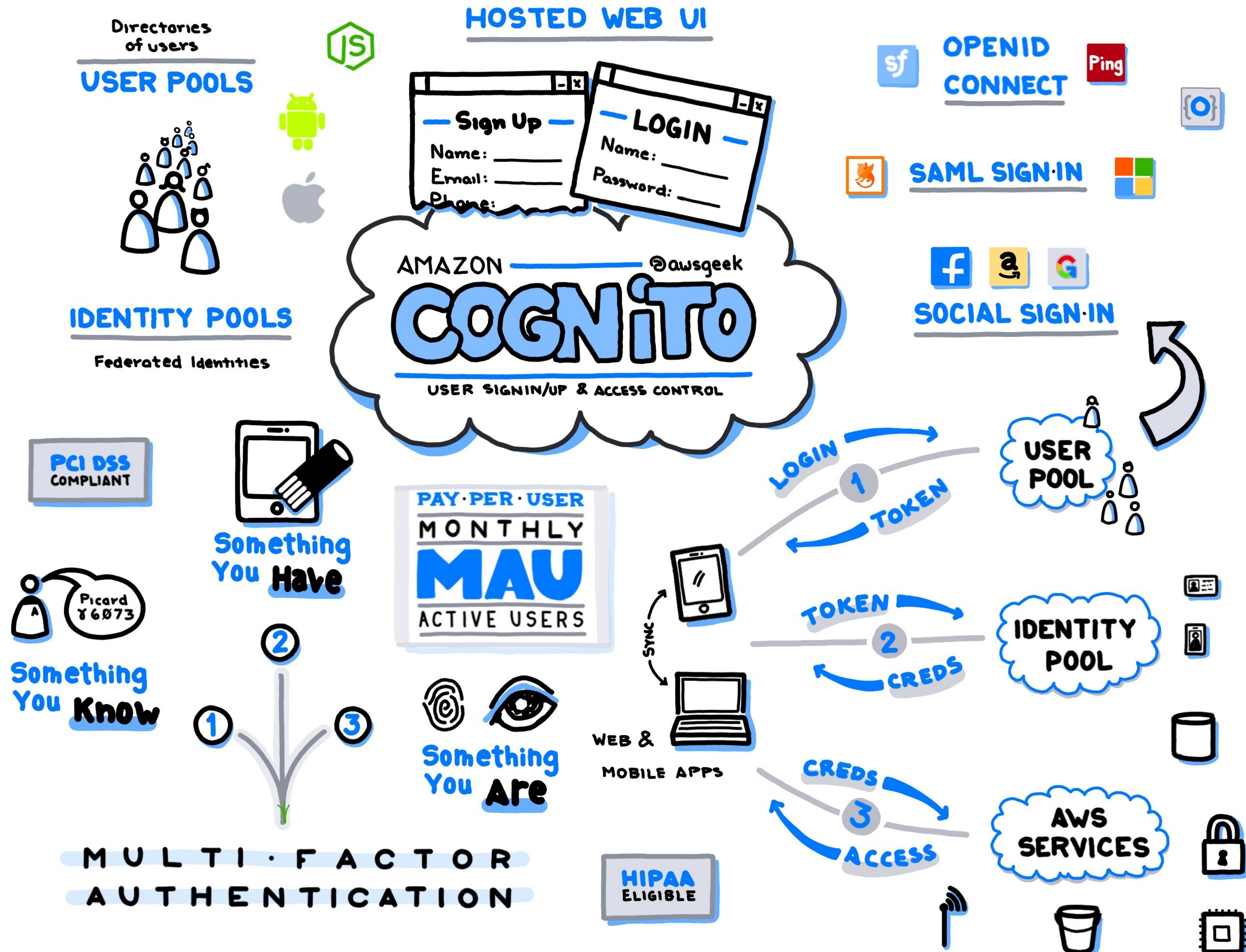


UNDER THE HOOD



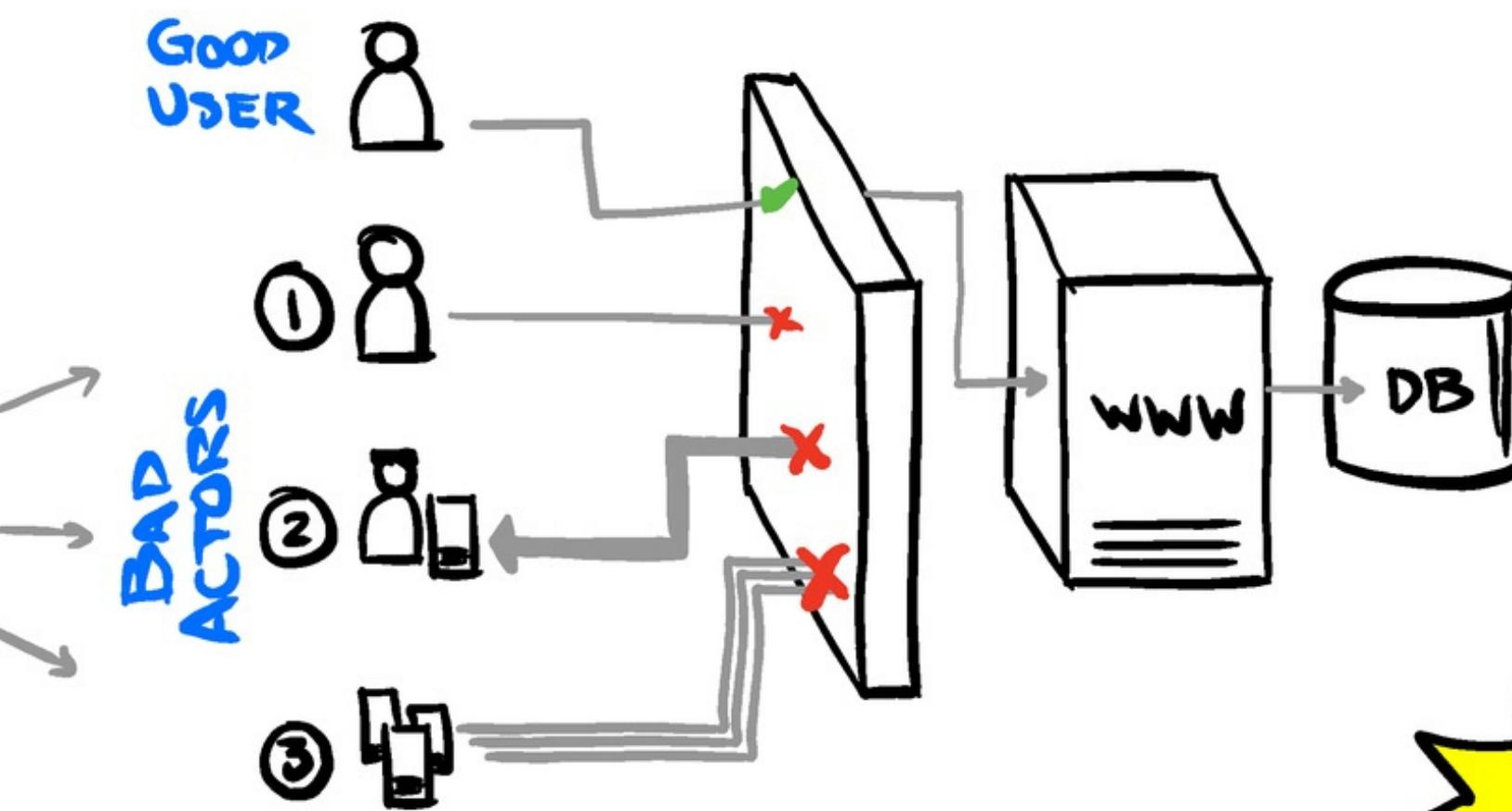
EVOLUTION OF AN API



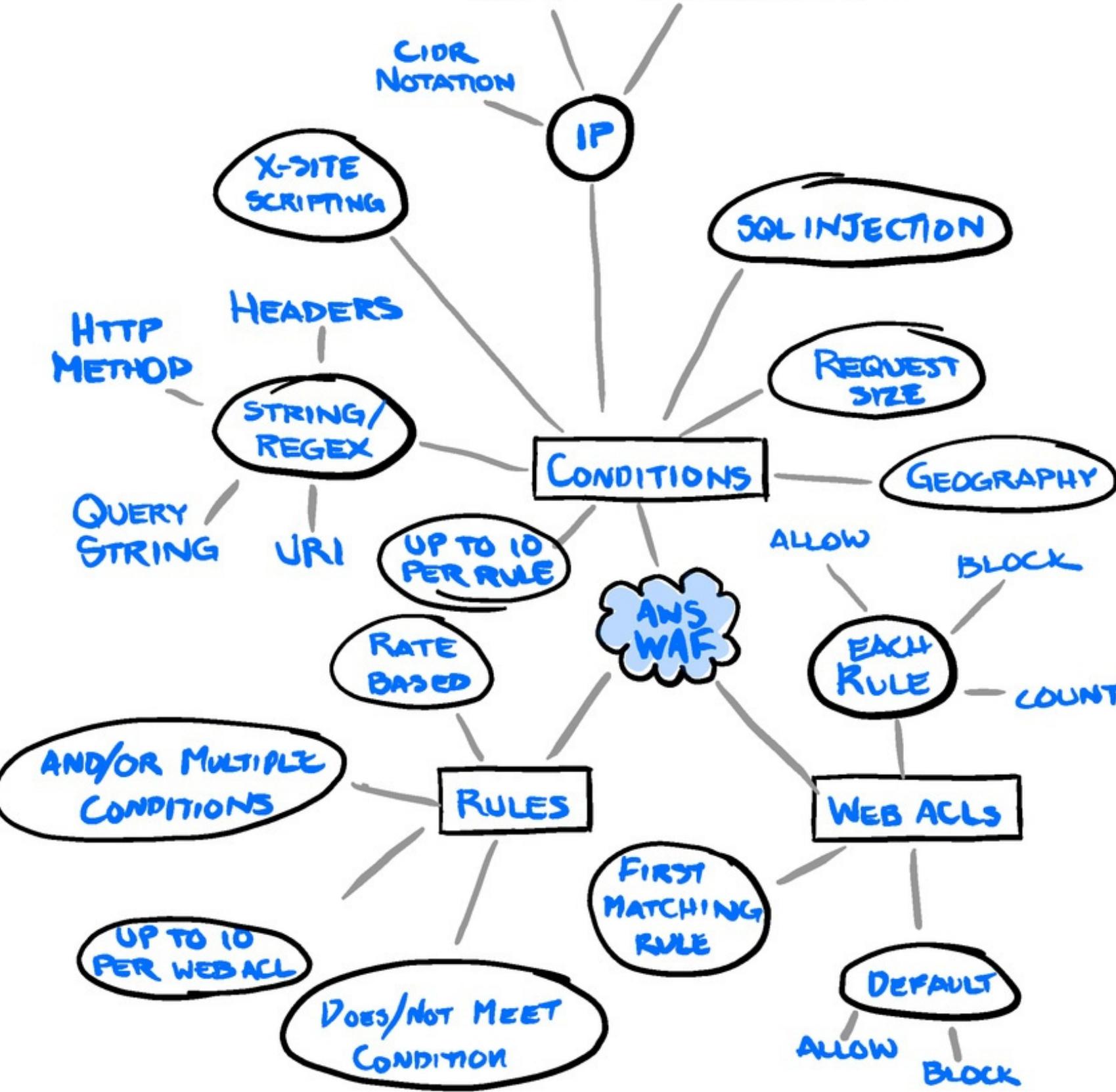


COMMON WAF USE CASES

- PREVENT
 - ① MALICIOUS USERS
 - ② CONTENT ABUSE
 - ③ DDOS ATTACKS

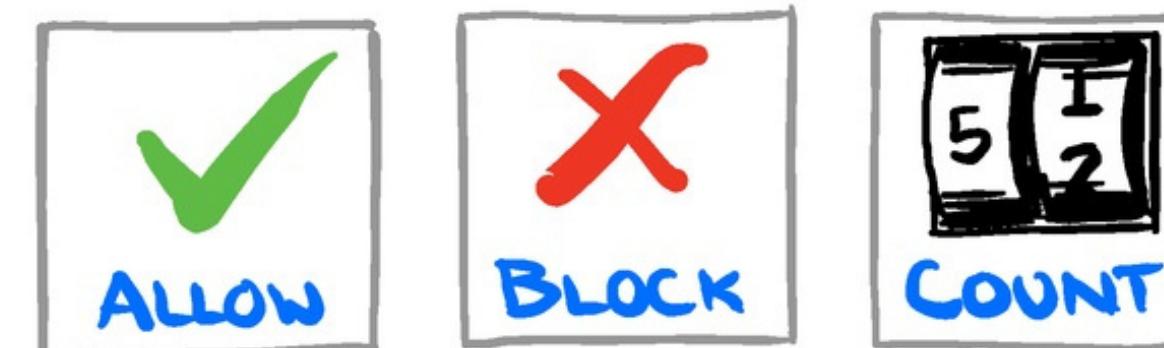


18,16,24,32 ONLY UPTO 10K PER CONDITION



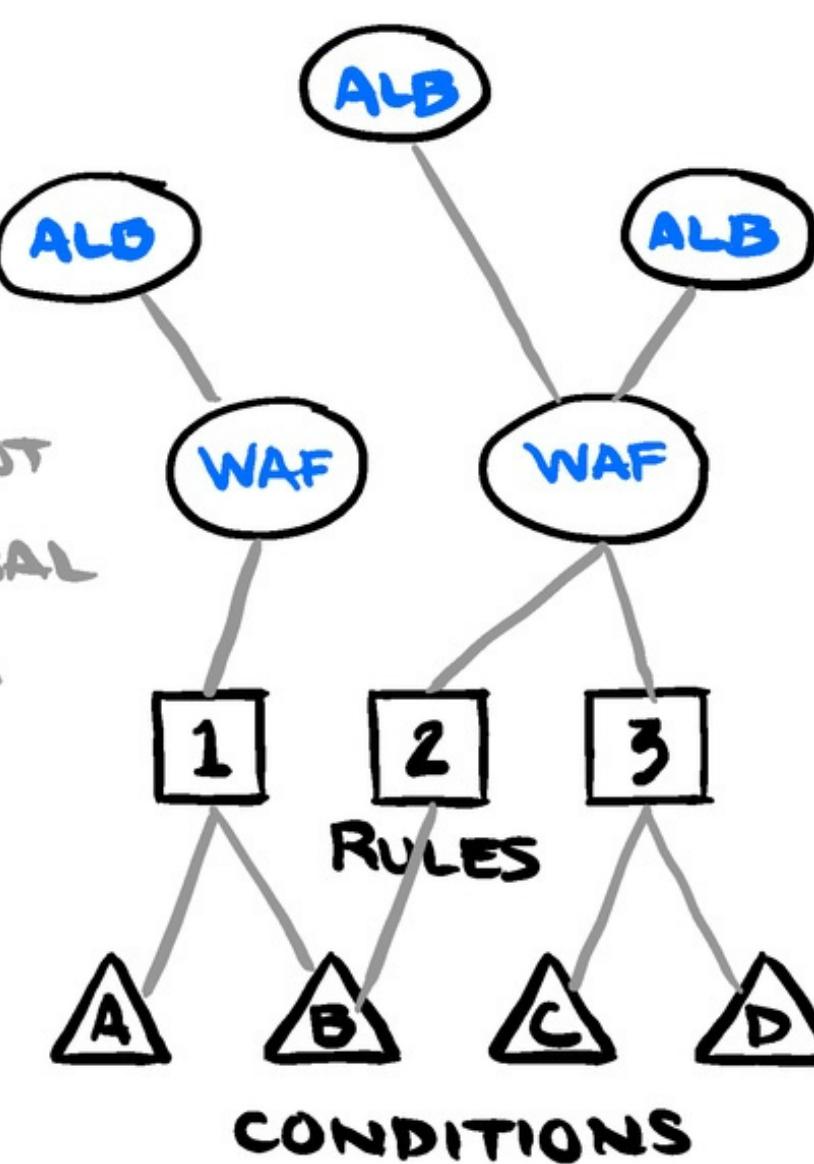
@awsgeek

jerry.hargrove@



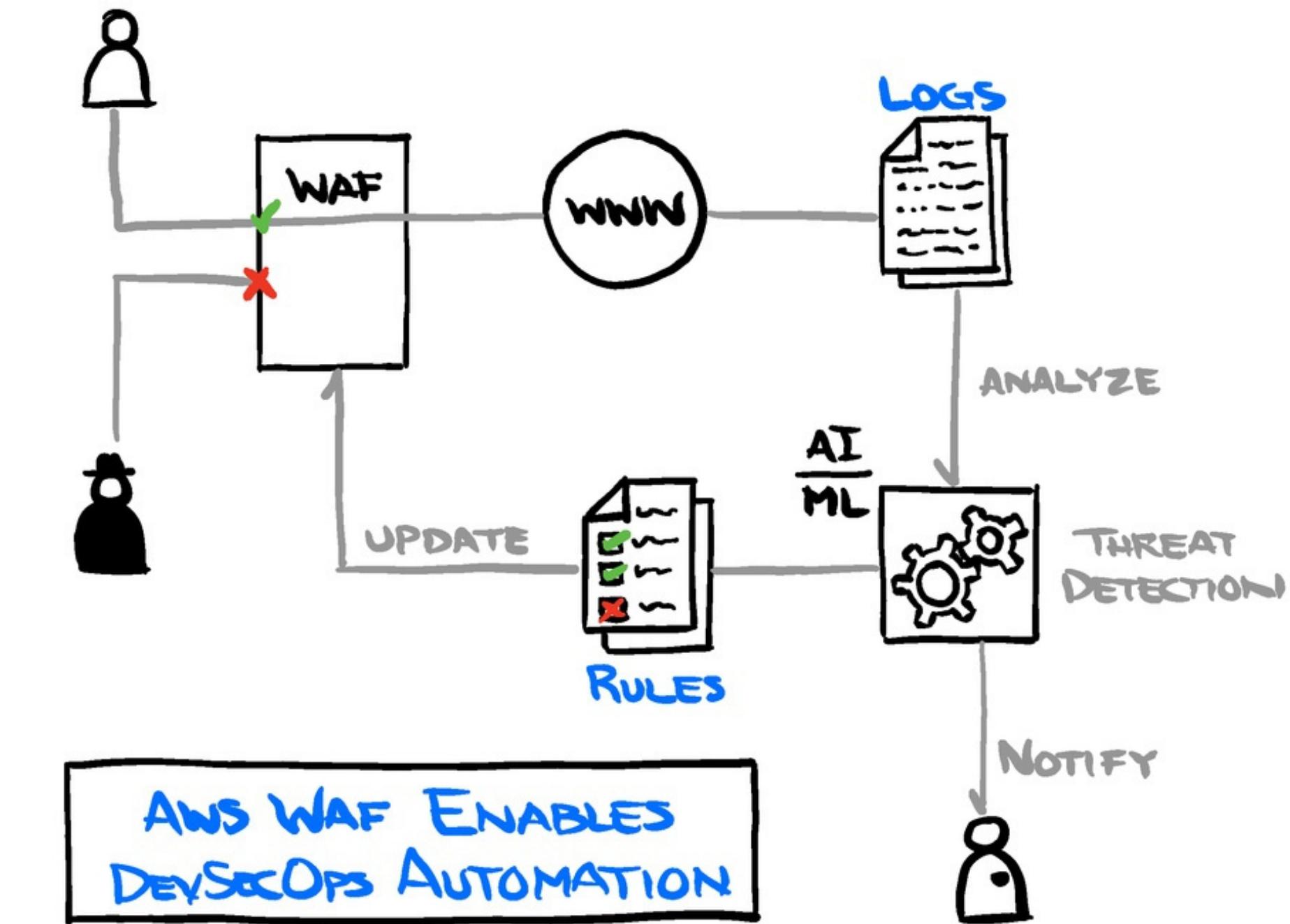
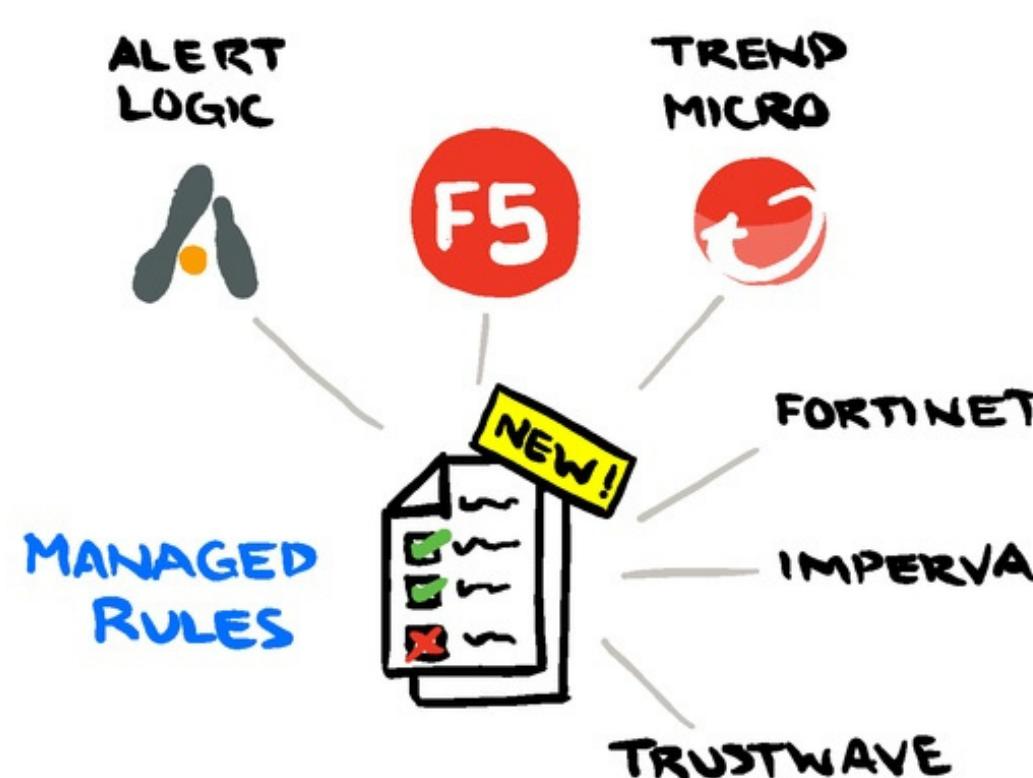
* ACL, RULE, CONDITION ARE EITHER GLOBAL OR REGION SPECIFIC

* REGIONAL MAY NOT BE USED BY GLOBAL AND VISA-VERSA

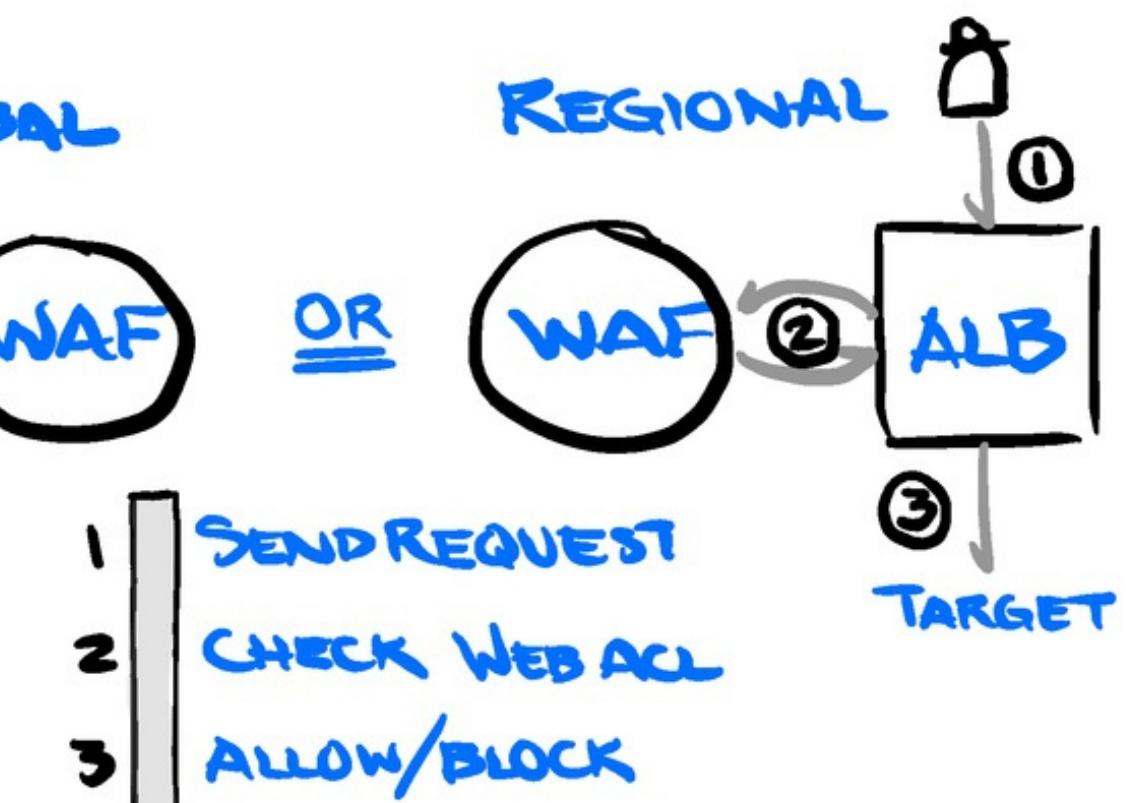


\$5/WEB ACL/Mo
\$1/RULE/WEBACL/Mo
60¢/MM REQUESTS

FOLLOW:
Aws SECURITY BLOG

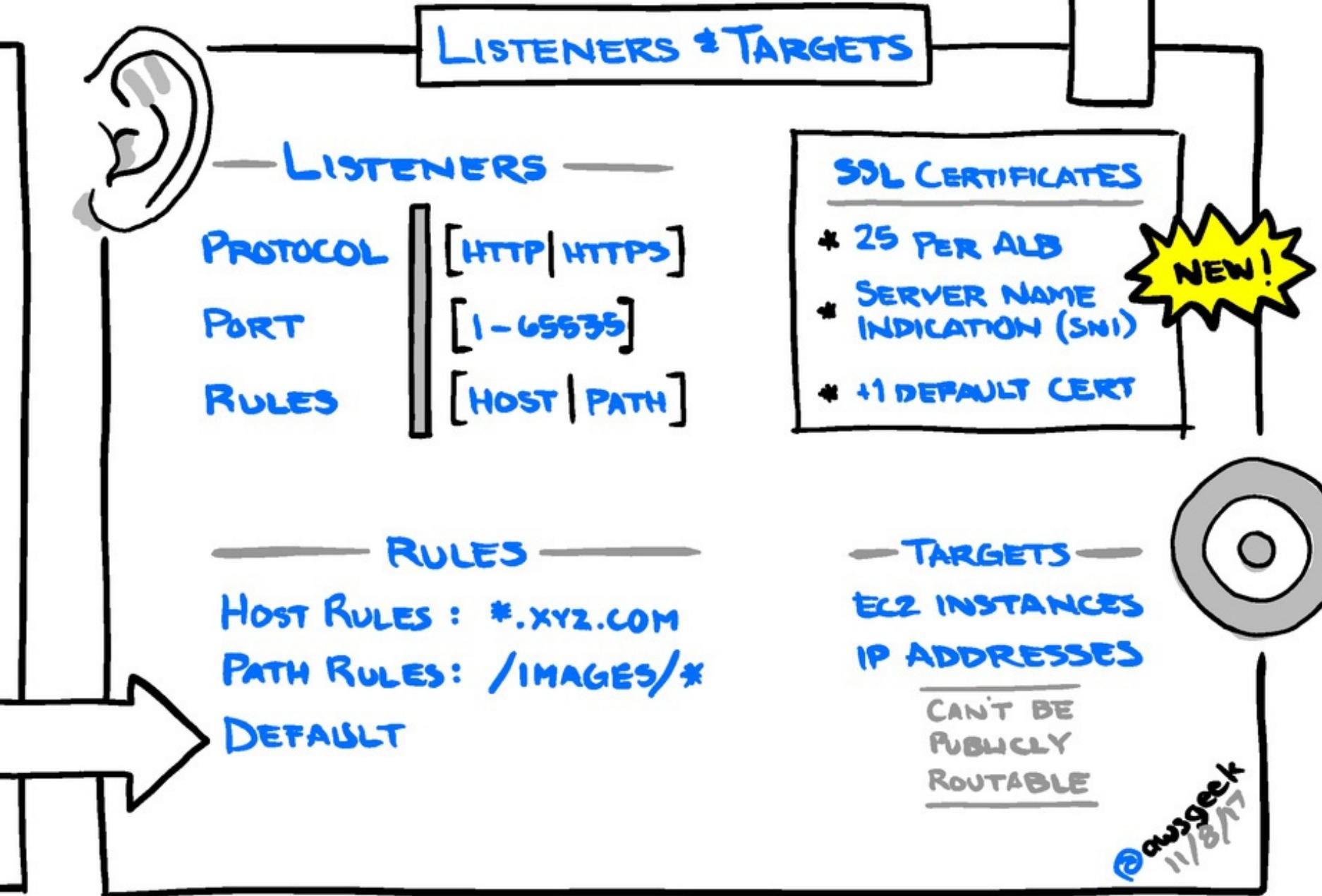
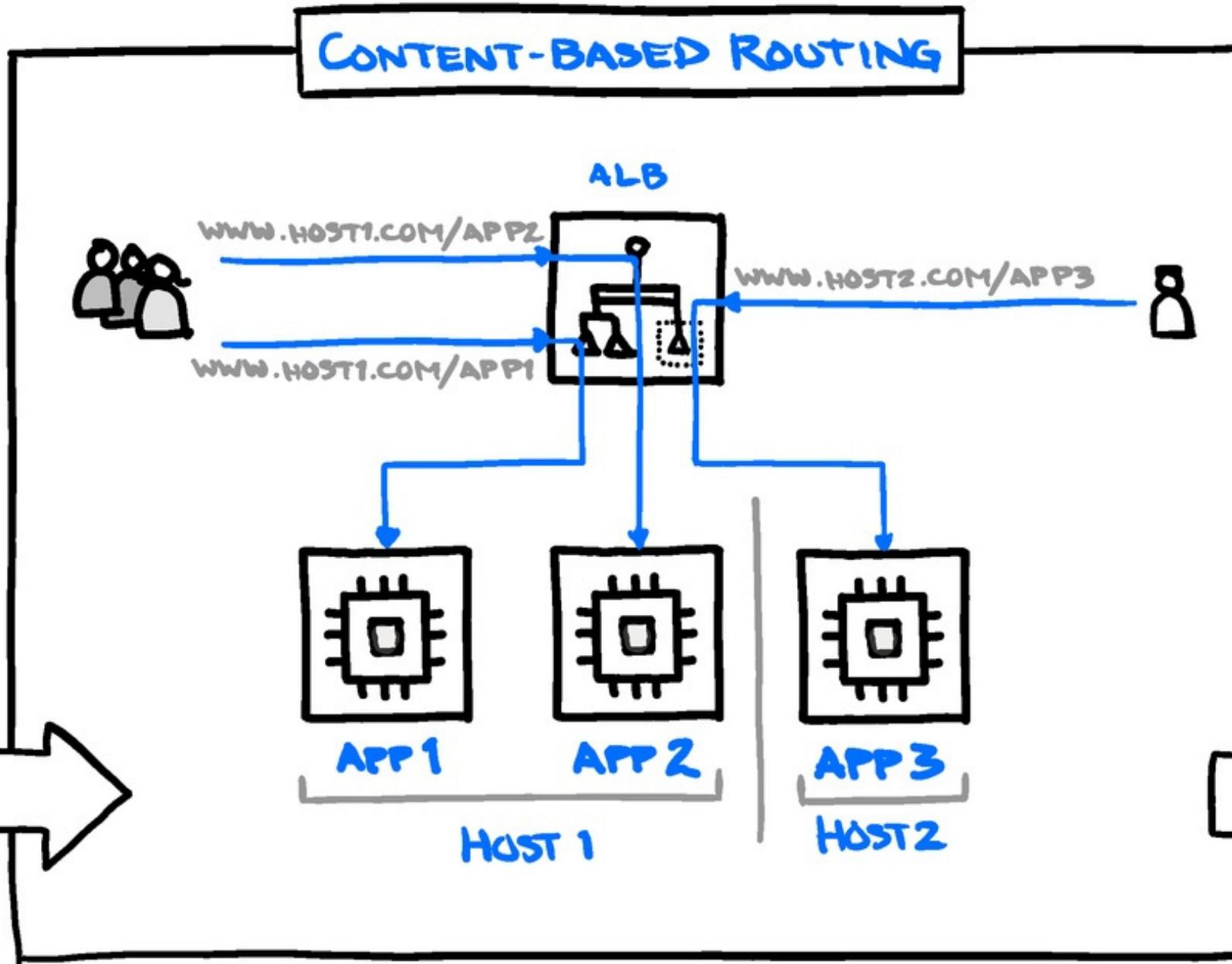
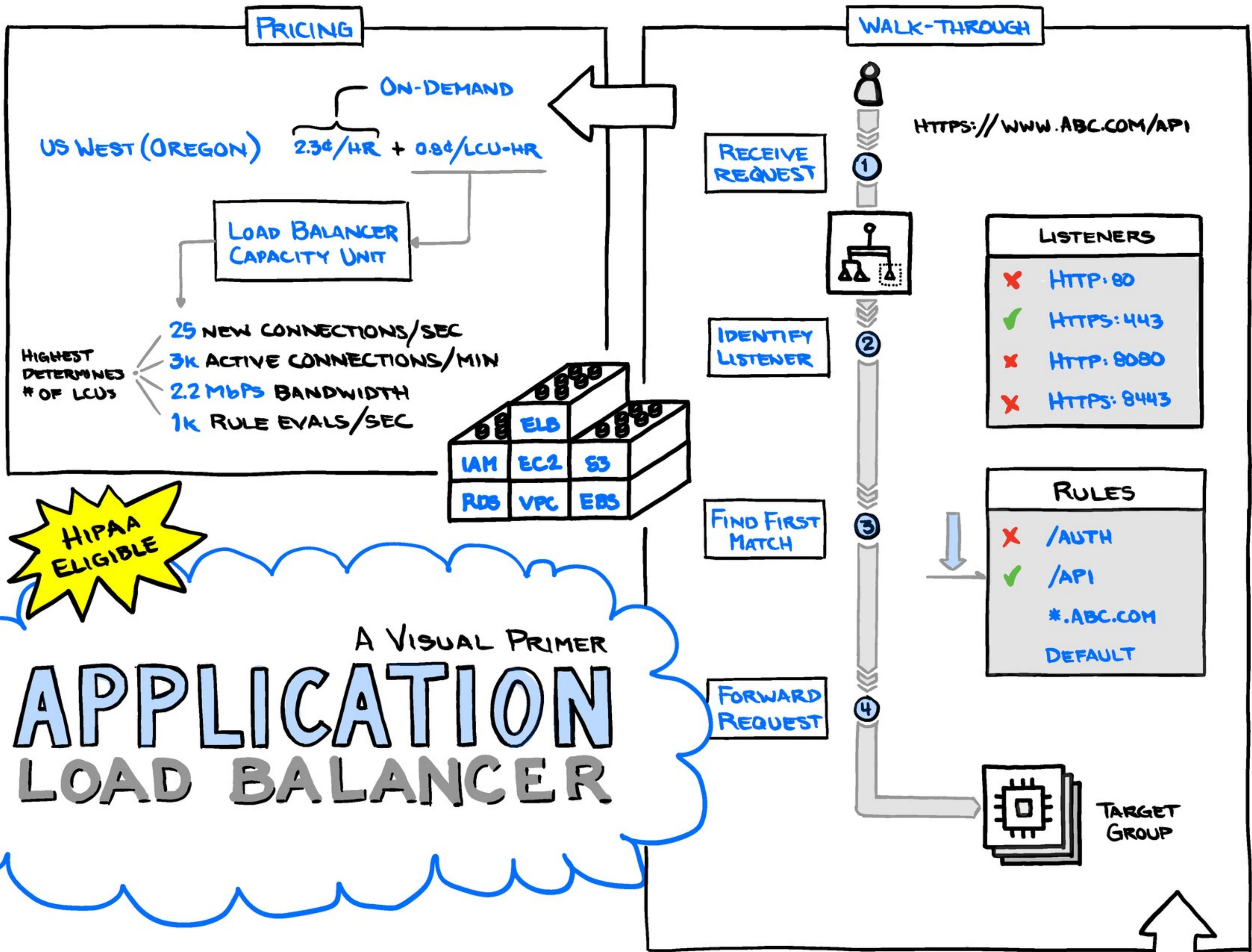
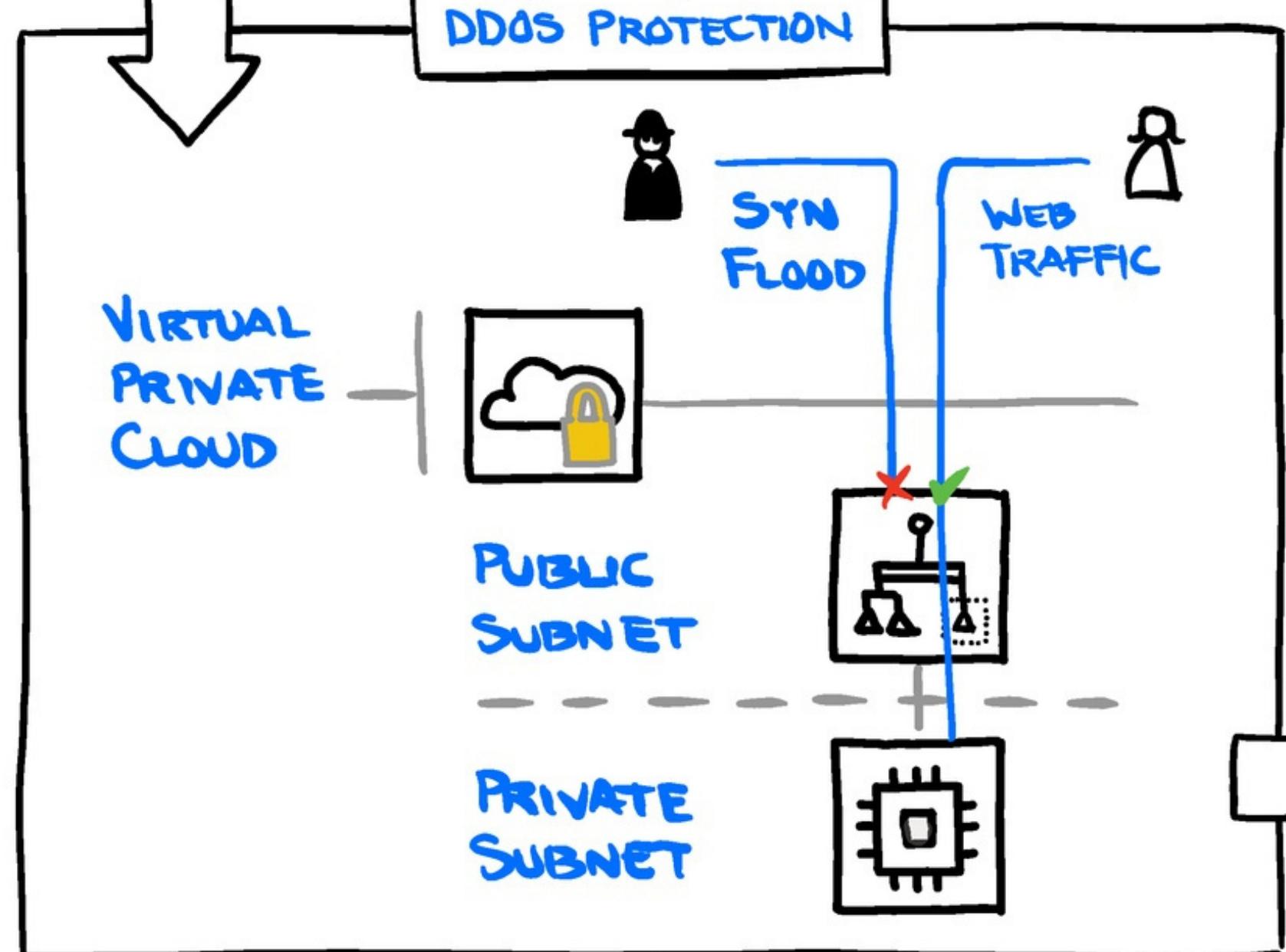
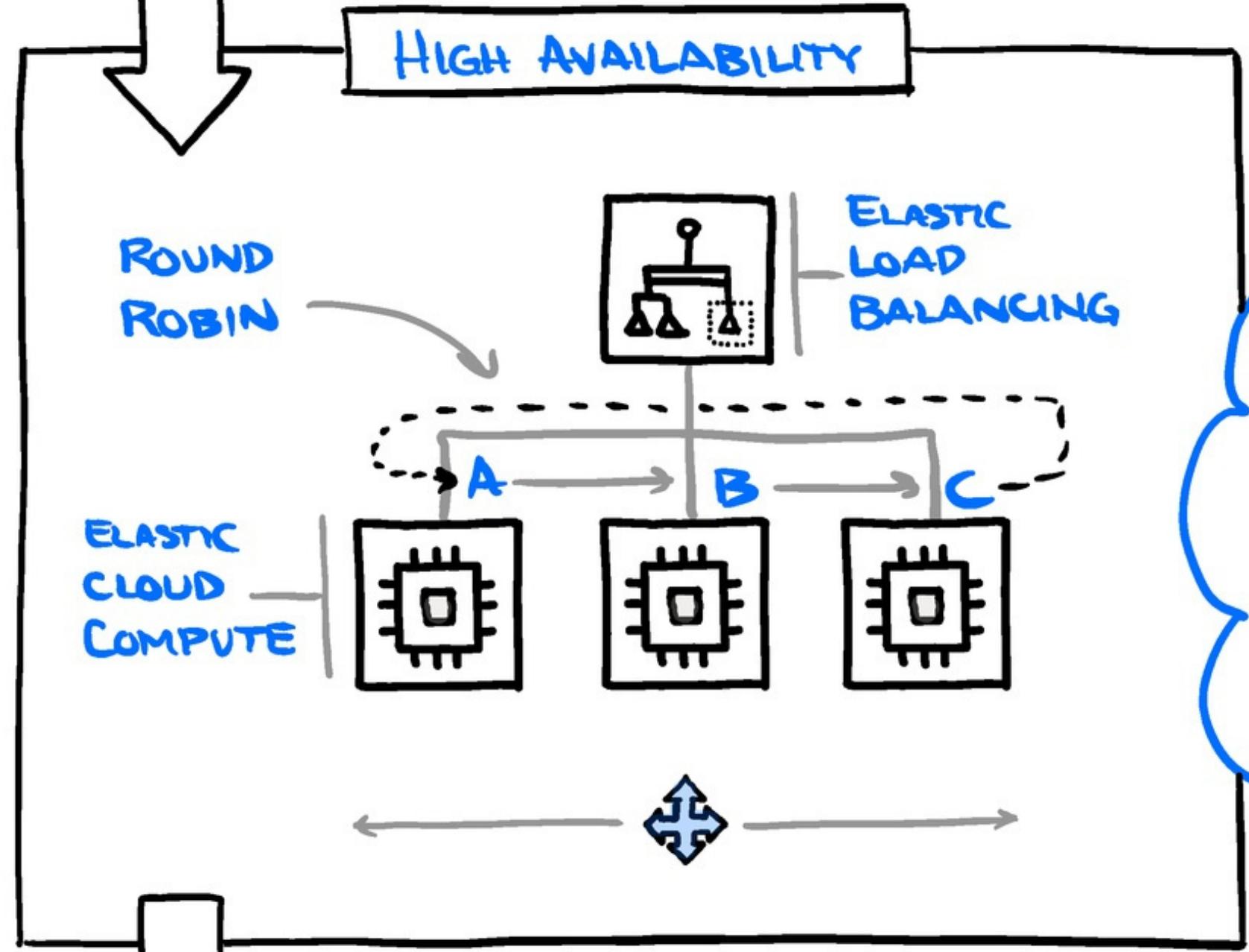
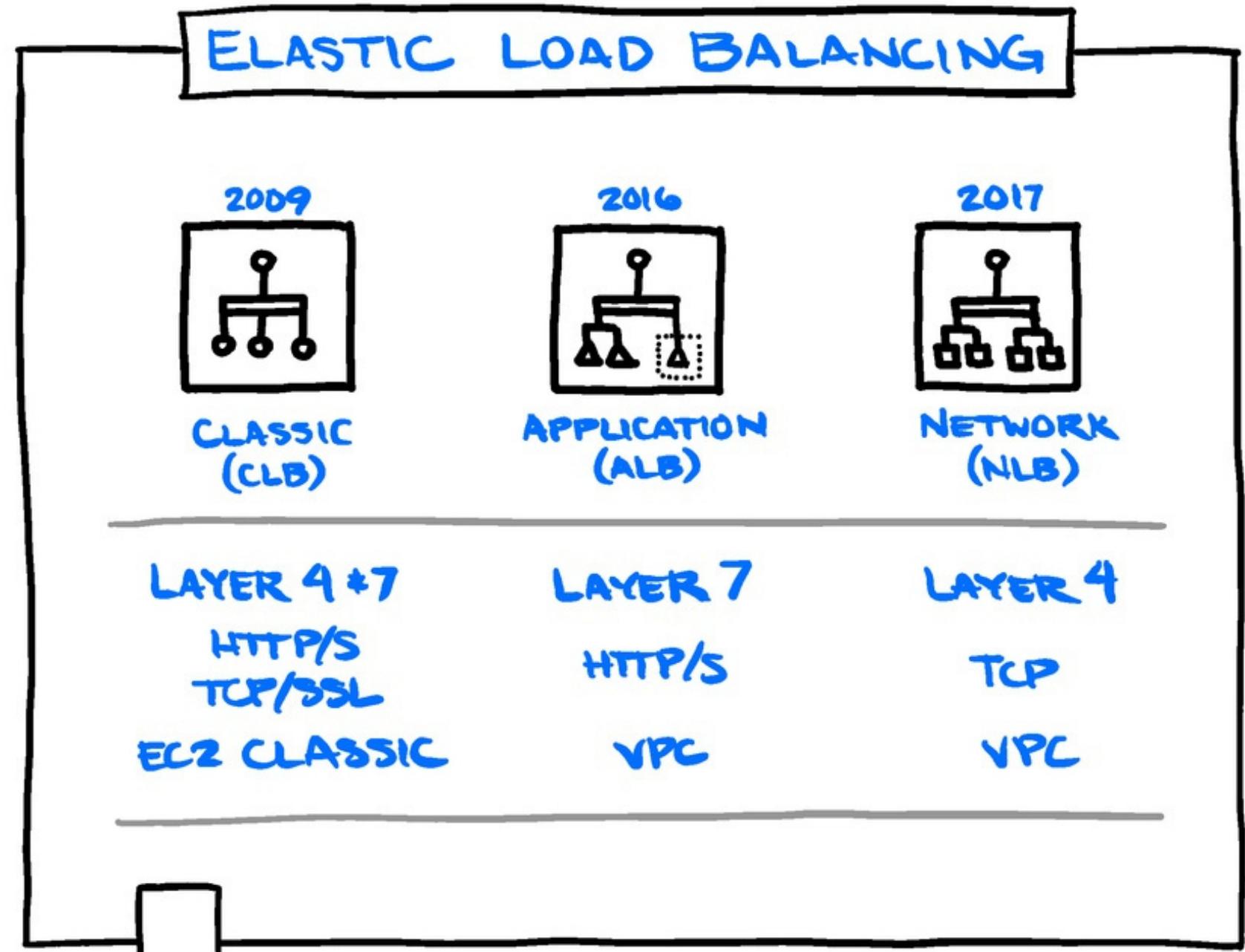


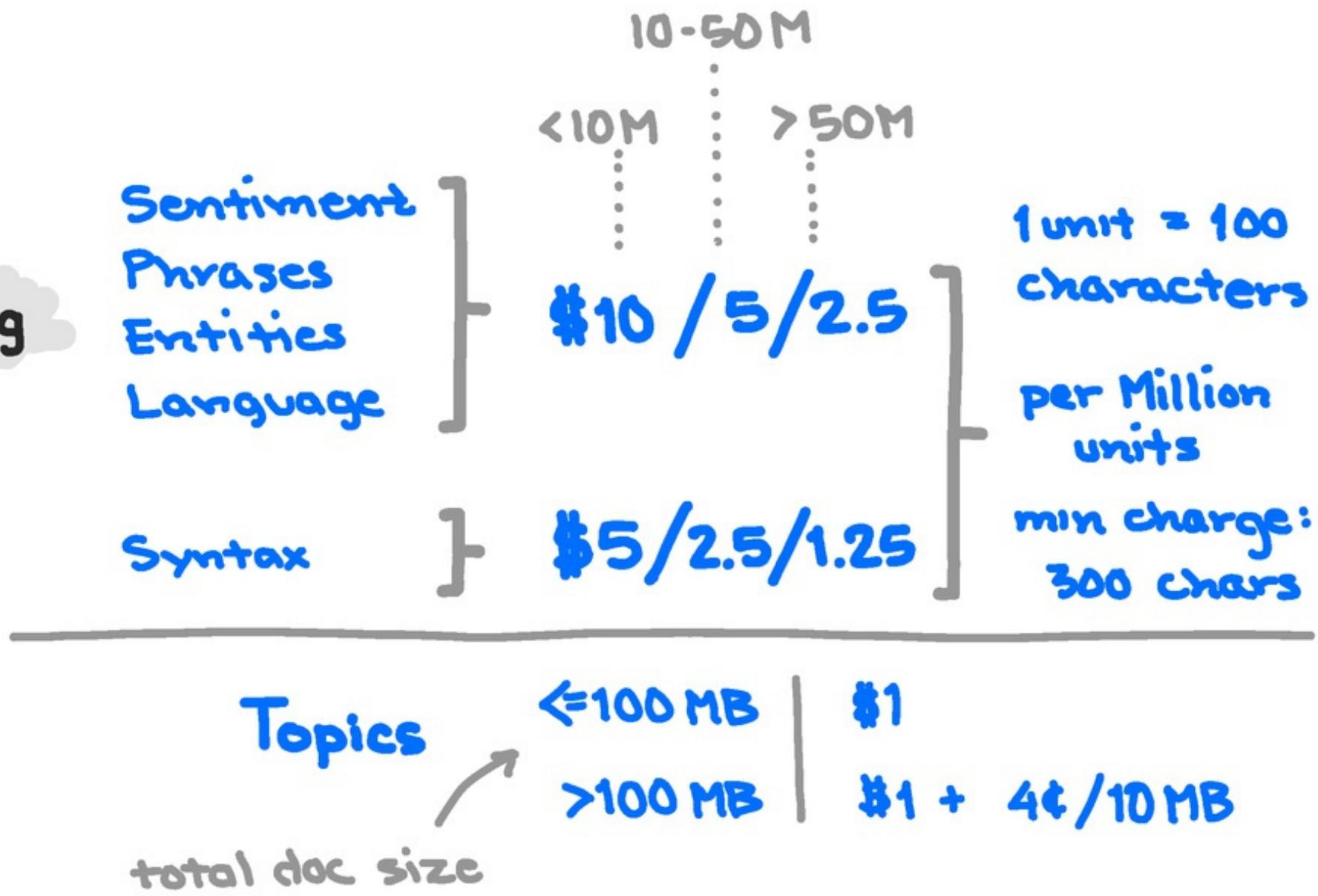
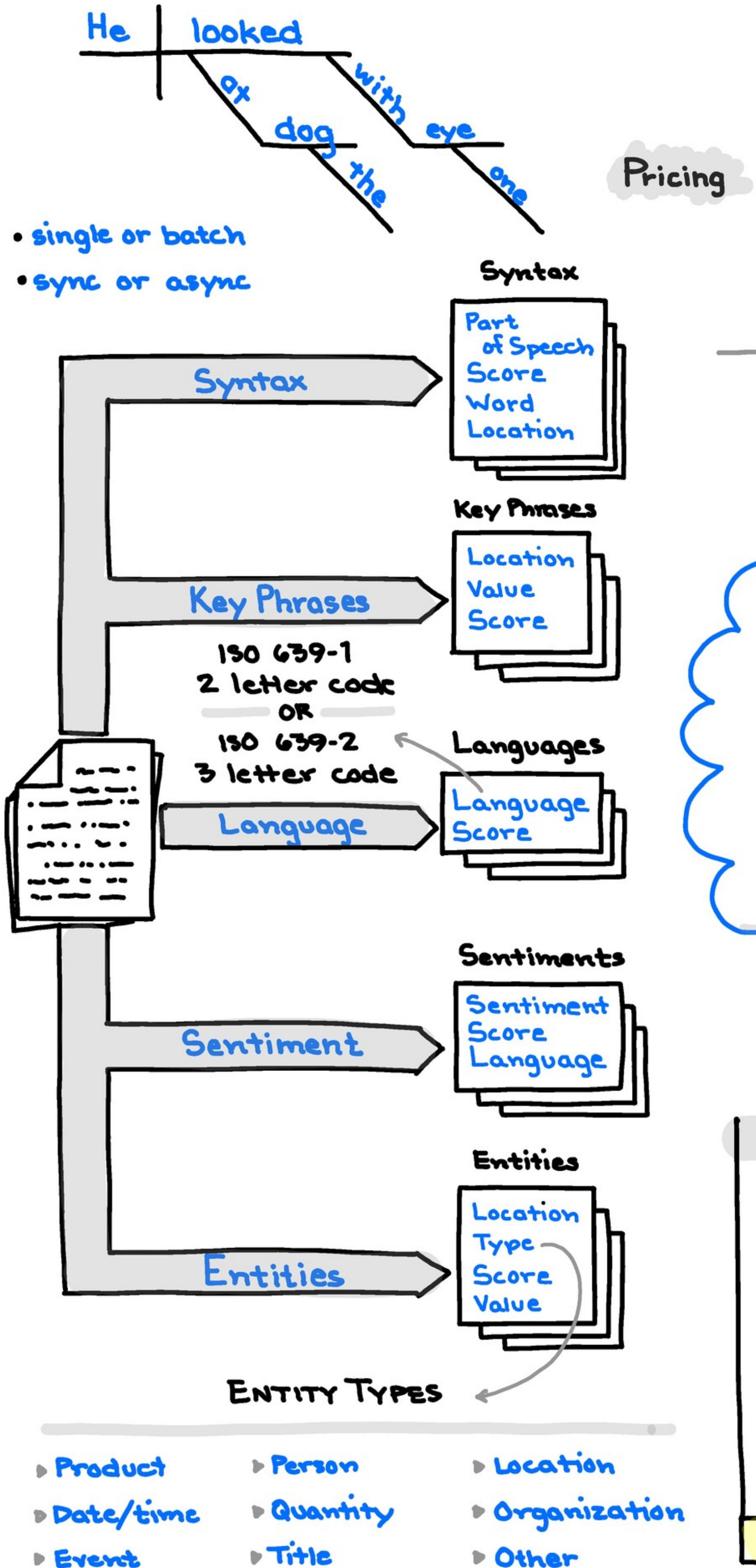
AWS WAF ENABLES DEVSECOPS AUTOMATION



PRECONFIGURED PROTECTIONS

★	BAD BOT/SCRAPER
★	SQL INJECTION
★	CROSS-SITE SCRIPTING
★	HTTP FLOOD, SCANNER, PROBE
★	IP WHITE/BLACK LIST
★	KNOWN ATTACKER
	VIA CLOUDFORMATION NEW OR EXISTING WAF



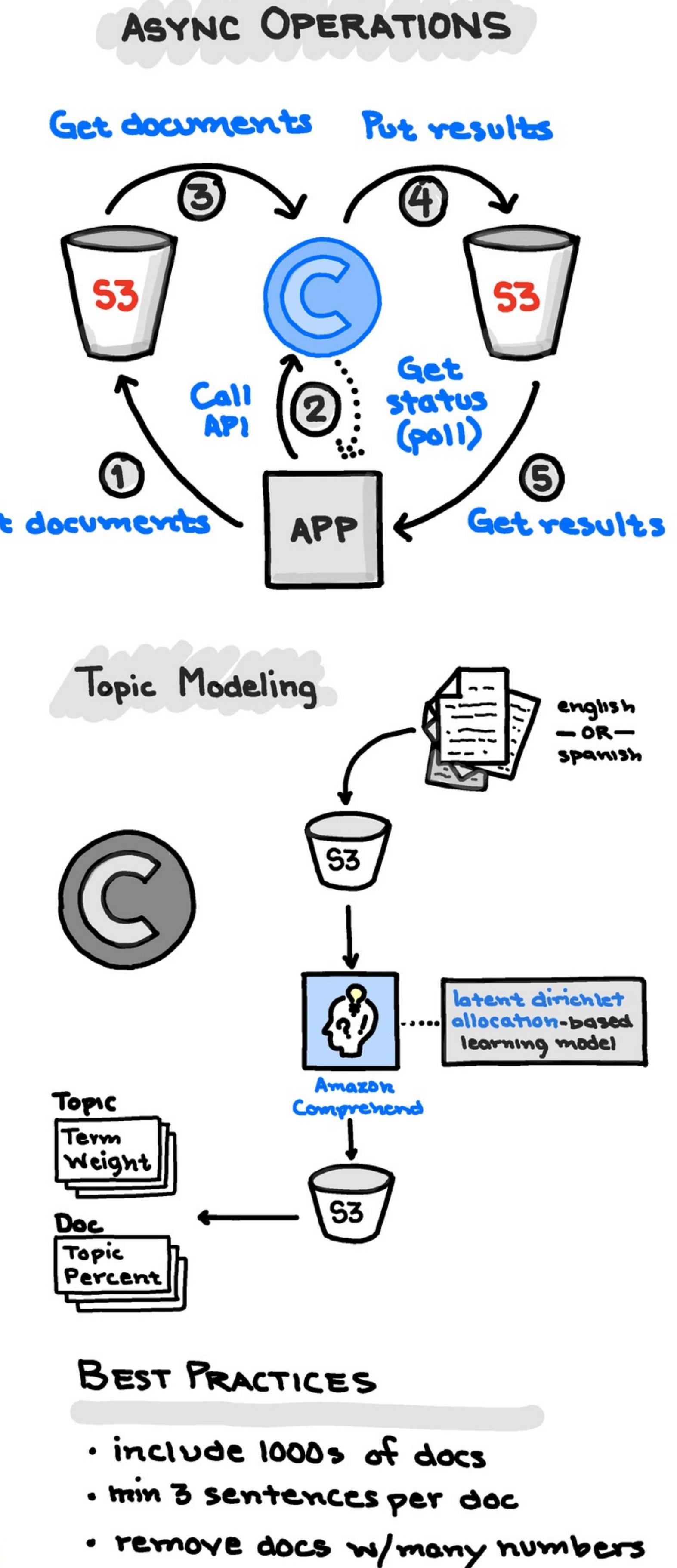


DATA PRIVACY

Your Comprehend data:

- may be used by Amazon for training
- may be accessed by Amazon employees
- may be moved to other regions

you must opt out to stop



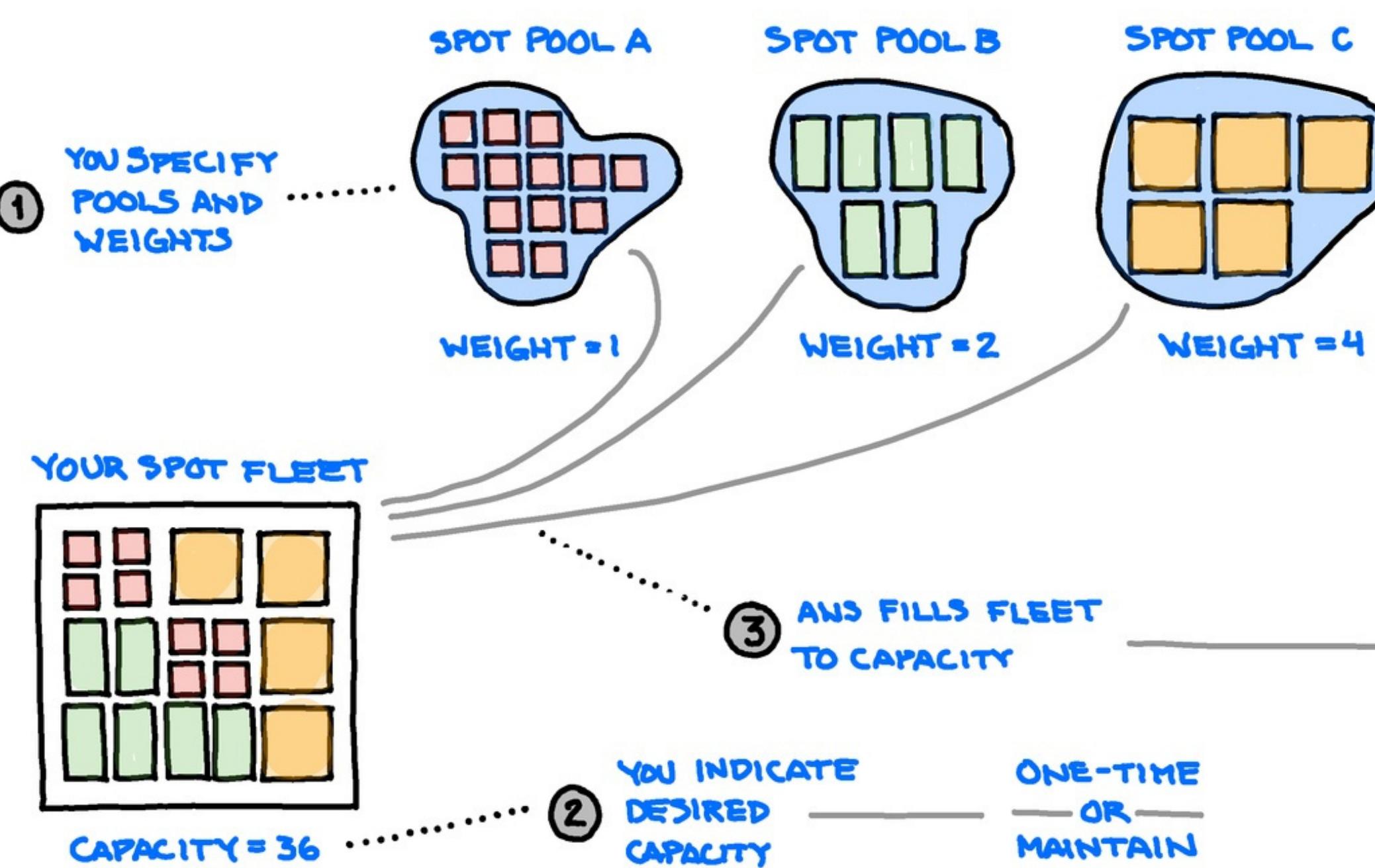
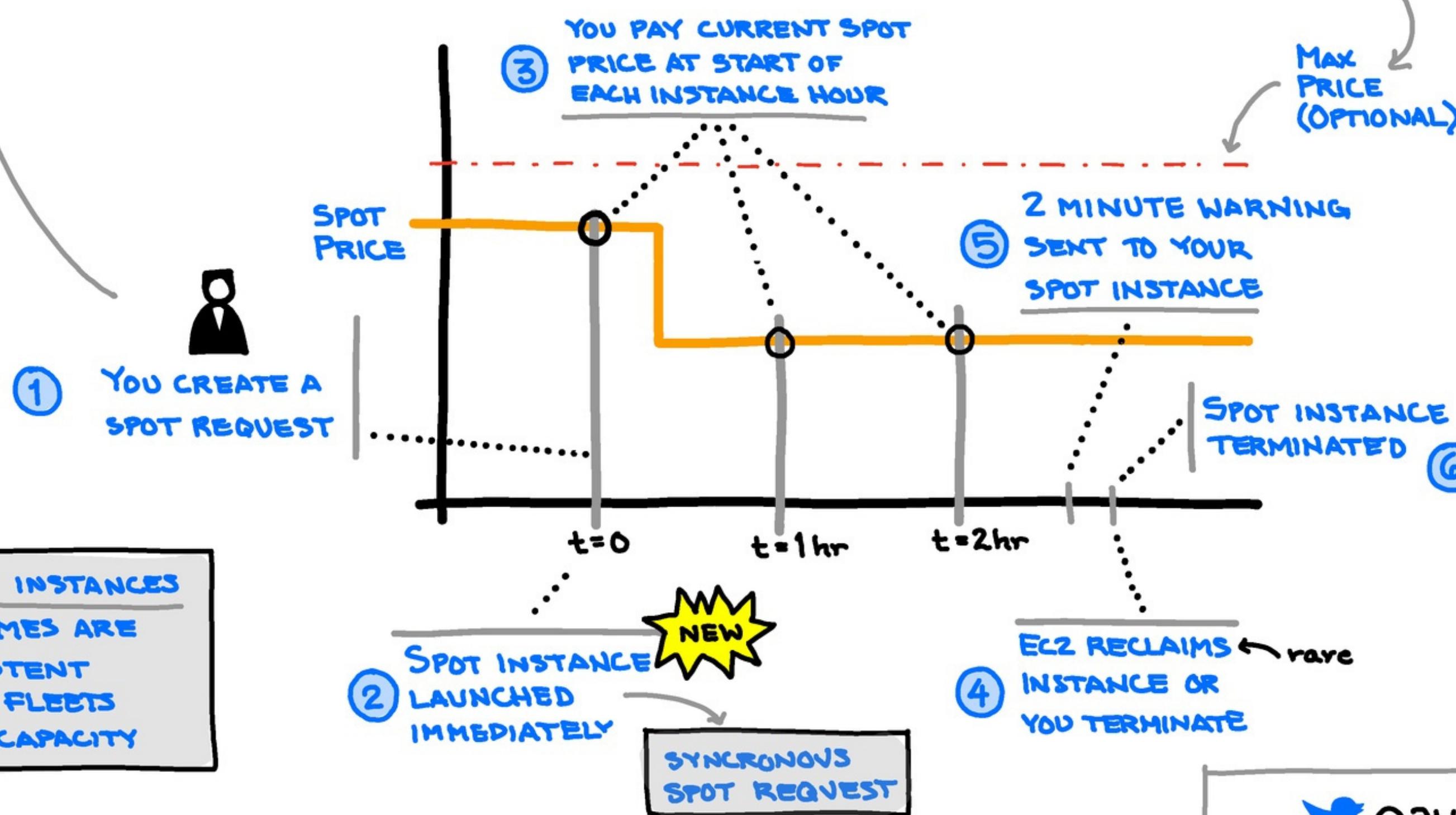
SPOT REQUEST

- INSTANCE TYPE
- INSTANCES COUNT
- MAXIMUM PRICE
- AVAILABILITY ZONE

SPOT POOL

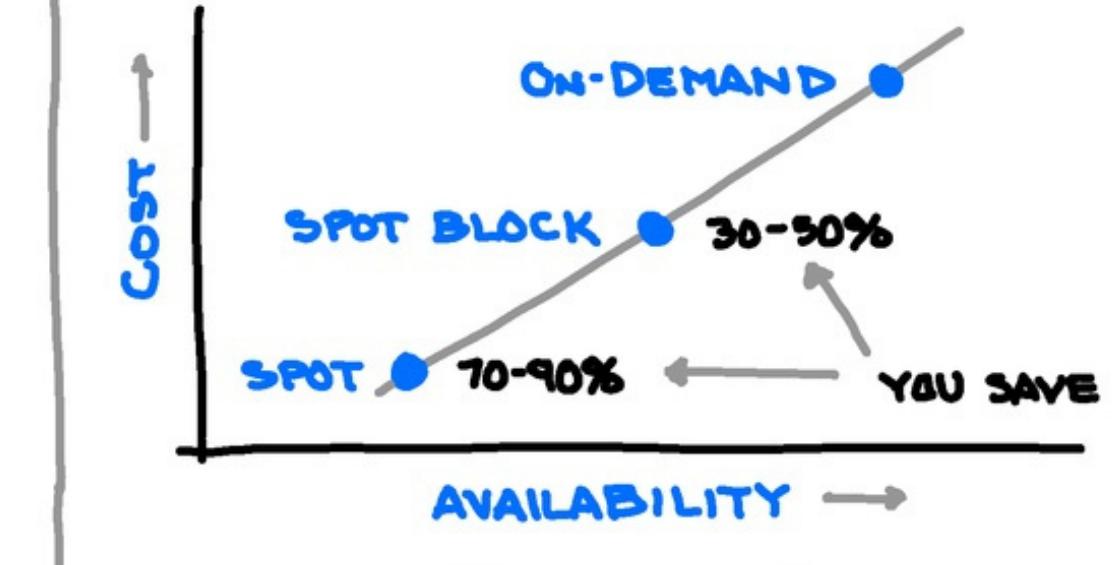
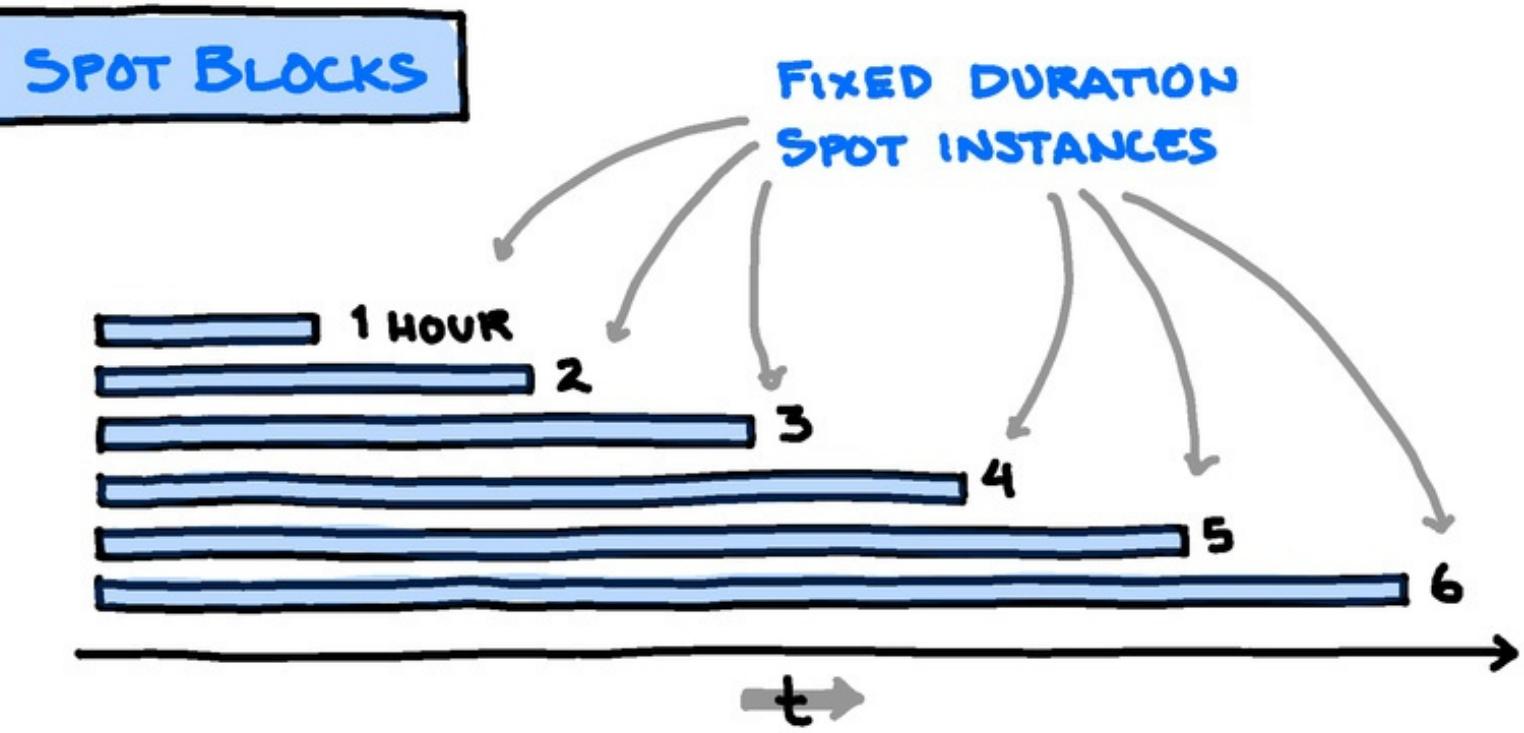
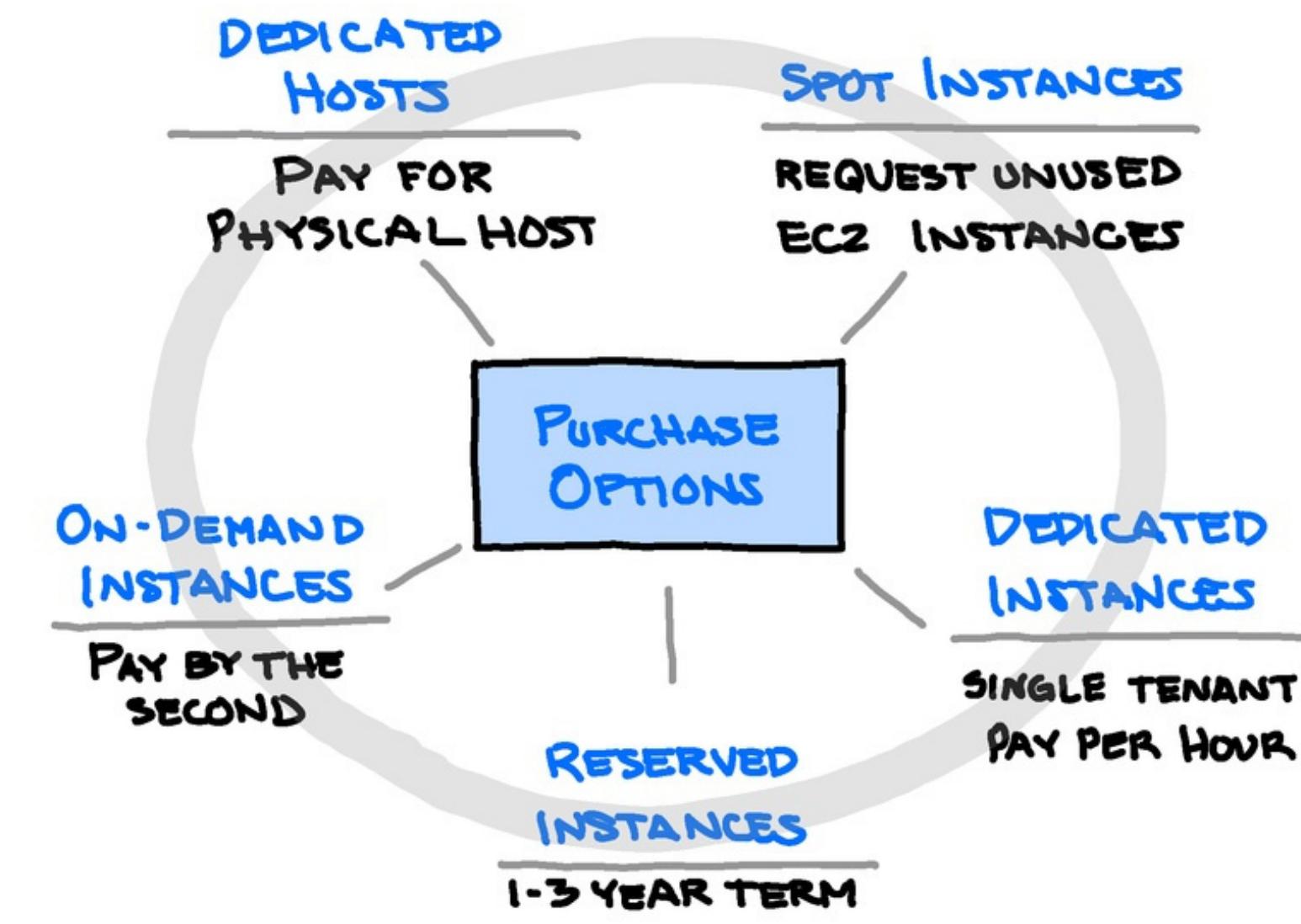
SAME INSTANCE TYPE
SAME AVAILABILITY ZONE
SAME OPERATING SYSTEM

BEHAVES LIKE
OLD 'BID PRICE'



ALLOCATION STRATEGY

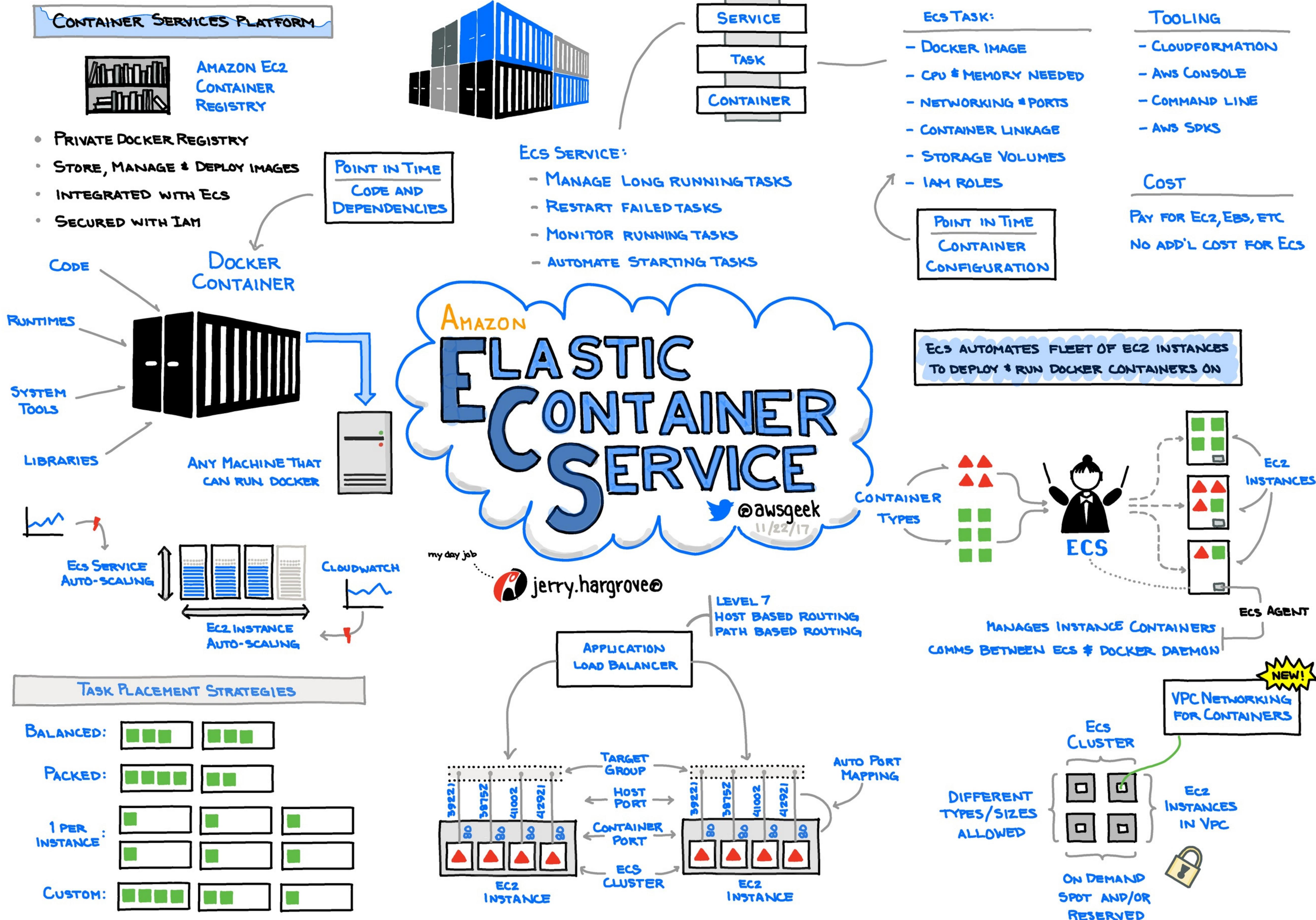
USE CHEAPEST POOL — OR — EQUALLY DISTRIBUTE

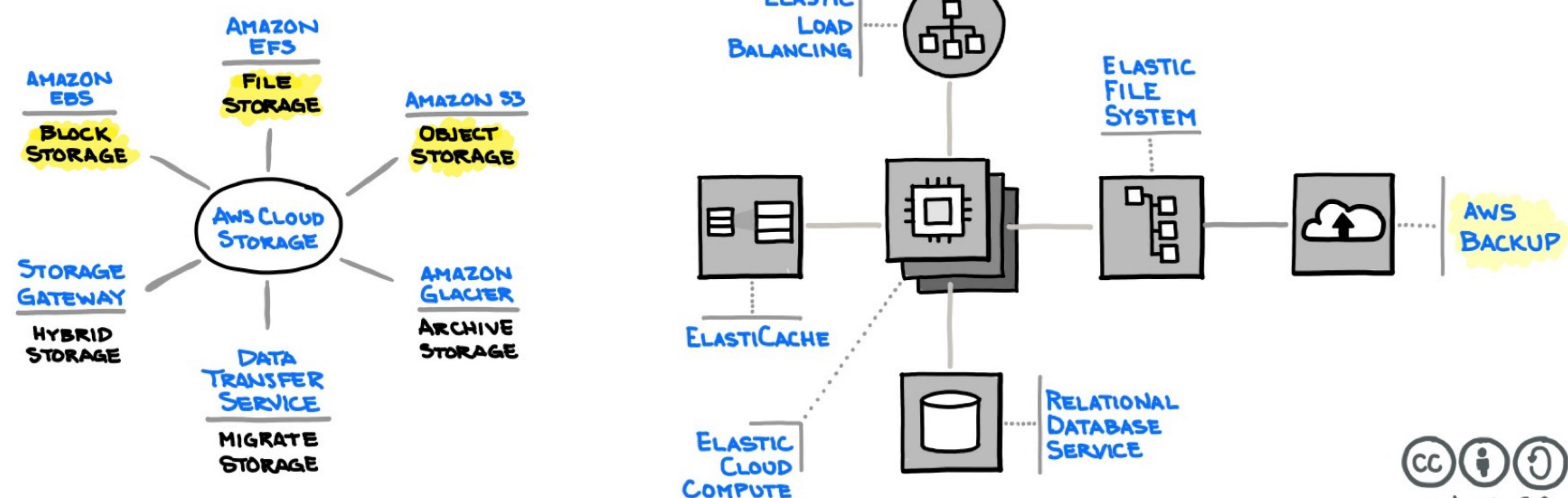
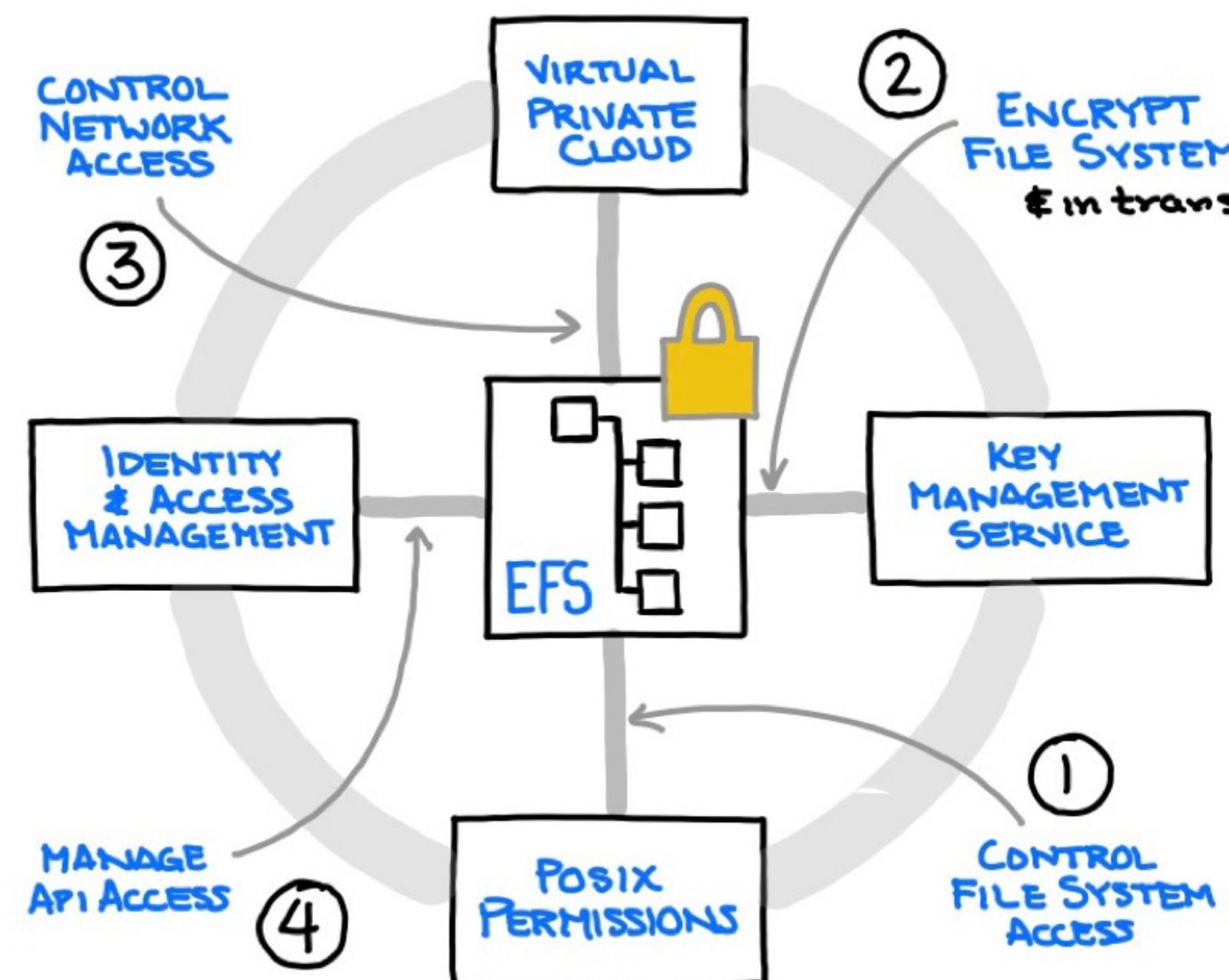
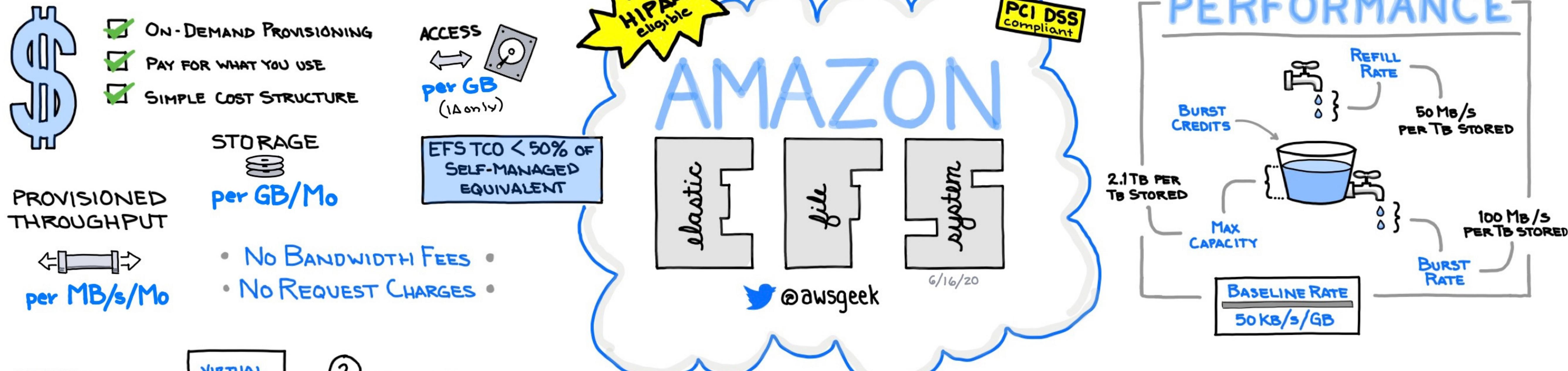
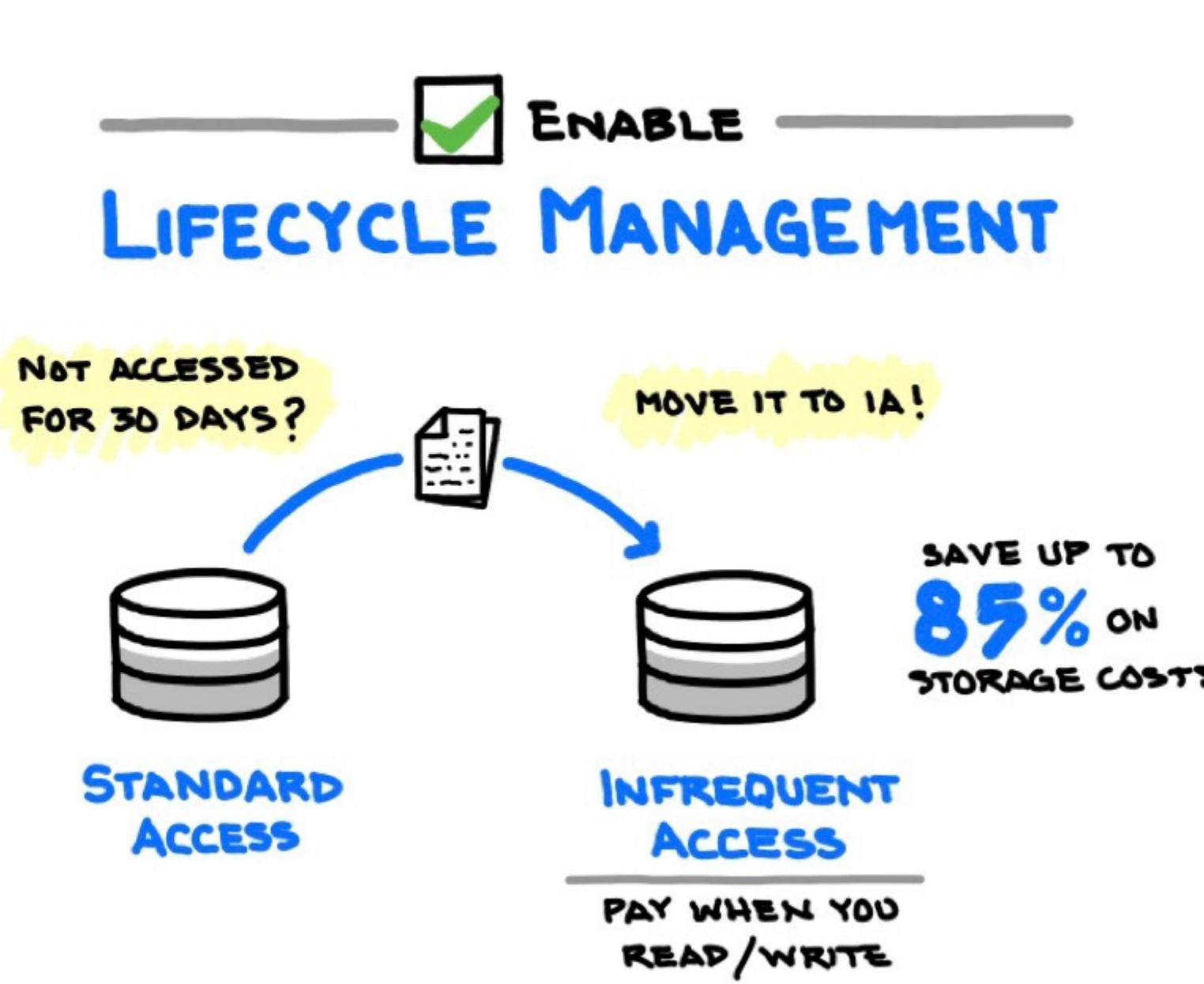
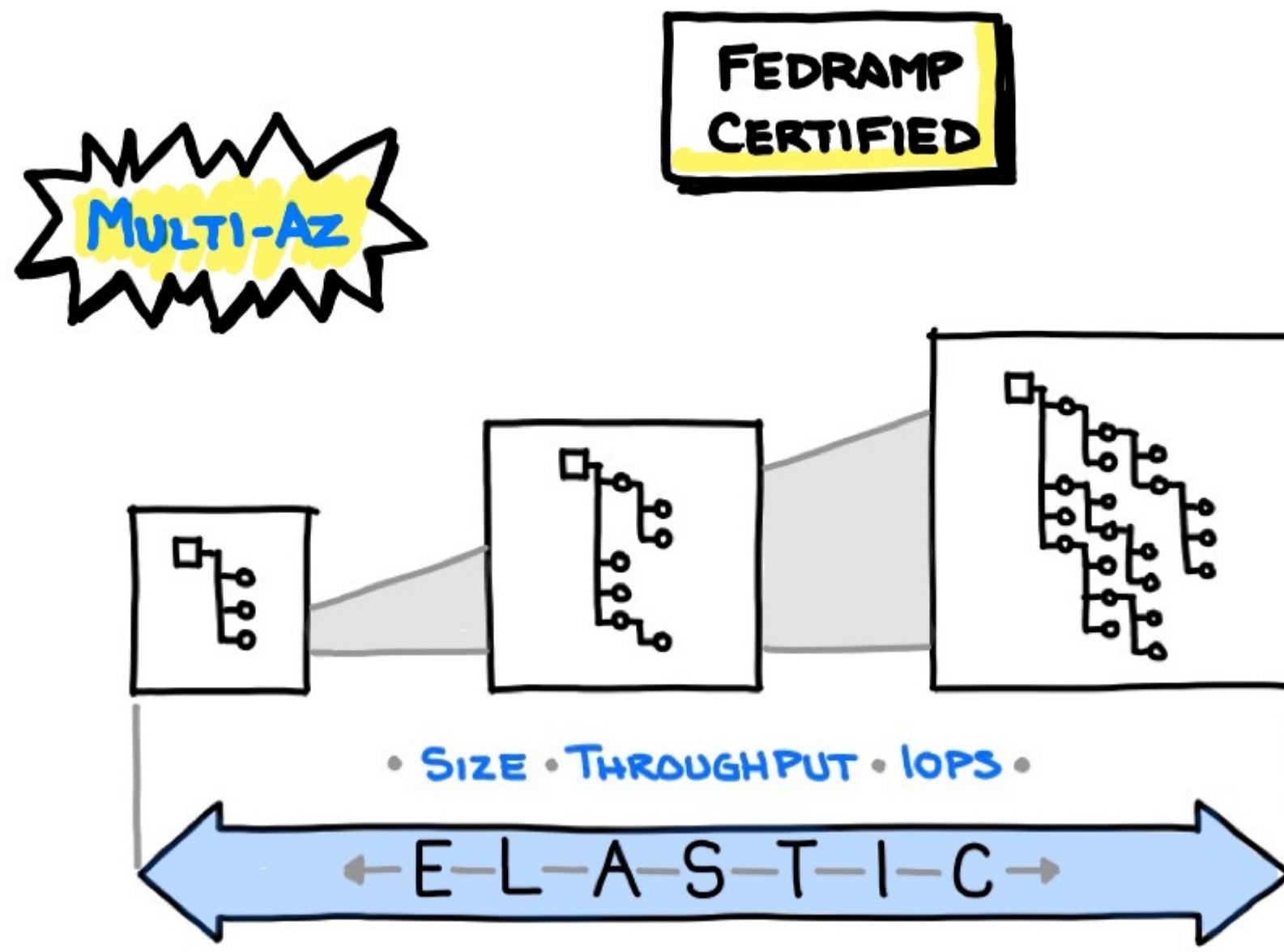
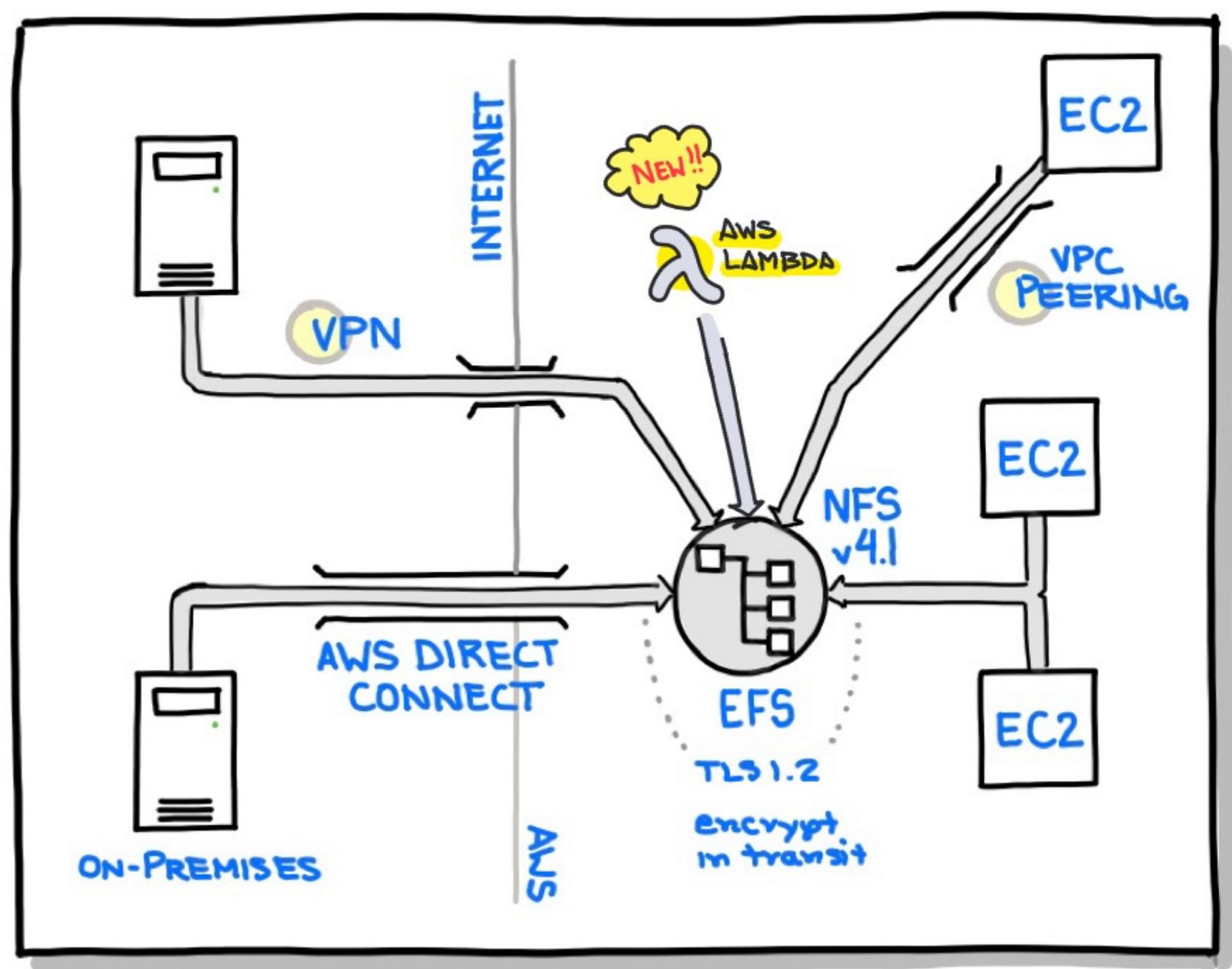


AMAZON **EC2 SPOT INSTANCES**

11/29/17

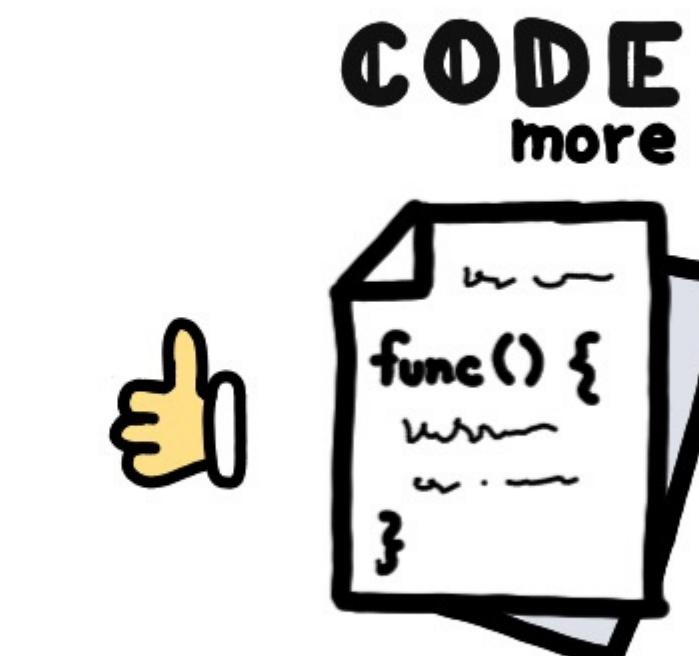
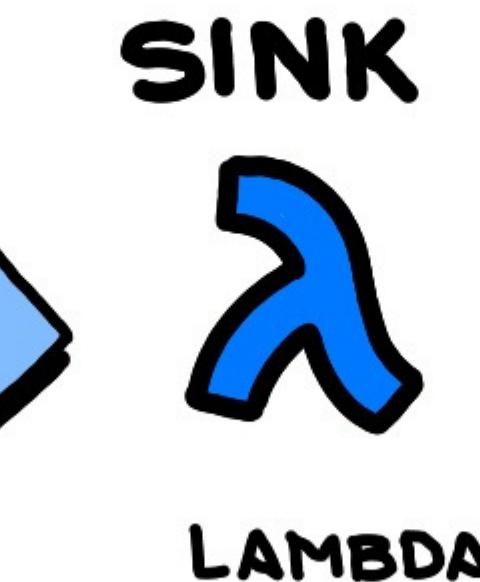
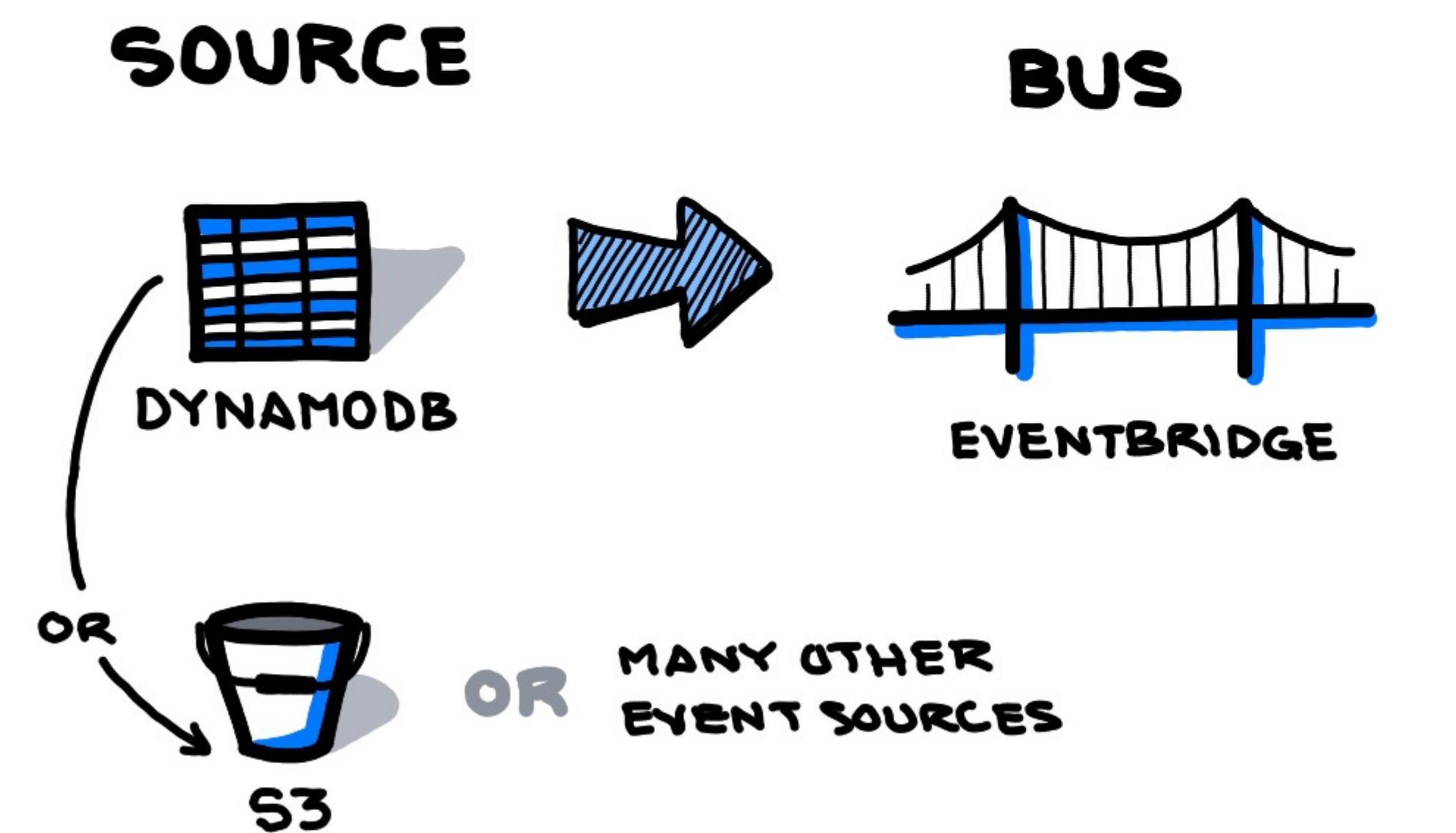






Event Driven Apps

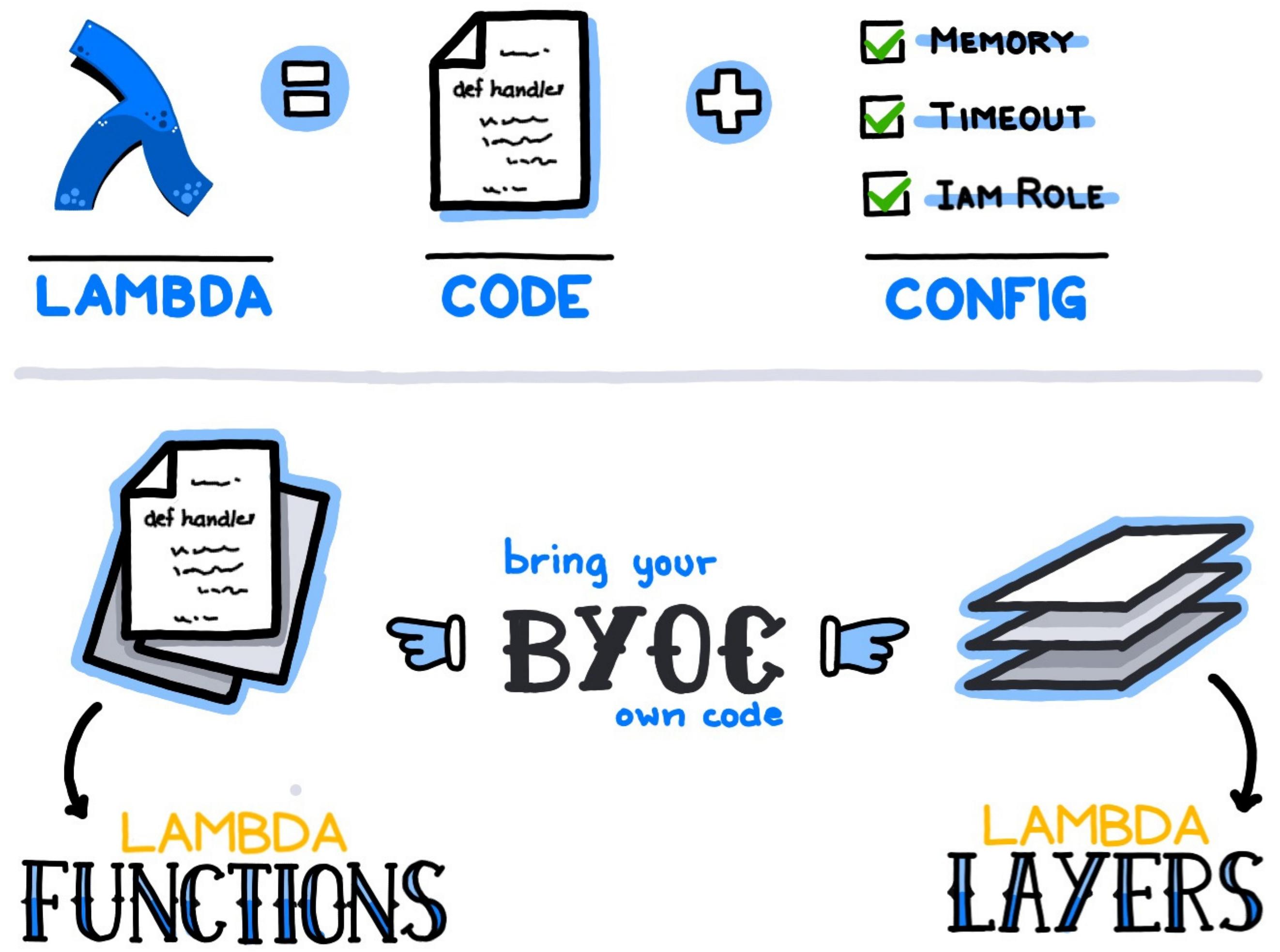
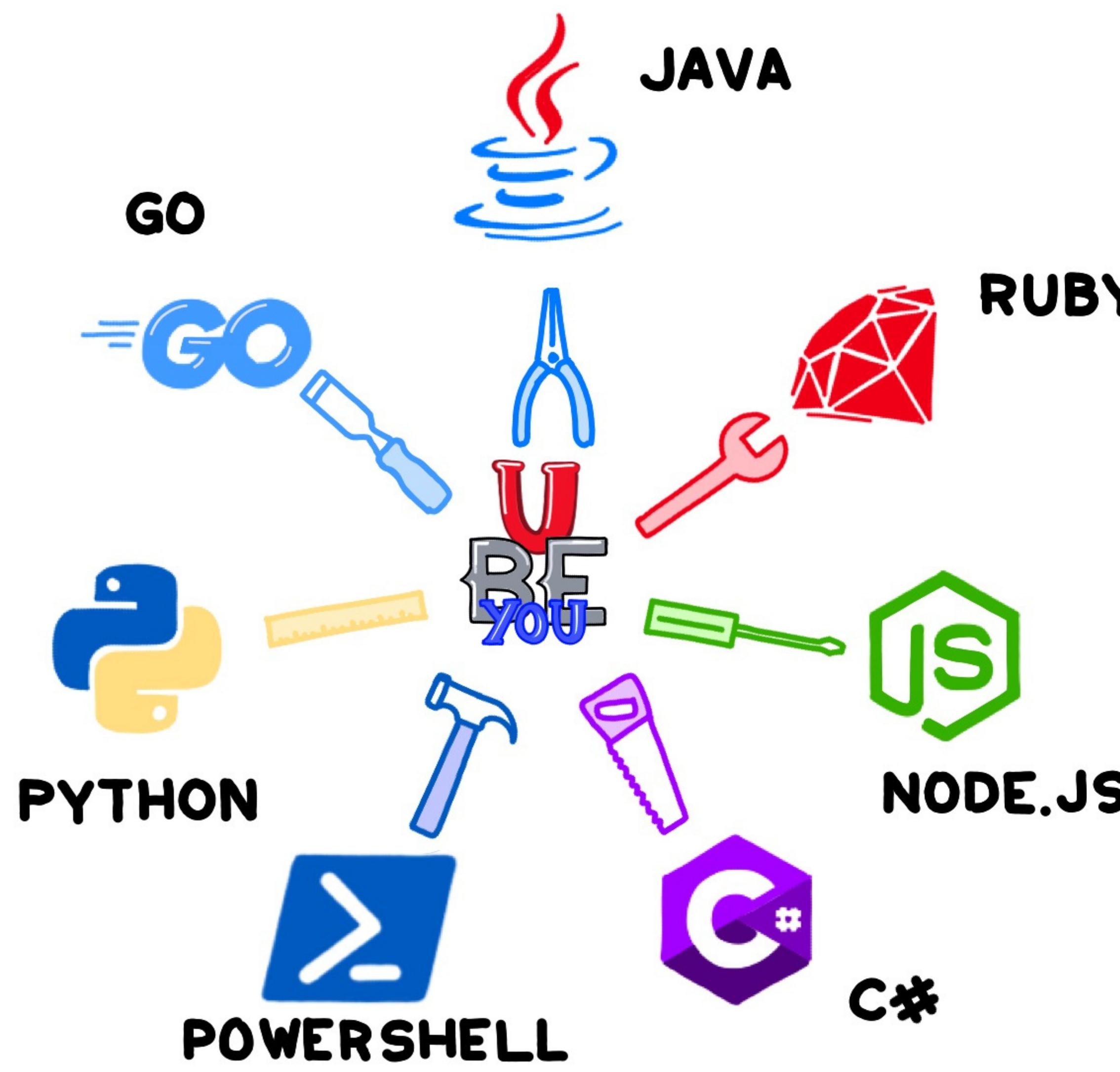
*serverlessfor everyone



AWS LAMBDA

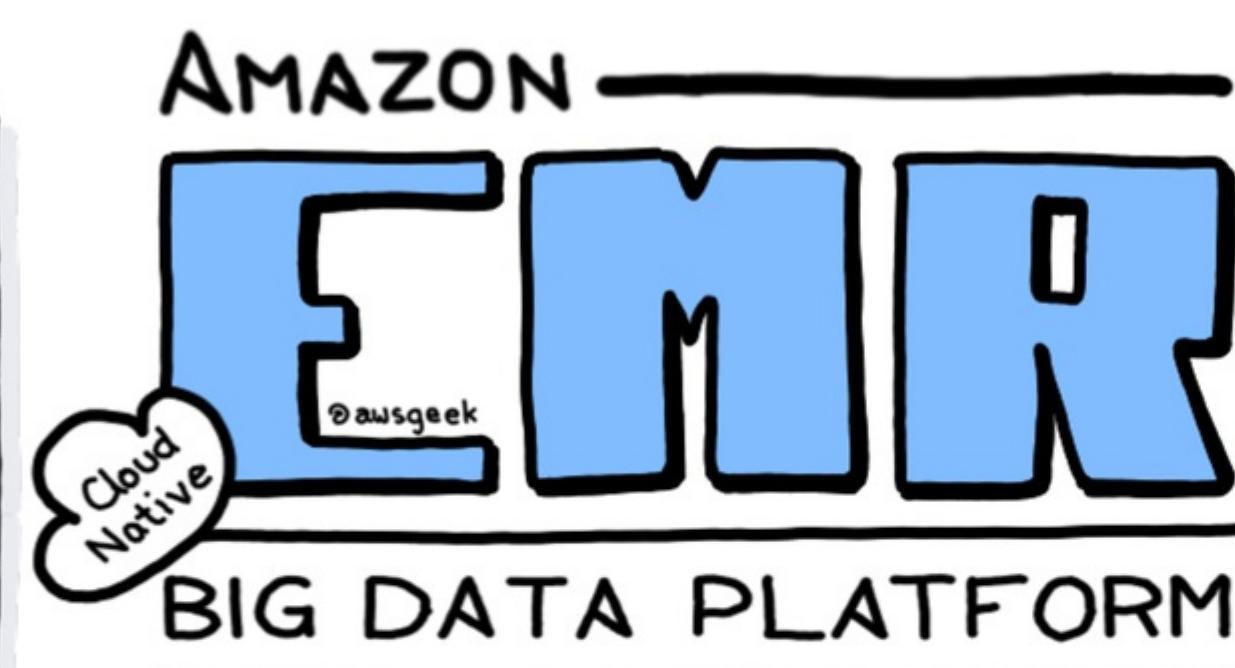
4/6/2020

@awsgeek



TIMELINE

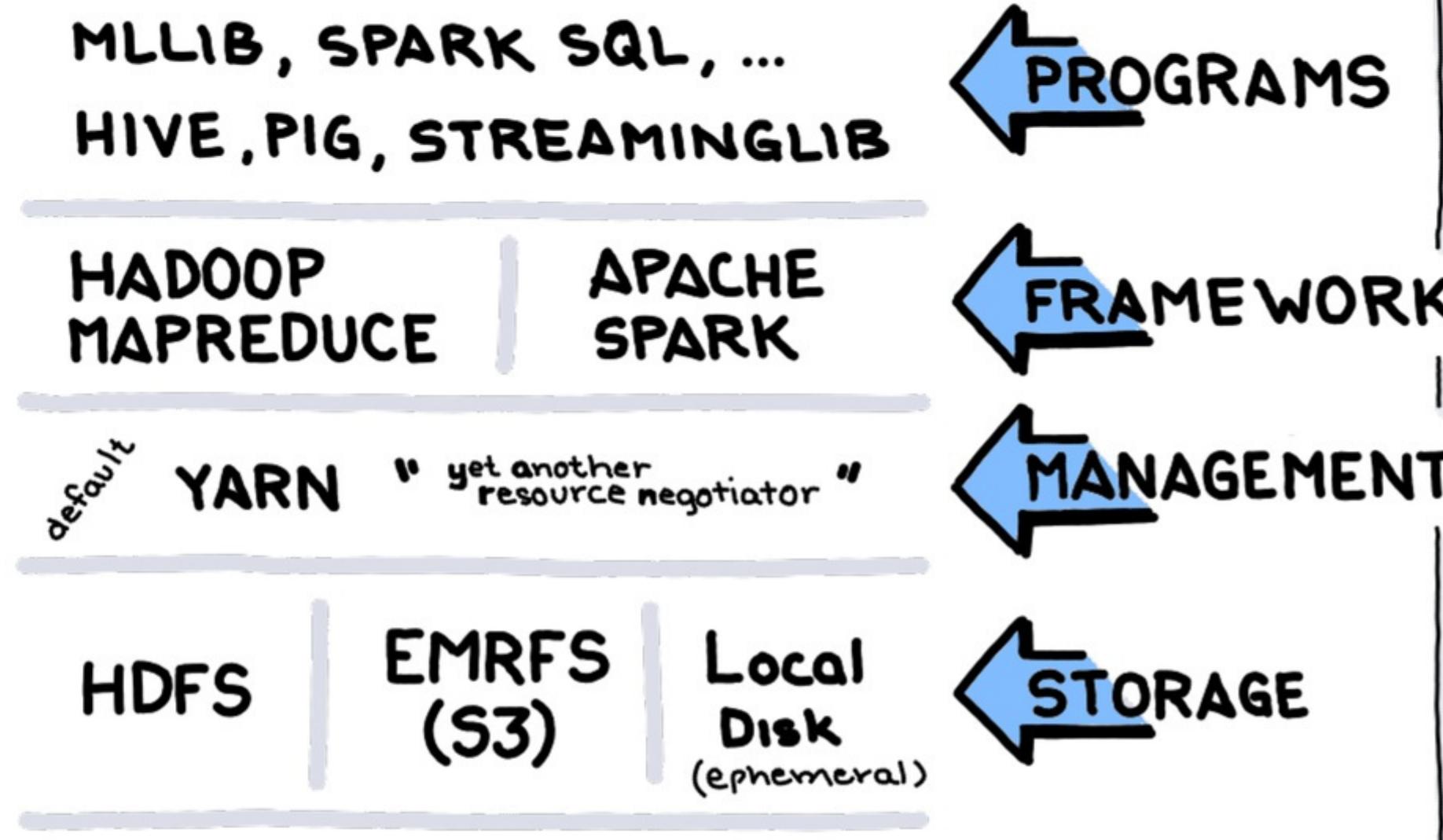
- 2009: BETA LAUNCH
PIG & HIVE
- 10: CC1/GPU INSTANCES
BOOTSTRAP ACTIONS
- 11: SPOT INSTANCES
- CC2 INSTANCES
- 12: HBASE
- DATA PIPELINE
- 13: S3 SSE
- IMPALA
- 14: IAM ROLES
- HUNK
- 15: APACHE SPARK
- PRIVATE SUBNETS
- CLOUDFORMATION
- FLINK
- 17: AUTO-SCALING
- MXNET
- NOTEBOOKS
- TENSORFLOW
- 2019: 99.9% SLA



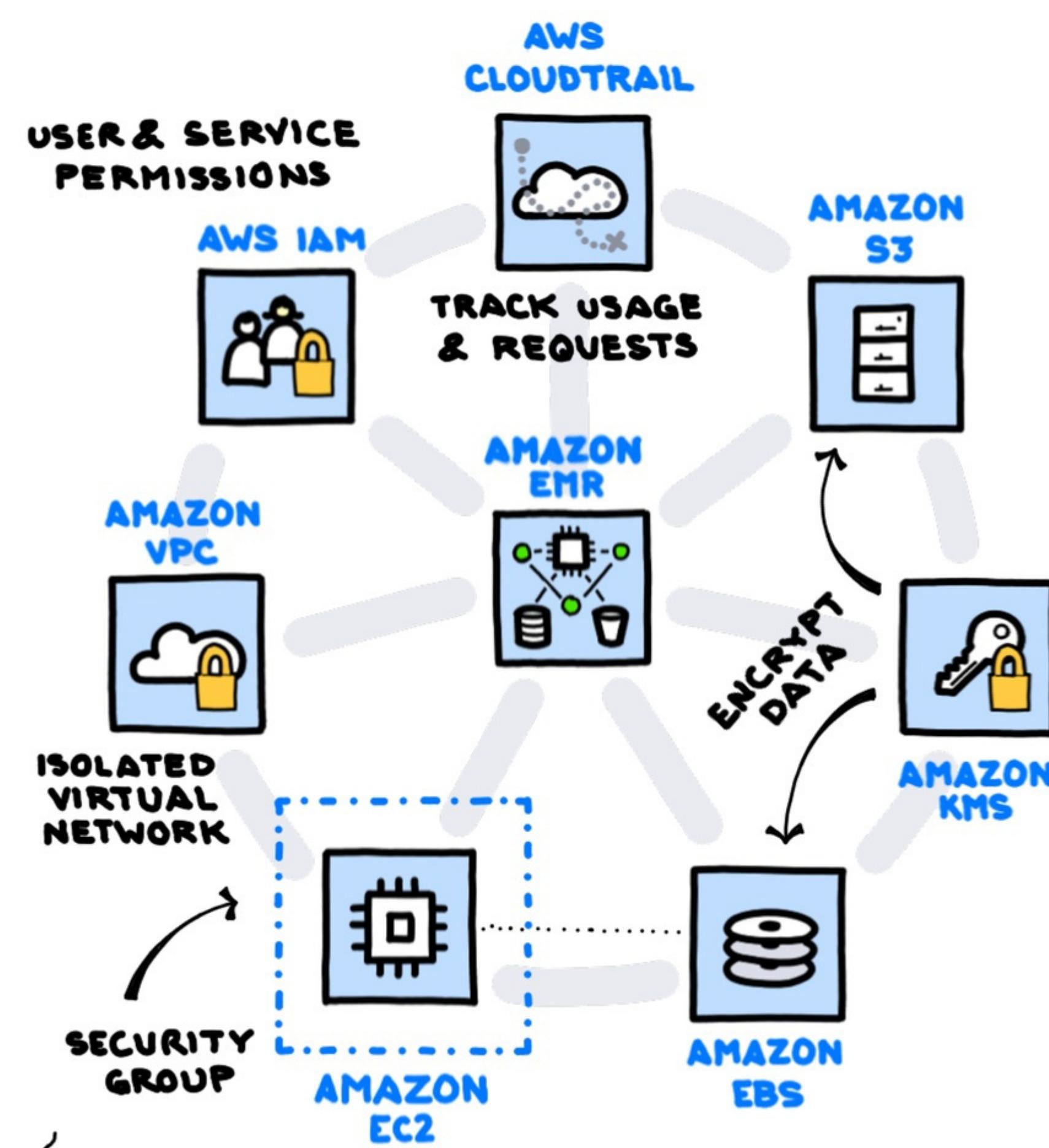
- MACHINE LEARNING
- REALTIME STREAMING
- CLICKSTREAM ANALYSIS
- GENOMICS
- ETL

- HOSTED HADOOP PLATFORM
ELASTIC CLUSTERS
- CONSOLE, CLI & SDK ACCESS
- STORAGE OPTIONS
- S3, EBS, RDS
 - DYNAMODB
 - REDSHIFT
 - GLACIER

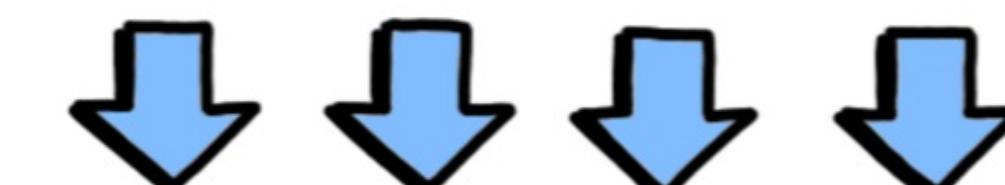
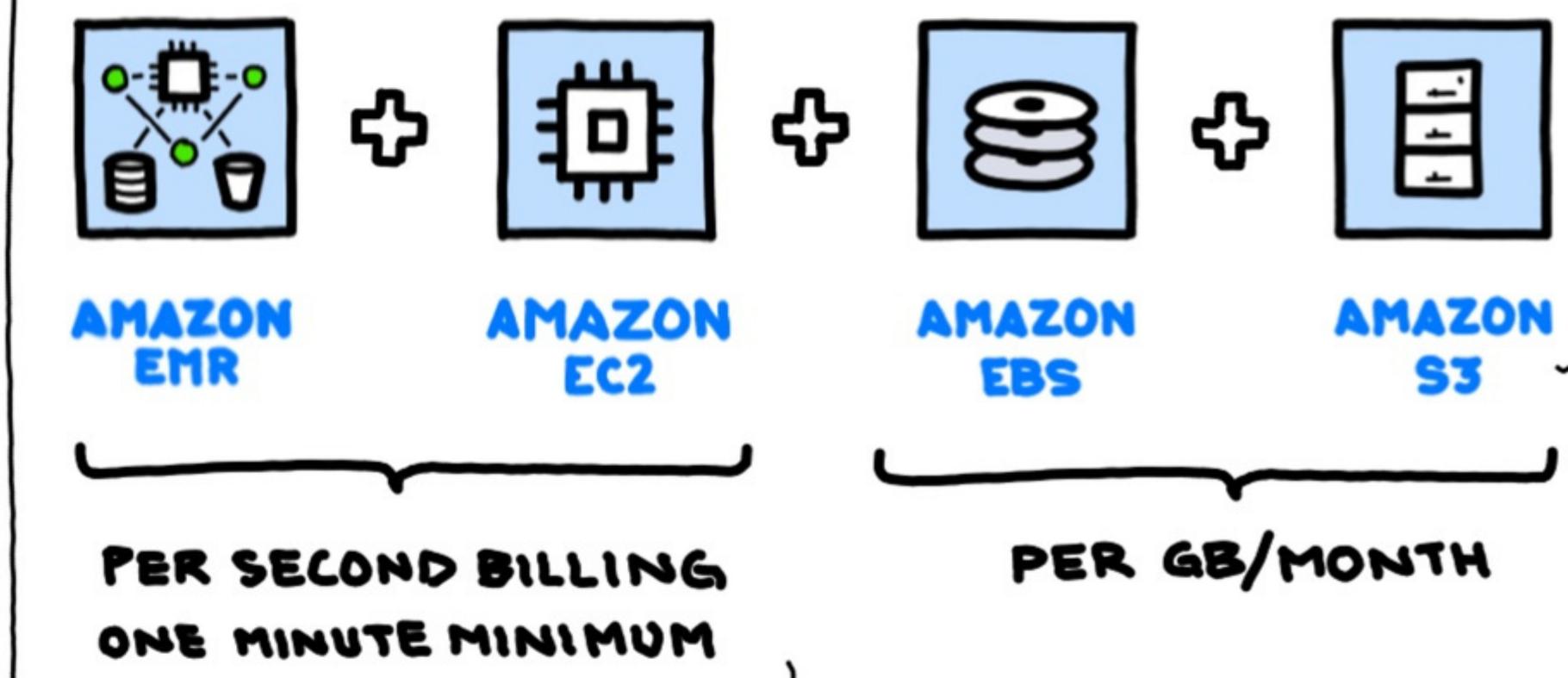
LAYERS



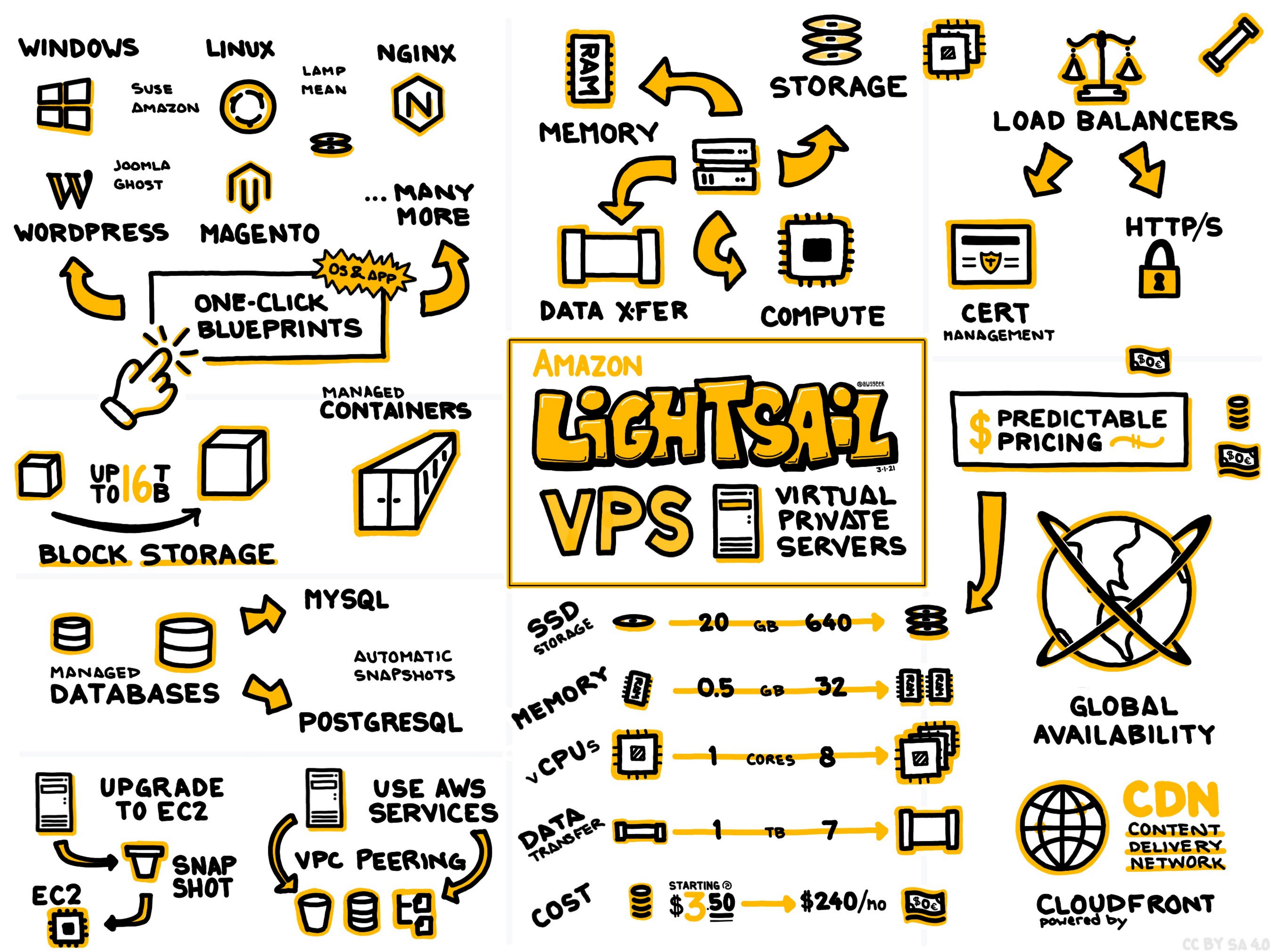
SECURITY

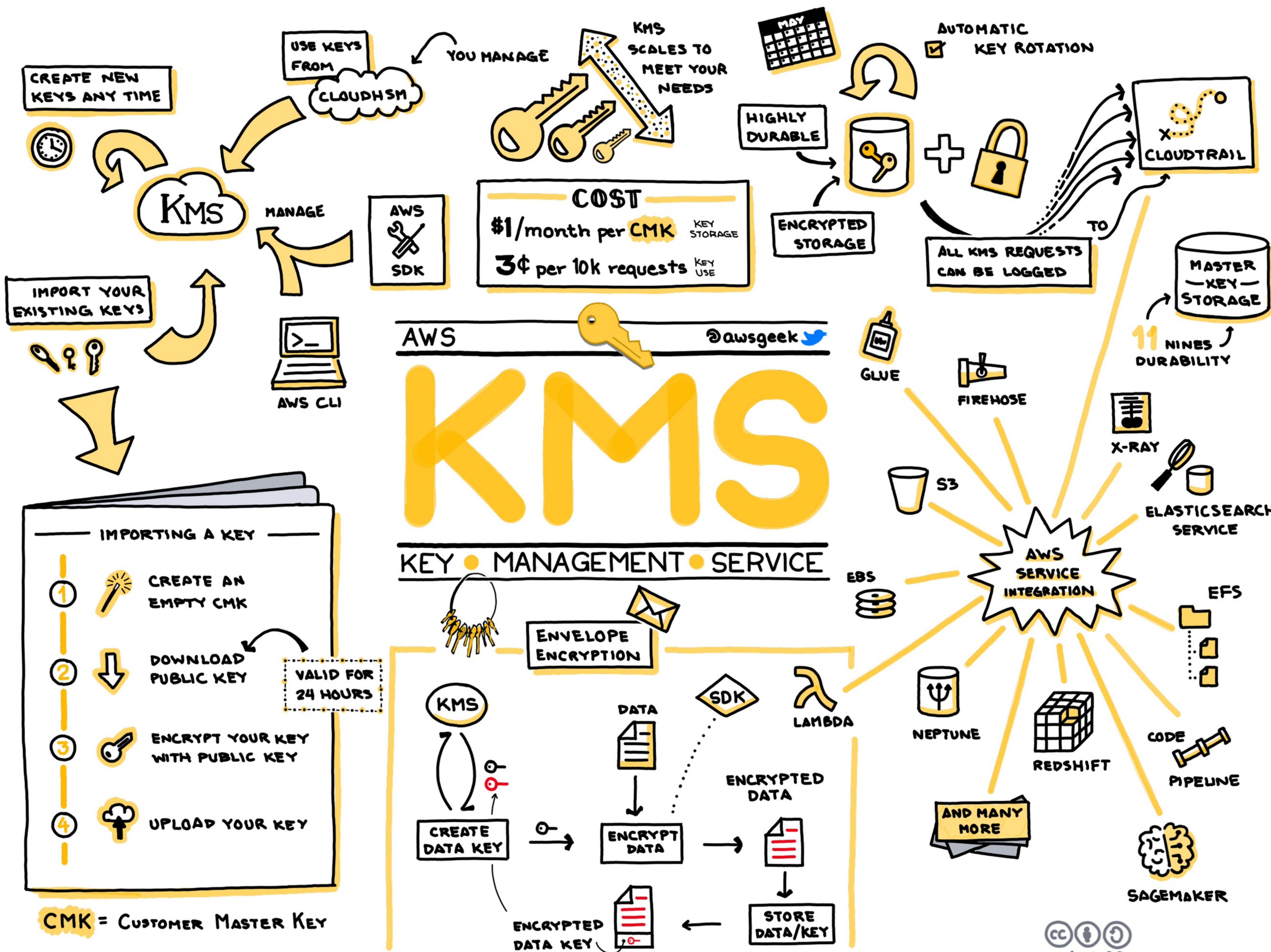


PAY-AS-YOU-GO PRICING ...



use EC2 SPOT for HADOOP TASK NODES up to 90% SAVINGS





Compliance

PCI



ISO



HIPAA

Soc
1,2,3

AWS · ELASTIC

@awsgeek

5/30/20

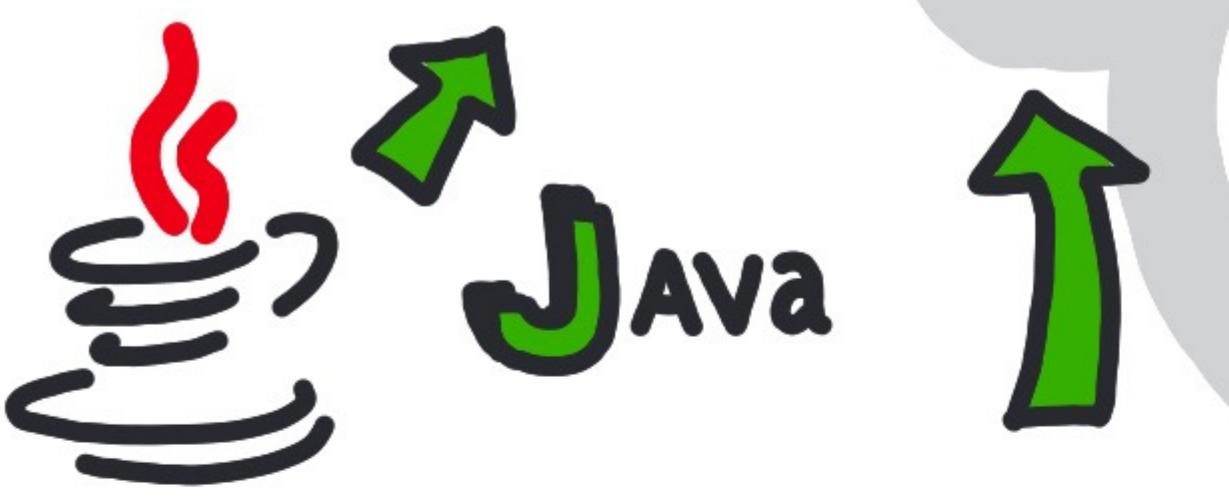
BEANSTALK

C#

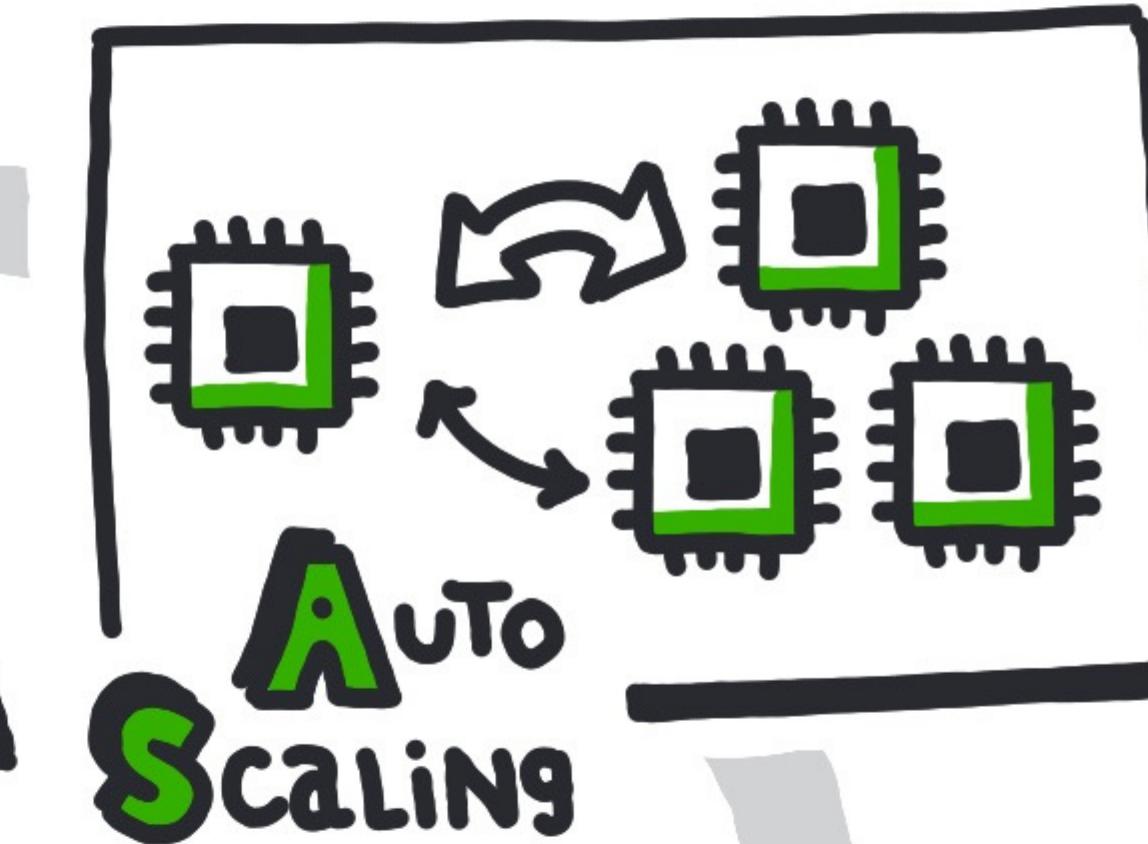
JS

ELASTIC
BEANSTALK

dotNET



DOCKER CONTAINERS



△ ELBs
△ MULTI-AZ



CONSOLE
SDK
CLI



MONITORING



CLOUDWATCH
ALERTS
NOTIFICATIONS

DOMAIN



REPOSITORIES
PACKAGE STORAGE

REPOSITORY



PACKAGE VERSIONS
ENDPOINTS

PACKAGE

1. Name
2. Namespace
3. Versions
4. Metadata

ASSET



FILE

aws

CodeArtifact

• SOFTWARE • ARTIFACT • REPOSITORY •

SECURE, SCALABLE, & COST EFFECTIVE ARTIFACT MANAGEMENT FOR SOFTWARE DEVELOPMENT

Maven

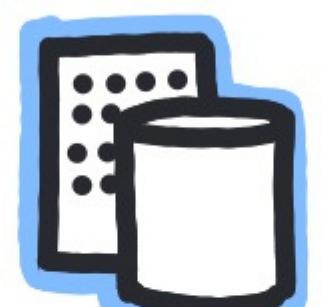
Central

NuGet.org

npm



PyPI



AWS
Code
Artifact

- AWS Managed -
Centralized
Repository

Maven

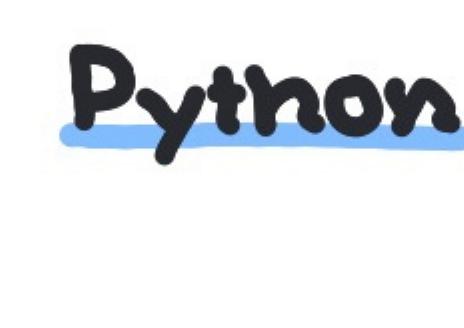
Gradle

NuGet

npm

twine

Pip



Public Repos



AWS KMS
ENCRYPTION



AWS IAM
RESOURCE PROTECTION

Development
Teams

CI/CD
Systems

PAY-PER-USE



\$

BYTES STORED

DATA TRANSFER

out of Region



\$

API CALLS

005

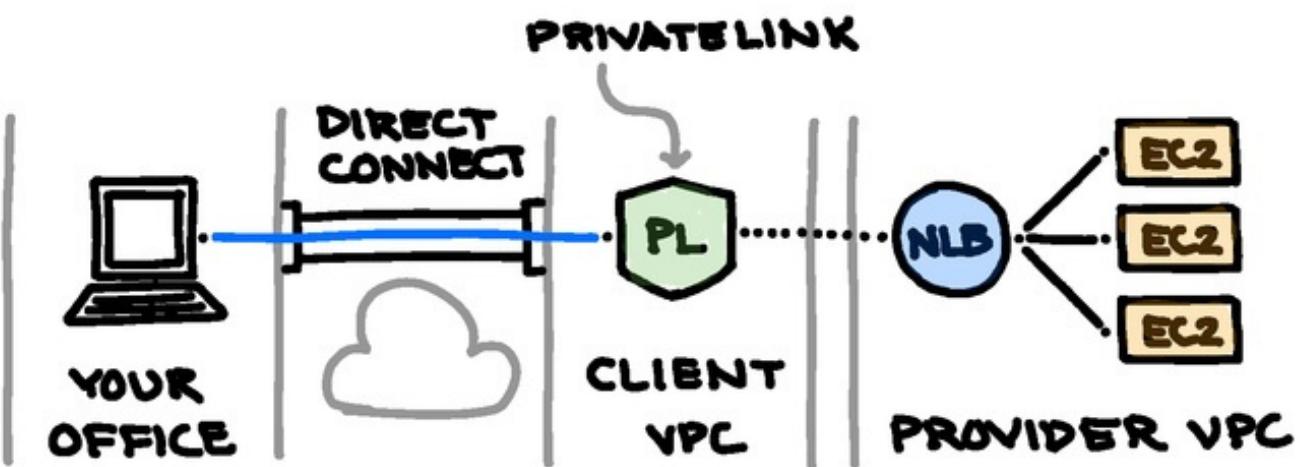


aws
CODE
ARTIFACT

PRIVATE
LINK

YOUR
VPC
CI/CD
APPS
YOUR
TOOLS

PRIVATELINK ADDRESSES ARE PRIVATE
NO PUBLIC IP ADDRESSES!!



EXPOSED AS ENI IN CLIENT VPC
CAN APPLY SECURITY GROUPS TO ENI

NO CROSS-REGION SUPPORT

BOTH REGIONAL & ZONAL DNS NAMES

USE FOR BETTER AVAILABILITY, LATENCY
(REMEMBER, ZONES DIFFER BY ACCOUNT)

MY 'A' MAY NOT BE YOUR 'A'

FOR CUSTOMERS & PARTNERS

EXPOSE YOUR SERVICE IN OTHER VPCS
LIFECYCLE EVENTS VIA SNS

NOW CALLED
"GATEWAY ENDPOINTS"

FOR AWS SERVICES

BUILDS ON ENPOINTS: S3, DYNAMO DB

CLOUDWATCH, SNS, SAGEMAKER

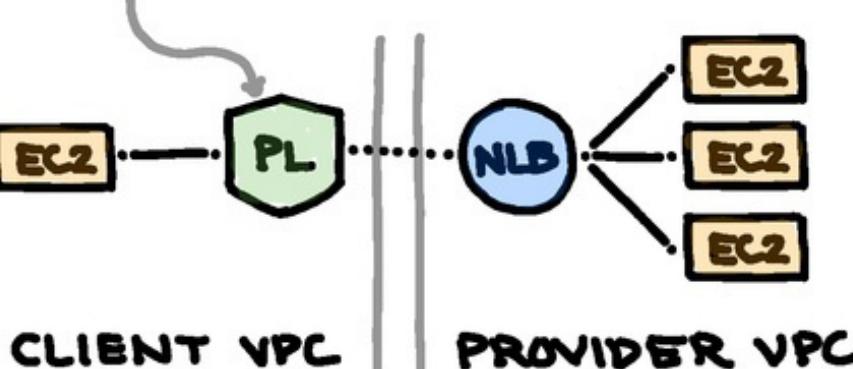
KINESIS, CODEBUILD, CONFIG

EC2, API GATEWAY, AWS SERVICE CATALOG

ELB, CLOUDFORMATION

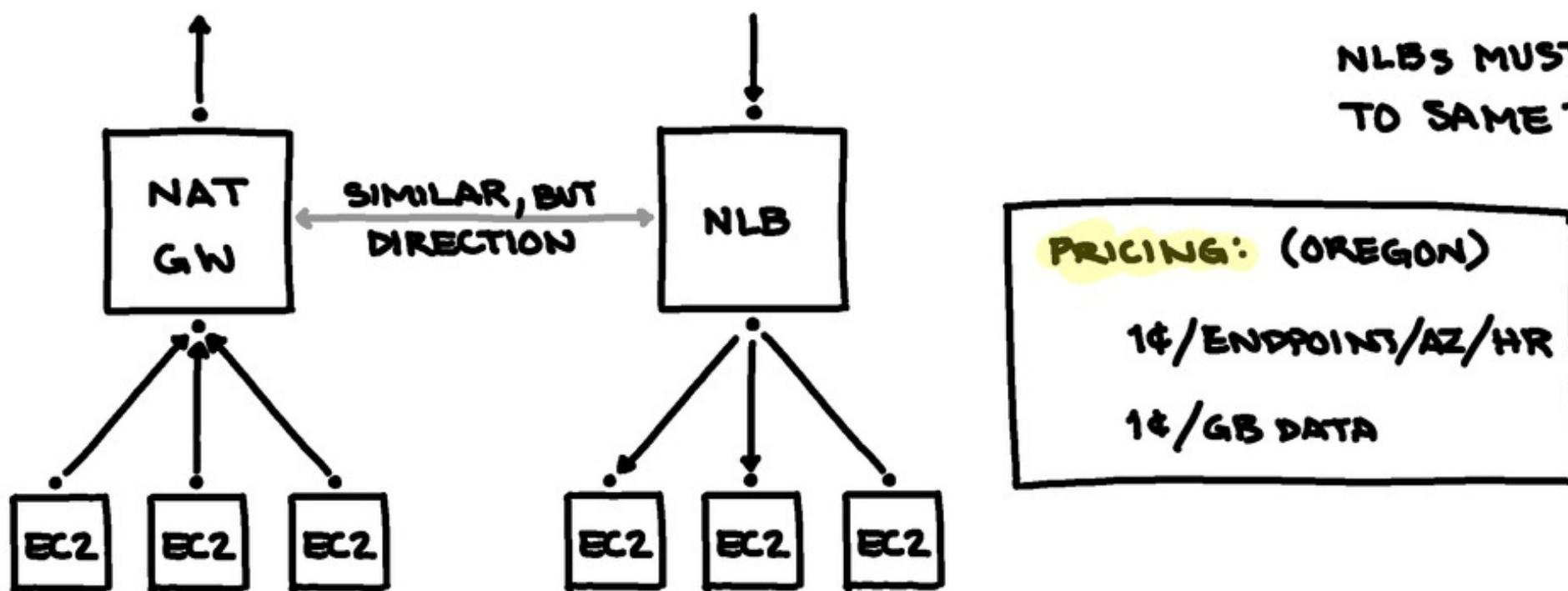
EC2 SYSTEMS MANAGER

PRIVATELINK



HYPERPLANE NODES

- BASED ON S3 LOAD BALANCER ARCHITECTURE
- HYPERPLANE NODES ARE REALLY EC2 INSTANCES
- USED BY AWS TO MANAGE STATE & ROUTE PACKETS



NAT GW MUST ENSURE ALL CONNECTIONS TO DEST IP/PORT COME FROM UNIQUE SOURCE PORT

NLB'S MUST SELECT & ROUTE CONNECTIONS TO SAME TARGET

DEALING WITH NOISY NEIGHBORS? SHUFFLE SHARDING

- GIVE EACH CUSTOMER N RANDOM NODES AMONG MANY
- ONLY A SMALL PERCENTAGE WILL OVERLAP
- ISOLATE REALLY NOISY NEIGHBORS

requires fault tolerant client

HOW TO DIFFERENTIATE TRAFFIC?

- 1 USE ACCOUNTS/PASSWORDS/TOKENS
- 2 USE DIFF LISTENER PORTS ON TARGETS
- 3 USE PROXY PROTOCOL V2 PREAMBLE

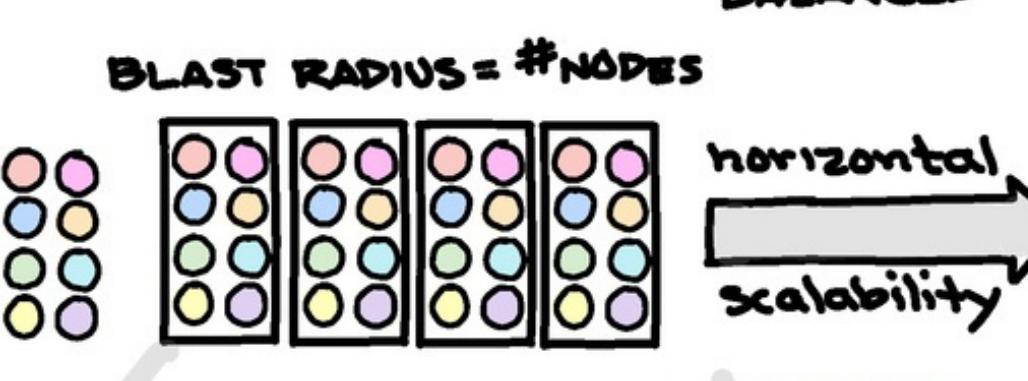
PREFERRED, BUT REQ'S CODE PATCH

UNDER THE HOOD: AWS HYPERPLANE

NOT A PROXY!
DOESN'T TERM CONNECTIONS
S3 LOAD BALANCER EVOLVED
USED BY EFS, NAT GW, & NLB
RUNS ON EC2 IN EC2
DISTRIBUTED & TRANSACTIONAL



GOOD



horizontal
scalability

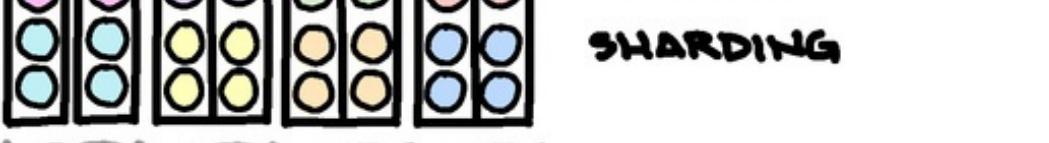
IMPACT EVERYONE

CUSTOMER



each shard has #N nodes
for redundancy

simple sharding



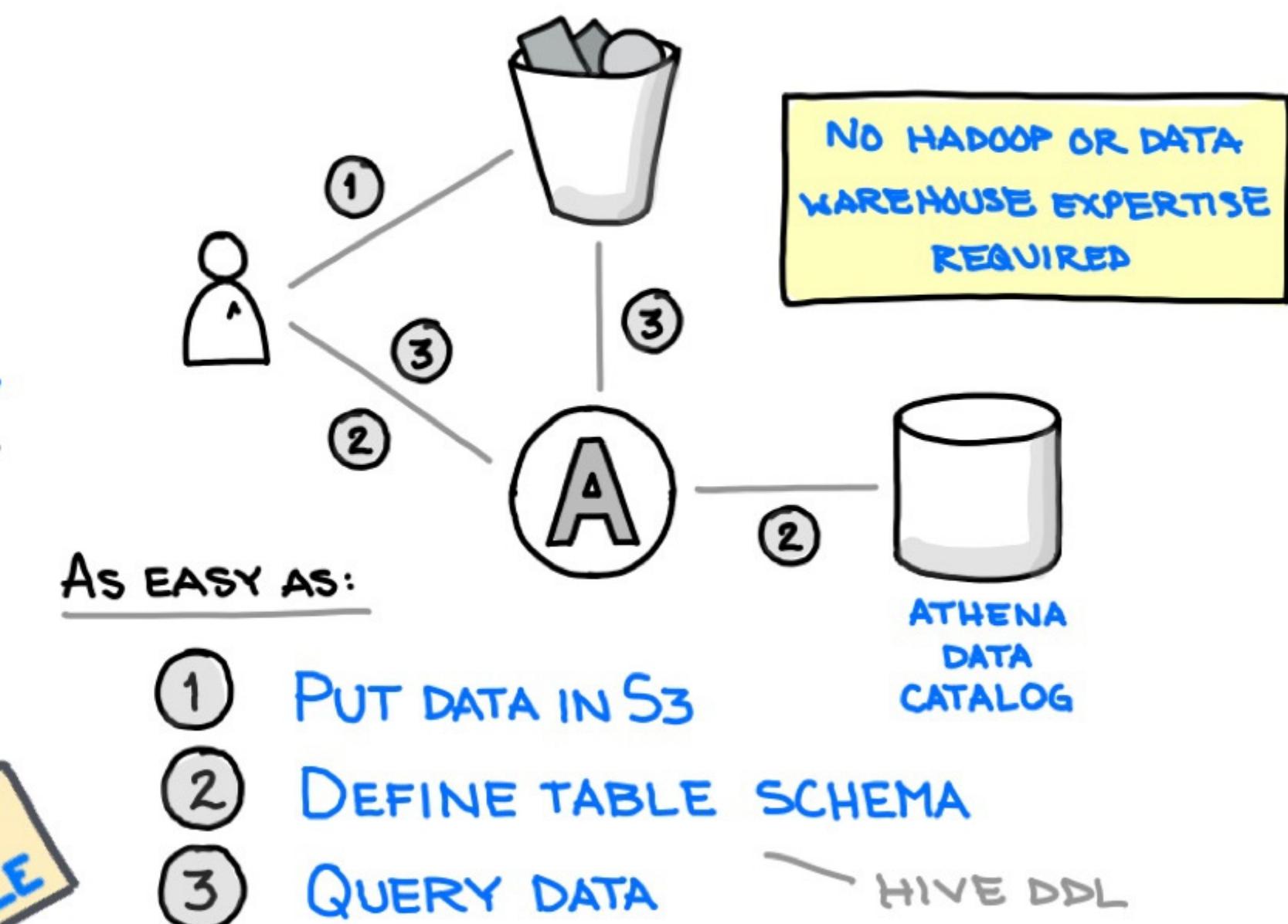
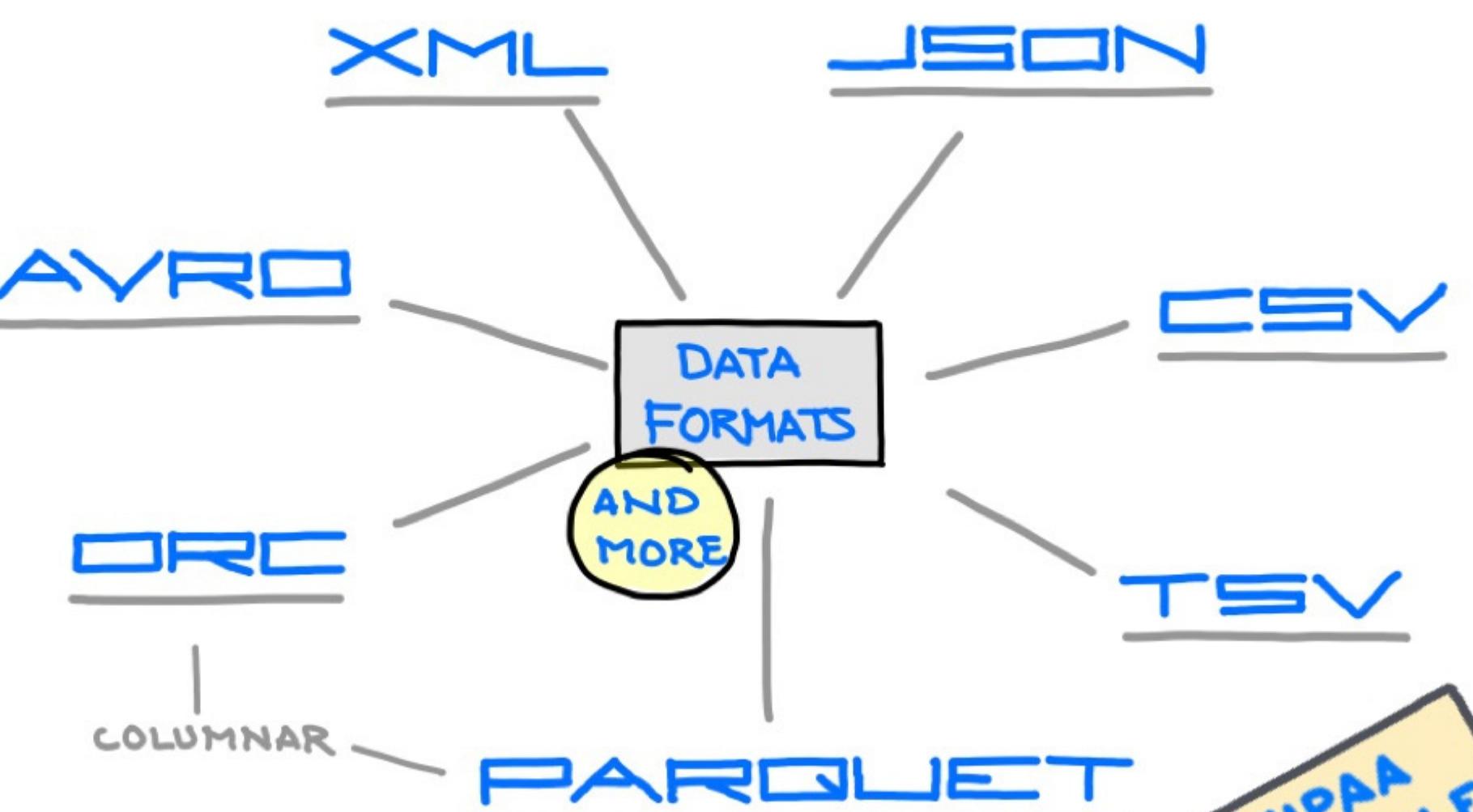
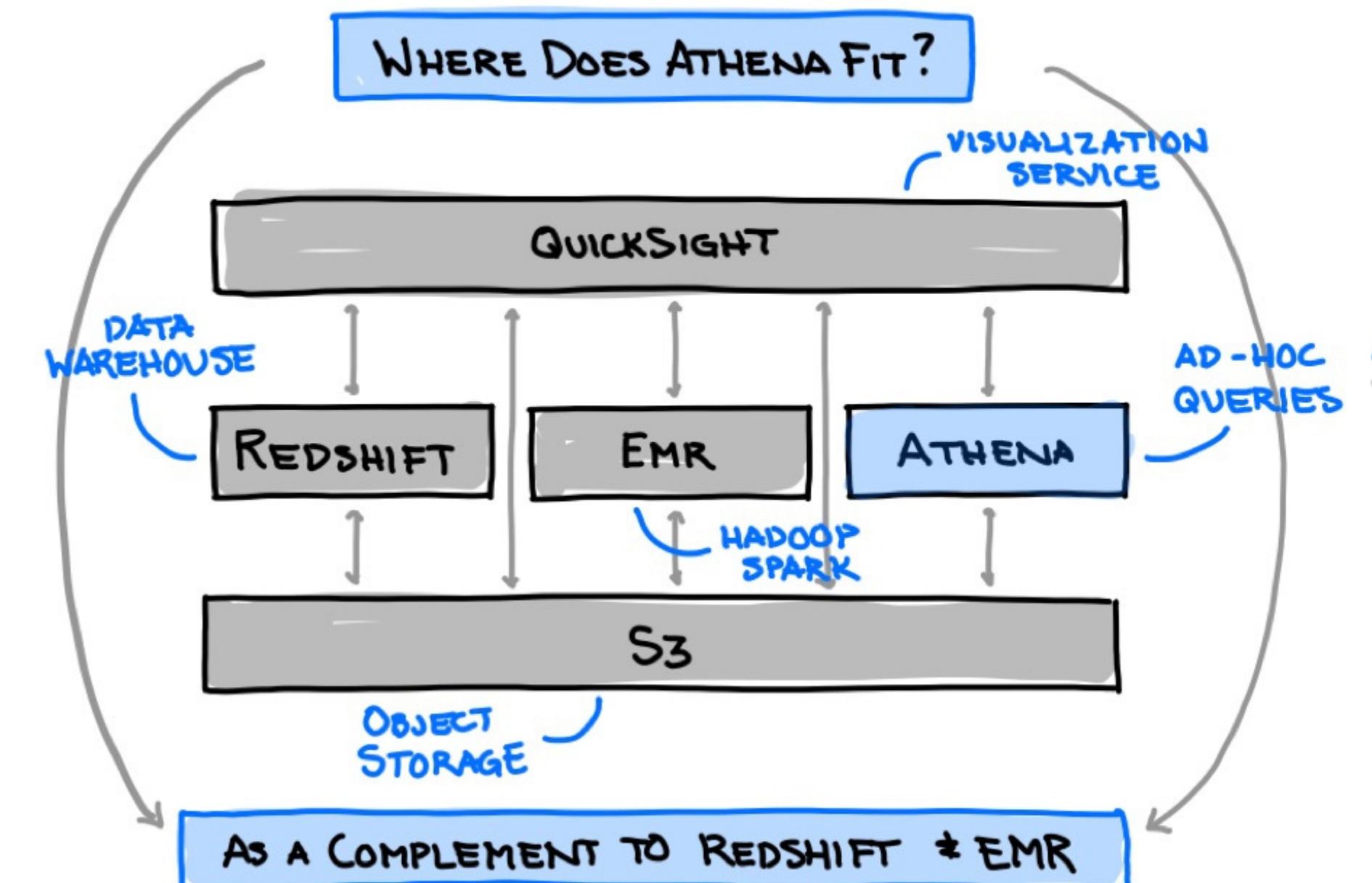
reduces blast radius

minimize blast radius

best shuffle sharding

BETTER



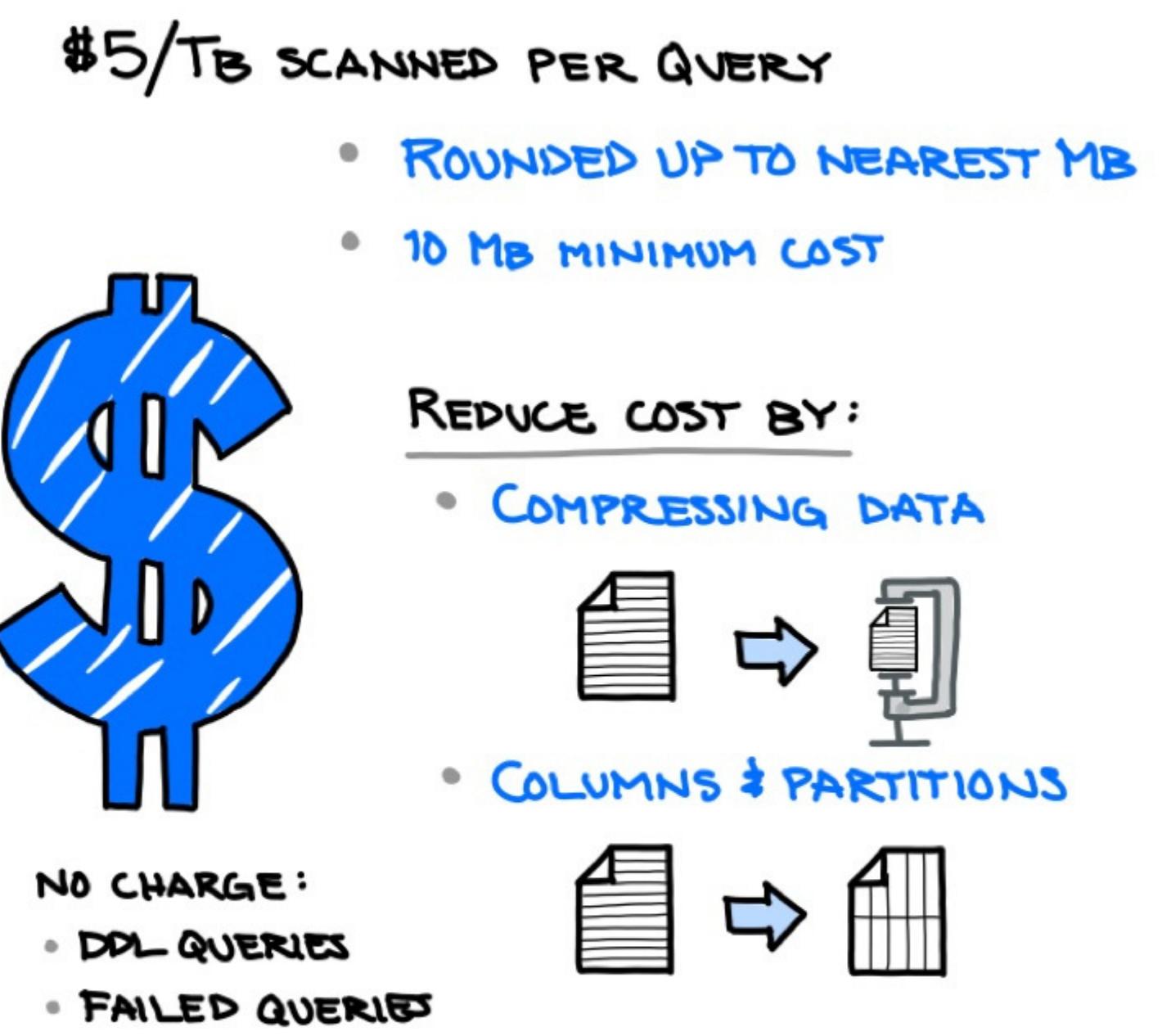
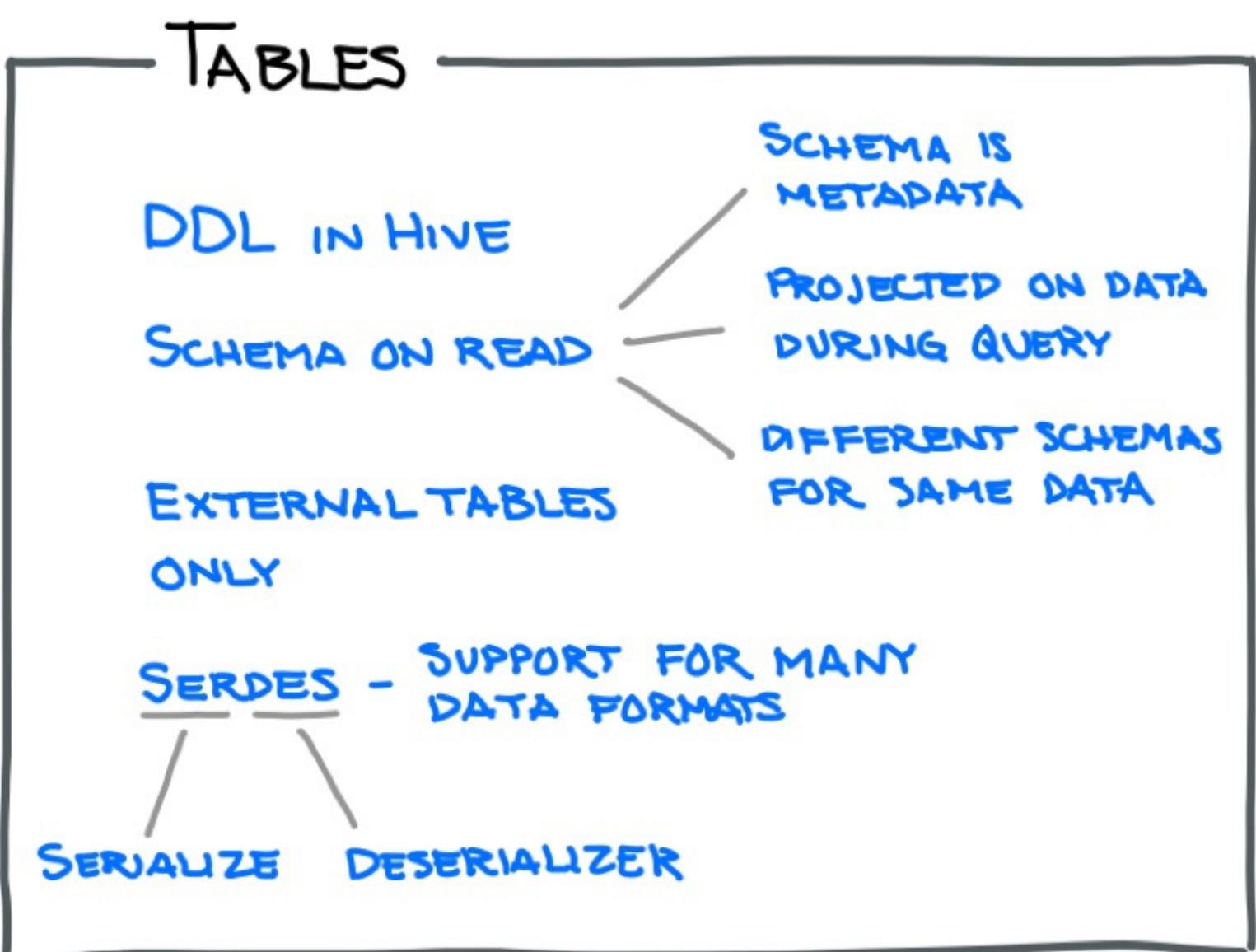
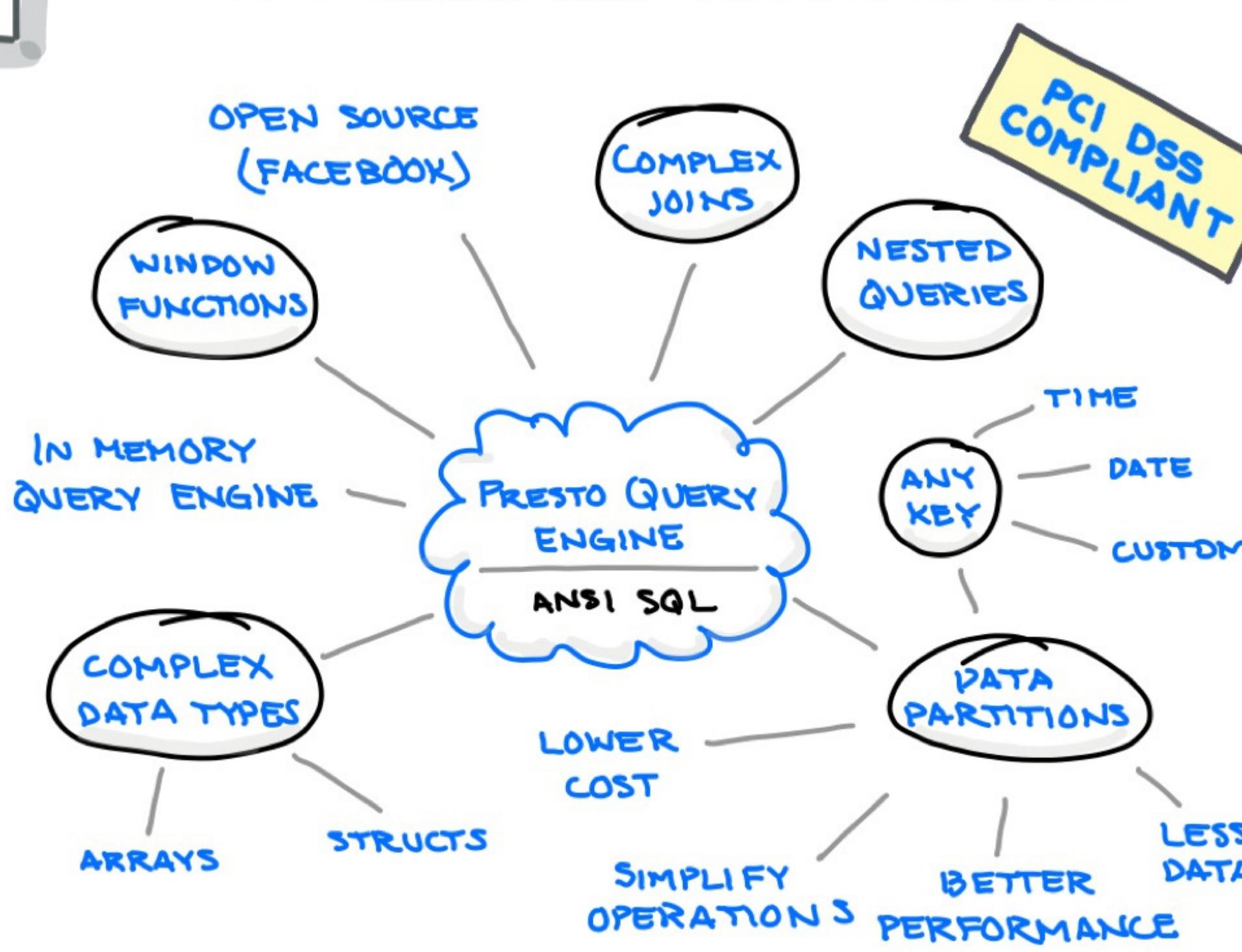
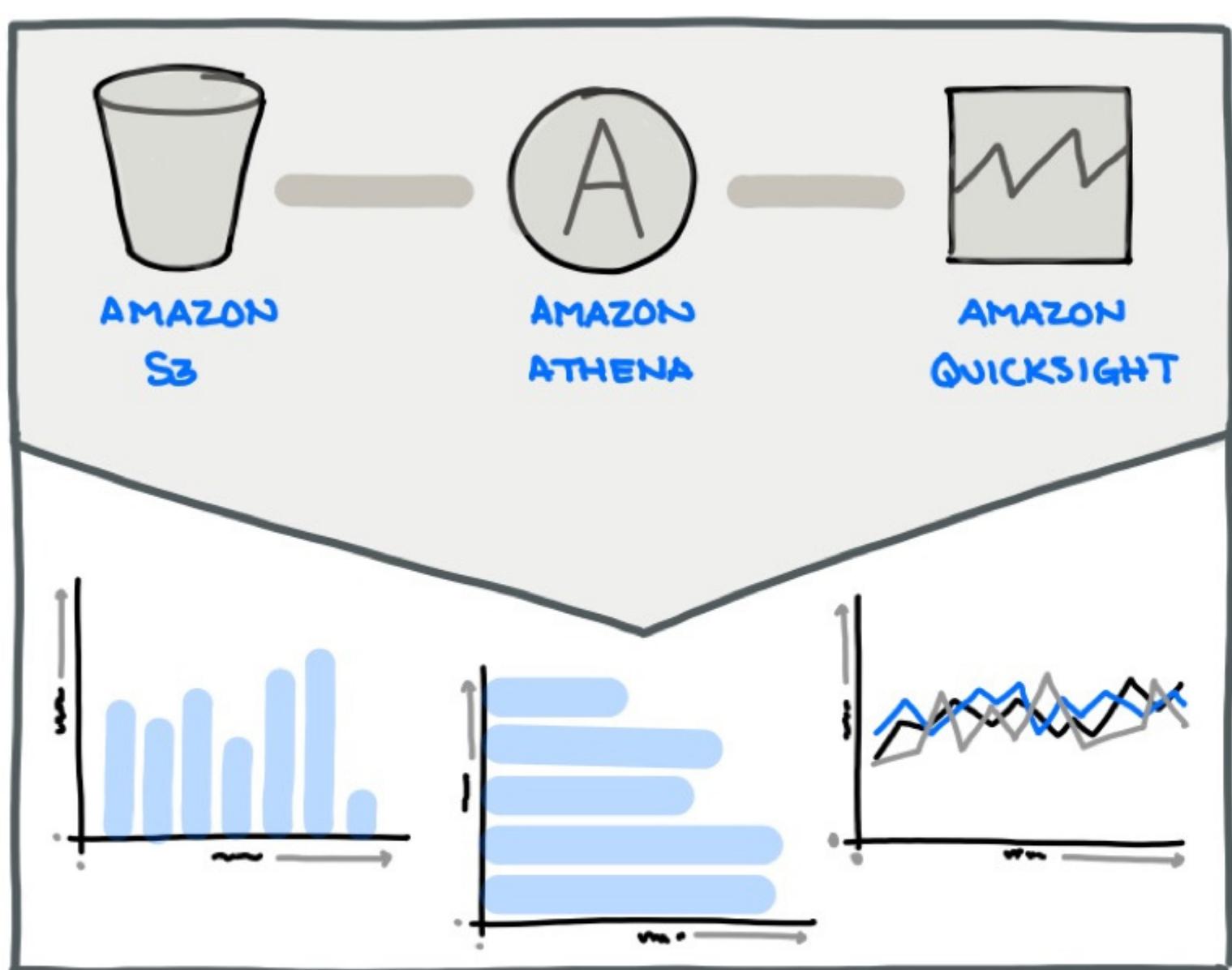


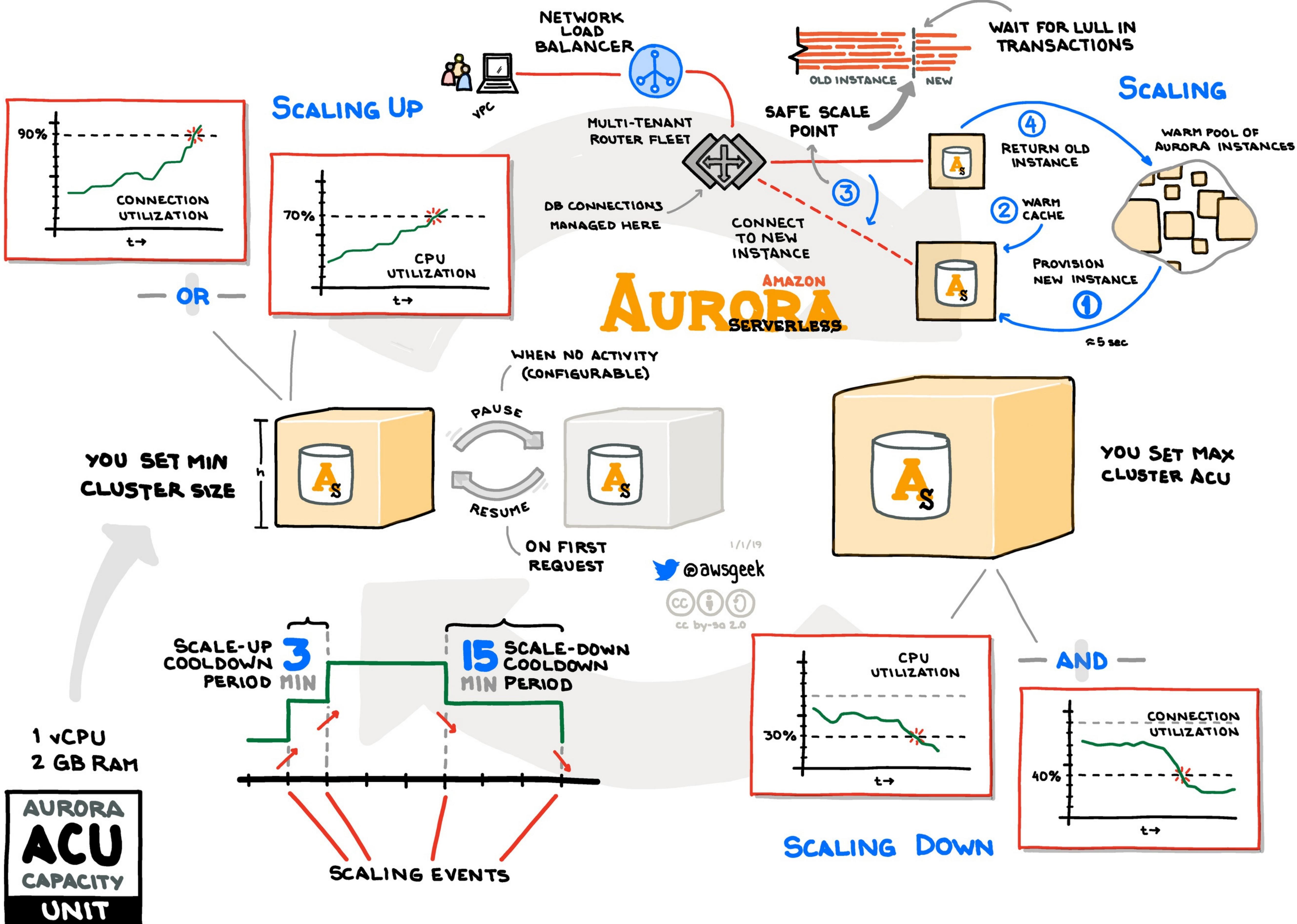
SERVERLESS	HIGHLY AVAILABLE
NO INFRA OR ADMIN	WARM COMPUTE POOLS
NO SPIN UP TIME	DATA IN S3
NO MAINTENANCE	MULTIPLE AZ
CONVENIENT	PERFORMANT
NO DATA LOADING	AUTO PARALLELIZATION
NATIVE DATA FORMATS	STREAMING RESULTS
NO ETL INVOLVED	COMPRESS / COLUMNAR

3/6/20 @awsgeek

AMAZON athena

GOAL: MAKE IT EASY TO ANALYZE DATA IN S3

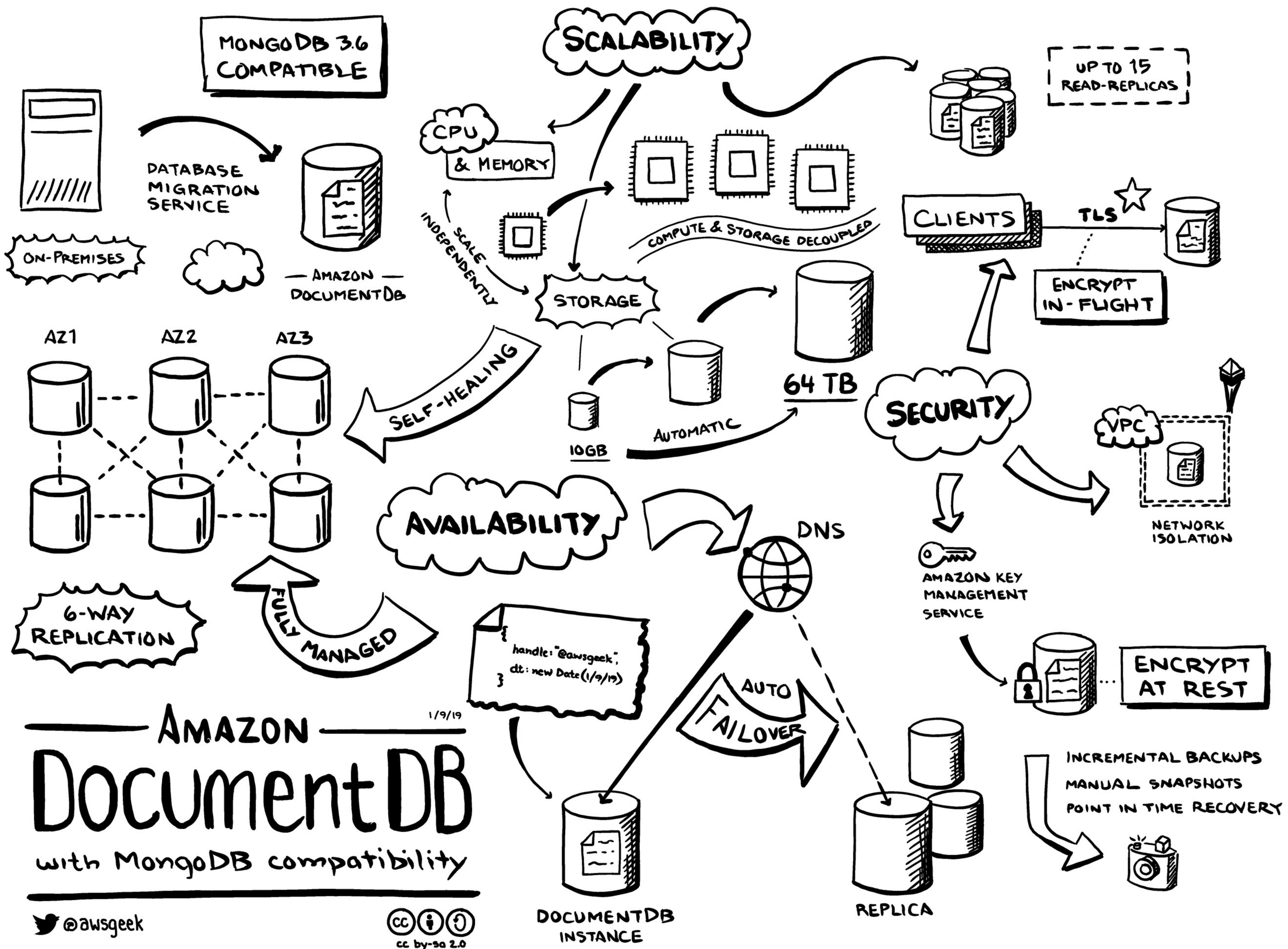




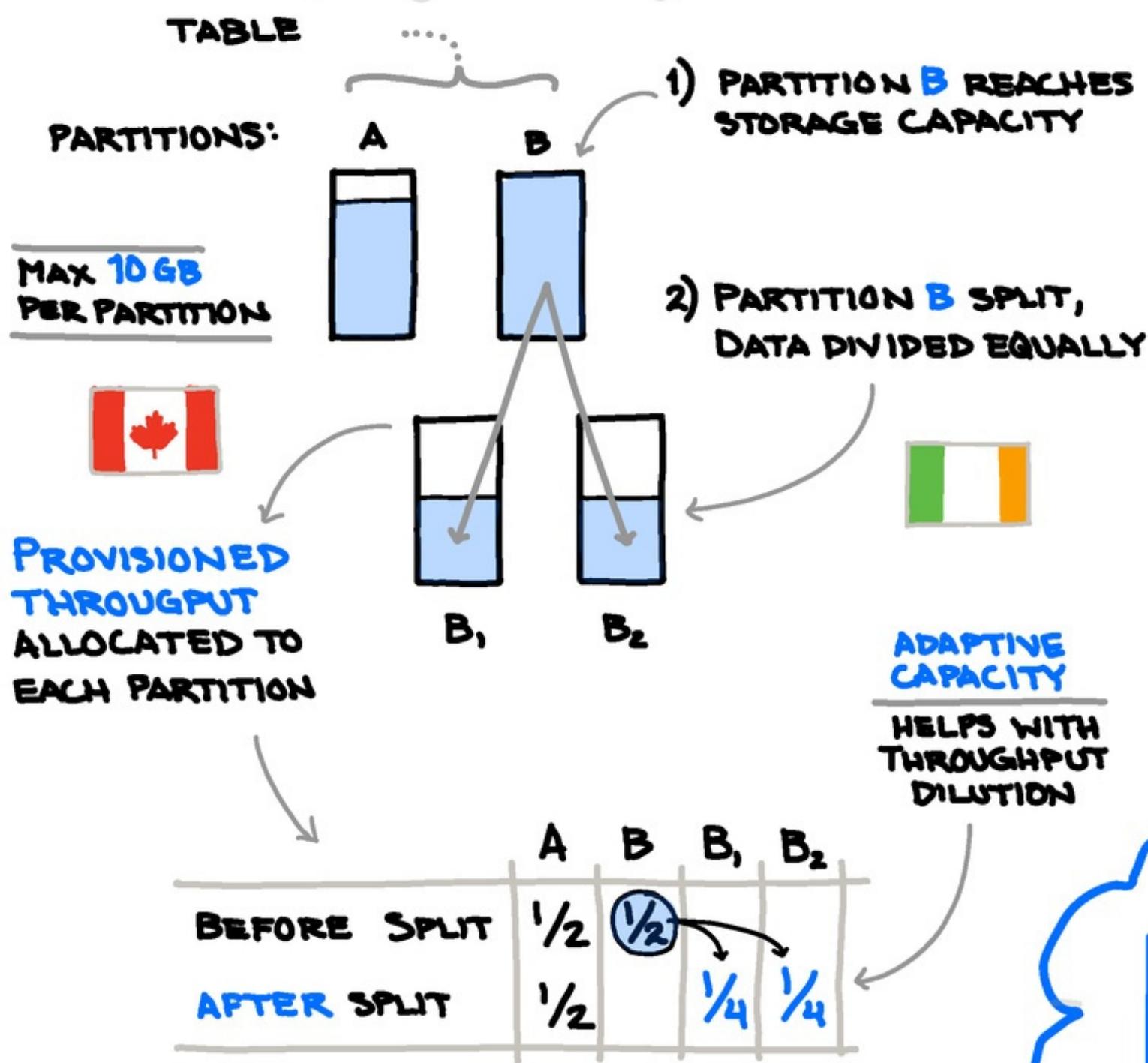
— AMAZON —

DocumentDB

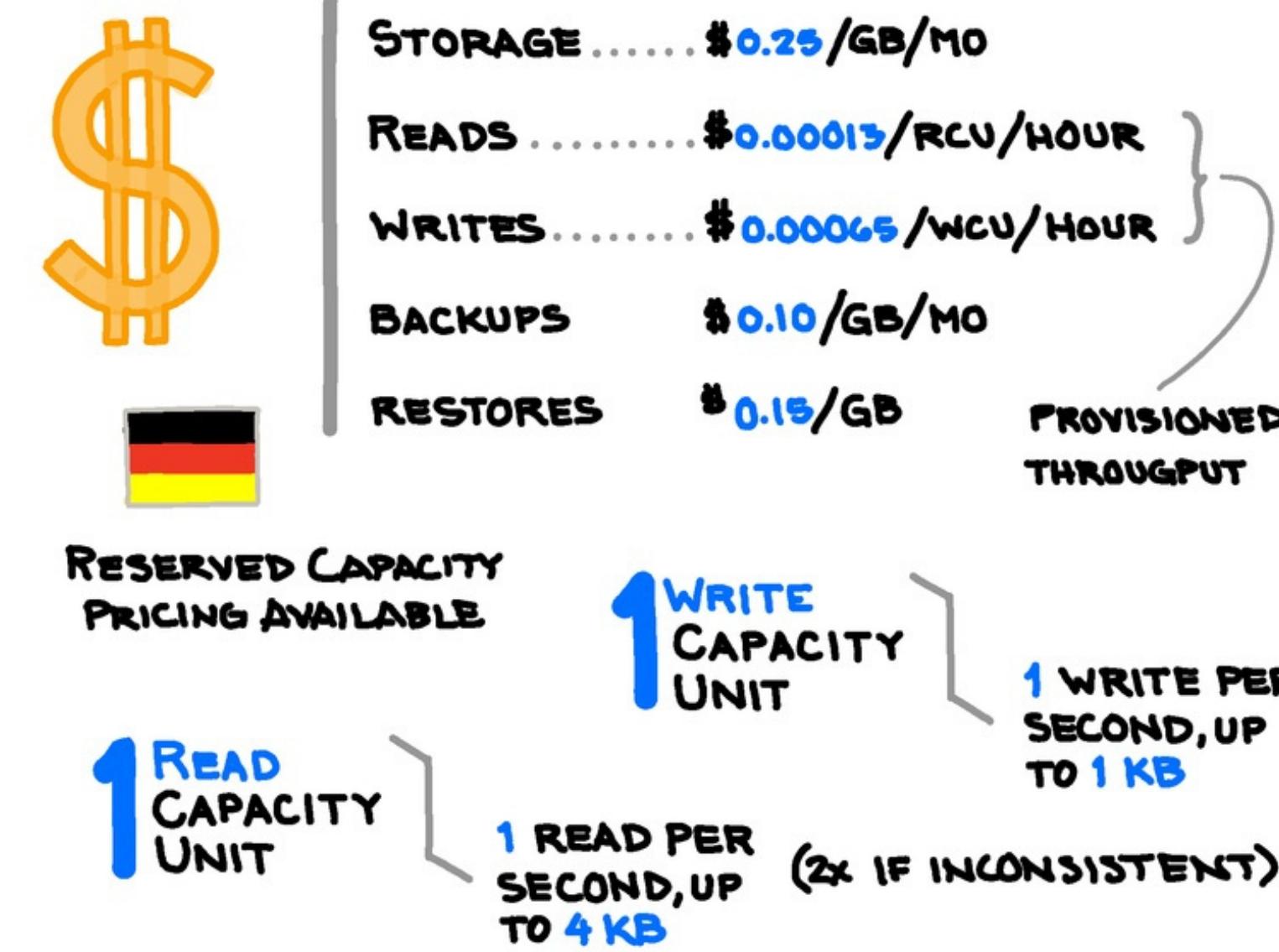
with MongoDB compatibility



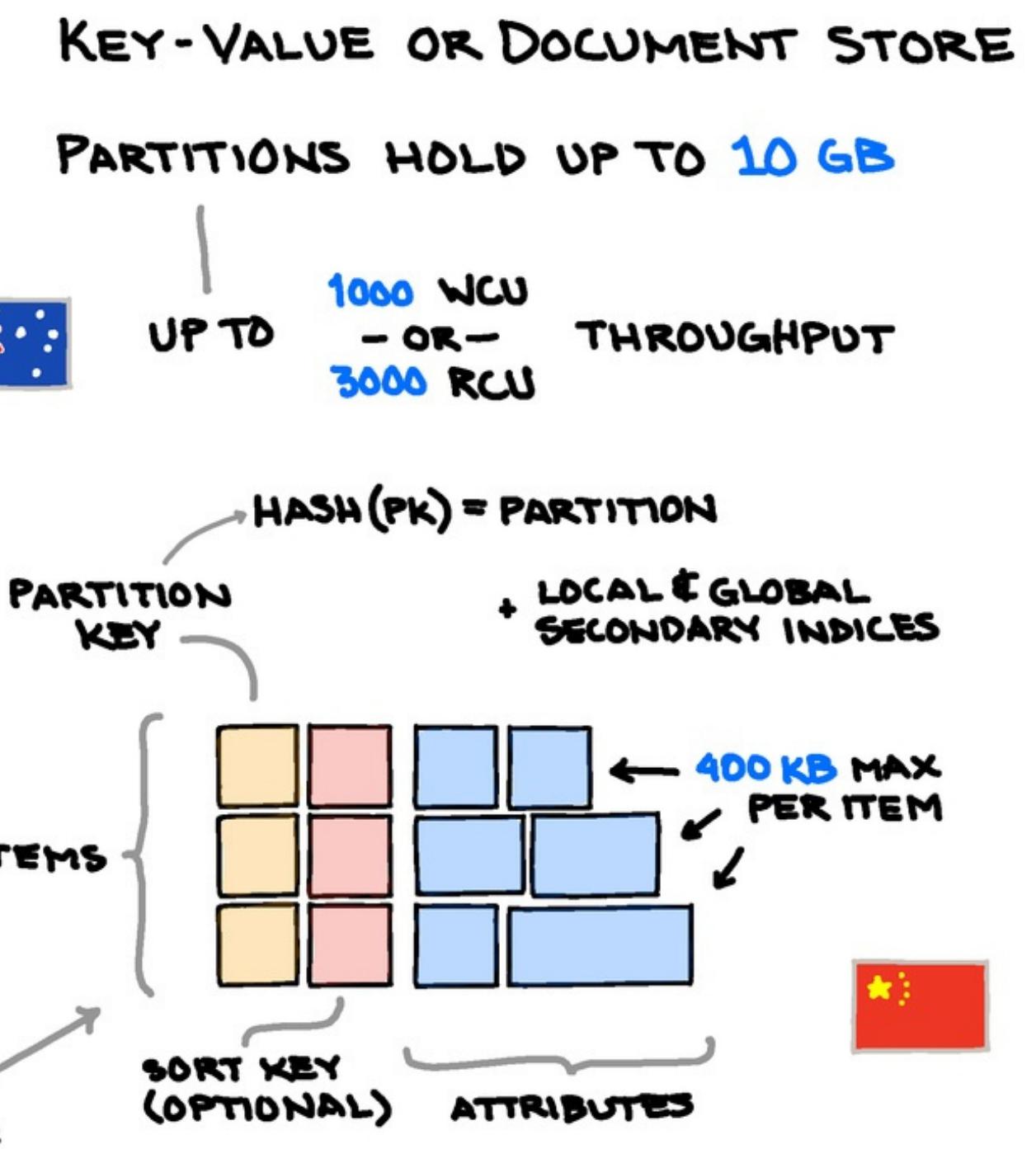
SCALABILITY



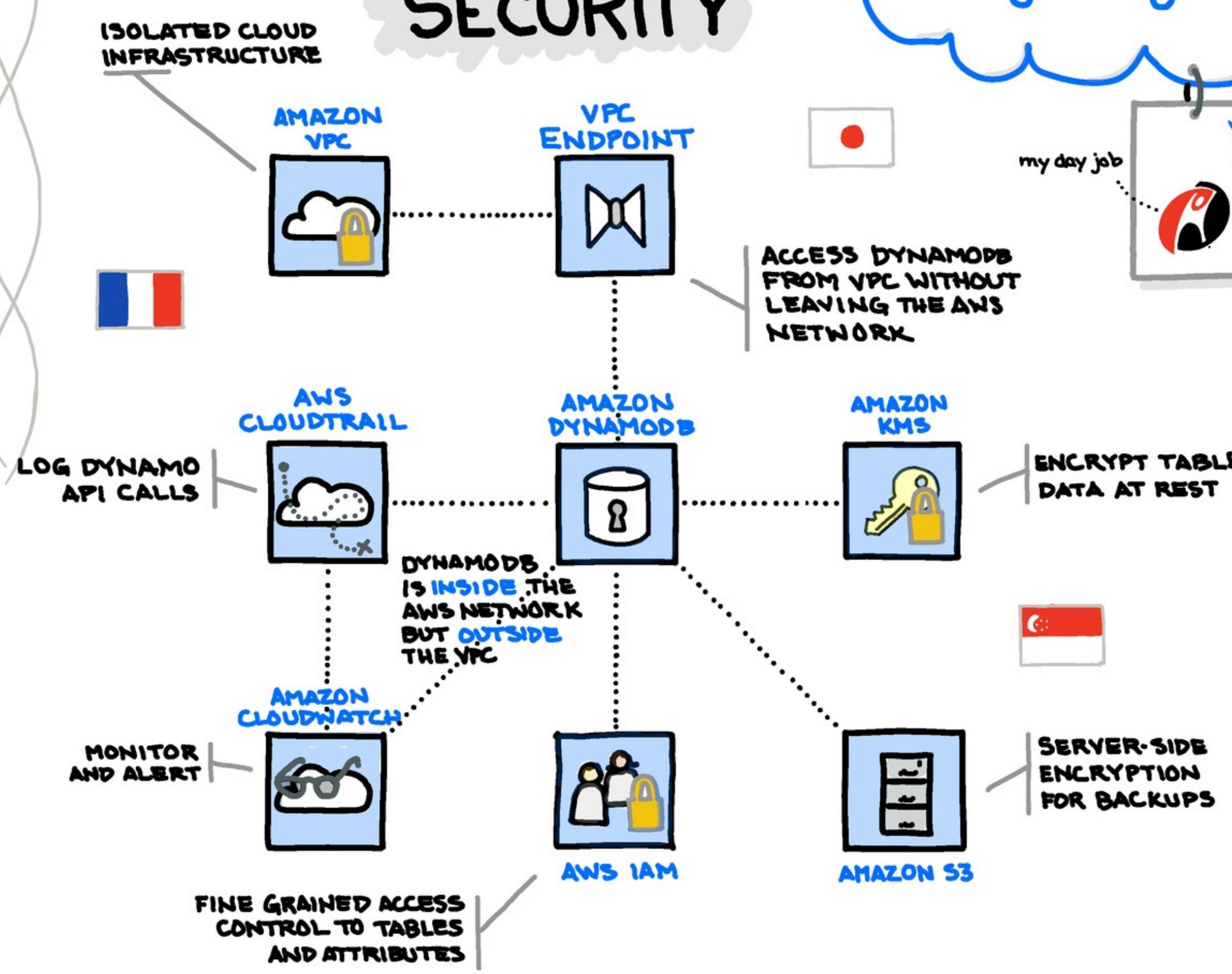
PRICING



ESSENTIALS



SECURITY

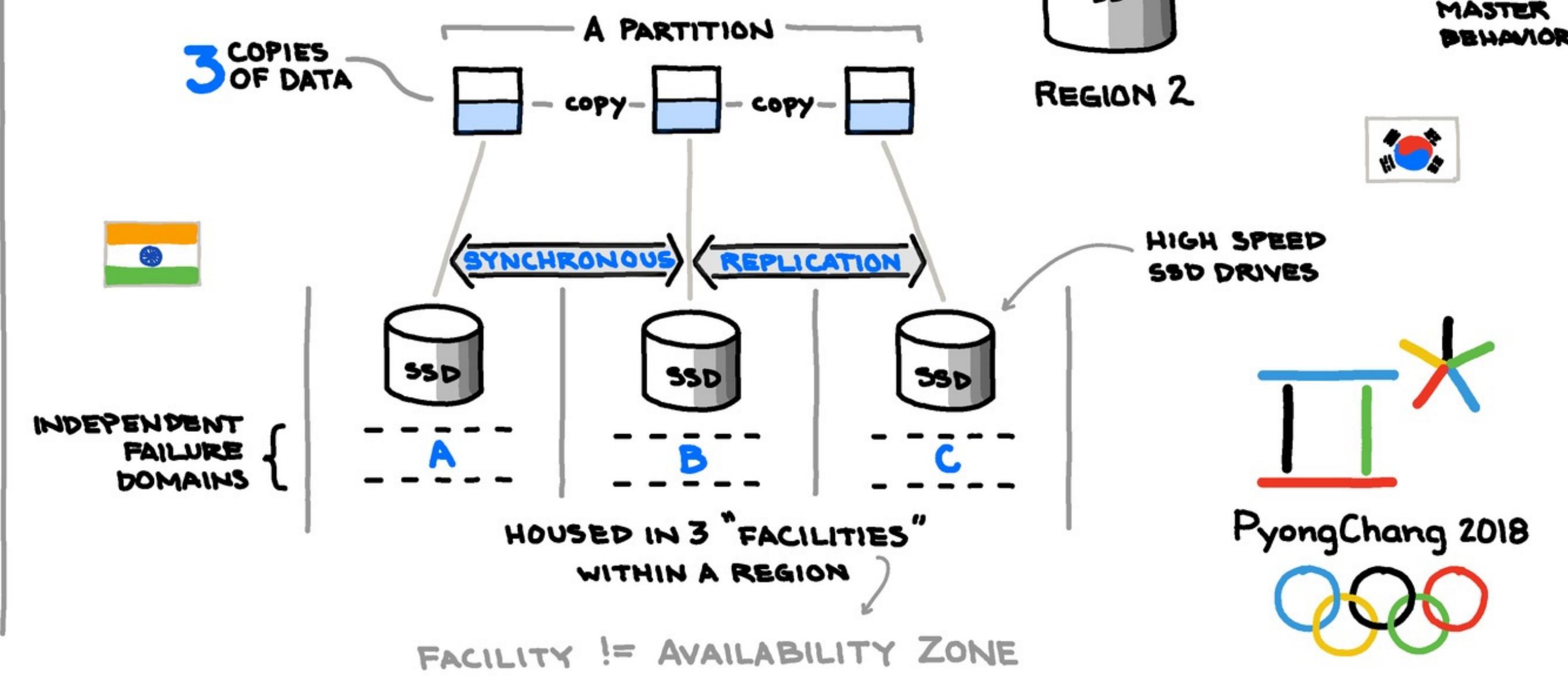


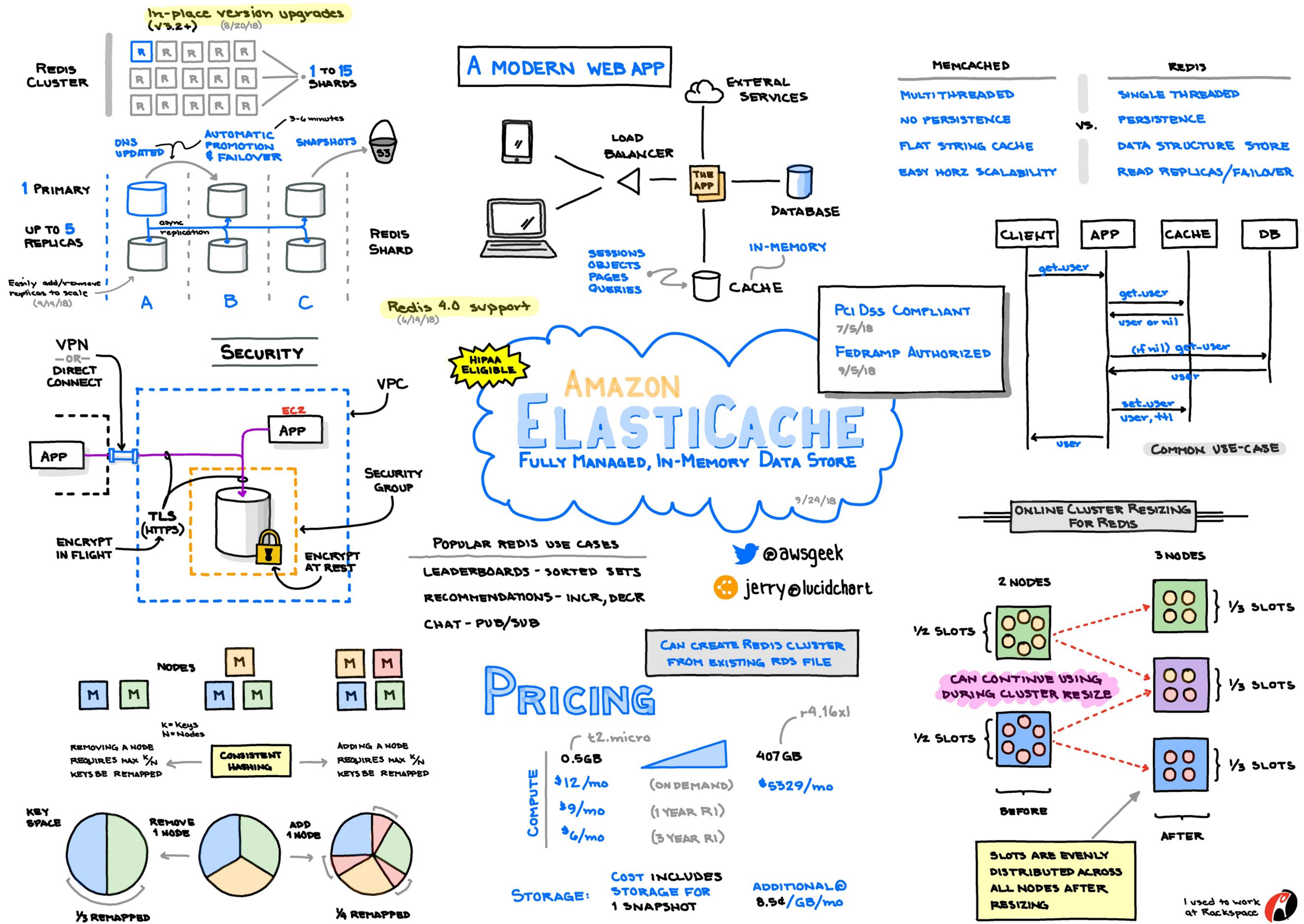
amazon DYNAMO DB

a fast, flexible no-sql database

2/10/18

AVAILABILITY





SOCIAL NETWORKING
GROUP FRIENDS WHO LIKE OR DISLIKE SIMILAR THINGS

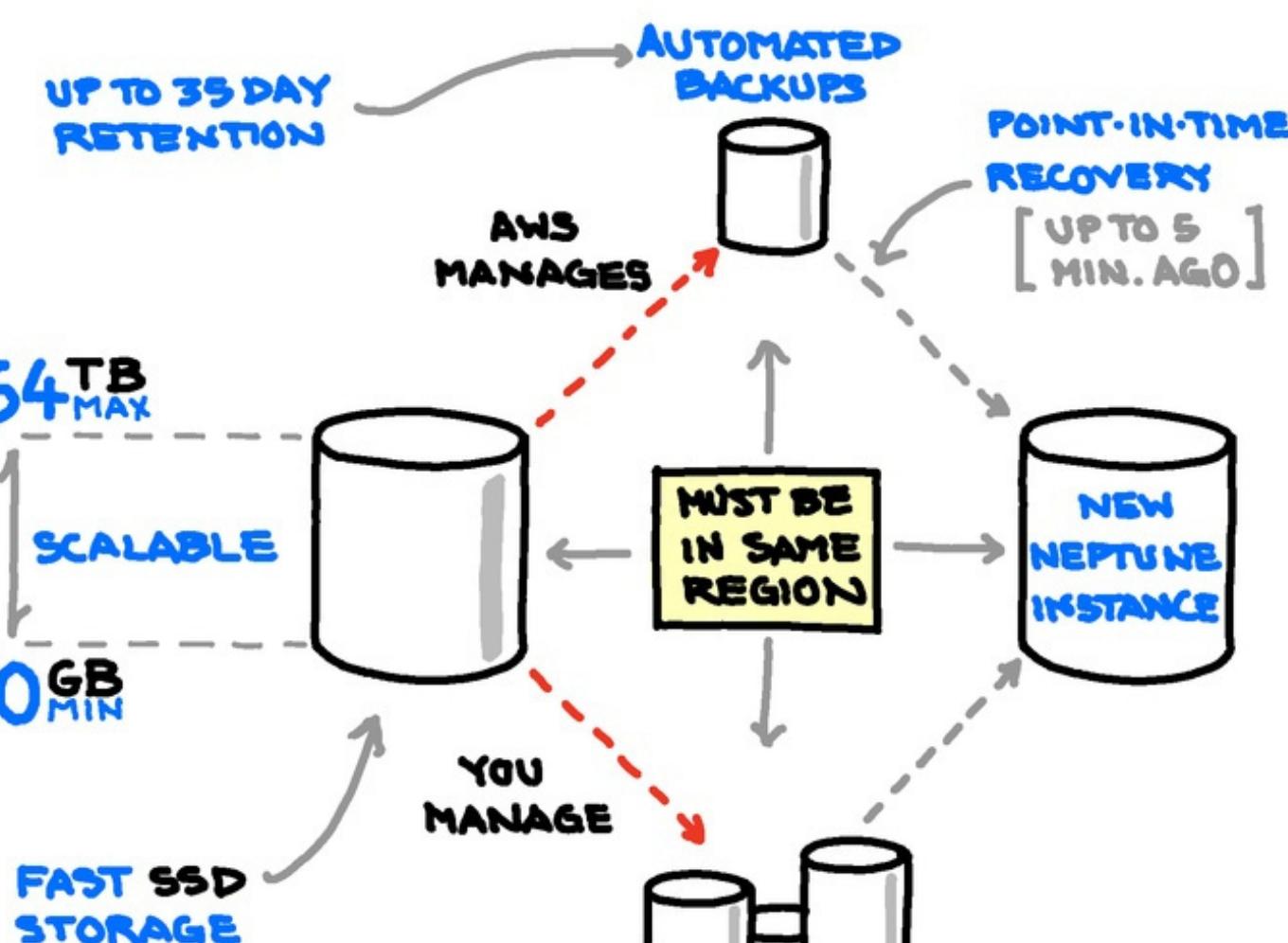
RECOMMENDATION ENGINE
MAKE PURCHASE SUGGESTIONS BASED ON OTHER USERS WITH SIMILAR INTERESTS

FRAUD DETECTION
DETECT CONNECTIONS TO KNOWN FRAUD SCENARIOS

KNOWLEDGE GRAPHS
STORE AND QUERY INFO & RELATIONSHIPS BETWEEN USERS

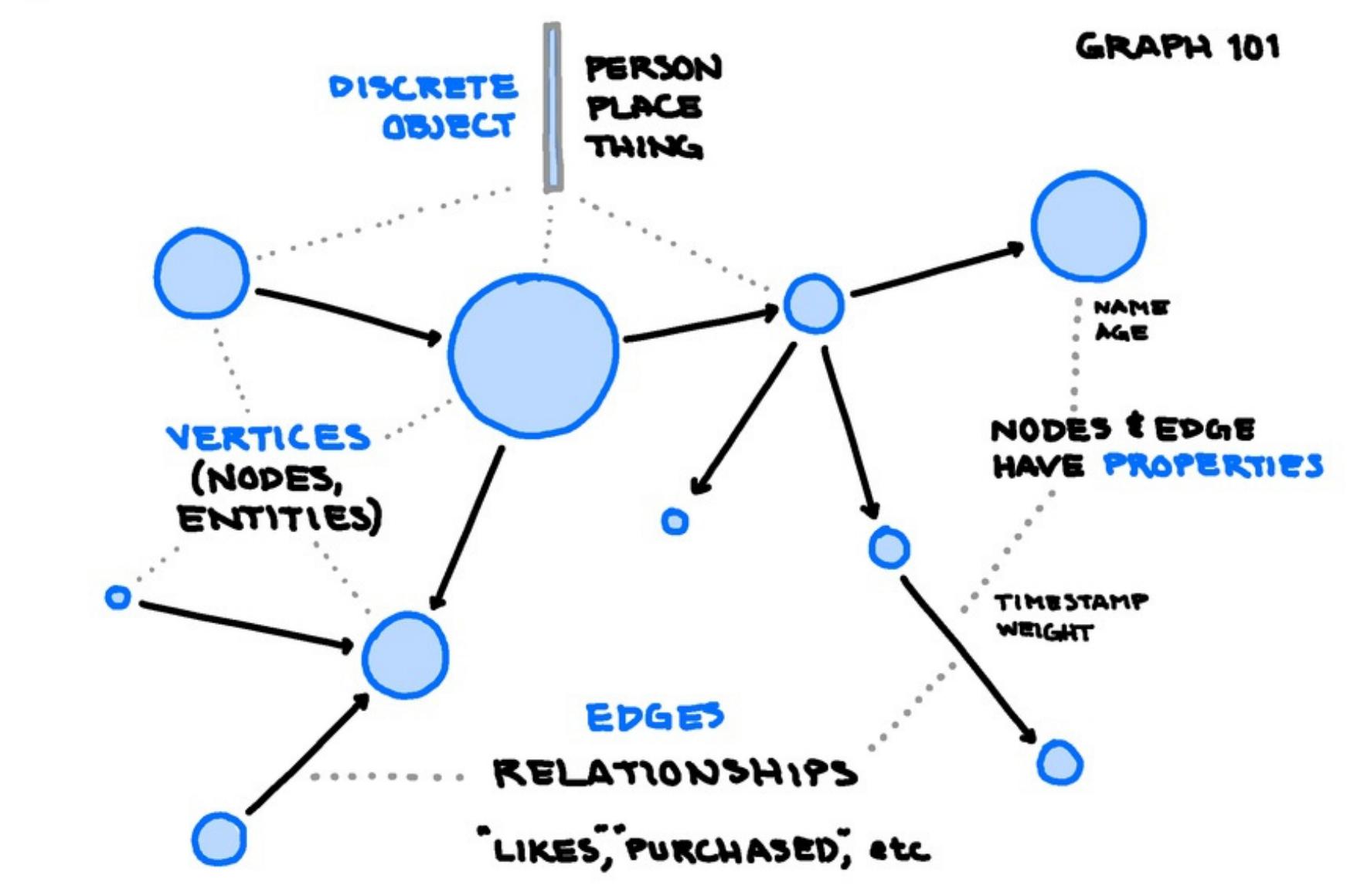
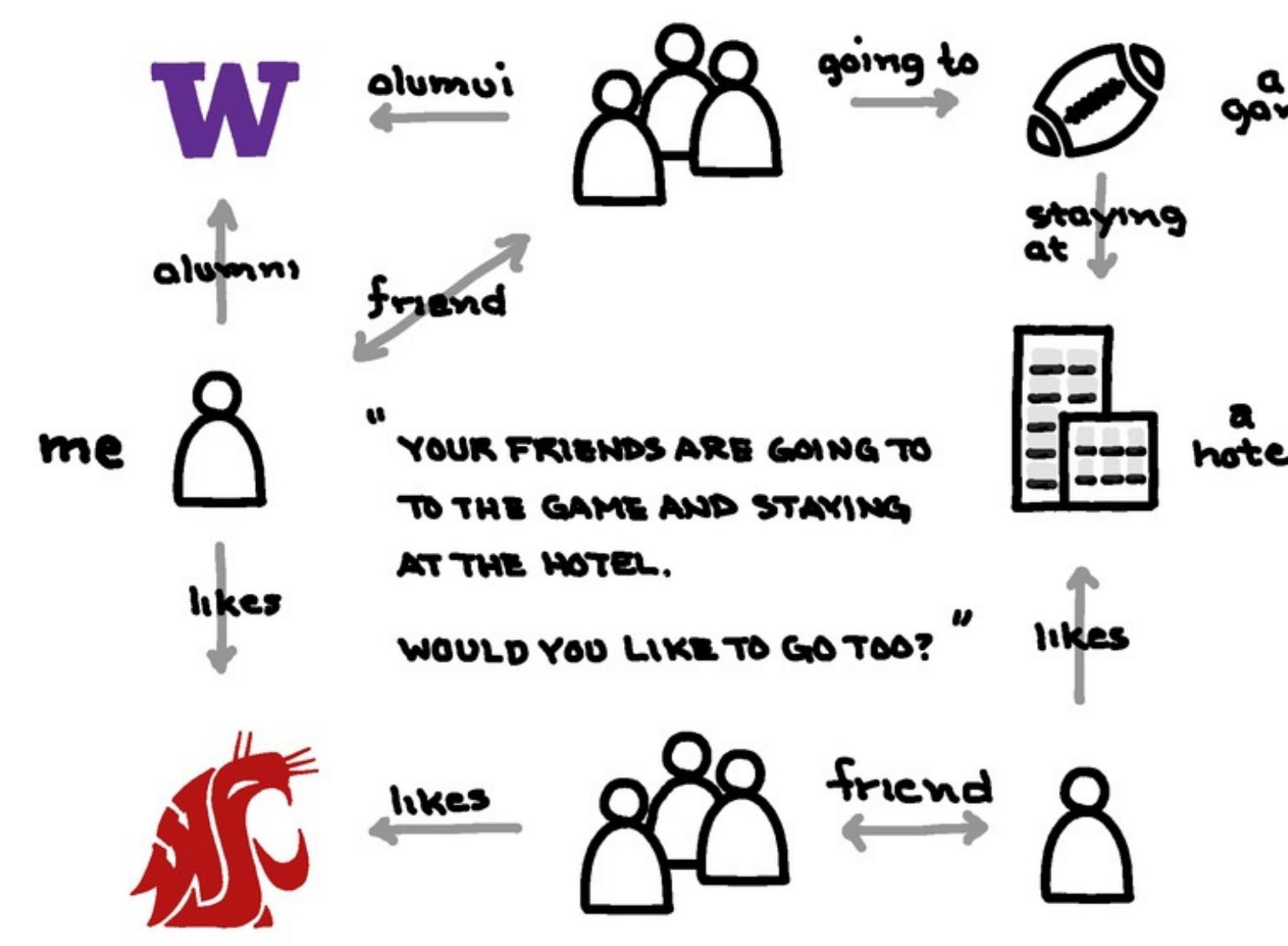
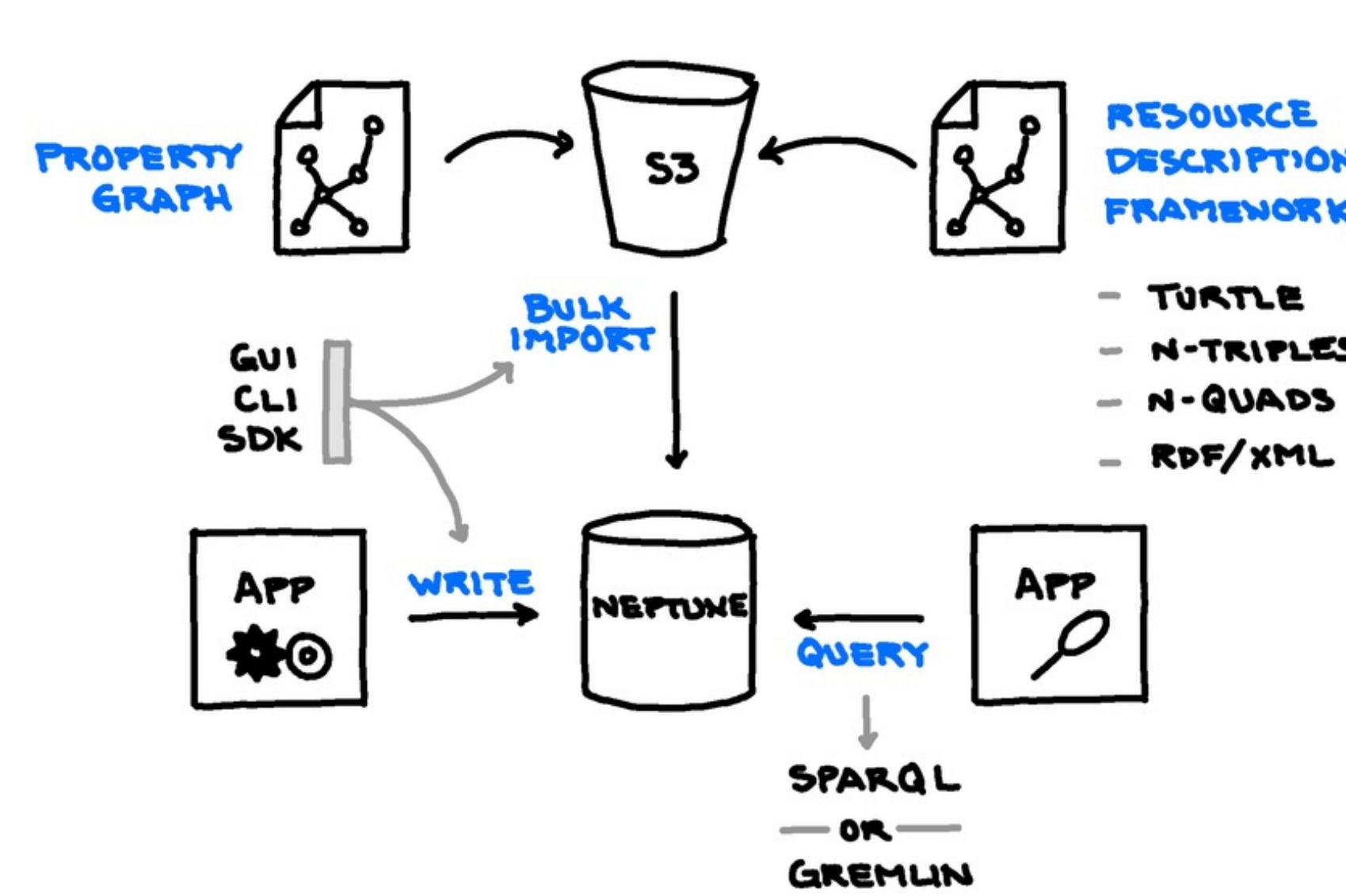
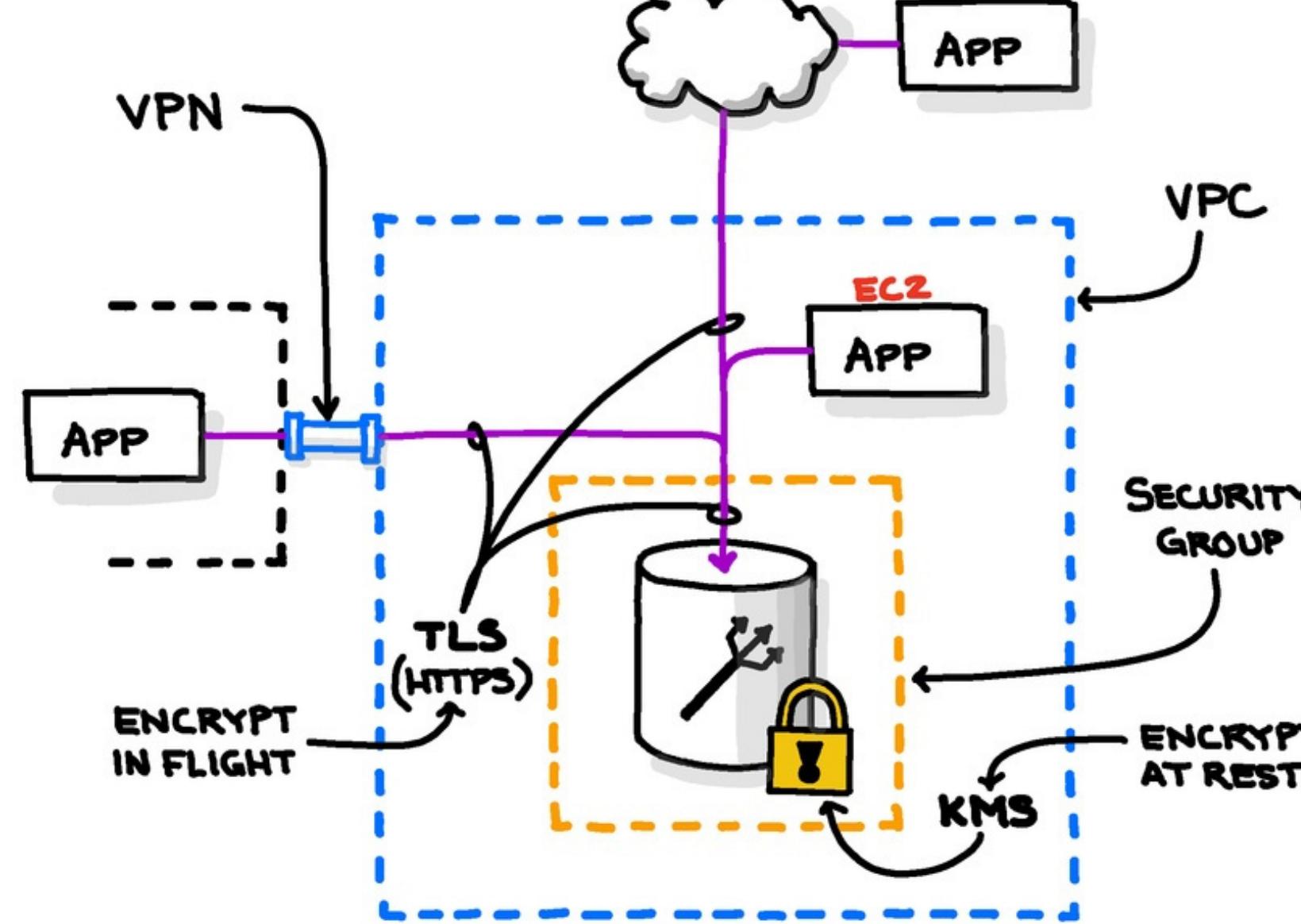
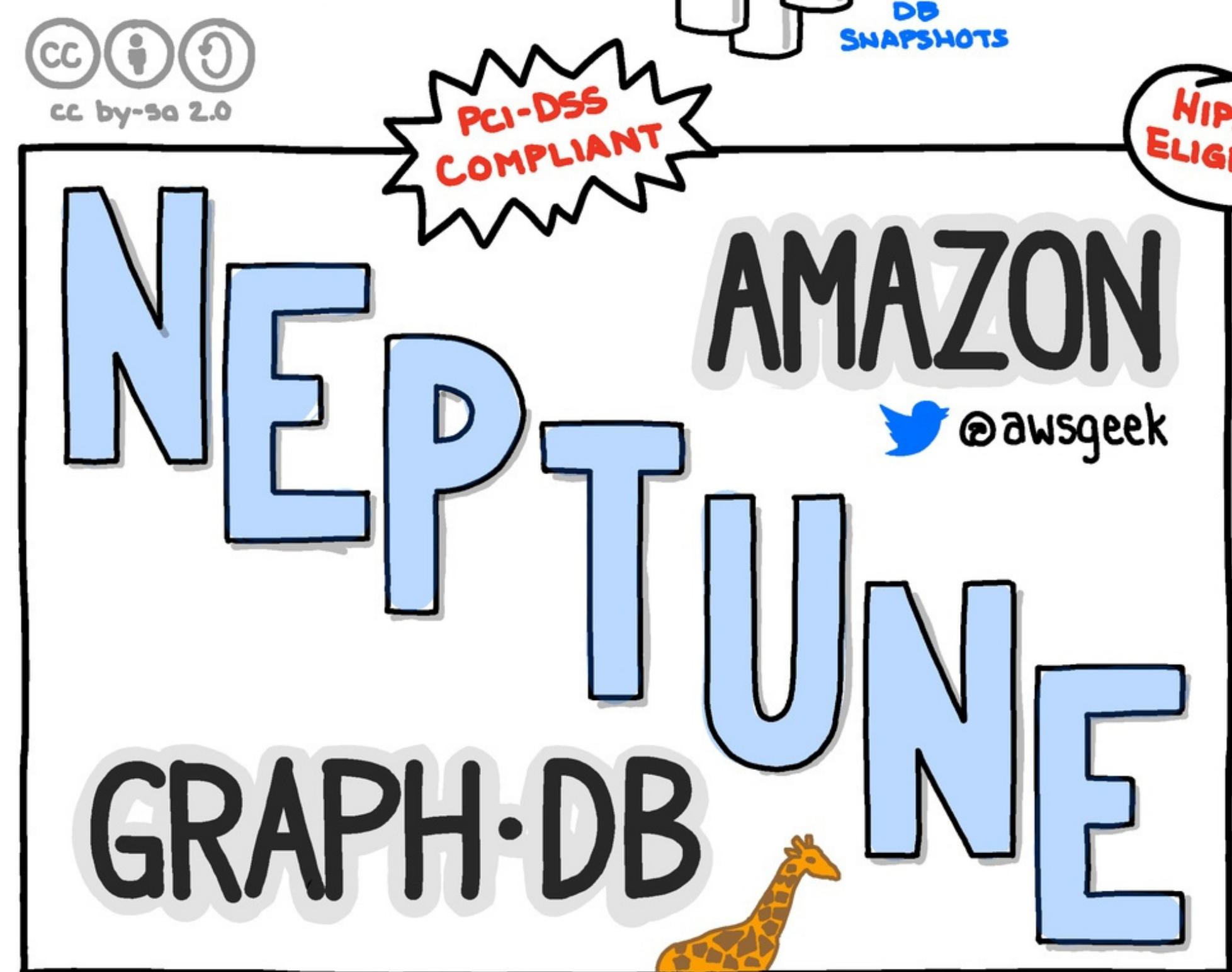
LIFE SCIENCES
SECURELY STORE AND PROCESS PATIENT & HEALTHCARE DATA

NETWORK/IT OPS
STORE NETWORK TOPOLOGY & DISCOVER RELATIONSHIPS BETWEEN HOSTS

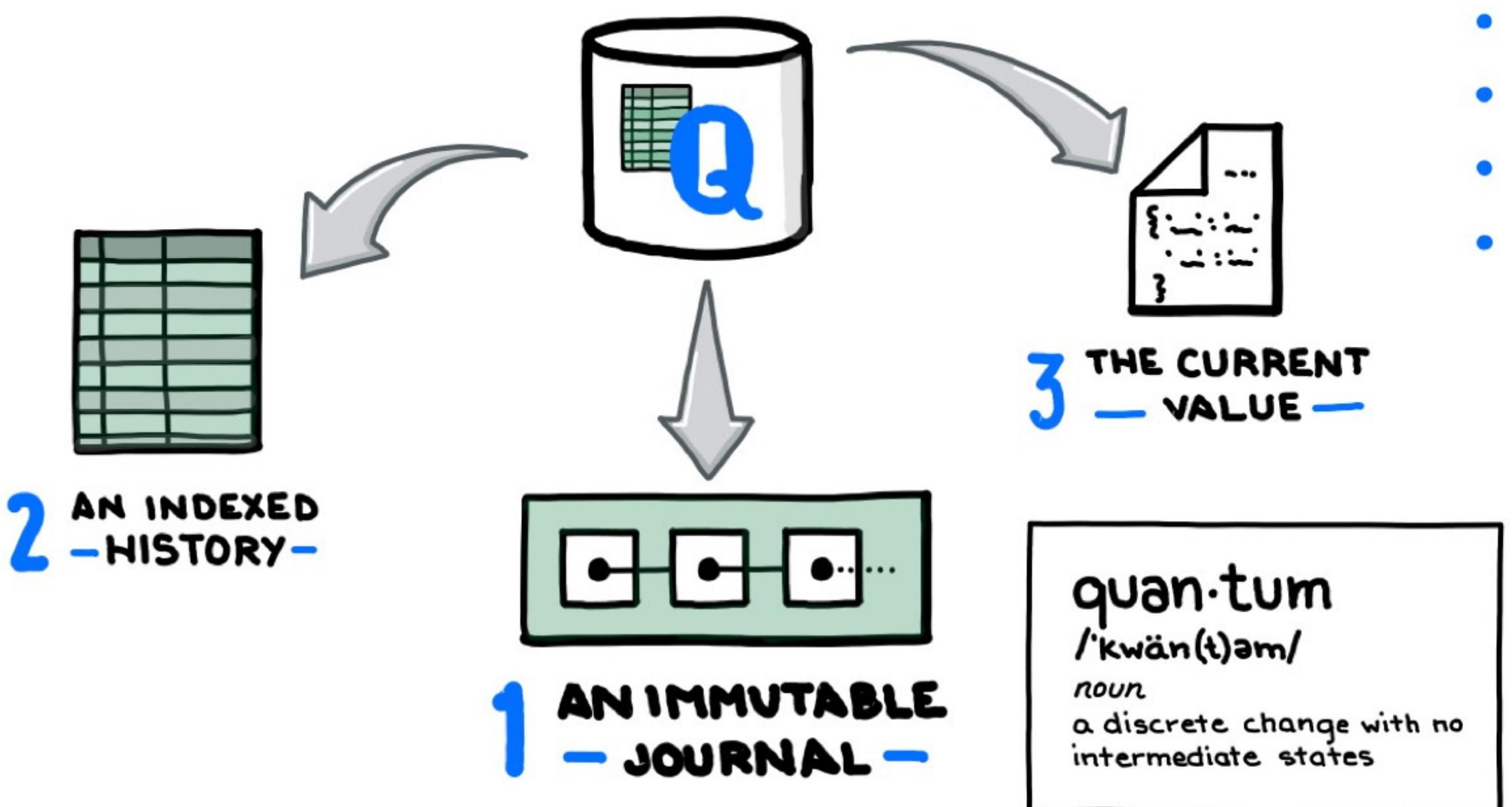


PRICING

ON-DEMAND	PRIMARY - PER HOUR REPLICAS - SAME	STARTING AT 35¢/HR FOR R4.LG
STORAGE	10¢/GB/MO	
BACKUPS	20¢/MILLION REQUESTS	per 16 KB read 4 KB write
DATA TRANSFER	Up to db size, free \$3 rates after	
	In .. Free Out .. 2¢/GB to other region .. 9¢/GB to internet	



WHAT IS A QUANTUM LEDGER DB?



DATABASE

- FULLY TRANSACTIONAL
- ACID FUNCTIONALITY
- DOCUMENT DATA MODEL
- UN/STRUCTURED DATA

STREAMING

- NEAR REAL TIME
- KINESIS DATA STREAMS

SERVERLESS

- NO NODE PROVISIONING
- NO IO PROVISIONING

How Much Does QLDB Cost?

im·mu·ta·ble
/i(m)'myooðab(ə)b/
 adjective
 unchanging over time or unable to be changed

5¢ TO 9¢ PER GB

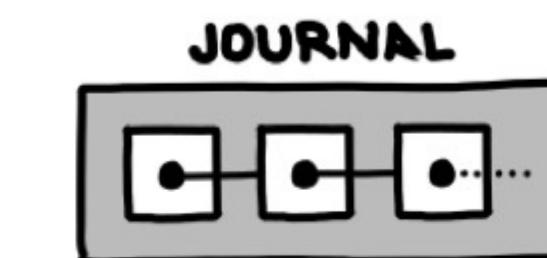
US EAST (VIRGINIA)

70¢ WRITE / MILLION REQUESTS

13.6¢ READ / MILLION REQUESTS

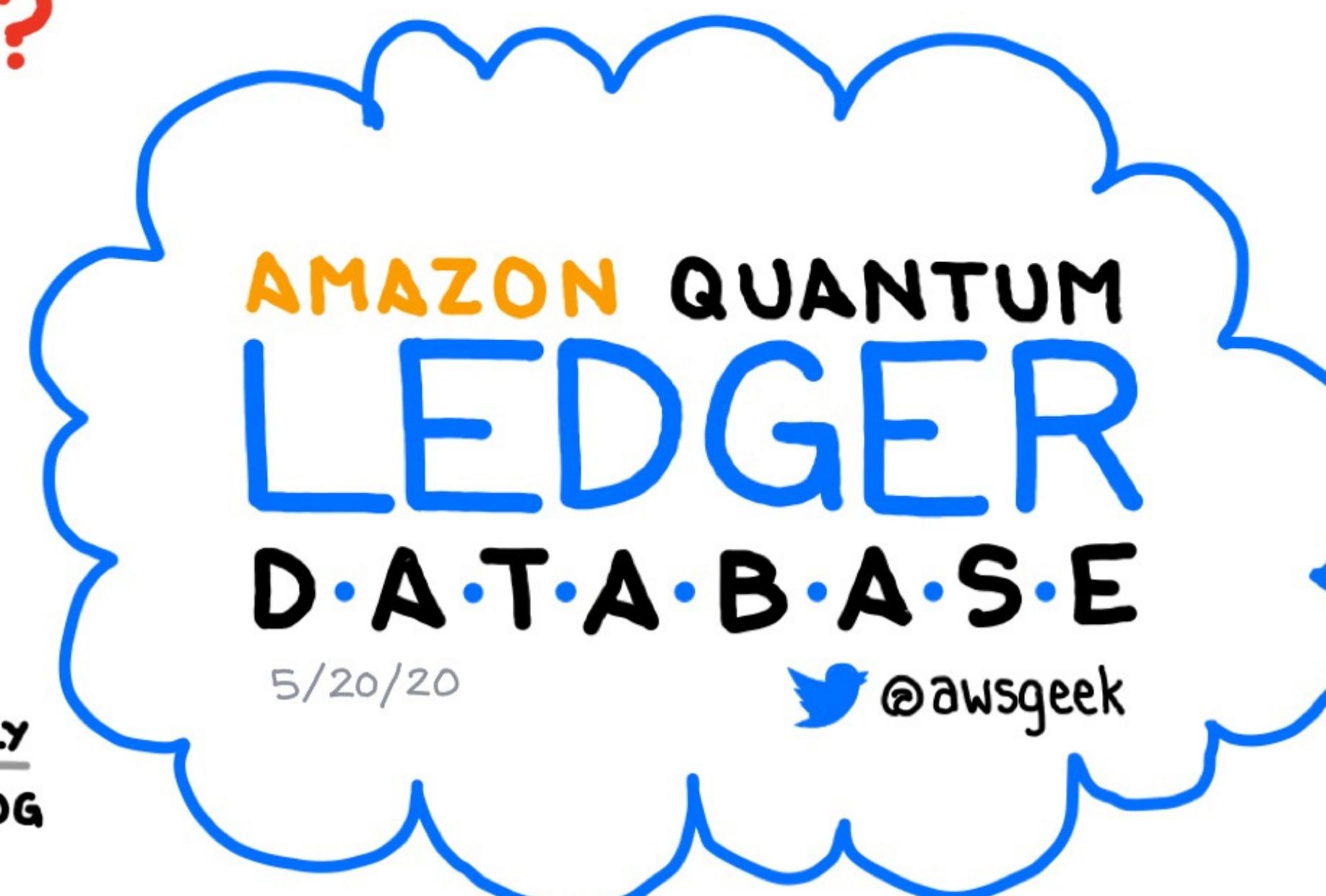
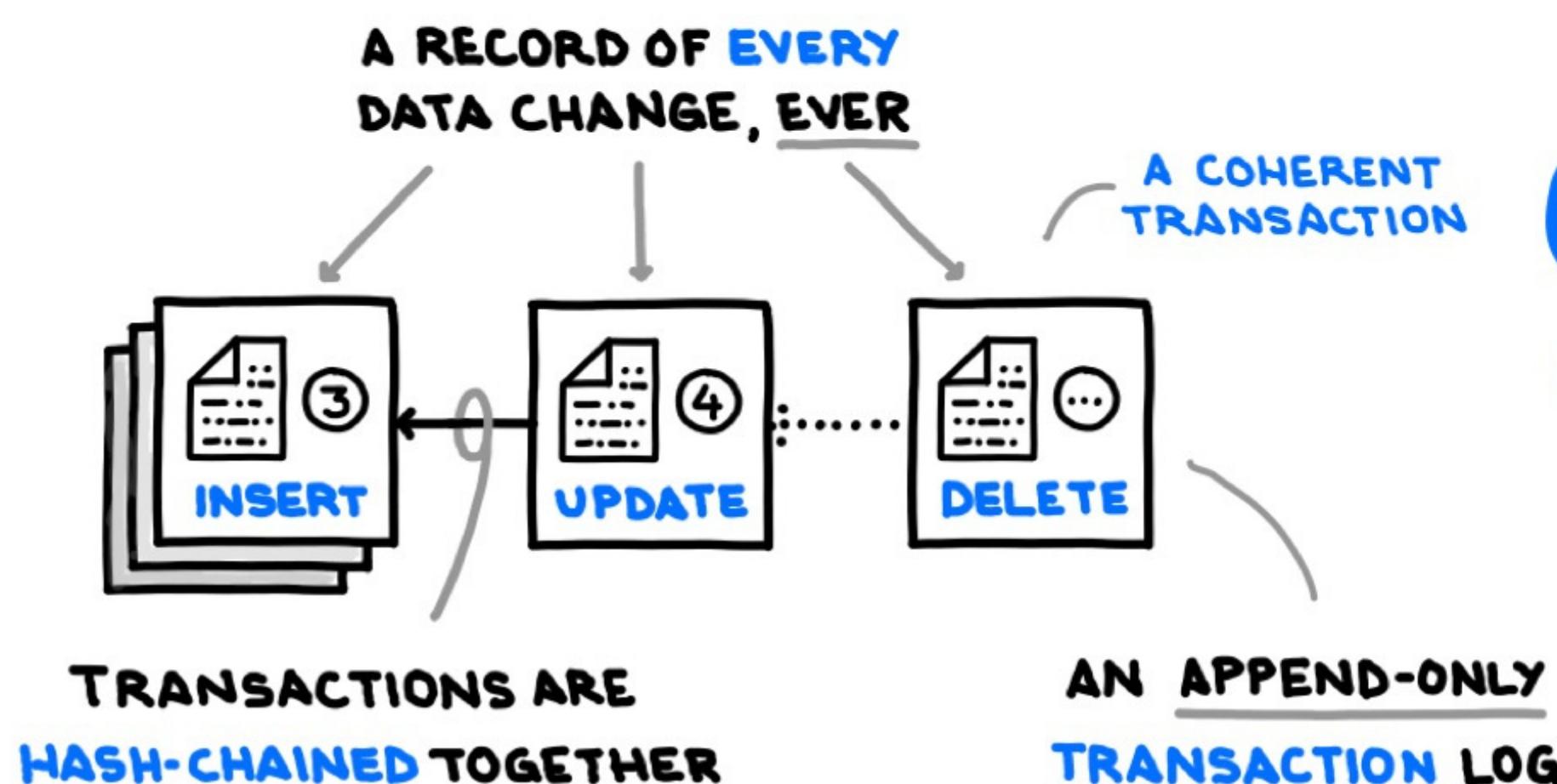


25¢ PER GB/MO

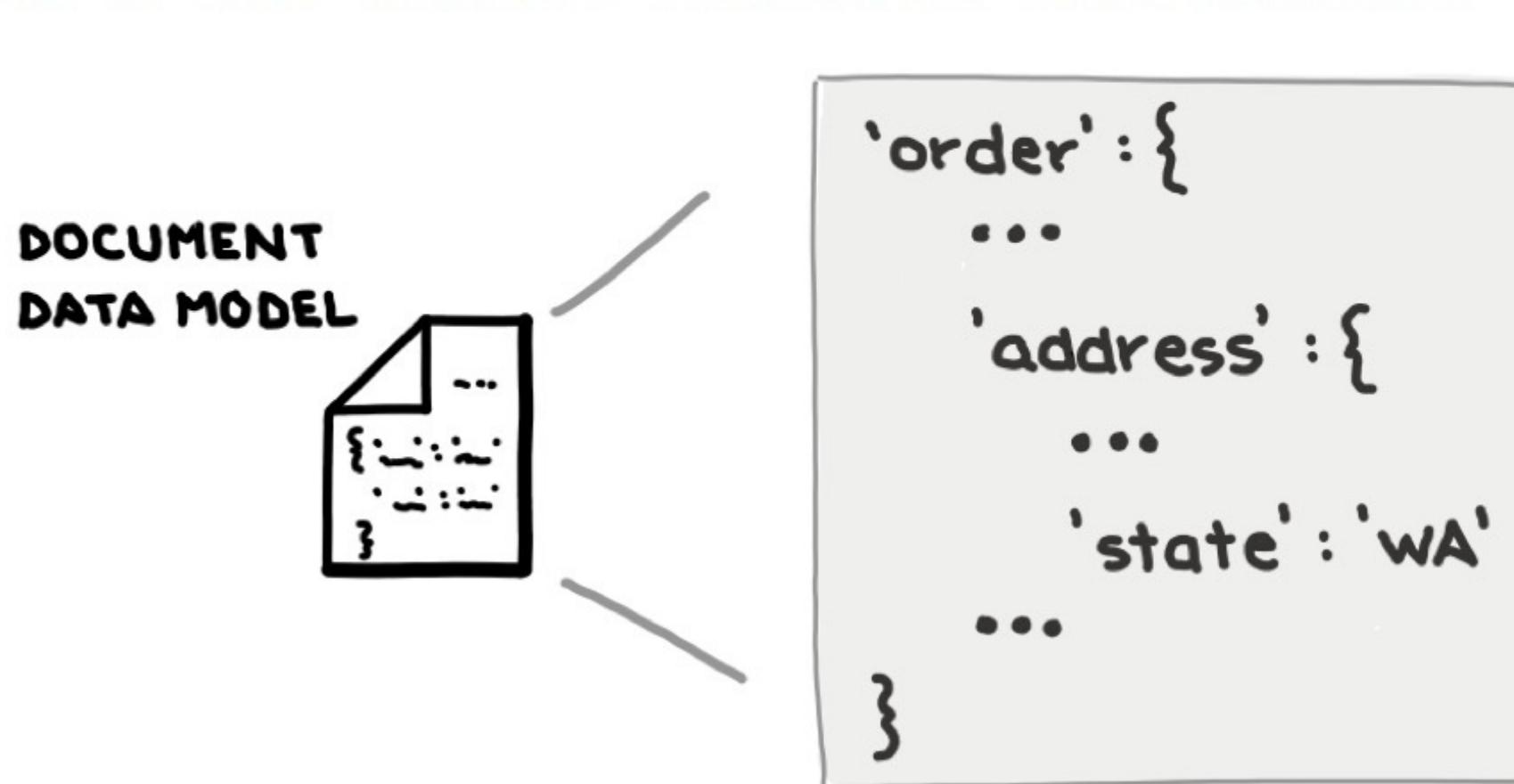


3¢ PER GB/MO

WHAT IS AN IMMUTABLE JOURNAL?



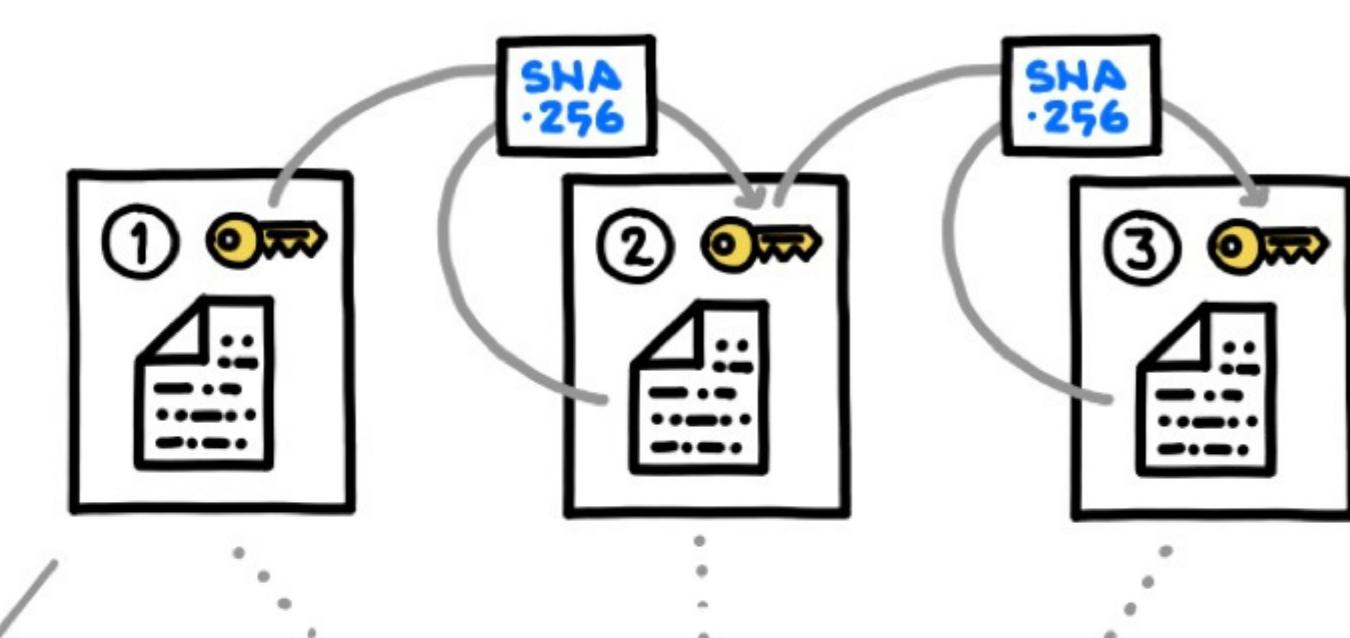
How is Data Stored/Queried?



FOR SYSTEM OF RECORD APPS

- MANUFACTURING • HR
- INSURANCE • FINANCE
- SUPPLY CHAIN • PAYROLL

CHANGES IMMEDIATELY DETECTABLE



TRANSACTIONS RECORDS ARE CRYPTOGRAPHICALLY VERIFIABLE

ENGINES

- ▶ ORACLE
 - ▶ SQL SERVER
 - ▶ MYSQL
 - ▶ MARIADB
 - ▶ POSTGRESQL
 - ▶ AURORA
 - MySQL
 - PostgreSQL
- based on
- commercial
 - open source
 - cloud native by Amazon

PRICING

COSTS: (Oregon)

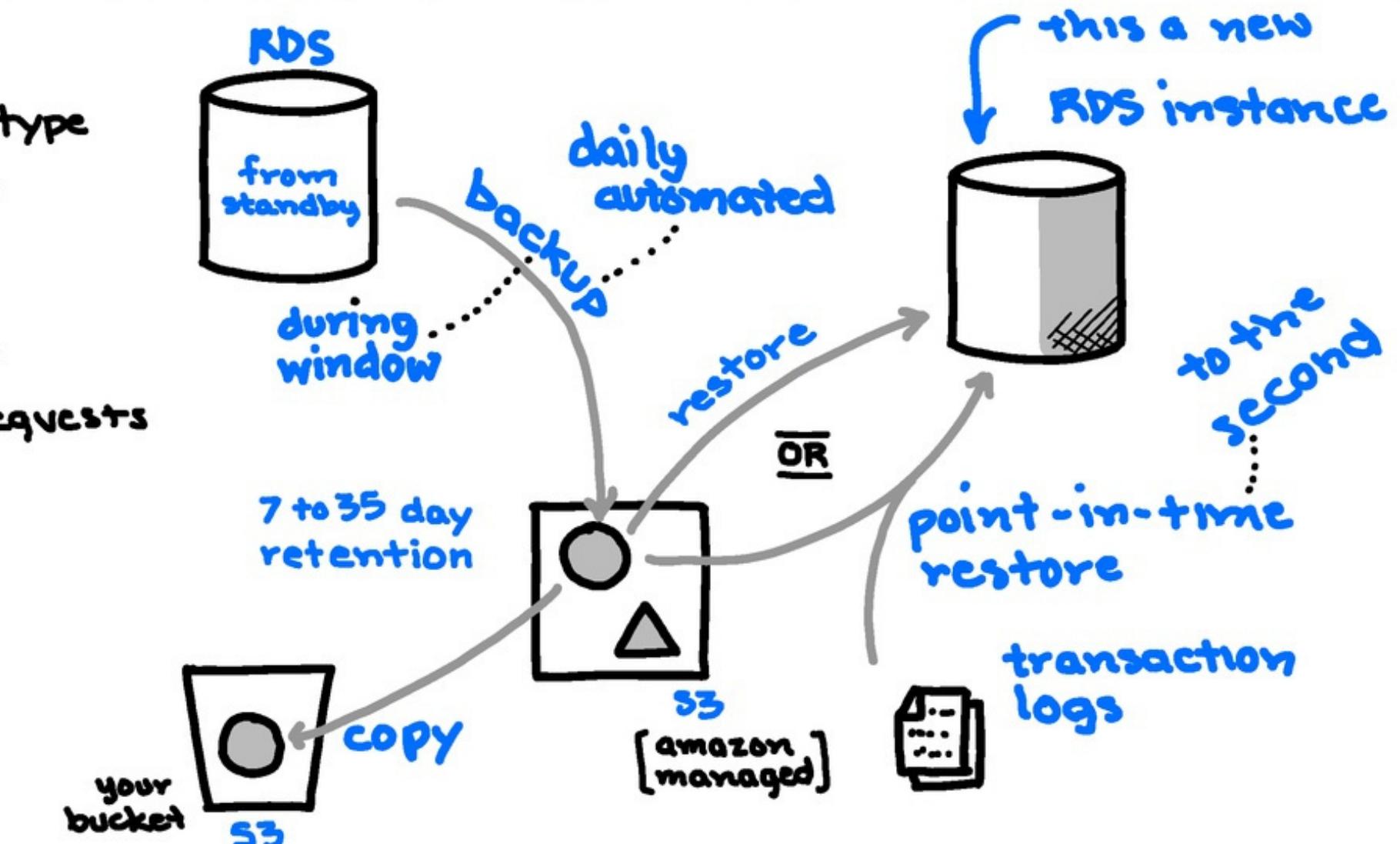
DB INSTANCE HOURS per engine/instance type
billed hourly, round up

STORAGE GP2 ... 11.5¢/GB/Mo
101 ... 12.5¢/GB/Mo + 10¢/10/Mo
Mag ... 10¢/GB/Mo + 10¢/MM Requests

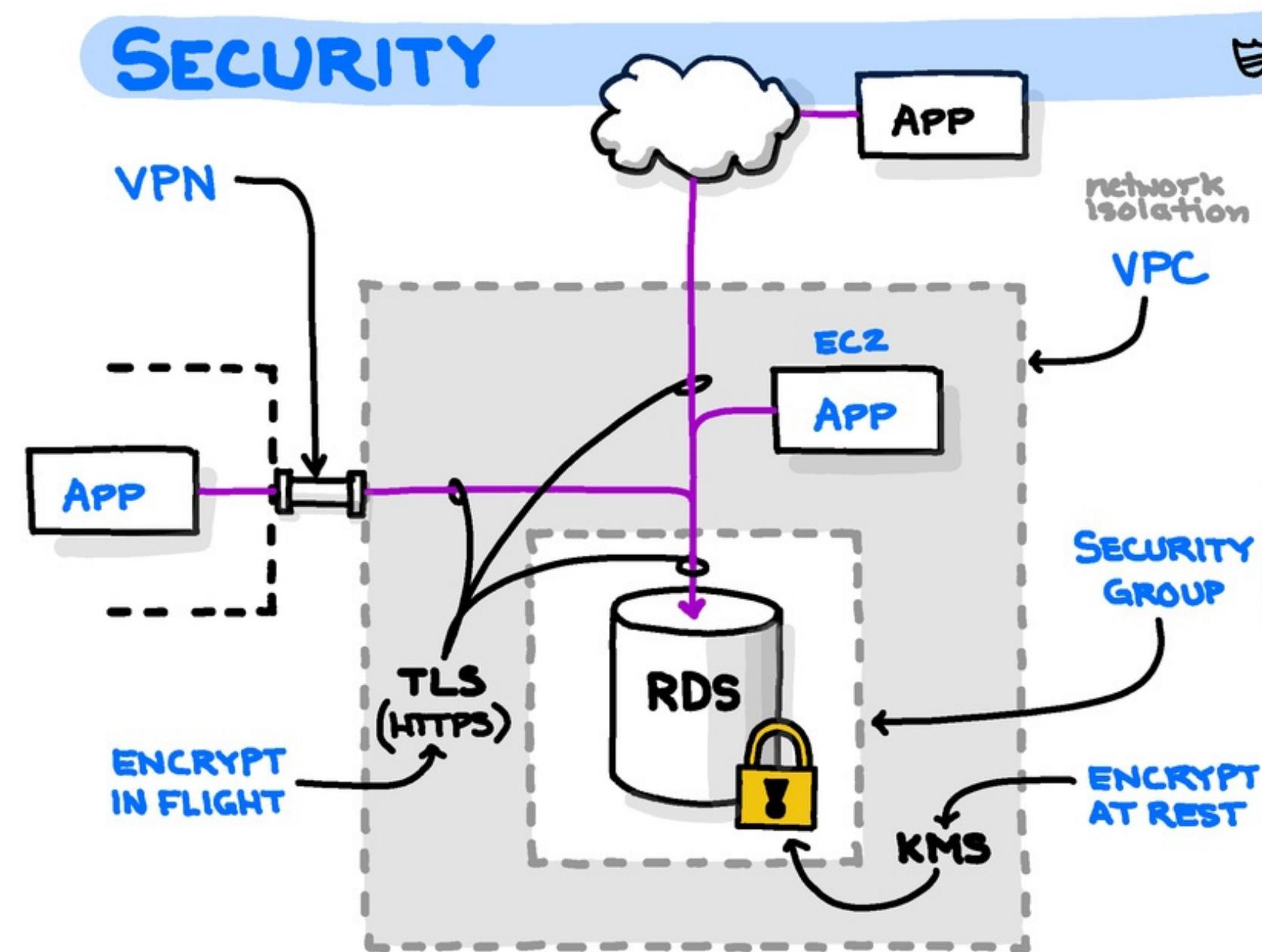
BACKUP STORAGE 100% of DB size free
9.5¢/GB/Mo after

DATA TRANSFER varies by destination

BACKUPS

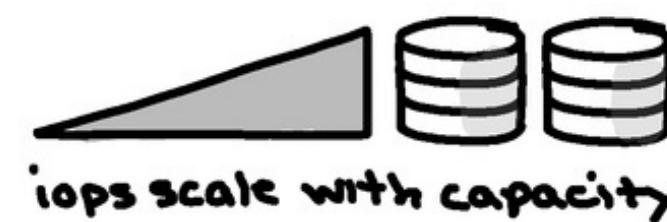


SECURITY

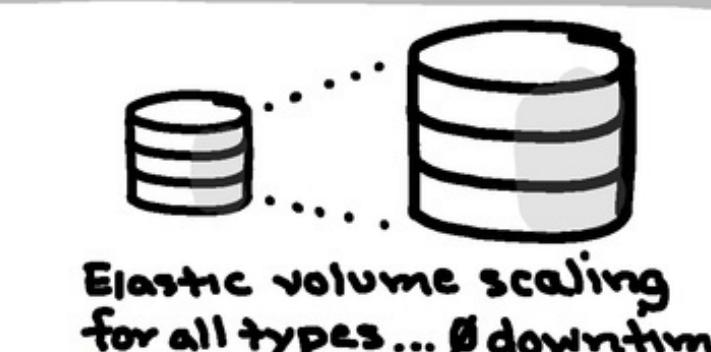


STORAGE

GP2 General Purpose
SSD 16TB Max

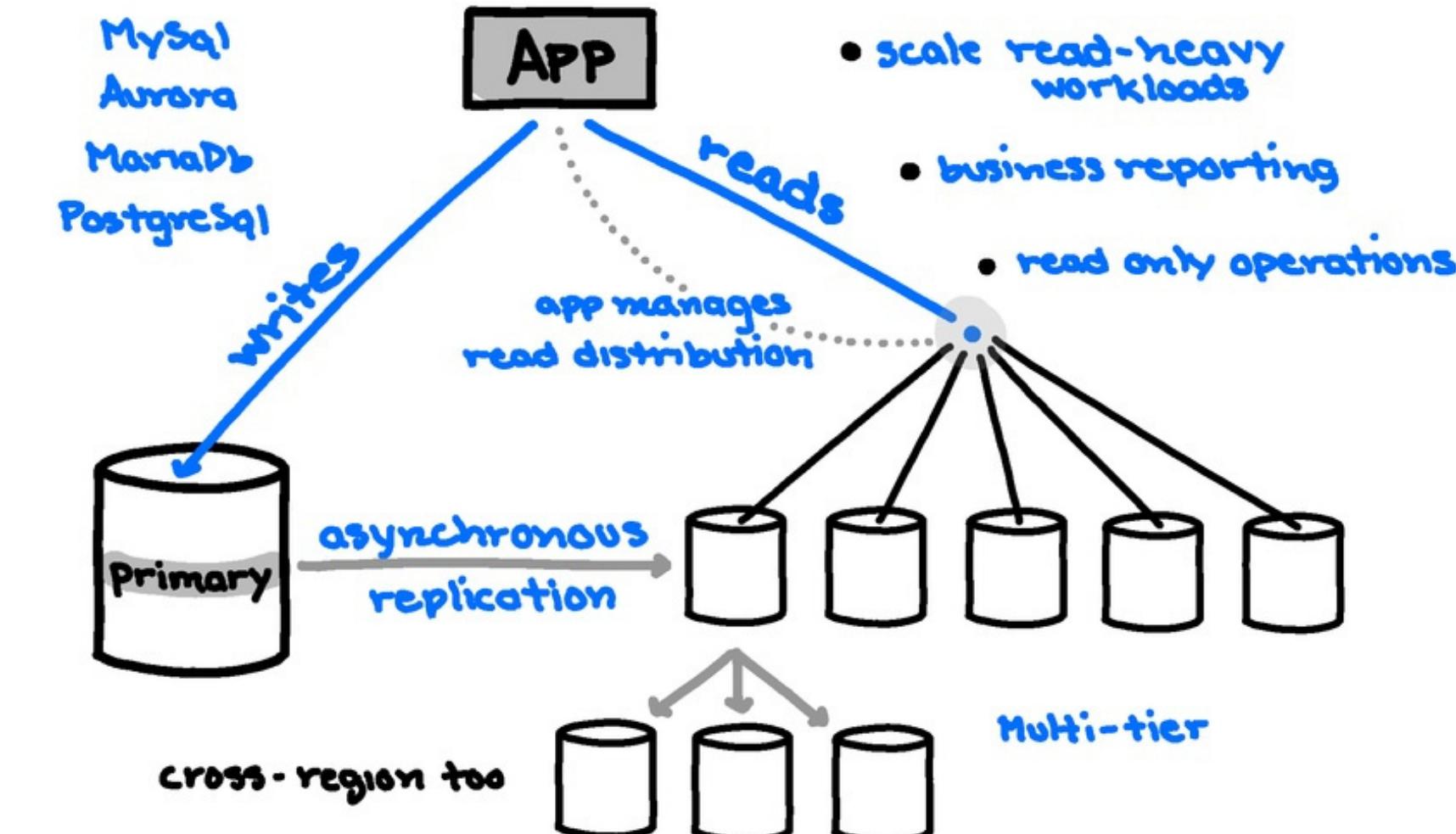


IOP1 Provisioned IOPS
SSD 16TB Max
30K IOPS



Magnetic Legacy 1TB Max

READ REPLICAS



INSTANCES

SMALL WORKLOADS

T2
burst

1 vCPU
1 GB RAM
8 vCPU
32 GB RAM

CPU INTENSIVE WORKLOADS

M3/M4
general purpose

2 vCPU
8 GB RAM
64 vCPU
256 GB RAM

QUERY INTENSIVE WORKLOADS

R3/R4/X1(e)
mem optimized
2 vCPU
16 GB RAM
128 vCPU
3904 GB RAM

STORAGE CLASSES

STANDARD
— and —
INFREQUENT ACCESS

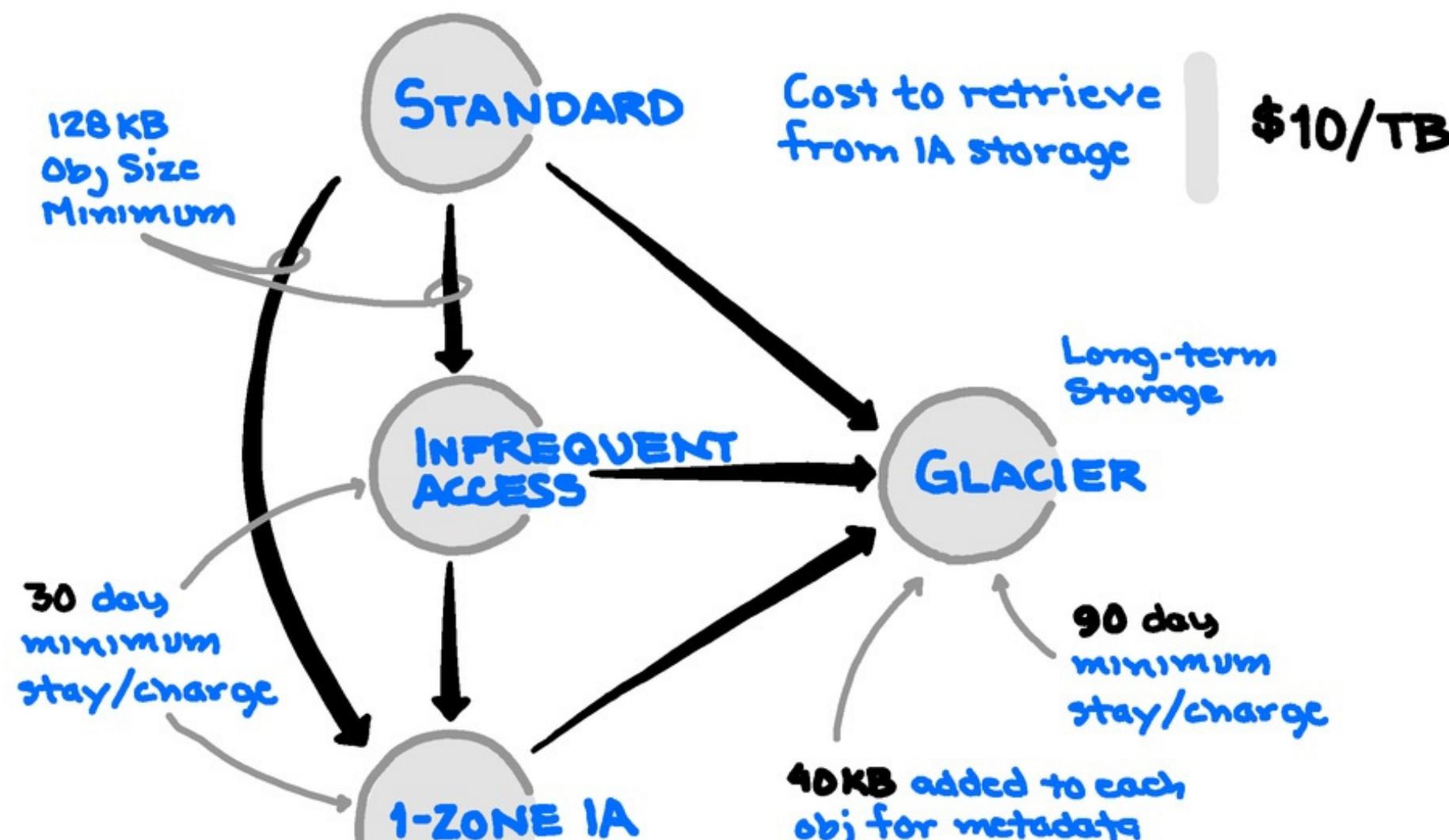
11 NINES DURABILITY

1-ZONE INFREQUENT ACCESS

11 NINES DURABILITY

99.5% / YR AVAILABILITY

STORAGE CLASS TRANSITIONS



SERVER SIDE ENCRYPTION

AES - 256
master key rotation
AWS managed KEYS

audit trail
KMS managed KEYS
more security controls

SELF managed KEYS
you own it!



[all pricing from US West (Oregon)]

REQUESTS (\$USD per 1,000,000 requests)



	GET	POST	PUT	DELETE	SELECT	Other
Standard	0.4	5.0	5.0	5.0	5.0	0.4
Infrequent Access	1.0	10.0	10.0	10.0	1.0	1.0
1-Zone IA	1.0	10.0	10.0	10.0	1.0	1.0

Storage class transitions : 1¢ per 1,000 objects
Transition to Glacier : 5¢ per 1,000 objects

STORAGE

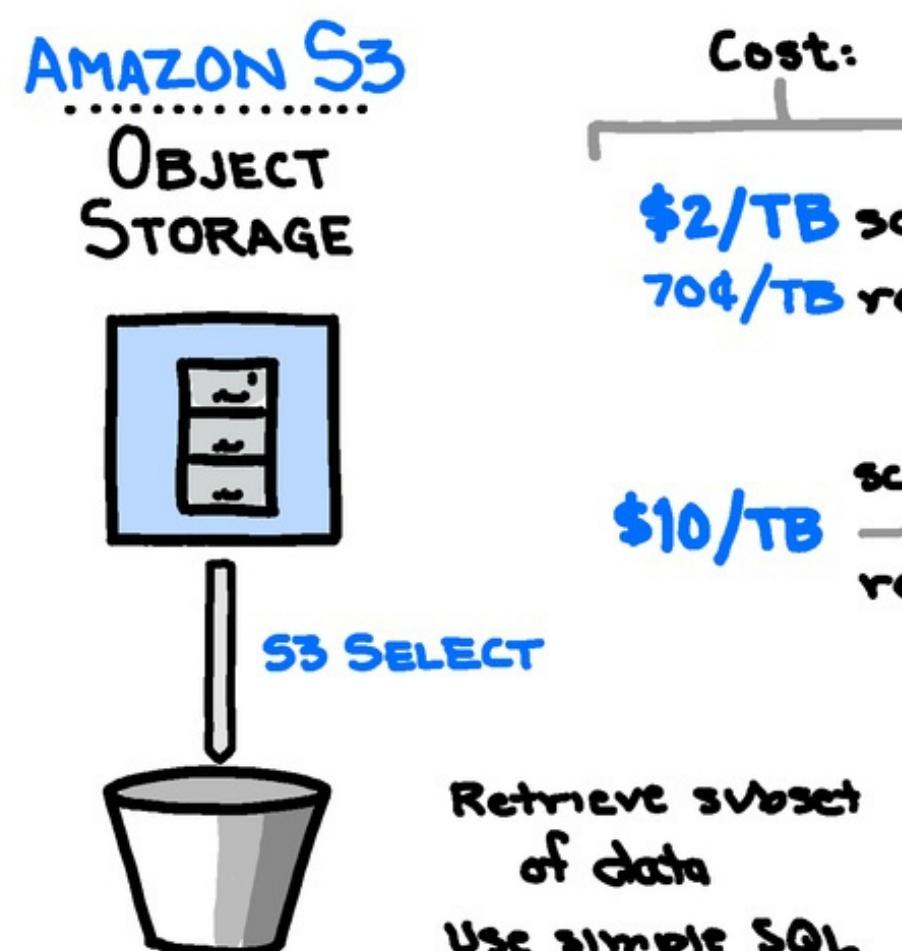
	TB	\$
[0, 50]	2.3¢	
[51, 500]	2.2¢	
[501, ∞)	2.1¢	

per GB/Mo

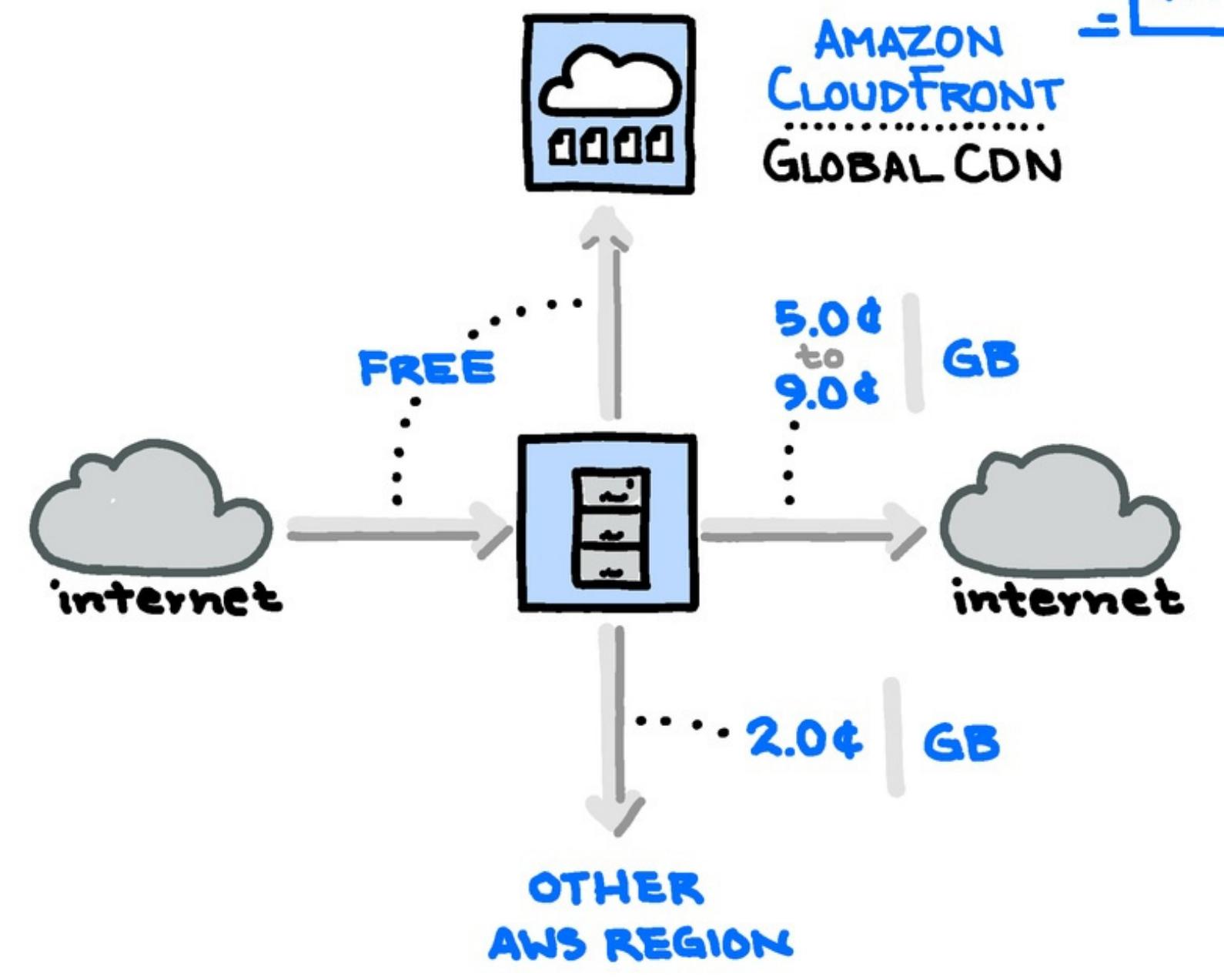
INFREQUENT ACCESS
STD 1-ZONE
GLACIER

Cost:
\$2/TB scanned
70¢/TB returned
\$10/TB scanned or returned

Standard Storage
IA Storage



DATA TRANSFER



OBJECT LOCKING

NEW
PREVENT OBJECT DELETION

GOVERNANCE

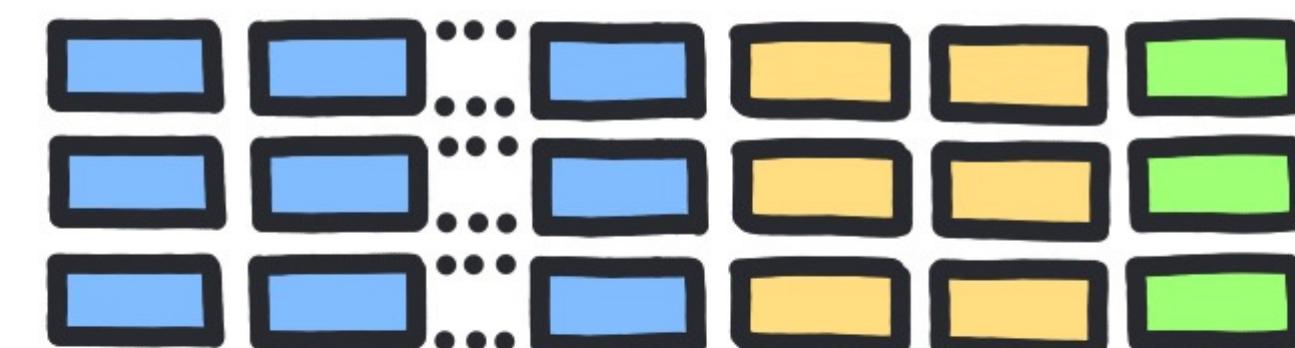
CAN'T DELETE TIL DATE

COMPLIANCE

NEVER DELETE (EVER)

TABLE

DIMENSIONS
up to 128/table

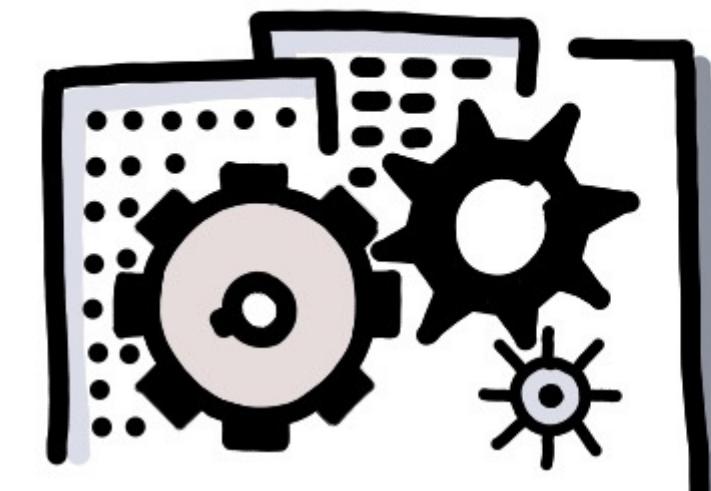


TIMESTAMP

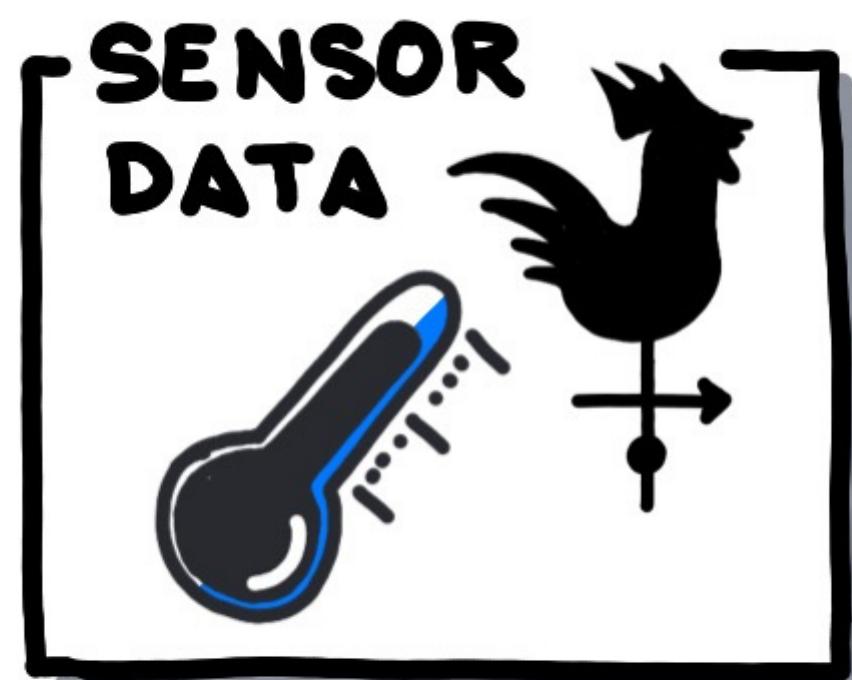
str, bool,
big int, double

MEASURE NAME & VALUE:TYPE

TIME SERIES
DATA



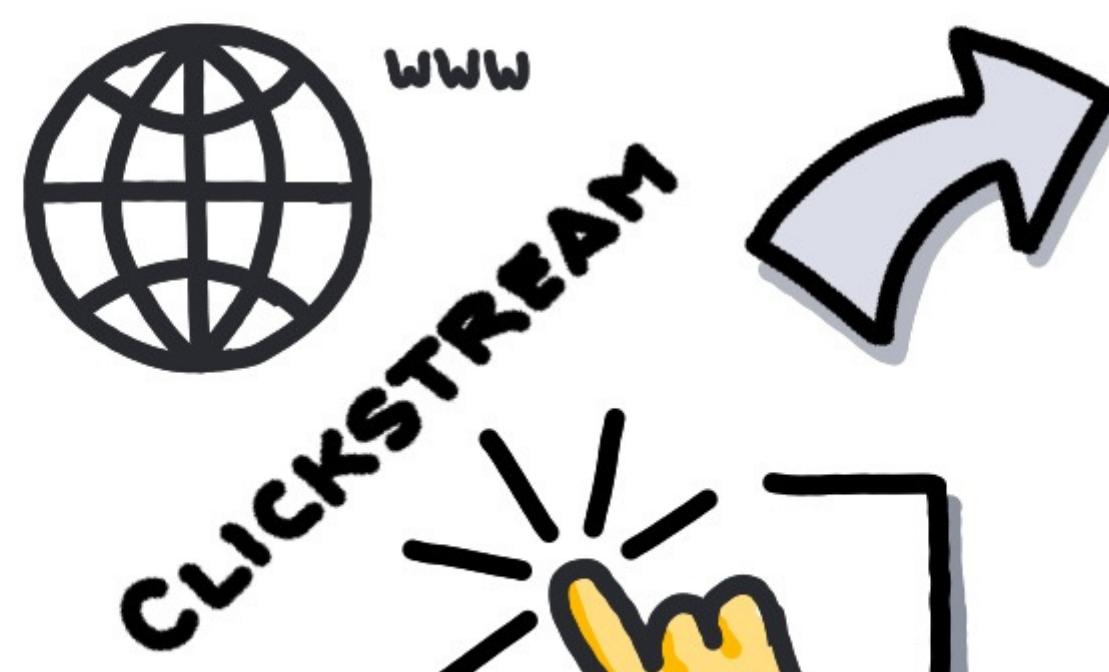
INDUSTRIAL
TELEMETRY



SENSOR
DATA



WEATHER



WWW

CLICKSTREAM



DATA IS
ALWAYS
ENCRYPTED



→ timestamped
→ deduplicated



SERVER
STATS



MEMORY
STORE

Monitoring
Analytics



FAST
QUERIES

1 hr → 1 yr
RETENTION



SSD
STORE

AI/ML
Biz Intel



USES
a subset
of SQL



MAGNETIC
STORE

HISTORICAL
QUERIES

1 day → 20 yr
RETENTION



TIME-BASED
RETENTION
POLICY

TIMESTREAM



EVENTBRIDGE

SERVERLESS EVENT BUS

EVENT

S·O·U·R·C·E·S

SaaS Partners



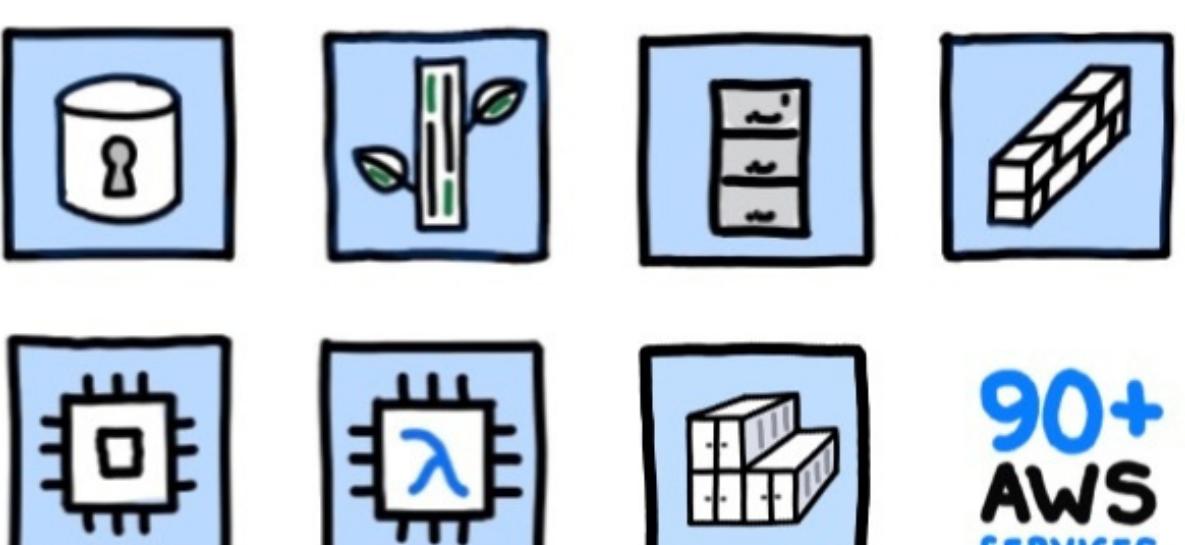
...and more

Your Apps



...yes, more

AWS Services



many more

90+ AWS SERVICES

C·O·S·T

CUSTOM &
SaaS EVENTS

\$1 Million
Published

AWS
EVENTS
free

EVENT

B·U·S·E·S

SaaS EVENTS



PARTNER

multiple

YOUR APP EVENTS



CUSTOM

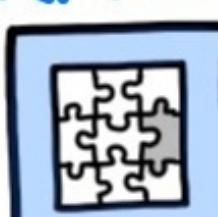
single

AWS SERVICE EVENTS



DEFAULT

CLOUD FORMATION



DEPLOY



CONFIG

MONITOR



EVENT



AUDIT

CLOUDTRAIL



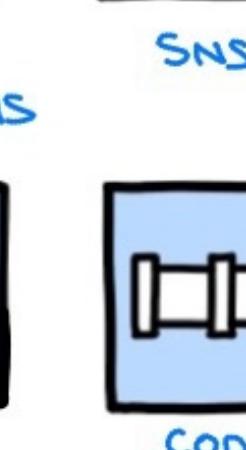
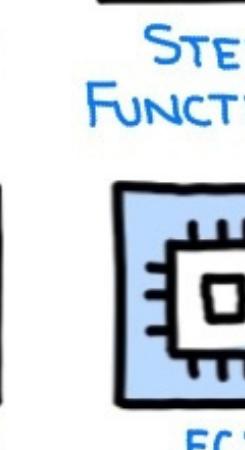
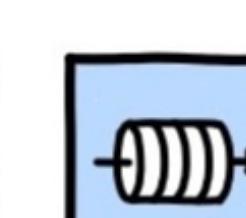
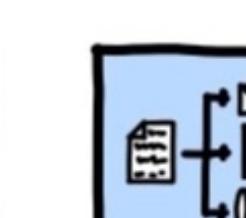
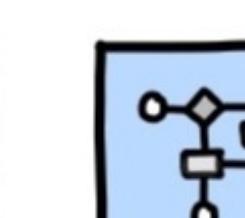
SECURE



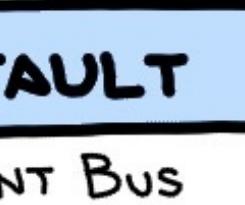
IAM

EVENT

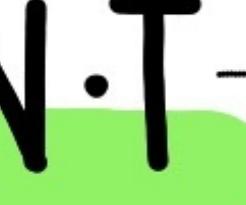
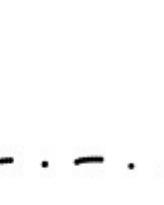
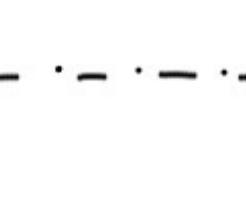
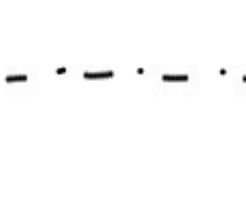
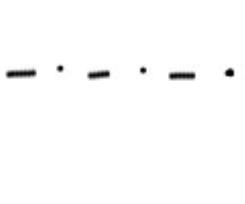
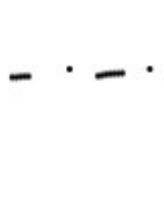
E·V·E·N·T·S



& MORE



OVER 15 TARGETS



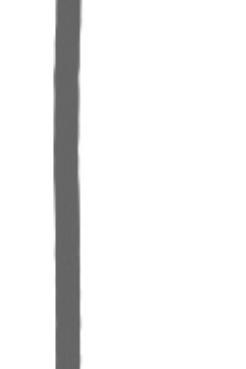
different account

EVENT

E·V·E·N·T

DETAILS

SOURCE
TIME
ACCOUNT
DETAIL
...



COMPLIANT

DOD

FedRamp

ISO

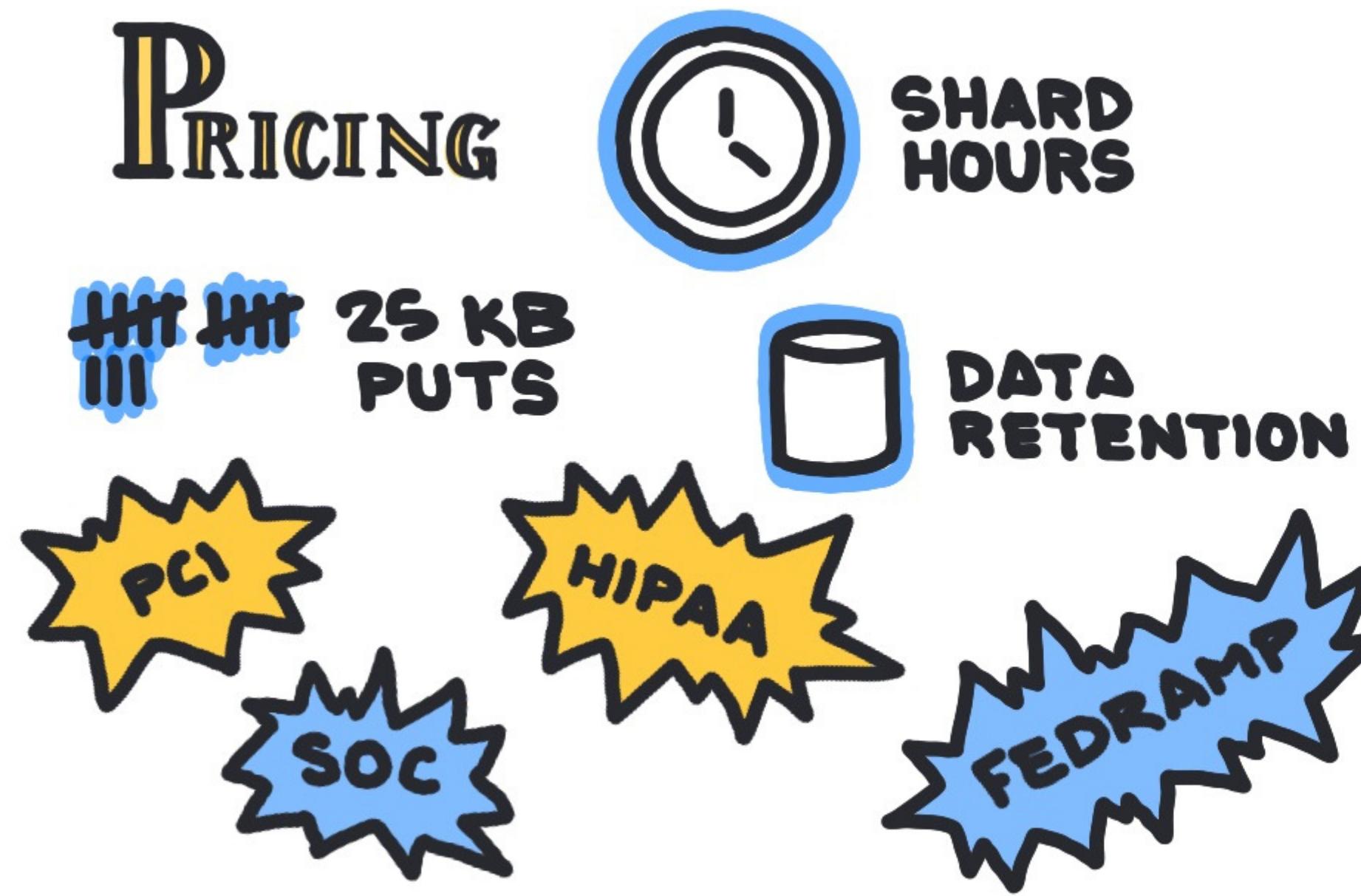
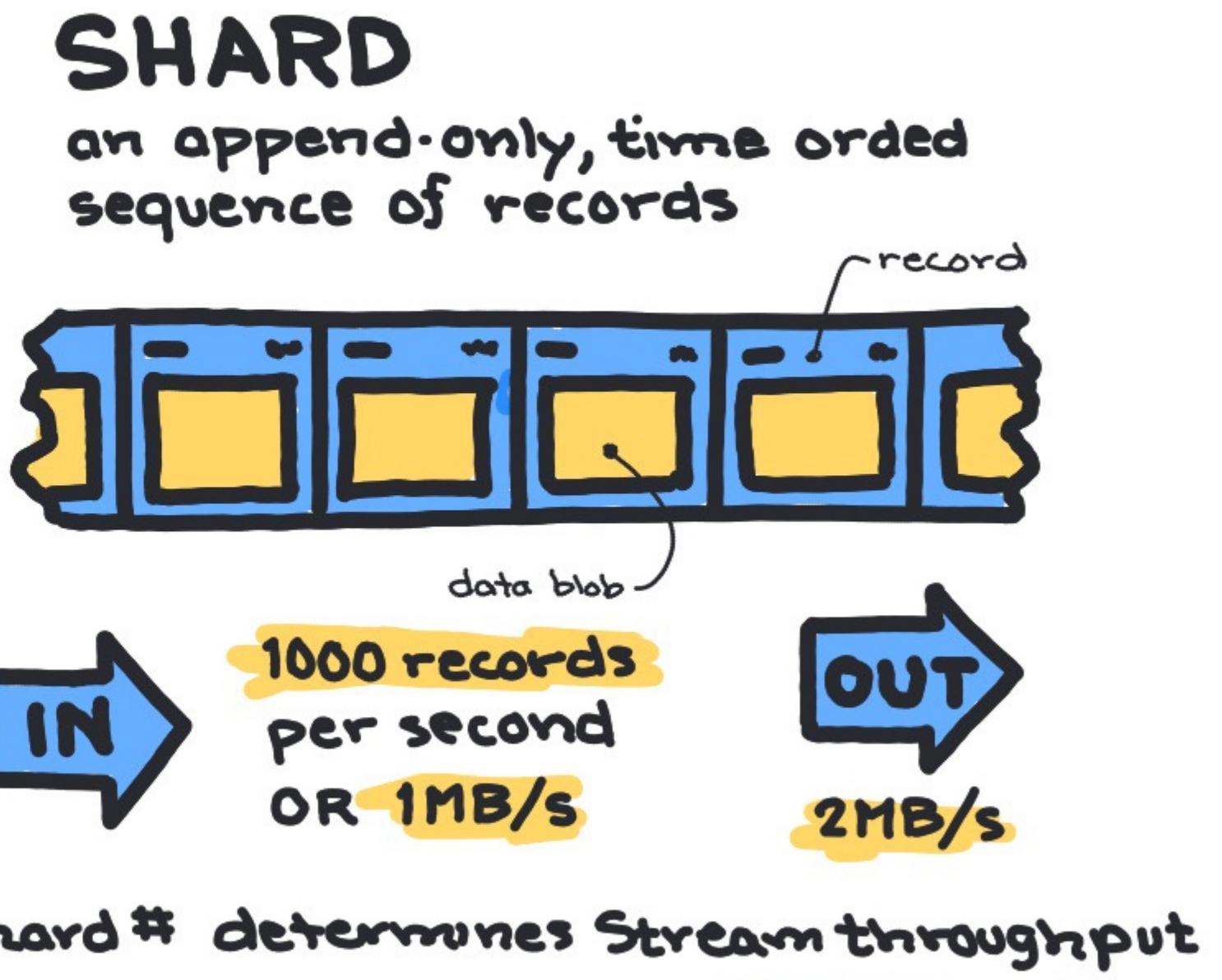
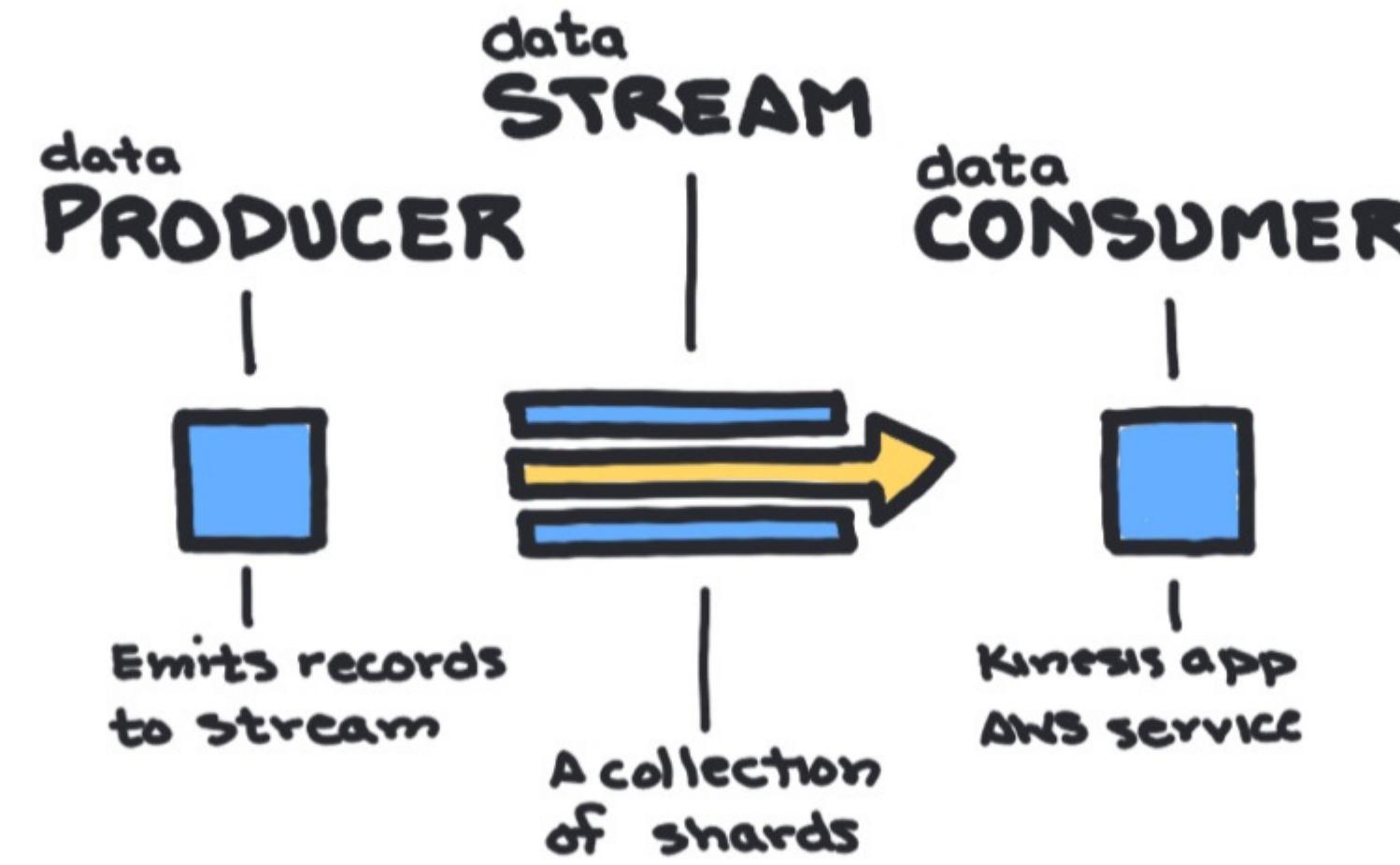
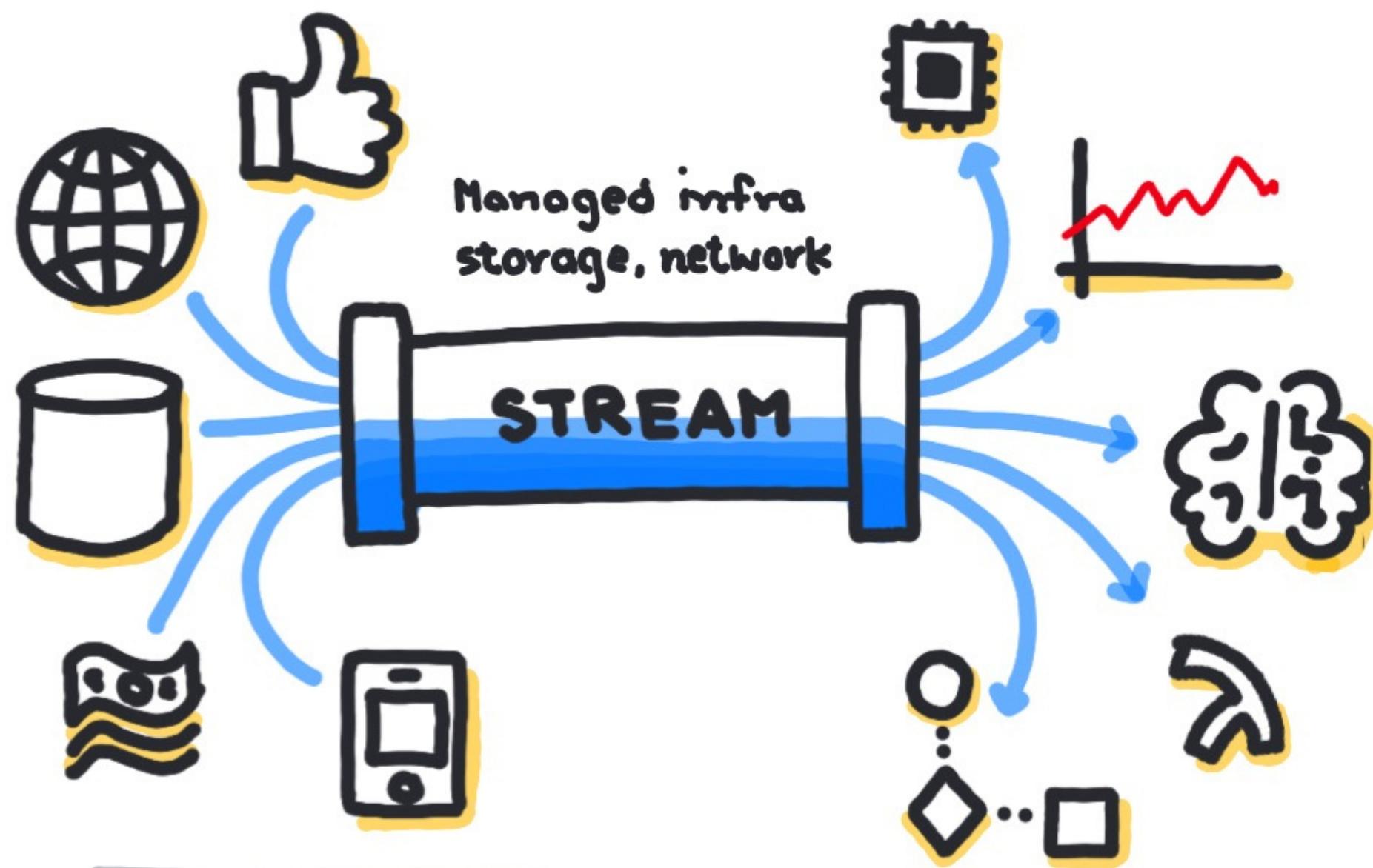
GDPR

SOC

HIPAA

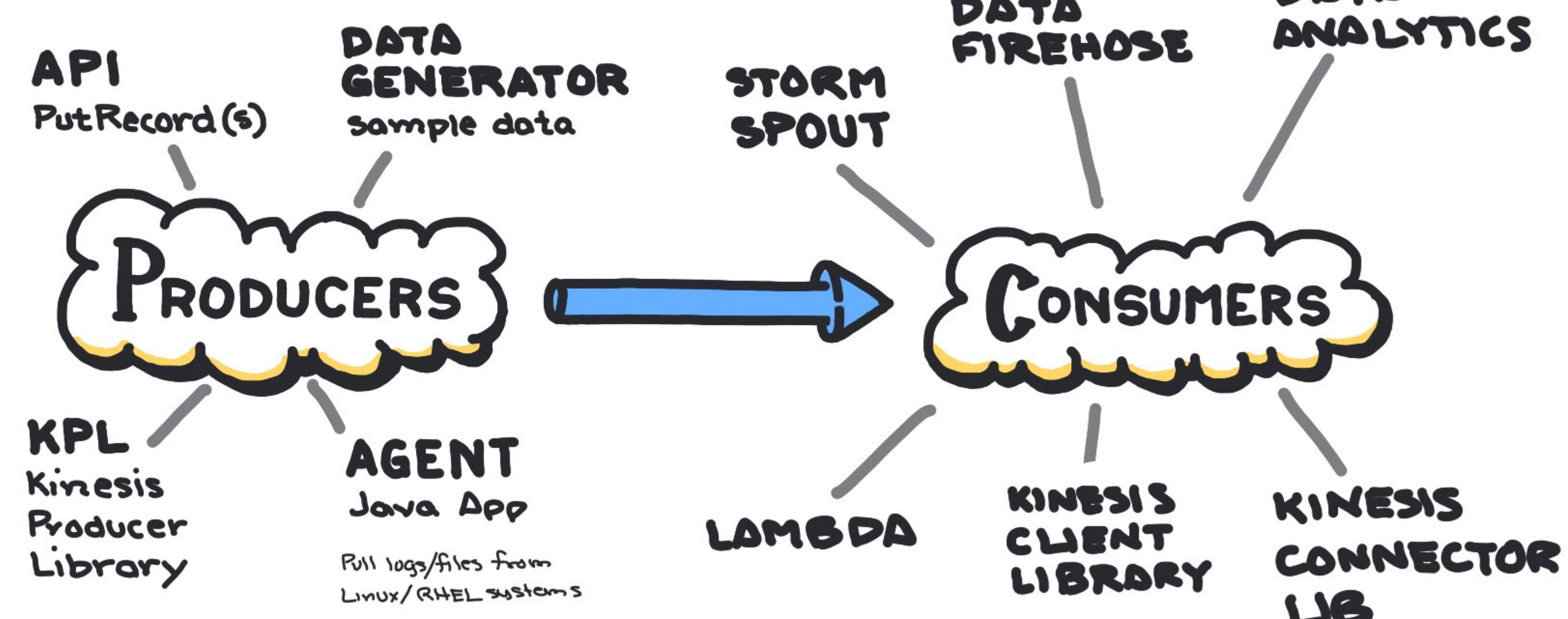
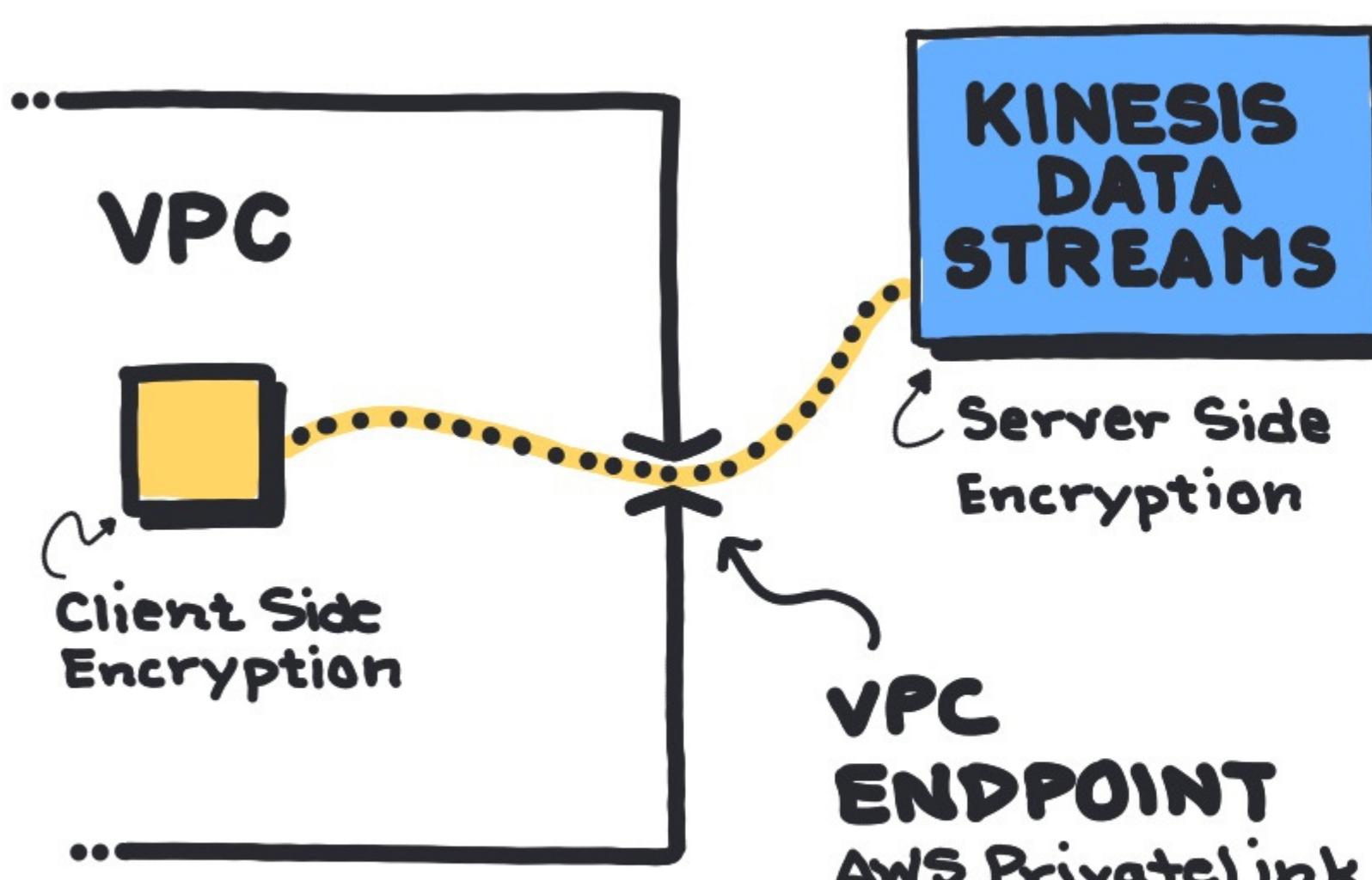
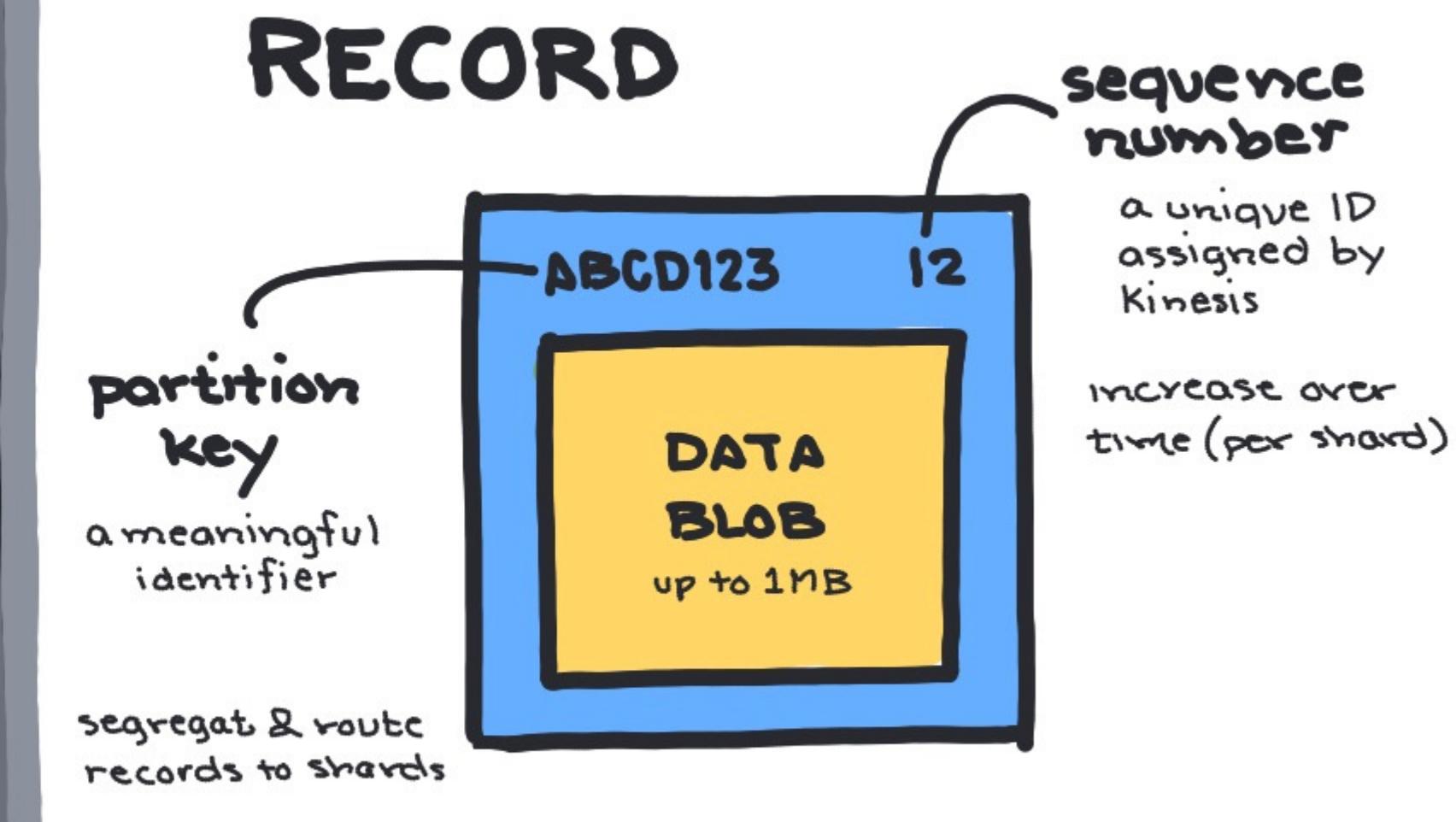
Eligible

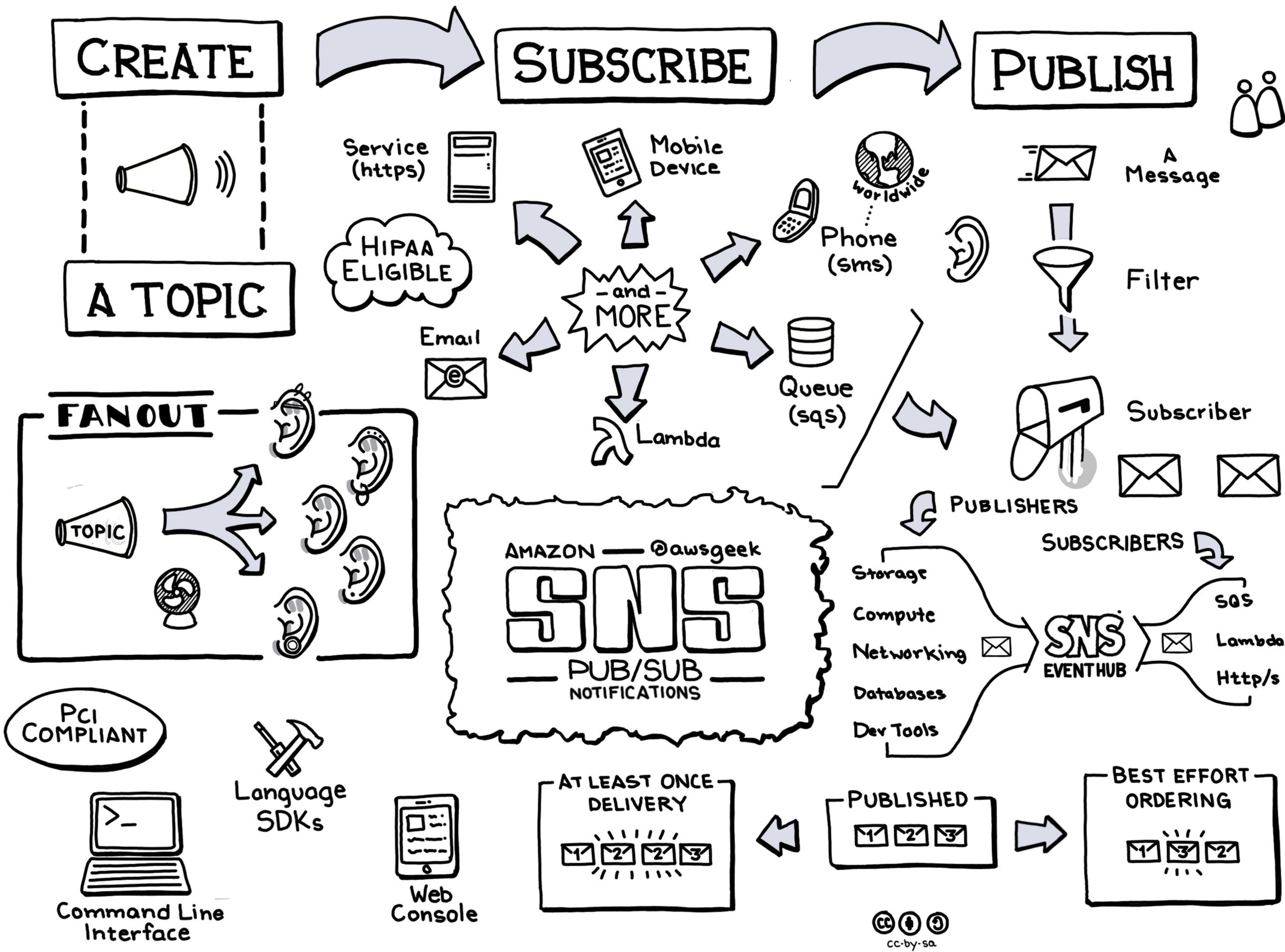
FedRamp



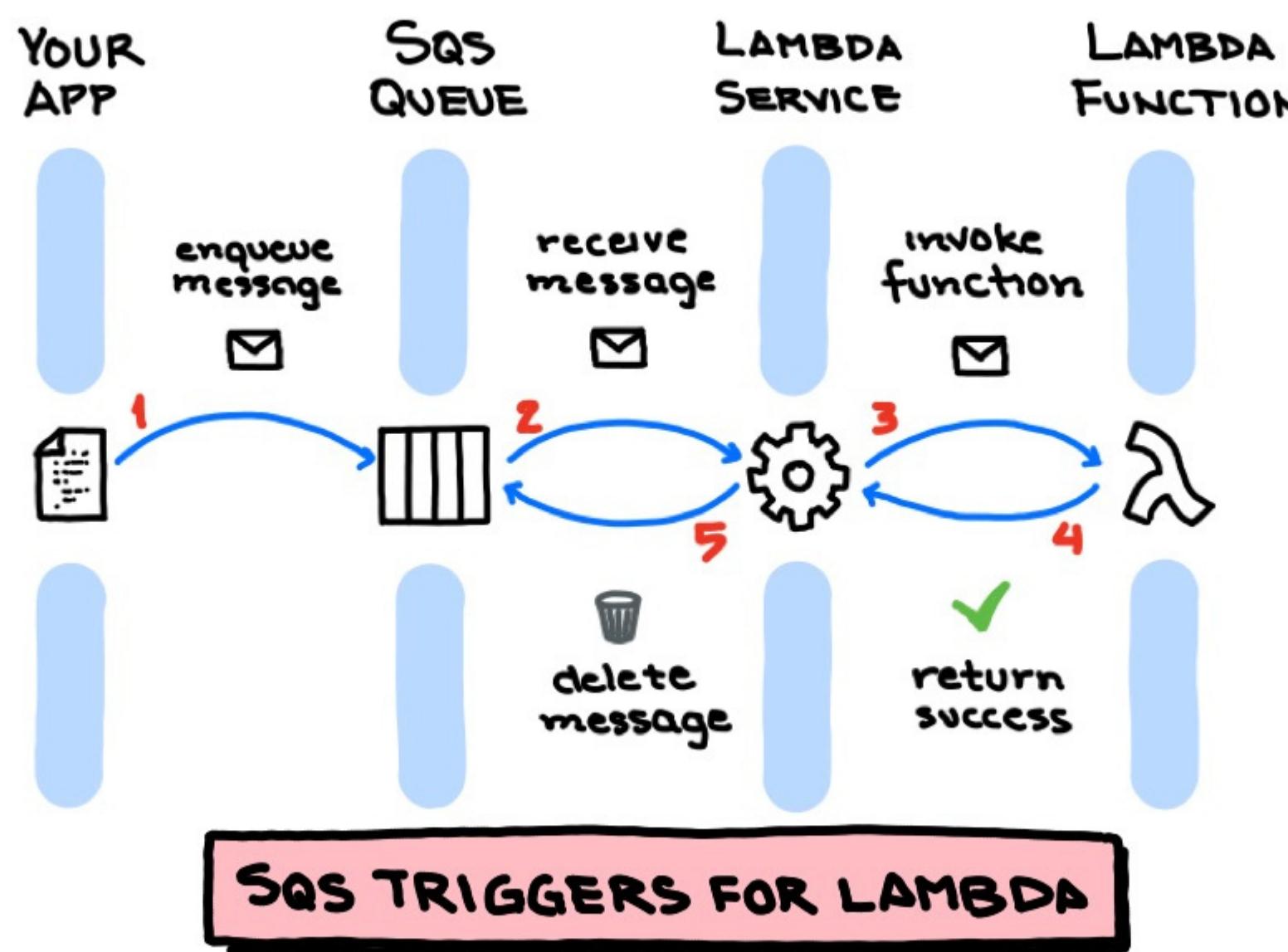
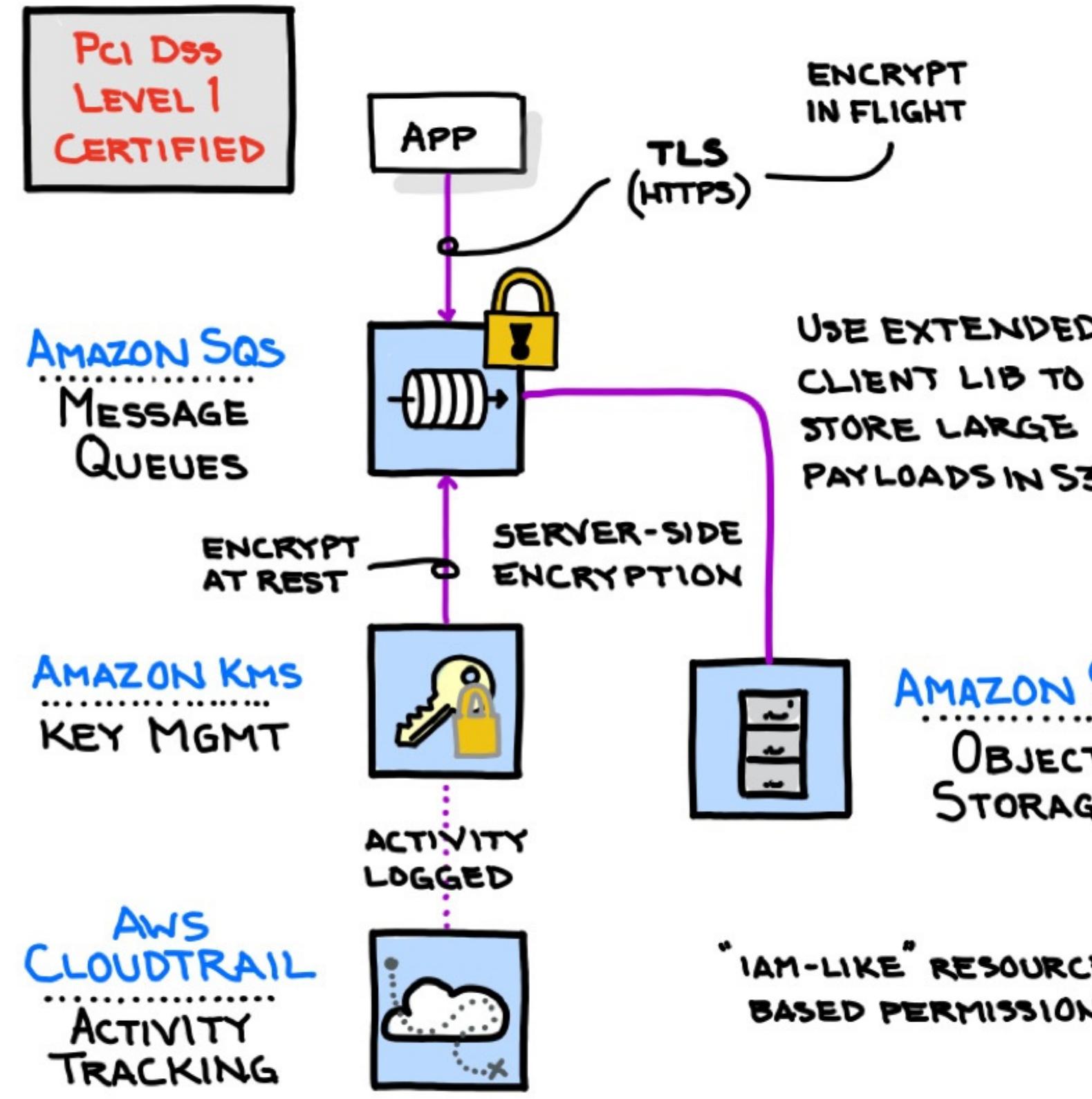
DATA KINESIS STREAMS

STREAM • DATA • AT • SCALE





Security



Pricing

each 64K chunk of payload counts as 1 request

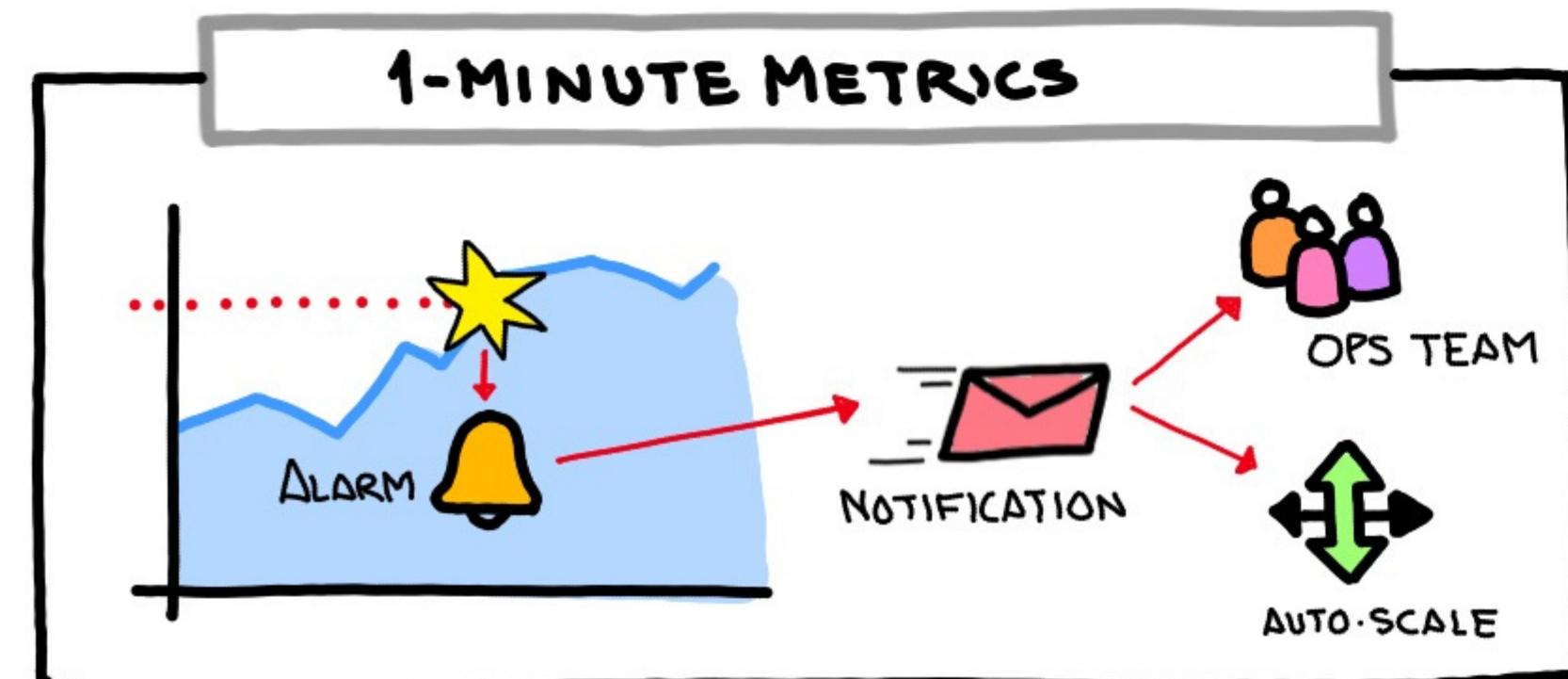
additional costs for S3 + KMS

Standard ... 40¢ per MM requests

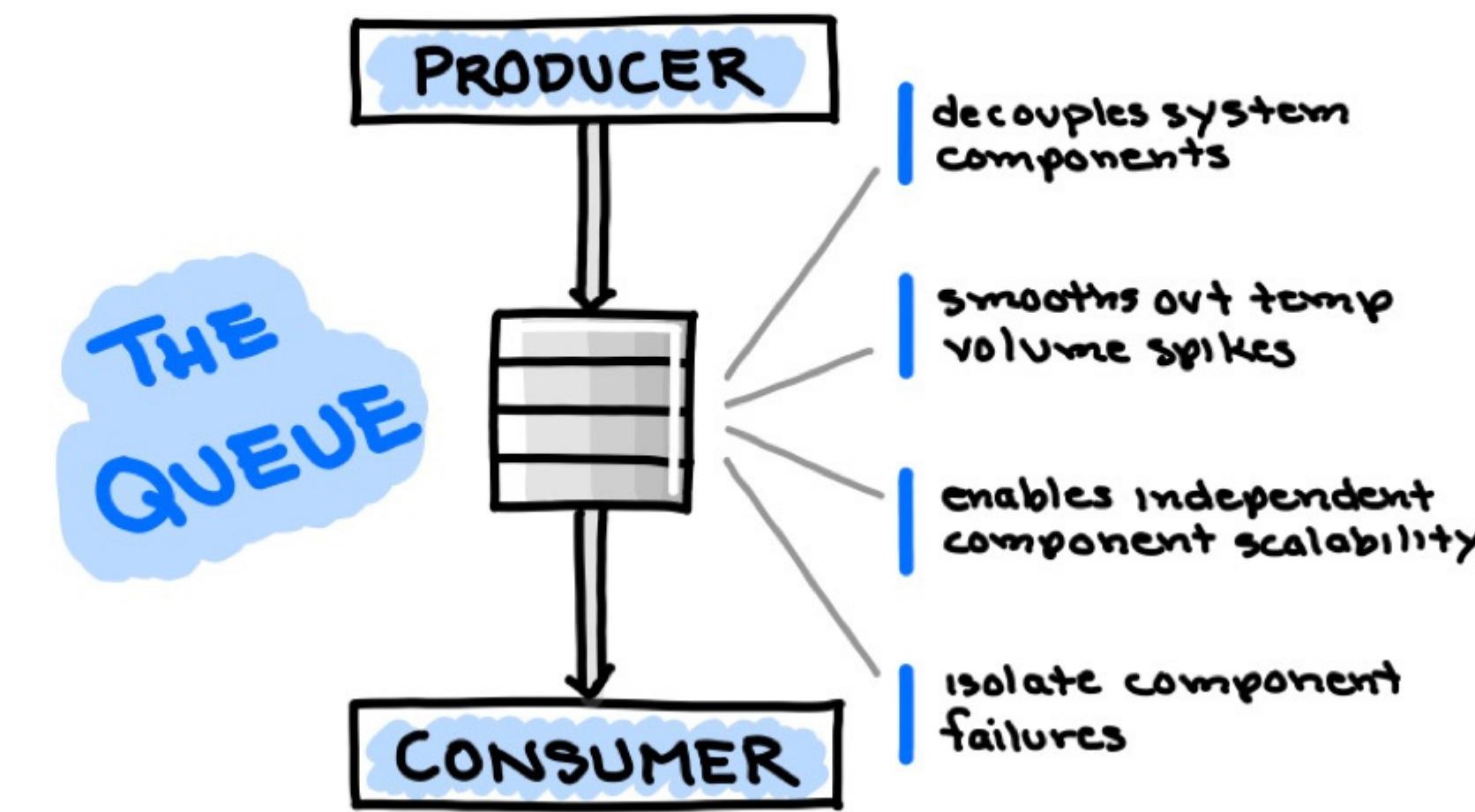
FIFO 50¢ per MM requests

Send, receive, delete, visibility APIs at FIFO rates, others at standard rate

data transfer starts at 90¢/GB



APP INTEGRATION FAMILY



Limits

MESSAGE RETENTION PERIOD

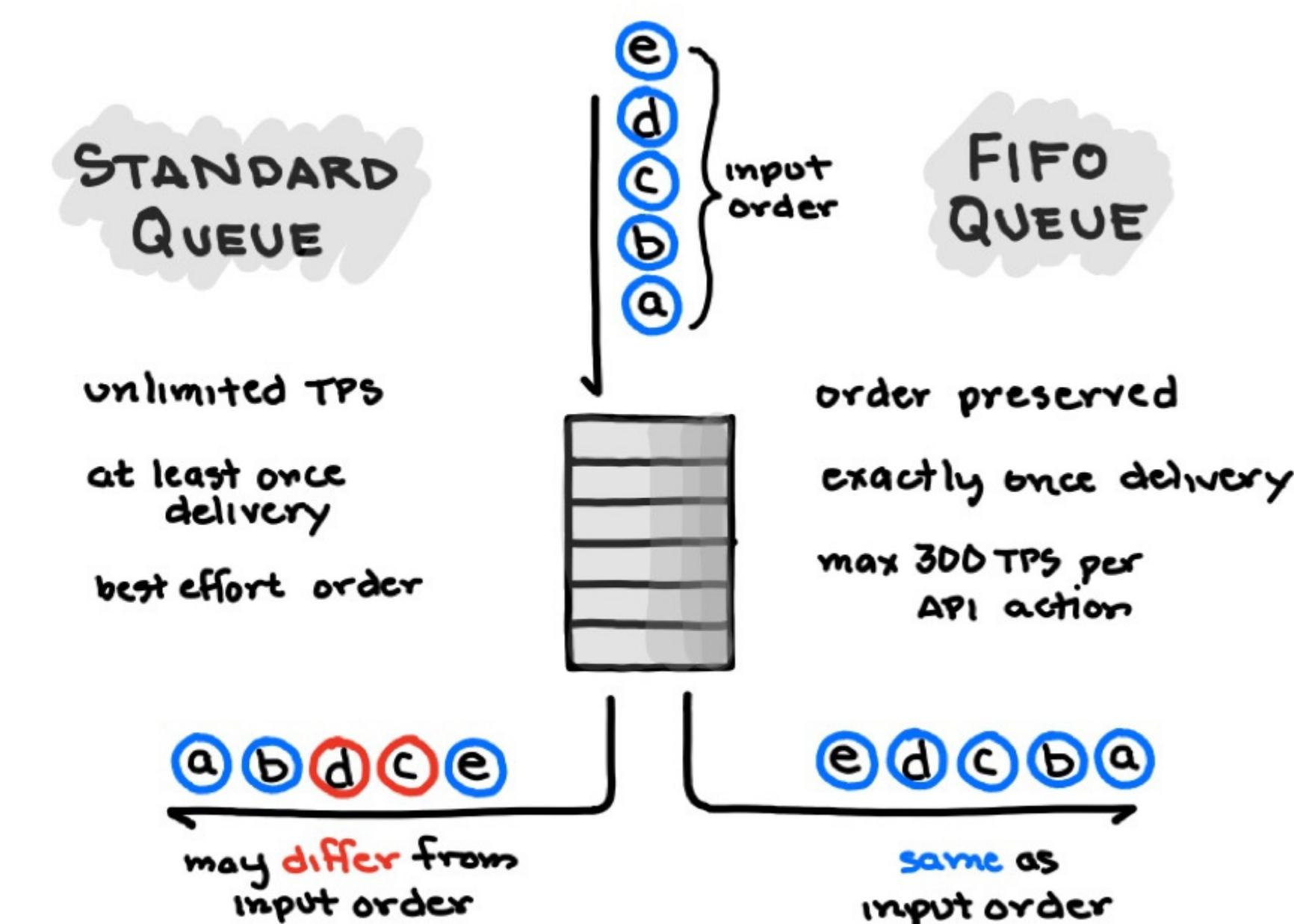
MIN: 1 MIN MAX: 14 DAYS

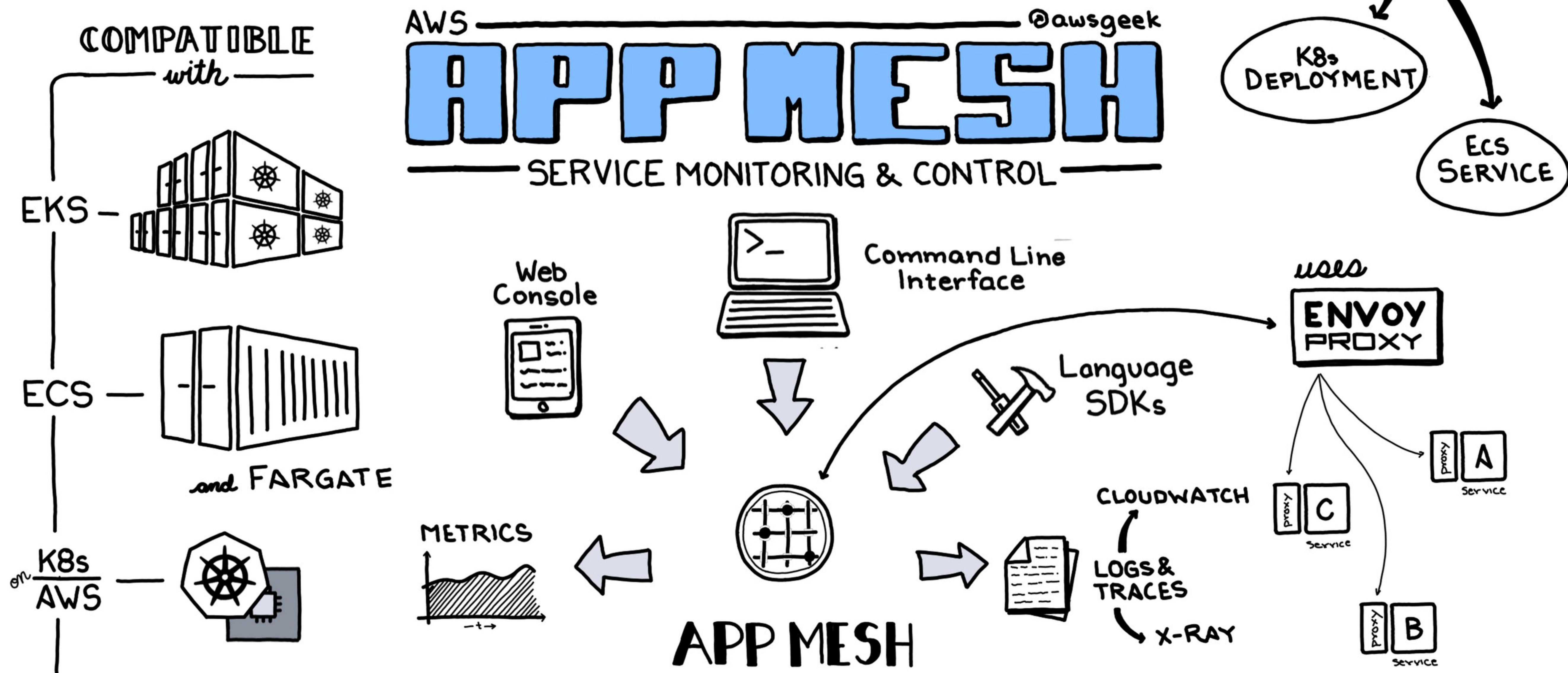
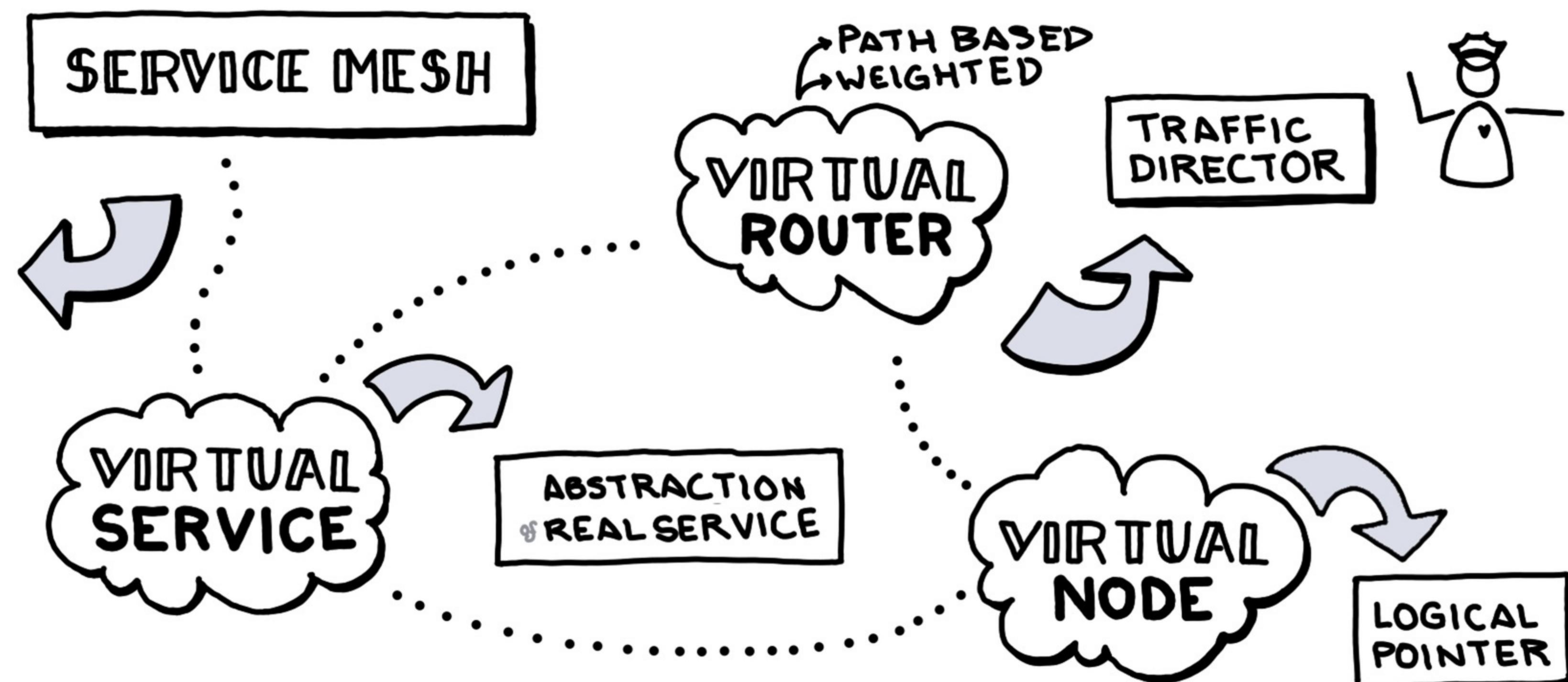
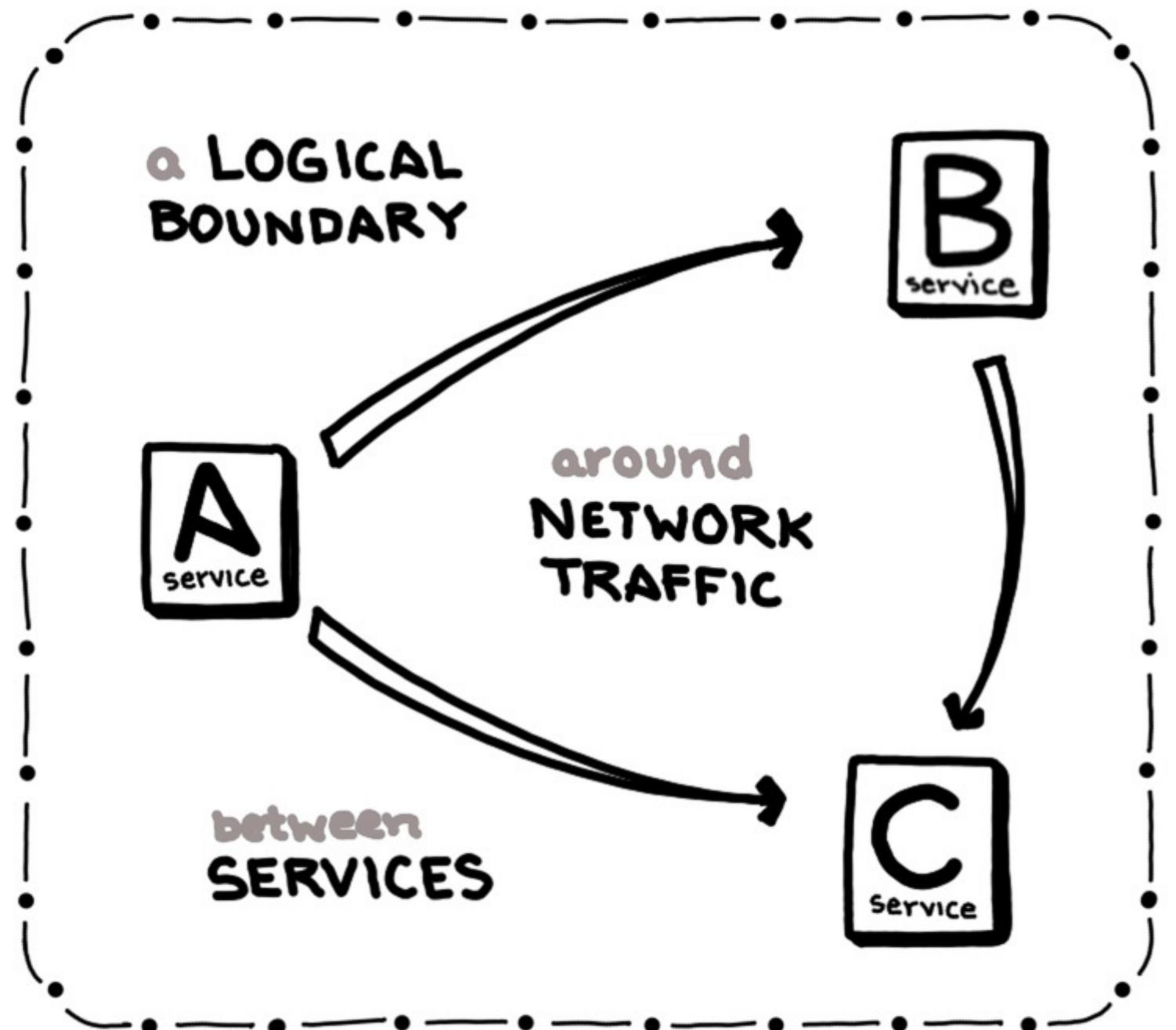
MAXIMUM MESSAGE SIZE

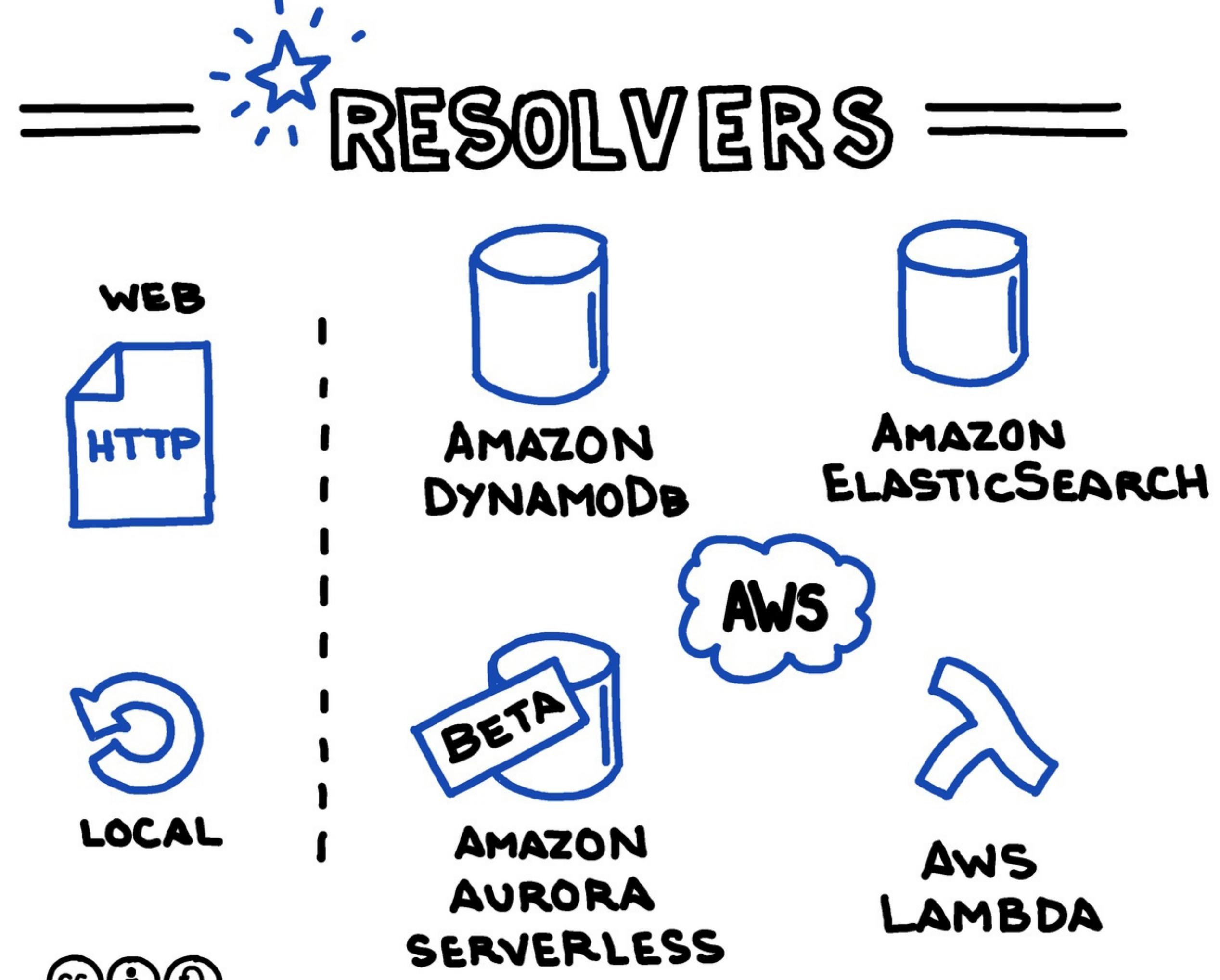
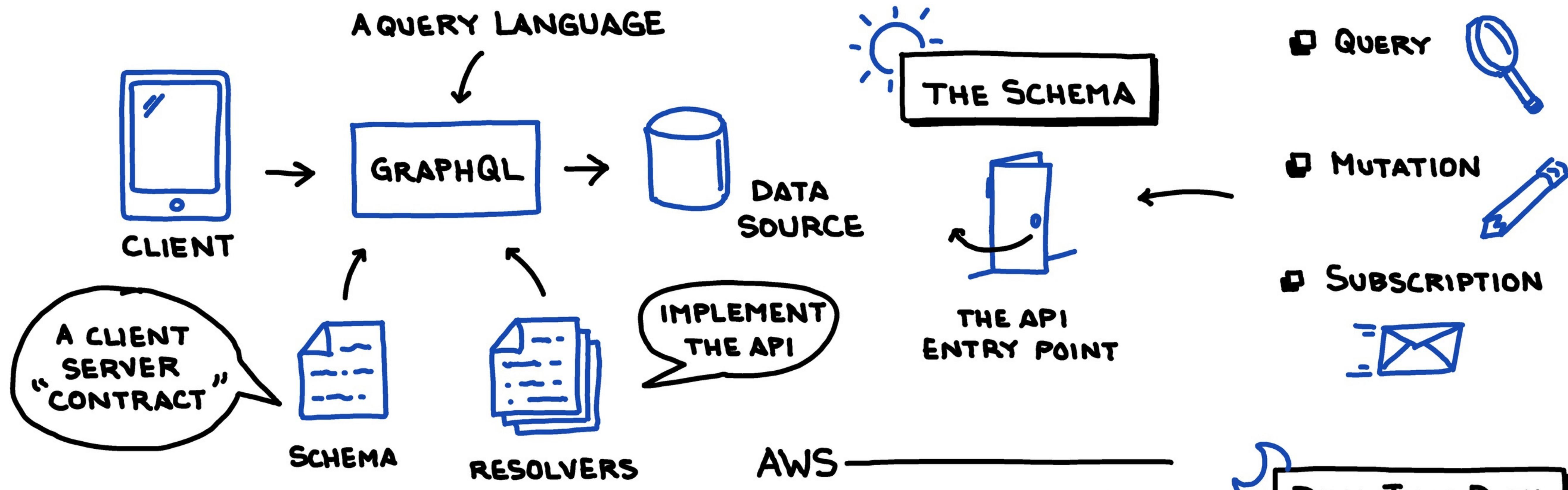
MIN: 1 KB MAX: 256 KB

MAXIMUM INFLIGHT MESSAGES

STD: 120K FIFO: 20K







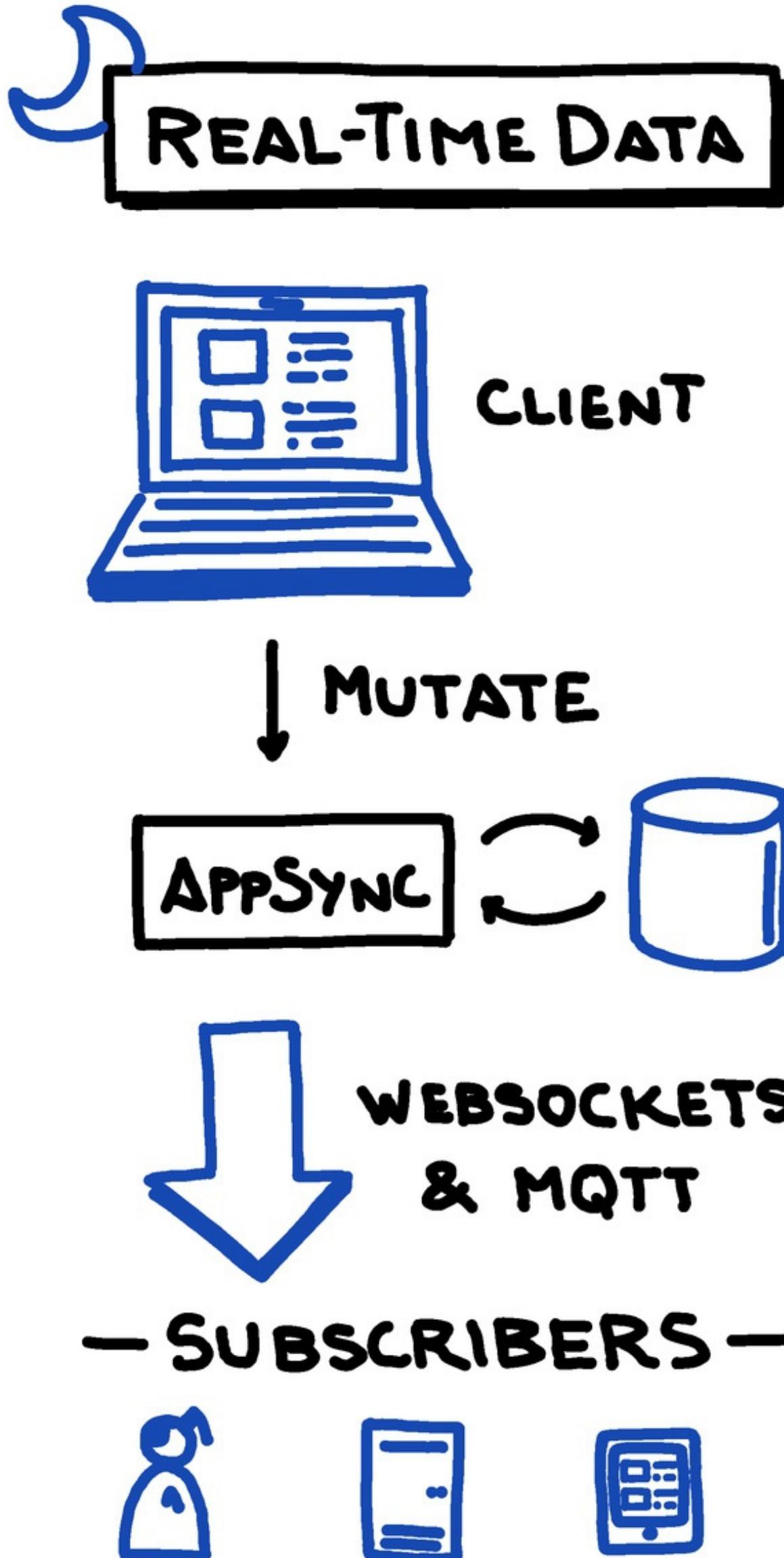
AWS — **APPSYNC**
MANAGED • GRAPHQL

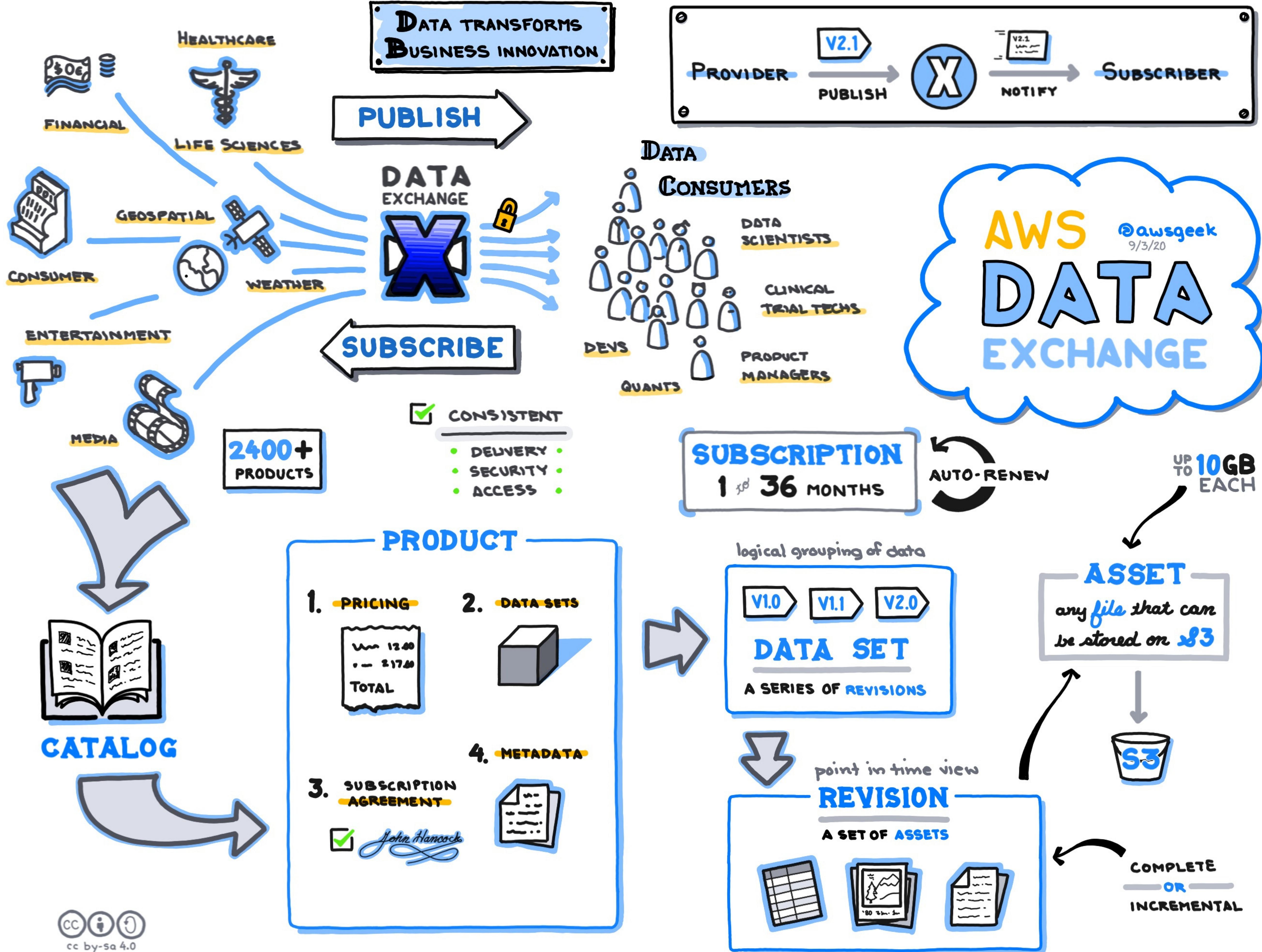
1/23/19

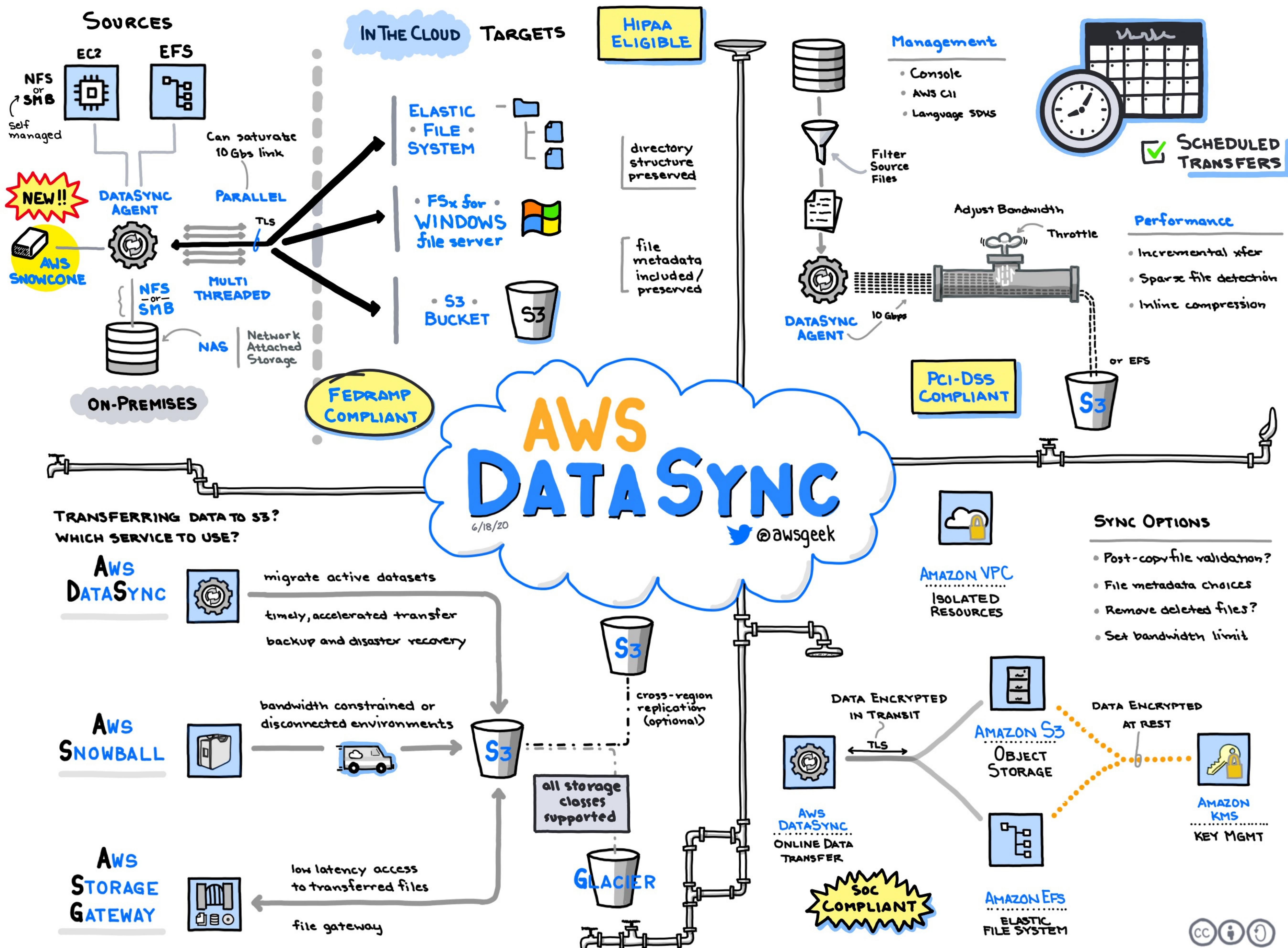
@awsgeek

OFFLINE DATA ACCESS

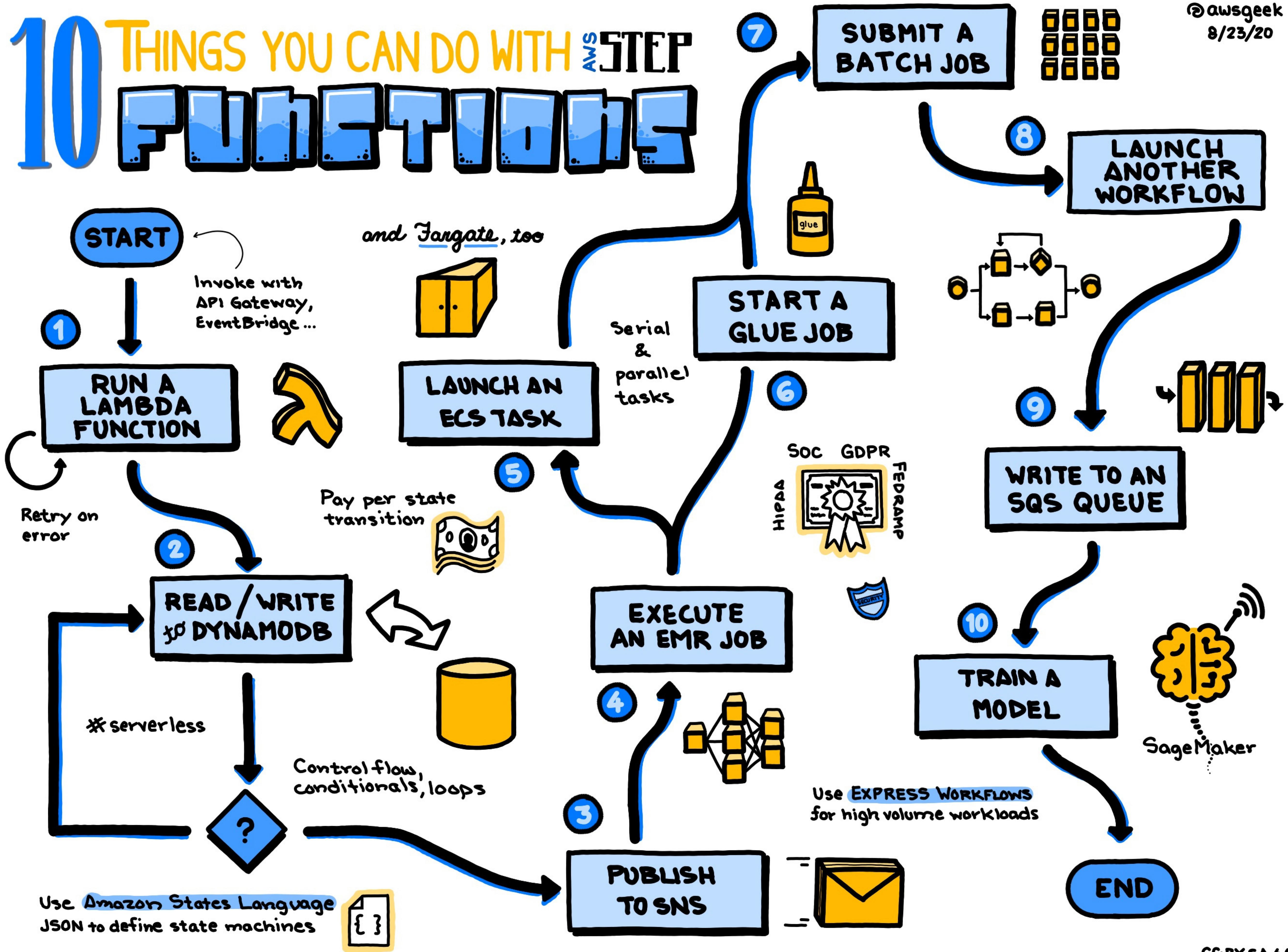
- ① MUTATE OFFLINE
 - ② UPLOAD CHANGES
 - ③ RESOLVE CONFLICTS
- APP SYNC

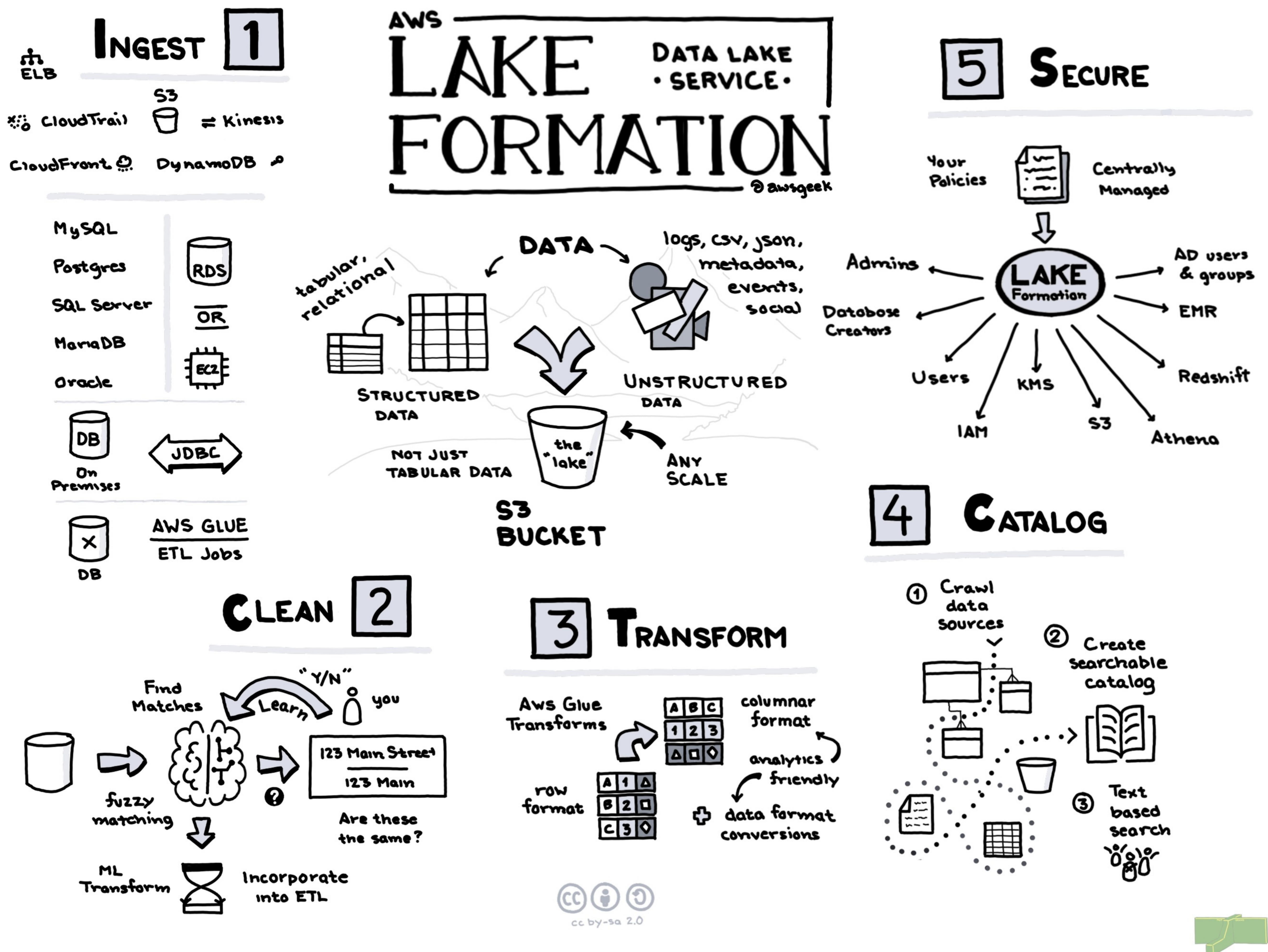






10 THINGS YOU CAN DO WITH AWS STEP FUNCTIONS





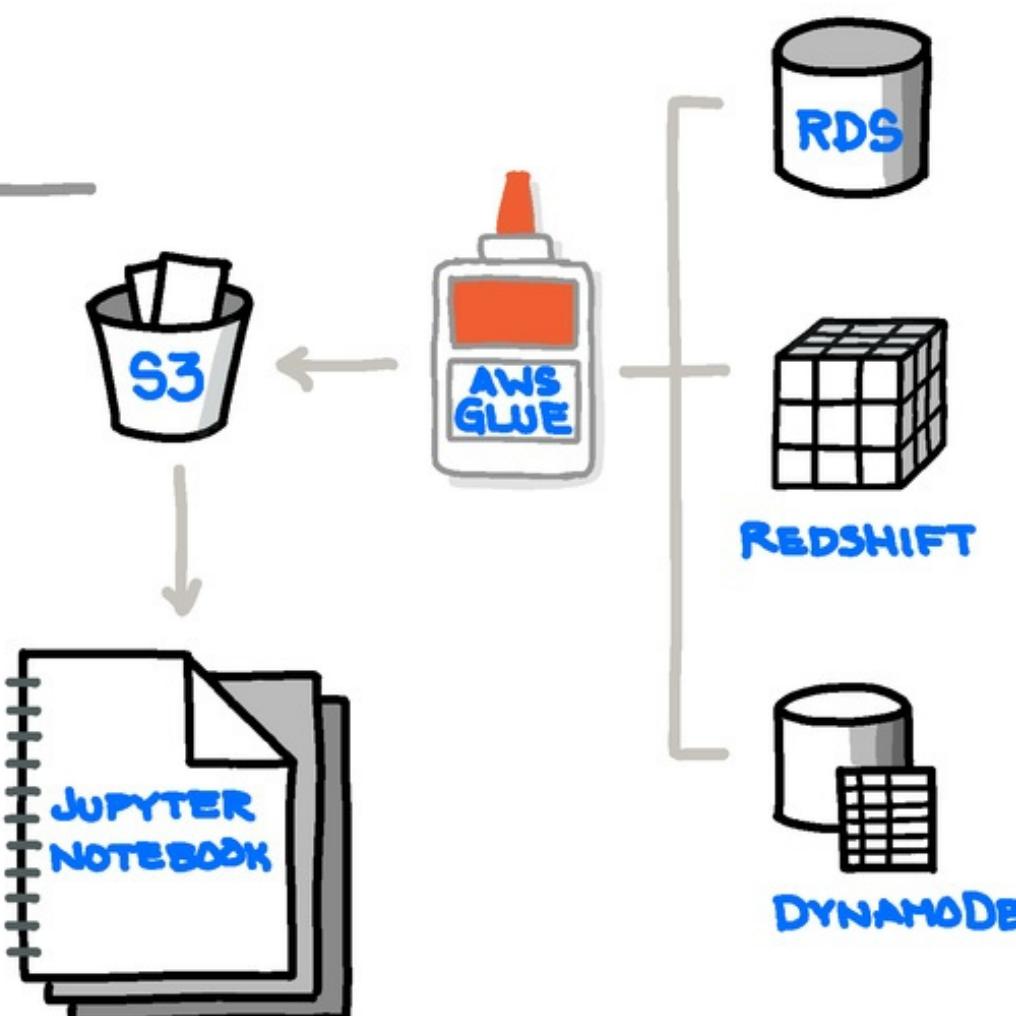
BUILD

COMMON TEMPLATES

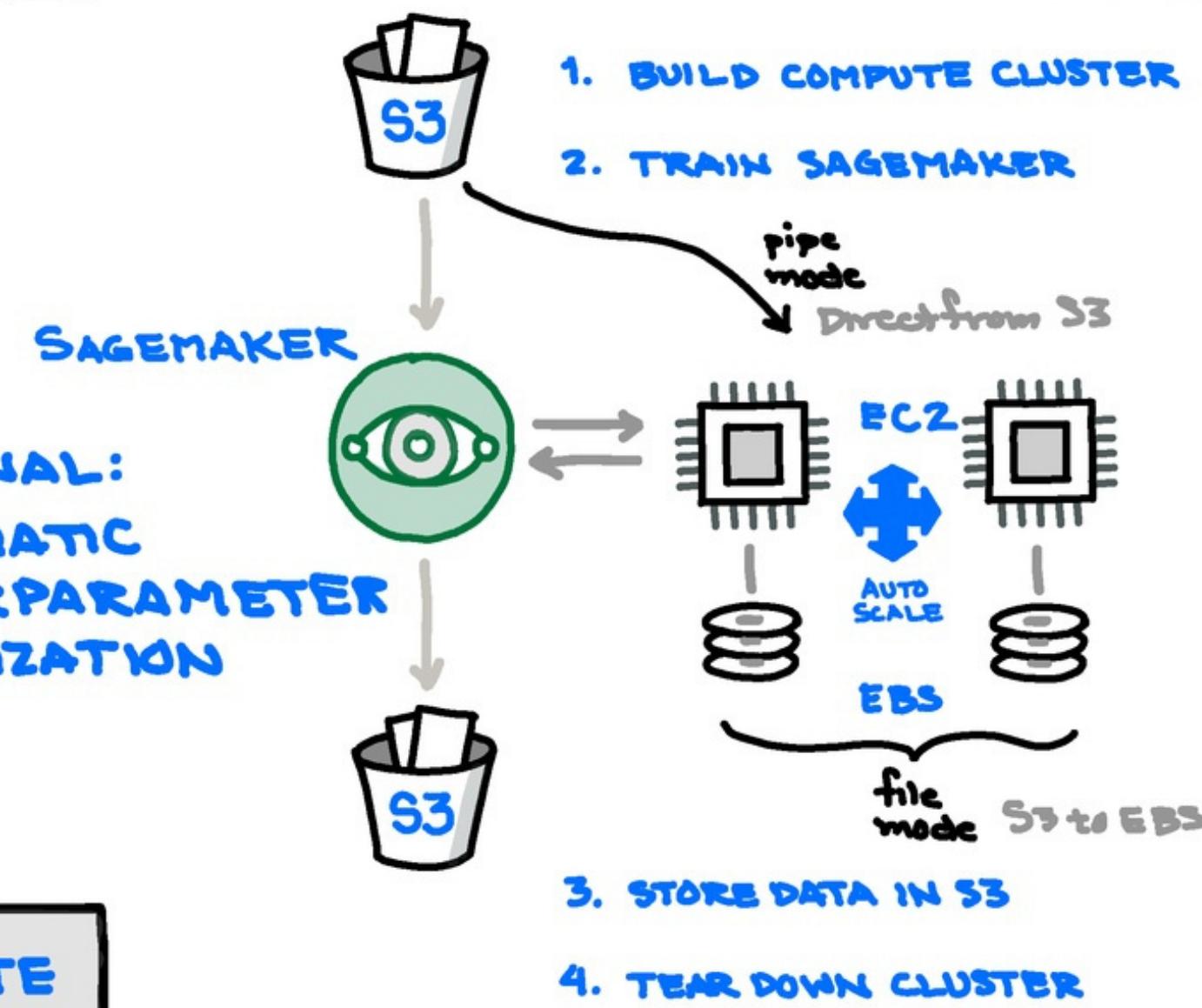
- TIME SERIES FORECAST
- DIRECT MARKETING TARGETS
- PREDICT CUSTOMER CHURN

ADV. TEMPLATES

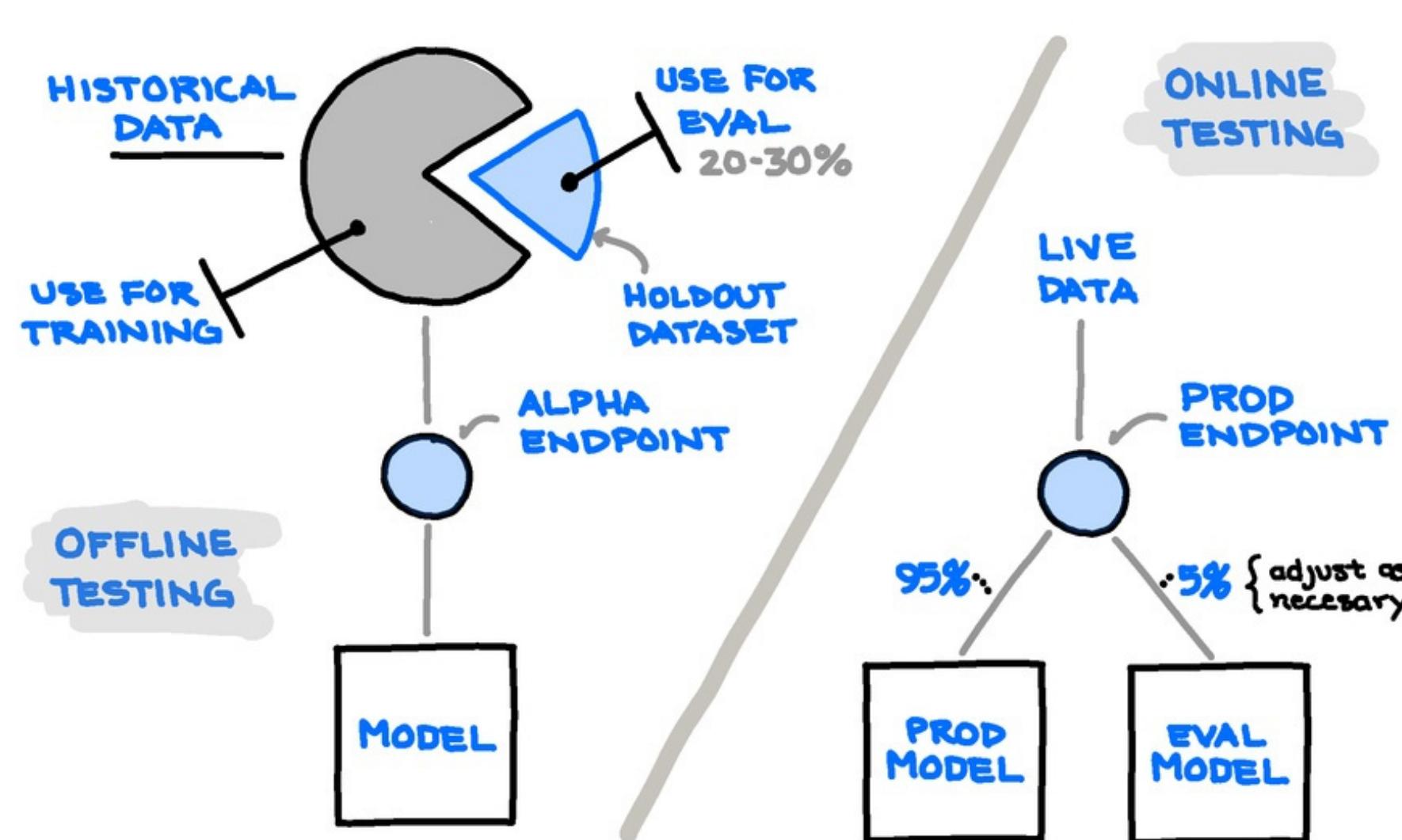
- BYO TENSORFLOW & MXNET CONTAINERS
- BYO SCIKIT OR R.ALGO



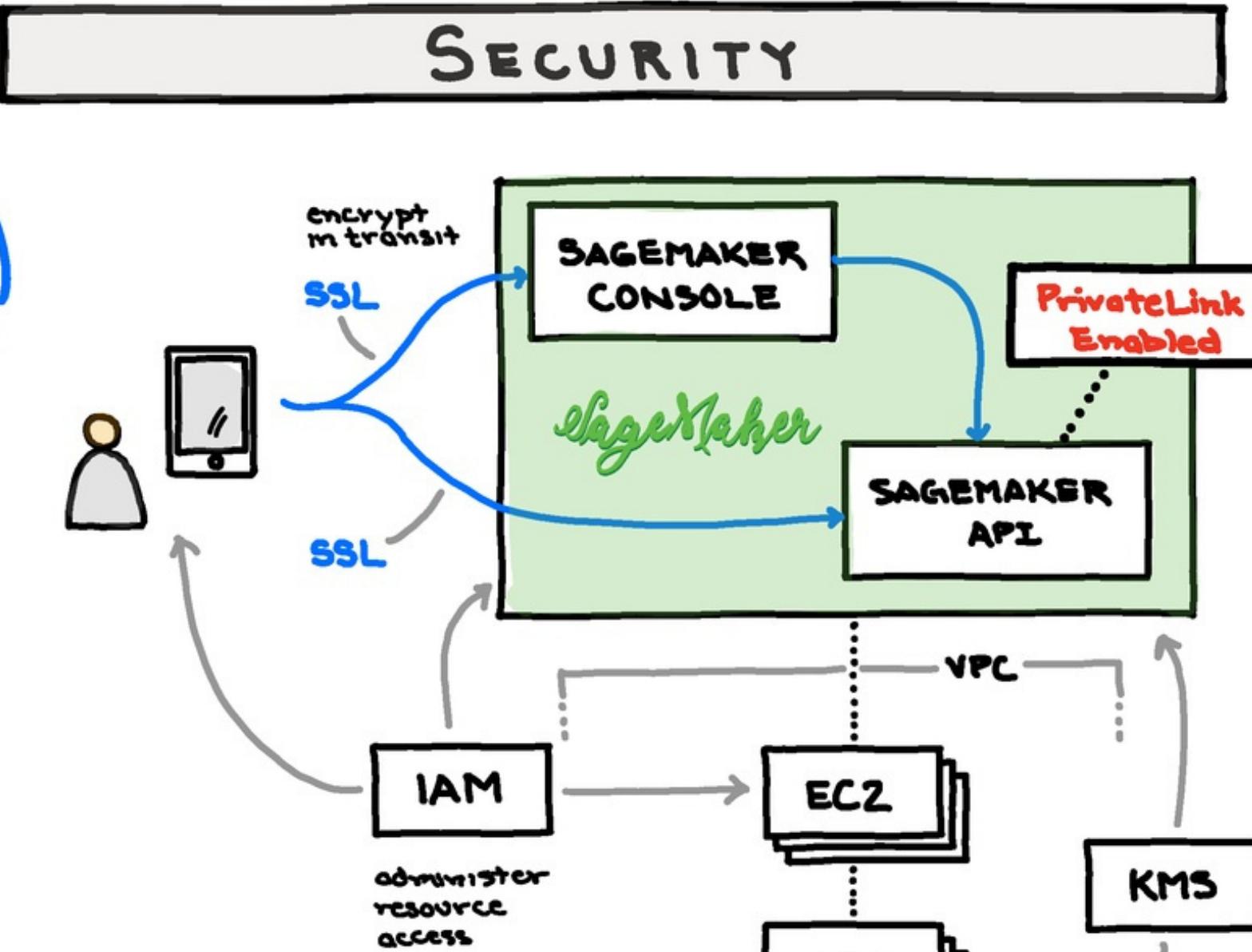
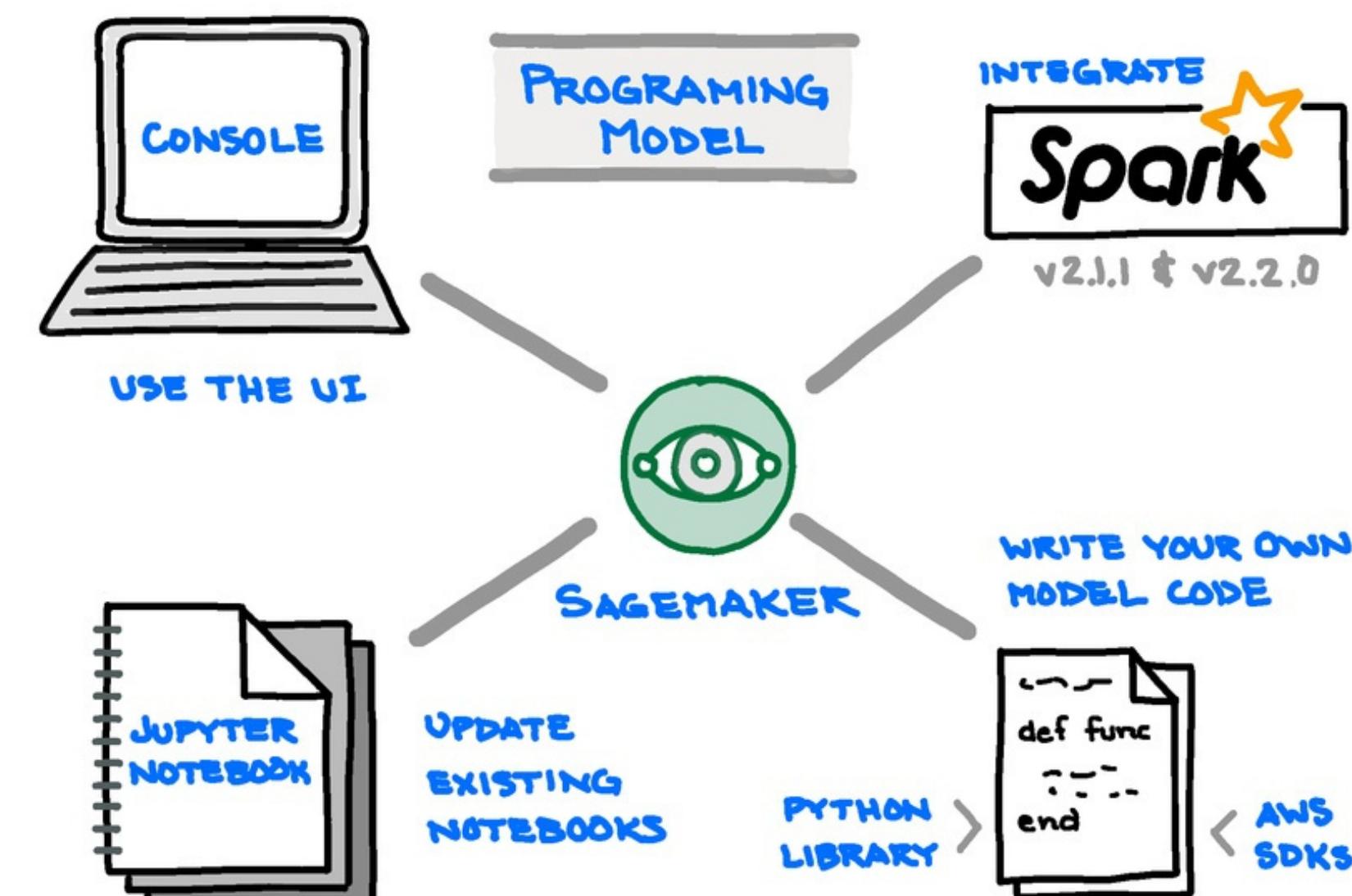
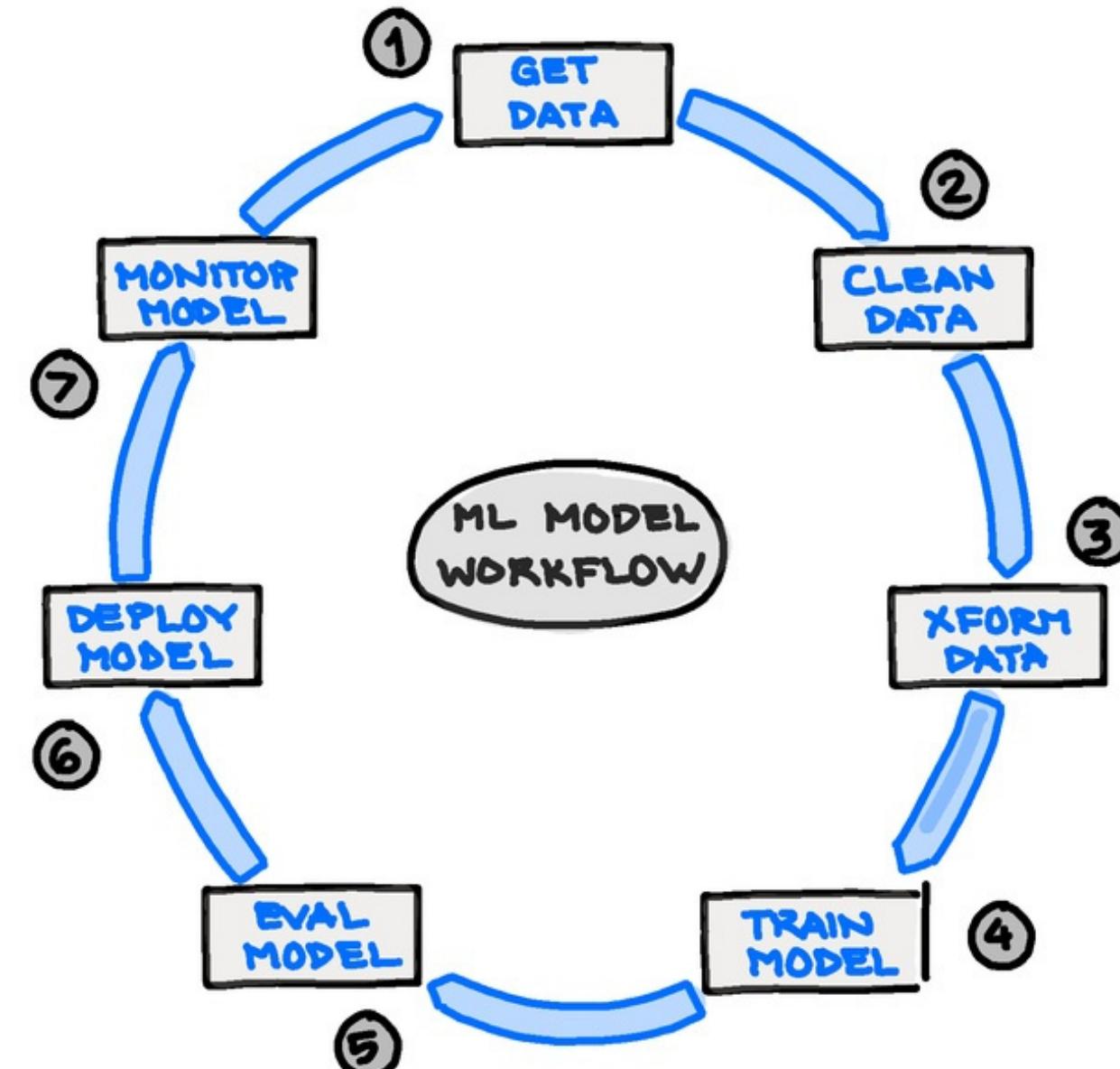
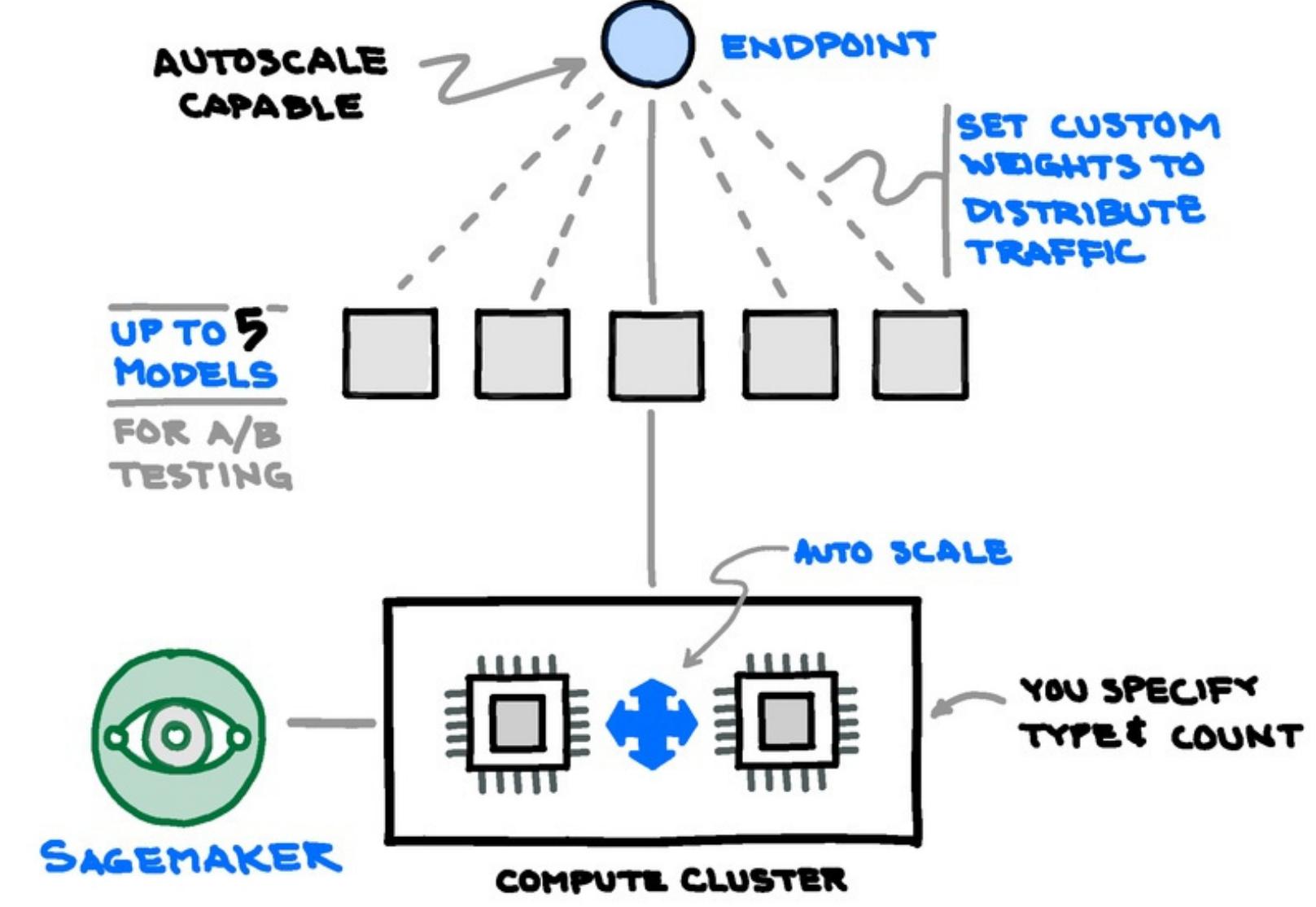
TRAIN



EVALUATE



DEPLOY

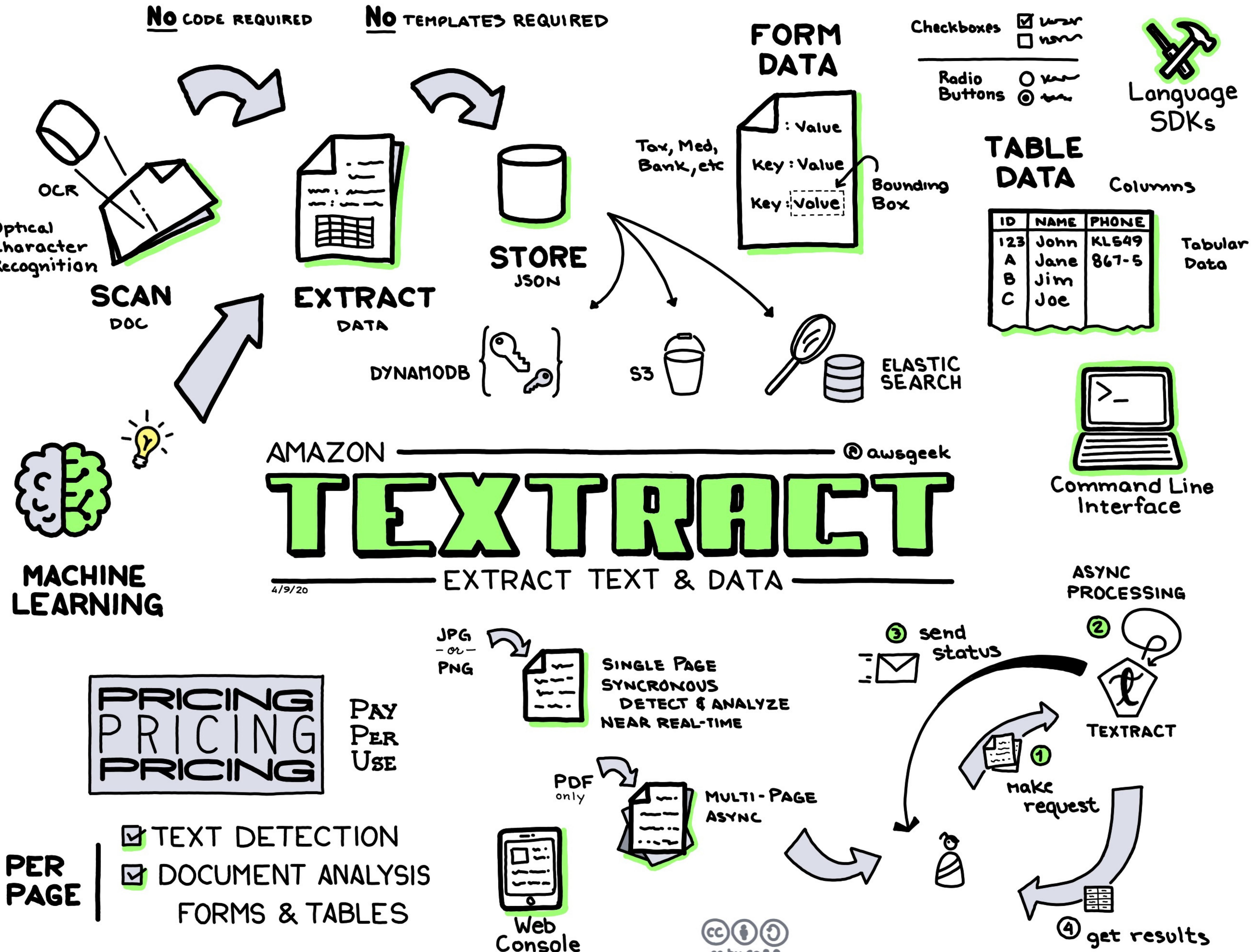


PRICING

INSTANCE FEES: ON DEMAND, HOURLY RATE, 1 MINUTE MINIMUM, PER SECOND

STORAGE FEES: 14¢ / GB / MO (UP TO 6TB FOR TRAINING)

PROCESSING FEES: 1.6¢ / GB (IN/OUT)



AUTOMATIC SPEECH RECOGNITION



SPEECH →
← TO TEXT

VOCABULARY
FILTERING



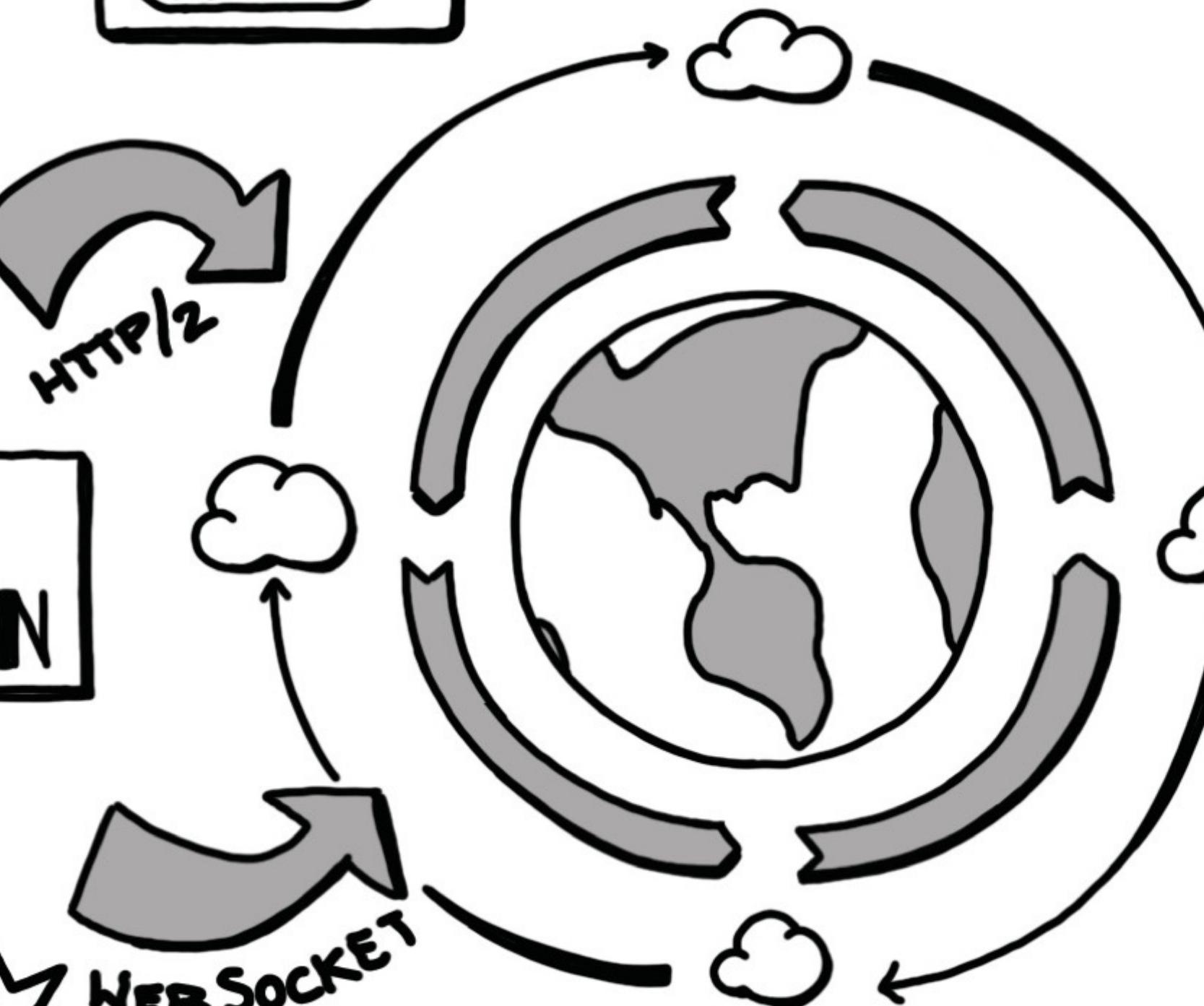
REAL TIME
CLOSE CAPTIONING



STREAMING TRANSCRIPTION



WEB SOCKET



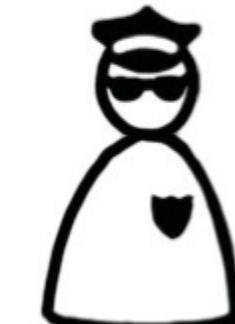
DEEP LEARNING PUNCTUATION AND FORMATTING



CLI



BRING YOUR OWN
BYOV
VOCABULARY



CUSTOM
VOCABULARIES

AMAZON **TRANSCRIBE**

5/21/20

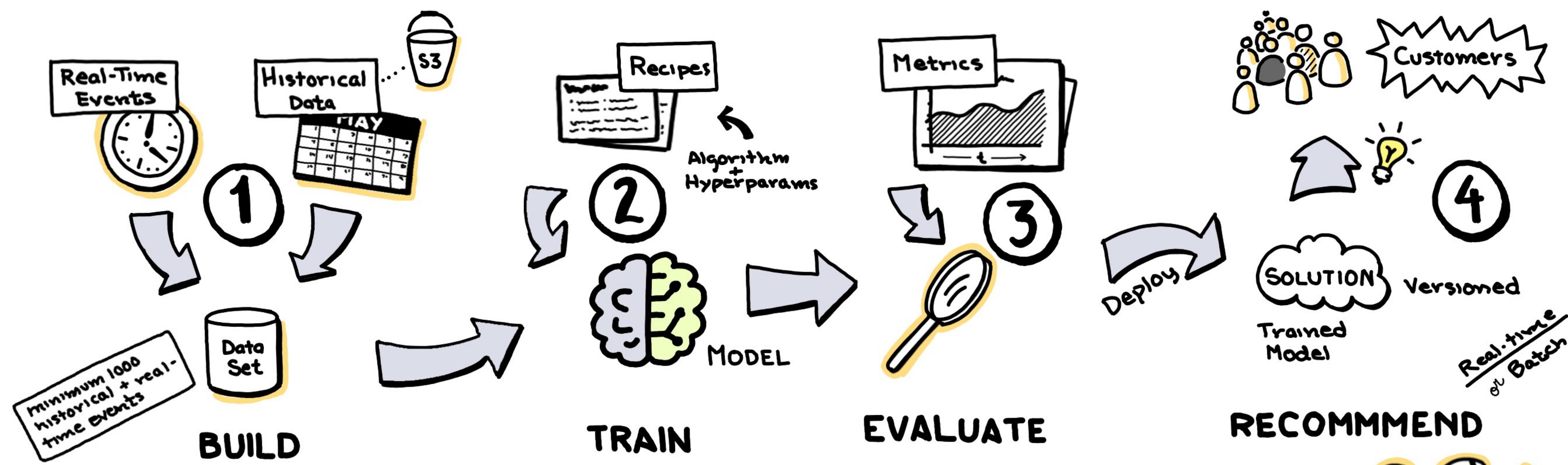
MULTIPLE SPEAKER
• IDENTIFICATION •

"DIARIZATION"



CHANNEL
ID

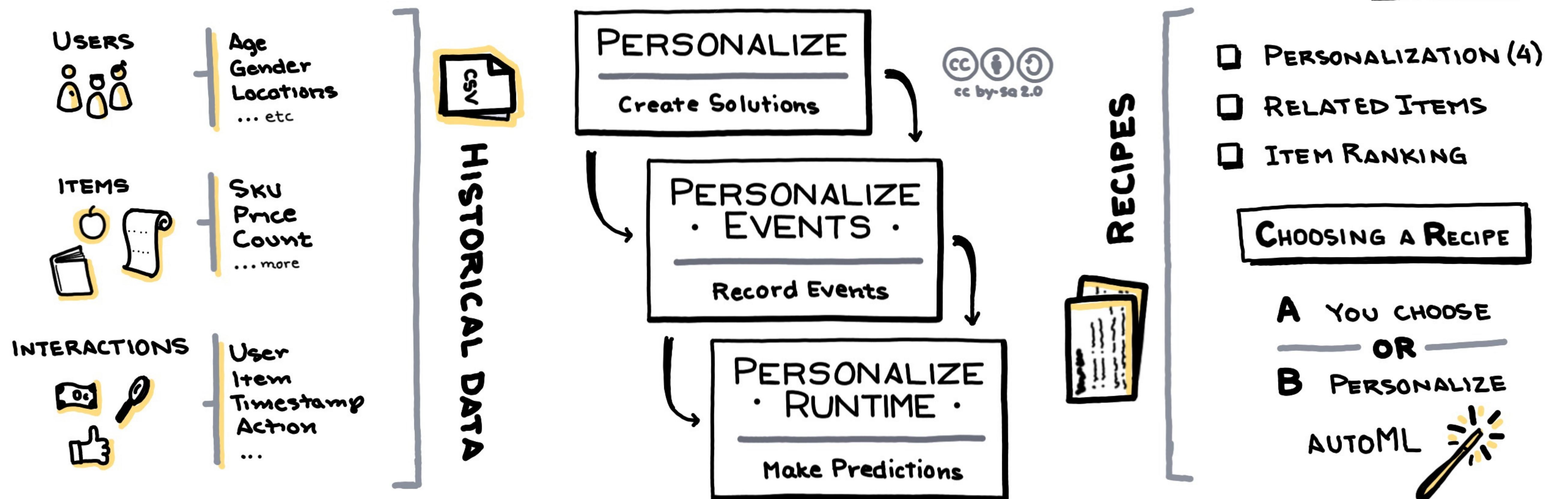
CC
BY-SA 4.0

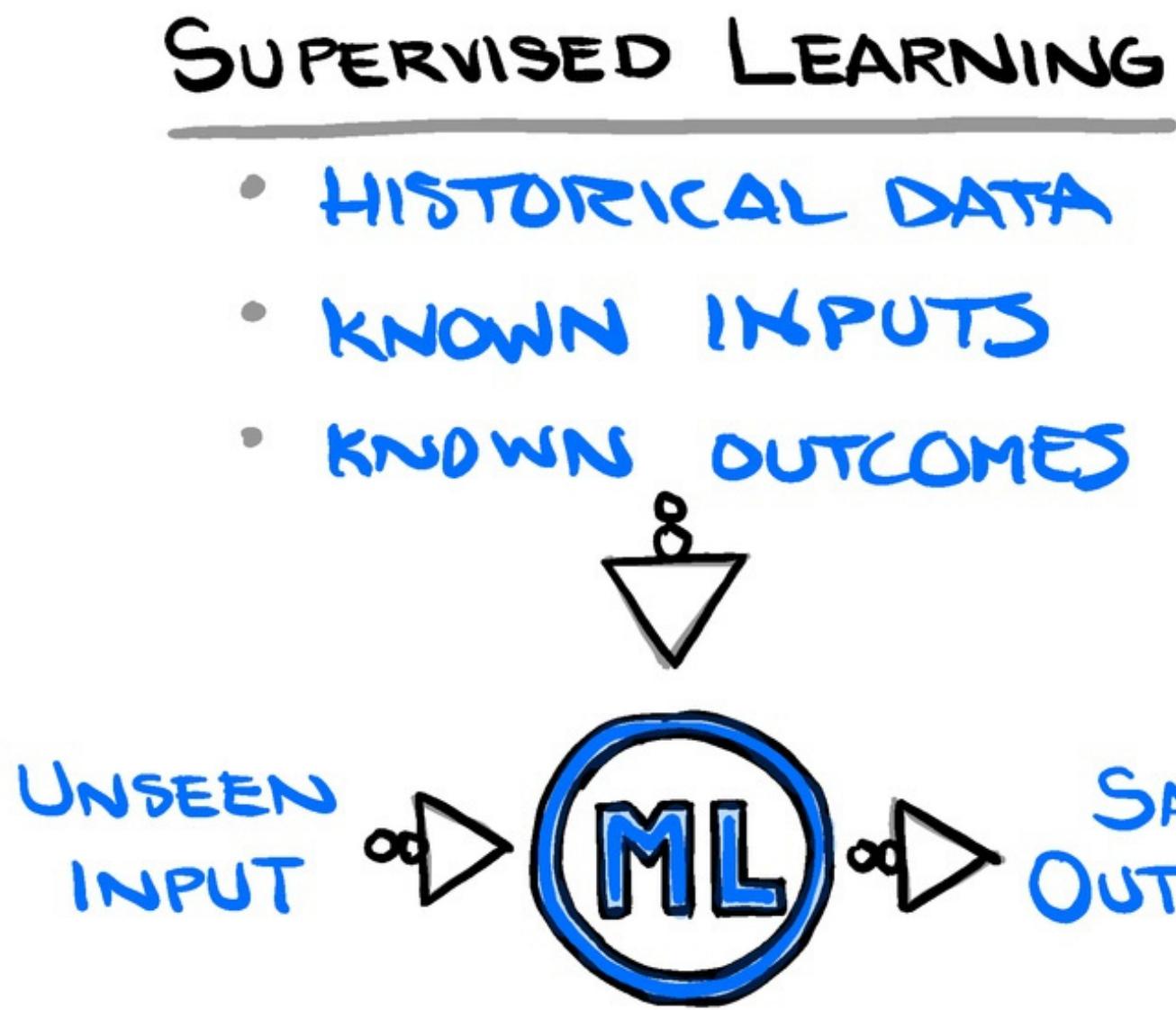
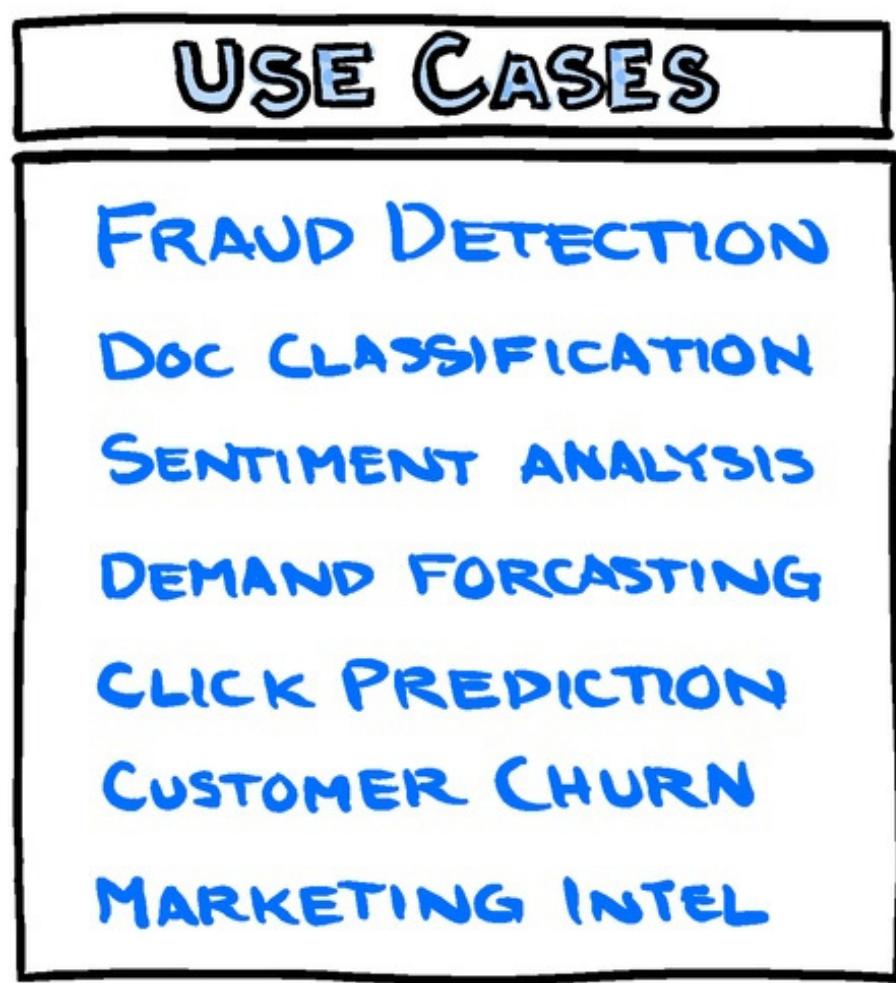
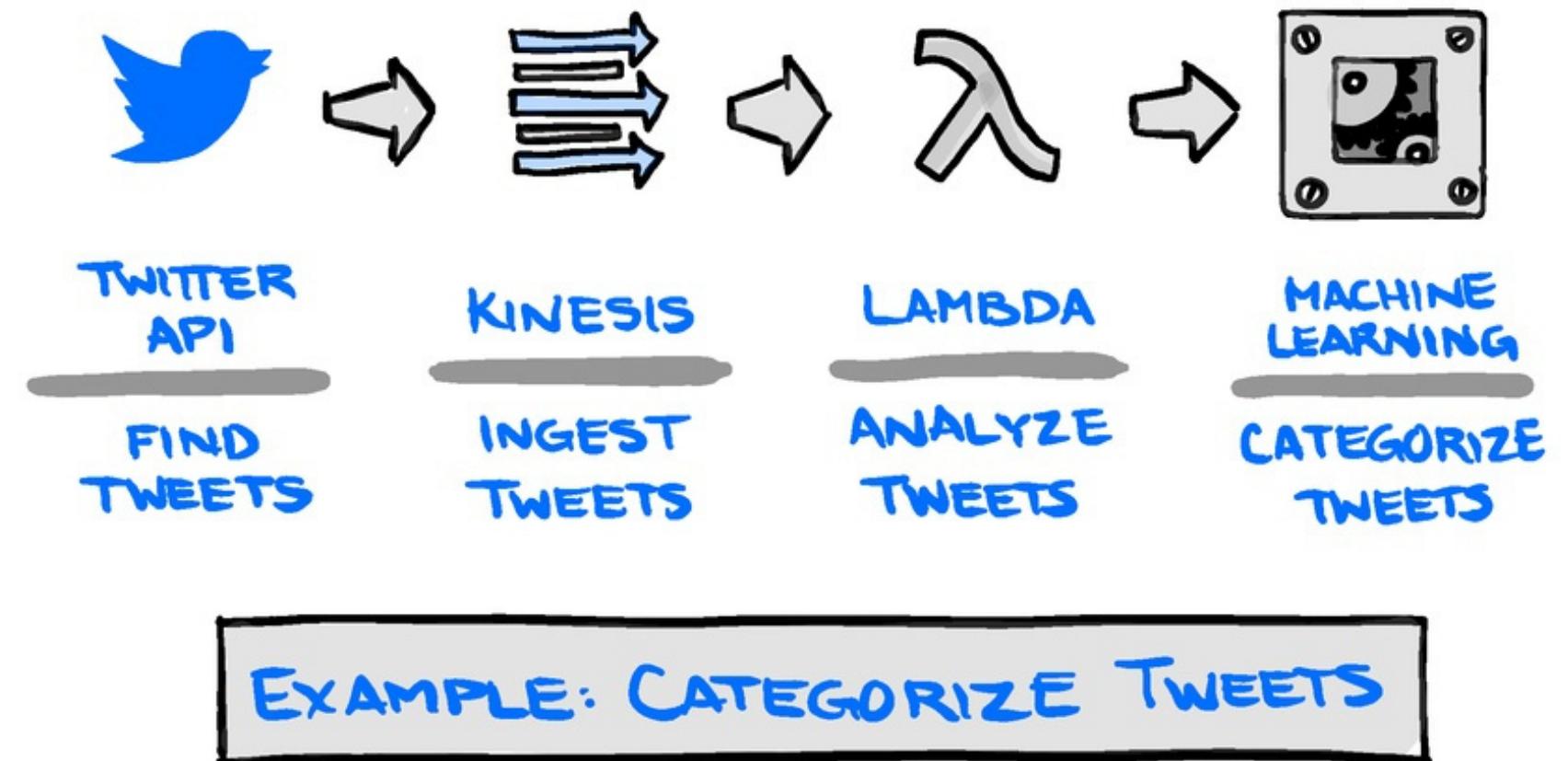
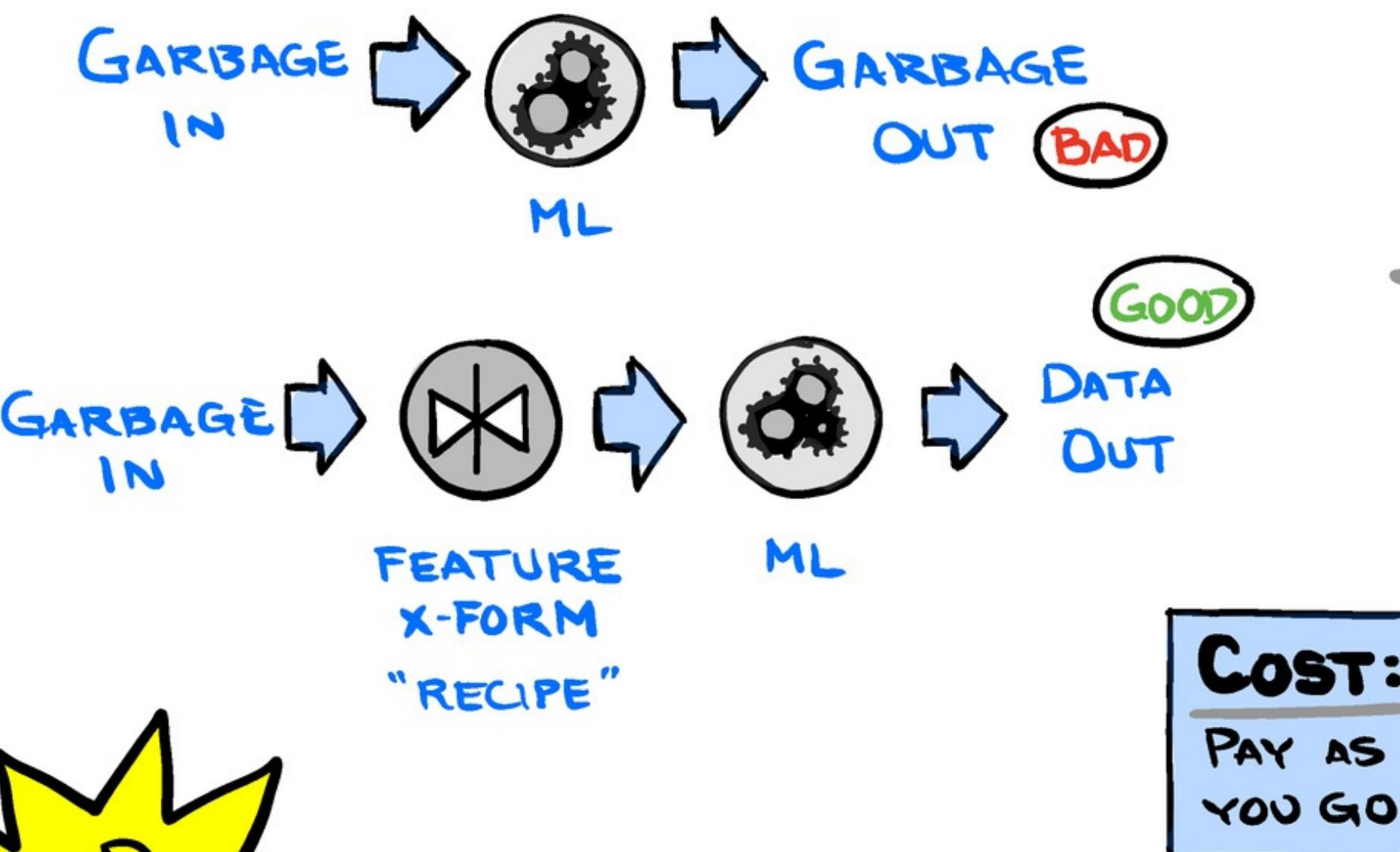
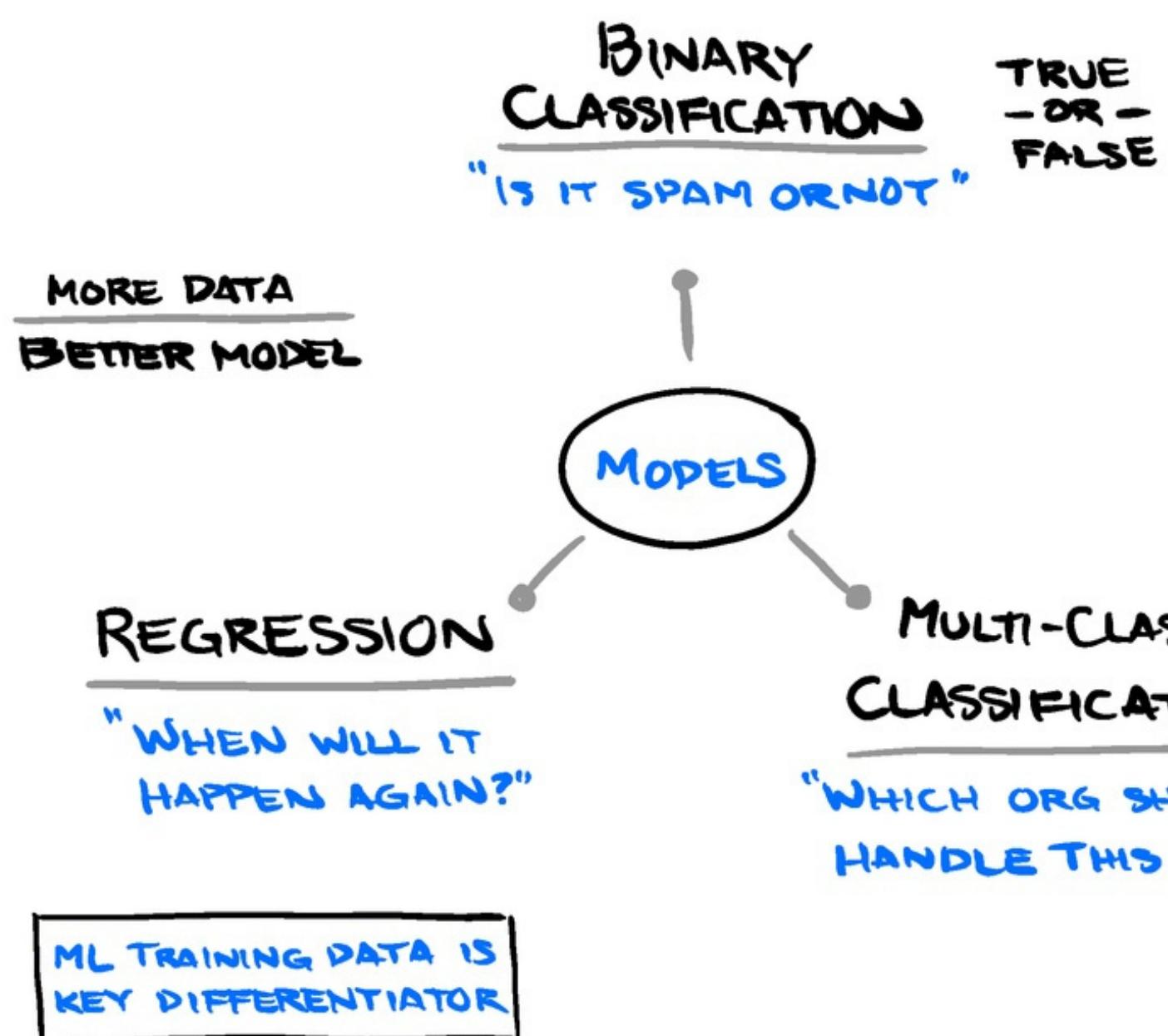


AMAZON PERSONALIZE

REAL-TIME RECOMMENDATIONS

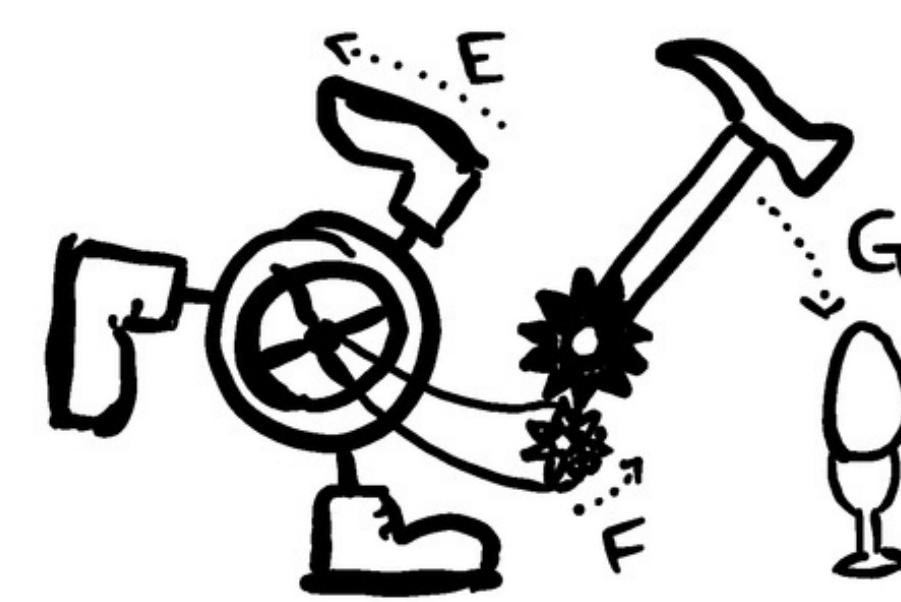
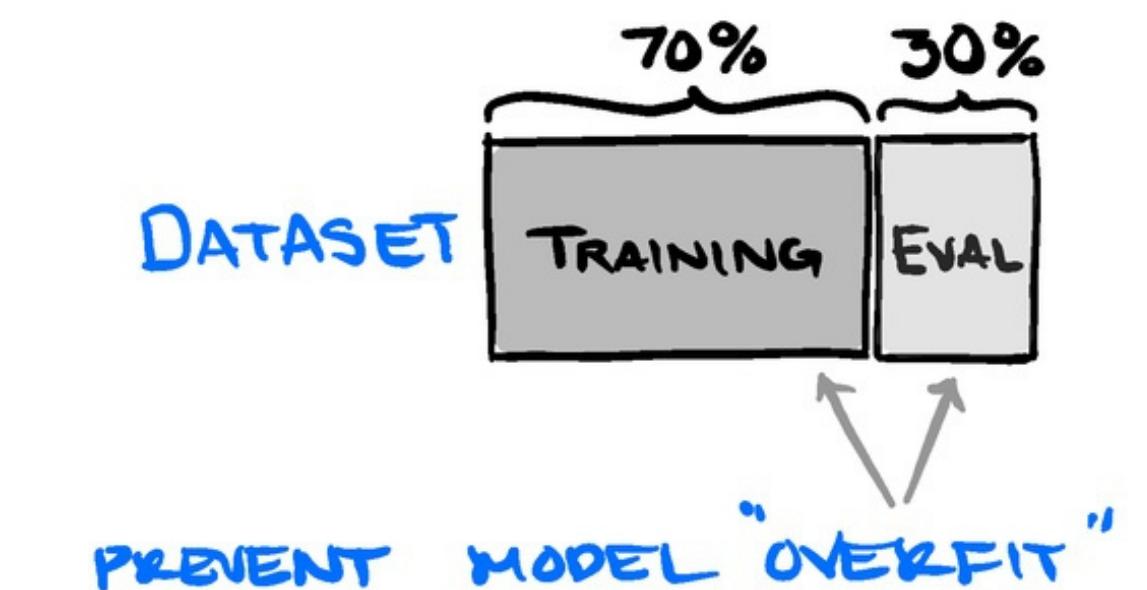
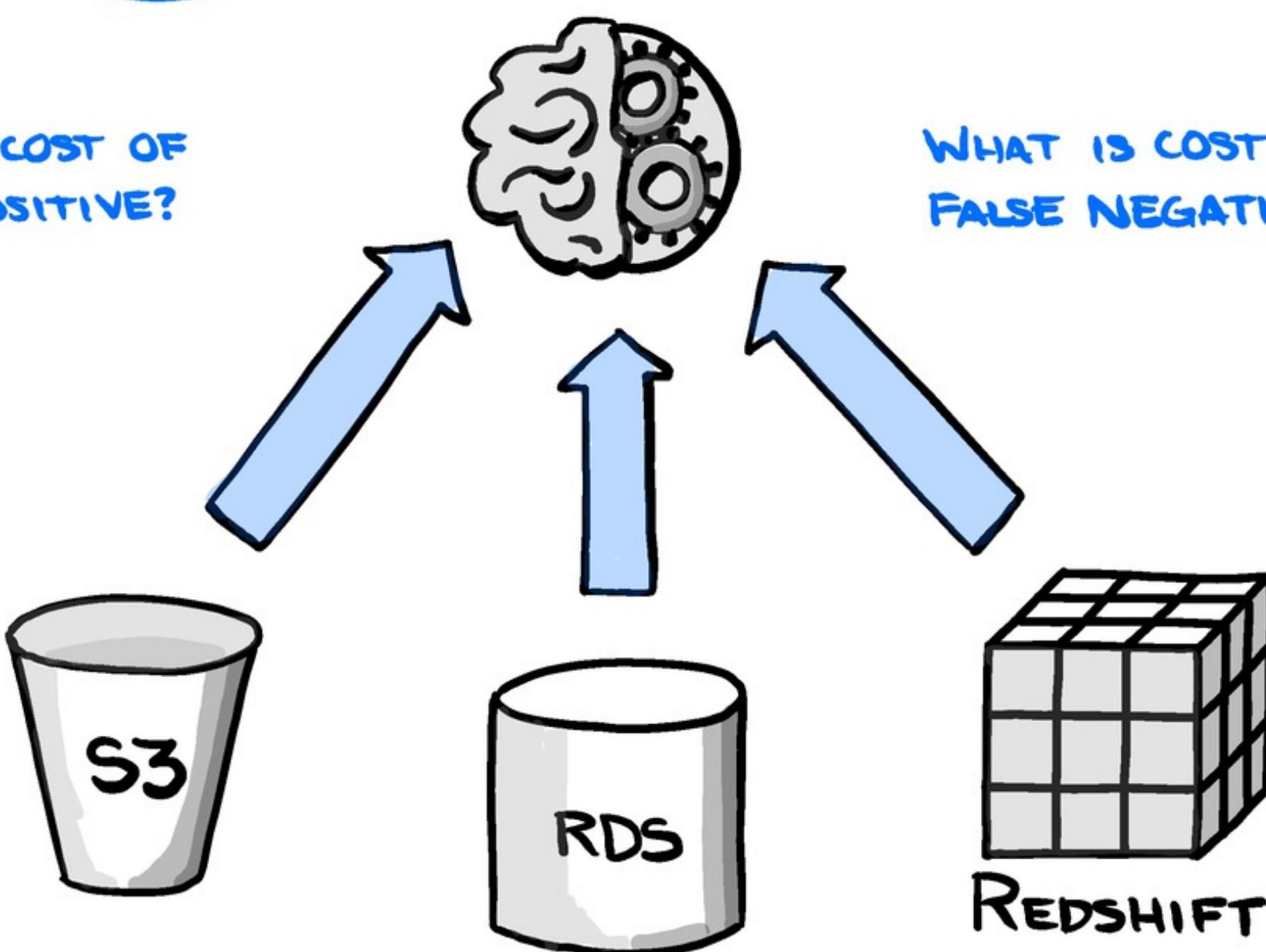
3/30/20 @awsgeek



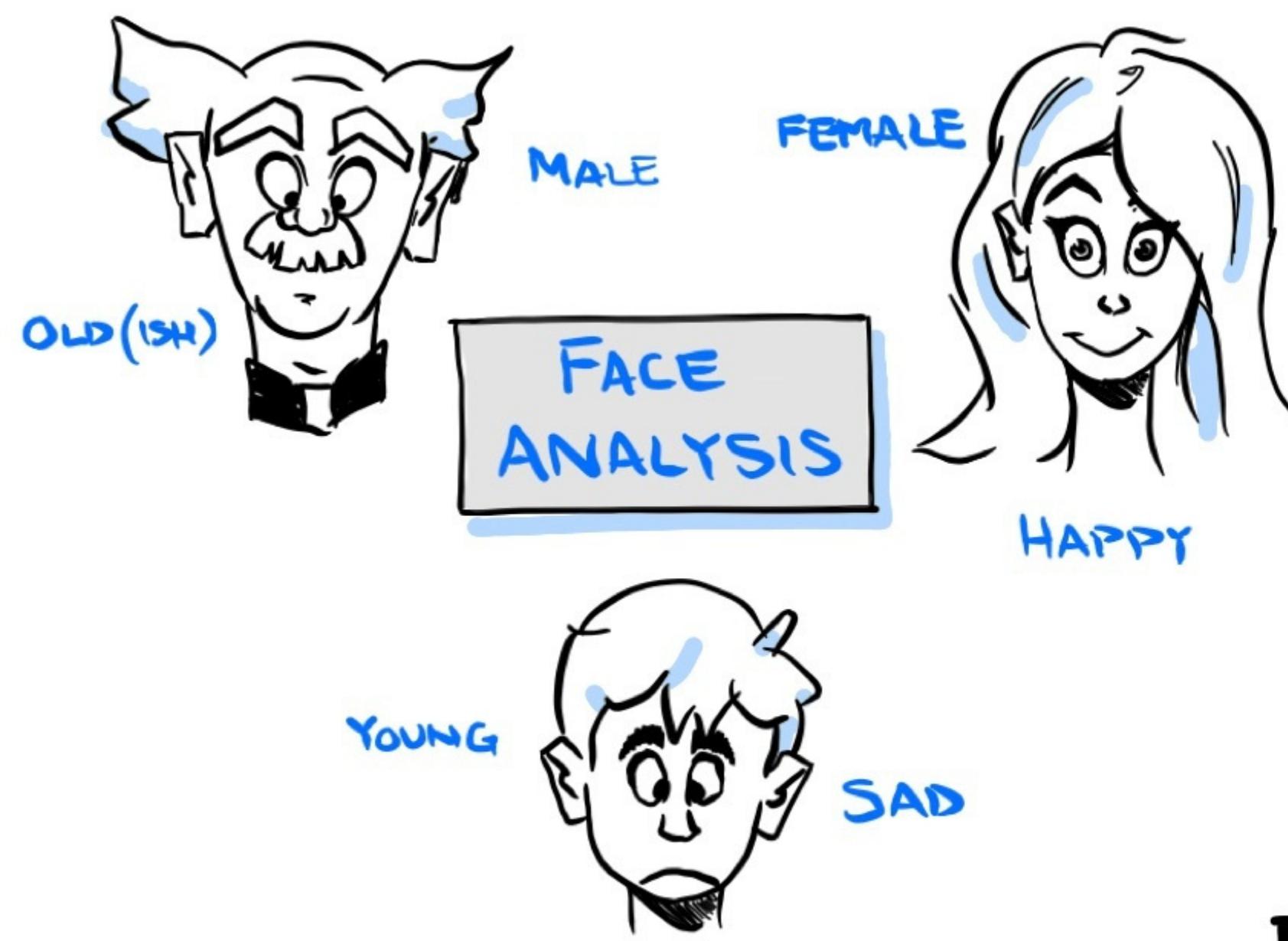
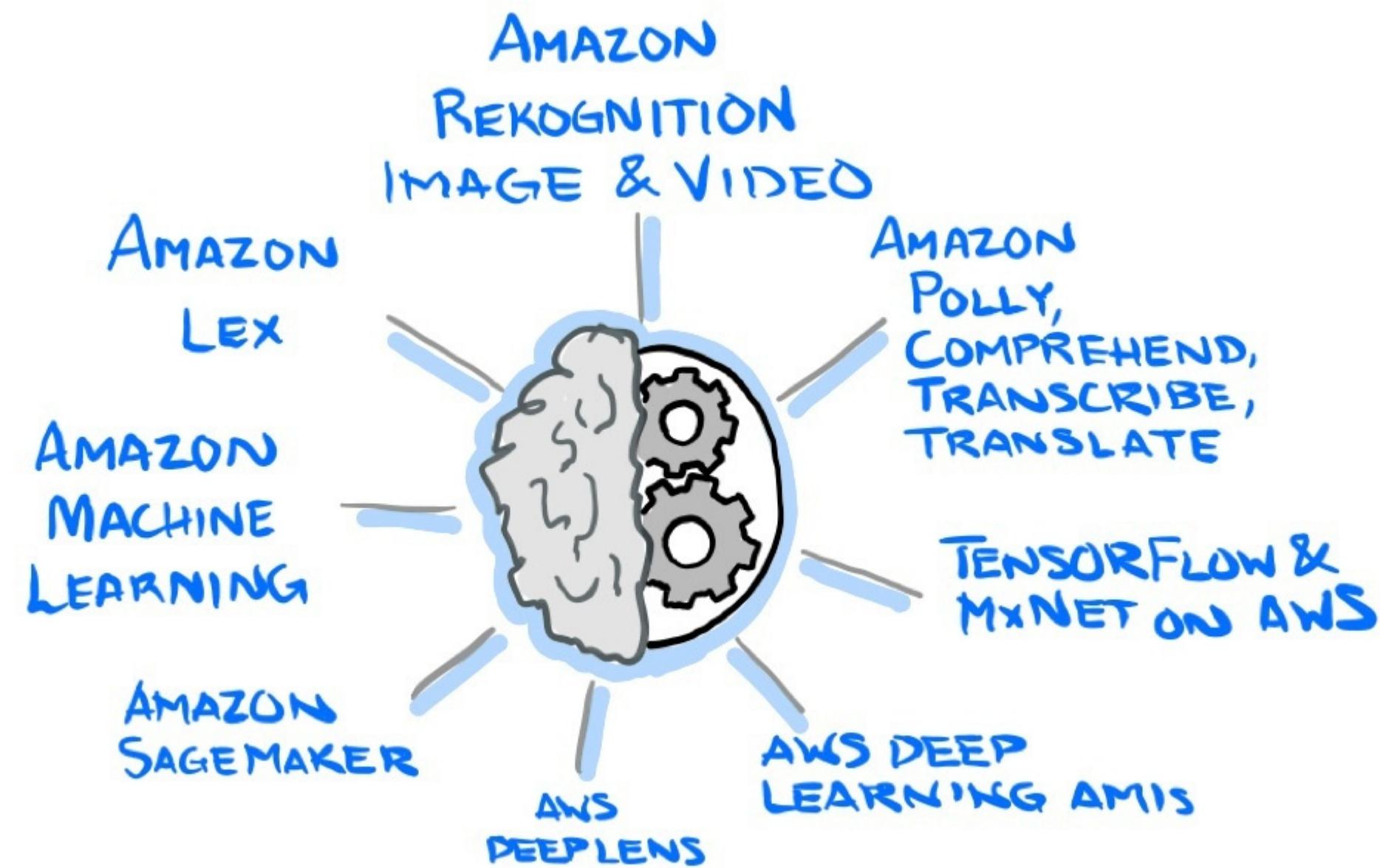
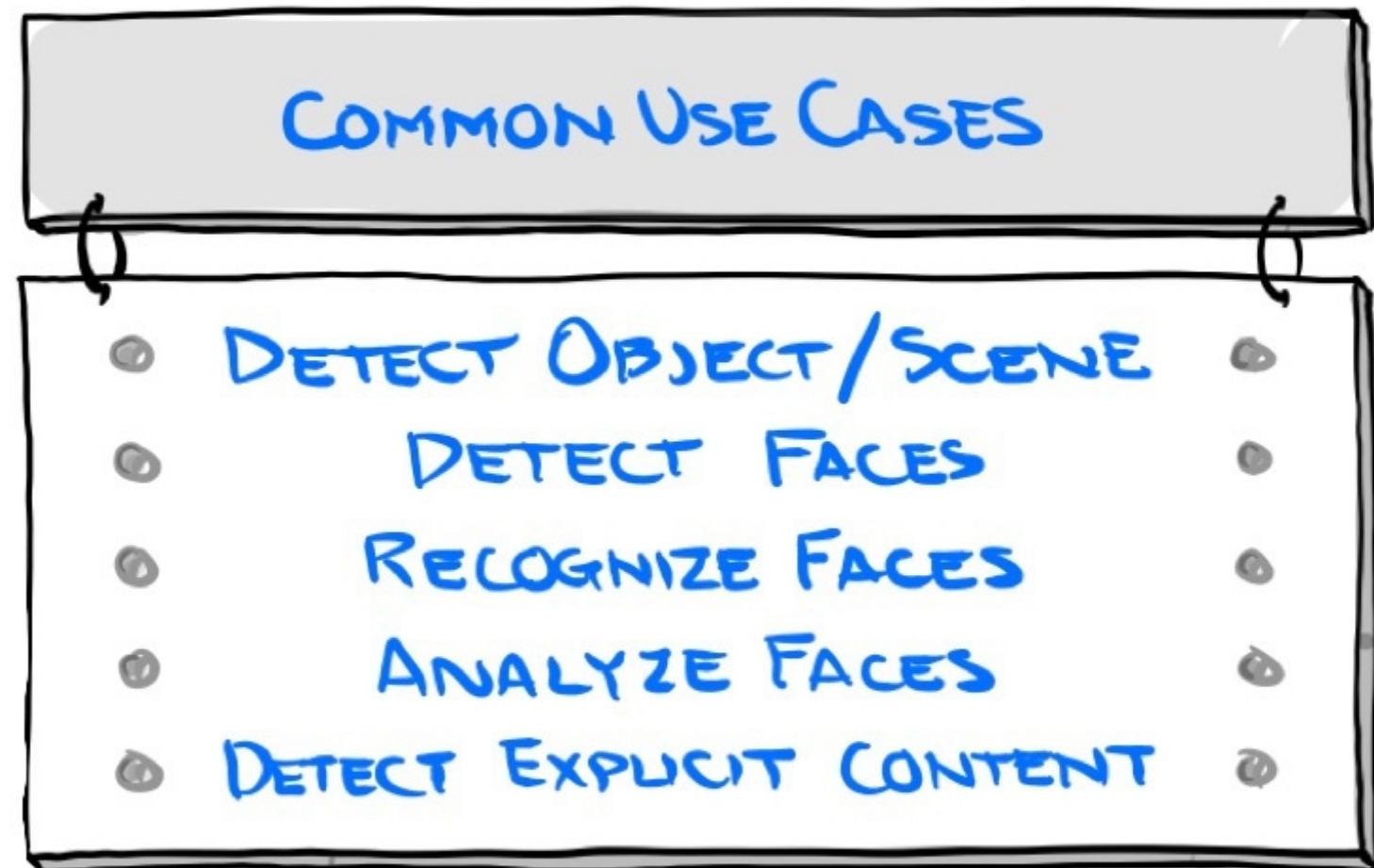


WHAT IS COST OF FALSE POSITIVE?

WHAT IS COST OF FALSE NEGATIVE?



@awsgeek
9/22/17

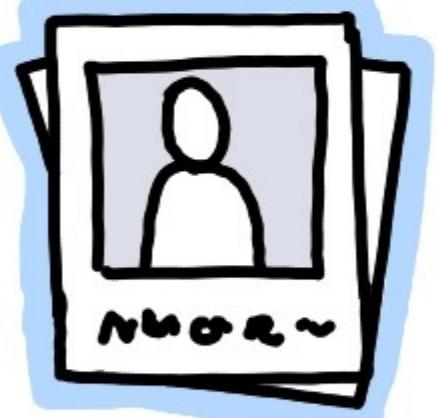


AMAZON AI FAMILY



PRICING

① \$ PER IMAGE



② \$



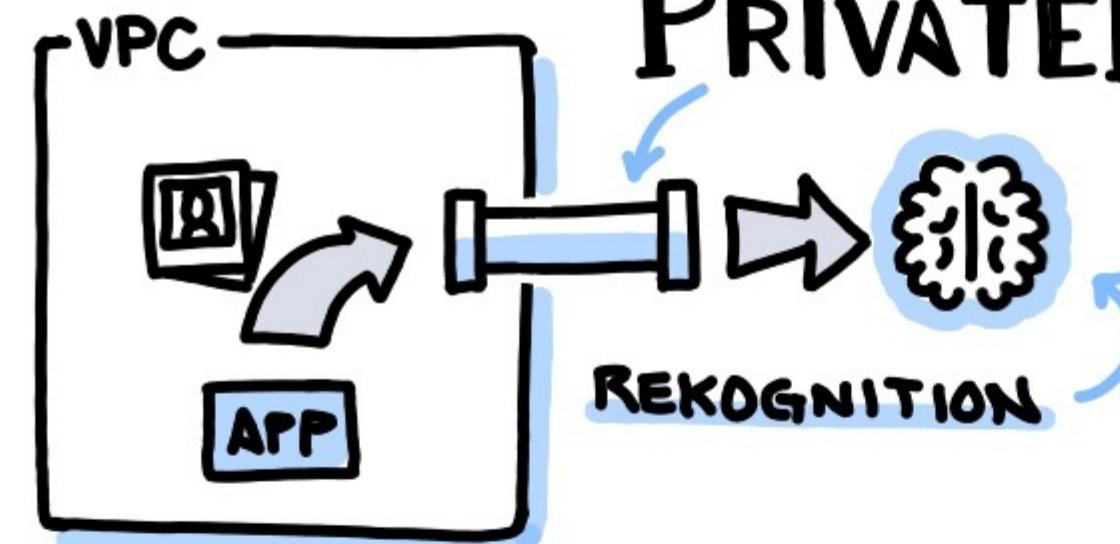
③ \$

PER MINUTE

IMAGE

VIDEO

PRIVATELINK

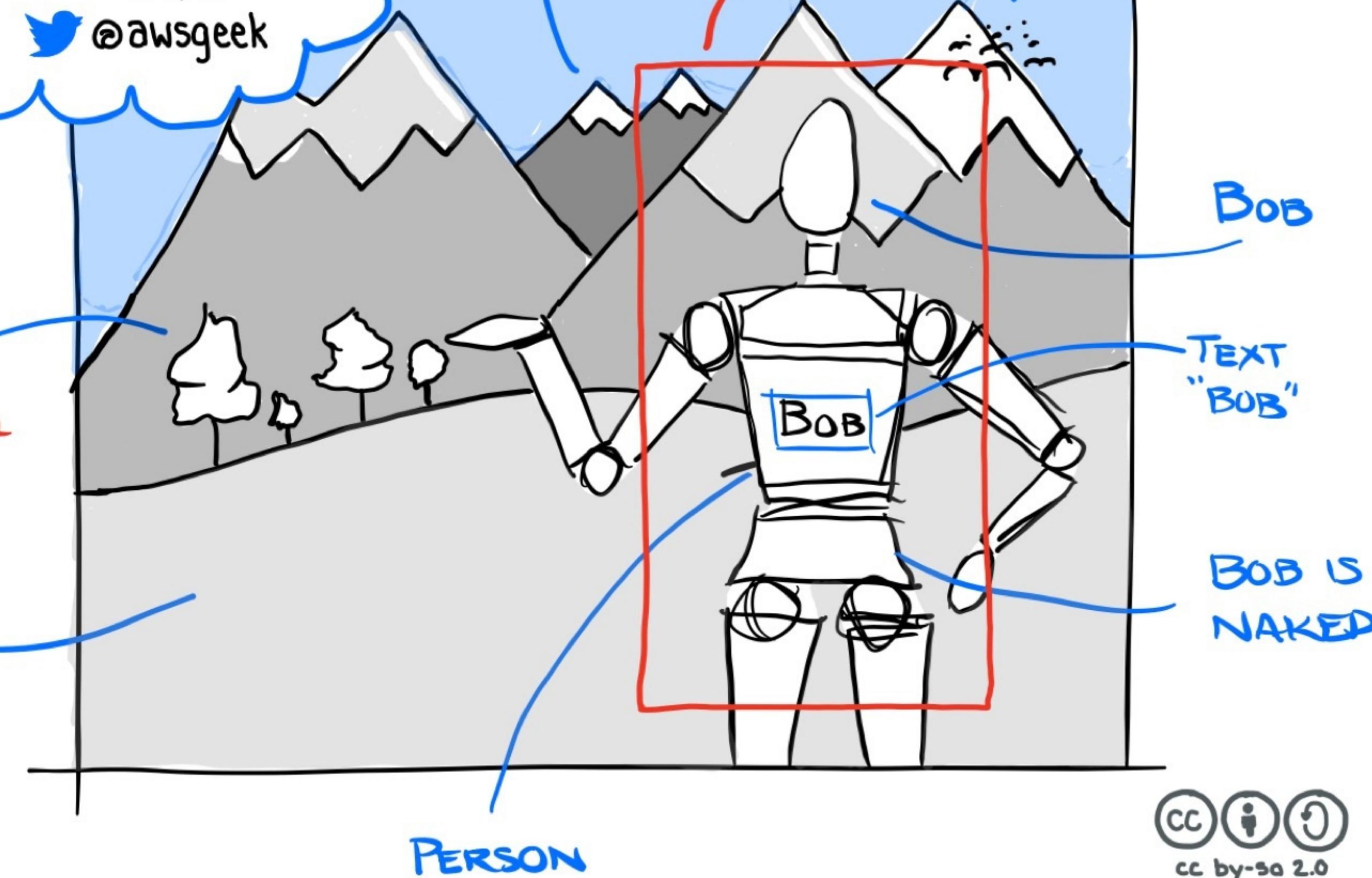


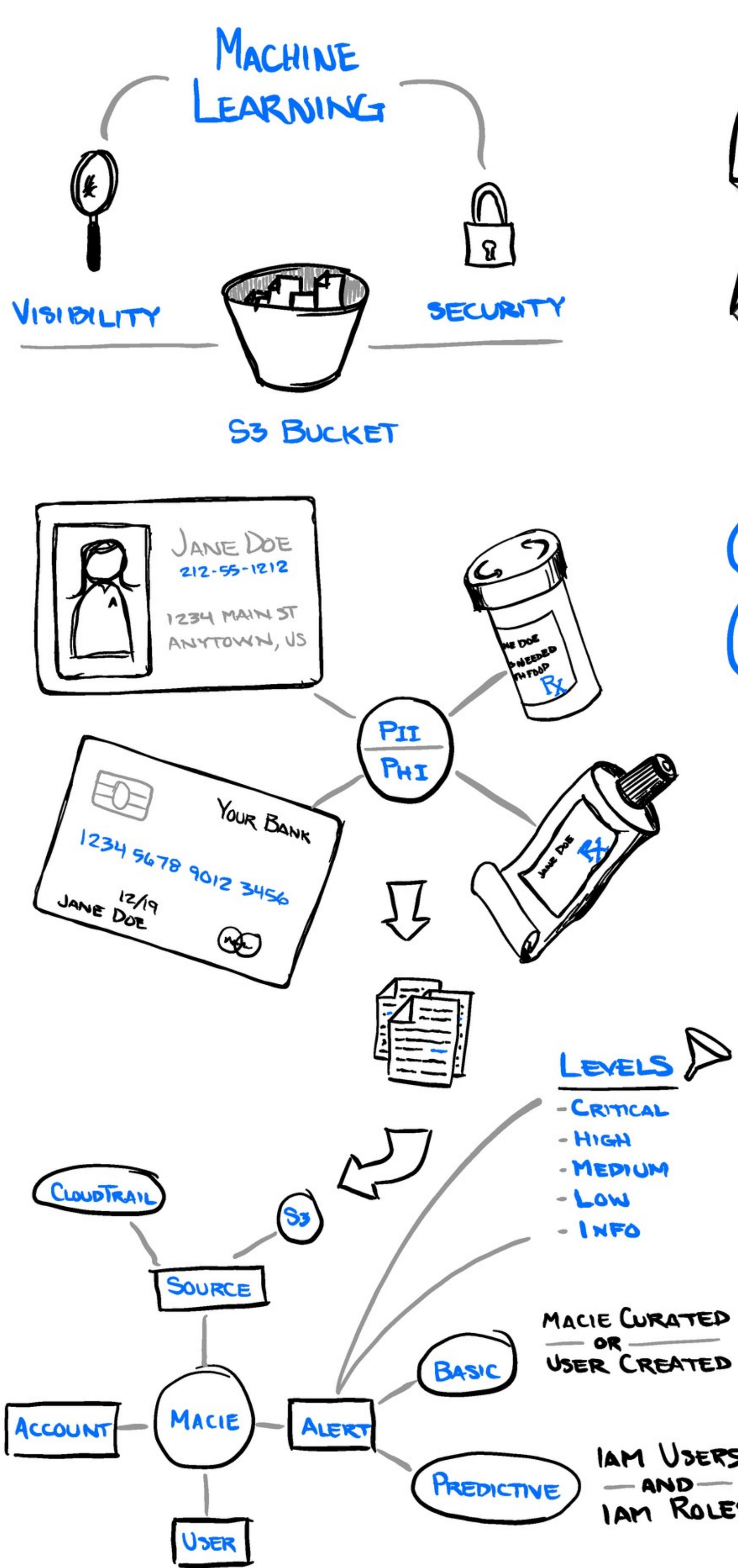
TREES /
HIERACHICAL
METADATA /
OUTDOORS

amazon REKOGNITION

11/2/19

@awsgeek





AS EASY AS:

- 1 ENABLE MACIE
- 2 SELECT S3 BUCKETS
- 3 REVIEW ALERTS

ENCRYPTED S3 OBJECTS

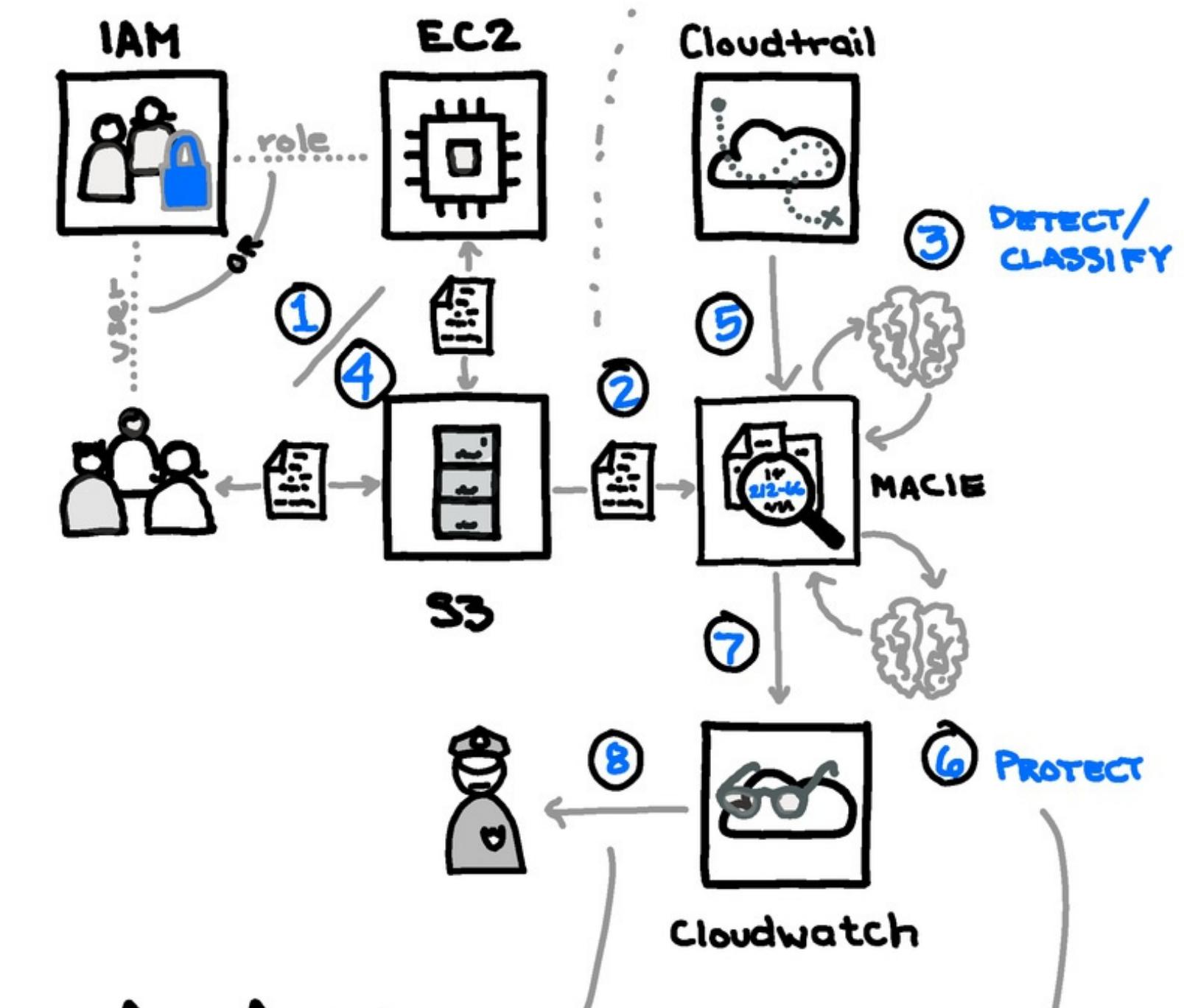
SERVER SIDE ENCRYPTION



KMS KEYS

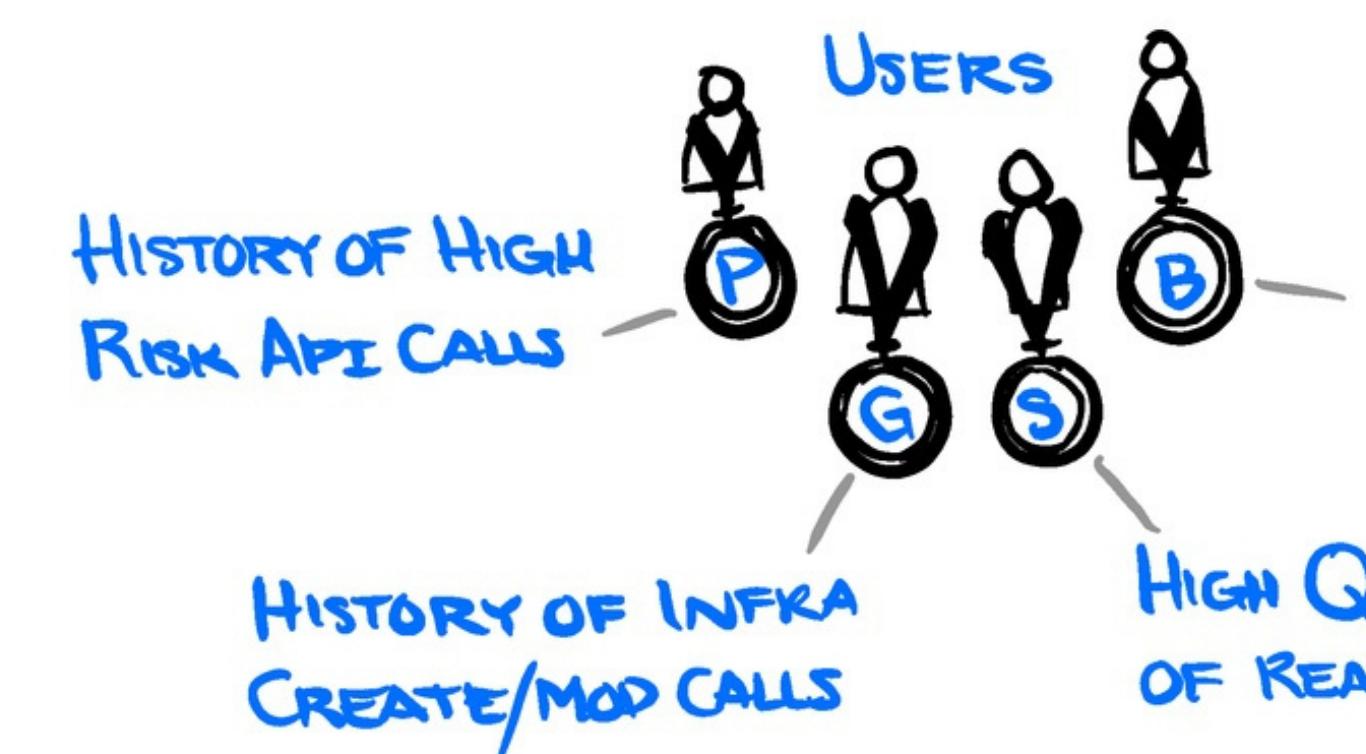


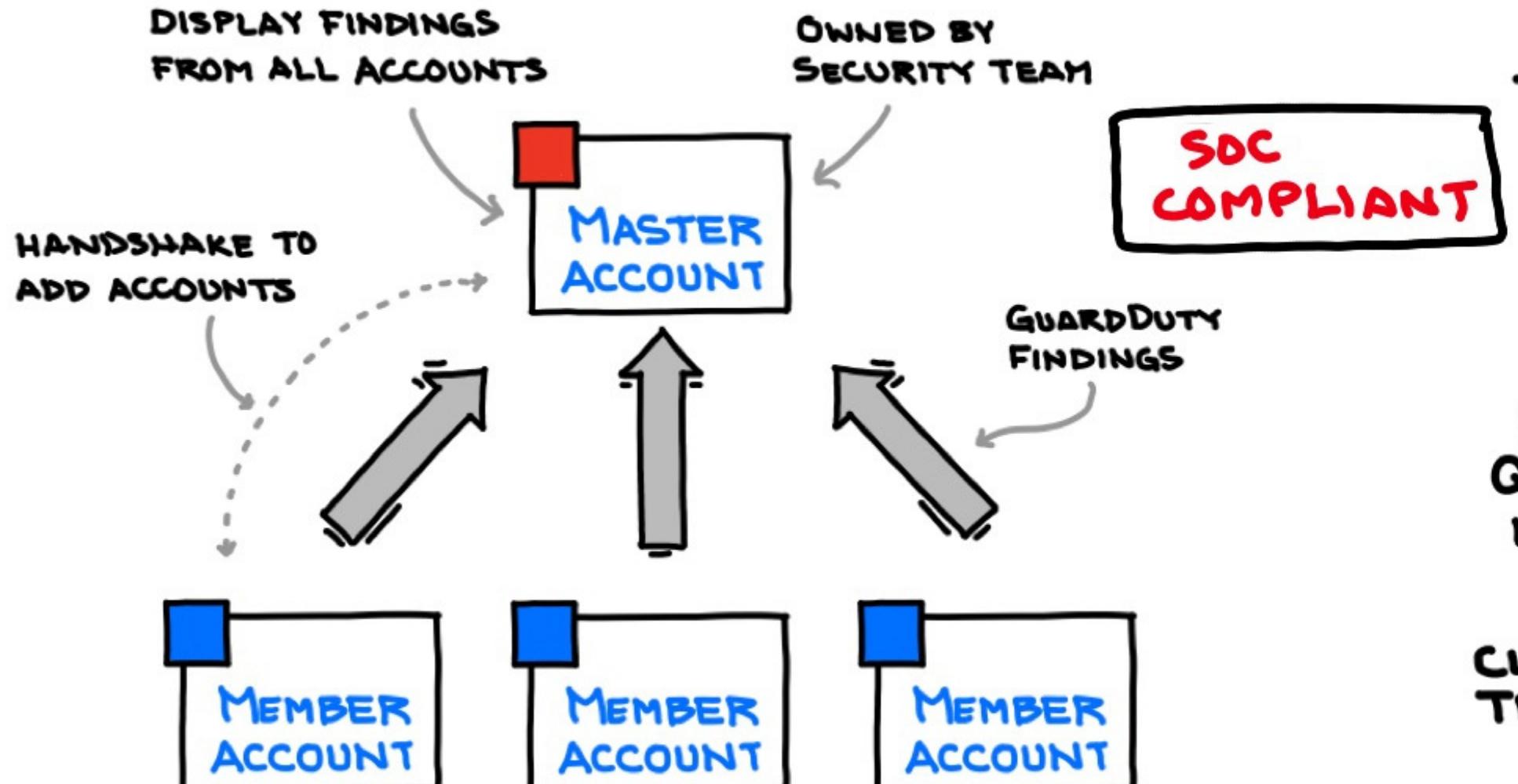
CLIENT ENCRYPTED



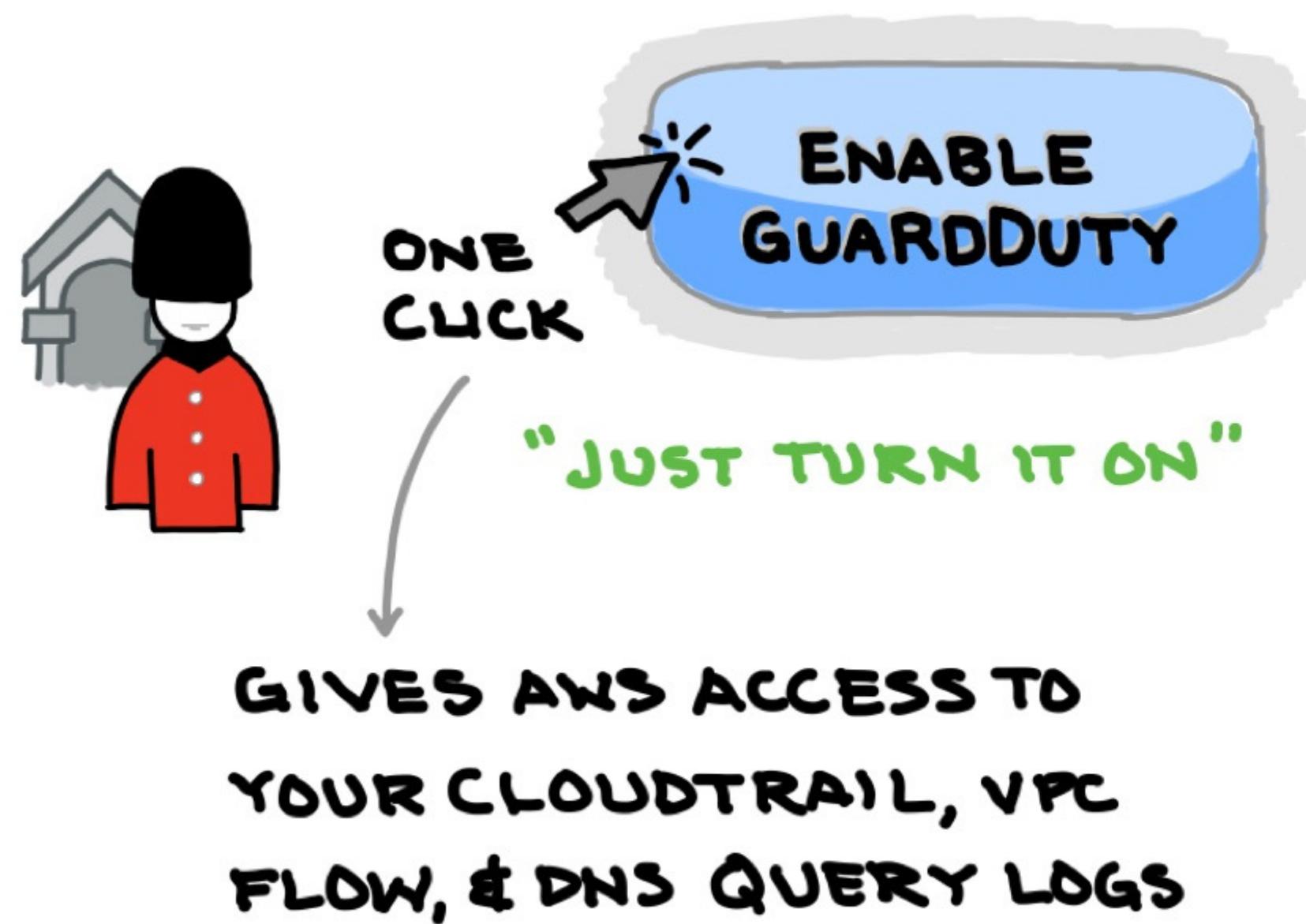
AN ALERT:

<ul style="list-style-type: none"> • SEVERITY • TIMESTAMP • CATEGORY • S3 BUCKET/ OBJECT 	<ul style="list-style-type: none"> • COMMENTS • # VIEWS • AWS REGION • # RESULTS
--	--





CENTRALIZED THREAT DETECTION

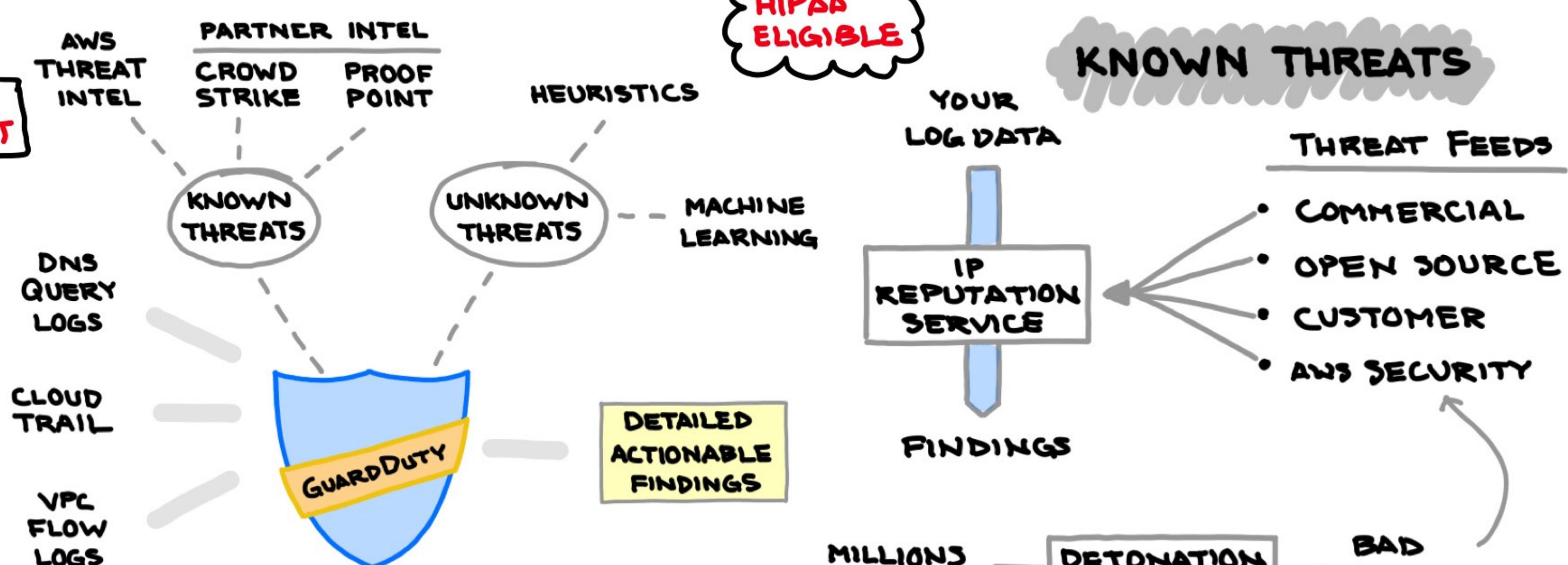


PRICING (US WEST - OREGON)

CLOUDTRAIL LOGS \$4/MO/MM

VPC FLOW LOGS & DNS QUERY LOGS

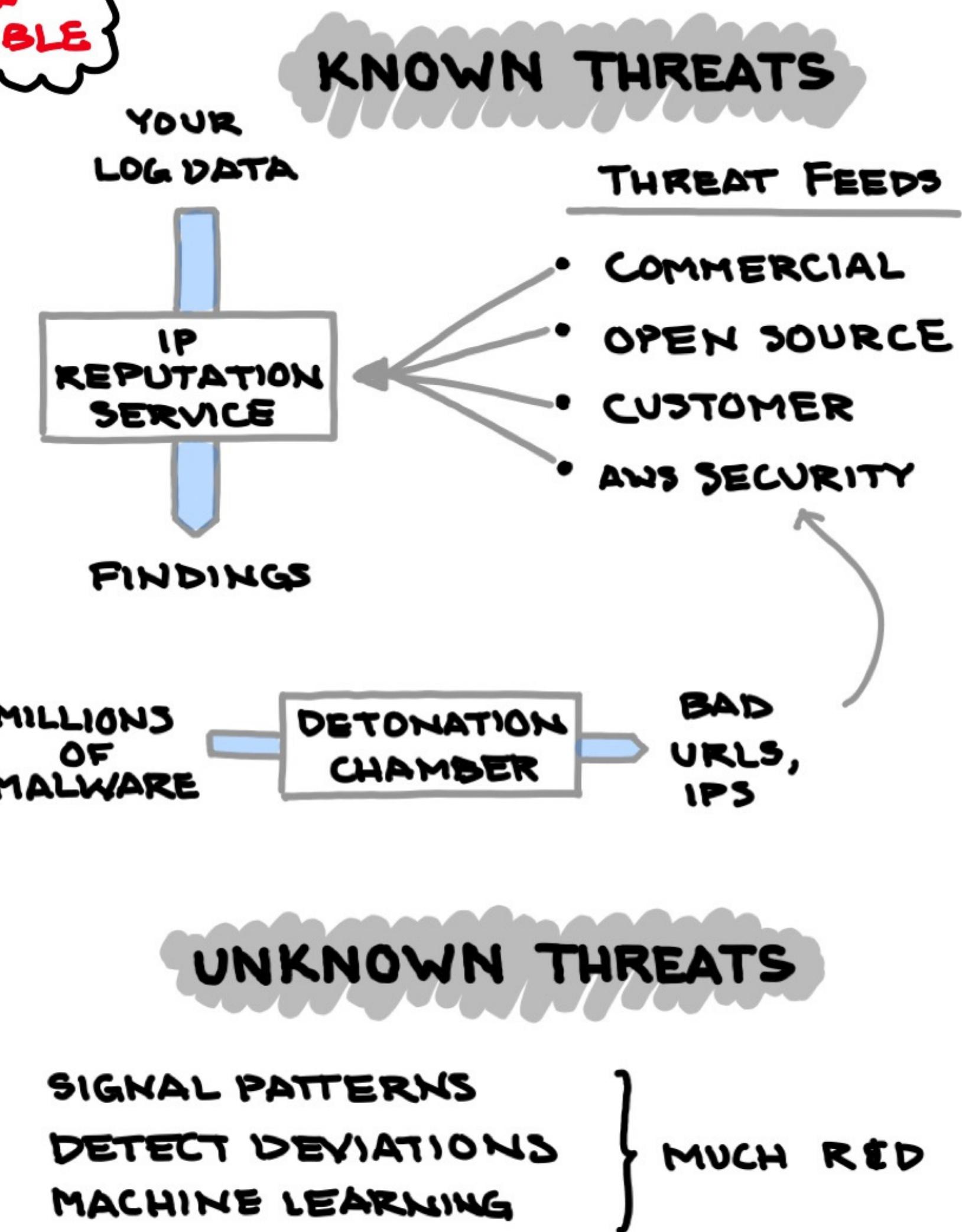
\$1/GB/MO	FIRST 500 GB
50¢/GB/MO	NEXT 2000 GB
25¢/GB/MO	NEXT 7500 GB
15¢/GB/MO	OVER 10K GB



GUARDDUTY IS A REGIONAL SERVICE
YOU MUST ENABLE IN ALL REGIONS



AUTOMATION FRAMEWORK



DETECTION TIMES

EC2 - C5 FAST, 30 SEC - 2 MIN
T2 SLOW, 5 - 10 MIN

CLOUDTRAIL - 5-15 MIN

DNS - BEHIND CLOUDTRAIL

DETECTION CATEGORIES

- RECON
- STEALTH
- BACKDOOR
- CRYPTO(CURRENCE)
- TROJAN
- PEN TESTING*
- UNAUTH ACCESS

PAY • AS • YOU • GO

PRICING

OPTIONAL:

- phone # verification
- dedicated short codes

EMAIL \$1 per 10K

MOBILE PUSH \$1 per 1M over 1M

SMS per message varies by destination

+ \$1.20 per 1k endpoints (over 5k)

EVENTS: \$1 per 1M collected via mobile SDK



CUSTOMER ENGAGEMENT

1. CUSTOMER ANALYTICS
2. CUSTOMER SEGMENTATION
3. MULTI-CHANNEL MESSAGING

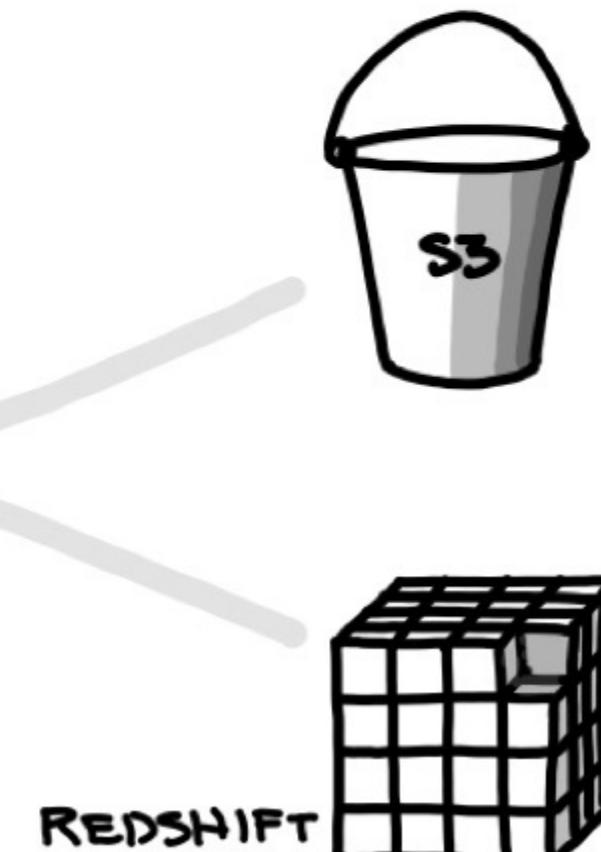


AMAZON PERSONALIZE

HIPAA ELIGIBLE



REPLACES MOBILE ANALYTICS AUTO-EXPORT



AMAZON PINPOINT

CAMPAIN MANAGEMENT

CUSTOMER ENGAGEMENT FAMILY of SERVICES

AMAZON SIMPLE EMAIL SERVICE

SCALABLE EMAIL PLATFORM

AMAZON CONNECT

CUSTOMER CONTACT CENTER

1 CUSTOMER ANALYTICS

- DEMOGRAPHIC DATA
- INTEREST DATA
- ENGAGEMENT DATA

METRICS	ACTIVATION	DAILY USERS CHURN RATE RETENTION RATE AVG REVENUE LIFETIME VALUE ...
	RETENTION	
	CONVERSION	

2 CUSTOMER SEGMENTATION

- DEMOGRAPHICS... age, gender, location...
- INTERESTS..... sports, hobbies, likes...
- ENGAGEMENT..... sessions, purchases...



3 MULTI-CHANNEL MESSAGING

- MOBILE PUSH
 - APPLE PUSH NOTIFICATION
 - FIREBASE CLOUD MESSAGING
 - GOOGLE CLOUD MESSAGING
- EMAIL
 - HTML OR PLAIN TEXT
- SMS

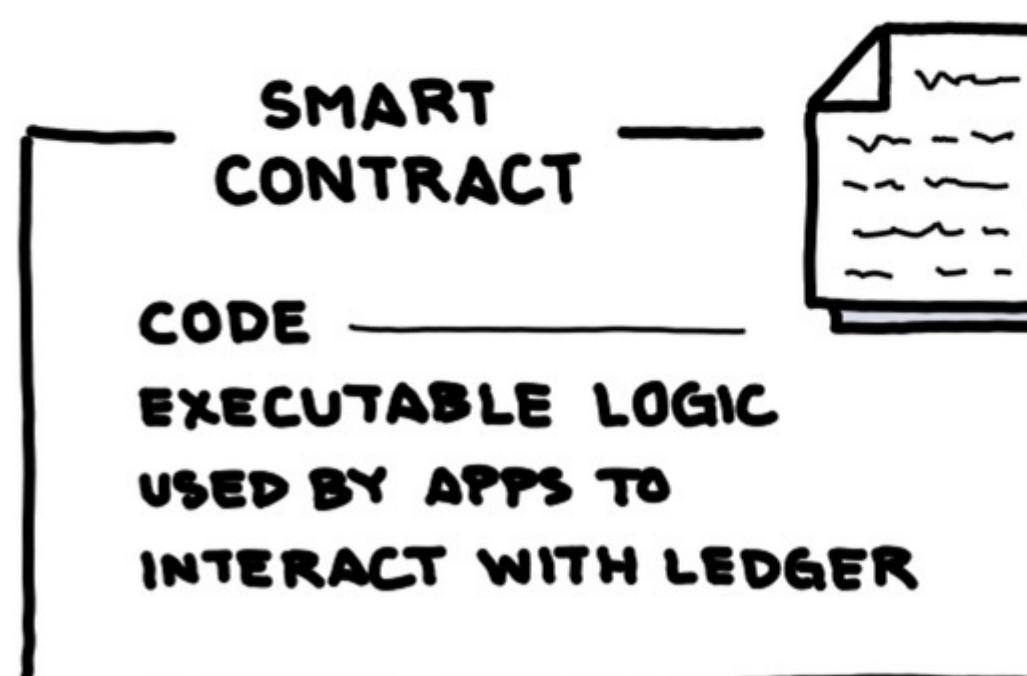
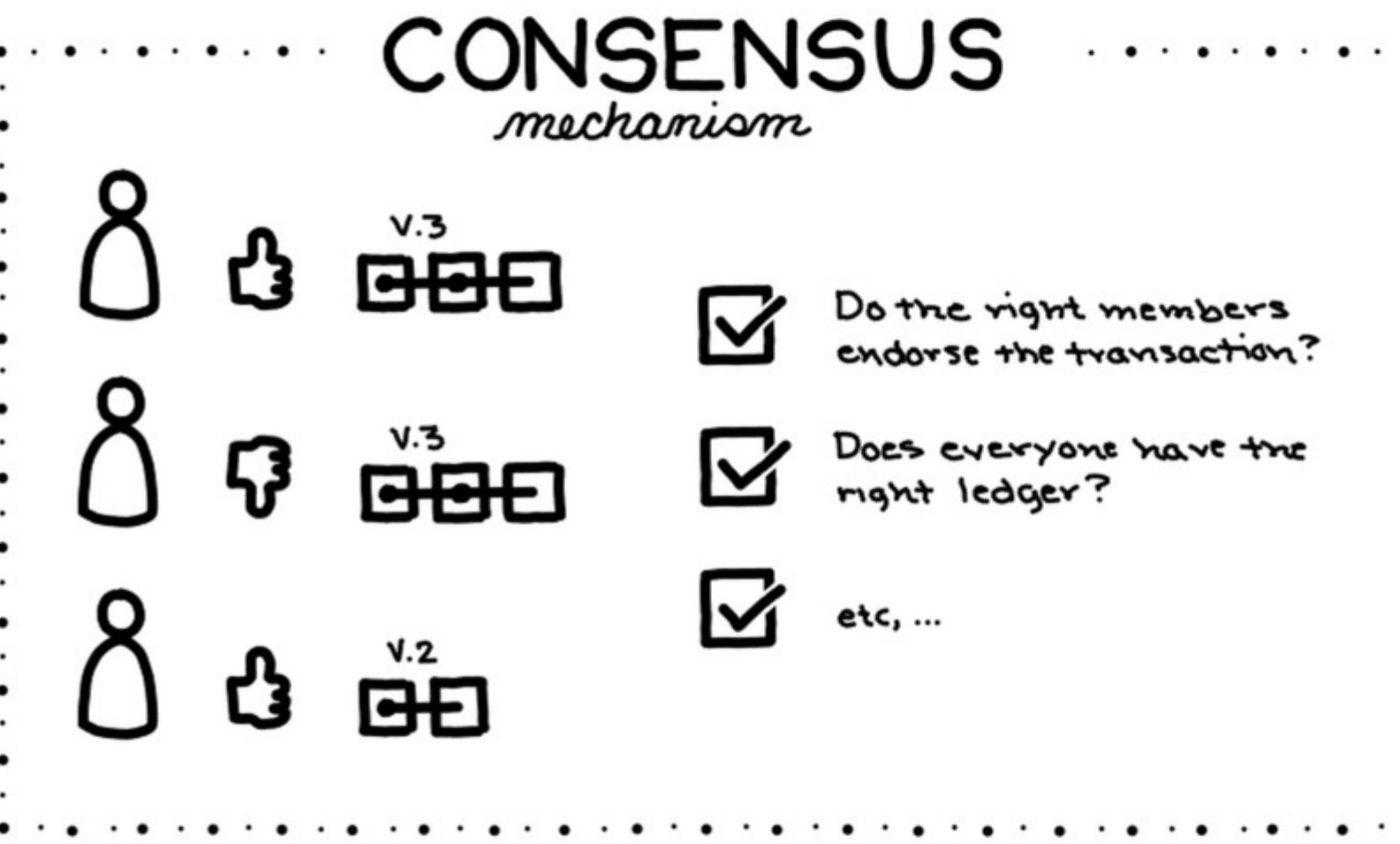
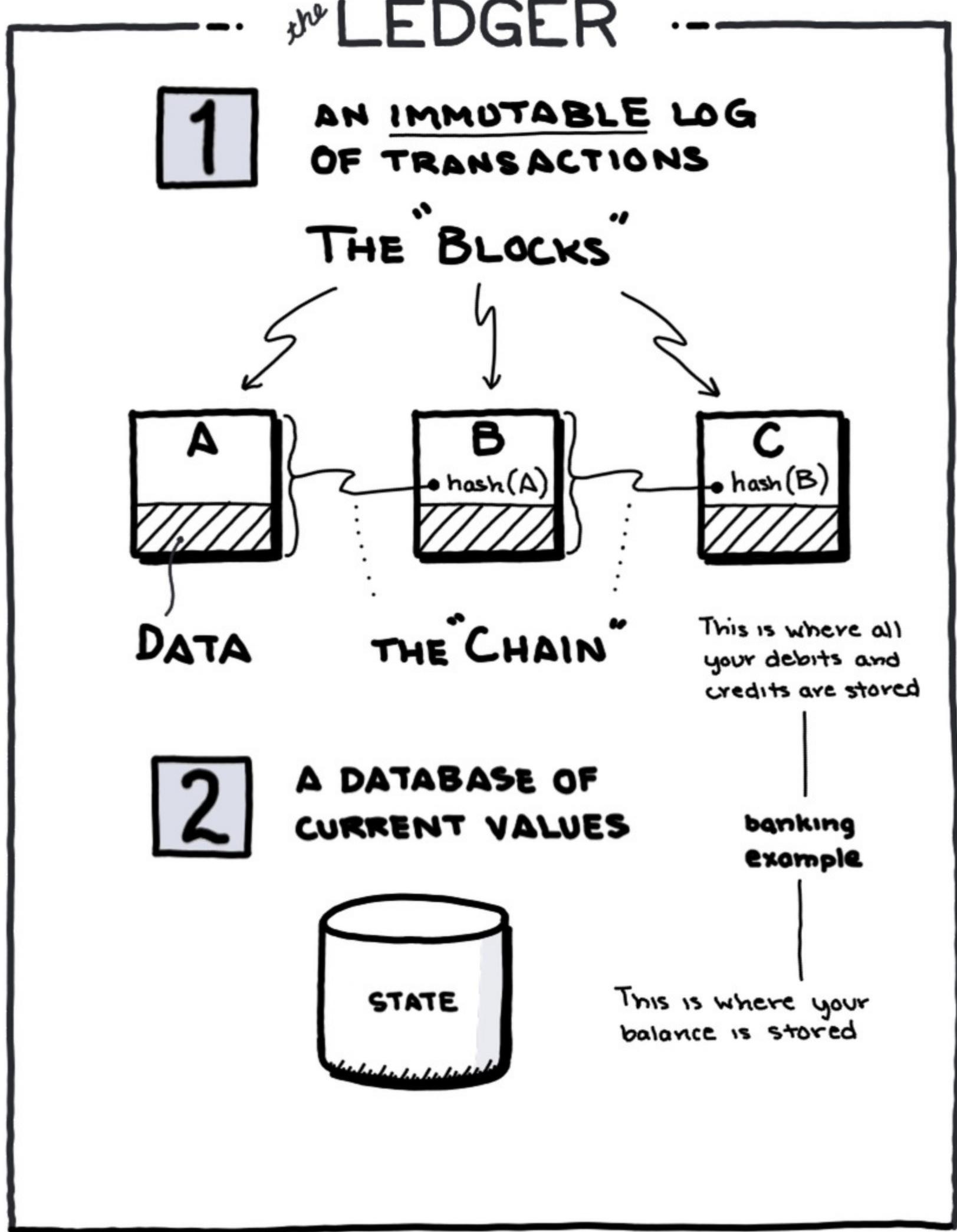
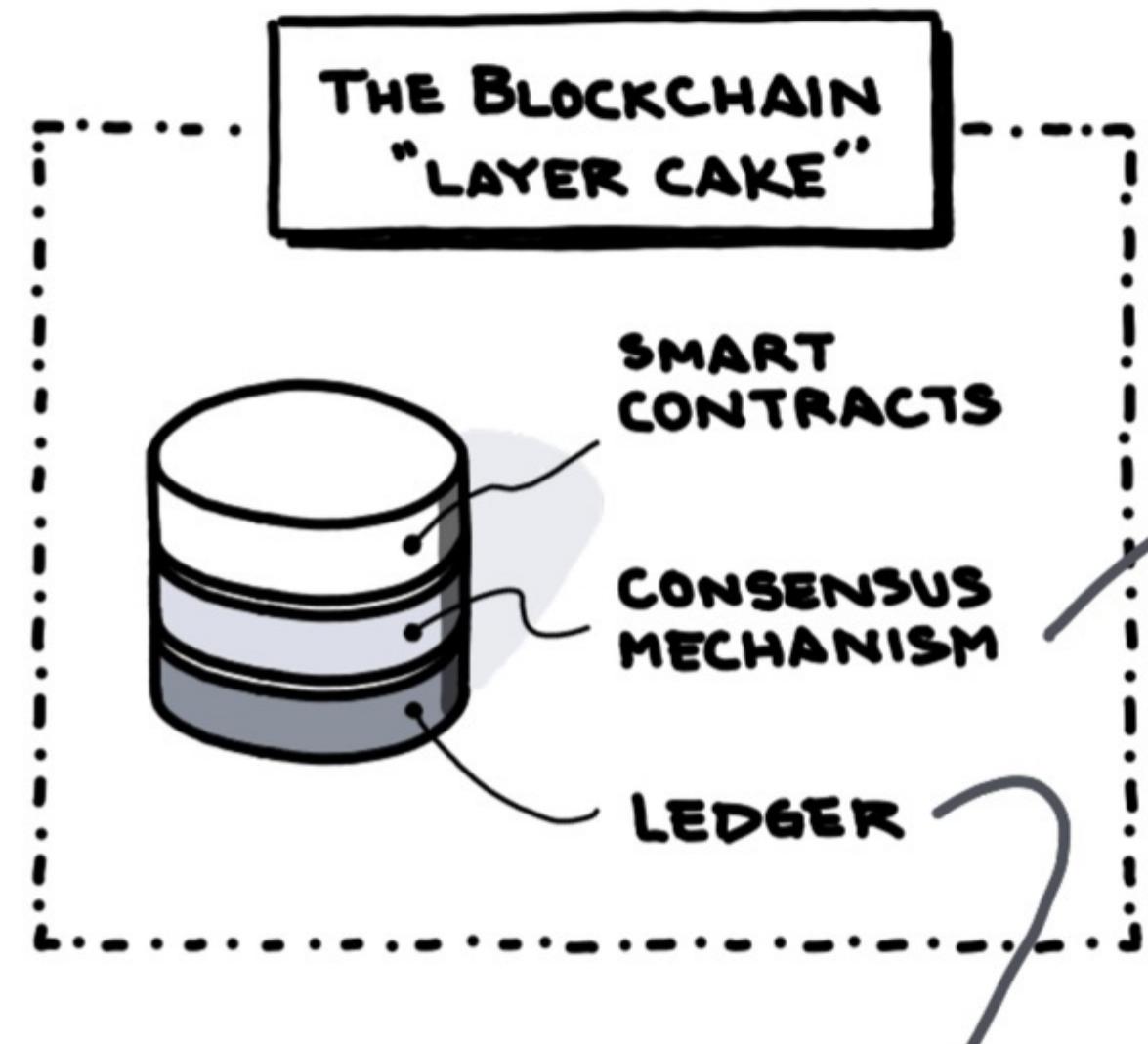
AMAZON MANAGED

BLOCKCHAIN

@awsgeek

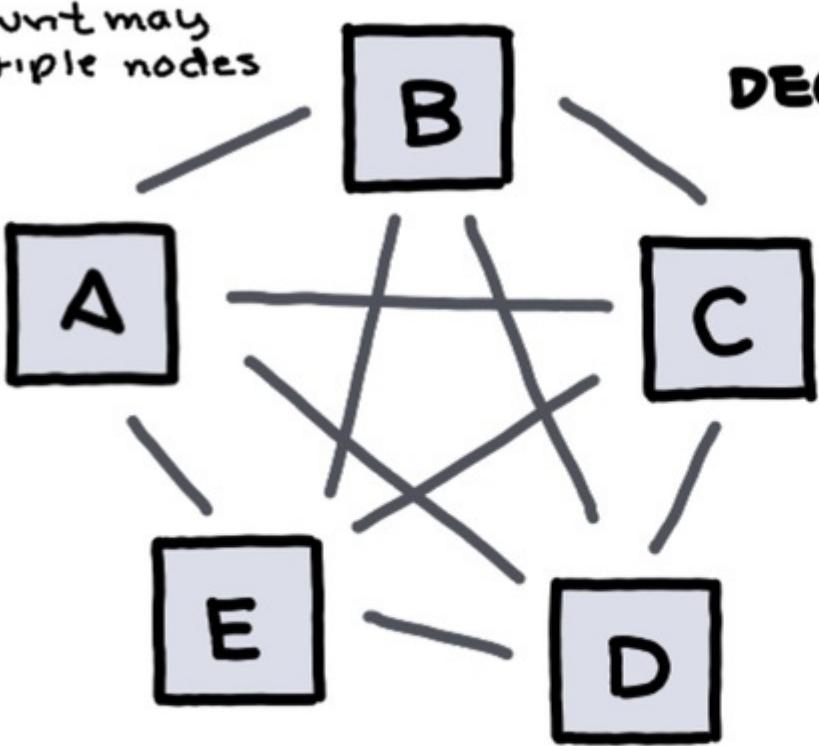
23 AUG 2019

SCALABLE BLOCKCHAIN NETWORKS

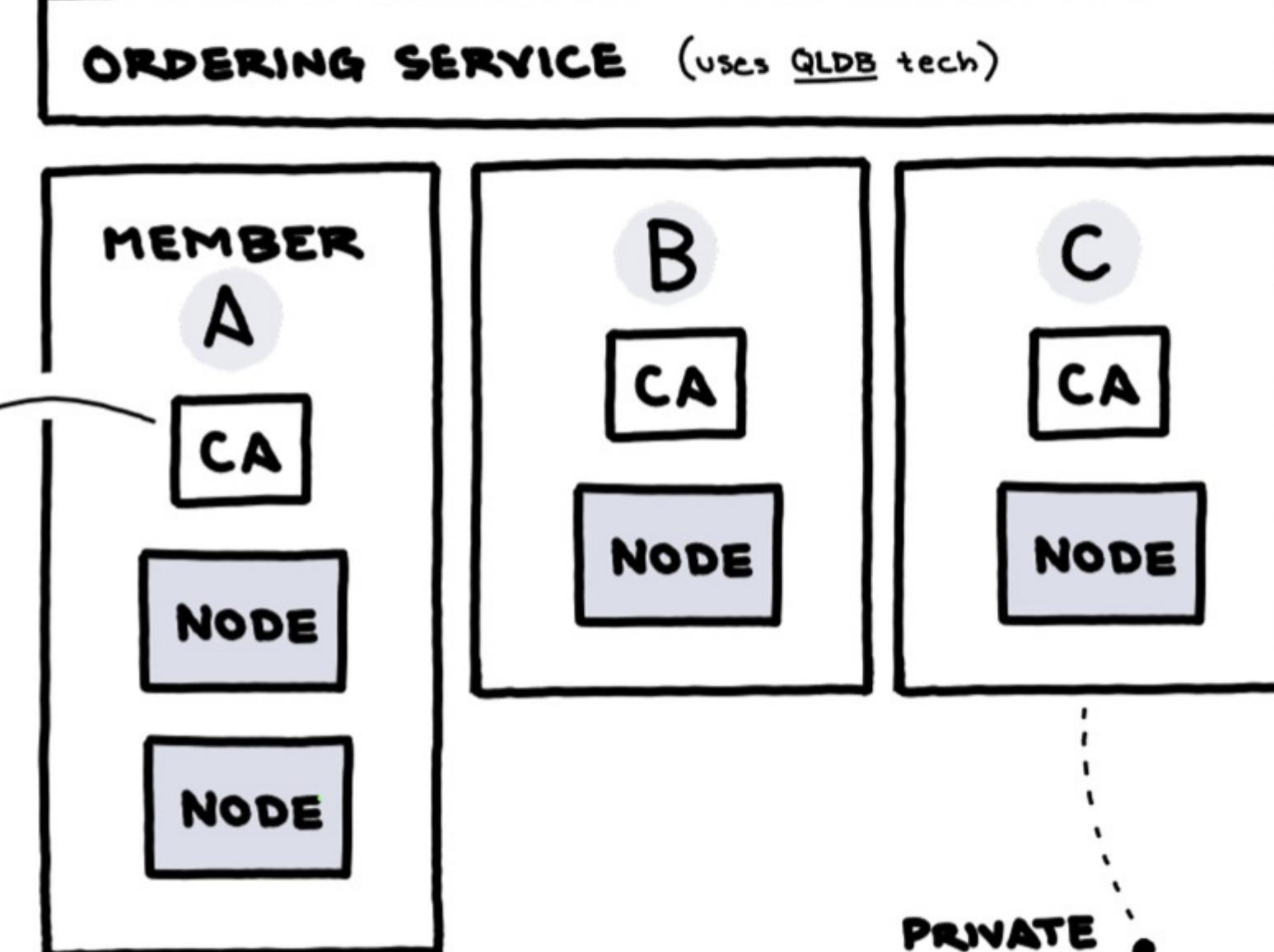
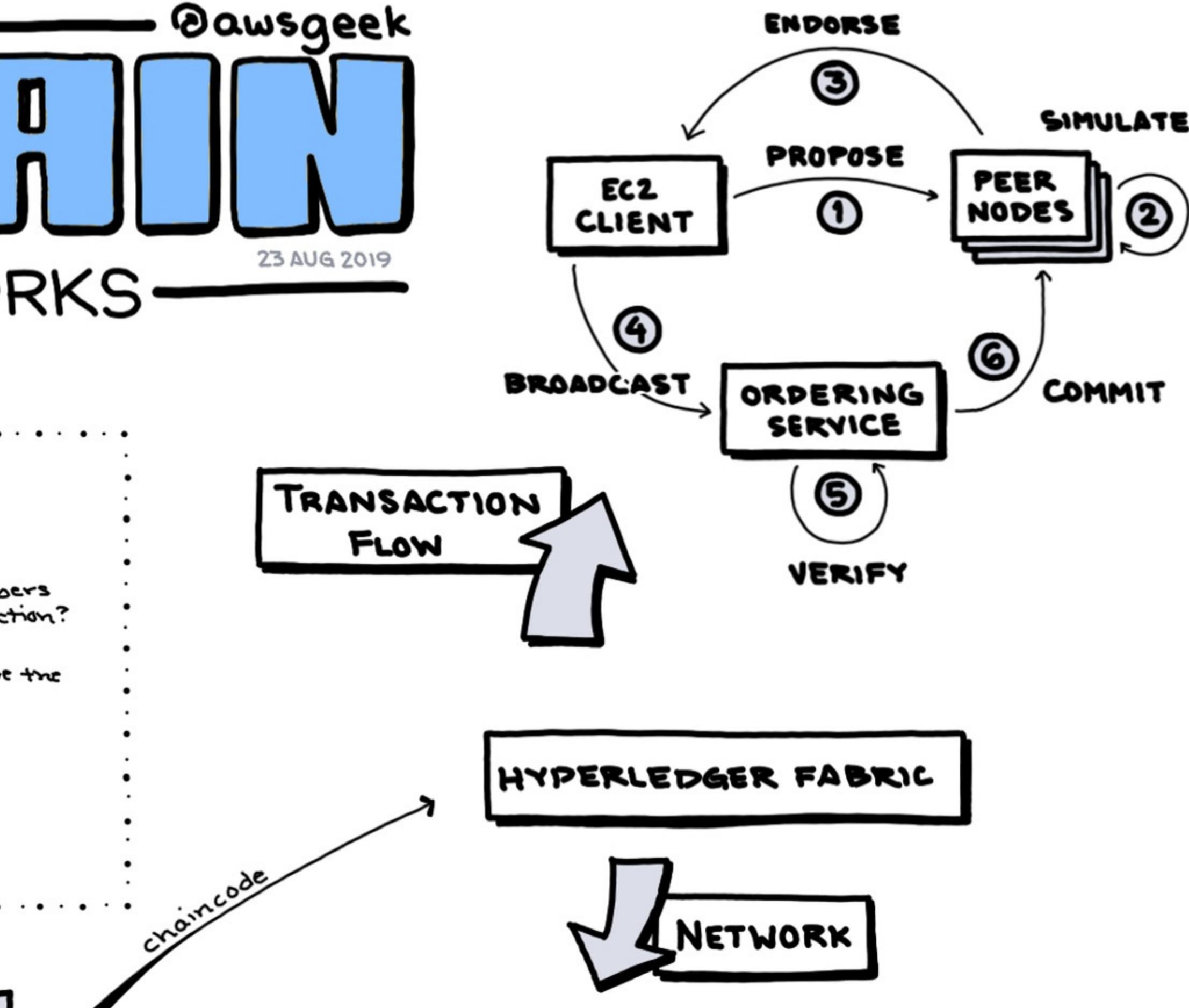


AMAZON MANAGED BLOCKCHAIN

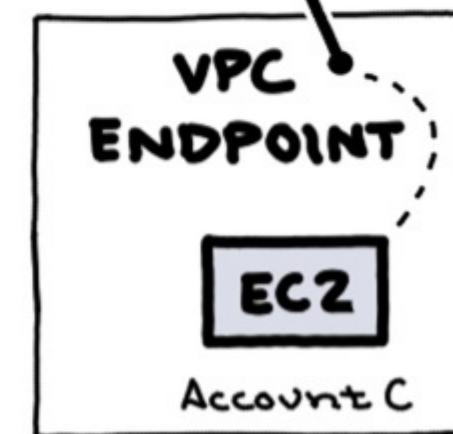
One account may have multiple nodes



EACH NODE HAS A COPY OF THE LEDGER



A CREATES BUT
DOESN'T OWN NETWORK



CC BY SA

The image features a large, stylized word "Cloud" written in white on a blue background. The letters are thick and have a slightly irregular, hand-drawn appearance. Below the word, there is a hand-drawn diagram. On the left, there's a stack of four purple rectangular boxes labeled "Services". To the right of the services, there are two computer monitors. The monitor on the left displays a code editor with several lines of pseudocode, and the monitor on the right shows a database schema with tables and relationships. A circular icon containing a cartoon character of a person with curly hair is positioned between the monitors and the services. Double-headed arrows connect the services to the databases and the databases to the code editor, indicating a bidirectional relationship or data flow between them.



Content: awsgeek.com

Curated By:  him431