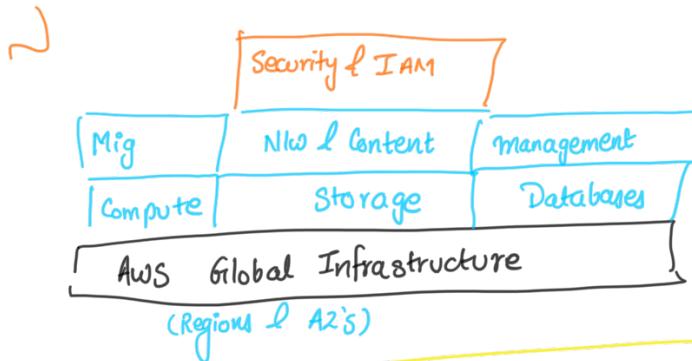


Aws Prep

Q High Level Services



Global:

Region is a geographical regions

Contains 2 or more AZ's,,

Edge Location: caching content

Typically CloudFront,

Amazon's CDN

#AZ
Distinct locations within an AWS
Region

#2 IAM:

manage user & access to the console
user, groups, admissions

⇒ centralized, granular

(Identity Federation)

SAML

① Users

③ Policy
(documents,
JSON)
user/group/role

② Groups

(collection)

④ Role → assign

↓
to AWS Resource

S3 → EC2

Billing → CloudWatch → SNS

S3: 0 Bytes → 5TB

Object - storage

* universal namespace

• Object → Key (name of object)

Value (data, made of
sequence of bytes)

• metadata

- Read after write for PUTS of new obj
- Eventual consistency for PUTS overwrite and Deletes,,

S3 → Tiered Storage Available

S3 Standard:

99.9999%
availability

S3-IA

(charged a
fee)

Glacier

\$↓

S3 - One Zone-IA

no need of
resilience

S3 → intelligent access

standard, intelligent, st-IA, one zone-IA, Glacier, Glacier Deep Archive

	S3 Standard	S3 Intelligent-Tiering*	S3 Standard-IA	S3 One Zone-IA†	S3 Glacier	S3 Glacier Deep Archive**
Designed for durability	99.999999999% (11.9's)	99.999999999% (11.9's)	99.999999999% (11.9's)	99.999999999% (11.9's)	99.999999999% (11.9's)	99.999999999% (11.9's)
Designed for availability	99.99%	99.9%	99.9%	99.5%	N/A	N/A
Availability SLA	99.9%	99%	99%	99%	N/A	N/A
Availability Zones	≥3	≥3	≥3	1	≥3	≥3
Minimum capacity charge per object	N/A	N/A	128KB	128KB	40KB	40KB
Minimum storage duration charge	N/A	30 days	30 days	30 days	90 days	180 days
Retrieval fee	N/A	N/A	per GB retrieved	per GB retrieved	per GB retrieved	per GB retrieved
First byte latency	milliseconds	milliseconds	milliseconds	milliseconds	select minutes or hours	select hours

Storage Req

Object → no AS
no DB

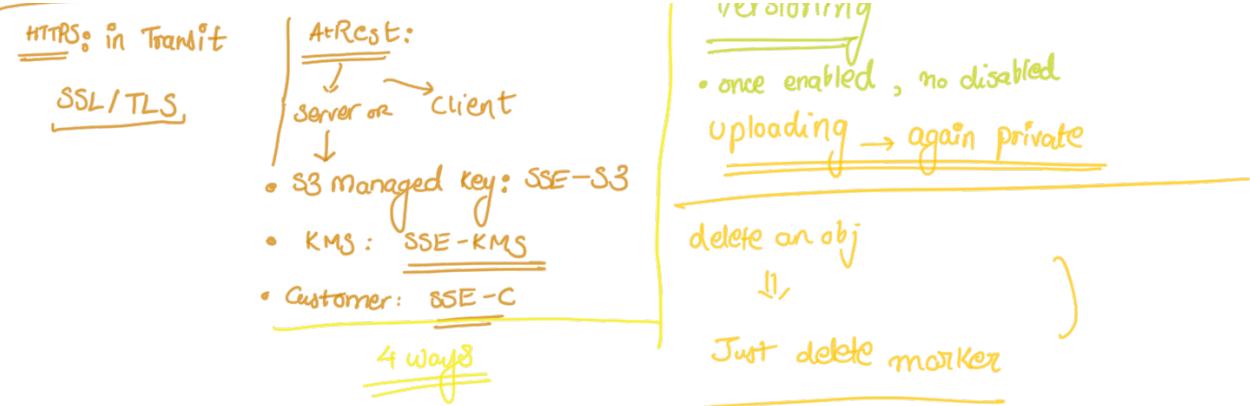
need block

#S3:

- Access control list
↓
Object level

Bucket Policy

↓ Implementation



AWS Org: account mgmt service

3 ways

- ① Bucket policy + IAM
 - ② Bucket ACL + IAM
 - ③ IAM Roles
- } Programmatic

Cross-region replication!

Transfer acceleration:
Users all across the world



CloudFront:

CDN: deliver resources
→ cached to the nearest edge location

web distribution
RTMP

(Origin → the origin of all files CDN distrib)

CF → Global
create an invalidation
to disable access //

Edge locations are → Read/write

Cached for TTL

Snowball
Petabyte data transfer

edge → Compute + Storage
mini AWS

Storage Glw:

On-premise ↔ cloud
(Virtual/physical)
↓

① FileGlw

② Volume Glw
↔ Hard disks

ATTACH vs macie

S3L

PII → personally identifiable

AWS)

③ Tag G/w

query
works
directly
with S3

AI + NLP → protect S3 PI //
Cloud Trail logs

Summary

① IAM :
→ User
→ Group
→ Roles
Policies

Power user access
↓
all except
User management

Change
Trigger to 3000

EC2 :

(Reduces time to deploy
web-servers)

→ On Demand
→ Reserved
→ Spot

→ Dedicated Hosts

- Flexible start/end
- feasible for ↓

low cost,
no long-term
Tested, short-term

- steady state
 - upfront to reduce \$
 - Standard Reserved (can't convert)
- * (Scheduled)

- regulatory
- licensing
- can be purchase on-demand

(SG + stateful
NACL + stateless)
inbound/outbound
auto create
Block by default / Allow

can attach
more than 1 SG's //

can't block
specific IPs //

inbound → blocked
outbound → allow

EBS :

General IOPS Throughput Cold Magnetic
most DB ware house File Server

Volumes exist
Snapshot → S3
Incremental

(Stop instance b4 sn
AMI ← Snapshots
Volume → same AZ
EC2 //

(Time copies of
Volumes)

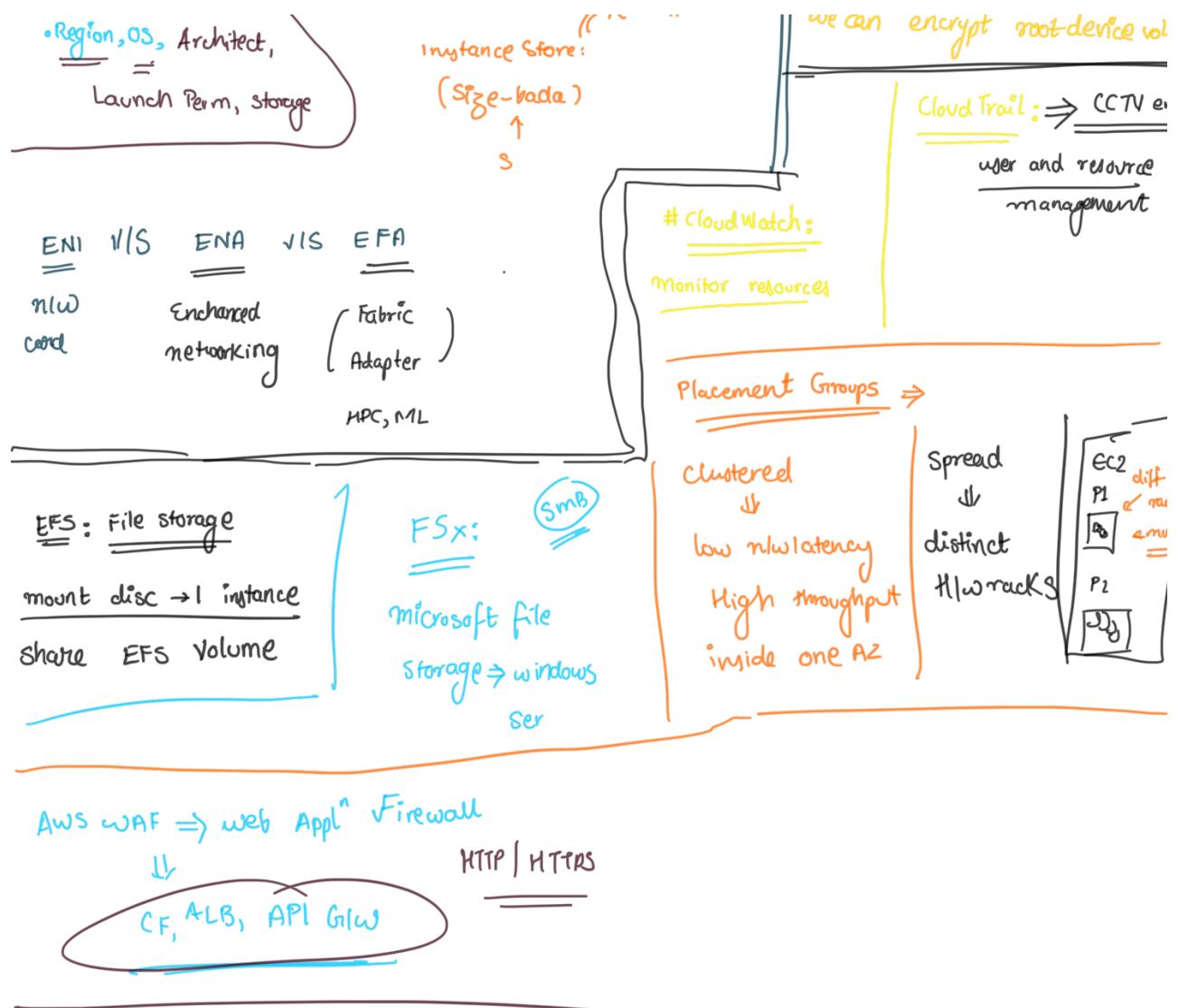
(snapshot)

Selecting AMI

AMI Types:

(cannot be stopped)

Snapshots of encrypted are enc



EC2 Summary

① Provision virtual machines on cloud

② On Demand
Reserved

Spot Bid
if terminated

Dedicated Hosts (licensed)

- Reserved Instances cannot be moved across Regions
- Spread Placement ⇒ 7 ins./AZ,
- / latest / meta-data
- Delete on Termination

DATABASES

- RDS

Automated Backups

Point - in - Time

Read Replicas

Snapshots are there even after deleting

