**Industry Solution Architect: AWS + MicroService**

 

pc mobile

api gateway

pc BFF

mobile BFF

BFF

video/image query

task status query

micro

service

video/image upload

label image

task status update

video/image update

aws EC2

aws s3

aws Lambda

aws ECS



aws ELB

* api gatewaty: traffic management, CORS support, authorization and access control, restriction, monitoring, and API version management
* BFF: aggregate the data of multiple the back-end services、provide the specific data according to different ends
* micro services: use computing resources effectively、faster and easier to update、lower development cost、higher scalability、highly reusable
* aws s3: videos and images storage
* aws lambda: convert videos and images
* aws EC2+ECS+ELB : scalable、economy、secure

**Data migration solution**

original data



aws Lambda

video/image upload service

video/image

convert

+ area、line、station

是

store

callback

write

]\get db address

zookeeper

video/image update service

  
aws s3

RMDB

Slave

Master

Instance-1

Instance-1

Instance-n

Instance-2

Instance-2

Instance-n

* aws Lambda: convert videos and images to different size adapting mutiple devices, create picture thumnail、create the first screen picture of video
* zookeeper: scale out of databases
* RMDB(master/slave, mutiple instances): One master and one slave is the most common master-slave architecture. It is simple and effective to implement. It can achieve both high availability and read-write seperation, then improving the concurrency of the cluster.

**videos and images management solution**

api

gateway

client

BFF

zookeeper

micro service

**Counting task status based on events can be on time and provide excellent user experience**

label image service

video/image update service

update task status

zookeeper

get db address

RMDB

Master

Slave

Instance-1

Instance-2

Instance-n

Instance-n

Instance-1

Instance-2

restful api address

read/write

get db address

video security solution

solution one: more complex rule, more security

check the

rule string



aws Lambda



amazon api gateway

Browser

insert a rule string into request headers hheaders

reqeust

video stream

video player

Yes

Is the rule string valid?

continue to request

No

**If the system requires very high security, please use solution two, but it will need high development cost.**

**Otherwise, solution one is enough. Solution one is simple and economy.**

solution two: dynamic key is time-efficient

check the key

No

end request

key checkor

service

Yes

Is the key valid?

continue to request



aws Lambda



amazon api gateway

insert key into request headers

reqeust

video stream

get key

key service

video player

Browser

end request