
AWS
re:Invent

GAM301

Gameloft: A zero-downtime data lake migration deep dive

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AWS re:Invent

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Agenda

- Gameloft
- On-prem to AWS
- Key choices
- Plan and execution
- Future and key takeaways



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GAMELOFT

GAMELOFT



A Vivendi company

Gaming entertainment company,
pushing the boundaries

275 games

On all stores – leader in development
and publishing of games

>80 million

Monthly active users worldwide
across all platforms

4.5 stars

Average game ratings on application
marketplaces at launch

27 minutes / day

Average playtime / user,
5 sessions / day

1.5 million

Gameloft games are downloaded
every day

Award-winning games generate massive volume of data

DESPICABLE ME MINION RUSH

965

million

downloads

…and growing!

Among world's top 10 most downloaded mobile games of all time[1]

Kids Kids' Choice Awards 2014

MODERN COMBAT 5

134

million

downloads

…and growing!

Editors' Choice · EDITORS' CHOICE IGN · GOLD AWARD Pocket Gamer

ASPHALT

Franchise

Benchmark for mobile arcade racing

1

billion

downloads

…and growing!

Asphalt 8 – Airborne among world's top 10 most downloaded mobile games of all time[1]

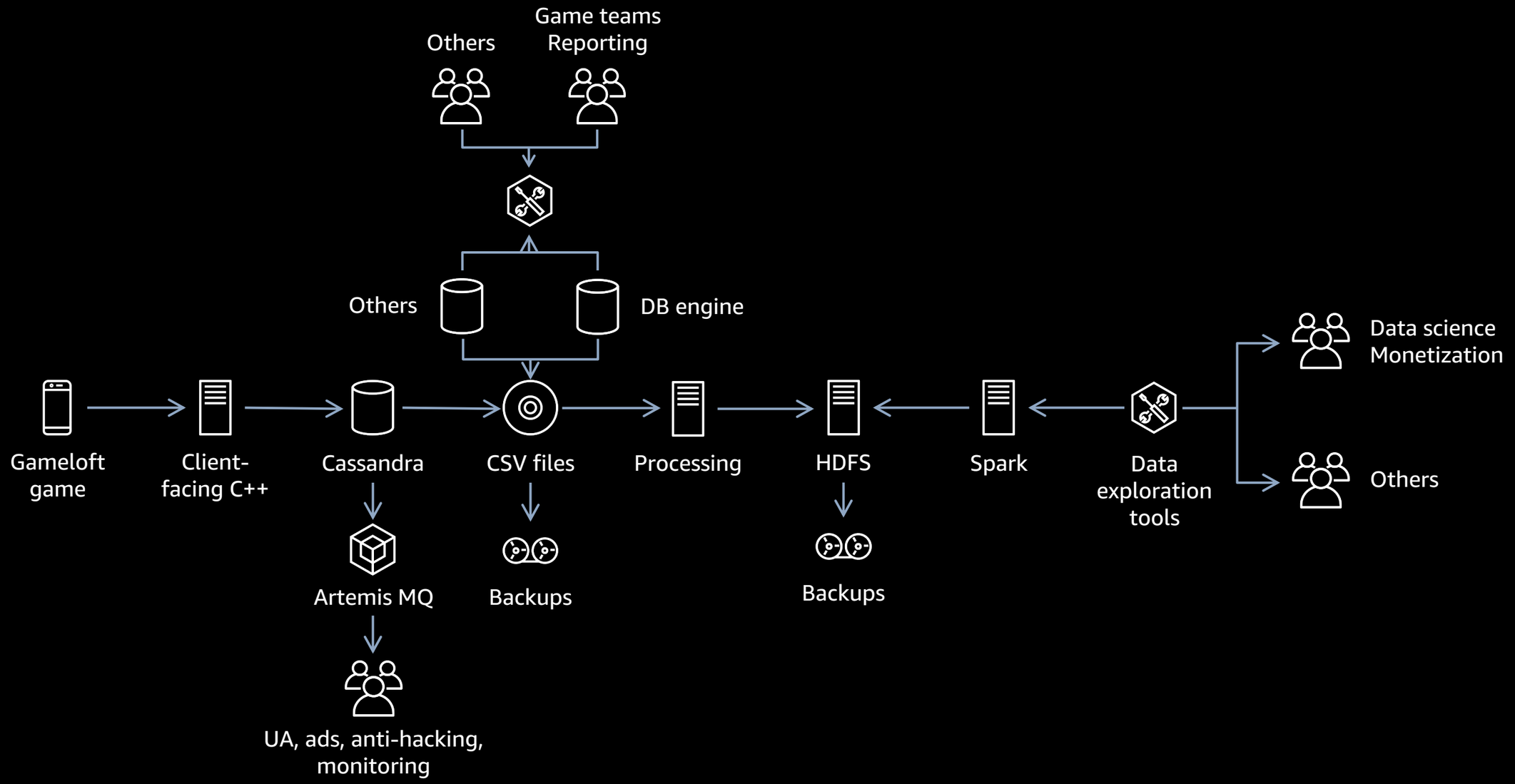
Global Mobile Awards Winner · 148Apps.com · Editors' Choice · Mobile Games Awards Winner · 2018 Winner TabbyAwards · Gold Award Pocket Gamer · Apple Design Awards 2019

On-premises to AWS



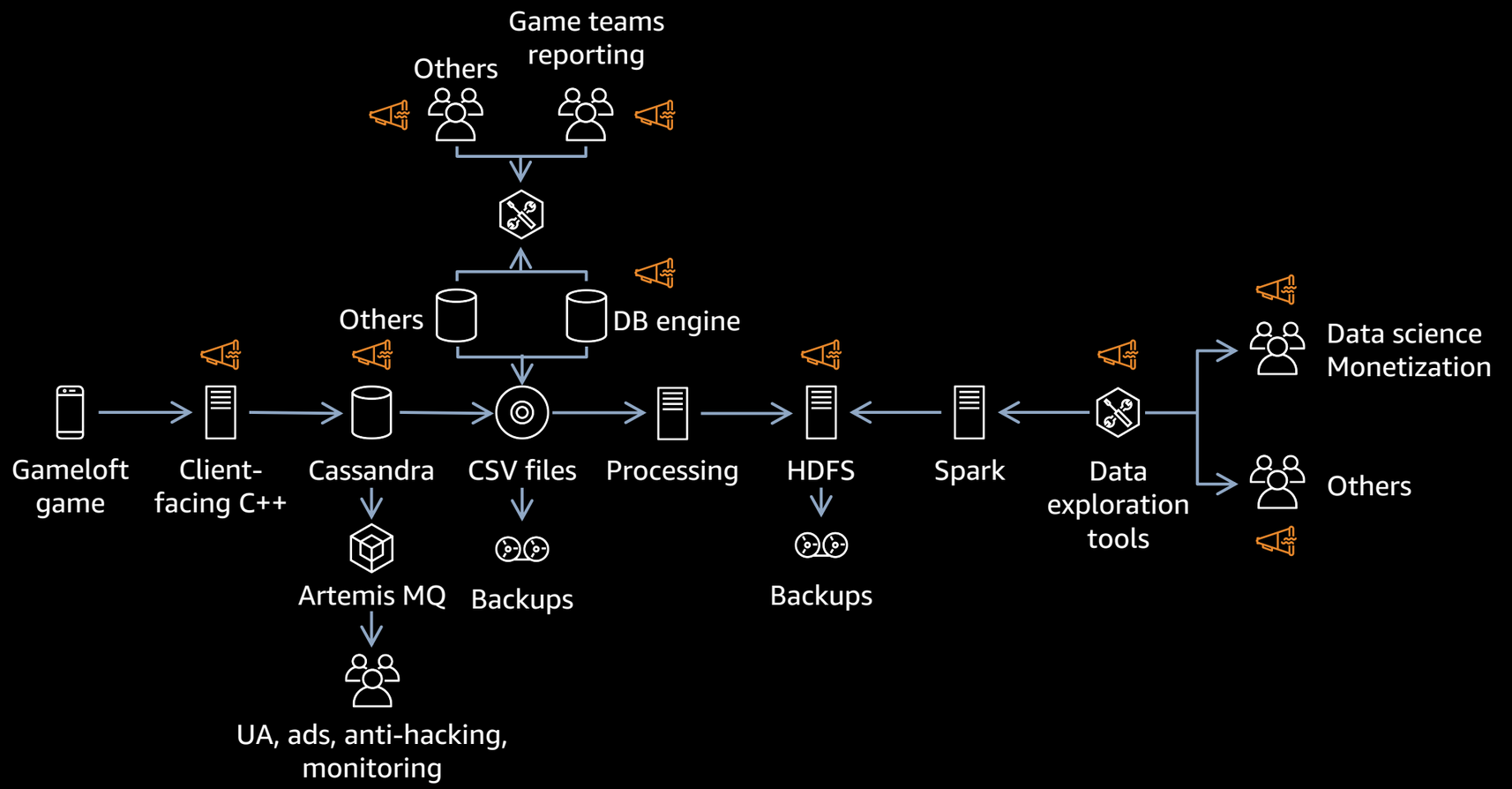
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On-premises situation



Key reasons we moved

- Agility
- Scalability
- Cost optimization
- Visibility
- Access



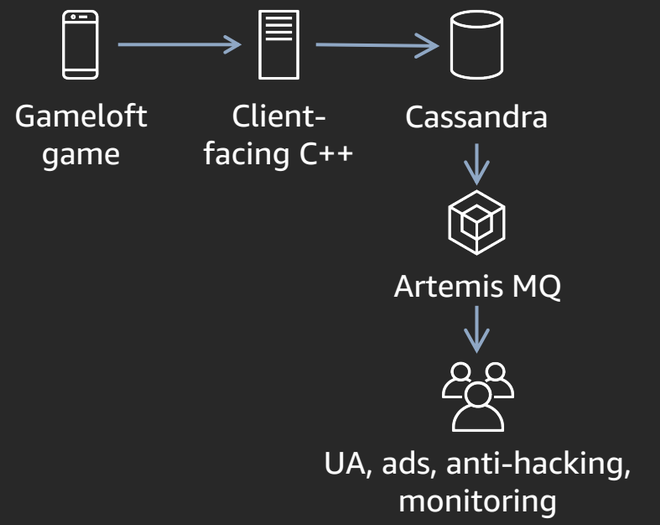
Key choices

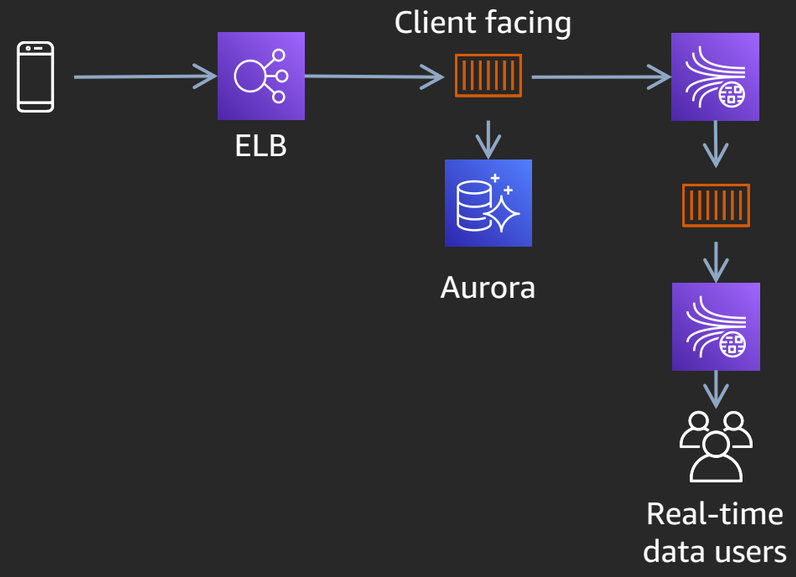


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Data ingestion

- Managed service
- 7-day retention
- Easy to deploy and integrate by clients
- Good integration with all AWS services





Processing and tooling



Previous XP with Rancher



Used to migrate ETLs,
crons, tools, etc.



Integration with Gameloft

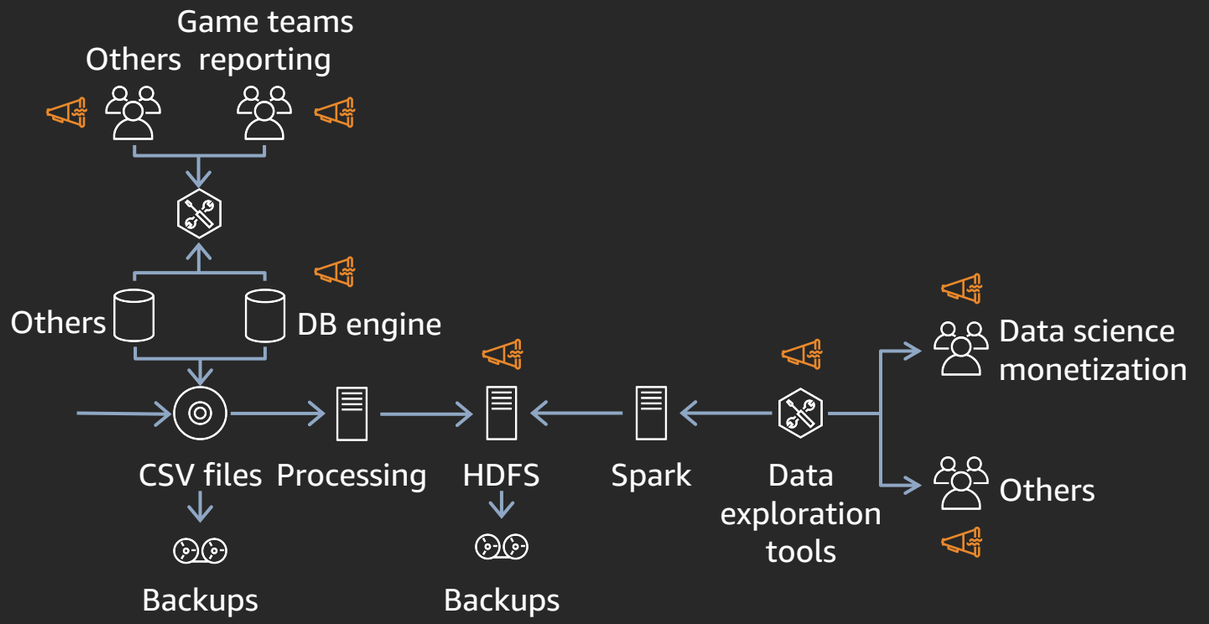


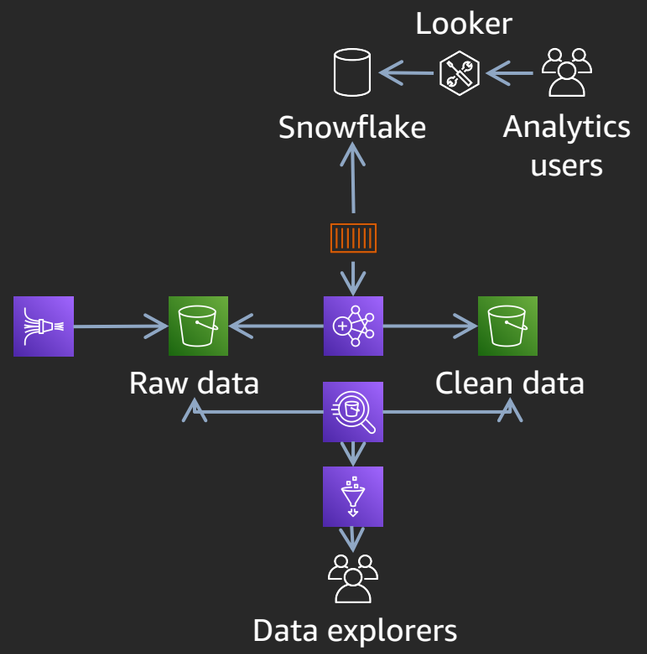
All-in-one interface



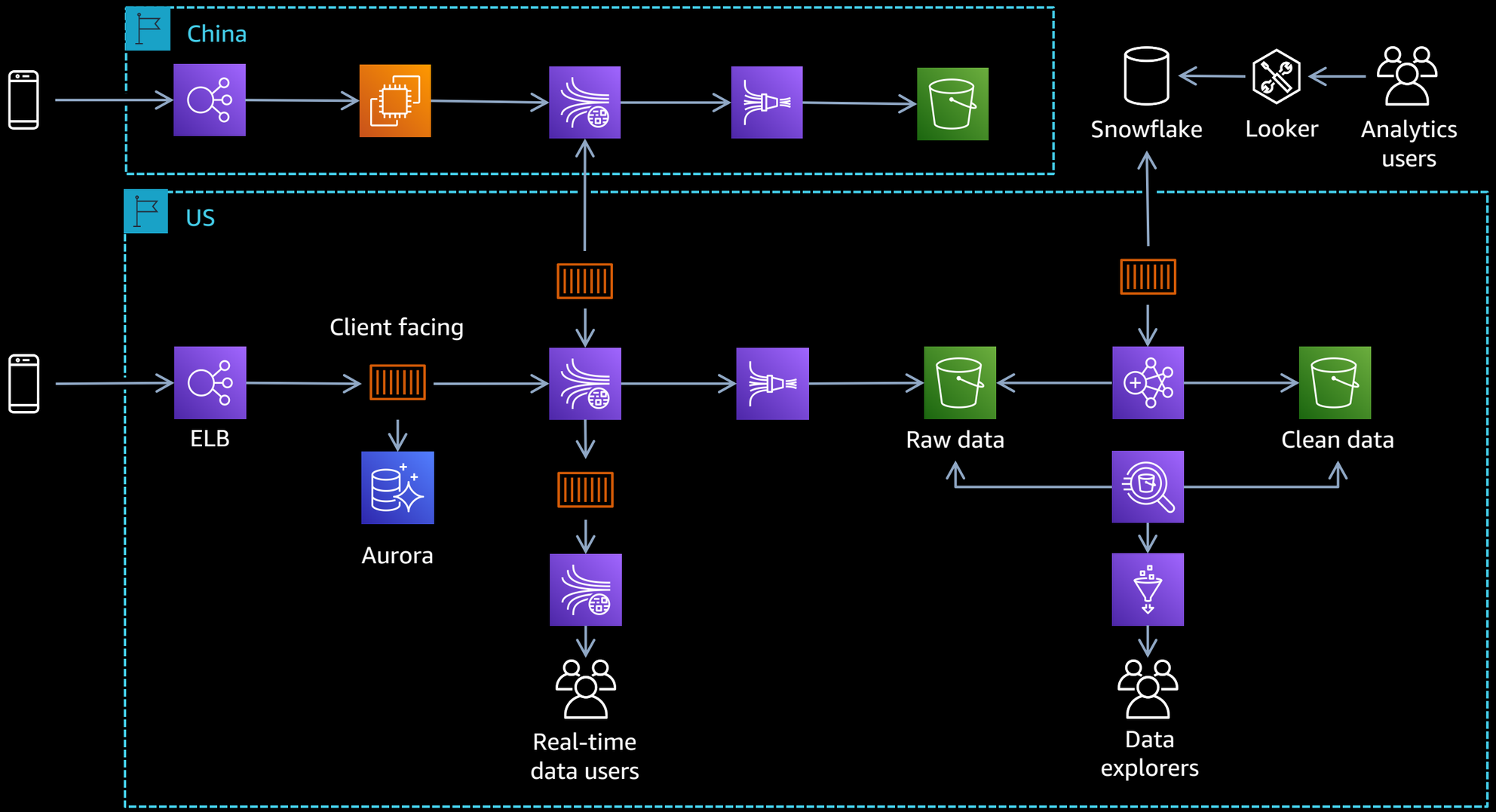
Data storage and analysis

- Data exploration environment
- Data access
- Cost optimization
- Performance
- Data retention





The plan


China
US
Snowflake
Looker
Analytics users
Client facing
ELB
Aurora
Raw data
Clean data
Real-time data users
Data explorers

We have a plan

Now what?



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Execution and results



Zero downtime



Accuracy and compatibility



Performance and optimization



Enable better data exploration



More use cases

KEY FIGURES

100+ servers

1.2 Pb of data

275+ games

1M files per month

>3B events per day

300+ monthly data users

10+ data tools

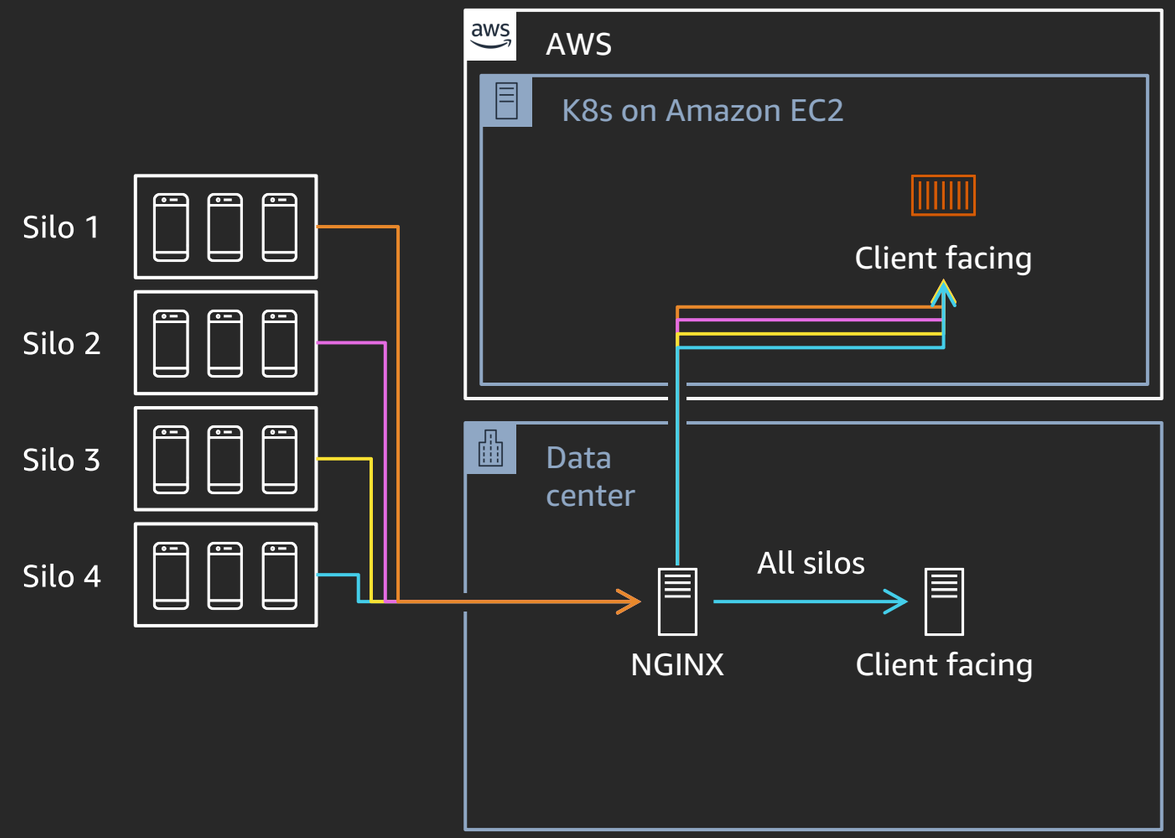
4 real-time Ops workloads

4 DevOps

4 developers

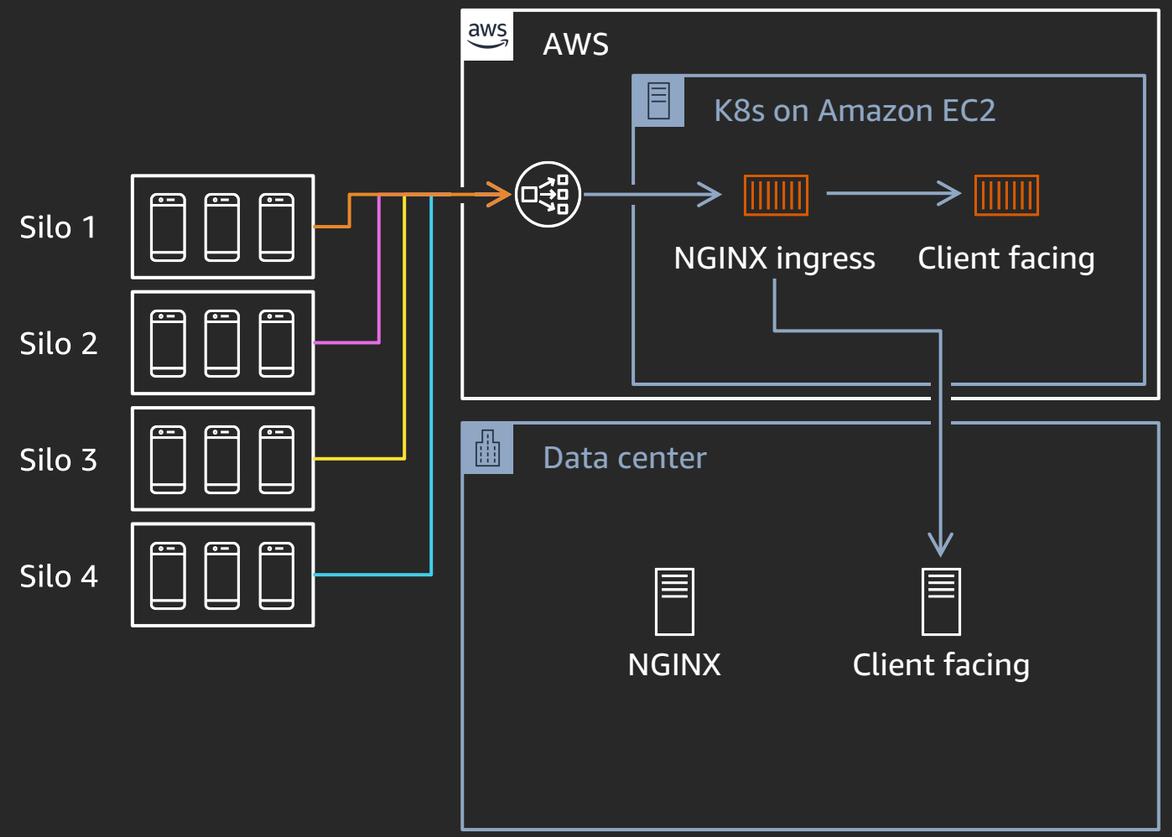
Zero downtime

- Pipeline
- Clients
- Gradually duplicate traffic
- Hairpin requests
- Single target limit
- Redundancy



Zero downtime

- Pipeline
- Clients
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Accuracy and compatibility



Duplication helped a lot



Clients had time to refactor and adapt



Kinesis

Sharding | retries | enhanced fan out | ensure capacity in KCL DynamoDB tables



Data checks with EMR and Athena

Performance and optimisation



Increased availability of all data from daily to within minutes



Better data



Faster access



Improved monitoring



Automatic data retention policy

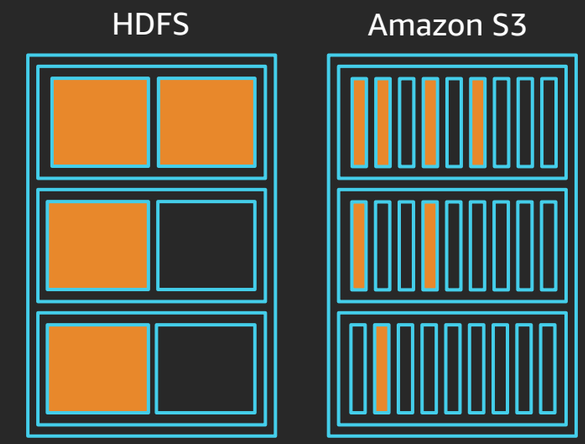


Optimized compute usage

Enable better data exploration

New structure of events

Better tooling



2x faster response time

Amazon Athena

Amazon EMR

Amazon Kinesis

AWS Glue

Amazon S3

Amazon S3 Glacier

MORE
use cases



Enable real-time data science use cases

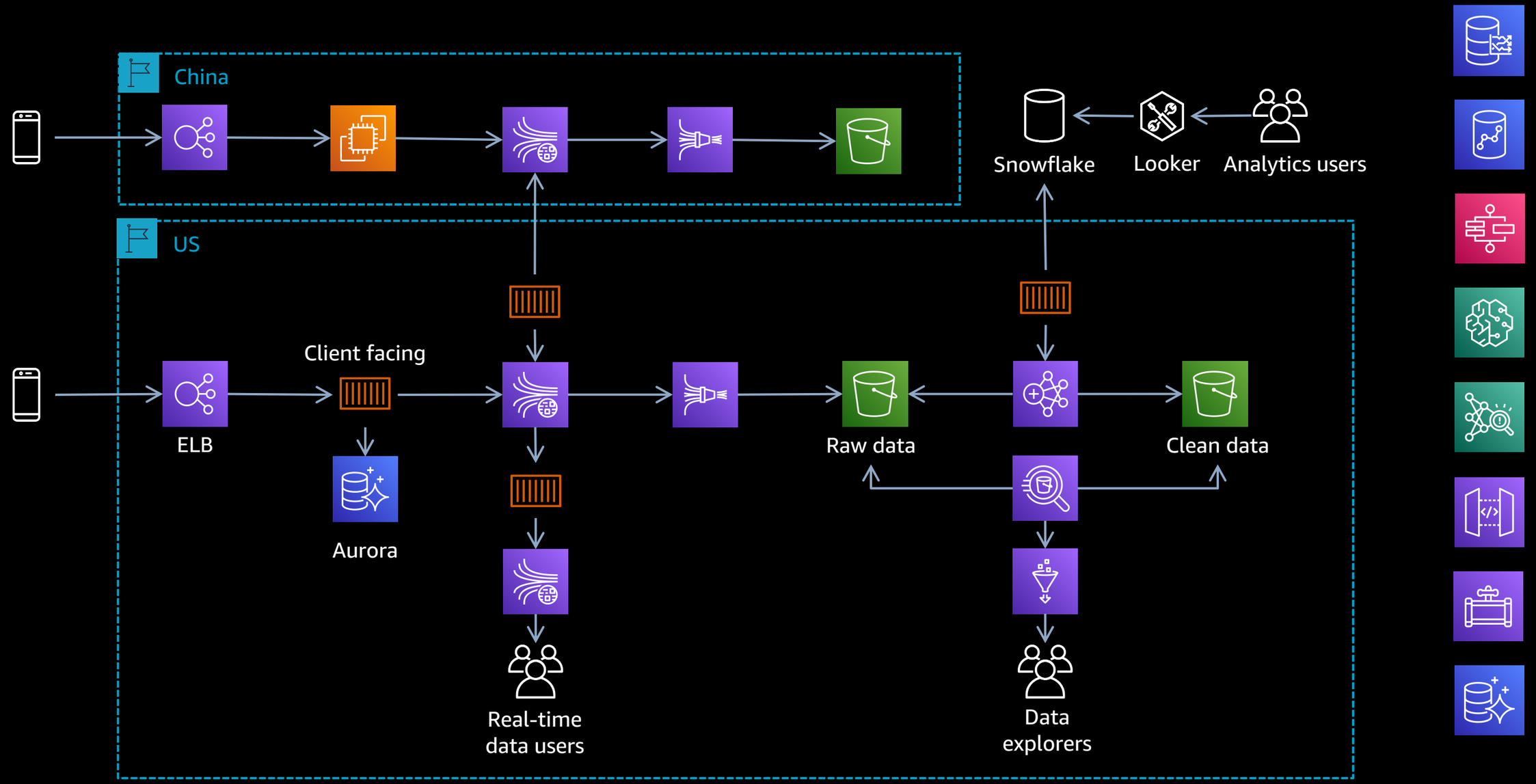


More machine learning projects



Analytics and operational workloads closer to real time

Future


China
US
Snowflake
Looker
Analytics users
Client facing
ELB
Aurora
Raw data
Clean data
Real-time
data users
Data
explorers

Key takeaways

- Duplicating data was key to success
- Amazon S3 dramatically increases data usability
- Use as much managed services as possible
- Overprovision in the beginning, optimize after
- Make sure you are redundant and prepared to revert
- Gather feedback from your clients
- AWS is full of possibilities when it comes to data

Thank you!



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