

AWS

S U M M I T

Think Big!

Scaling Seamlessly to Millions of Devices with Serverless Architectures

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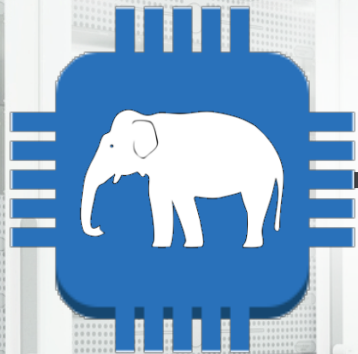
Speaker's Bio



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Hanibal is renting out elephants to deliver goods. Tracker sends position and other telemetry once per minute.




m4.large

\$92.88 per month

Daily reports would cost \$3 per report.

But 100 reports per day would only cost \$0.03 per report.



How many reports do we expect?

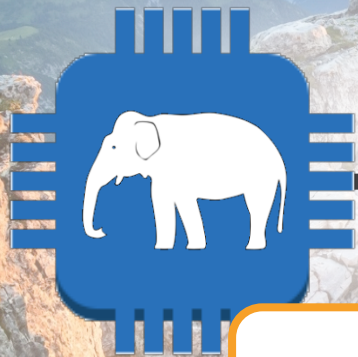
How many reports will our EC2 instance support?



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No servers – No sizing!



\$5.00
per 1M messages

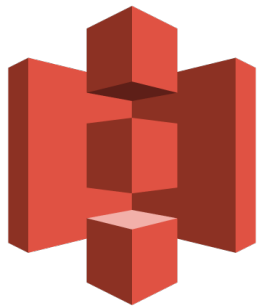


\$1.03*
per 1M messages

* 512MB • 100ms per message



What about persistence?



S3

\$0.49 / month*

* 10GB, 1 read & write per minute



DynamoDB

\$0.99 / month*

* 1GB, 1 read & write per second



RDS

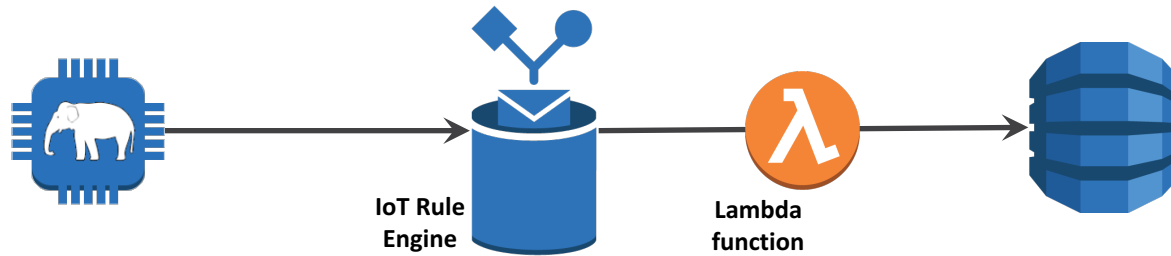
\$149 / month*

* 3000 TPS, single AZ



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1M messages /
month



\$5.00

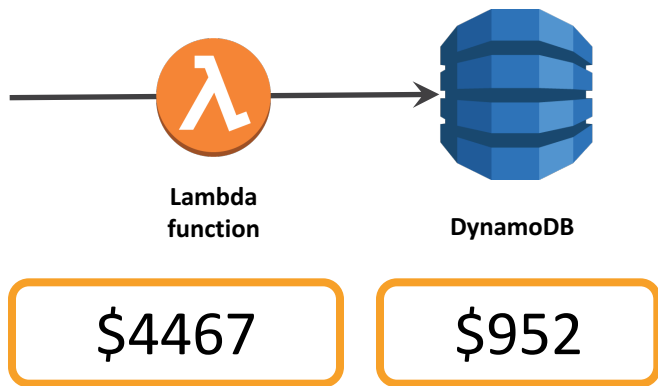
\$1.03

\$1.48



100k camels reporting
once per minute

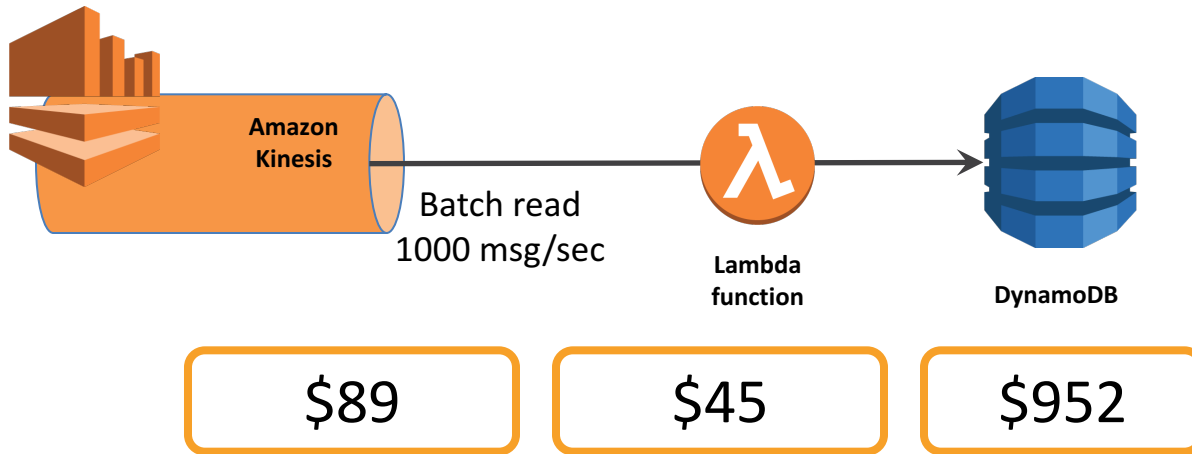
4.32bn messages per
month



Cost and capacity examples only. Actual performance and cost depends on specific use case.



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Cost and capacity examples only. Actual performance and cost depends on specific use case.



Kinesis, Lambda, and DynamoDB:

ç1



DynamoDB

\$0.99 / month*

* 1GB, 1 read & write per second



ElastiCache

\$134 / month*

* 8GB, 50.000 TPS, single AZ



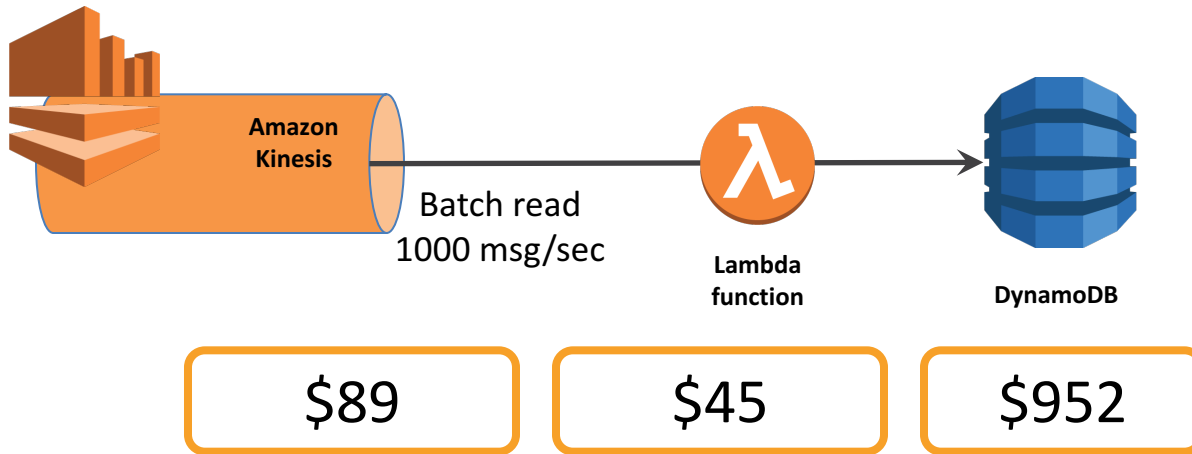
RDS

\$149 / month*

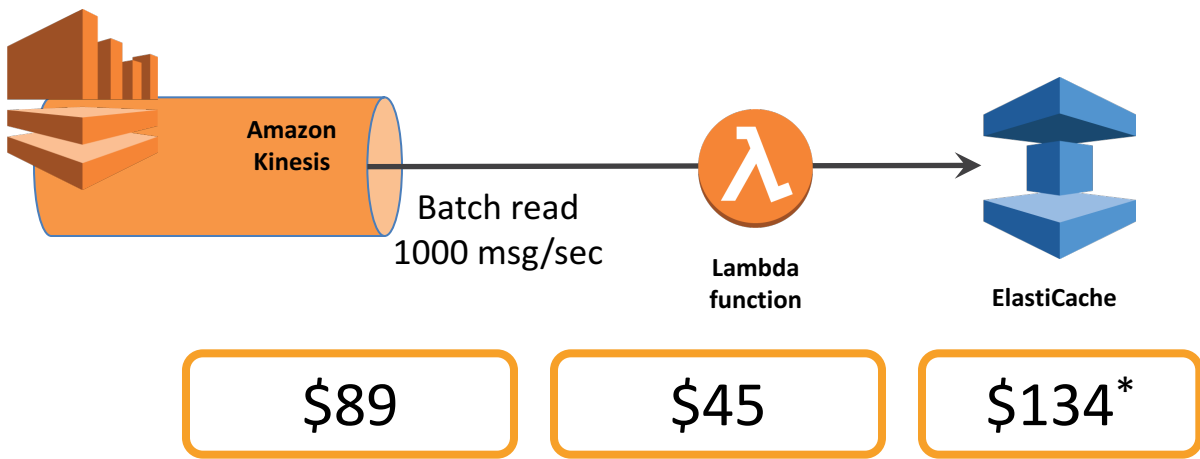
* 3000 TPS, single AZ



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Cost and capacity examples only. Actual performance and cost depends on specific use case.



* Lightly loaded: 6M messages per hour; capacity 180M operations per hour



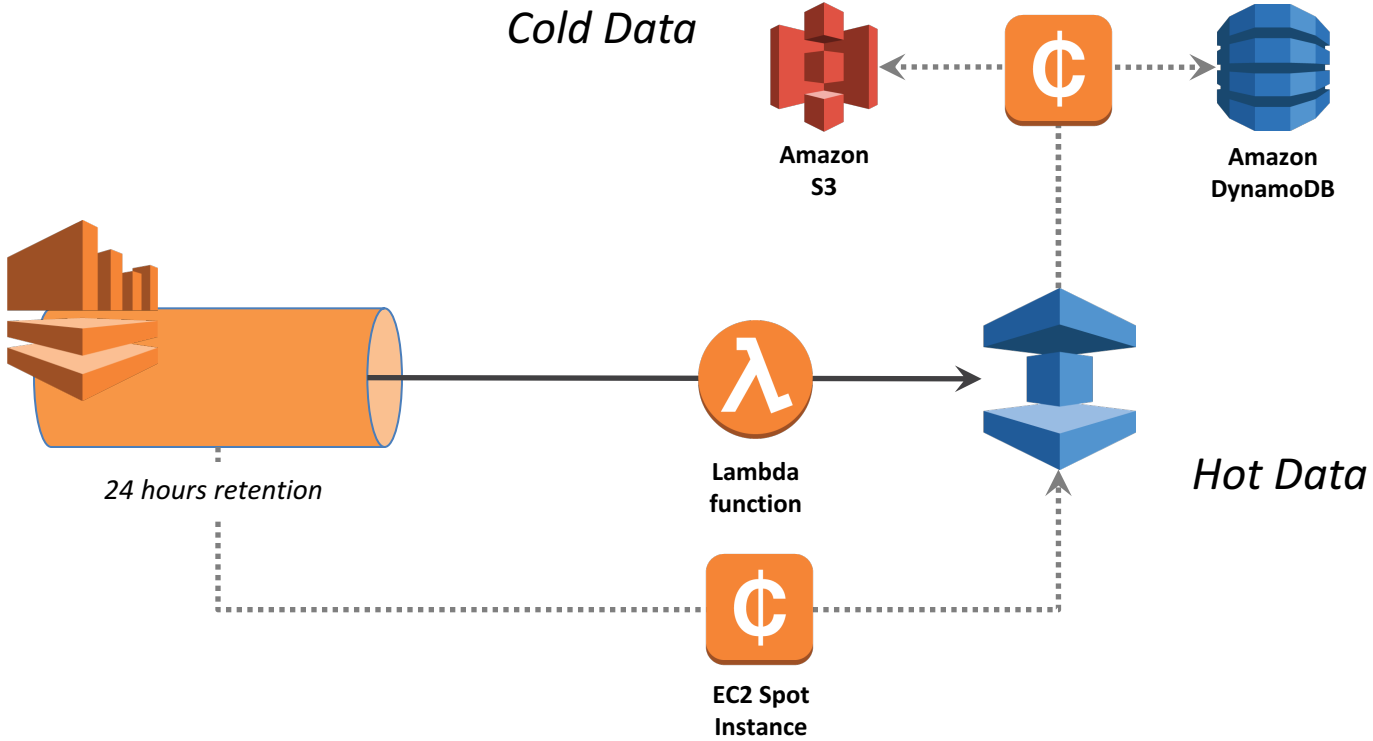
Kinesis, Lambda, and ElastiCache:

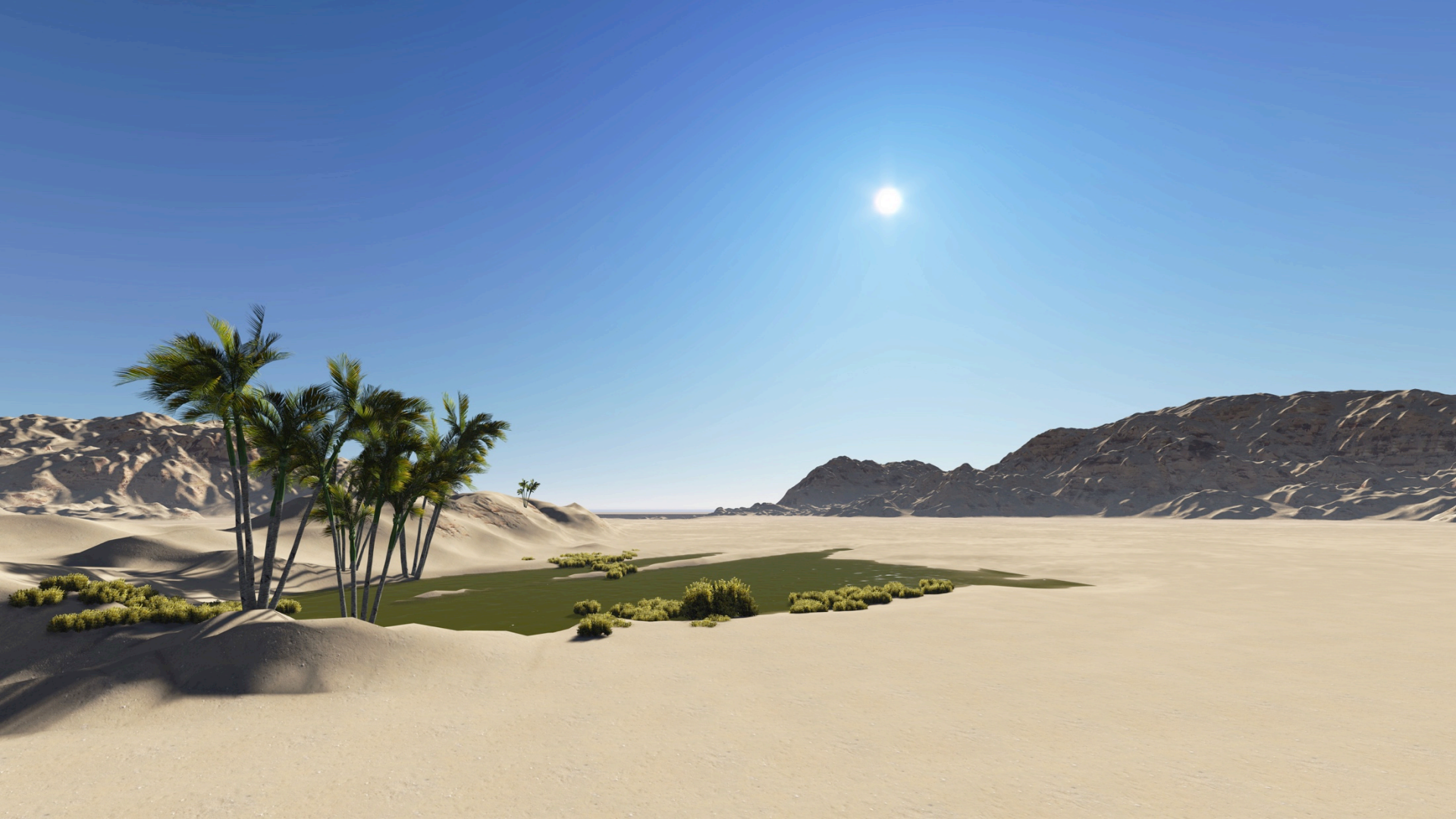
¢0.25

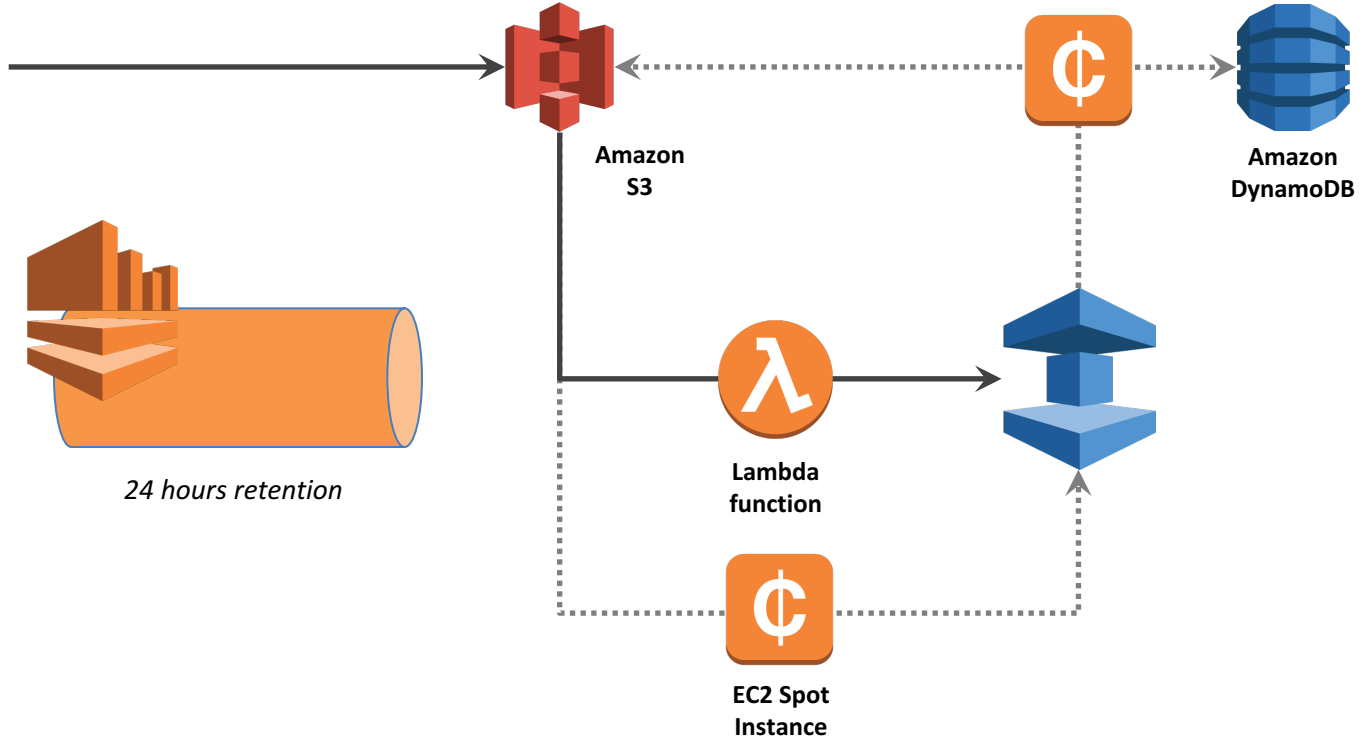




What about persistence?







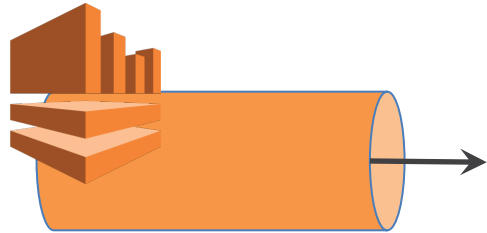
\$5.40

100M

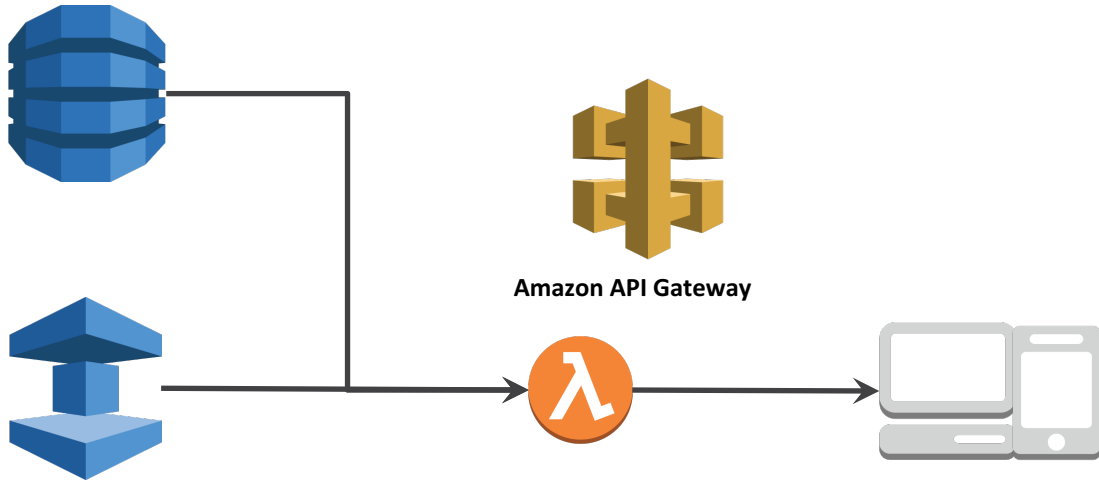


\$5.00

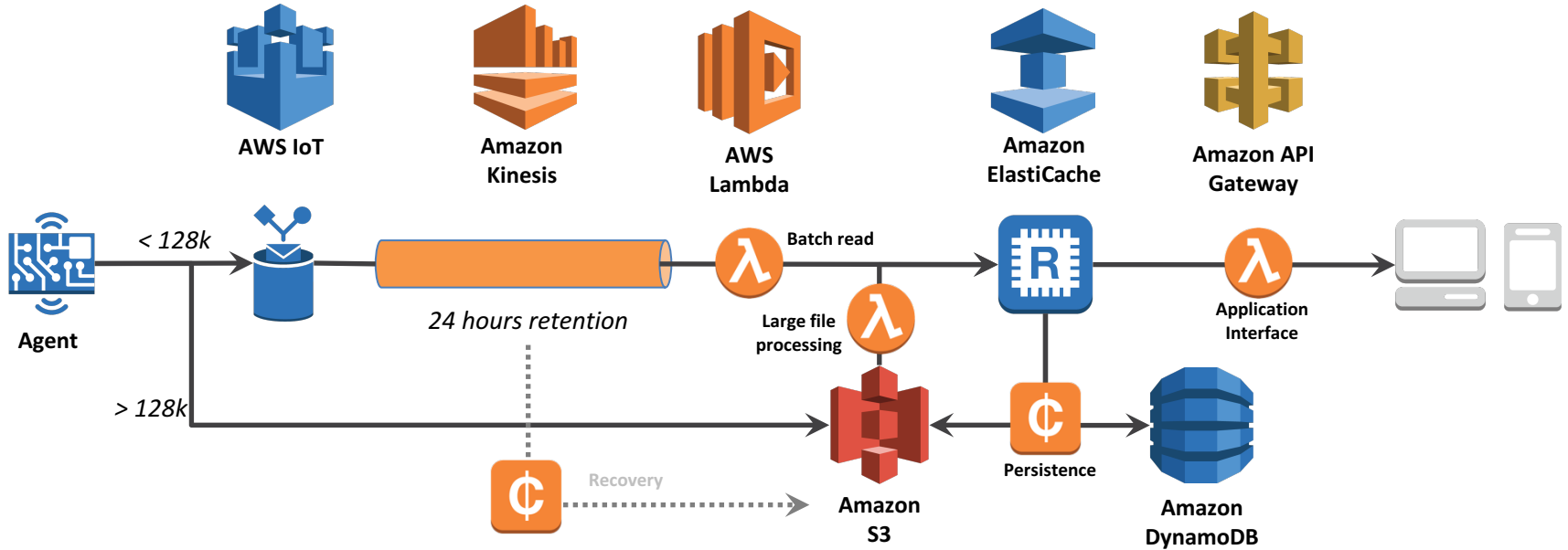
128k



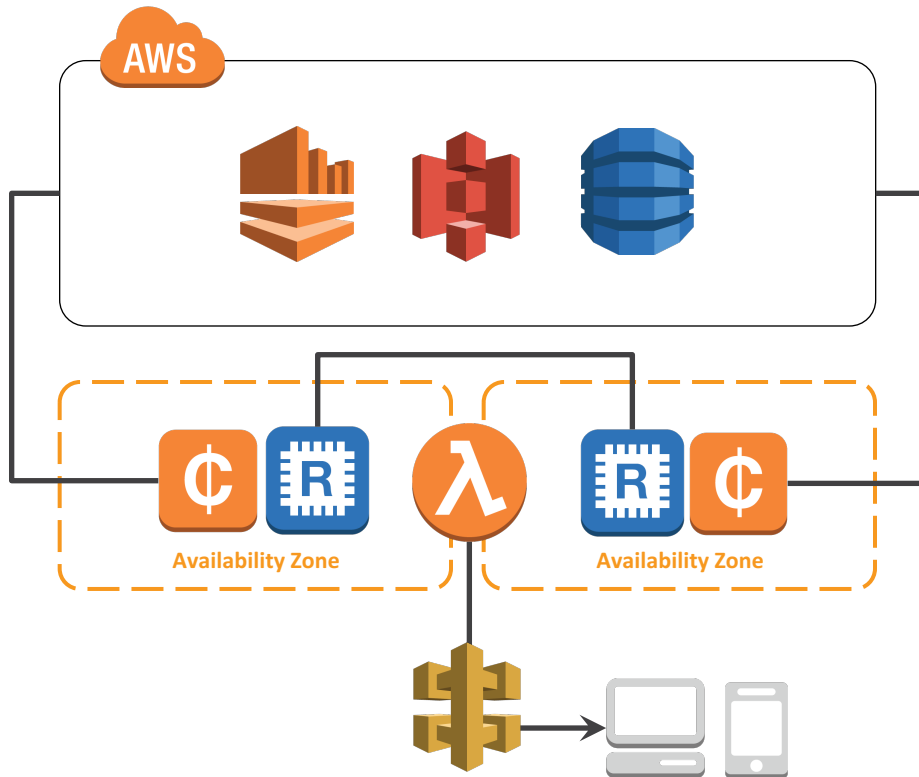




Serverless Architecture



Separate Persistence from Access



Persistence Layer

Fast Data Layer

Pricing in a Serverless World

Fix cost (per month):

- \$13 Kinesis Shard
- \$13 ElastiCache
- \$1 DynamoDB

Variable cost (1M messages):

- \$5.00 IoT
- \$1.03 Lambda



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Thank you!

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