

Serverless Architecture

After (almost) two years

A surgeon in a white coat and blue gloves holds a small vial with a barcode label. The background is dark and out of focus.

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Invent Medical

Triple Innovation

- Product Innovation = Advanced Products
- Process Innovation = Democratising the 3D printing
- Business Model Innovation = Global Approach

Product Innovation



reddot award 2019
winner

Product Innovation

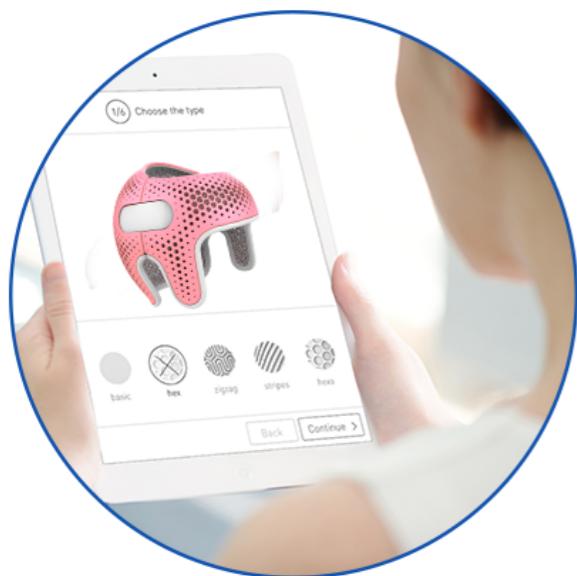
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reddot award 2019
best of the best

Process Innovation

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Configurator



3D Scanning



Algorithms



3D Printing

Online Interactive Configurator

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8 sole



2/3 Konfiguration

Einlagentyp
PlanoFit
Normaler Schuh,

02 Ausrichtung

03 Vorderkante

04 Schalenbreite

05 Gewölbehöhe

06 Rückfusskorrektur

07 MTT Pelotte

08 Entlastung

09 Fersenerhöhung

10 Farbe

11 Bezeichnung

UniFit

PlanoFit

CavoFit

PediatricFit

Weiter

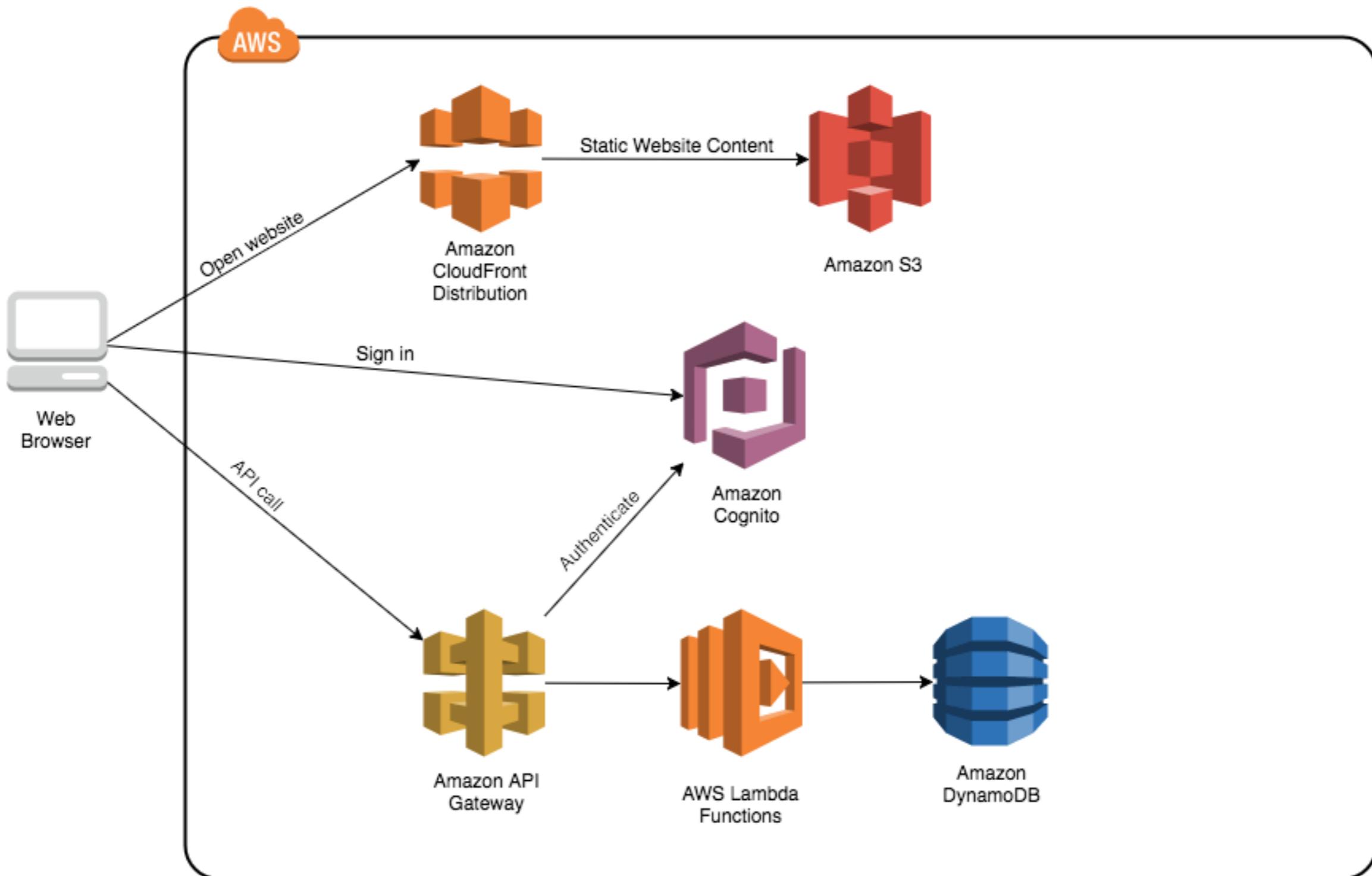
Beenden



Architecture Evolution

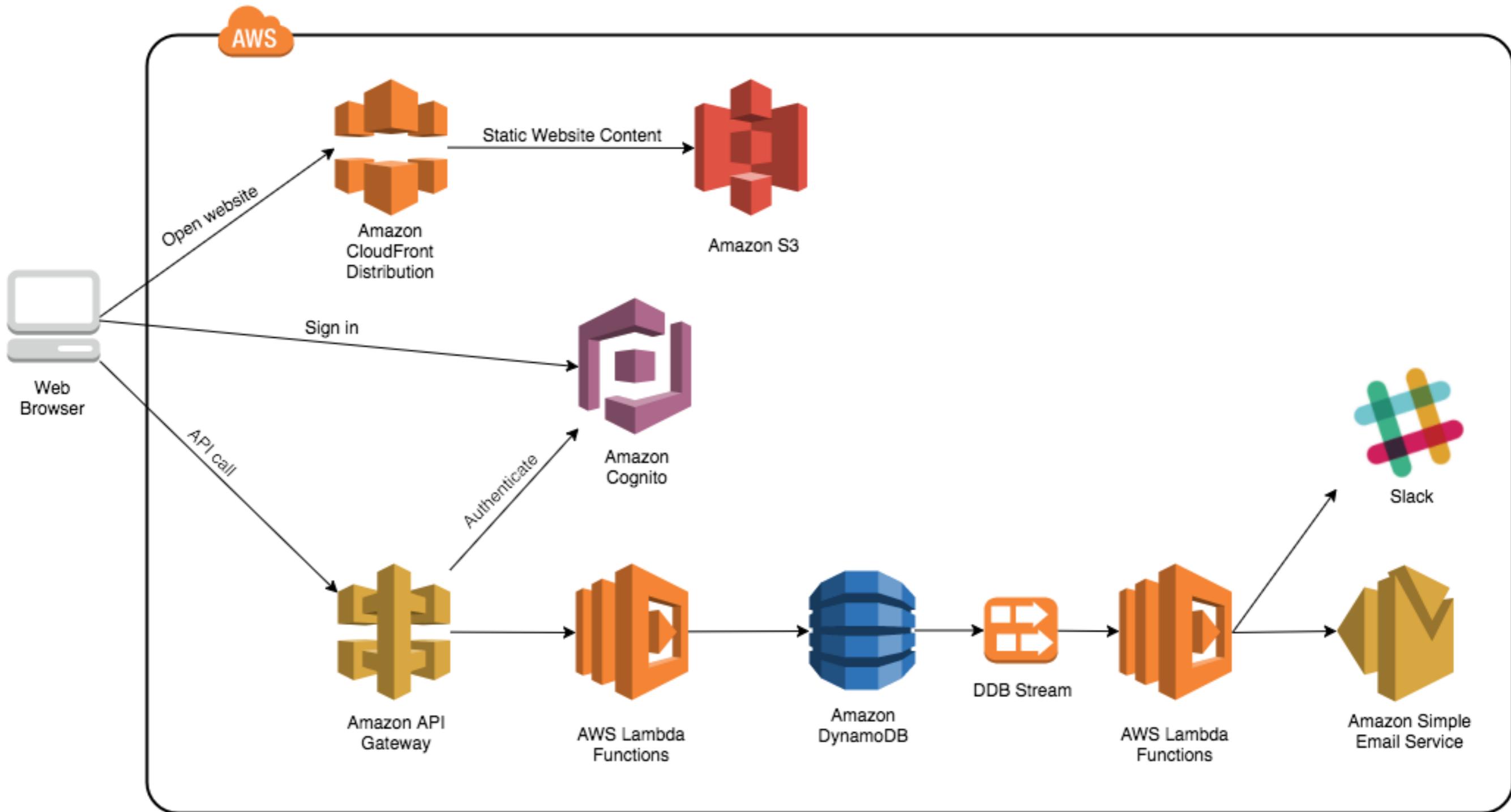
1) Prototype within one week

Serverless Architecture - Phase 1



2) Adding notifications

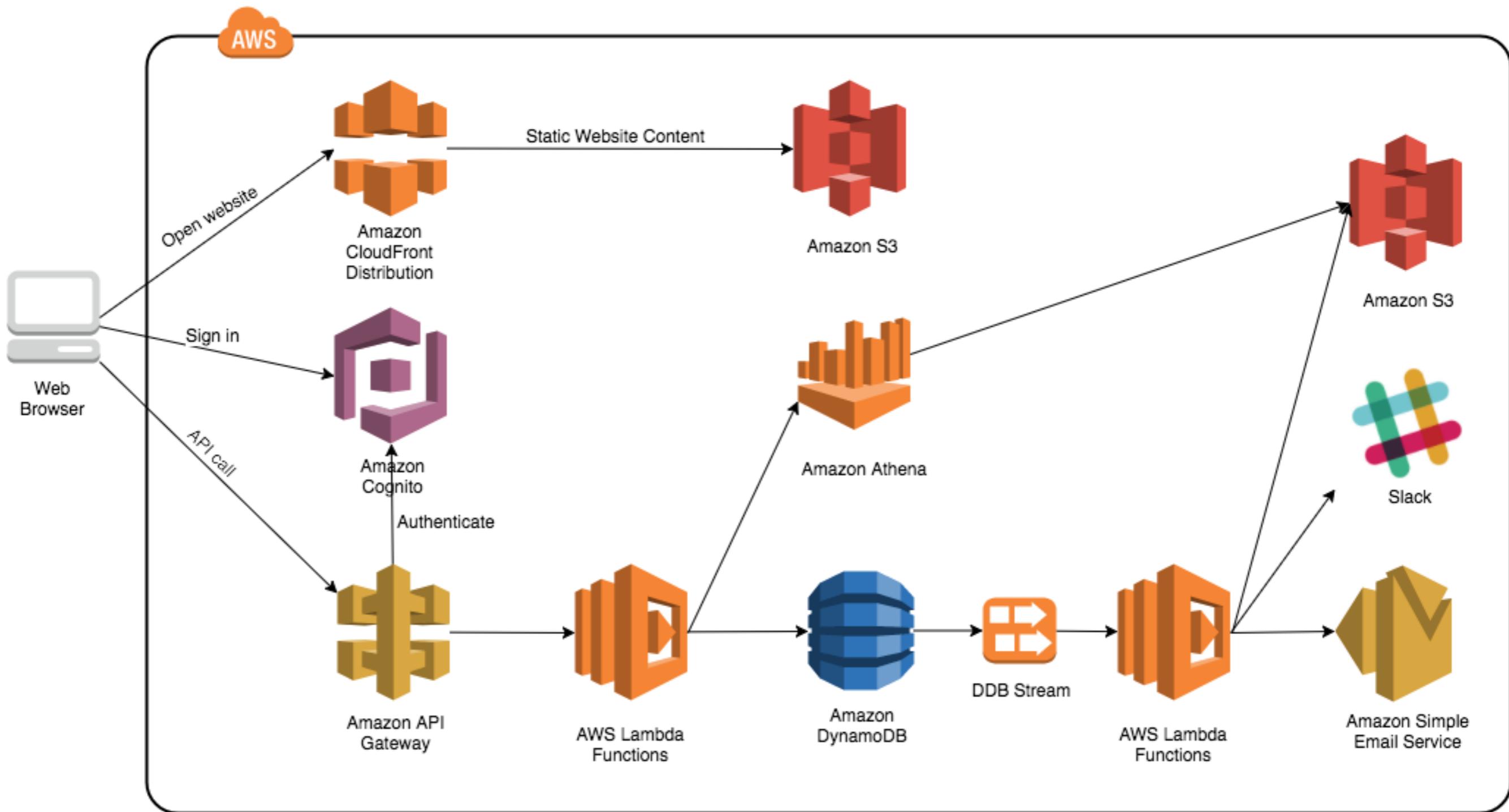
Serverless Architecture - Phase 2



3) More sophisticated queries

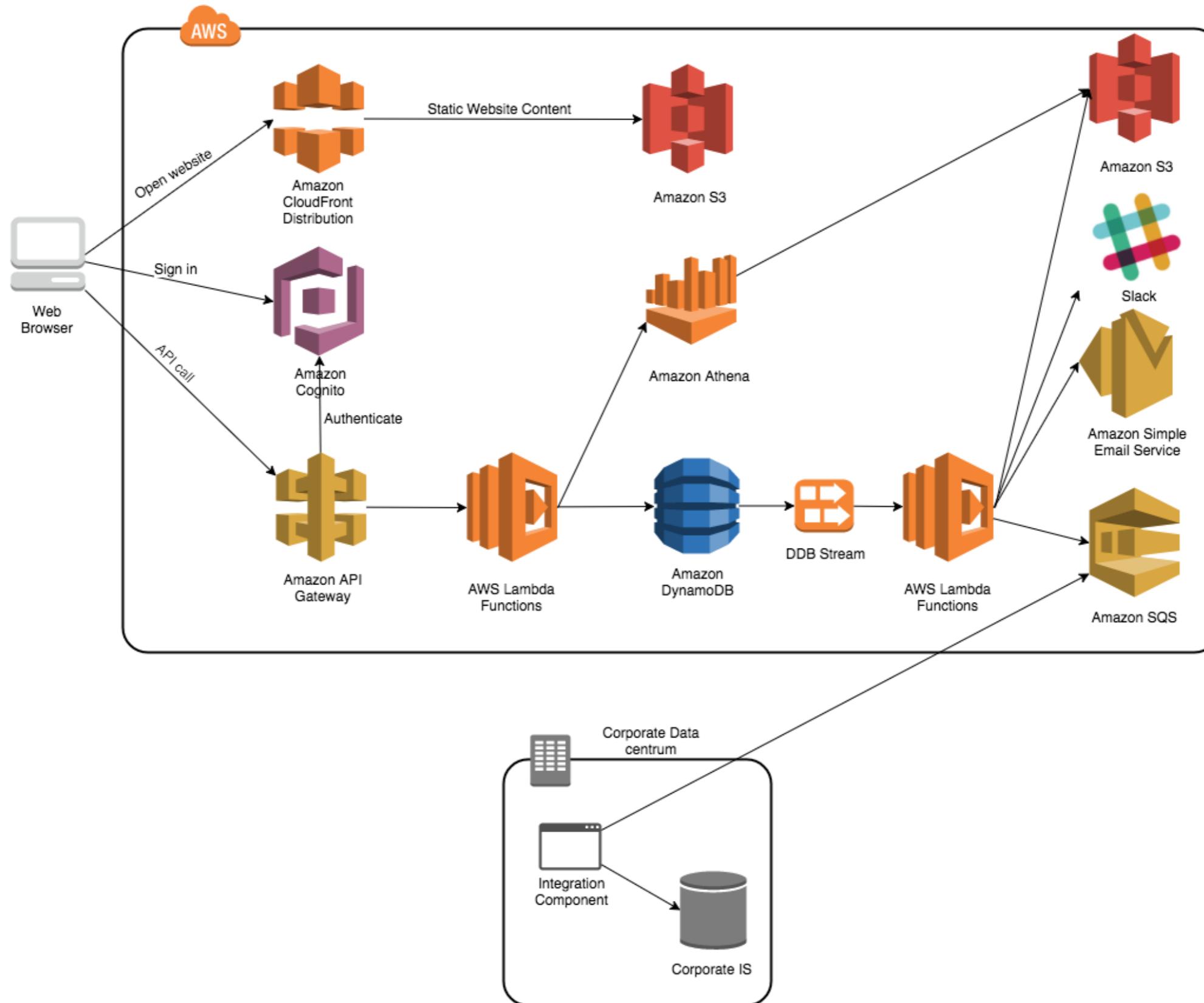
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Serverless Architecture - Phase 3



4) Corporate data center integration

Serverless Architecture - Phase 4



5) Next steps



- Generate manufacturing data for 3DP
- Integrate Payments & Billing (Stripe)
- Add support for handling logistics
- Planning to use AWS Step function for more complex workflows

Serverless in Production

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Dashboards & UI:

- API Gateway, CloudFront, Cognito
- AWS Lambda
- S3
- Athena

API & Backend:

- API Gateway
- AWS Lambda
- Dynamo DB

Others:

- Messaging - SNS, SQS, SES
- Route53
- AWS Glue, QuickSight
- CodeCommit, CodePipeline, CodeBuild, CloudFormation, CloudWatch, X-Ray, KMS



Serverless
+
Agile
Development

**The whole point of running
application software is to deliver
business value of some sort**

Adrian Cockcroft

Serverless + Agile Development



Reducing ‘conception-to-production lead time’ (more important than cost benefits)

Serverless + Agile Development



Reducing the amount of code we need to
write

Serverless + Agile Development



Simplifying the deployment and operations of applications

Serverless + Agile Development



Minimising the cost commitment of creating
infrastructure

Serverless + Agile Development



Continuous Experimentation



Lessons
learned

Lessons learned



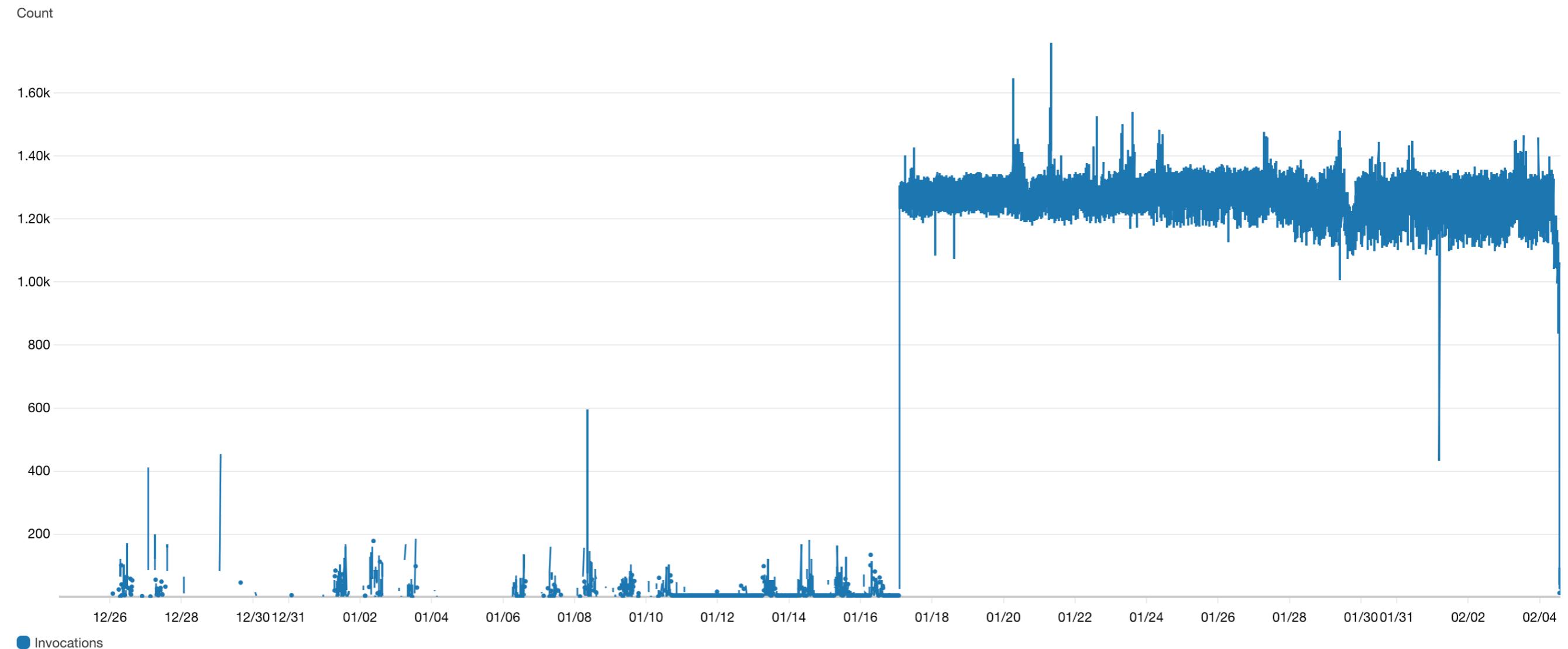
Monitor Your Usage and Costs

Lessons learned



Create Metrics and set Alarms

Lessons learned



Lessons learned

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Logging is vital

Lessons learned

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Tracing is vital too

Lessons learned



Follow Trends

Lessons learned



Keep it Simple!

Lessons learned



Automate!!!

Go Build! Go Serverless!

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