

Building the communication fabric for serverless architectures

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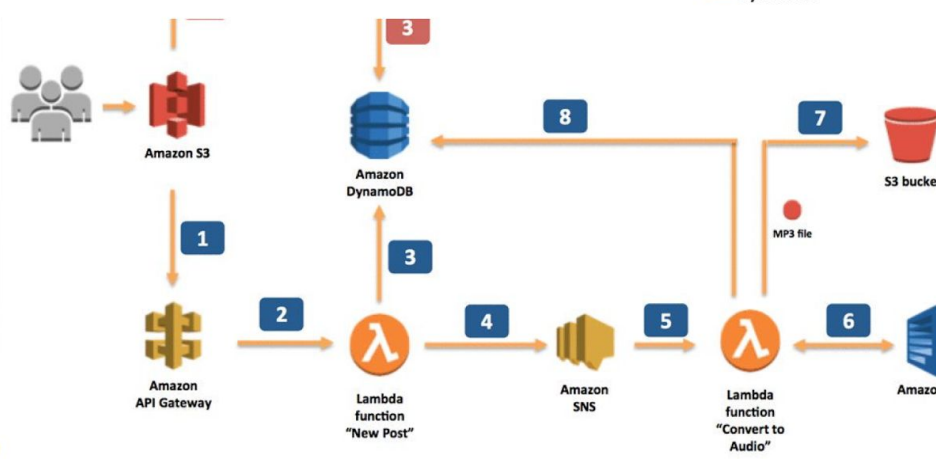
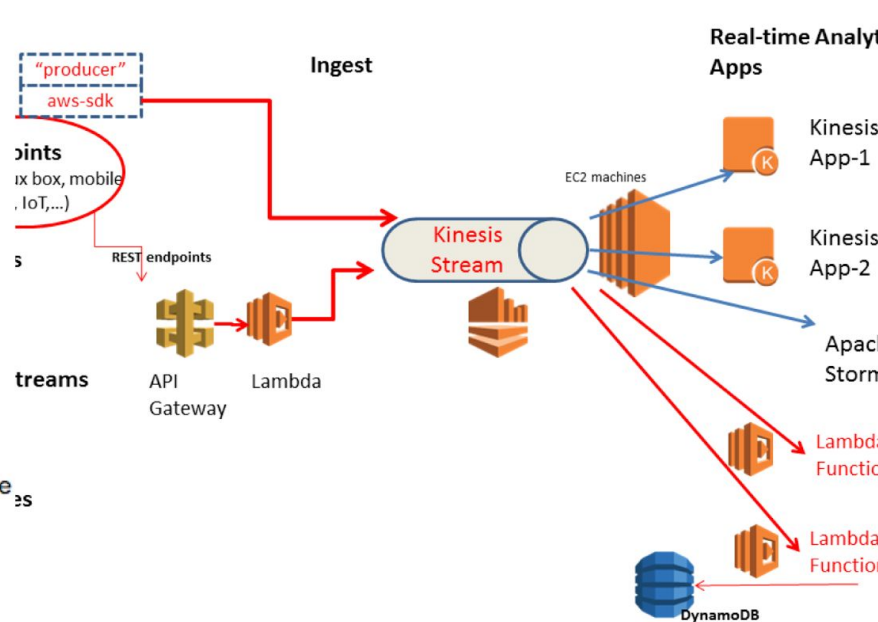
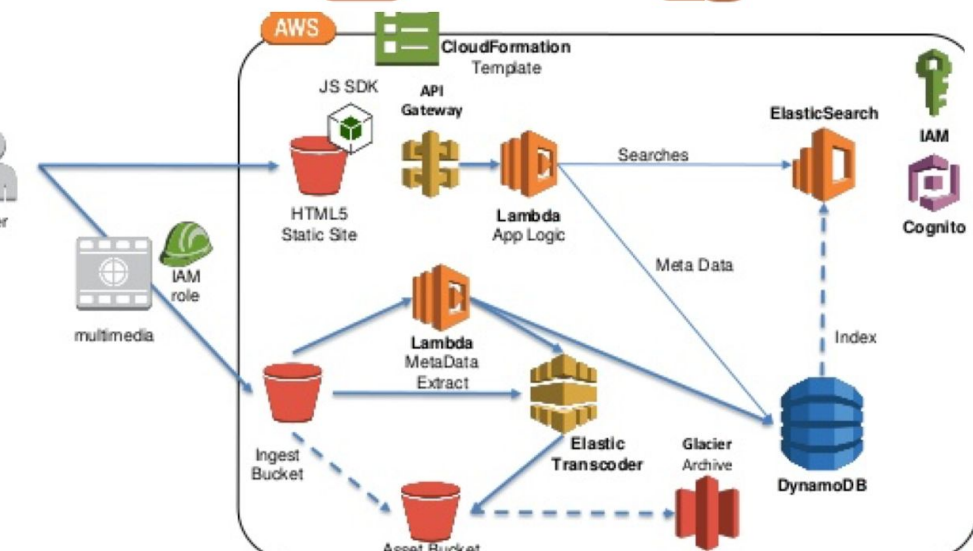
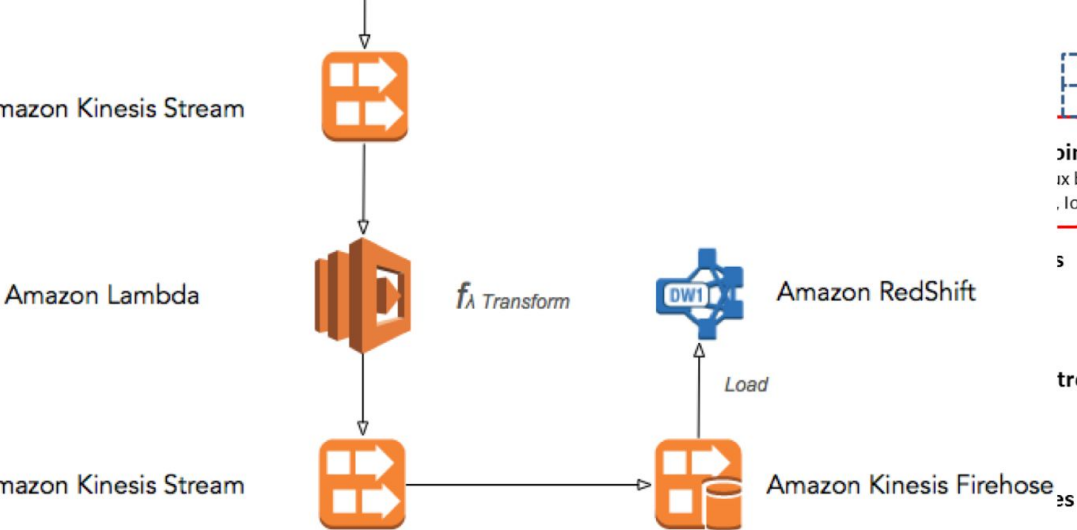
The background features a large, faint, dark grey AWS Lambda logo, which is a stylized 'lambda' symbol.

Introducing AWS Lambda

An event-driven computing service for
dynamic applications

Let's build apps with
serverless compute!

But what does a serverless
architecture look like?



📄 Dockerfile	Update Dockerfile with new tooling	4 months ago
📄 LICENSE.txt	update license year	7 months ago
📄 README.md	Add ETA as Serverless Consultants	2 months ago
📄 RELEASE_CHECKLIST.md	releasing v1.14.0	3 months ago
📄 VERSIONING.md	Add VERSIONING.md file	3 months ago
📄 docker-compose.yml	Updated dotnet sdk docker image	2 months ago
📄 package-lock.json	first wip of the emit plugin	12 days ago
📄 package.json	upgrade fdk	9 days ago

📖 README.md



service:

name: users

provider:

name: aws

runtime: nodejs6.10

stage: prod

region: us-east-1

functions:

register:

handler: handler.register

events:

– http:

path: /users

method: POST

 Unwatch ▼


744

 Unstar

18,392

 Fork

1,821

 Settings

Insights ▼

serverless architectures using AWS Lambda, Azure

Edit

com

google-cloud-functions

azure-functions

ibm-openwhisk

aws

Convenience attracts all users & use-cases

Web, Mobile & IoT Back-Ends

Form Processing

Auth

DevOps Automation

Security Audits

Stream Processing

Chatbots

File Manipulation

Voice Apps (e.g., Alexa)

Graph APIs

ETL

Image Resizing

Web Scraping

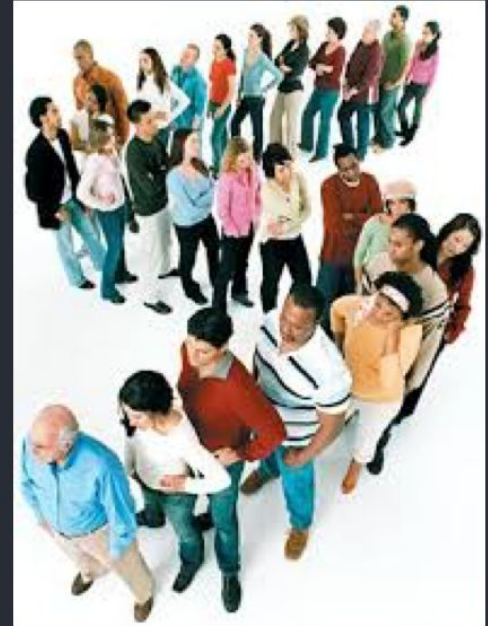
Testing

Running Binaries

Webhook Listeners

CRON Jobs

Serving Dynamic HTML



Serverless teams are emerging in the enterprise.



Engineers are provisioning 10x more functions than microservices



Companies now try serverless first,
falling back on other technologies
only when they have to.



serverless = service-full



Amazon
S3



Amazon
DynamoDB



Amazon
Kinesis



AWS
CloudFormation



Amazon
SWF



AWS
CloudTrail



Amazon
SES



Amazon
Cognito



Amazon
API Gateway



Amazon
SNS



Amazon
CloudWatch
Logs

serverless is the new multi-cloud



service:

name: users

provider:

name: aws

runtime: nodejs6.10

stage: prod

region: us-east-1

functions:

register:

handler: handler.register

events:

– http:

path: /users

method: POST

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Introducing AWS Lambda

An event-driven computing service for
dynamic applications

It's still difficult to build large
serverless architectures



introducing the event gateway

The highly productive event router
for Functions-as-a-Service

Goals

Express all data as events.

React to any event, with any FaaS, in any location.

Be flexible. Accommodate many use-cases.

Decouple logic. Decouple teams.

Express all data as events

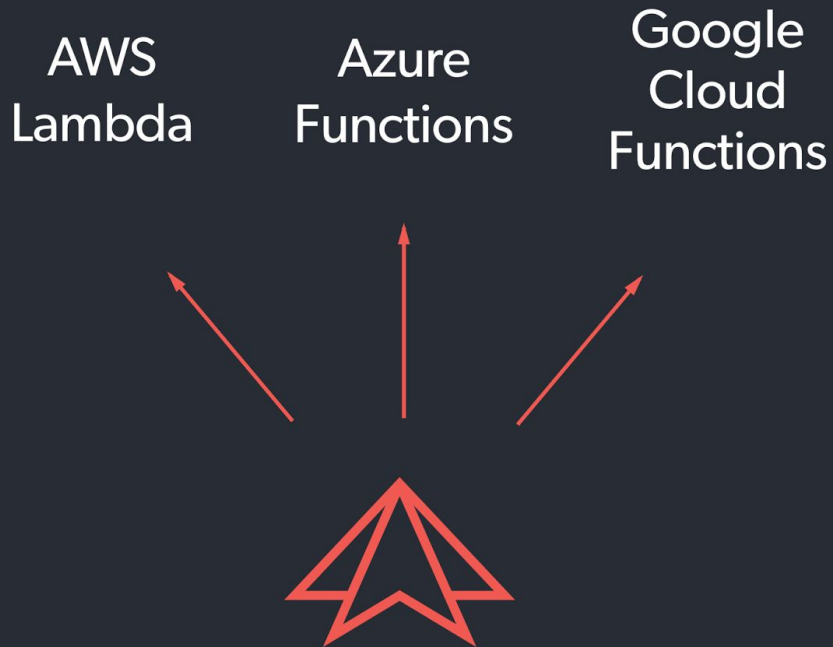
- Receives data via HTTP and interprets it as an event
- Ingests custom event schemas
- Ingests HTTP requests as events
- Emits Logs, Metrics & Errors as events



Data

React to any event, with any FaaS, in any Location

- Works w/ any event
- Supports major FaaS providers
- Discovery, Composition, Communication



Be flexible. Accommodate many use-cases

Be flexible. Accommodate many use-cases

Pub/Sub

HTTP Request
with special
headers



The request body is
declared as the event

Be flexible. Accommodate many use-cases

Pub/Sub

HTTP Request
with special
headers



The request body is
converted to an event

API Gateway

HTTP Request



The HTTP request is
converted to an
'HTTP event'

Be flexible. Accommodate many use-cases

Pub/Sub

HTTP Request
with special
headers



The request body is
converted to an event

API Gateway

HTTP Request



The HTTP request is
converted to an
'HTTP event'

Webhooks

HTTP Request
from a
supported
integration



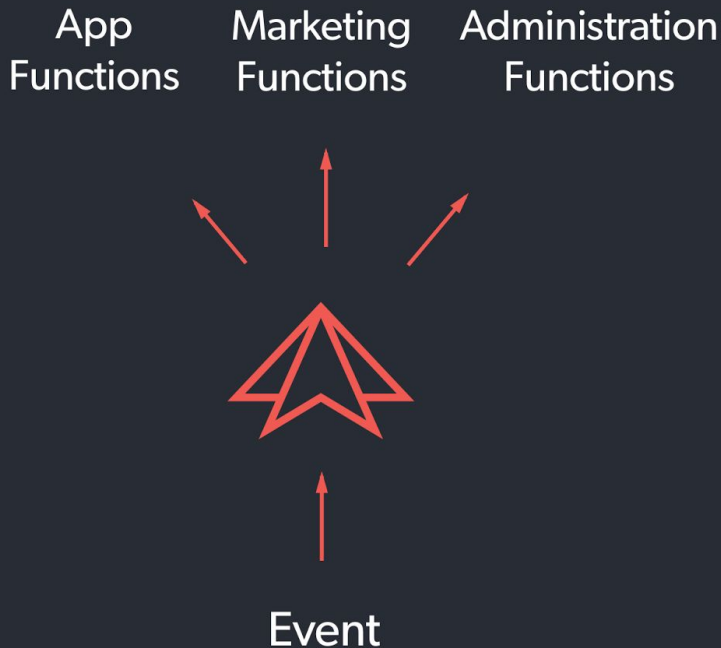
The gateway knows how
to convert into an event

Be flexible. Accommodate many use-cases

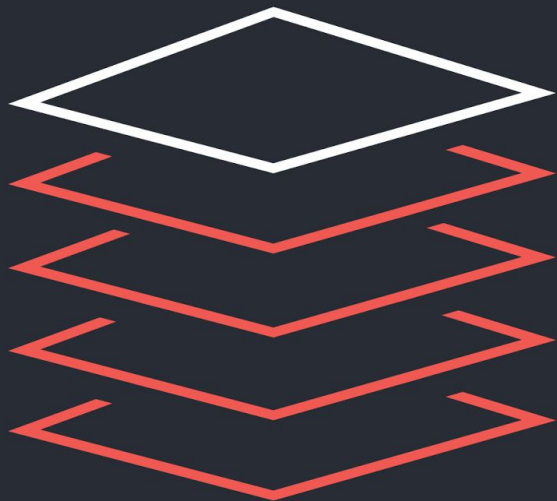


Decouple logic. Decouple teams.

- FaaS decouples logic.
- Event-driven design decouples teams.



the old serverless architecture



FaaS (single provider)

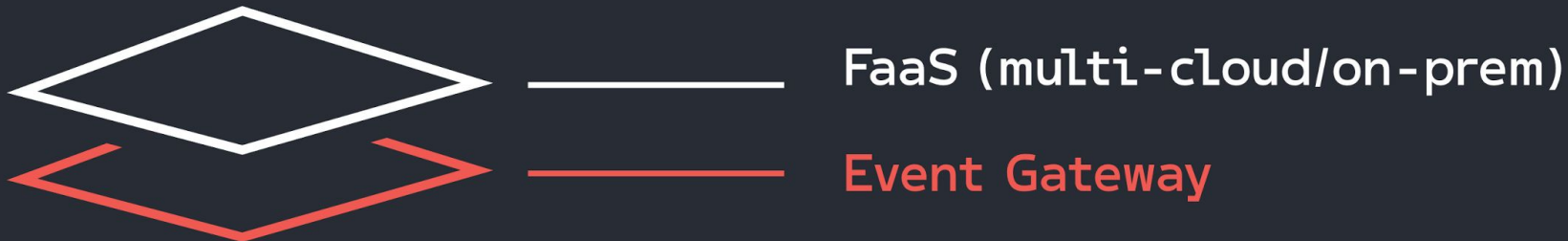
Workflows (e.g. AWS StepFunctions)

Streaming Data (e.g. AWS Kinesis)

Pub/Sub (e.g. AWS SNS)

API Gateway (e.g. AWS API Gateway)

the new serverless architecture



AWS
Lambda

Azure
Functions

Google
Cloud
Functions

event  gateway

API Endpoints

Pub/Sub

Webhooks

Demo

AWS
Lambda

Azure
Functions

Google
Cloud
Functions

event  gateway

API Endpoints

Pub/Sub

Webhooks



Thank you!

github.com/serverless/event-gateway

Architect - Maciej Winnicki

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