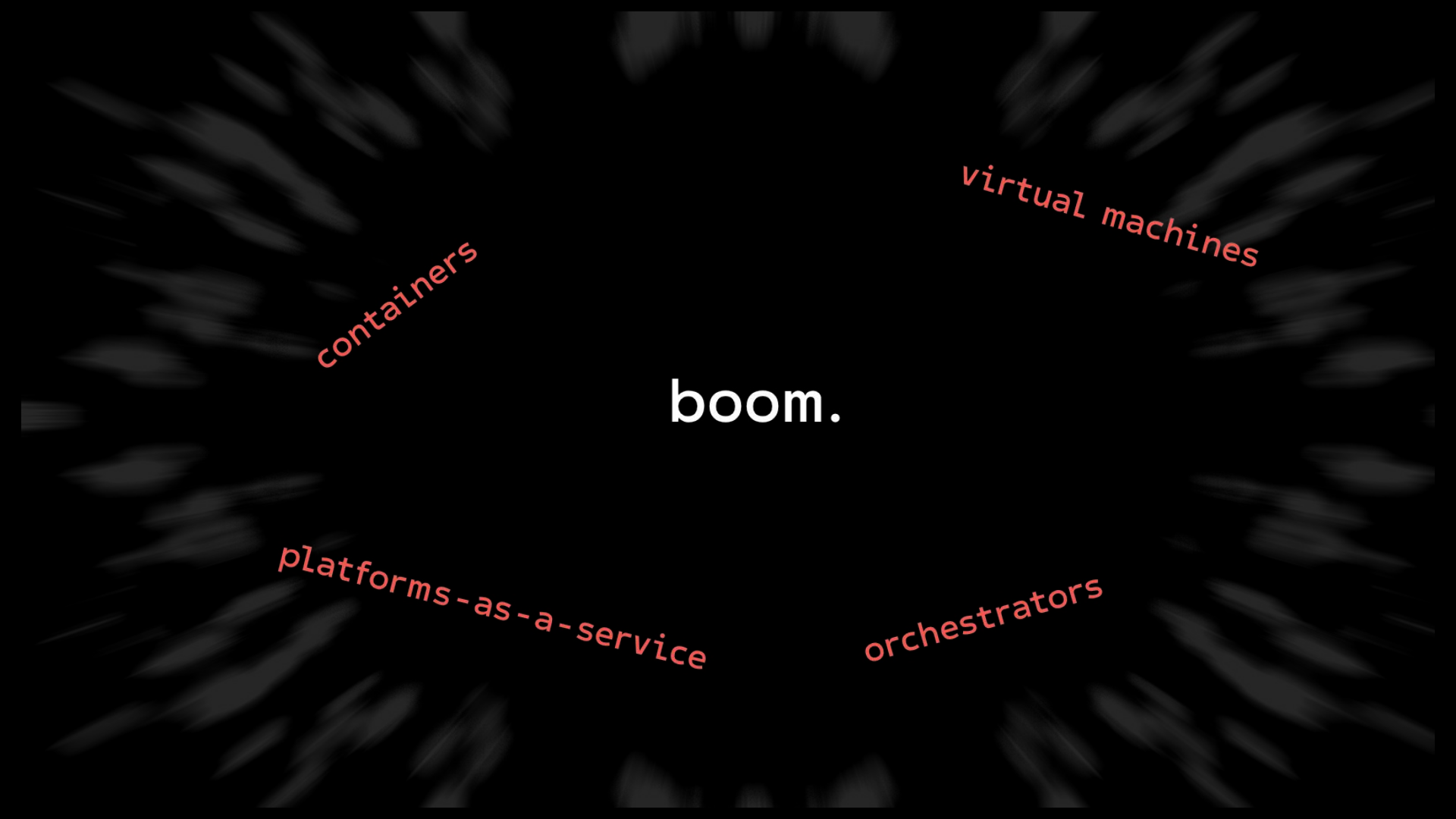
the serverless & event-driven future

@austencollins - serverless.com


containers
virtual machines
boom.
platforms-as-a-service
orchestrators

serverless

though servers exist

developers don't have to

think about them

serverless compute qualities

functions are the unit of deployment

scale fast, scale automatically

never pay for idle

serverless

current trends

serverless

current trends

closed-source

serverless compute platforms

aws lambda

azure functions

google cloud functions

ibm cloud functions

and more...

serverless

current trends

open-source

serverless
compute
platforms

kubeless

apache openwhisk

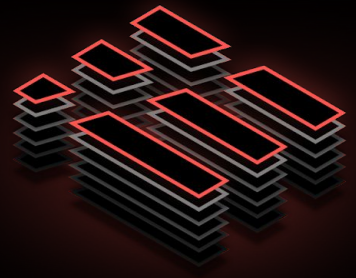
oracle fn

fission

openfaas

serverless

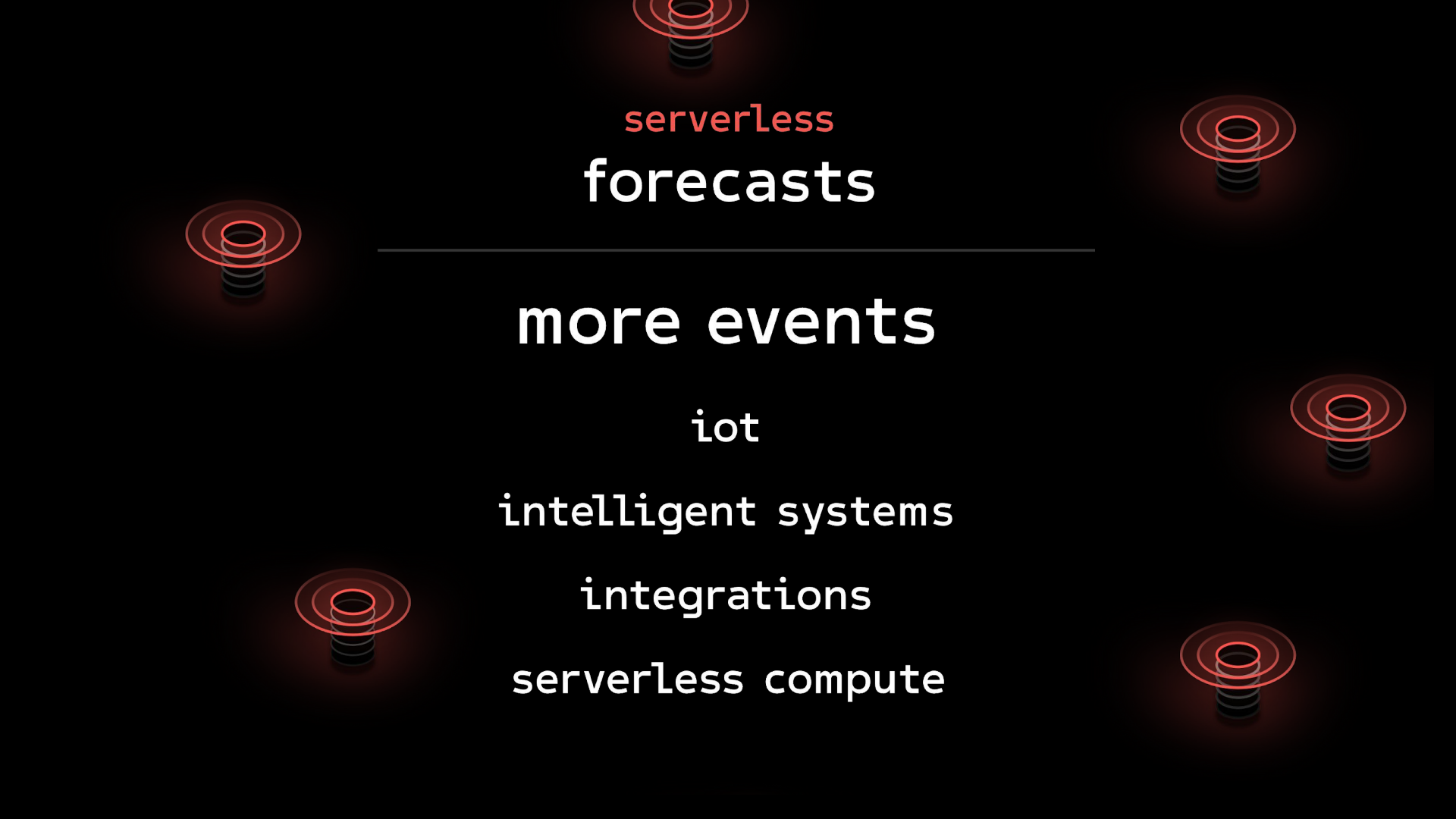
current trends



serverless
application

entire applications
architected as
functions & events that
use other services w/
serverless qualities

serverless
forecasts


serverless
forecasts
more events
iot
intelligent systems
integrations
serverless compute

serverless

forecasts

---

functions everywhere

multi-cloud

on-premise

edge

serverless

standards

serverless

standards

---

runtimes

APIs

events

plumbing

serverless

standards

---

events

runtimes

APIs

plumbing

introducing

cloudevents

a specification for

describing event data in a common way

cloudevents.io

cloudevents - version 0.1 - JSON representation

```
{
    eventType:  AWS.S3.Object.Created,
    eventID:  C234-1234-1234,
    eventTypeVersion:  2.0,
    eventTime:  2018-04-26T14:48:09.769Z,
    source:  aws.com/s3/bucket/cloudevents,
    cloudEventsVersion:  0.1,
    schemaURL:  https://www.aws.com/events/s3,
    contentType:  application/json,
    extensions:  {},
    data: {}
}
```

cloudevents

use-cases

normalize events across environments

facilitating integrations across platforms

increasing portability of functions-as-a-service

normalizing webhooks

event data evolution

event tracing

iot

cloudevents

ecosystem

JSON event format

HTTP bindings

MQTT 3.1.1 and 5.0 transport binding

AMQP 1.0 transport binding

webhooks specification

cloudevents

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sap

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collinson group

mark fisher
pivotal

and many more...

cloudevents

ultimate serverless/event-driven interop demo

cloudevents

ultimate serverless/event-driven interop demo

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publishers

aws s3

ultimate serverless/event-driven interop demo

---

publishers middleware

ultimate serverless/event-driven interop demo

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publishers

middleware

subscribers

google cloud function

ultimate serverless/event-driven interop demo

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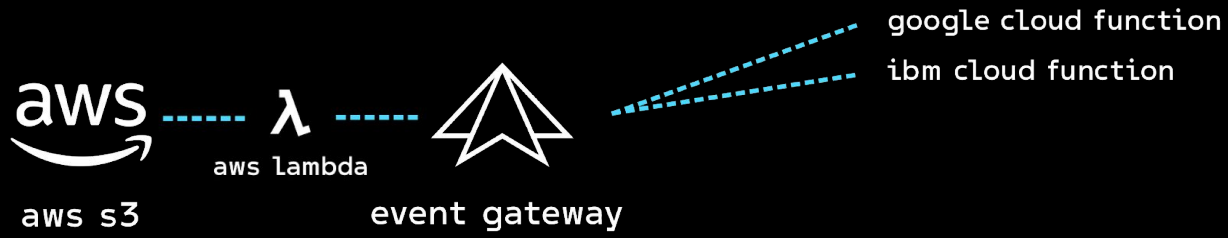
publishers

middleware

subscribers



cloudevents

ultimate serverless/event-driven interop demo

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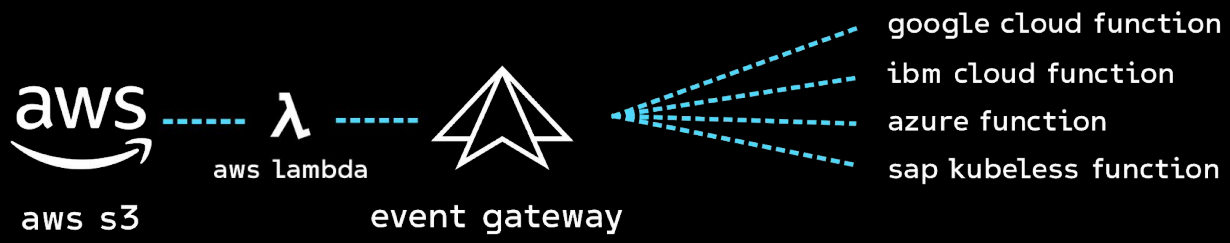
publishers

middleware

subscribers



cloudevents

ultimate serverless/event-driven interop demo

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publishers

aws s3

middleware

aws lambda

event gateway

subscribers

- google cloud function
- ibm cloud function
- azure function
- sap kubeless function
- nuclio function
- vmware dispatch function
- oracle fn function
- huawei function

cloudevents

ultimate serverless/event-driven interop demo

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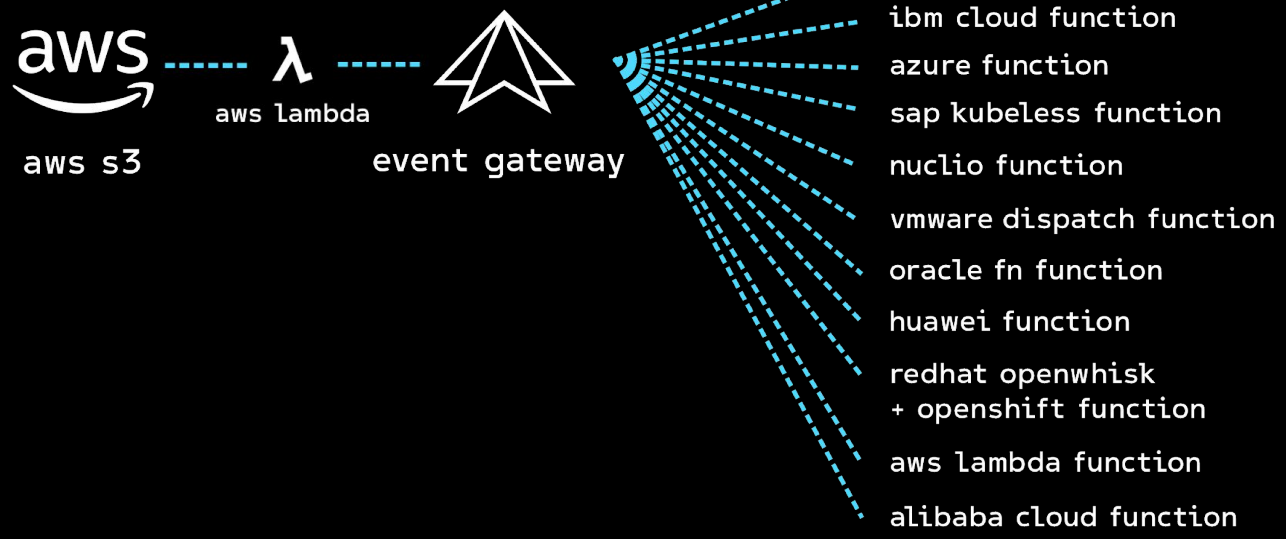
- redhat openwhisk + openshift function
- aws lambda function
- alibaba cloud function



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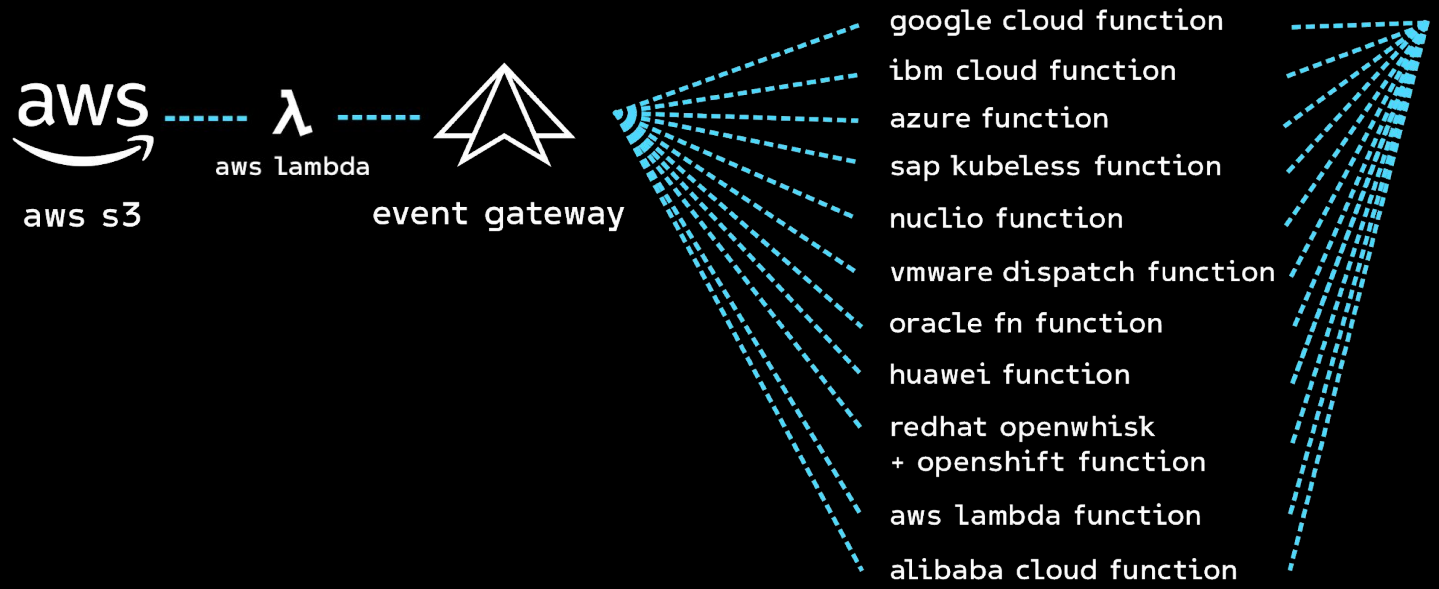
ultimate serverless/event-driven interop demo

publishers | middleware | subscribers | log



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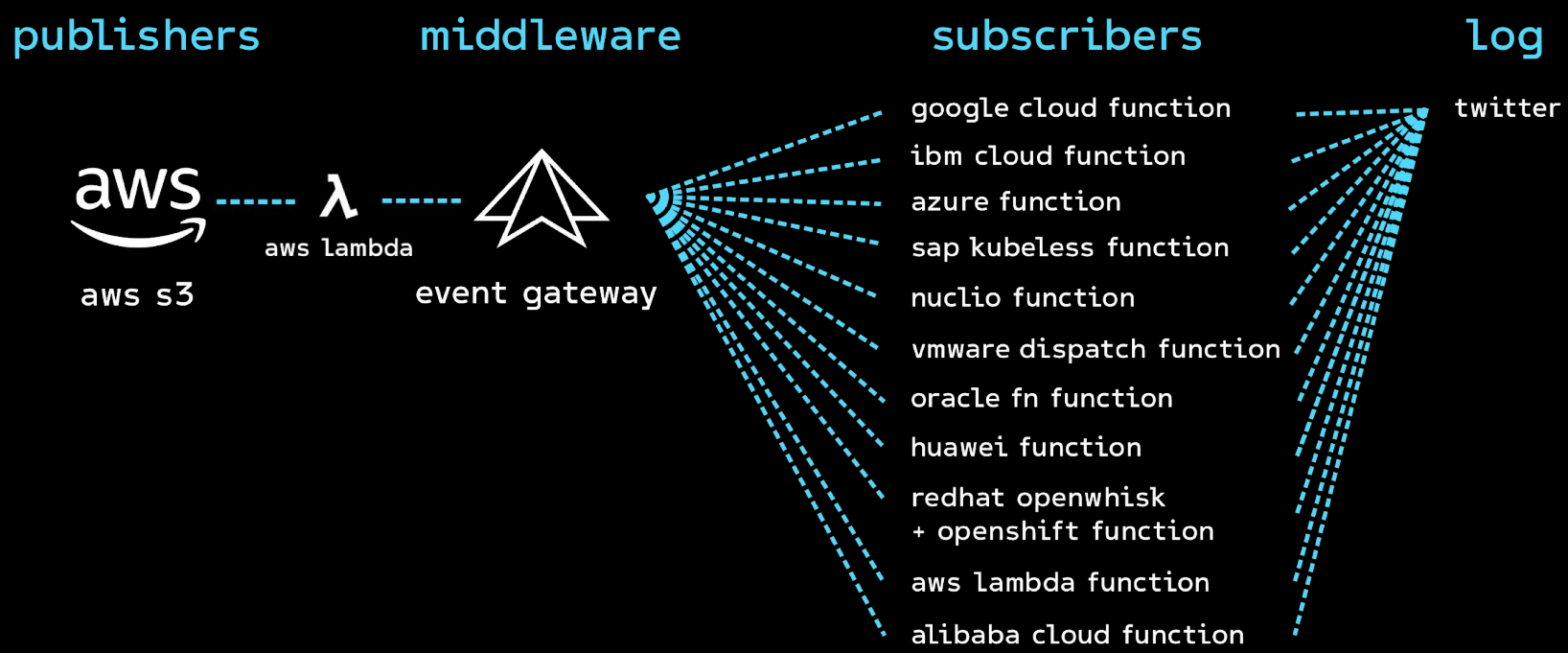
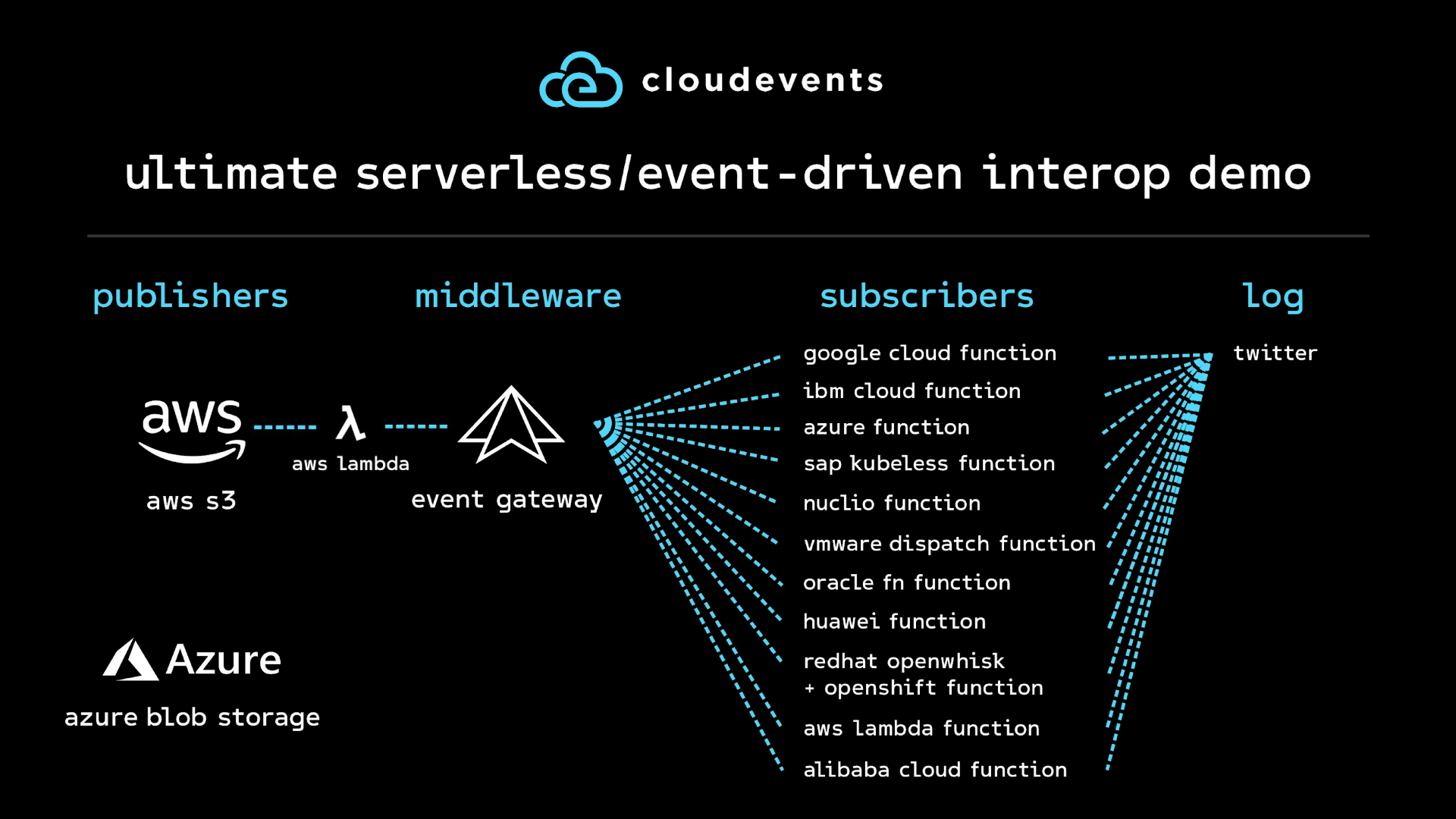
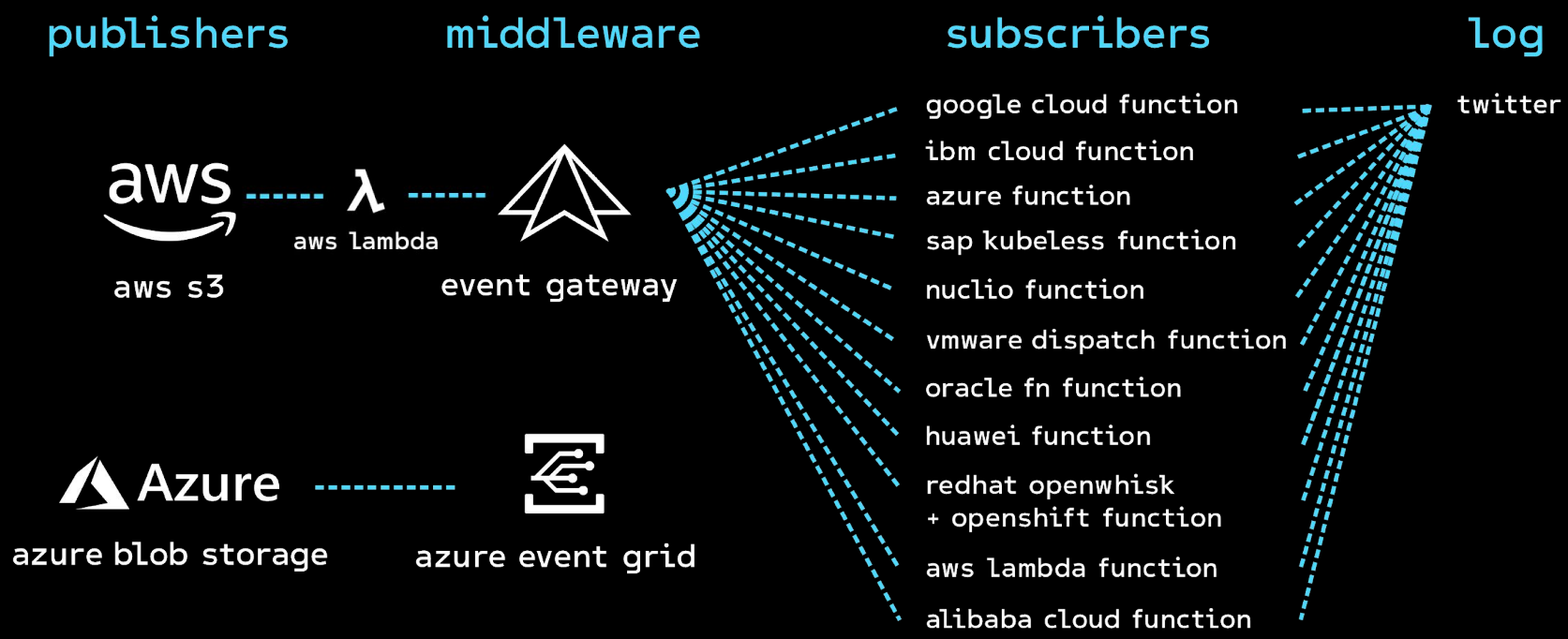
ultimate serverless/event-driven interop demo




cloudevents
ultimate serverless/event-driven interop demo
publishers
middleware
subscribers
log
aws
aws s3
λ
aws lambda
event gateway
google cloud function
ibm cloud function
azure function
sap kubeless function
nuclio function
vmware dispatch function
oracle fn function
huawei function
redhat openwhisk
+ openshift function
aws lambda function
alibaba cloud function
twitter
Azure
azure blob storage

cloudevents

ultimate serverless/event-driven interop demo



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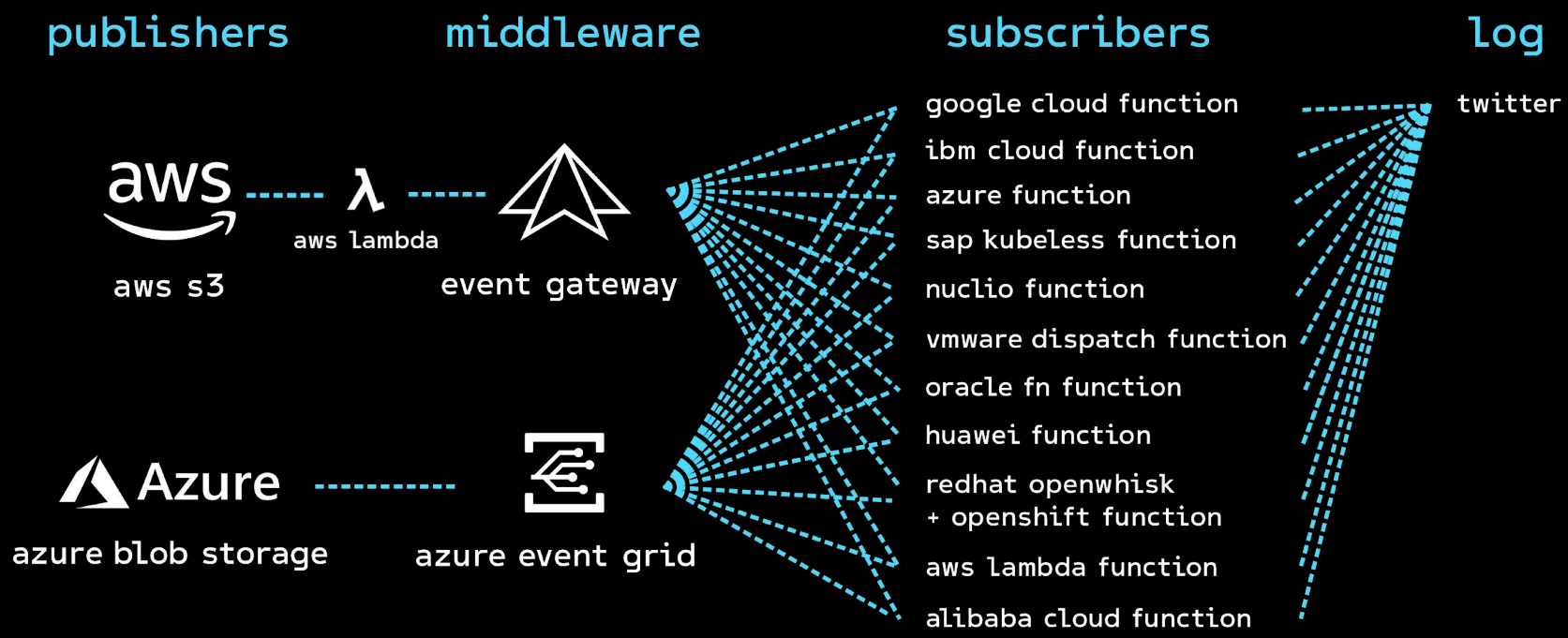
ultimate serverless/event-driven interop demo



demo time

cloudevents

future

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tracing

workflows

correlation

rules

standard events

event directories

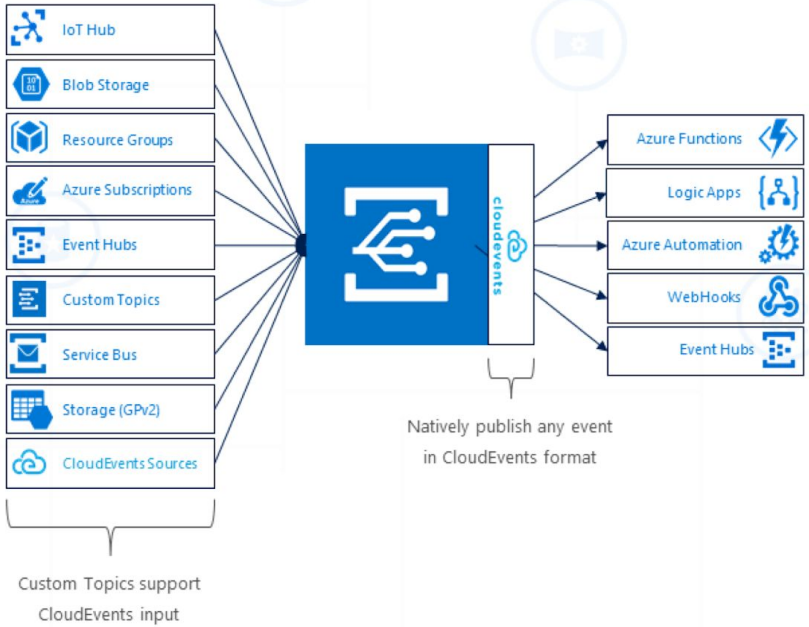
webhooks

cloudevents

how to use it today

Announcing:

First-class support for CloudEvents on Azure Event Grid

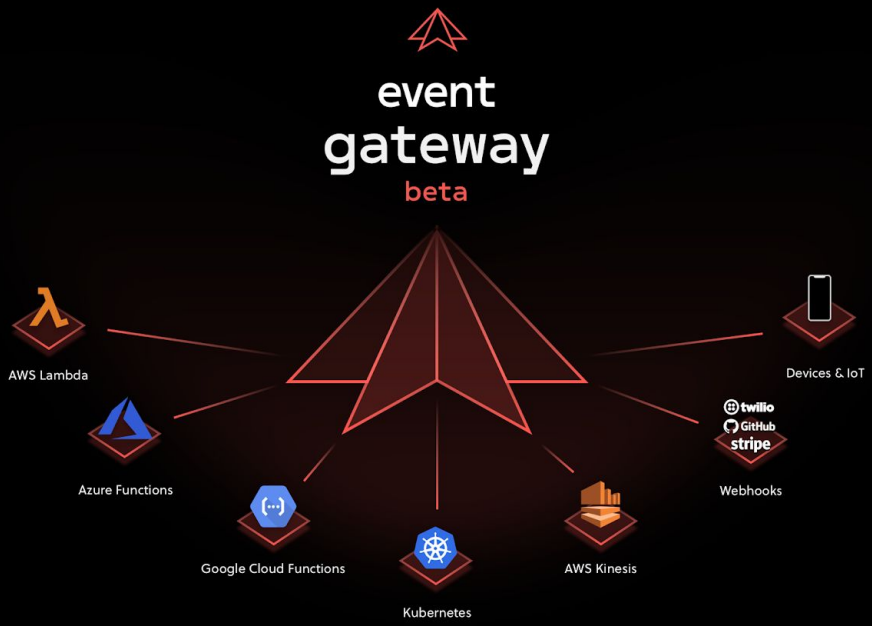


- CloudEvents v0.1 support for **all** Azure platform events, available **today, in production.**
- CloudEvents v0.1 support for Event Grid custom topics (structured JSON encoding)
- **Today** in regions West Central US, Central US, and North Europe. Global rollout in progress, available everywhere next week.
- Docs: **https://aka.ms/egcncfdocs**

Azure

serverless

introducing the hosted



cloudevents · open-source · serverless framework

serverless.com/event-gateway

the

end

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cloudevents.io

github.com/cloudevents

@austencollins

special thanks to the CNCF & serverless working group

cloudevents

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and many more...