Monitoring Applications in AWS with X-Ray and CloudWatch

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X-Ray monitoring is
great for troubleshooting

Overview

A bird’s eye view of X-Ray

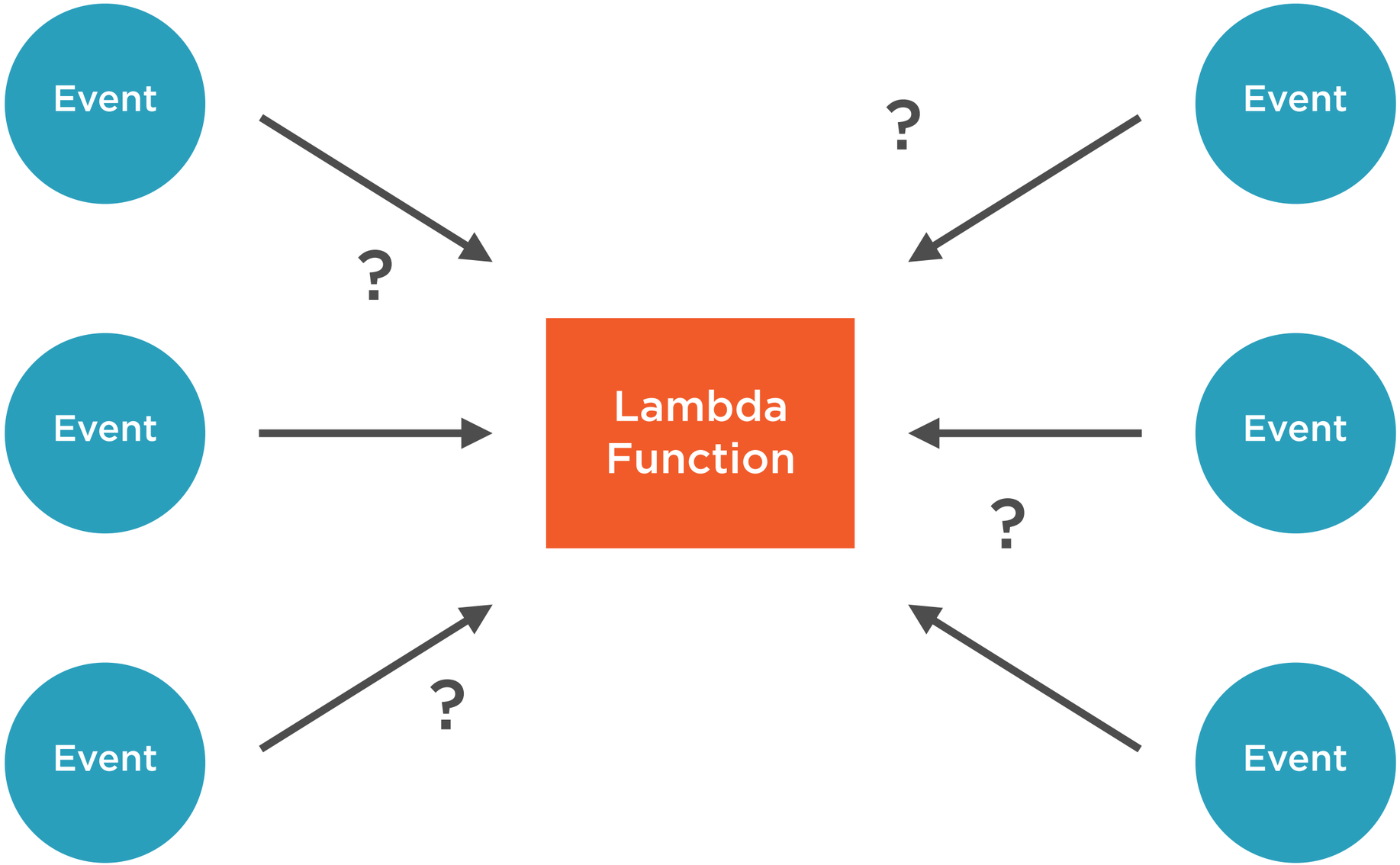
Traces are everywhere

X-Raying a Serverless application

Don’t be alarmed by CloudWatch

Clean it up and go home

How X-Ray Works


Event
Event
Event
?
?
Lambda Function
?
?
Event
Event
Event

Ways to Improve AWS Application Insight

Aggregate logs to a common place

Use X-Ray to monitor applications

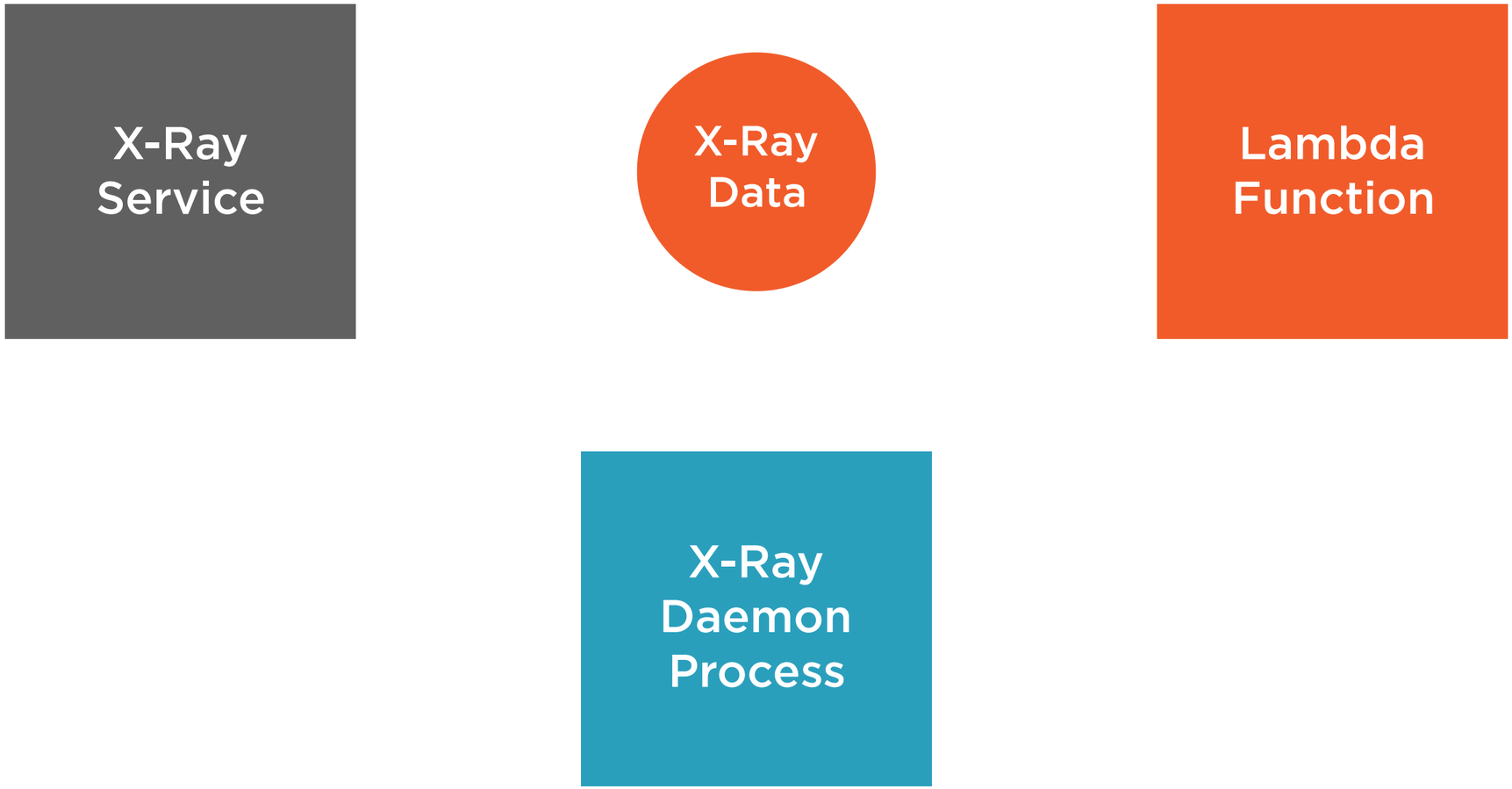
AWS X-Ray

X-Ray Data Contents

Trace ID

Trace Data

AWS X-Ray


X-Ray
Service
X-Ray
Data
Lambda
Function
X-Ray
Daemon
Process

X-Ray daemon is pre-installed for Lambda and Elastic Beanstalk

X-Ray Sampling Default Rules

1 request/second

5% of subsequent requests

Tracing in AWS X-Ray

X-Ray Trace

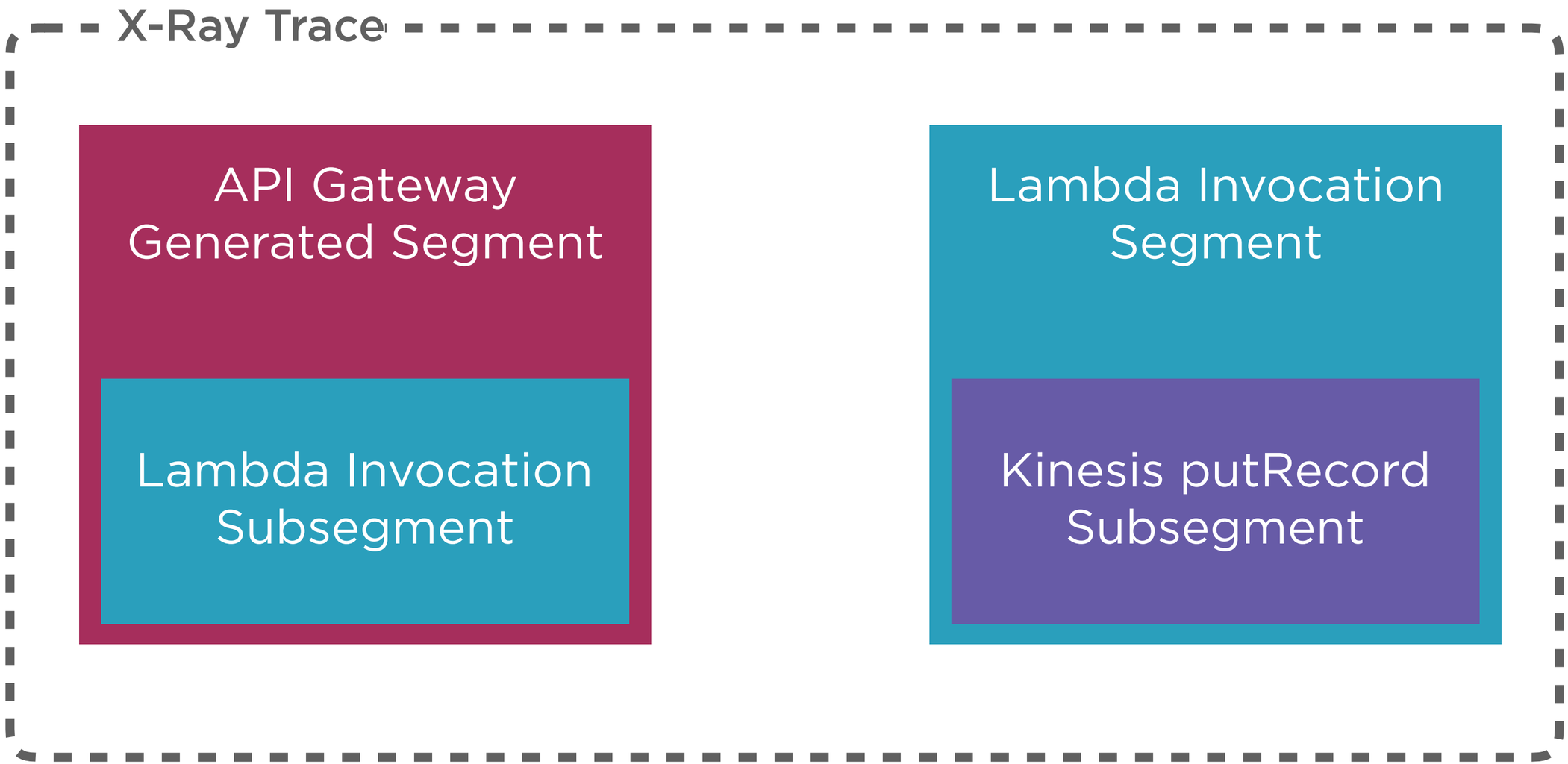
Representation of the actions taken in response to a single request to your application.

The first X-Ray enabled service in your application that receives a request will generate a **Trace ID**

X-Ray Segment

A single packet of data describing an action that took place in response to a request. Contains a Trace ID.

X-Ray Segments and Subsegments



X-Ray Instrumented Code

```
const AWSXRay = require('aws-xray-sdk')

const segment = new AWSXRay.Segment('my-segment')
AWSXRay.setSegment(segment)

// complicated code

segment.addMetadata('result', codeResult)
segment.close()
```

Monitoring Serverless Applications with X-Ray

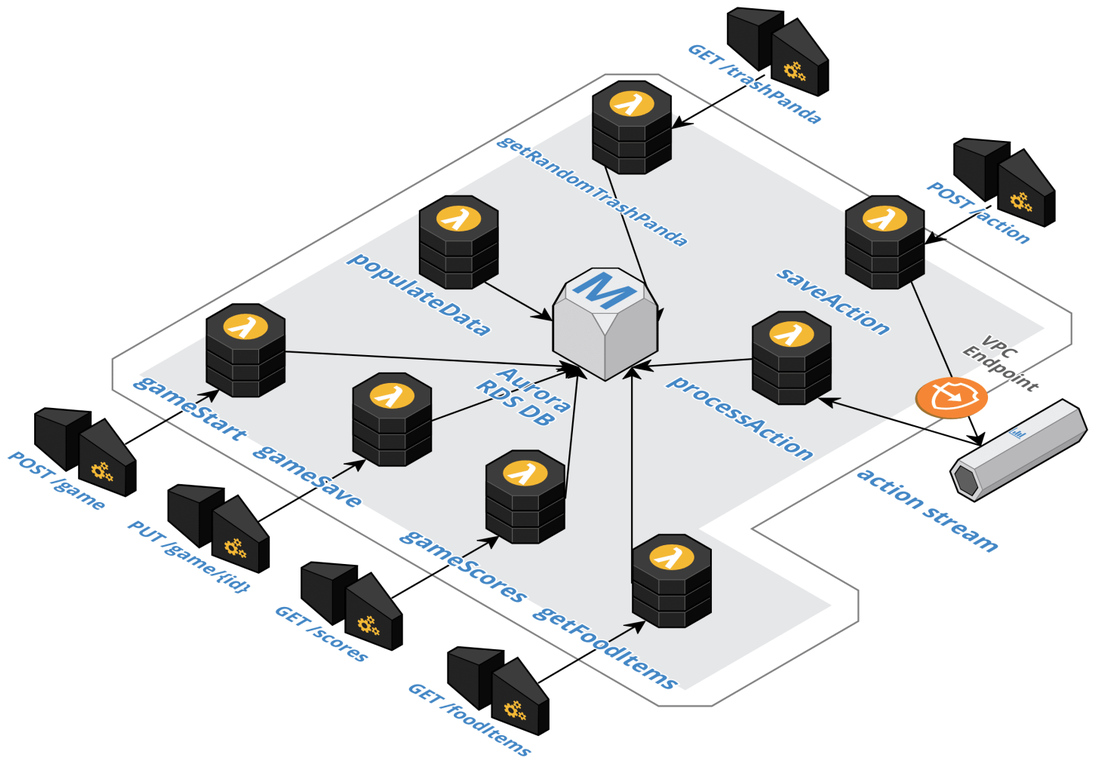
Configuring an Application for X-Ray

Enabling X-Ray tracing for services

Instrumenting application code with X-Ray SDK

Monitoring Serverless Applications with CloudWatch

CloudWatch Alarms can invoke Lambda functions when triggered



If one Lambda fails in a Serverless application, does it make a sound?

Removing Demo Application Resources

Conclusion

Summary

A diagram for X-Ray

Tracing between API Gateway and Lambda

A watchman for our Lambda errors

Saved by the Serverless removal script

Thank you!

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