AWS re:Invent

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Observability best practices for modern & traditional applications

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Agenda

Introduction to observability

AWS services for observability

Meeting you where you are

Labs

What's next?

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What is observability?

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What is observability?

Observability is a measure of how well internal states of a system can be inferred from knowledge of its external outputs

Monitoring tells you whether a system is working; observability lets you understand why it isn't working

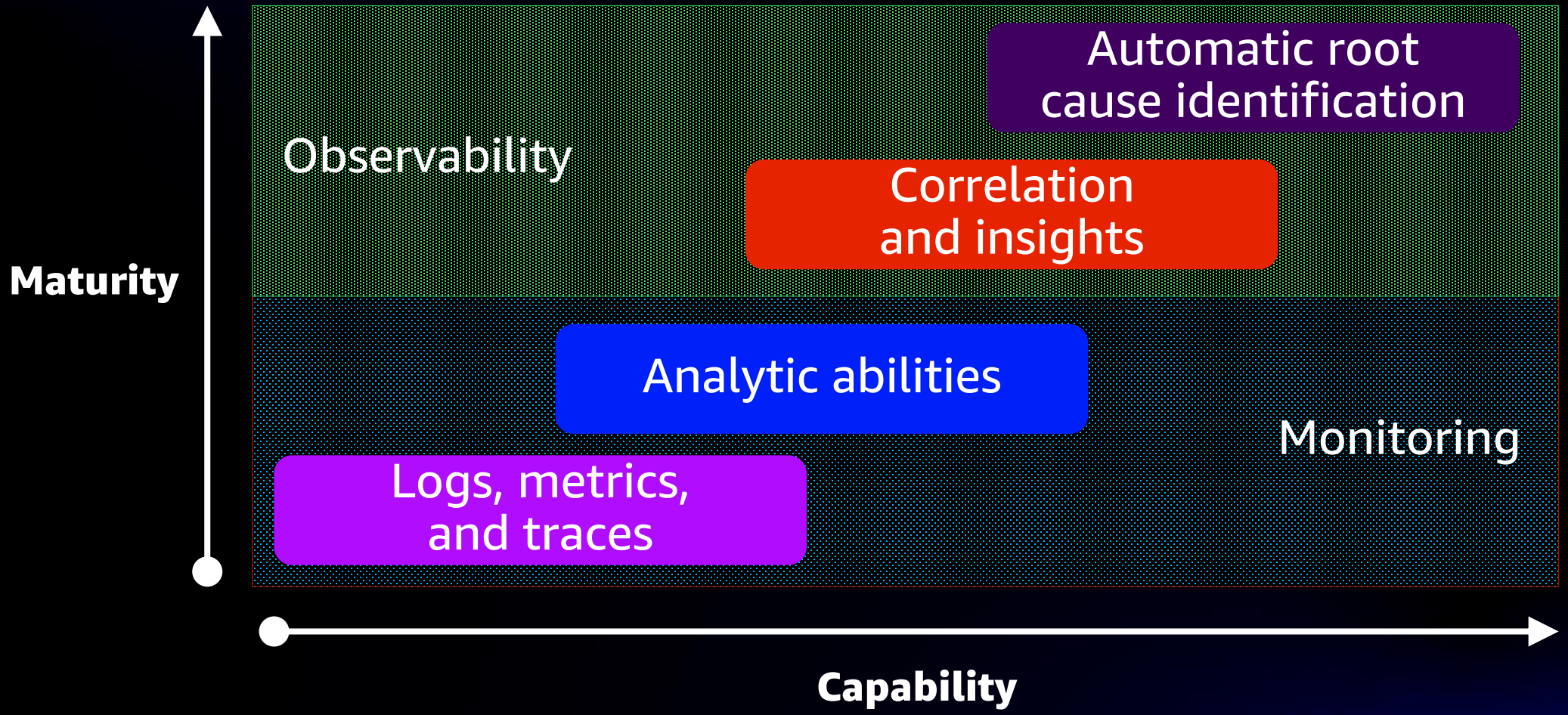
Good observability allows you to answer the questions you **didn’t know that you needed to ask**

Source: Wikipedia, “Observability.” https://en.wikipedia.org/wiki/Observability

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Observability maturity journey



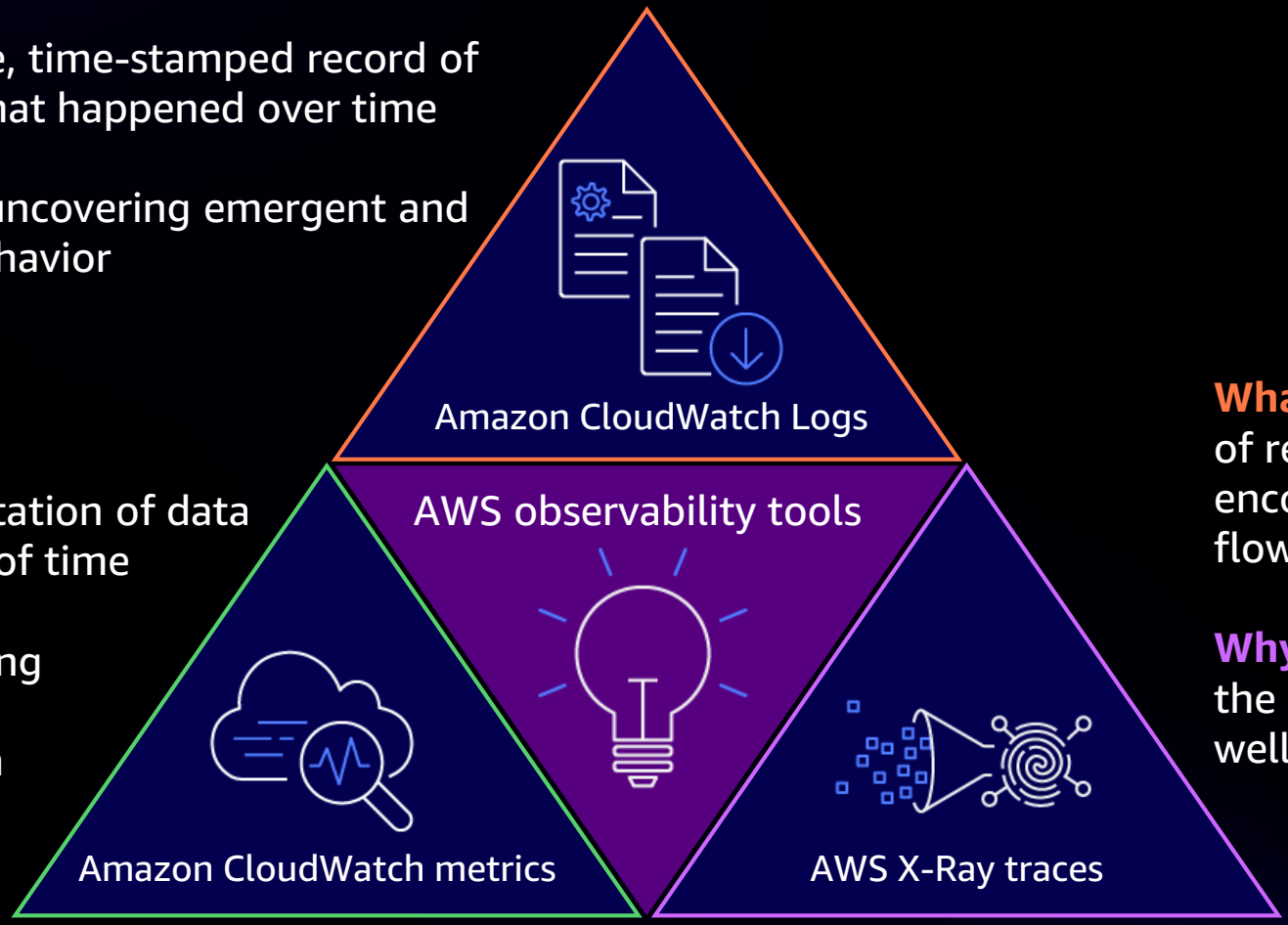
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Cloud-native foundational services

What: Immutable, time-stamped record of discrete events that happened over time

Why: Useful for uncovering emergent and unpredictable behavior



What: Numeric representation of data measured over intervals of time

Why: Useful for identifying trends, mathematical modeling, and prediction

What: Representation of a series of related, distributed events that encode the end-to-end request flow through a distributed system

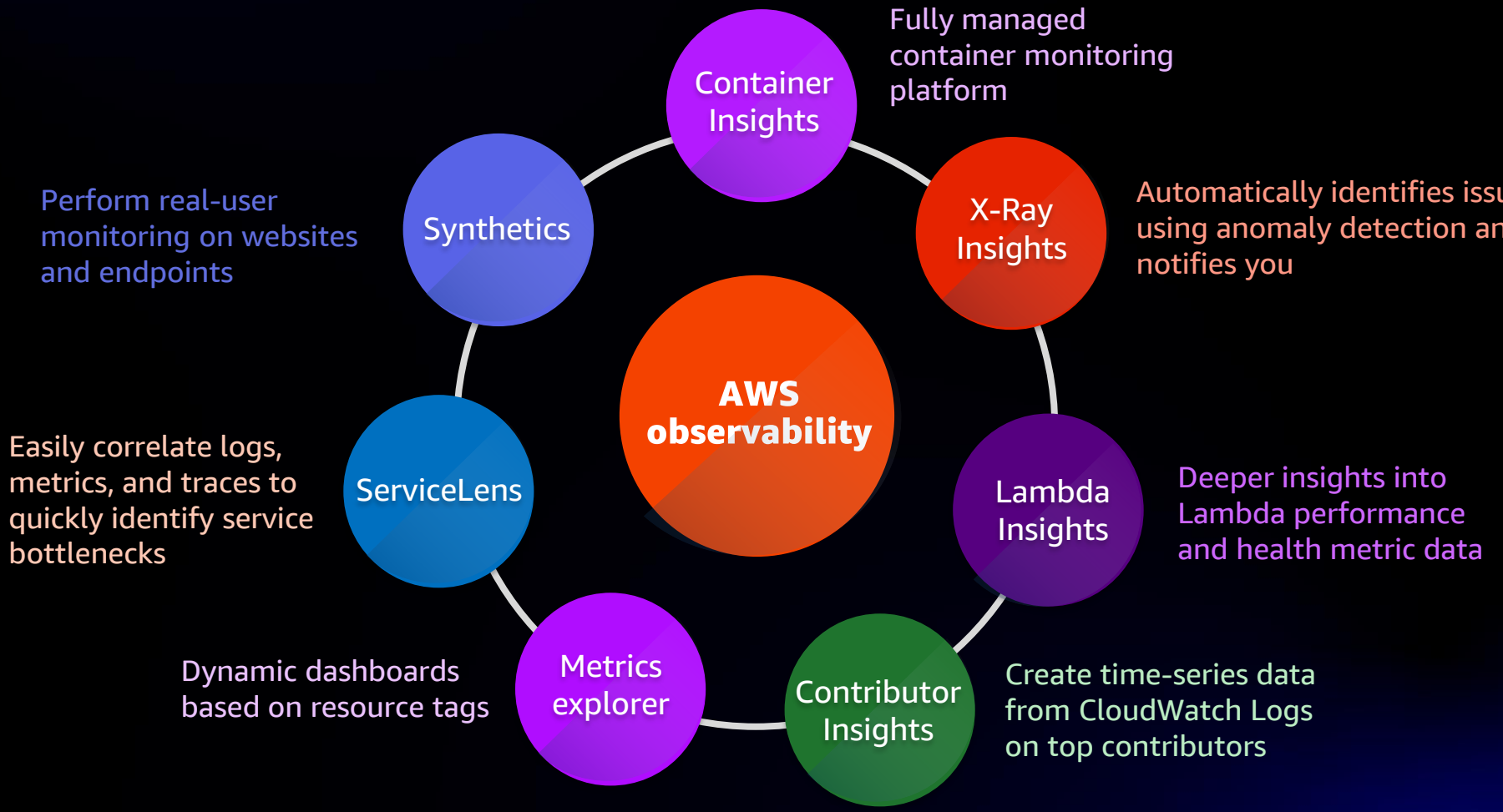
Why: Provides visibility into both the path traversed by a request, as well as the structure of a request

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AWS observability tools

- Infrastructure monitoring
- Application monitoring
- Synthetic monitoring



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AWS OBSERVABILITY

AWS NATIVE MONITORING SERVICE

CloudWatch ServiceLens

Container Insights

Lambda Insights

Synthetics

Contributor Insights



CloudWatch Logs



CloudWatch metrics



AWS X-Ray

OPEN-SOURCE MANAGED SERVICES



Amazon Managed Service for Grafana

Do It Yourself (DIY)



Amazon OpenSearch Service — Logs



Amazon Managed Service for Prometheus



Jaeger & Zipkin — Tracing

INSTRUMENTATION



CloudWatch Agent



X-Ray agent



AWS Distro for OpenTelemetry (ADOT)

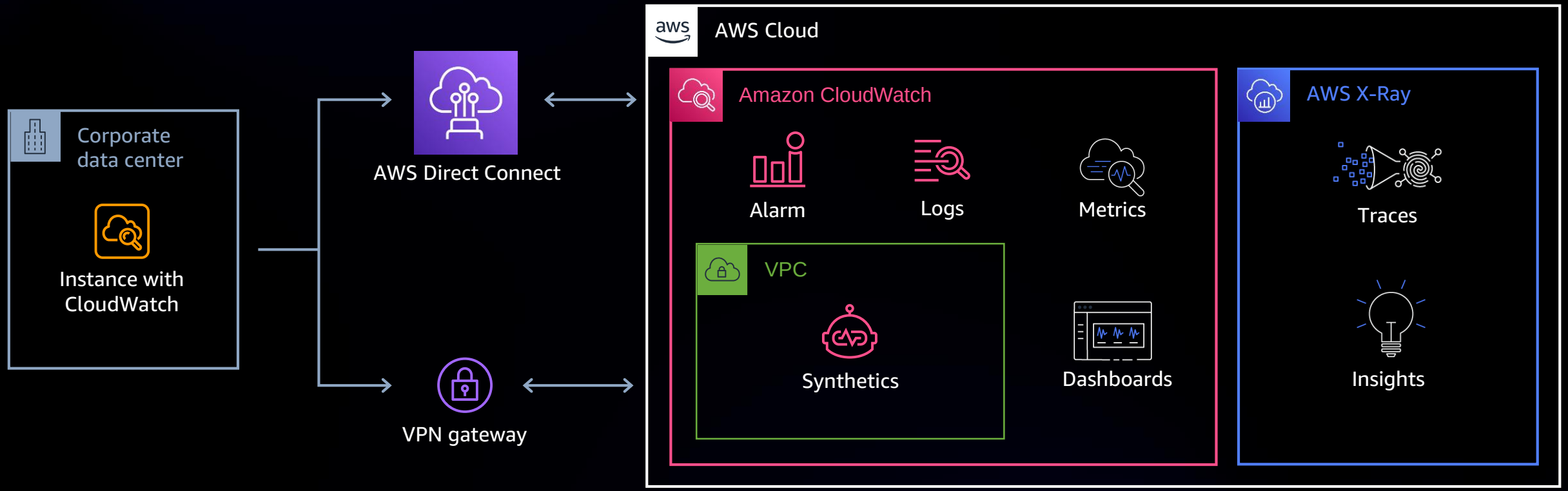
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What about on premises?

Meeting you where you are TODAY

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On premises

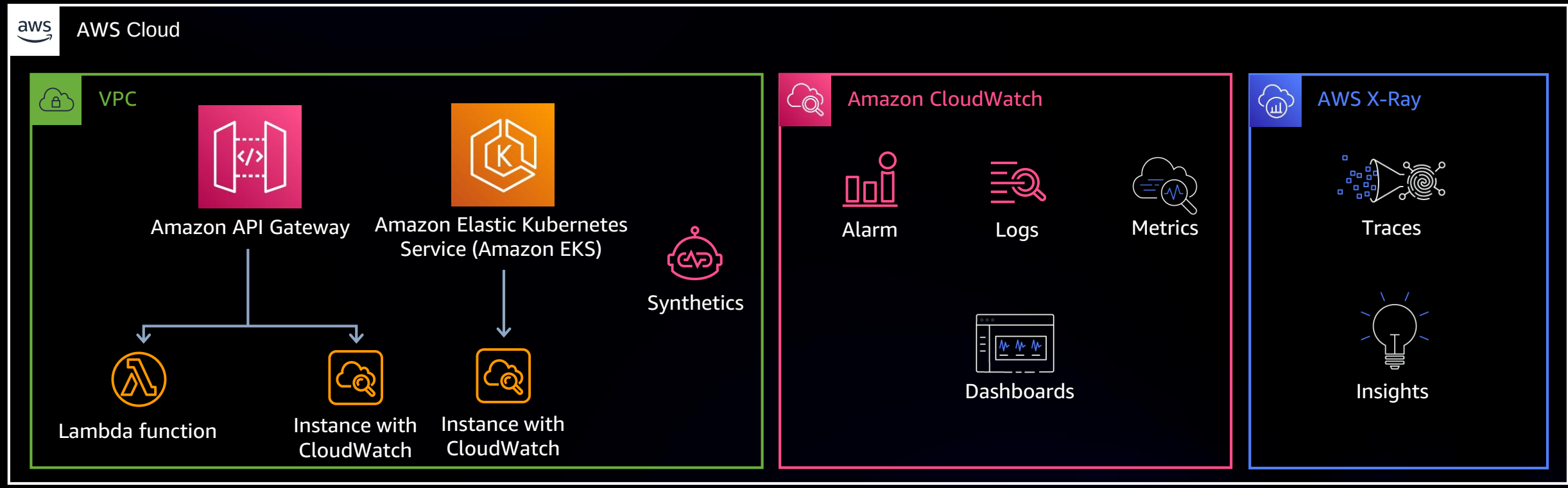


The line between on premises and cloud is becoming thinner

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On AWS, the solution is similar



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Into the labs!

https://cop307-reinvent2021.net

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What’s next?

Regardless of who you are and where you operate workloads,

AWS observability tools can help

Visit the complete AWS observability workshop at https://observability.workshop.aws to learn about more tools that can complete your observability journey

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Thank you!

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