Service Summary Cards (SSC)

AWS X-Ray

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What?
- AWS X-Ray is a service that collects data about requests that your application serves, and provides tools that you can use to view, filter, and gain insights into that data to identify issues and opportunities for optimization.
- AWS X-Ray helps developers analyze and debug applications, such as those built using a microservices architecture.

Why?
- X-Ray provides an end-to-end view of requests as they travel through your application, and shows a map of your application's underlying components. With X-Ray, you can understand how your application and its underlying services are performing to identify and troubleshoot the root cause of performance issues and errors.

When?
- You want to create a service map, identify errors and bugs or build your own analysis and visualization apps.
- You want to provide an end-to-end, cross-service view of requests made to your application.
- You need a user-centric model, instead of service-centric or resource-centric model for requests made to your application.

Where?
- AWS X-Ray is a Regional service. X-Ray data is stored locally to the processed region.
- You can use X-Ray to track requests flowing through applications or services across multiple regions.
- X-Ray agent can be installed on supported operating systems.

Who?
- Some services, like AWS Lambda, Amazon DynamoDB, Amazon SNS are already integrated with X-Ray.
- You can instrumenting your application for AWS X-Ray. Instrumenting your application involves sending trace data for incoming and outbound requests and other events within your application, along with metadata about each request.

How?
- AWS X-Ray receives data from services as segments. X-Ray then groups segments that have a common request into traces. X-Ray processes the traces to generate a *service* graph that provides a visual representation of your application..
- You can get started with X-Ray by including the X-Ray language SDK in your application and installing the X-Ray agent.

How much?
- You pay based on the number of traces recorded, retrieved, and scanned. A trace represents a request to your application and may include multiple data points, such as for calls to other services and database access.
- AWS X-Ray enables customers to choose their own sampling rate.