AWS X-Ray

Analyze and debug production and distributed applications

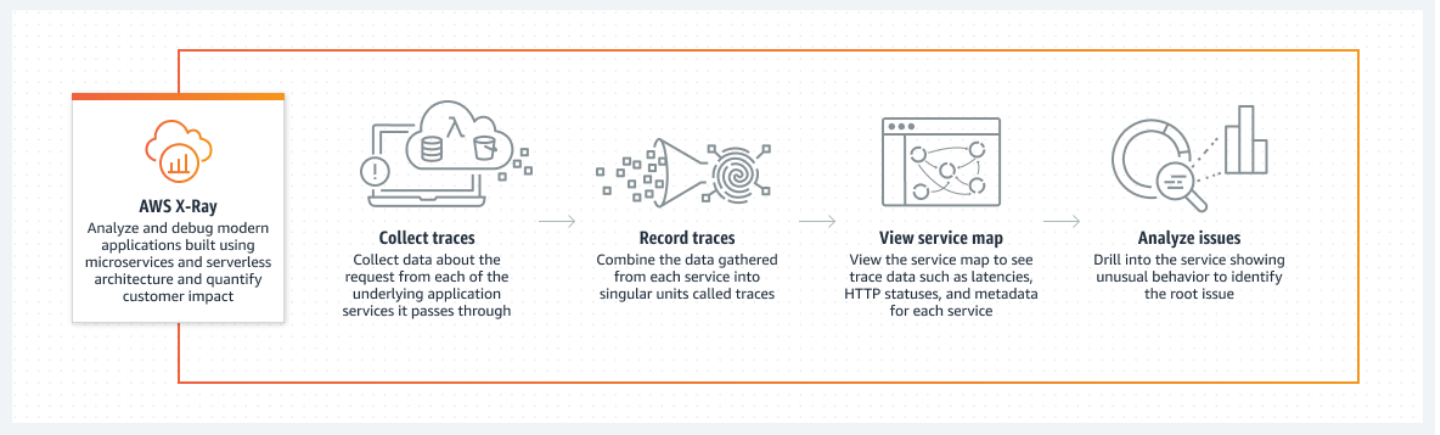
AWS X-Ray collects data about requests served by your application and provides tools to visualize and analyze this data. This gives you deep insights into your application's performance and helps identify issues or optimization opportunities.

Concepts

- **Segments:** Data about the resources running your application logic. These can be the resource's name, details about the request, and details about the work done.
- **Subsegments:** Granular information about the work done by services and downstream calls.
- **Service Graph:** A visual representation of services in your application.
- **Traces:** End-to-end tracking of requests through your application.
- **Sampling:** A method to control the amount of data recorded.
- **Annotations and metadata:** Ways to add extra information to your traces.

How It Works

AWS X-Ray provides a complete view of requests as they travel through your application and filters visual data across payloads, functions, traces, services, APIs, and more with no-code and low-code motions.



Use Cases

Application analysis and debugging

Receive an end-to-end view of the request so that you can identify bottlenecks and troubleshoot issues. For example, if you are experiencing intermittent timeouts in your e-commerce application, AWS X-Ray can help you trace the request path and identify where the delay is occurring.

Performance analytics

Explore, analyze, and visualize traces. You can also compare trace sets with different conditions, for root cause analysis. For example, if you notice slow load times in your application during peak hours, X-Ray can help you identify which services are causing the bottleneck and where you might need to scale.