

# Observability & Security for Serverless Applications



## Challenges

### Debugging, Monitoring, and Securing Serverless Apps

Serverless allows organizations to focus on business logic, leaving non-functional concerns to AWS. Stateless and distributed, serverless apps are hard to debug, troubleshoot, and secure. Just like any application, serverless applications experience performance problems. Functions fail to execute or take a long time to run, becoming costly performance issues difficult to identify and address. Vulnerabilities may be introduced by architectures composed of independent functions open to external interactions. Developers must manage debugging, monitoring, troubleshooting, as well as security and compliance at the same time.



## The Thundra Solution

### Performance and Security Insights for Serverless-Centric Apps

Built for debugging, observability, and security, Thundra provides deep security and performance insights into serverless-centric workloads. Thundra enables software teams to take actions faster to improve the distributed business workflows of serverless applications where data is spread across multiple managed services and third-party APIs. Thundra eases the debugging process with distributed and local tracing of serverless applications using AWS Lambda functions. Thundra improves MTTR and consolidates to one platform what used to require multiple costly and disconnected tools to monitor applications, detect issues, alert, debug, troubleshoot, optimize costs, remove security vulnerabilities, and prove continual compliance.

## Benefits

Build secure and healthy serverless applications by discovering issues, understanding root causes, and taking rapid actions.



#### Discover Bottlenecks

Detect issues 50% faster by visualizing the serverless architecture aggregated by distributed and line-by-line traces, metrics, and logs viewed in a single pane.



#### Troubleshoot in Minutes

Reduce MTTR by 60% with Thundra's actionable real-time alerts. Assess business impact and take rapid actions.



#### Optimize Cost

Reduce your bill up to 40%. Identify resource costs and improve resource utilization where necessary.



#### Granular Security & Compliance

Monitor security and compliance across dev, test, and runtime using whitelists, blacklists, and automatic detection and blacklisting of anomalies for all Lambda functions and serverless services.

## Thundra on AWS

AWS enables software teams to deliver modern applications with managed serverless services. Thundra, an AWS Partner Network (APN) Advanced Technology Partner and AWS DevOps Competency holder, provides observability & security for modern serverless centric application teams to safely accelerate software delivery. Thundra enhances AWS serverless technology integration with real-time application performance, security, and compliance across development, testing, and production environments while AWS manages the entire infrastructure for the customer. Getting started is made easy with AWS CloudFormation and Lambda Layers. Thundra monitors Lambda, other AWS-managed services, and third-party APIs.

### Features



#### Monitor performance and cost of serverless workflows

Thundra monitors all of your serverless architecture composed of functions, third-party APIs, and AWS or non-AWS resources and provides an architectural view of all the services used by a serverless application with insights into performance and cost issues. Thundra brings distributed and local tracing together to give software teams the capability to track serverless transactions end-to-end with insights into the behavior of each line of application code to accelerate MTTR.



#### Close the doors for potential security vulnerabilities

Software teams safely accelerate software delivery by incorporating security from Thundra into their CI/CD workflows and runtime environments. Behavior anomalies are proactively detected across Lambda functions. By detecting and whitelisting or blacklisting 3rd parties, Thundra improves serverless application compliance and prevents security vulnerabilities.

### Case Study: GotPhoto Inc.



#### Challenges

Discovering the root cause of errors and difficulties responding to the problems of specific customers were big challenges for GotPhoto. Another crucial issue was discovering the reason behind latencies.



#### Solution

GotPhoto filled the deficiency of error troubleshooting with Thundra's end-to-end tracing capabilities. Thundra enhanced the efficiency of tracking issues specifically related with selected customers.



#### Results

Thundra helped GotPhoto gain visibility on its serverless architecture and brought insight into trackable errors. MTTR was automatically reduced by 60% and application health jumped up by 50%.

### Get started with Thundra solutions on AWS

Visit AWS Marketplace or [www.thundra.io](https://www.thundra.io) to purchase or start a Free Trial today.



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