

@devopschallengehub



## Can you share a few practical use cases where DevOps teams commonly use AWS Lambda?

### Infrastructure Automation

- **Automated Backups:** Lambda triggers via CloudWatch to create and clean up EBS snapshots or perform backups on a schedule, reducing manual intervention.
- **Resource Cleanup:** Used for cleaning up unused EC2 instances, removing orphaned resources, or deleting old CloudFormation stacks.
- **Cost Optimization:** Lambda can shutdown development server during night for cost optimization.

### Event-Driven Workflows

- **S3 Event Processing:** Lambda functions are triggered when files are uploaded to S3, enabling automatic content transformation (e.g., video transcoding, image resizing, or metadata extraction).
- **Change Data Capture:** Integration with DynamoDB Streams allows Lambda to react to database changes for monitoring, replication, or audit flows.
- **Notification Systems:** Lambda works with SNS to send emails, Slack messages, or other notifications when specific events occur, such as new database entries or system alerts.

### CI/CD and Deployment

- **Continuous Deployment/Rollback:** Systems like Harness use Lambda in pipelines for basic and canary deployments, handling function updates and automatic rollbacks upon failures, all integrated with version tracking and artifact management.
- **Certificate Automation:** Lambda automates issuance or renewal of SSL/TLS certificates with services like Let's Encrypt.

### API and Microservices

- **Lightweight Backends:** Lambda operates behind API Gateway to serve as a backend for microservices, authentication endpoints, or independent APIs without managing servers.

### Monitoring, Security, and Custom Utilities

- **Custom Security Automation:** Creating, updating, or auditing IAM policies, responding to WAF (Web Application Firewall) or guard duty events, or performing security checks automatically.
- **Workflow Utilities:** Simple utilities such as updating DNS when ASG changes size, automating login authentication steps, or on-demand reporting jobs.

Which of the following is a common Lambda use case for **infrastructure automation**?

- a) Sending real-time chat messages
- b) Auto-resizing EC2 instances based on CPU load
- c) Creating and cleaning up EBS snapshots on a schedule
- d) Hosting a static website

**Answer:** c) Creating and cleaning up EBS snapshots on a schedule

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An organization wants to automatically shut down development servers at night to save costs. How they can do it?

- a) CloudWatch Alarm
- b) Lambda
- c) AWS SNS
- d) AWS SES

**Answer:** b) Lambda

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In a CI/CD pipeline, Lambda can be used for:

- a) Hosting static frontends
  - b) Automatic rollbacks upon deployment failures
  - c) Storing container images
  - d) Serving DNS records
- Answer:** b) Automatic rollbacks upon deployment failures

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How to renew **SSL/TLS certificates automatically**?

- a) CloudWatch Alarm
- b) Lambda
- c) AWS SNS
- d) AWS SES

**Answer:** b) Lambda

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