○ Day 10: Monitoring & Logging – CloudWatch and CloudTrail

I done day 10 AWS follow for more Divya M . LinkedIn www.linkedin.com/in/divyam2000 This document serves as a comprehensive guide for Day 10 of your AWS learning journey, focusing on monitoring and logging using Amazon CloudWatch and AWS CloudTrail. By the end of this session, you will have a solid understanding of how to monitor AWS resources, set alarms, and track user activities and API calls effectively.

1. What is Amazon CloudWatch?

CloudWatch is AWS's monitoring and observability service.

Key Features:

- Collects metrics, logs, events, alarms
- Monitor EC2, RDS, Lambda, S3, etc.
- Set up alerts when thresholds are crossed

2. CloudWatch Metrics

- Auto-generated for AWS services (CPU, network, disk, etc.)
- You can create custom metrics too.

Example:

- EC2 CPU utilization over time
- RDS connections
- Lambda invocation errors

3. CloudWatch Alarms

• Notify you or take action (e.g., stop instance, send email) when a metric crosses a threshold.

How to Create:

- 1. Go to CloudWatch \rightarrow Alarms \rightarrow Create Alarm
- 2. Choose metric (e.g., EC2 \rightarrow CPU Utilization)
- 3. Set threshold (e.g., > 80%)
- 4. Choose action (e.g., send to SNS/email)

4. CloudWatch Logs

- Store logs from:
 - EC2 (via agent)
 - Lambda
 - API Gateway
 - Custom apps

Example Use:

```
sudo yum install -y awslogs
sudo service awslogs start
```

Use it to stream /var/log/messages to CloudWatch.

5. What is AWS CloudTrail?

CloudTrail records API calls and user actions in your AWS account.

Tracks:

- Who did what, when, and from where?
- Actions from console, CLI, SDK
- Helps in auditing & security

6. How to Use CloudTrail

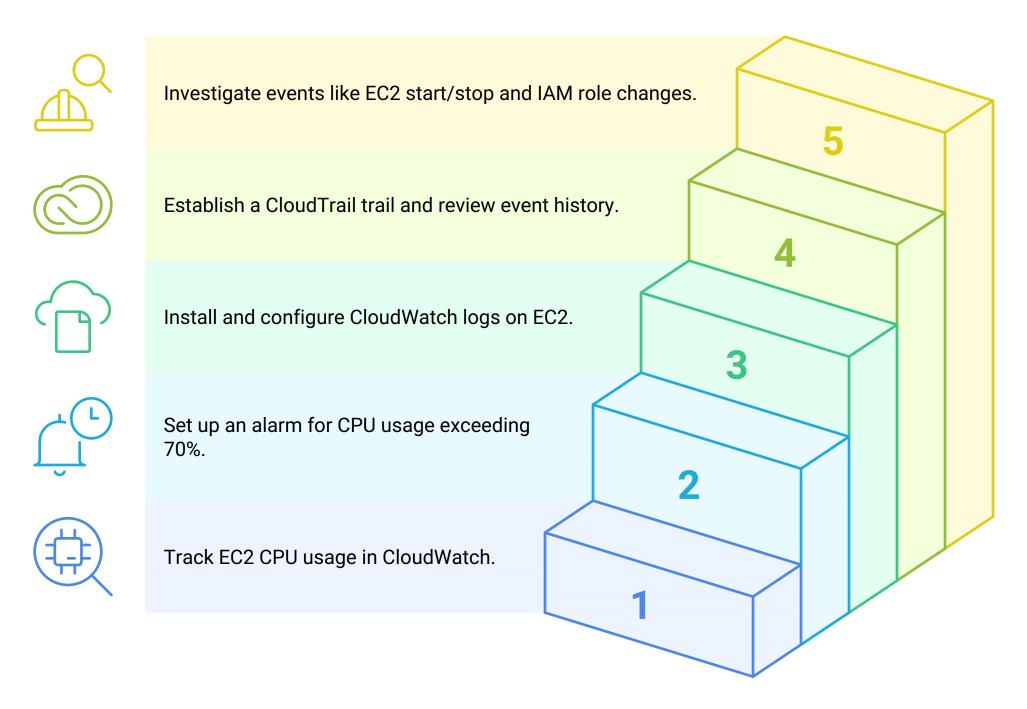
- 1. Go to CloudTrail \rightarrow Trails \rightarrow Create Trail
- 2. Choose:
 - Trail name
 - Apply to all regions
 - Store logs in an S3 bucket
- 3. After setup, you can view:
 - Event history
 - Which user launched EC2, deleted S3, etc.

Hands-On Tasks for Day 10

- [] Monitor EC2 CPU usage in CloudWatch
- [] Create an alarm for CPU > 70%

- [] Install and configure CloudWatch logs on EC2
- [] Create a CloudTrail trail and review event history
- [] Explore events like EC2 start/stop, IAM role changes

Achieving Cloud Monitoring Mastery



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This concludes your Day 10 learning objectives. By completing the hands-on tasks, you will gain practical experience in monitoring and logging within AWS, enhancing your skills for managing cloud resources effectively.

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