What is S3 Event Notification? Give an example of how you've used it as Devops Engineer.

As a **DevOps Engineer**, I see **S3 Event Notification** as a powerful automation trigger in AWS that lets you **react to changes in an S3 bucket**. It enables automatic actions whenever specific events occur—like when an object is uploaded, deleted, or restored.

You can configure S3 to send notifications to:

- **SNS topics**: Sends a message to many subscribers at once (like a group SMS).

- **SQS queues**: Holds messages in a queue so other services can process them later, one at a time.

- **AWS Lambda functions**: Runs your code automatically in response to an event, without needing a server.

This helps eliminate polling and manual intervention, making systems more event-driven and scalable.

Example of How I've Used It

In one of my projects, we had a CI/CD pipeline where teams uploaded build artifacts (like `.zip` or `.tar.gz`) to a specific **S3 bucket** after the build phase.

My DevOps Workflow:

1. **Trigger:**
   When a new artifact was uploaded to `build-artifacts/` in the S3 bucket.

2. **Action:**
   S3 triggered a **Lambda function**, which:

   - Verified the checksum and artifact metadata,

- Tagged the artifact with build info (e.g., build ID, timestamp),
- Triggered a downstream deployment job via **Step Functions** or **CodePipeline**.

3. **Outcome:**
The deployment process was now fully automated—no manual steps, no polling, and real-time artifact handling. It improved delivery speed and reduced human error.

💡 Why It Matters in DevOps:

- **Automation**: React to infrastructure changes instantly
- **Observability**: Log and audit file changes automatically
- **CI/CD Integration**: Trigger builds, tests, or deployments on file uploads
- **Cost-Effective**: No need for a continuously running server to check S3

What is the purpose of Amazon S3 Event Notifications?

A. To monitor EC2 instance logs
B. To notify users when billing thresholds are crossed
C. To trigger actions automatically when specific S3 bucket events occur
D. To replicate data between S3 buckets in different regions

Answer: ✅ C

Which of the following services can be integrated directly with S3 Event Notifications?

A. AWS RDS
B. AWS Lambda
C. Amazon SQS
D. Amazon SNS

Answer: ✅ B, C, and D
(*Note: Multiple correct options — Lambda, SQS, SNS*)

You want to automatically trigger image resizing when a user uploads a `.jpg` file to an S3 bucket. What should you use?

A. AWS Auto Scaling
B. CloudFront

C. S3 Event Notification + Lambda
D. Route 53

Answer: ✅ C