



DynamoDB Stream & Trigger

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Introduction

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DynamoDB stream

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DynamoDB Streams is a feature in Amazon DynamoDB that keeps track of all changes made to the data in a table

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Whenever an item is added, updated, or deleted in the table, DynamoDB Streams records these changes as events

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These events are stored for 24 hours, allowing other services to access them and take real-time actions

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Trigger

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A trigger in DynamoDB is a way to automatically perform actions whenever there is a change in your table

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It connects a DynamoDB Stream to an AWS Lambda function

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Whenever the stream records changes, the trigger activates the Lambda function to process those changes

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Real-World Example

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Notifications with DynamoDB Streams

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Introduction

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When you buy something on Amazon, you instantly get a message on WhatsApp or an email about your order

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This happens because DynamoDB Streams captures the new order in the database and triggers actions to send the notification

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Let's see how this works step by step.

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Step 1: Placing an Order

When a user places an order, the order details (like item name, quantity, and price) are added to a DynamoDB table

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Step 2: Capturing Changes with DynamoDB Streams

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DynamoDB Streams captures this new addition to the table as an event

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It records what changed (e.g., a new order was added) and stores it temporarily for 24 hours

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Step 3: Triggering an Action

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A Trigger connects the DynamoDB Stream to an AWS Lambda function

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When the stream logs a change, the trigger automatically invokes the Lambda function

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Step 4: Processing Data in Lambda

The Lambda function takes the order data from the stream and integrates it with notification services like

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Amazon SNS (Simple Notification Service)

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Third-party APIs like WhatsApp

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Email systems

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Step 5: User Notification

The notification service sends a confirmation message to the user's email or WhatsApp, ensuring they are informed instantly

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Key Exam Tips

1

Remember that Triggers rely on DynamoDB Streams to capture changes. Without streams enabled, triggers will not work

2

DynamoDB Streams must be enabled to replicate data across multiple regions in a DynamoDB Global Table for multi-region, active-active architectures

3

Stream captures and stores detailed logs of all changes in a DynamoDB table to track who made changes and when