**AWS SNS Subscription Filter Policy – Simple Explanation**

**AWS SNS (Simple Notification Service)** allows you to send messages to multiple subscribers, like **email, SMS, mobile apps, or other AWS services**. But sometimes, not all subscribers need to receive every message. **Subscription Filter Policy** helps you **control which messages a subscriber will receive.**

**What is a Subscription Filter Policy?**

A **Subscription Filter Policy** lets **SNS subscribers** decide which messages they want to receive **based on message attributes**. Instead of sending **all messages** to **all subscribers**, AWS SNS **only delivers relevant messages** to each subscriber.

**How Does It Work?**

* **A publisher sends a message** to an **SNS topic** (a central channel where messages are sent).
* **The message contains attributes** (extra details about the message).
* **SNS checks each subscriber’s filter policy** to see if the message matches.
* **Only subscribers whose filter policy matches the message attributes will receive the message.**

**Example Scenario**

Imagine you have an SNS topic for **weather alerts**. There are three subscribers:

* **Alice wants only "rain" alerts.**
* **Bob wants only "snow" alerts.**
* **Charlie wants all alerts.**

**Step 1: A Publisher Sends Messages with Attributes**

A **weather service** sends messages with **attributes**, such as:

* **Message 1:** "Heavy Rain in New York" → **Attribute: "weather": "rain"`**
* **Message 2:** "Snowstorm in Chicago" → **Attribute: "weather": "snow"`**

**Step 2: Filter Policies Decide Who Gets the Message**

* **Alice's filter policy:** { "weather": ["rain"] } → **She gets Message 1 (Rain Alert).**
* **Bob's filter policy:** { "weather": ["snow"] } → **He gets Message 2 (Snow Alert).**
* **Charlie has no filter policy** → **He gets both messages.**

This way, **subscribers only get the messages they care about.**

**How to Set a Subscription Filter Policy?**

* **Go to AWS SNS Console.**
* **Select a topic.**
* **Choose a subscription.**
* **Edit the subscription and add a filter policy.**
* **Save the settings.**

You can also do this using the **AWS CLI** or **AWS SDK**.

**Why Use a Subscription Filter Policy?**

* **Reduces unnecessary messages** → Subscribers get only what they need.
* **Saves costs** → Avoids unnecessary message processing.
* **Improves efficiency** → Helps applications process only relevant data.
* **Simplifies message handling** → No need for subscribers to filter messages themselves.

**Summary**

* **AWS SNS Subscription Filter Policy** controls **which messages a subscriber will receive.**
* It works by **matching message attributes** with a **subscriber's filter policy**.
* **Only relevant messages** are delivered to each subscriber.
* **Saves costs, improves efficiency, and simplifies message handling.**

This feature is useful when **different subscribers need different types of messages from the same SNS topic.**