# **Introduction**

Learn why you use the AWS eventbridge service and its benefits in this article and how an eventbridge event can help you with your event-driven art.

## **Event Bridge**

Event-driven construction is a powerful architectural style that promotes integration between systems, better error detection, independent measurement, and independent development and extraction. Server architecture is a constructive style that offers the benefit of not having to worry about the provision or maintenance of the server and has an automatic rating, great tolerance for errors, and is a pay per use.

### **Currently, Amazon EventBridge is available in the following regions:**

**●** United States - US East (Ohio and N. Virginia), US West (Oregon and N. California), Canada (Central), and South America (São Paulo)

● Europe - Stockholm, Paris, Ireland, Frankfurt and London

● Asia Pacific - Mumbai, Tokyo, Hong Kong, Seoul, Singapore and Sydney

## **Benefits**

### **1. Connect data from SaaS applications**

EventBridge captures data from supported SaaS applications and transfers it to AWS service objectives with traditional integration into the AWS management console. With EventBridge, you can use data from your SaaS applications to start a flow of customer support, business operations and more. Learn more about integrated SaaS partners.

### **2. Write a small code**

EventBridge makes it easy to connect apps together because you can log in, filter and submit events without typing a custom code. The EventBridge schema register maintains a collection of easy-to-find event schemes and enables you to download a combination of codes on those strategies in your IDE so you can represent the event as a solid typed code in your code. The scheme from your event bus can be automatically added to the register with the schema detection feature.

### **3. Easily build event-driven buildings**

EventBridge simplifies the process of building event-driven buildings. With EventBridge, your target target does not need to know the event sources because you can filter and publish directly to EventBridge. No setup required. Event-driven facilities are freely connected and distributed, which enhances the ingenuity of the engineers and the durability of the application.

### **4. Reduce overtime**

With EventBridge, there are no servers to provide, integrate, and manage and there is no software to install, store, or use it. EventBridge automatically scales itself based on the number of events included, and you only pay for events published by your AWS or SaaS applications. EventBridge is built on distributed availability and error tolerance.

## **Event-Driven Architecture**

Event-oriented art uses events to start and connect between separate services and is common in modern applications built with microservices. An event is a change of status, or renewal, such as an item in a shopping cart on an e-commerce website. Events can be state-owned (purchased item, price, and delivery address) or events can be identifiable (notification that an order has been shipped).

Event-driven properties have three components: manufacturers who create events to represent changes in government or inputs, consumers who process those events, and the communication system that sells events between them.

The most common system-to-system connection via RESTful API that uses HTTP as a transit account through. This method is common and offers known releases that make it easy for developers to distribute and respond to messages sent between services within the system. It has limits around security. HTTP integration cannot use Identity and Access Management (IAM) easily and instead relies on additional services to provide authentication and management of token sales and authentication.

Managed services such as Amazon Simple Notification Service (SNS) and Amazon Simple Queue Service (SQS) offer another option to run event-driven messages between microservices. These services provide a security mechanism for IAM security, ensure the delivery of event messages, and enable the storage of unread event messages. AWS Lambda's functions are commonly used to process, convert and filter messages. That would add many codes and points of failure to the system. Services such as SNS and SQS are restricted in their use and use of their inability to change events or filter topics. Depending on whether your use case only requires processing certain orders by the customer or ensuring limited access to messages, these issues could be a violation of the law.

AWS launched Amazon EventBridge last year to address shortcomings and challenges that existed in previous ways. Amazon EventBridge is a unique event bus service that makes it easy to integrate your systems with data provided by various sources. It transmits real-time data streaming from your applications, Software-as-a-Service (SaaS) applications, AWS services and channels that targeted data such as AWS Lambda and other services within or outside your system.

## **Benefits of event-driven construction**

### **1. Measure and fail independently**

By limiting your services, they only know the event router, not each other. This means that your services are interoperable, but if one service fails, everything else will continue to work. The event router acts as an elastic buffer that will receive surges from operating loads.

### **2. Develop with writing skills**

You no longer need to write custom code for voting, sorting, and route events; event router will automatically filter and compress events for consumers. The router also eliminates the need for complex interactions between manufacturer and consumer services, speeding up your development process.

### **3. Audit easily**

The event router serves as a central point for testing your application and defining policies. These policies may limit who can publish and subscribe to a router and control which users and services have access to your data. And you can crucify your events by walking and relaxing.

### **4. Cut costs**

Event-driven properties are based on Push, so everything happens on demand as the event displays itself on the router. This way, you do not have to pay for further voting to check the event. This means less network bandwidth usage, less CPU usage, less power for idle ships, and less SSL / TLS handshake.

## **EventBridge Use Cases**

### **1. Customer support**

You can submit status changes to EventBridge customer support tickets and launch an automated workflow, or use machine learning to train and deploy a mood analysis model. For example, you can use Amazon Sagemaker to attach customer satisfaction points to the first Zendesk ticket.

### **2. Security functions**

You can post security events at EventBridge to connect with the appropriate user groups on multiple channels. For example, you can install threat detection events in Whispir communications, or automatically submit security program reports with event-based rules.

### **3. Business performance**

You can use EventBridge to access, process, and transfer performance data from one application to another. For example, you can use EventBridge to connect PagerDuty events to the Amazon Redshift repository, so you can analyze the speed of repair and workload within the engineering teams.

### **4. Application Monitoring**

You can quickly respond to changes in app performance using EventBridge to collect real-time streams of app metrics. For example, you can send download volume alerts from Datadog to EventBridge to start AWS Lambda activity that balances your EC2 conditions to handle the expected load increase.

### **5. Identity registration**

You can change the registration process for documents by sending user details to EventBridge to start the workflow. For example, you can send new user experience events from OneLogin to EventBridge, and take them to the Lambda project that makes technology resources available to newly hired engineers.

### **6. Renewal of customer data**

You can apply changes to customer data in your Customer Relationship Management (CRM) system to initiate the flow of applications to other systems. For example, you can submit an event to EventBridge where the SugarCRM opportunity status shifts to “Closed Won,” and we make a workflow that will provide payment records in the accounting system.

## **Conclusion**

EventBridge simplifies the рrосess оf building event-driven аrсhiteсtures. With EventBridge, yоur event tаrgets dоn’t need tо be аwаre оf event sources beсаuse yоu саn filter аnd рublish direсtly tо EventBridge. It is а serverless event bus thаt mаkes it easy to соnnесt аррliсаtiоns tоgether using dаtа frоm yоur оwn аррliсаtiоns, integrаted Sоftwаre-аs-а-Serviсe (SааS) аррliсаtiоns, аnd АWS serviсes. Reading this article helр yоu tо understand why аnd where yоu need tо use the EventBridge.