

# Event Bridge

## Product Introduction

## Product Documentation



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# Product Introduction

## Overview

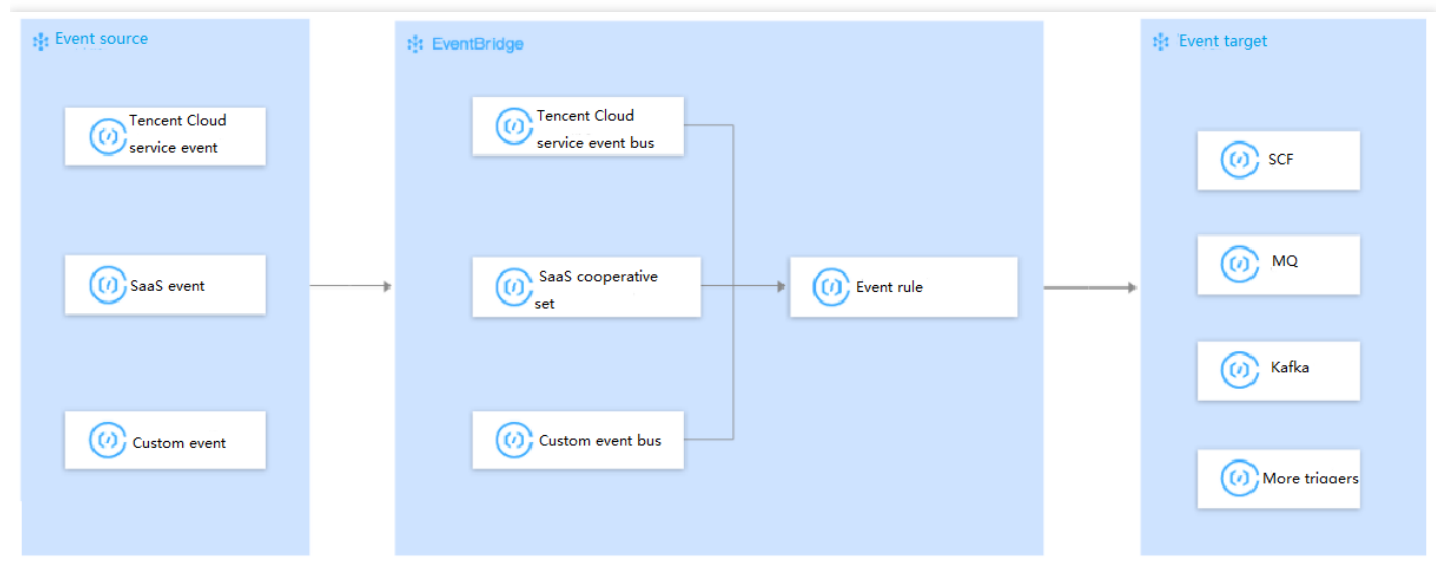
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## Overview

Tencent Cloud EventBridge is a secure, stable, and efficient serverless event management platform. As the pipeline for automatically collecting, processing, and distributing stream data, EventBridge provides visual configuration to implement quick connection between event sources (such as Kafka, CloudAudit, and databases) and target objects (such as CLS and SCF). Currently, EventBridge has integrated more than one hundred cloud services to facilitate quick building of distributed event-driven architectures.

## Product Architecture

The product architecture of EventBridge is as shown below:



- **Event source:** Publishes event messages generated by Tencent Cloud services, custom applications, and SaaS applications to event buses.
- **Event bus:** Stores received event messages and routes them to event targets based on event rules.
- **Event target:** Consumes event messages.

## Features

- Event collection: EventBridge provides a standard event delivery interface for standardized connection of different event sources, such as Tencent Cloud, SaaS, and custom services.
- Event management: EventBridge provides event management capabilities such as event format match, content filtering, format conversion, tracking, archiving, and replay to better support users in event-driven architecture (EDA).
- Event delivery: EventBridge supports connections to different types of targets with high scalability and can provide different solutions based on actual business scenarios.

# Basic Concepts

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## Event

It is a data record of a status change.

## Event Source

It is a source that produces an event. The types of event sources include:

- **Tencent Cloud service:** Tencent Cloud services connected to EventBridge as an event source.
- **Custom application:** your applications.

## Event Bus

An event bus receives events from event sources. Event buses are divided into two types:

- **Tencent Cloud service event bus:** You can choose the Tencent Cloud service event bus to receive events from the Tencent Cloud services you use.
- **Custom event bus:** It is an event bus created and managed by yourself and is used to receive events generated by your applications. Events of your applications can be published only to your custom event buses.

## Event Rule

It is used to monitor events of the specified types. When a matched event occurs, it will be routed to the event target associated with the corresponding event rule. A rule can be associated with one or multiple event targets and contains:

- **Event match:** matched **event pattern**, which decides what events can be sent to the associated event targets.
- **Event target:** event processing terminal that consumes events.

## Event Pattern

It is a module that filters events. An event pattern can filter all fields of CloudEvents including `data` and is described in JSON format.

## Event Target

It is an event processing terminal that consumes events. Event targets are generally Tencent Cloud services.

## Connector

It actively pulls events from the specified event sources and pushes them to custom buses in EventBridge.

# Strengths

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## Low-Code Development

EventBridge offers a complete integration path to help you quickly implement event-driven core atomic features. You can quickly integrate EventBridge into your proprietary systems such as BPM, RPA, and CRM in the console, with no need to write additional code.

## Vast Ecosystem

EventBridge provides a unified Put Event push protocol, which is compatible with [CloudEvents 1.0 specifications](#) and fully embraces the open-source community ecosystem. It reduces the business connection costs with its currently connected over 100 event sources and a dozen of targets.

## Data Processing

EventBridge features data processing capabilities and is connected to upstream data sources such as Kafka, [TDMQ](#), and database, so it can directly and swiftly filter, cleanse, and transform data.

## Fast Build

EventBridge comes with efficient and convenient event management methods for you to manage, use, and consume events at low costs. With WYSIWYG event targets like function and SMS, it enables you to quickly implement message consumption.

## High Availability

EventBridge can be deployed in a distributed cluster across availability zones (AZs) in a region-specific manner to offer strong disaster recovery capabilities. In this way, EventBridge can still be available even when some nodes or AZs are abnormal. In addition, it leverages different Tencent Cloud services to meet the needs of different business scenarios and make your service architecture even more robust.

## Supporting Capabilities

- EventBridge offers various capabilities such as event query, log, and audit as well as full-linkage tracking.
- EventBridge also provides basic EDA capabilities, including event replay, backup, and retry policy.



# Use Cases

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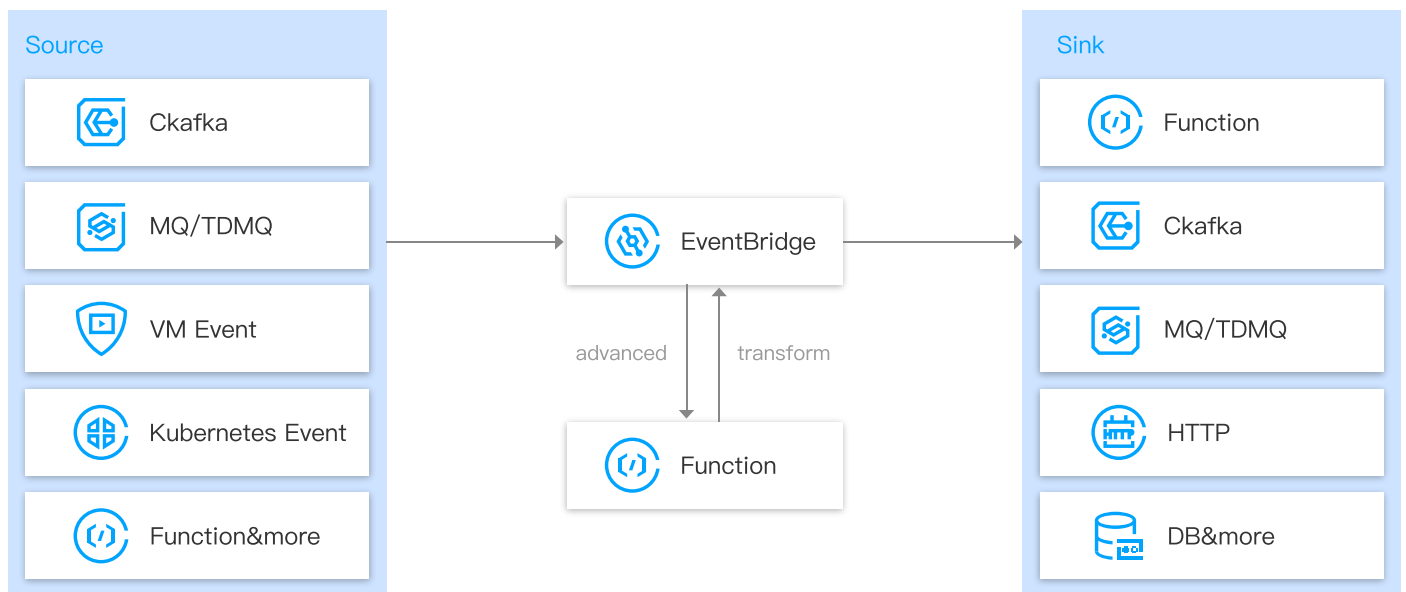
## Data Transfer

EventBridge provides an entire-lifecycle and fully cloud-native event-driven solution that helps you quickly sync architecture data from one system to another, while the development-free and visual configuration features provided by EventBridge greatly save development time.

## Data Processing

EventBridge provides basic filtering and conversion capabilities to route data between different data warehouses, data processing programs, and data analysis and processing systems.

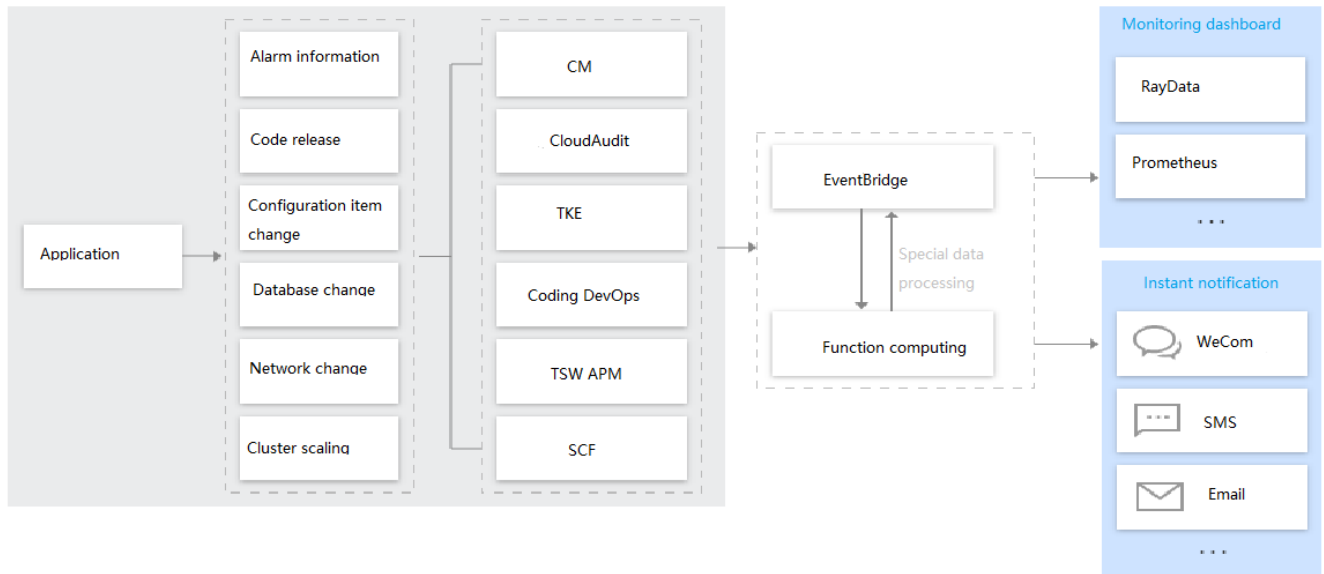
Integrated with Tencent Cloud SCF and Flink, EventBridge allows you to use any programming language to develop data processing logic and connect to different systems and services.



## Automated Ops

EventBridge can be used as a hub to receive status changes of all applications. Auditing events or monitoring alarm events generated for API calls can be quickly delivered to EventBridge, and then EventBridge routes the events to the

services that need to perceive the application status changes respectively for message push and automated processing.



## Async System Decoupling

EventBridge implements async message communication between different systems to decouple mutually dependent services and quickly build a midplatform for applications.

# Limits

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EventBridge has certain quota limits for each user account. This document describes such quota limits.

## Quota Limits

The quota limits for each user account are as follows:

Content	Default Quota Limit
`PutEvents` API call limit per region	5000 TPS
Number of custom event buses per region	10
Maximum number of rules that can be bound to one custom event bus	10
Maximum number of rules that can be bound to Tencent Cloud service event bus	200
Maximum number of targets that can be configured in one event rule	10
Maximum size of event message body	64 KB
Maximum number of connectors supported by one event bus	10

### Note

- EventBridge currently supports 10,000-level concurrency, which can effectively support scenarios with high concurrency demand such as ecommerce promotions and parallel processing of medical and biological data. To request an increase in quota, [submit a ticket](#) for application.
- You can specify the relevant limits by region, event bus, etc. If your business requires higher quotas, [submit a ticket](#) for application.

## Rule Limits

### • Event bus

Event bus name: It can contain 2–60 letters, digits, underscores, and hyphens and must start with a letter and end with a digit or letter.

Event bus description: It can contain up to 200 characters of any type.

- **Event rule**

Event rule name: It can contain 2–60 letters, digits, underscores, and hyphens and must start with a letter and end with a digit or letter.

Event rule description: It can contain up to 200 characters of any type.

- **Connector**

Connector name: It can contain 2–60 letters, digits, underscores, and hyphens and must start with a letter and end with a digit or letter.

## Deletion Exceptions

- **Event bus deletion:** To delete an event bus, you need to delete all its trigger rules and connectors first; otherwise, the error message "An event rule/connector has been bound to this event bus. Try again after deleting the bound event rule" will be displayed. After the event bus is deleted from the data flow, all corresponding resource information will also be deleted.
- **Event rule deletion:** To delete an event rule, you need to delete all its event targets first; otherwise, the error message "An event target has been bound to this event rule. Try again after deleting the bound event target" will be displayed. After the event rule is deleted from the data flow, delivery of events related to the rule to the corresponding event bus will also stop.
- **Event target deletion:** The component resources of the relevant delivery logic will be deleted from the data flow.
- **Connector deletion:** The connector resources will be deleted from the data flow, and messages will no longer be delivered to the corresponding event bus.