

Integrating Systems to “Talk Smarter”

*Event-Driven Architecture, **SAP BTP** and **Advanced Event Mesh** in Action*

SAP INSIDE TRACK
İSTANBUL 2025



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May'2025

Agenda

- **Walk through** SAP's Integration and Event-Driven Capabilities
- SAP BTP Integration Suite: **“talking smarter”**
- Event-Driven Architecture **“in action”** with Advanced Event Mesh
- Recap and Roadmap for SAP BTP Integration & AEM
- Final words and key takeaways

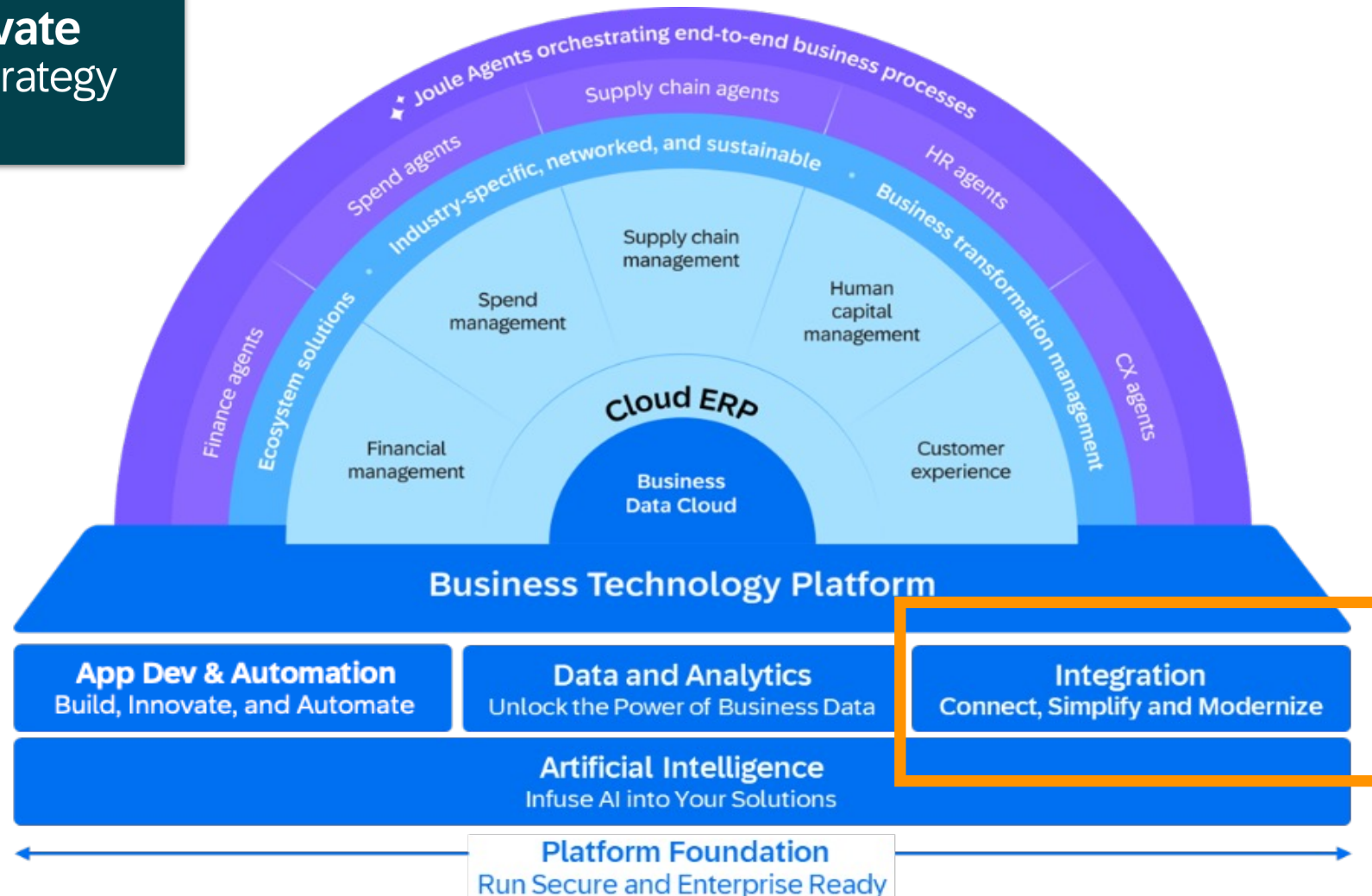


An aerial, high-angle photograph of a busy city intersection, likely in London, featuring several red double-decker buses and numerous pedestrians. The scene is captured with a slight motion blur, giving it a sense of activity. The image is overlaid with a semi-transparent white rectangular box containing the title text. The top of the slide has a blue and orange geometric header.

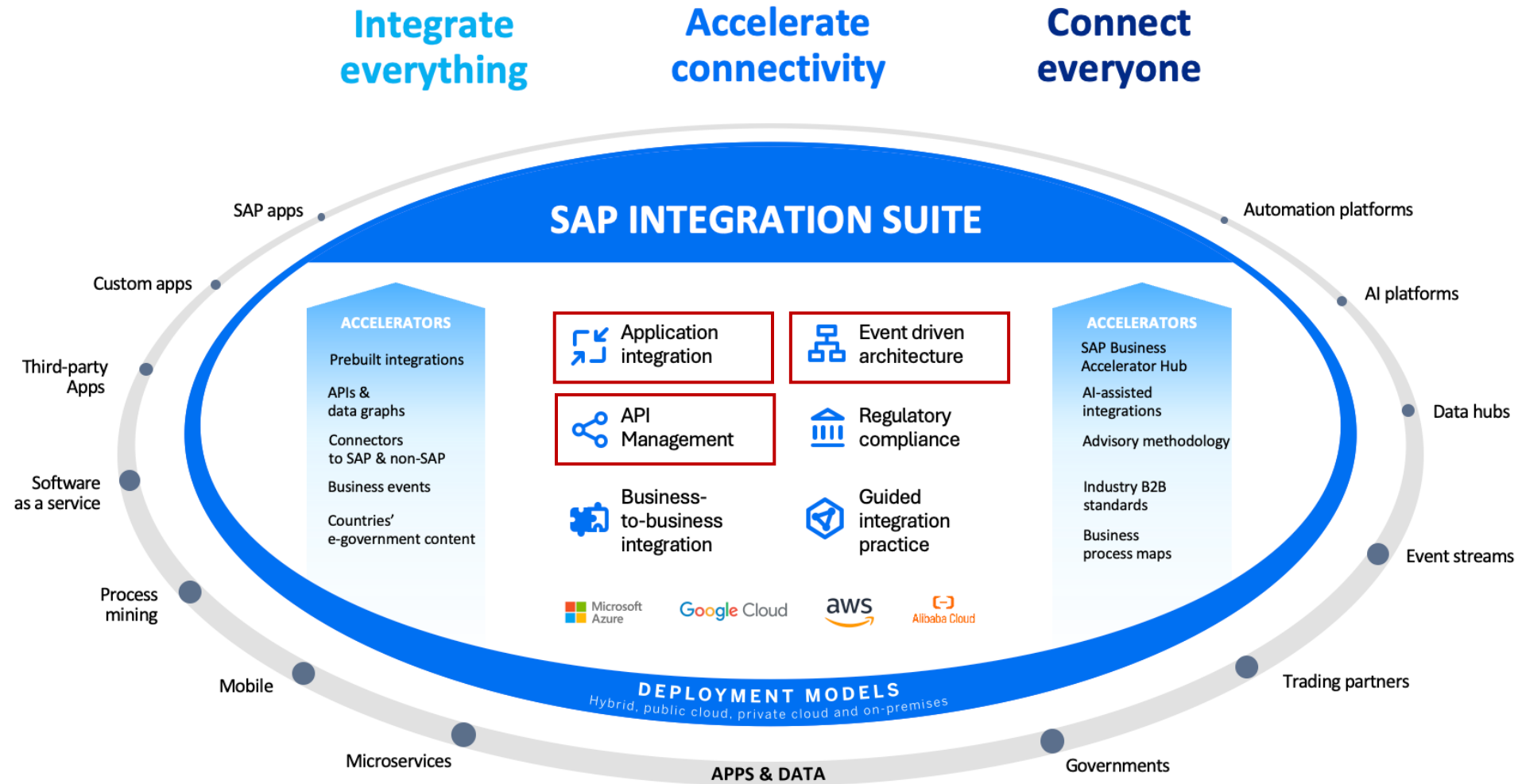
Walk Through **SAP's Integration and Event-Driven** Capabilities

SAP's Integration Strategy & BTP Integration Capability

Integrate to Innovate
SAP's Integration Strategy
White Paper



Integration via BTP : SAP Integration Suite

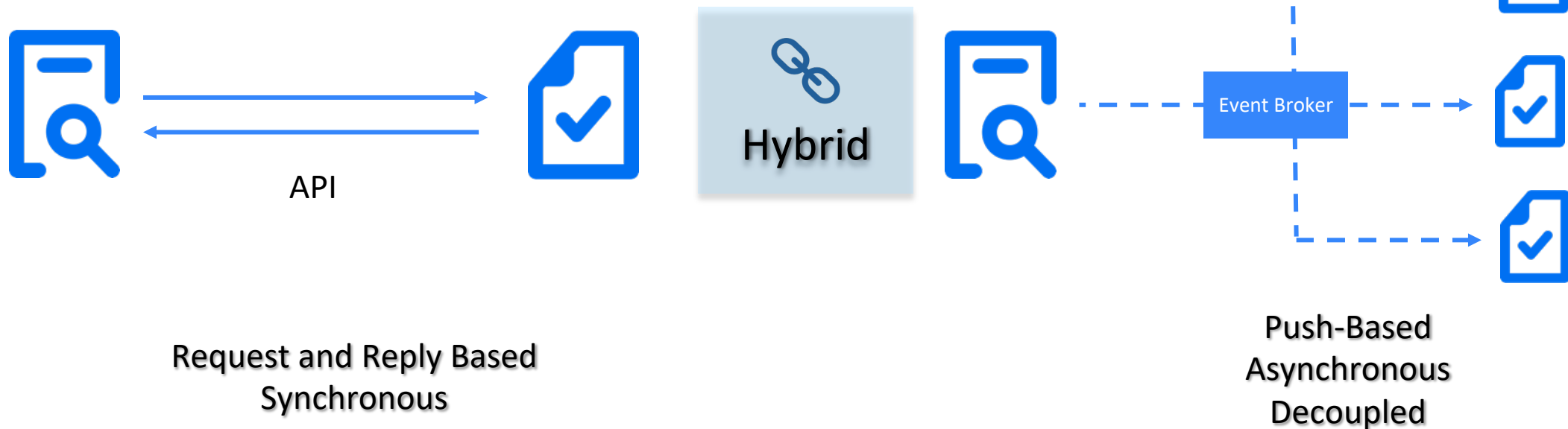


API-led classical, Event-Driven and Hybrid Integrations

When to use which

API Architecture

Event-Driven Architecture (EDA)



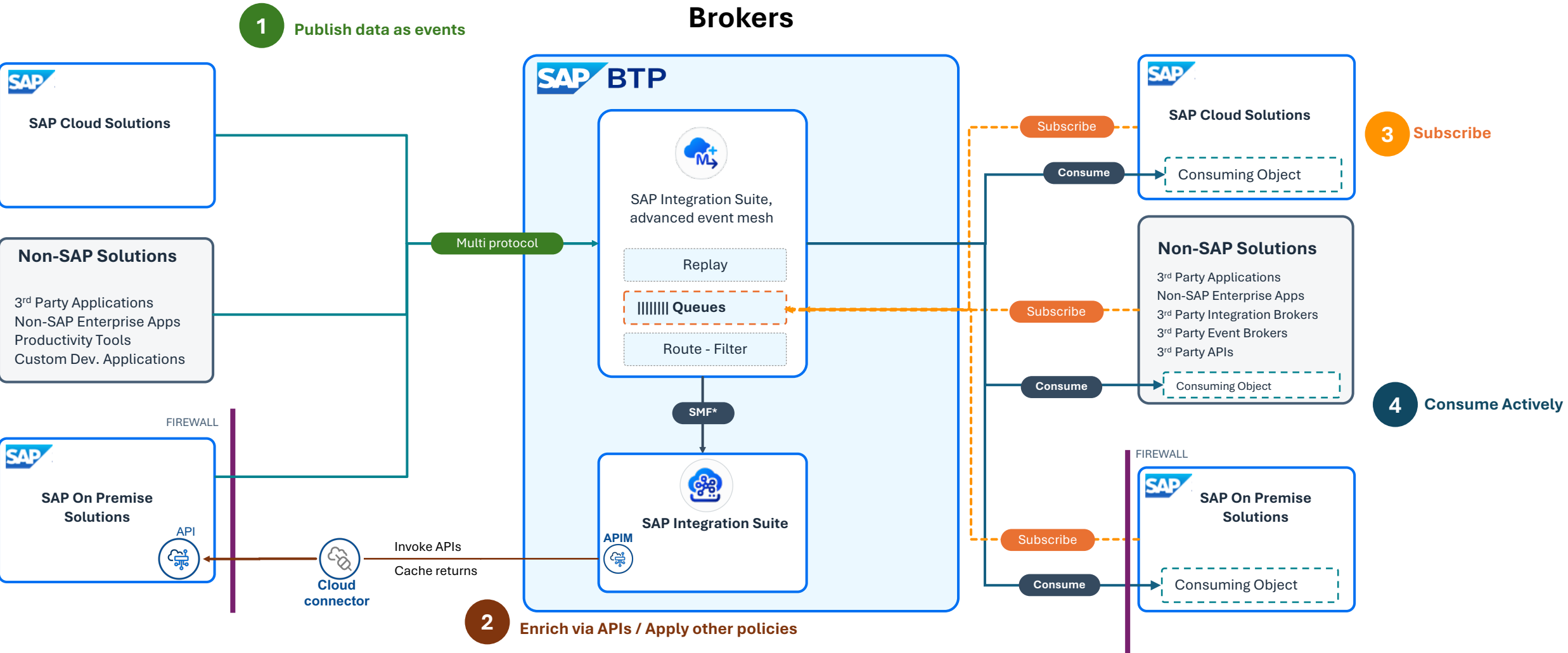
Why Event-Driven ? – too many reasons

- Loose coupling of systems and applications (**minimum dependencies**)
- (Near)**real time** information published to **distributed systems**.. No polling .. **Everything is event**, every component acts as soon as possible
- **Publish once**, do not stop/wait for other service(s).
- Shifting from **huge batches to small blocks of data** over time
- **Handle slower consumers**, back-off / back-pressure
- Load balance - **scale and fail independently**, add new consumers easily
- No loss of messages, **replay the history** for late joiners / errors
- «**Smart routing**» based on topics

The Big Picture – Architecture

Upstream(publishers)

Downstream(subscribers)



SAP BTP Integration Suite

Talking “Smarter” than ever





SAP's Event Brokers

SAP Event-Driven Integration Offerings for BTP



Application
development and
automation

Data and analytics

Extended planning
and analysis

Integration

Artificial intelligence



Advanced Event Mesh

Use an event-streaming and management platform for the real-time enterprise.



Event Mesh

SAP Event Mesh allows applications to communicate through asynchronous events.



SAP Event Hub

Flexible solution to distribute business events across the SAP cloud landscape.



FEATURED

Integration Suite

Simplify and accelerate enterprise integration.

Event Mesh Capability (EM-IS)

Free Tier



SAP's Event Brokers

Feature / Service	Event Mesh (Standalone Subscription)	Event Mesh (Integration Suite Capability)	Advanced Event Mesh (AEM)	Cloud Application Event Hub (CAEH)
What is it?	Standalone event broker service on BTP	Same broker engine, integrated into Integration Suite	Solace-powered, distributed high-scale event mesh	Lightweight event publisher for SAP Cloud apps
Who is it for?	BTP apps, CPI, external systems	CPI-based integration scenarios with event-driven logic	Global, high-load, enterprise-grade architectures	SAP Cloud apps sending events to 3rd party systems
Usage model	Pub-sub, queue/topic creation, general purpose	Pub-sub, usually tied to CPI flows	Mesh network, geo-distributed, high throughput	Publish-only (Cloud App → external consumer)
Subscriber support	✅ Yes (AMQP, Webhook, Kafka, REST)	✅ Yes (CPI, Webhook, Kafka, REST)	✅ Yes (same + Solace tools)	✅ Yes (REST, Webhook, Kafka, etc.)
Management UI	✅ BTP Cockpit + REST APIs	✅ BTP Cockpit (limited to CPI scenarios)	Solace Admin UI / CLI / APIs	Simple, embedded in SAP Cloud admin tools
Routing & QoS	Durable queues, topic filters, retry logic	Same (in CPI context)	Advanced: replay, mesh routing, guaranteed delivery	Basic delivery, limited routing
Setup & Operations	Separate subscription, full configuration	Automatically provisioned in Integration Suite tenant	High – dedicated brokers with infrastructure setup	Lightweight provisioning, low ops effort
Example Use Case	SAP → Event Mesh → AMQP → 3rd Party	S/4HANA Cloud → CPI (iFlow) triggered by event	Black Friday load handling across regions	SAP Subscription Billing → Kafka or webhook
Key Differentiator	Standalone, reusable across multiple apps	CPI-optimized, fast integration build	Enterprise-grade mesh for massive throughput	SAP SaaS-native, fast external exposure

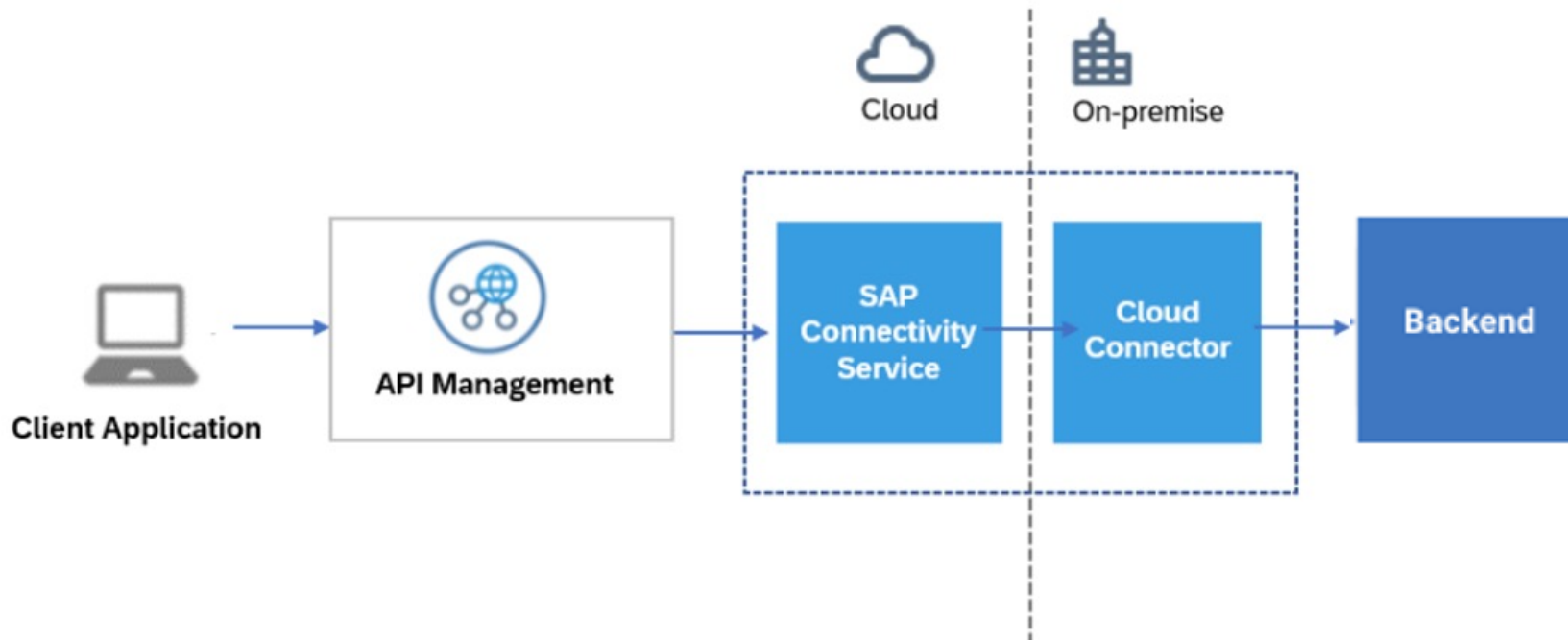


SAP API Management

“Unlocking the Power of APIs»

What is API Management?

SAP API Management is an API management solution running on the SAP BTP. Its main purpose is to expose services from on-premise or cloud systems to the outside world (or internal systems) in a secure, scalable, and manageable way.



The Key to Digital Ecosystems: SAP API Management



What Does It Do?

Exposure of backend services

API Security

Monitoring & Analytics

Rate Limiting, Caching, and Traffic Control

Versioning of APIs



Where Is It Used?

Exposing SAP systems (e.g., **S/4HANA**, **SF**, **Ariba**) to partners and third-party applications

B2B and partner integrations, mobile apps, and portals

IoT scenarios needing secure, controlled access to SAP data

Acting as a **central API gateway** in hybrid system landscapes

Supporting **digital business models** with service-based offerings

Real-World Use Cases of SAP API Management

Response Caching

Improve performance by caching repetitive requests when backend data changes infrequently.

Key-Value Map (KVM)

Manage dynamic parameters like tokens or endpoints externally using get/set scripting.

Quota + Spike Arrest (Rate Limiting)

Protect public APIs from overload and define per-subscriber call limits.

VerifyAPIKey + OAuth2 Security

Control who accesses your API with robust, app-based authentication policies.

Backend Failover / Mock Response

Ensure business continuity with static or KVM-based fallback responses when backend fails.

JavaScript Payload Manipulation

Enrich responses with dynamic fields like timestamp, clientId, or geo info.

Header Injection & Sanitation

Auto-inject headers (e.g., Authorization, X-Correlation-ID) to enhance security and traceability.

Request/Response Validation (JSON/XML)

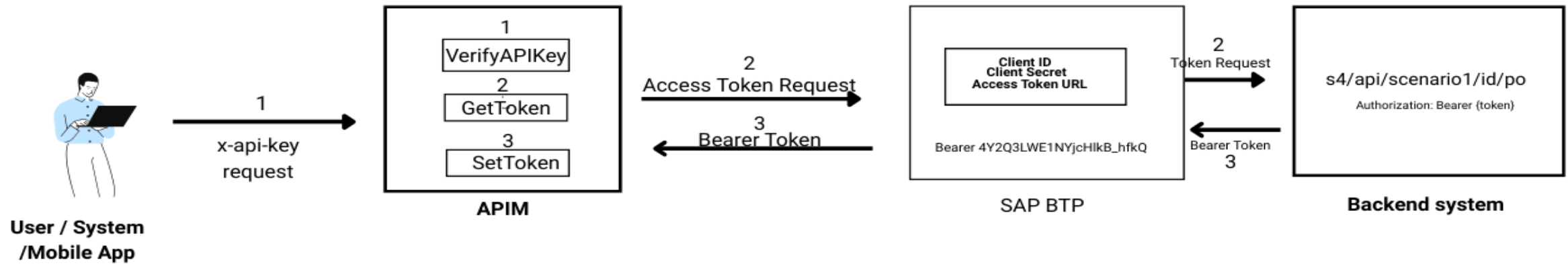
Enforce strict schema validation to prevent malformed data from affecting backend systems.



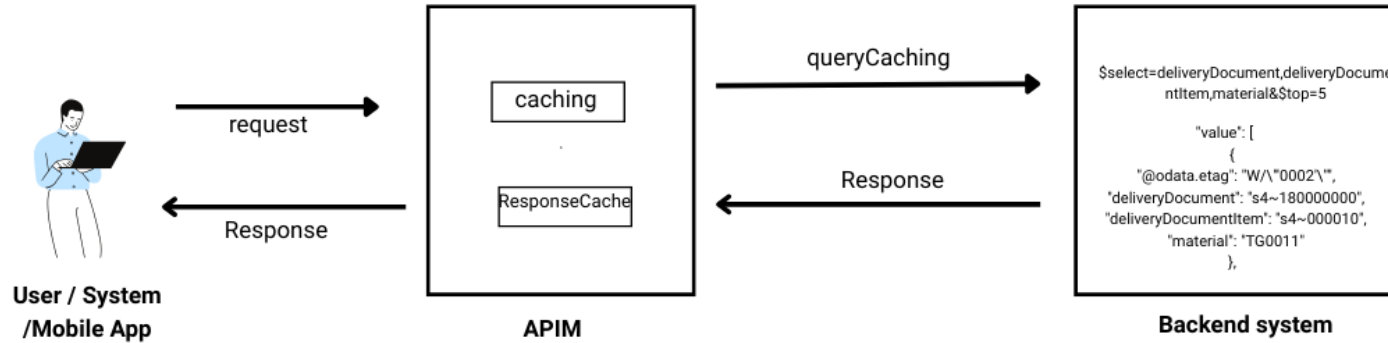
SAP API Management

”Fast and Secure: SAP S/4HANA API Consumption with APIM»

Fast and Secure: SAP S/4HANA API Consumption with APIM



Fast and Secure: SAP S/4HANA API Consumption with APIM

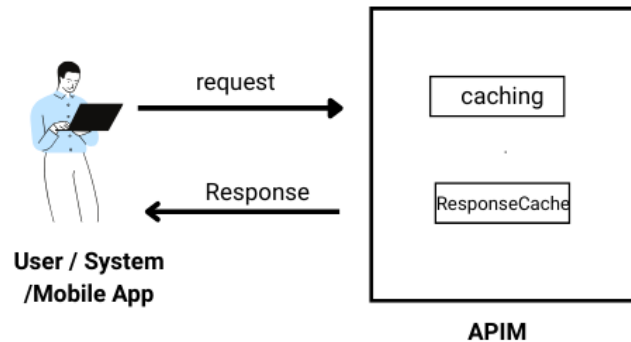


Purpose

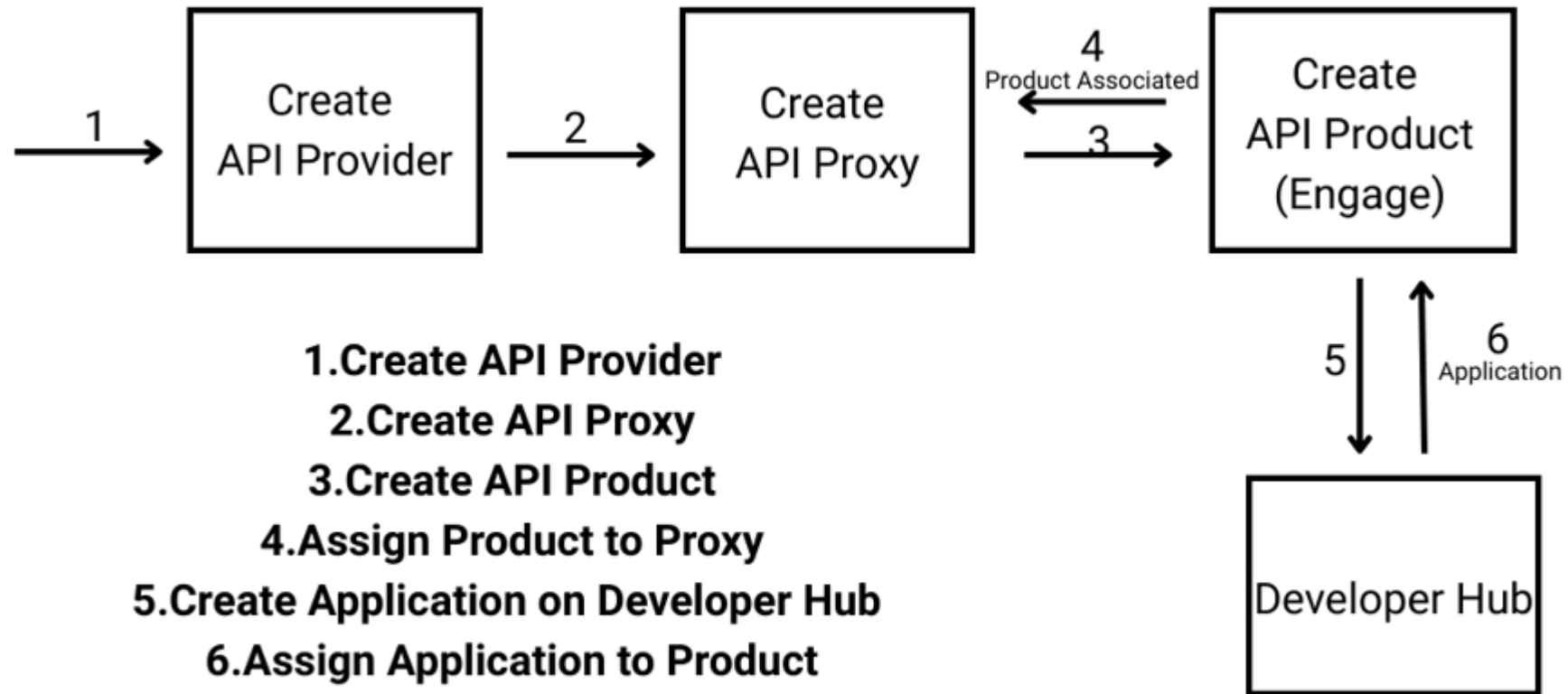
Thanks to caching, we can return responses to frequently repeated queries directly through APIM without calling the backend system.

This not only preserves SAP BTP resources but also allows us to deliver near-instant responses to users.

By defining our own cache duration, we provide second-level access while only engaging the backend system when truly necessary.



Fast and Secure: SAP S/4HANA API Consumption with APIM



Fast and Secure: API Management

SAP

Integration Suite

Home

Discover

Design

Test

APIs

Configure

APIs

Monitor

Analyze

Engage

Inspect

Monetize

Settings

Configure

Create and configure API proxies, API providers, certificates, key-value maps, and policy templates.

API Proxies (8)

API Providers (3)

Certificates (0)








Key Value Maps (0)

Policy Templates (0)

Create

Import API

Create

Name	Title	Status	Type
 OAuth_QueryCaching_v1	OAuth_QueryCaching	Deployed	REST
 Graph_API_ID-PO_AUTO	Graph_API_ID-PO	Deployed	REST
 Graph_API_ID-PO_v1	Graph_API_ID-PO	Deployed	REST
 PurchaseOrder_v1	PurchaseOrder	Deployed	ODATA
 API-PurchaseOrder_v1	API-PurchaseOrder-Caching	Deployed	REST
 validationAPI_v1	validation	Deployed	REST
 CurrencyRateAPI_v1	Currency Rate API	Deployed	REST

Fast and Secure: Create API Proxy

API Proxies (7)

API Providers (3)

Certificates (0)

Key Value Maps (0)

Policy Templates (0)

Create

Import API

Create in API Designer

Filter

Name	Title	Status	Type	Changed By	Last Updated	Calls	Action
Graph_API_ID-PO_AUTO	Graph_API_ID-PO	Deployed	REST		28.04.2025 00:05:07	0	...
Graph_API_ID-PO_v1					27.04.2025 23:48:54	0	...
PurchaseOrder_v1					27.04.2025 22:55:27	0	...
API-PurchaseOrder_v1					27.04.2025 22:37:57	0	...
validationAPI_v1					24.04.2025 01:25:48	0	...
CurrencyRateAPI_v1					23.04.2025 02:33:20	0	...
HelloWorldAPI					23.04.2025 00:17:20	0	...

Create API

Select: ☐ API Provider ☐ API Proxy ☒ URL

URL *

API Details

Name: *

Title: *

Short Text:

API State: *

Host Alias: * .apimanagement.eu10.hana.ondemand.com

API Base Pa... * /v1/caching

Version:

Service Type:

Create

Cancel

Fast and Secure: Create Product

SAP Integration Suite

Home

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Monetize

Settings

Create Product

Caching_Secure

Overview APIs (0) Permission Rate plans (0) Custom Attribute (0)

Name: *
Caching_Secure

Title: *
Caching_Secure

Short Text:

Quota:
100

Requests Every:
10 Month(s)

Scope:

Description:

Fast and Secure: Create Product

Create Product

Save As Draft Publish Cancel

Caching_Secure

Overview APIs (0) Permissions

Name:

Add

Remove

Add APIs

Some of the APIs may have saved changes that are not deployed yet. If such APIs are added to the Product, they will not get published.

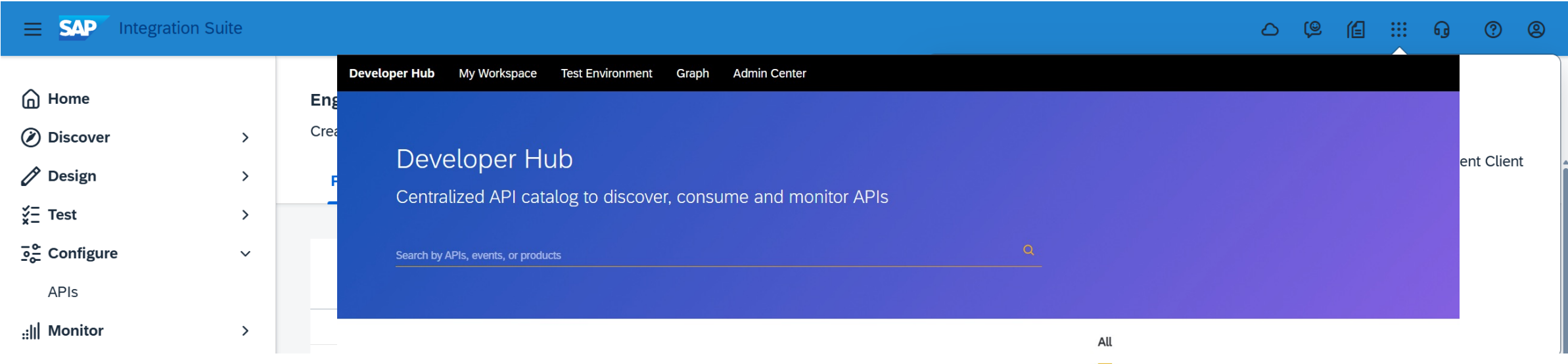
Search

	API Name	API State
> <input type="checkbox"/>	API-PurchaseOrder_v1	Deployed
> <input type="checkbox"/>	CurrencyRateAPI_v1	Deployed
> <input type="checkbox"/>	Graph_API_ID-PO_AUTO	Deployed
> <input type="checkbox"/>	Graph_API_ID-PO_v1	Deployed
> <input type="checkbox"/>	HelloWorldAPI	Deployed
<input checked="" type="checkbox"/>	OAuth_QueryCaching_v1	Deployed
> <input type="checkbox"/>	PurchaseOrder_v1	Deployed
> <input type="checkbox"/>	validationAPI_v1	Deployed

OK

Cancel

Fast and Secure: Developer Hub



Select a Product to Explore

See the various resources that each product has to offer

Caching_Secure	cachingGraph	validation json/xml
1 API Published on 02 May 2025	2 APIs Published on 27 Apr 2025	1 API Published on 23 Apr 2025

Fast and Secure: Create Application

Developer Hub

My Workspace

Test Environment

Graph

Admin Center

Site Editor

Hi

Create New Application

Application Info

Add Products

*Title

CachingDemo

Short Text

Description

Callback URL

☐ Create this application on behalf of someone else

☐ Custom Application Key & Secret ?

☒ Take me to this new application now

Create New Application

Application Info

Add Products

Selected Products

Caching_Secure

Products

☒ Caching_Secure

☐ cachingGraph

☐ validation json/xml

Find Products

Sort by: Newest on top

Create

Create

Cancel

Fast and Secure: Associate with Product

» CachingDemo

Edit Application

Application Details

Products

Custom Attributes

Analytics

About

Callback URL:

Application Secret: zlxrG8ACUZcAOBQ

Regenerate

Application Key: A4tpwcVluFotNTndkO3oP9lr0zL1pxtE

Created By:

Created On:

Calls this month:

Last Modified By:

Last Modified On:

Fast and Secure: API Proxy Policies

≡

SAP

Integration Suite

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Configure

APIs

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Monetize

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View API

TransportPoliciesCopyEdit

OAuth_QueryCaching_v1

OverviewProxy EndPointTarget EndPointResourcesRevisions

Title:
OAuth_QueryCaching

Host Alias:
[redacted]10.hana.ondemand.com

Short Text:

API Base Path:
/v1/caching

Version:
v1

API State:
Active

Description:

Products Associated (1)

Caching_Secure

Caching_Secure

Calls(05/01/2025 - 05/08/2025)

0

API Health

00

Key Value Map Associated (0)

No data

Created On:
02.05.2025 23:30:10

Created By:
[redacted]

Changed On:
02.05.2025 23:34:25

Changed By:
[redacted]

Fast and Secure: API Proxy Policies

[<](#) API Artifacts for Graph_API_ID-PO_AUTO (Draft-1)

[Edit](#) [Policy Template](#) [Cancel](#)

Policy Editor

Flows ?

ProxyEndpoint

PreFlow	7
PostFlow	0
	0

TargetEndpoint: default

Created Policies ?

Scripts ?

```
graph LR; User((User)) --> verifyAPIKey[verifyAPIKey...]; verifyAPIKey --> caching1[caching]; caching1 --> getToken[getToken]; getToken --> extractToken[extractToken...]; extractToken --> setToken[setToken]; setToken --> JS1[JS]; JS1 --> caching2[caching]; caching2 --> addServer[addServer]; addServer --> Server((Server));
```

verifyAPIKey

Condition String

```
1 |
2 | <!--Specify in the APIKey element where to look for the variable containing the api key-->
3 | <VerifyAPIKey async='true' continueOnError='false' enabled='true'
4 |   xmlns='http://www.sap.com/apimgmt'>
5 |   <APIKey ref='request.header.x-api-key' />
6 | </VerifyAPIKey>
```

Policies ?

Security Policies

- Basic Authentication
- DecodeJWT
- GenerateJWT
- JSON Threat Protection
- OAuth v2.0
- OAuth v2.0 GET
- OAuth v2.0 SET
- Regular Expression Protection
- SAML Assertion Generation
- SAML Assertion Validation
- Verify API Key
- VerifyJWT
- XML Threat Protection

Traffic Management Policies

- Access Control
- Invalidate Cache
- Lookup Cache

Fast and Secure: API Proxy Policies

< API Artifacts for Graph_API_ID-PO_AUTO (Draft-1) Edit Policy Template Cancel

Policy Editor

Flows ?

ProxyEndpoint

PreFlow	7
PostFlow	0
	0

TargetEndpoint: default

Created Policies ?

Scripts ?

```
graph LR; User((User)) --> verifyAPIKey[verifyAPIKey...]; verifyAPIKey --> caching1[caching]; caching1 --> getToken[getToken]; getToken --> extractToken[extractToken...]; extractToken --> JS1[JS: setToken]; JS1 --> JS2[JS: addServer]; JS2 --> caching2[caching]; caching2 --> User;
```

Condition String

```
1 <ResponseCache async="false" continueOnError="false" enabled="true" xmlns="http://www.sap.com/apimgmt">
2   <CacheKey>
3     <KeyFragment ref="request.queryparam.$filter"/>
4     <KeyFragment ref="request.queryparam.$select"/>
5     <KeyFragment ref="request.queryparam.$top"/>
6     <KeyFragment ref="request.queryparam.$expand"/>
7     <KeyFragment ref="request.queryparam.$skip"/>
8     <KeyFragment ref="request.path"/>
9   </CacheKey>
10  <Scope>Exclusive</Scope>
11  <ExpirySettings>
12    <TimeoutInSec>3600</TimeoutInSec>
13  </ExpirySettings>
14
15 </ResponseCache>
```

Policies ?

Security Policies

- Basic Authentication
- DecodeJWT
- GenerateJWT
- JSON Threat Protection
- OAuth v2.0
- OAuth v2.0 GET
- OAuth v2.0 SET
- Regular Expression Protection
- SAML Assertion Generation
- SAML Assertion Validation
- Verify API Key
- VerifyJWT
- XML Threat Protection

Traffic Management Policies

- Access Control
- Invalidate Cache
- Lookup Cache
- Populate Cache
- Quota
- Reset Quota

Fast and Secure: Testing the Endpoint with Postman

The screenshot displays the Postman interface for a GET request. The URL bar contains the endpoint `https://api.postman-echo.com/get?select=deliveryDocument,deliveryDocumentItem,material,headerGrossWeight,purchasingGroup&$filter=purchasingGroup eq '002'`. The Headers tab is active, showing a list of headers including `Postman-Token`, `Host`, `User-Agent`, `Accept`, `Accept-Encoding`, `Connection`, `Accept-Encoding`, and `x-api-key` with its value `mvBoJnOvLY2q52GpecDShJ5dxflV5rGM`. The Body tab is selected, showing a JSON response. The status bar at the bottom indicates a `200 OK` response with a time of `4.09 s` and a size of `1.47 KB`.

Request Details:

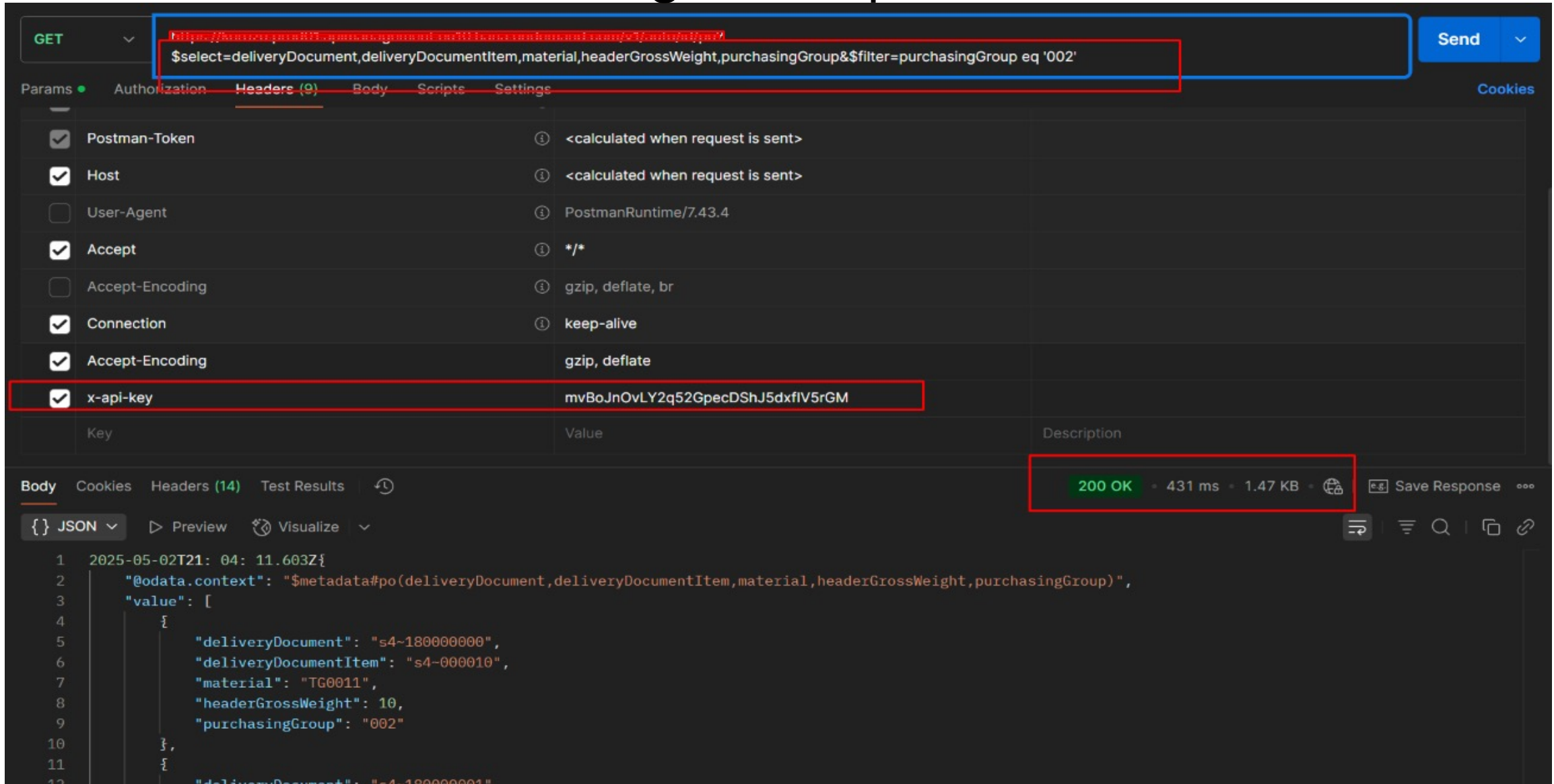
- Method:** GET
- URL:** `https://api.postman-echo.com/get?select=deliveryDocument,deliveryDocumentItem,material,headerGrossWeight,purchasingGroup&$filter=purchasingGroup eq '002'`
- Headers:**
 - `Postman-Token`: `<calculated when request is sent>`
 - `Host`: `<calculated when request is sent>`
 - `User-Agent`: `PostmanRuntime/7.43.4`
 - `Accept`: `*/*`
 - `Accept-Encoding`: `gzip, deflate, br`
 - `Connection`: `keep-alive`
 - `Accept-Encoding`: `gzip, deflate`
 - `x-api-key`: `mvBoJnOvLY2q52GpecDShJ5dxflV5rGM`

Response Details:

- Status:** 200 OK
- Time:** 4.09 s
- Size:** 1.47 KB
- Body:** JSON

```
1 2025-05-02T21: 04: 11.603Z{
2  "@odata.context": "$metadata#po(deliveryDocument,deliveryDocumentItem,material,headerGrossWeight,purchasingGroup)",
3  "value": [
4    {
5      "deliveryDocument": "s4~1800000000",
6      "deliveryDocumentItem": "s4~000010",
7      "material": "TG0011",
8      "headerGrossWeight": 10,
9      "purchasingGroup": "002"
10   },
11   {
```

Fast and Secure: Testing the Endpoint with Postman



Business Benefits of Response Caching in SAP APIM

GAINS

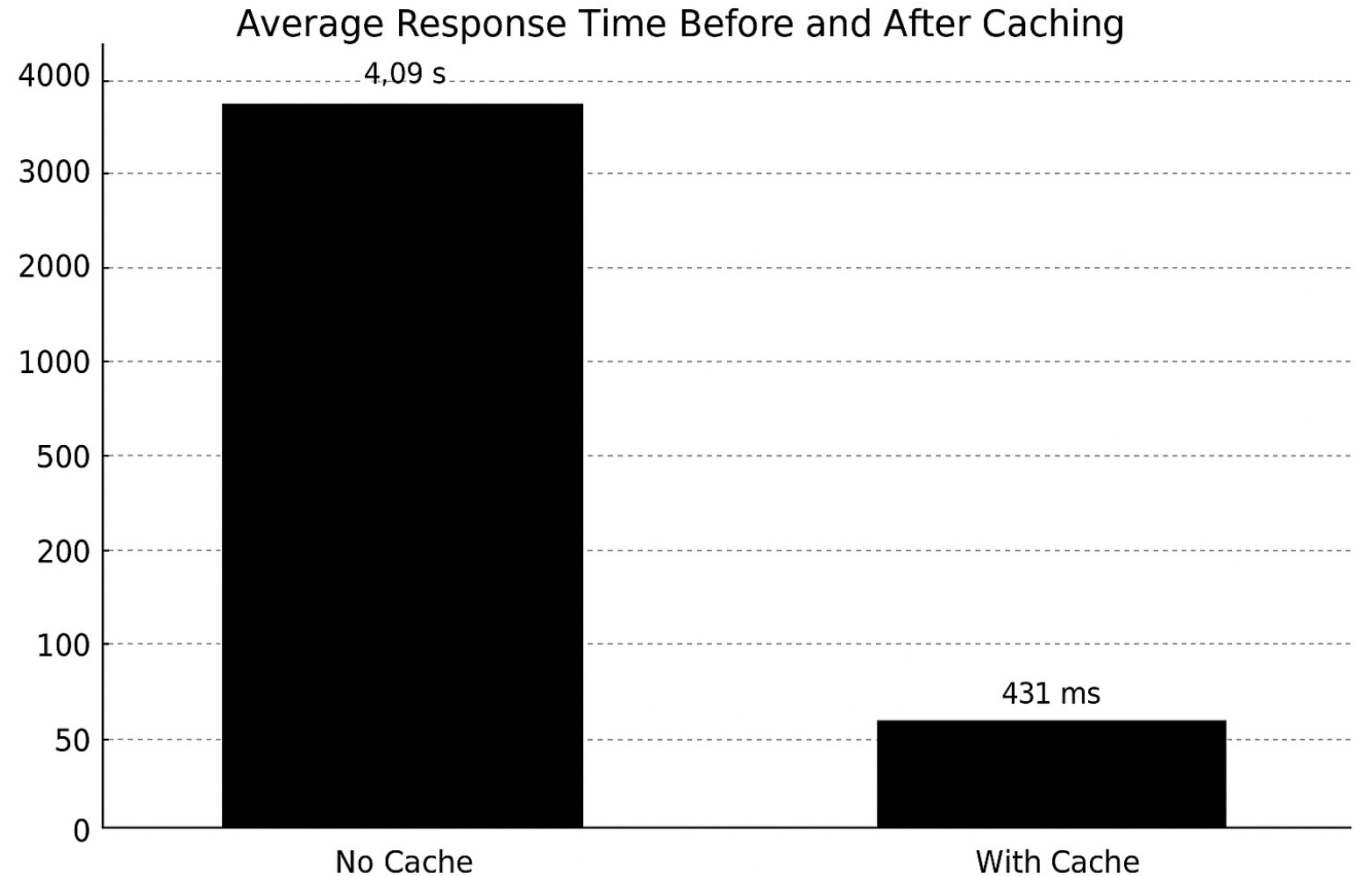
Faster Response Times → Improves user experience, especially for mobile users

Lower Backend Load → Reduces pressure on SAP Graph or backend systems

Cost Savings → Avoids redundant backend calls to pay-per-use services

API Quota Efficiency → Prevents hitting rate limits from repeated queries

Improved Stability → Enables continued responses even during backend outages





SAP Graph

” Single Access Point to Multiple SAP Systems»

What is SAP Graph?

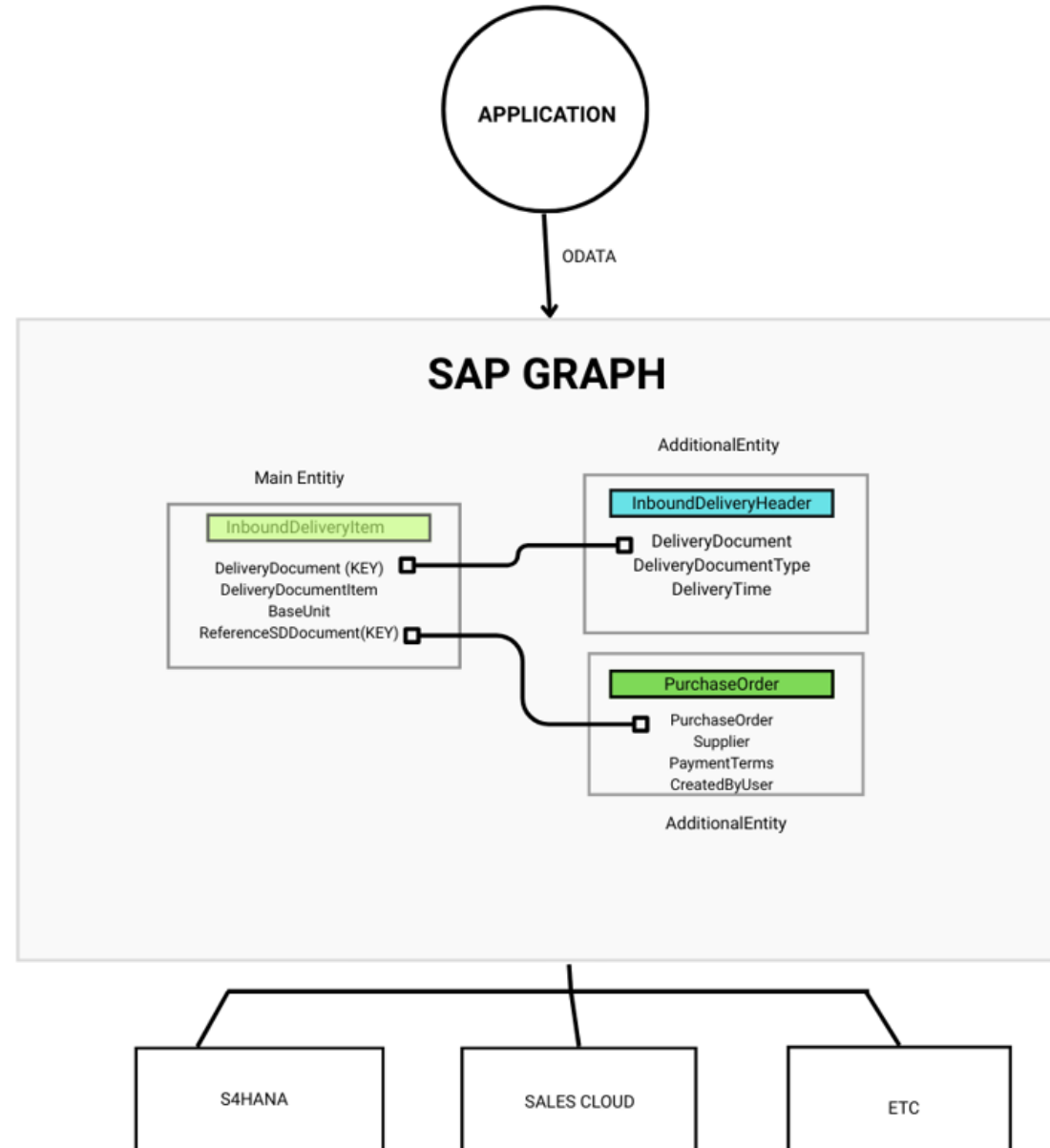
- **SAP Graph** is a service offered by SAP that consolidates data from various SAP systems into a single unified API layer.

It allows access to data from different systems such as **SAP S/4HANA, SAP SuccessFactors, SAP Sales Cloud,** and **SAP Concur** through one unified API.

While doing so, it hides the diversity and complexity of the backend systems.

The end user (or the integration developer) can access the data through a single **global data model**.

SAP Graph Architecture: Unified Access Across SAP Systems



SAP Graph : Hands-on

[Design \(Graph\) /](#)

test

Business Data Graph

EditDelete↔

Overview

Schema

Data Sources

Model Extensions

Cues

Key Mappings

Model extensions are copied to the business data graph during activation. Changes to model extensions will only become visible when reactivating the business data graph. [Learn more](#)

Model Extensions (1)

Name	Description
ID_PO	

[Design \(Graph\) /](#)

test

Business Data Graph

EditDe

Overview

Schema

Data Sources

Model Extensions

Cues

Key Mappings

Status

✓ Available

Last Modified: 1 minutes ago

Show LogsReactivate

Description

URL

Access data & metadata

OData: .../api/test

GraphQL: .../api/test/graphql

Catalog: .../catalog/test

Data Sources

Connectivity to your underlying business systems

s4

Schema

Schema of your business data graph

sap.s4

id.po

Show in Developer Hub

Model Extensions

Customize your data model

ID_PO

SAP Graph : Testing with Postman

The screenshot shows a Postman interface for a GET request to the SAP Graph API. The URL is `https://graph.api.sap.com/scenario1/id/po?$filter=material eq 'TG0011'`. The request is successful, returning a 200 OK status with a response time of 3.31 s and a body size of 1.09 KB. The response body is a JSON object with the following structure:

```
{
  "@odata.context": "$metadata#po",
  "value": [
    {
      "deliveryDocument": "s4~1800000000",
      "deliveryDocumentItem": "s4~000010",
      "costCenter": "",
      "distributionChannel": "",
      "division": "",
      "material": "TG0011",
      "deliveryBlockReason": "",
      "deliveryDate": "2017-01-30T00:00:00.000Z",
      "deliveryDocumentType": "EL",
      "deliveryTime": "22:30:00",
      "headerGrossWeight": 10,
      "headerNetWeight": 9,
      "orderId": "",
      "id": "4500001435",
      "companyCode": "1710",
      "purchaseOrderType": "NB",
      "purchasingProcessingStatus": "02",
      "purchasingGroup": "002",
      "validityStartDate": null,
      "validityEndDate": null,
      "supplierPhoneNumber": "",
      "supplyingSupplier": "",
      "supplyingPlant": ""
    }
  ]
}
```



AI in Integration Suite

AI in Integration Suite

The screenshot displays the SAP Integration Suite interface with a focus on the 'Replicate Business Partner to SAP S4HANA' project. The main header shows the project name and navigation tabs: Header, Overview, Artifacts, Documents, and Configuration. A 'Create Integration Flow' dialog is open, offering two methods: 'Create Integrations with assistance from AI' and 'Create Integrations manually'. The AI-assisted method is highlighted, showing a text input field for the integration scenario. The 'Generate Integration Flow' dialog is also open, showing the generated integration flow details, including the sender and receiver systems, and a table of artifacts.

Replicate Business Partner to SAP S4HANA

Header Overview **Artifacts** Documents Configuration

Save Export Cancel Delete Package

Create Integration Flow

Choose the preferred method to create your integrations

Create Integrations with assistance from AI

Let AI generate your integration flow based on the description of your integration scenario

Create Integrations manually

Create an integration flow the traditional way of every step of the scenario

Generate Integration Flow

Describe your integration scenario: *

Replicate business partner from S4HANA-cloud to S4 Hana Object Plant every Monday and Wednesday at 9:00 Am Berlin time

882 characters remaining

Example: I would like to replicate newly hired employee data from SAP S/4HANA to SAP SuccessFactors to run the onboarding process.

AI response:

Thank you for providing the requirement. We will proceed with the integration of replicating business partner from S4HANA-cloud to S4 Hana Object Plant every Monday and Wednesday at 9:00 AM Berlin time.

Sender system: *

Business Partner (A2X) **Select**

Receiver system: *

Plant Substitution Exclusion **Select**

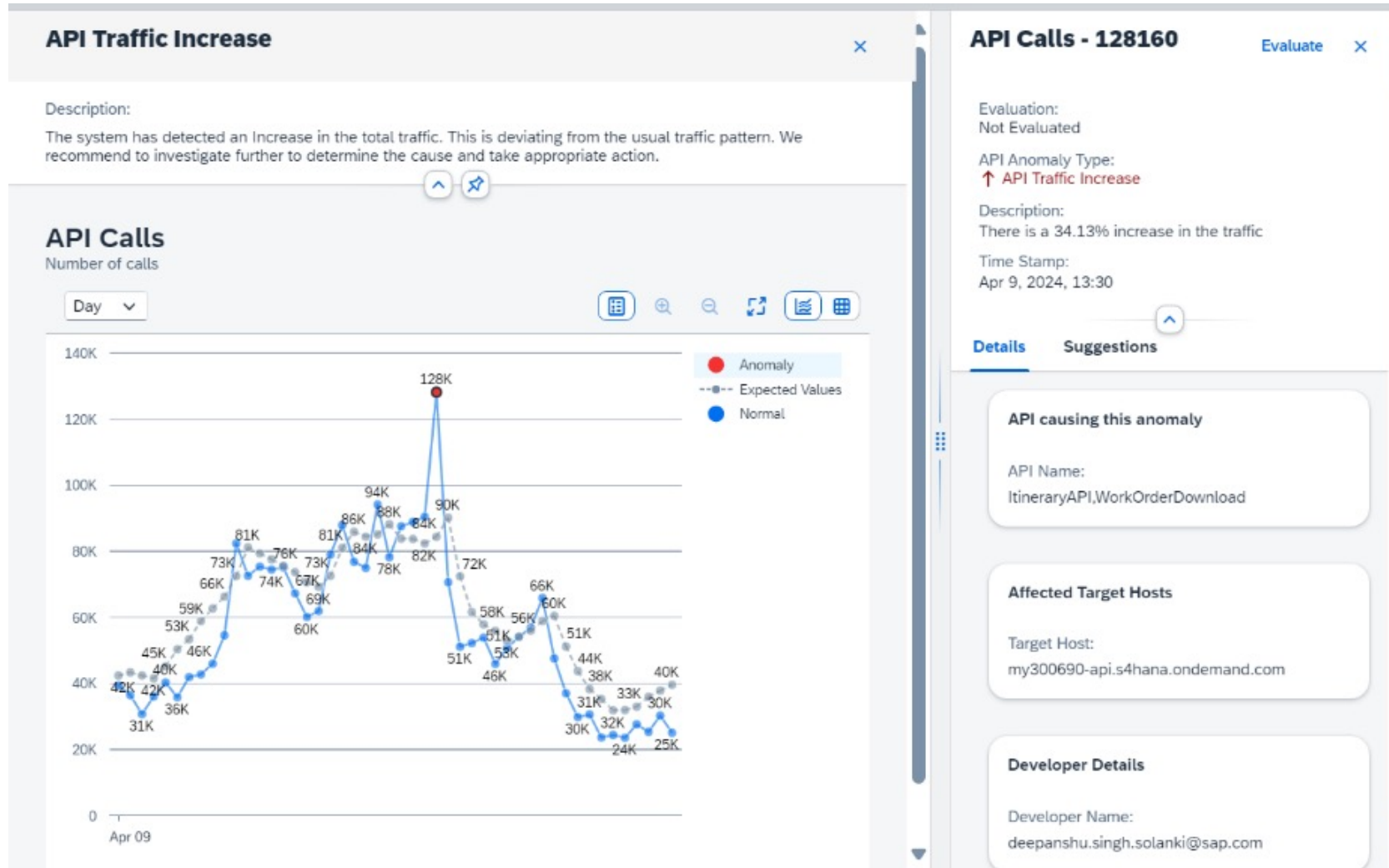
Name: *

Replicate Business Partner from S4HANAcld to S4 Hana

Generate Cancel

Version	Actions
Draft	
1.0.0	
Draft	
Draft	
Draft	

AI in Integration Suite



AI in Integration Suite


 ... / log.groovy /








Apply **Optimize** Close


log.groovy


```
1 import com.sap.gateway.ip.core.customdev.util.Message;
2 import com.sap.it.op.agent.mpl.*;
3 import groovy.transform.Field;
4 import groovy.xml.XmlUtil;
5 import groovy.json.JsonOutput;
6
7 @Field String S4_MESSAGE_XML = '1 - Inbound Message XML';
8 @Field String IFLOW_MESSAGE_XML = '2 - Outbound Message XML';
9 @Field String IFLOW_MESSAGE_JSON = '3 - Outbound Message JSON';
10 @Field String RESPONSE_JSON = '4 - OSTA Response JSON';
11 @Field String EX_DETAILS = '4 - Exception Details';
12
13 def Message logS4MessageXML(Message message) {
14     return processData(S4_MESSAGE_XML, true, message);
15 }
16
17 def Message logiFlowMessageJson(Message message) {
18     return processData(IFLOW_MESSAGE_JSON, false, message);
19 }
20
21 def Message logiFlowMessageXML(Message message) {
22     return processData(IFLOW_MESSAGE_XML, true, message);
23 }
```


AI in Integration Suite

 Integration Suite



 Home

 Discover >

 Design >

Integrations and APIs


Graph

B2B Scenarios


Custom Type Systems

MIGs •

MAGs


 Test >

APIs

 Configure >

APIs

Message Implementation Guidelines /

 **orders.orders05**
Version: 4.0 (Draft) v

Save

Simulate

Get Proposals

Cancel

...

Overview

Structure




Notes (0)

Namespaces

MIG Codelists (0)

Runtime Context

Status

Structure

Node	Constraint	Cardinality	Position	Primitive ...	Sy...	Length	Codelist	Status
▼ <input checked="" type="checkbox"/> ORDERS05 – Purchasing/Sale:		1..1						
> <input checked="" type="checkbox"/> EDI_DC40 – EDI DC40		1..1						
> <input checked="" type="checkbox"/> E1EDK01 – E1 EDK01		1..1						
> <input checked="" type="checkbox"/> E1EDK14 – E1 EDK14 - Divi	← 006	0..1						
> <input checked="" type="checkbox"/> E1EDK14 – E1 EDK14 - Cor	← 011	0..1						
> <input checked="" type="checkbox"/> E1EDK03 – E1 EDK03 - Rec	← 002	0..1						
> <input type="checkbox"/> E1EDK04 – E1 EDK04	←	0..10						
> <input type="checkbox"/> E1EDK05 – E1 EDK05	←	0..16						

An aerial, high-angle photograph of a busy London street intersection, likely Piccadilly Circus. The scene is filled with numerous red double-decker buses, some in motion and others stopped. Pedestrians are walking across the sidewalks and crossing the street. The architecture is classical, with multi-story buildings featuring large windows and ornate details. The overall atmosphere is one of a bustling, historic urban environment. A semi-transparent white rectangular box is overlaid on the upper portion of the image, containing the title text.

Event-Driven Architecture “in action” with **SAP Advanced Event Mesh**

A lot of Event-Driven Use Cases

HR across multiple systems

Data Lake Updates

Medication Delivery and Tracking

Flight Tracking

Production Line Analysis

Demand Based Supply Chain

Attendance Tracking

Financial Market Data Distribution

Global Event Localization and Distribution

Inventory Management

Event-Driven Forecasting

Weather based Pricing

Water Quality Monitoring

Harbour Management

Elevator Emergency Service

Real Time Inventory

Sales Support

Budgeting and Forecasting

Smart Order Routing

Meter to Cash

Ticketing

Document Update Notification

Supply Chain Control Tower

Digital Twin

Supply Chain Visibility

Customer Guidance

Shipment Notification and Tracking

Credit Card Authorizations

Automatic Ordering

Food Quality Tracking

Sales Order Shock Absorber

Oil Well Monitoring

Mobile Workforce Connectivity

Industrial Maintenance

Real Time Trading

Real Time Loyalty Points

Luggage Tracking

Buffering when Offline

Smart Financial Order Routing

Across Vendor Business Processes

Regulatory Reporting

Online Store Buffering

Smart City

Event Log / Kafka Data Updates

Smart Meter Readings

Predictive Maintenance

Real Time Order Management

Connected Car

Real Time Test Data

Across Vendor Integration

Airport Management

Real Time Payments

Point of Sale

Smart Trashcans

Business Process Documentation

Smart Routing – multi source / multi target

TOPIC

[object] / [action] / [source] / [objectID] / [timestamp] / [type]

Events published

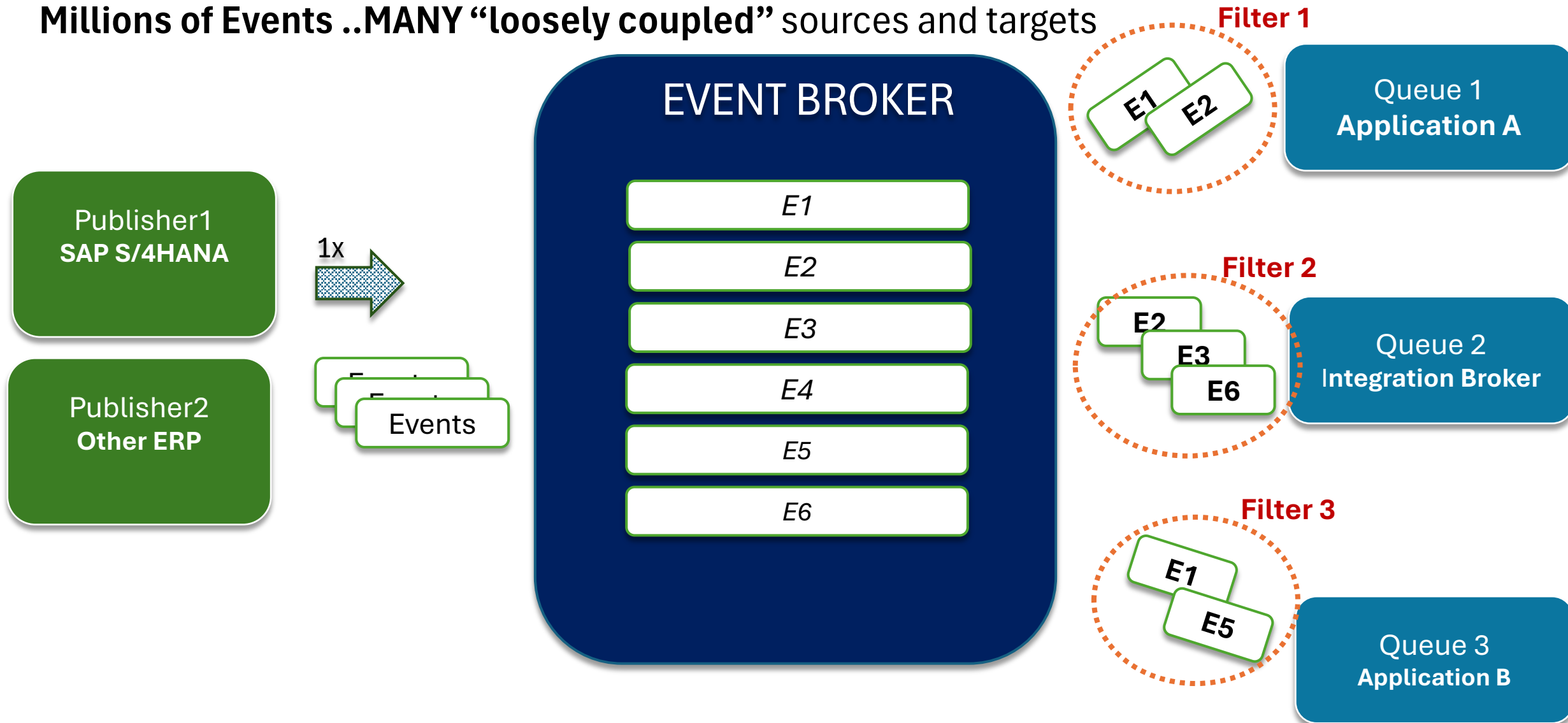
EVENT1	customer	/	created	/	s4p500	/	998844	/	20250510131522	/	XYZ
EVENT2	customer	/	created	/	erp200	/	999423	/	20250510131522	/	ABC
EVENT3	customer	/	changed	/	s4p500	/	998844	/	20250510134322	/	XYZ

Route Events via Filters

FILTER 1	customer	*	s4p500	*	*	*
FILTER 2	customer	created	*	*	*	XYZ
FILTER 3	*	*	*	998844	*	*

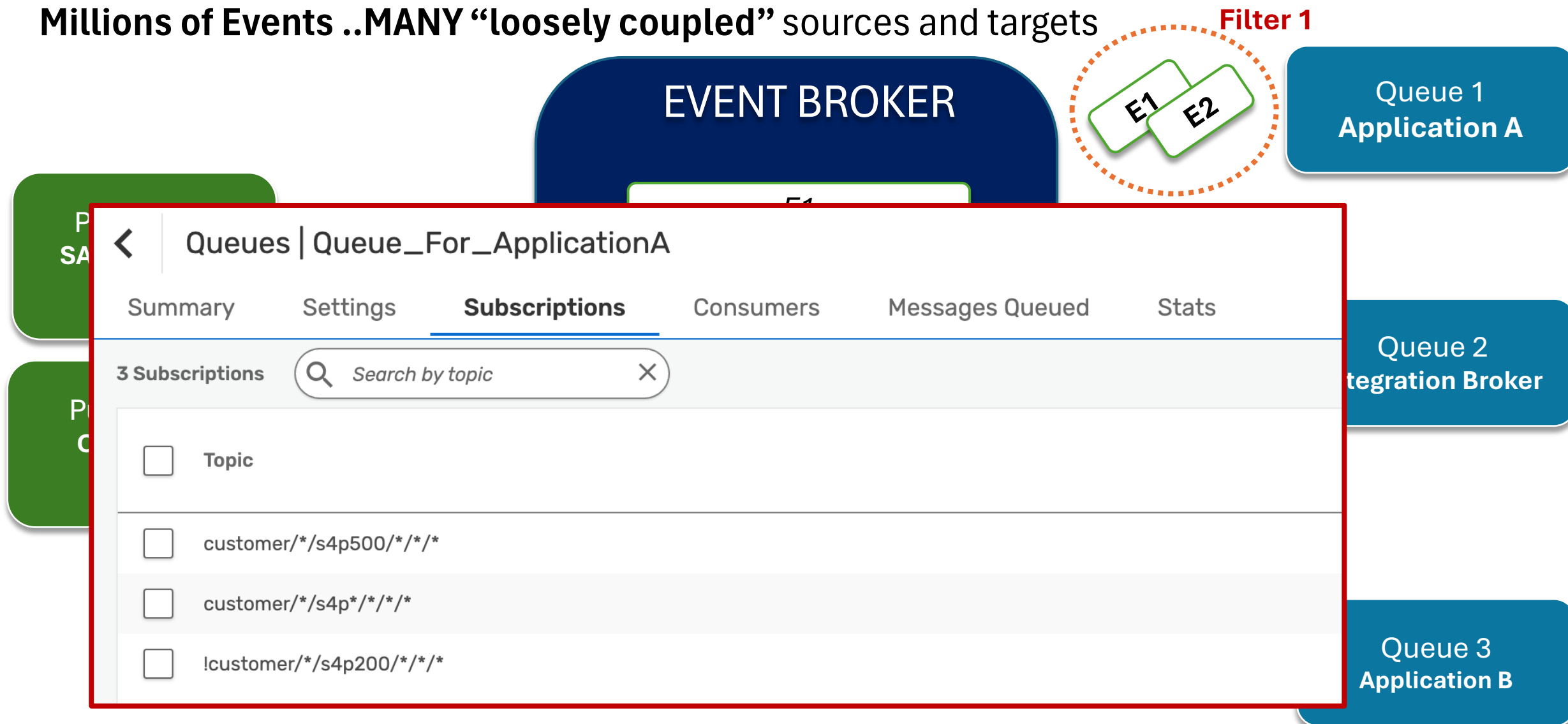
Smart Routing – multi source / multi target

Millions of Events ..MANY “loosely coupled” sources and targets

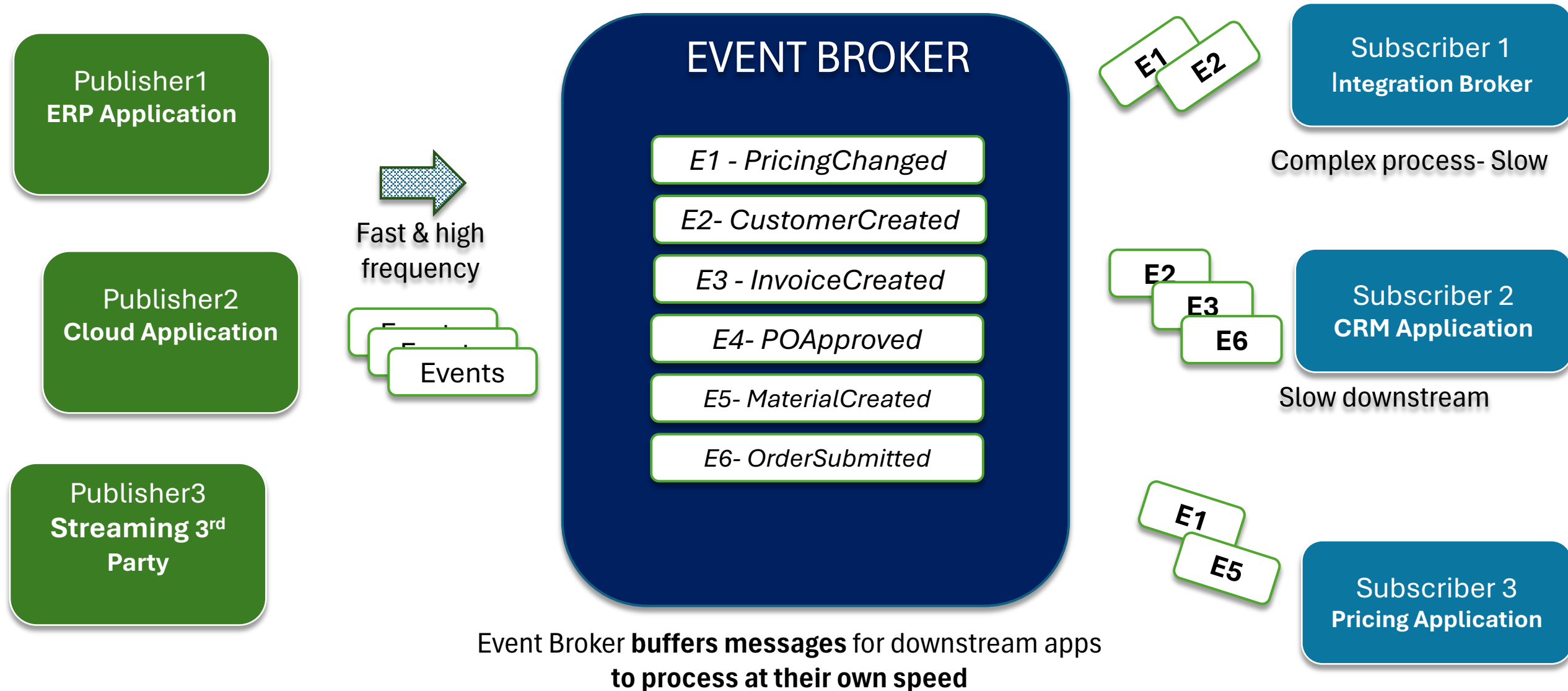


Smart Routing – multi source / multi target

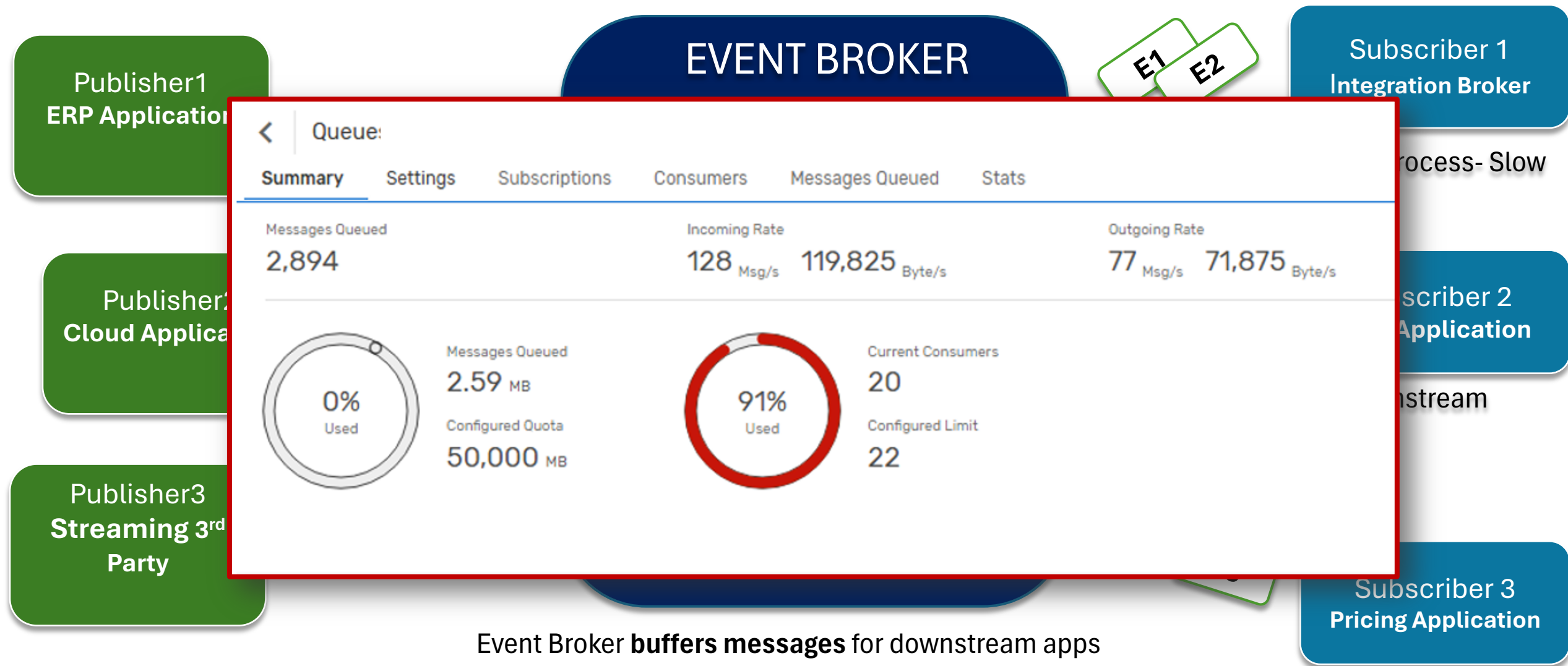
Millions of Events ..MANY “loosely coupled” sources and targets



Managing back-pressure – Relaxing Consumers

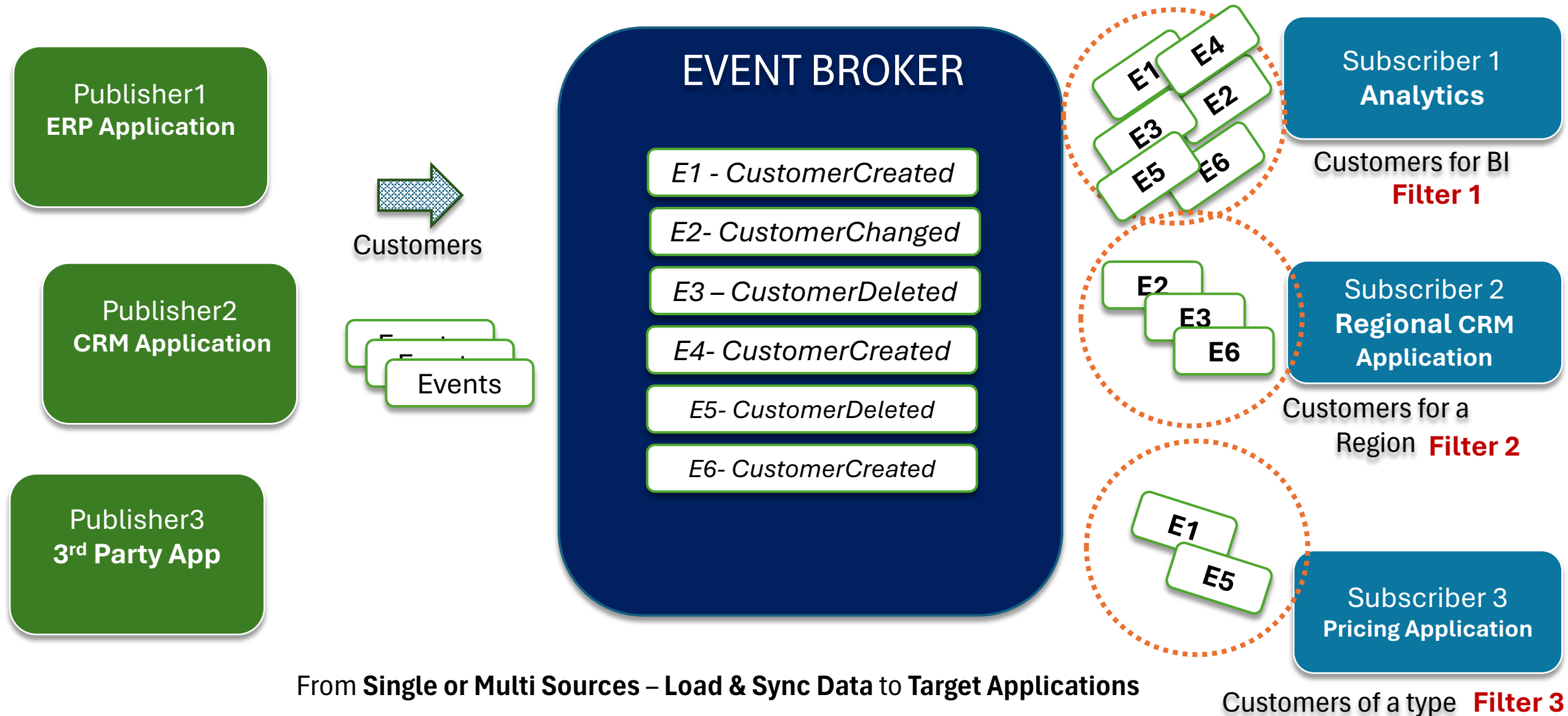


Managing back-pressure – Relaxing Consumers

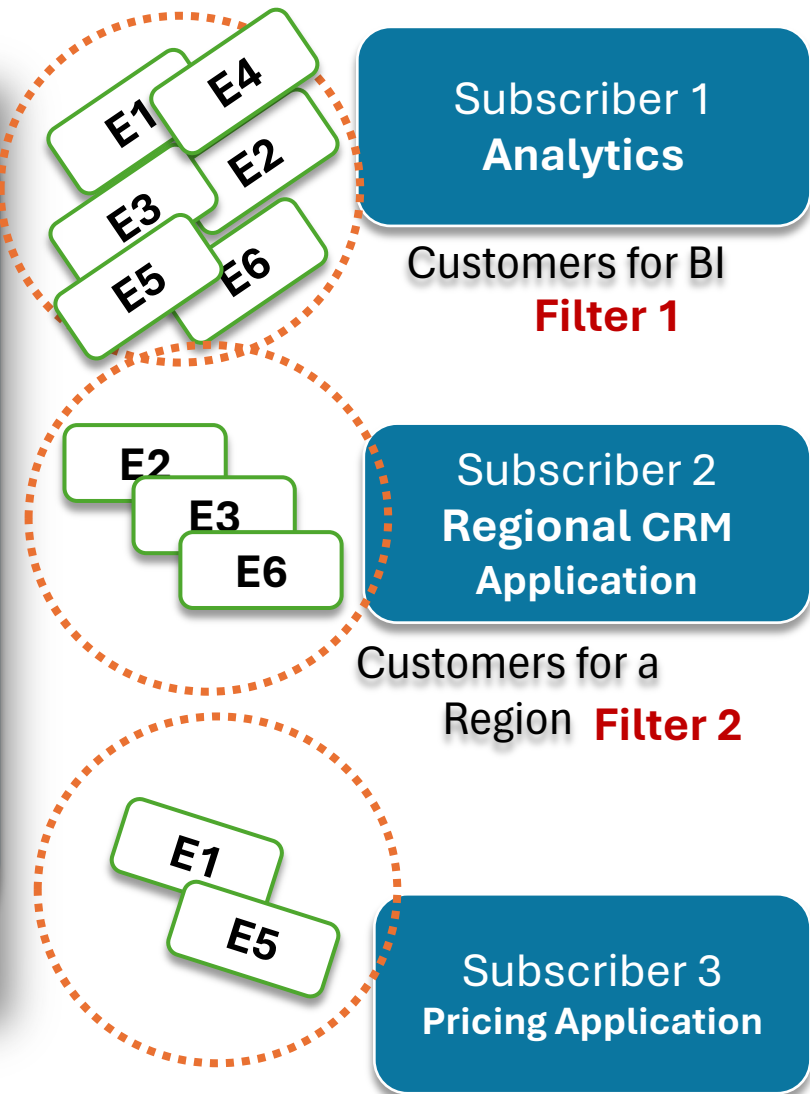
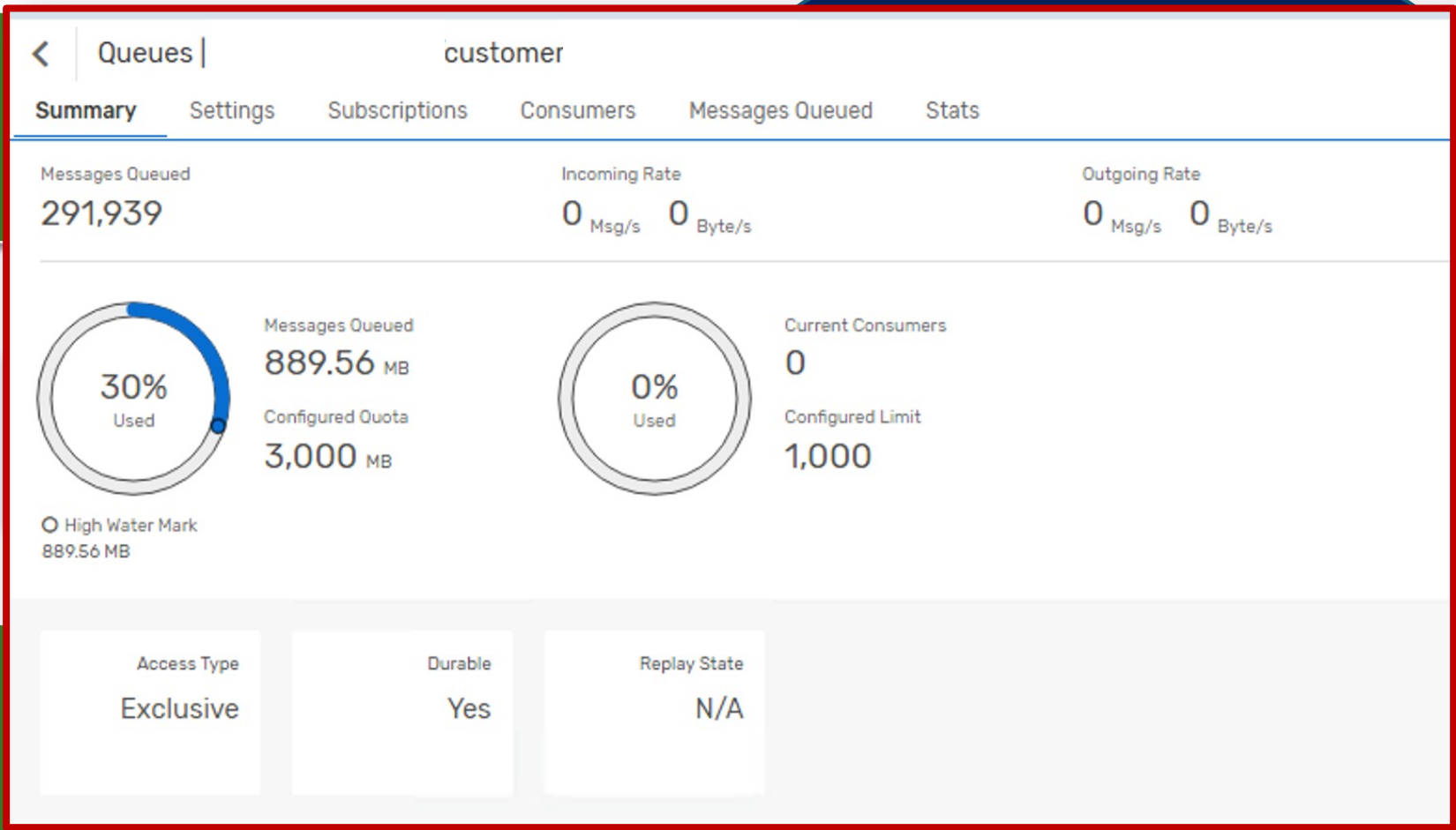


Event Broker **buffers messages** for downstream apps
to process at their own speed

Initial Data Load – and sync near-real time



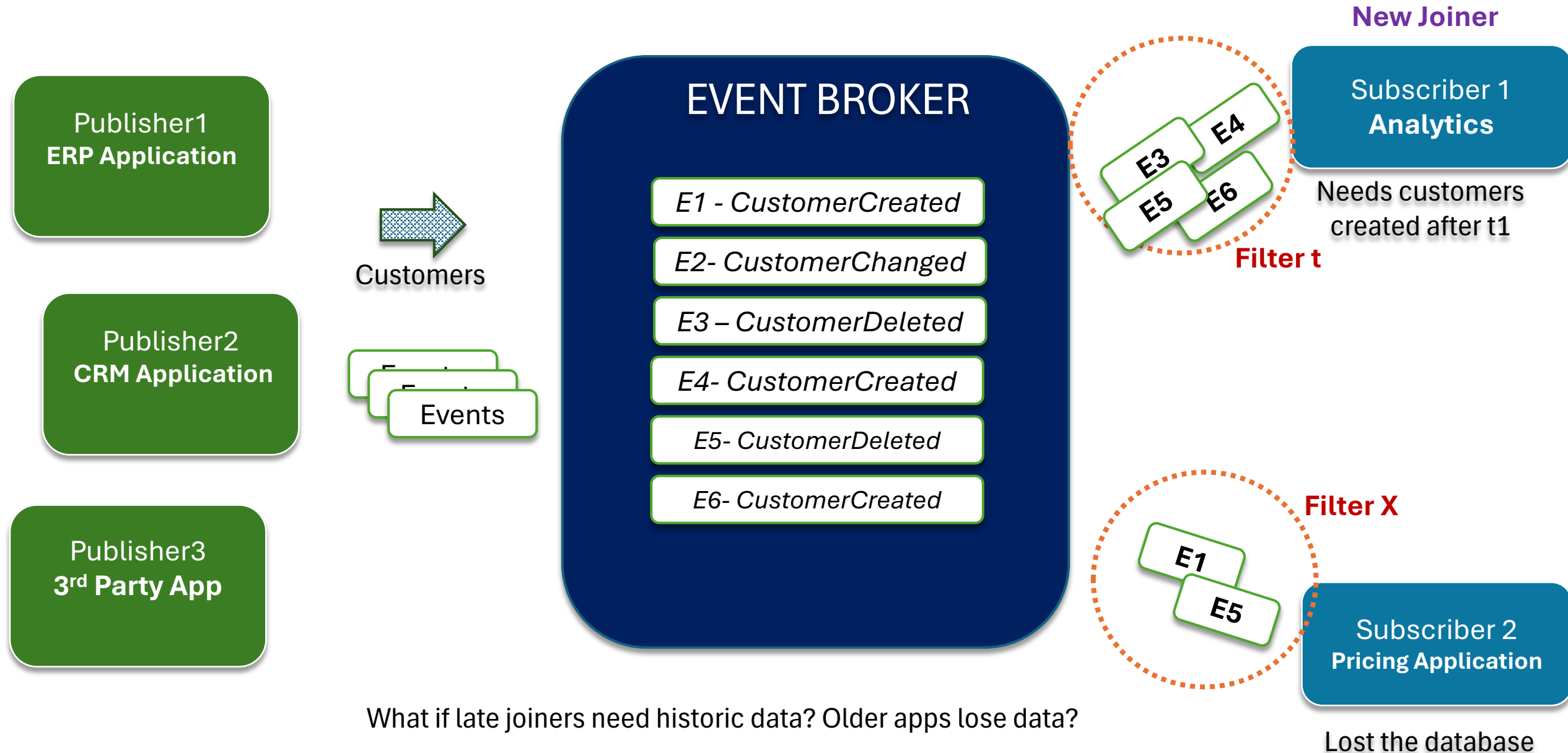
Initial Data Load – and sync near-real time



From **Single or Multi Sources** – Load & Sync Data to Target Applications

Customers of a type **Filter 3**

Replay– what if some target apps need historical data?



Replay- what if some target apps need historical data?

ER

3r

Start Replay

☐ Start Replay from Beginning

Start to replay messages from the oldest message

☒ Start Replay from Date (in Local Time)

2025-04-13 06:30:00

<

April 2025

>

Su	Mo	Tu	We	Th	Fr	Sa
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3
4	5	6	7	8	9	10

06

:

30

:

00

<

Queues | Queue_For_ApplicationA

Summary

Settings

Subscriptions

Consumers

Messages Queued

3 Subscriptions

Q

Search by topic

X

☐ Topic

☐ customer/*/s4p500/*/*/*

☐ customer/*/s4p*/*/*/*

☐ lcustomer/*/s4p200/*/*/*

New Joiner

Subscriber 1

Analytics

Needs customers created after t1

Filter t

E3

E4

E5

E6

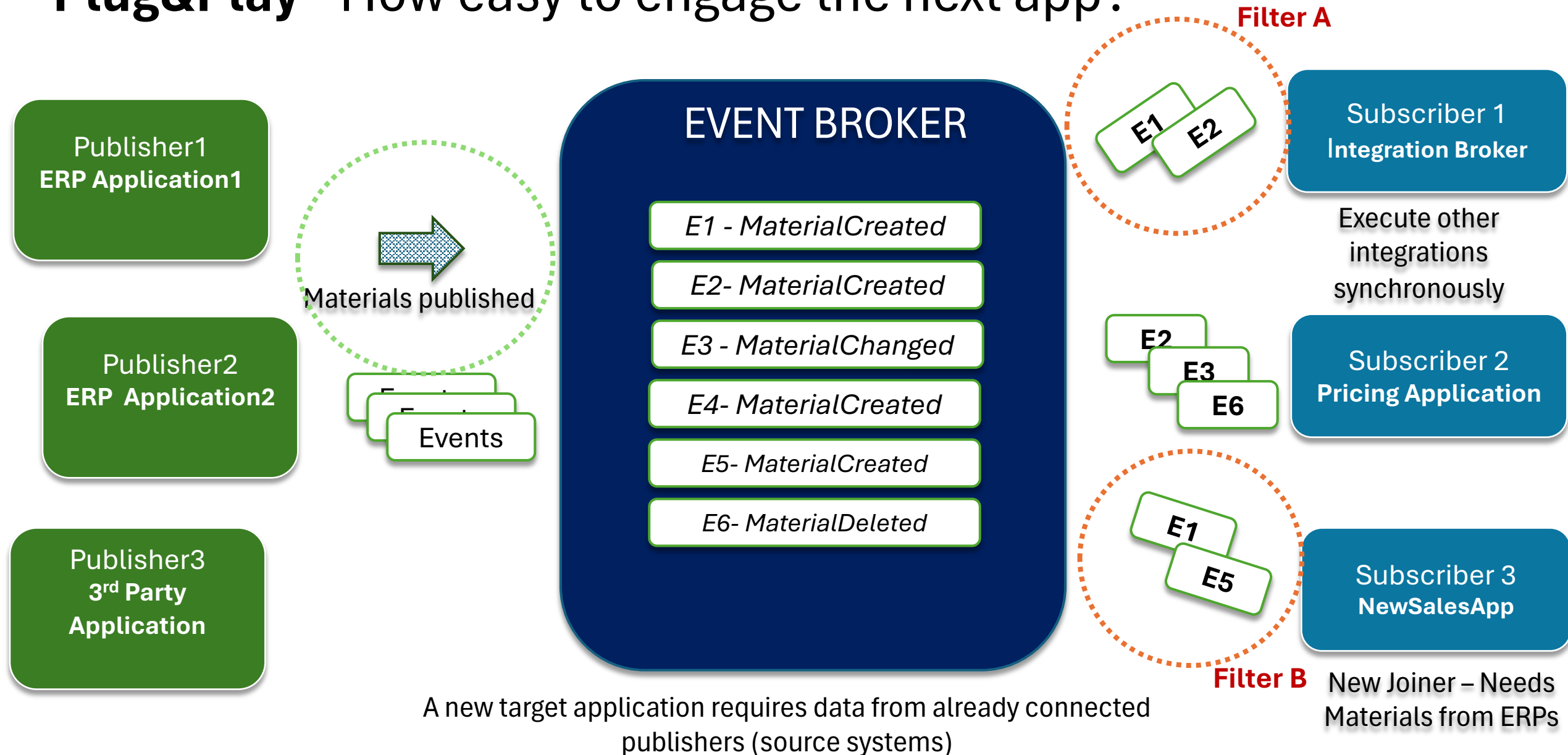
Filter X

Subscriber 2

Pricing Application

Lost the database

Plug&Play - How easy to engage the next app?



Plug&Play - How easy to engage the next app?

Publisher
ERP Application

Create Queue

Queue Name

Queue_For_NewSalesApp

Queues | Queue_For_NewSalesApp

Summary Settings **Subscriptions** Consumers

3 Subscriptions

Search by topic

- ☐ Topic
- ☐ material/*/ecp*/**/*
- ☐ material/*/s4p*/**/*
- ☐ !material/*/3rdparty/**/*

Filter A

Subscriber 1
Integration Broker

Execute other
integrations
synchronously


Subscriber 2
Pricing Application

Subscriber 3
NewSalesApp

Filter B

New Joiner – Needs
Materials from ERPs

data from already connected
publishers (source systems)




Recap & Next..

” Integration & EDA Roadmap and Take Aways»



The Big Picture – Architecture

Upstream(publishers)

1 Publish data as events


SAP Cloud Solutions

Non-SAP Solutions
3rd Party Applications
Non-SAP Enterprise Apps
Productivity Tools
Custom Dev. Applications





SAP On Premise Solutions


FIREWALL


Cloud connector


Invoke APIs
Cache returns

Brokers


SAP BTP

SAP Integration Suite, advanced event mesh
Replay
Queues
Route - Filter
SMF*

SAP Integration Suite
APIM

2 Enrich via APIs / Apply other policies


Downstream(subscribers)


SAP Cloud Solutions
Consuming Object

3 Subscribe

Non-SAP Solutions
3rd Party Applications
Non-SAP Enterprise Apps
3rd Party Integration Brokers
3rd Party Event Brokers
3rd Party APIs
Consuming Object

4 Consume Actively


SAP On Premise Solutions
Consuming Object

FIREWALL

The Roadmap – BTP Integration & Advanced Event Mesh

FUTURE RELEASE

Integrating SAP Cloud Application Programming Model and advanced event mesh

Providing support for SAP Integration Suite, advanced event mesh in SAP Cloud Application Programming Model

SAP Integration Suite, advanced event mesh

[Open](#) ^

FUTURE RELEASE

Integration of advanced event mesh for health monitoring in SAP Cloud ALM and SAP Focused Run

Use SAP Cloud ALM, our central entry point for monitoring SAP landscapes, for monitoring the health of SAP Integration Suite, advanced event mesh

SAP Integration Suite, advanced event mesh

[Open](#) ^

FUTURE RELEASE

Distributed tracing enablement between SAP S/4HANA and advanced event mesh

Enable the distributed tracing feature of SAP Integration Suite, advanced event mesh for SAP S/4HANA as an event source

SAP Integration Suite, advanced event mesh

[Open](#) ^

FUTURE RELEASE

Scenario monitoring in SAP Cloud ALM and SAP Focused Run

Use SAP Cloud ALM, our central entry point for monitoring SAP landscapes, for monitoring integration scenarios through SAP Integration Suite, advanced event mesh

SAP Integration Suite, advanced event mesh

[Open](#) ^

FUTURE RELEASE

AI adapter

Provide an AI adapter as an additional built-in connectivity option for the Cloud Integration capability within SAP Integration Suite to connect to large language models

SAP Integration Suite

[Open](#) ^

FUTURE RELEASE

"Where-used" functionality for security materials

- Enable "where-used" functionality in SAP Integration Suite for identifying the integration artifacts in credentials, key pairs, and certificates
- Availability with standard and premium editions of SAP Integration Suite and with CPEA

Cloud Integration SAP Integration Suite

[Open](#) ^

FUTURE RELEASE

AI-based payload size anomaly identification in API traffic

Detect unusual request payload sizes and flag them as anomalies

SAP Integration Suite

[Open](#) ^

FUTURE RELEASE

XML threat protection policy for XML-based APIs

XML threat protection policy in the API Management capability to help mitigate various security threats, such as XML bombs attacks, by validating, filtering, and restricting XML payloads before they reach backend services

SAP Integration Suite Edge Integration Cell

[Open](#) ^

Final Words - Key Takeaways

- Design for the long-term benefits (consider maintenance, reusability)
- Modernize your existing interfaces whenever possible (replace inefficient, old-technology)
- Think End-to-End (for all current & possible future sources and targets)
- Start smart / Start small

Thank you..

SAP INSIDE TRACK

İSTANBUL 2025



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