

The Developer Advocates present

SAP CodeJam

2024



> Event-driven integrations using SAP Integration Suite, advanced event mesh



SAP Developer Advocates

We help developers be successful.

We do that by engaging with the community and **creating and presenting content designed to help developers discover, understand and adopt SAP technologies.**

Our aim is to **maintain communications in both directions**, to understand what developers need to know, listen to what developers have to say, and represent what we hear back into SAP product development.

<https://developers.sap.com/developer-advocates.html>

SAP Developer Advocates

Personal Insights



Thomas Jung M

May 20, 2022 | 7 minute read

Star Wars App – No-Code Challenge

1 16 1,961

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This blog post describes my participation in the [No-Code Challenge](#). If you aren't familiar with the challenge, please check out the blog post by [Daniel Wroblewski](#) for the full details. But in short, it's an opportunity to get to know [SAP AppGyer](#) a little better and share what you were able to build with the SAP Community.

My goal was to build a mobile app that allowed me to view Star Wars data originally sourced from the public [Wookieepedia](#). You never know when you might be out and about and need to quickly lookup the climate of a planet from Star Wars. Ok, maybe not the most business-critical app, but one I certainly enjoy playing around with.



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SAP Developer show for weekly updates on the latest happening in the SAP developer world in about 5 minutes.



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SAP Developer News

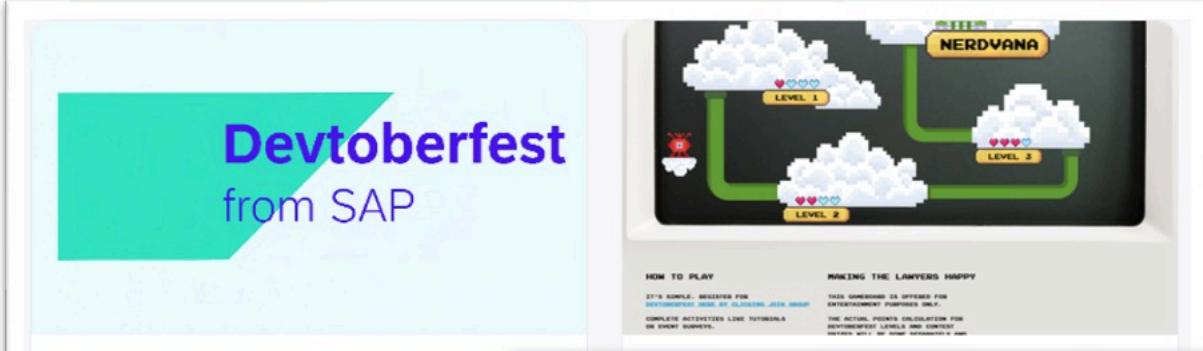
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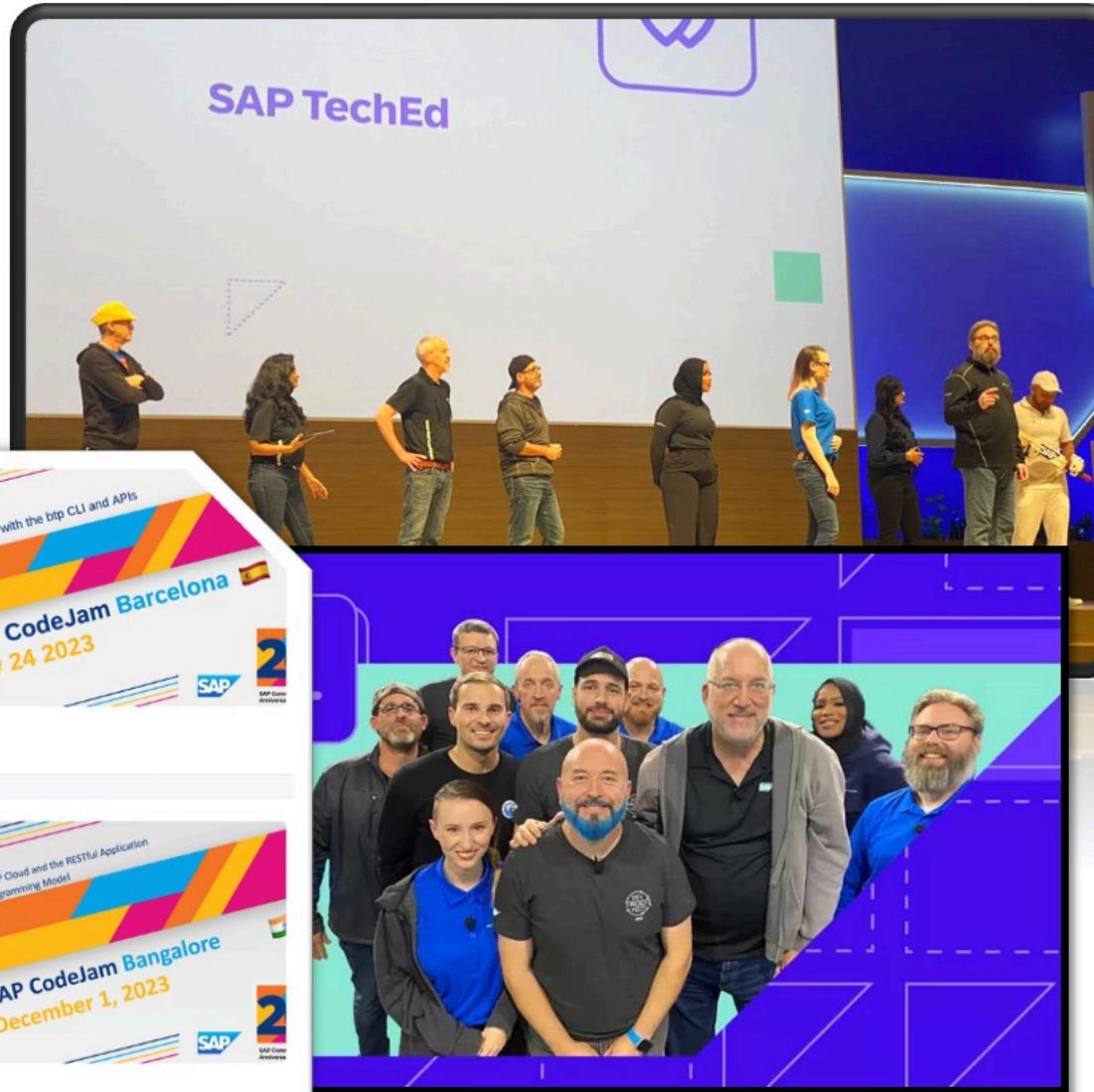
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SAP Developer Advocates



This block contains two screenshots of the SAP Developer Advocates calendar. The top screenshot shows the event for November 24, 2023, titled "SAP CodeJam BTP: Hands-on with the btp CLI and APIs (Barcelona, Spain)". It lists several sessions including "Overview of ABAP Cloud", "Making SAP Extensible", "ABAP Cloud for Classic", and "Capire: Introduction, En...". The bottom screenshot shows the event for November 30, 2023, titled "SAP CodeJam ABAP: SAP BTP, ABAP Environment & RAP". It lists sessions like "SAP CAP in Flight: BTP...", "How to Clean your ABA...", "SaaS Enablement for C...", and "What's New in the ABA...". Both screenshots show a "You are attending" button and registration statistics: 27 attending for the first and 44 attending for the second.

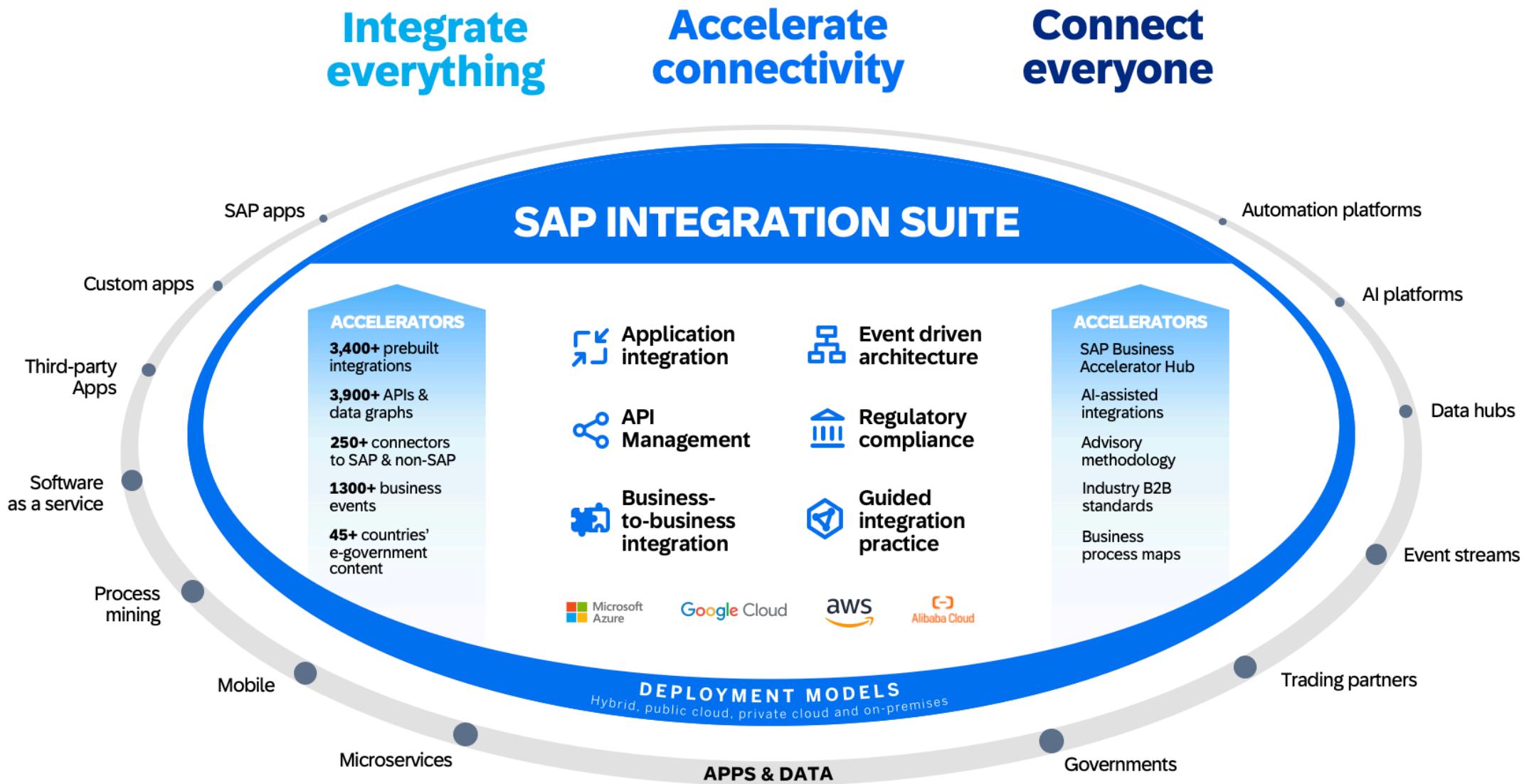


<https://developers.sap.com/developer-advocates.html>

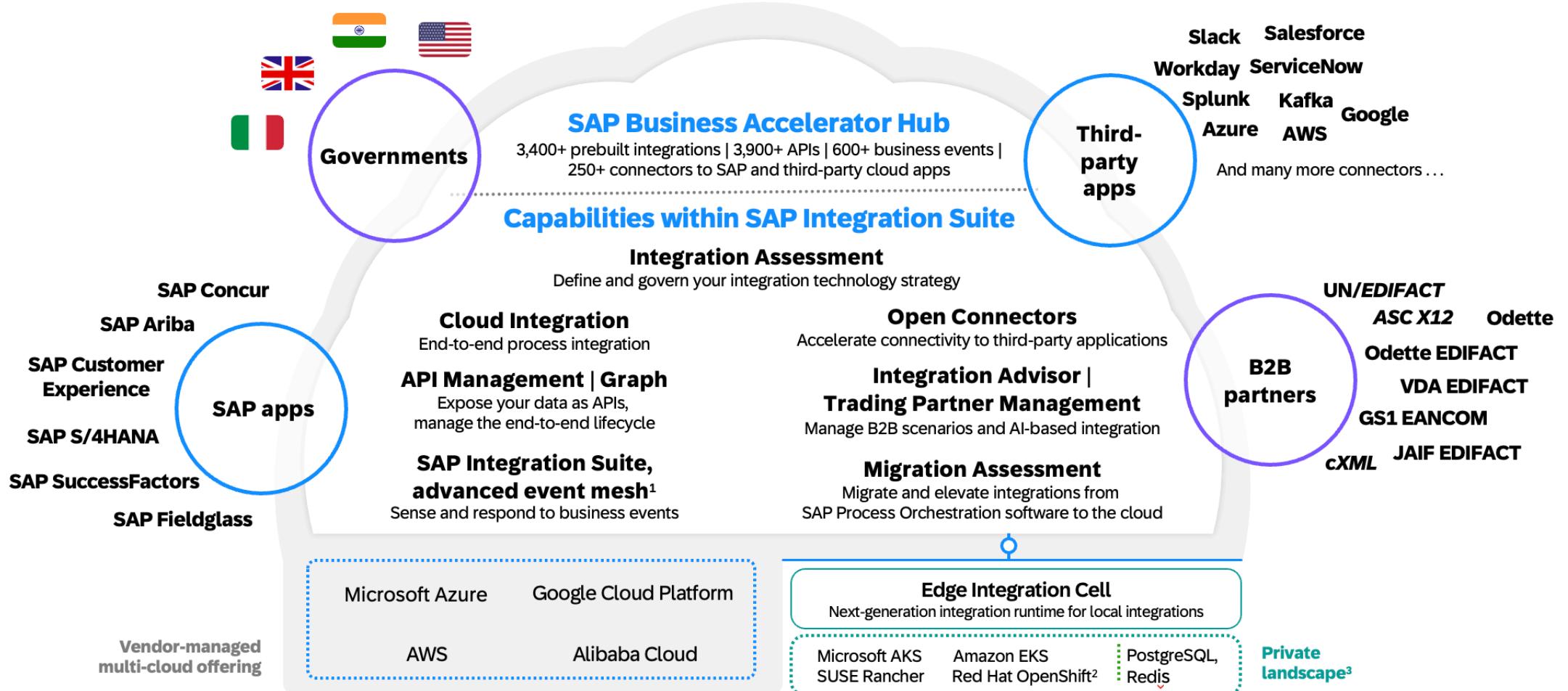
SAP CodeJam - Agenda

- 09:30 - Introduction
- 09:30 - Exercise 03 - 06
- 11:00 - Break
- 11:30 - Exercise 07 - 11

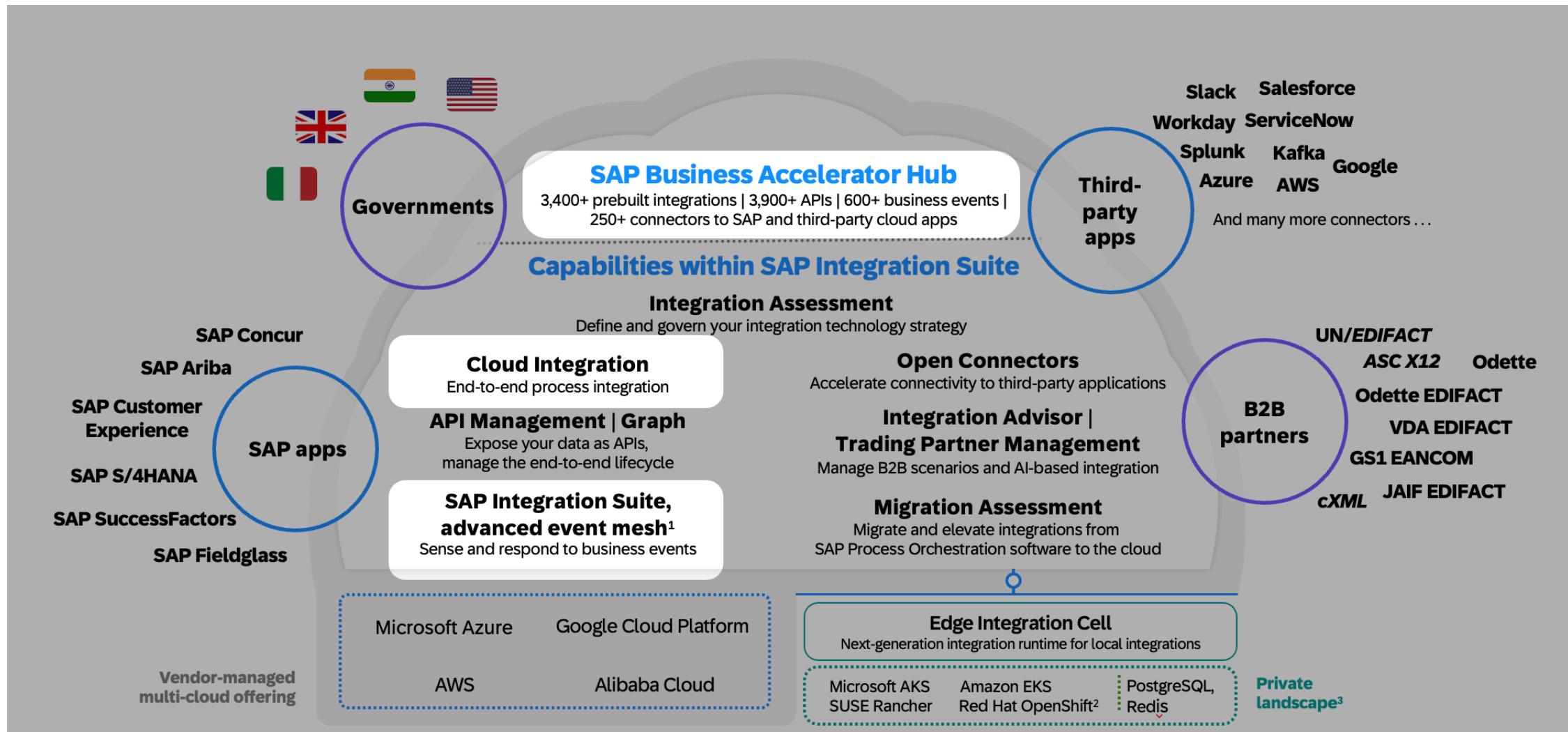
SAP Integration Suite



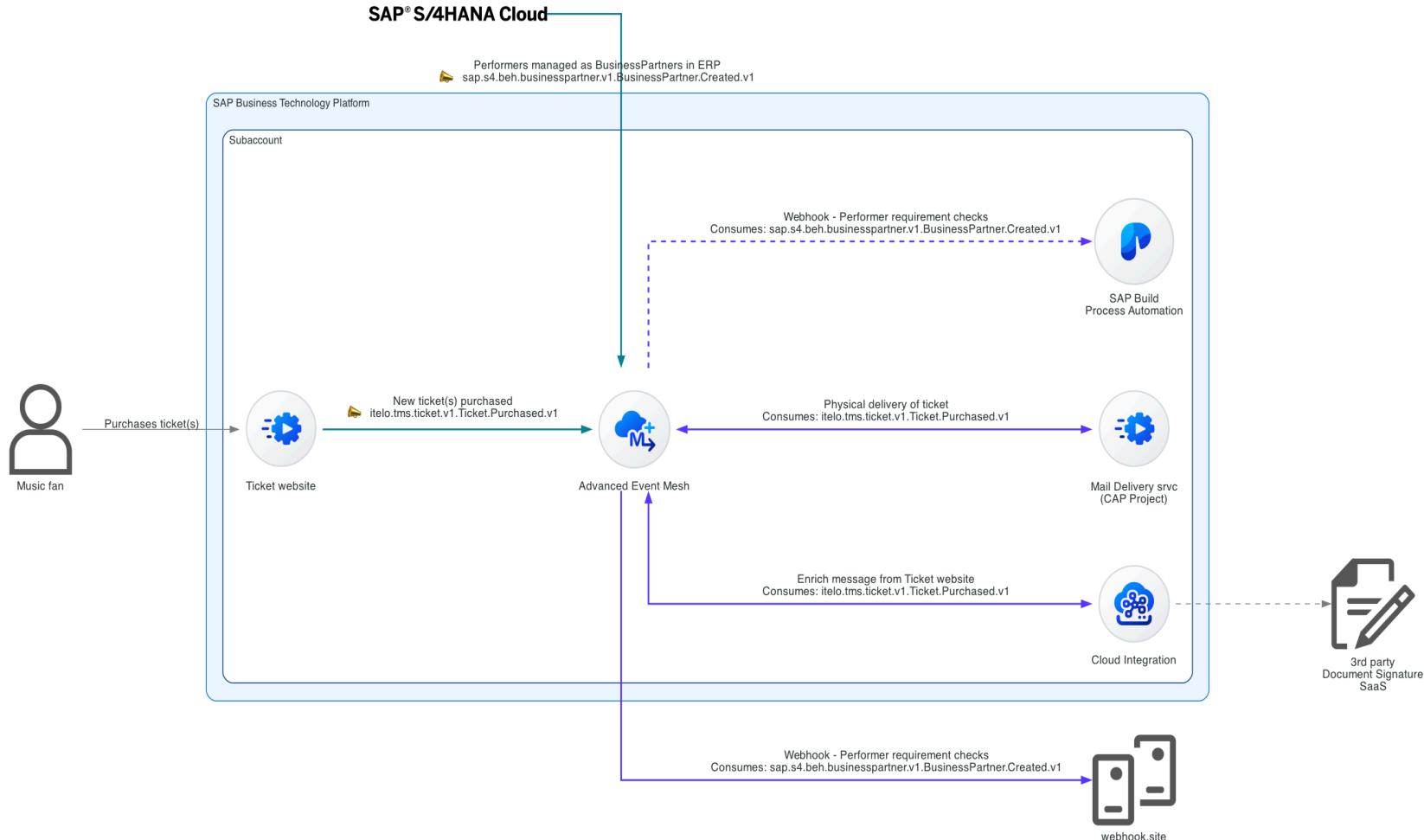
SAP Integration Suite - Services



SAP Integration Suite - part of the CodeJam



SAP CodeJam - Event-Driven Integrations scenario



SAP CodeJam - Repository

The screenshot shows a GitHub repository page for 'event-driven-integrations-codejam'. The repository is public and was generated from SAP-samples/repository-template. It has 1 branch and 0 tags. The main branch has 81 commits by user ajmaradiaga. The commits are listed below:

Commit	Message	Date
.devcontainer	Updating devcontainer for CAP	2 weeks ago
.reuse	Adjust REUSE metadata	4 months ago
.sap/code	Updated to use cds logging facade	yesterday
.vscode	Including runOnSave to automate diagram creation	last month
LICENSES	Initial commit	4 months ago
assets	Updating final diagram	1 hour ago
exercises	Updating final diagram	1 hour ago
.gitignore	Including GH pages config	last week
Gemfile	Including GH pages config	last week
LICENSE	Updated year and company name	3 months ago
README.md	Removing draft exercises text	1 hour ago
_config.yml	Including GH pages config	last week
prerequisites.md	Additional explanation on prerequisites	1 hour ago
requirements.txt	Additional libraries needed	last month

The repository has 2 stars, 7 watchers, and 2 forks. The 'About' section describes the SAP CodeJam as looking at Advanced Event Mesh, part of the SAP Integration Suite, and how it can be used to connect systems and services following an Event-driven architecture approach. Tags include sample, eda, sap-integration-suite, sap-btp, sap-codejam, and advanced-event-mesh. Other repository details include Readme, Apache-2.0 license, Code of conduct, Security policy, Activity, Custom properties, 2 stars, 7 watching, 2 forks, and Report repository. There are no releases published.

SAP CodeJam - Exercises (Part 1)

-  Prerequisites
-  Exercise 01 - Events in the SAP Ecosystem
-  Exercise 02 - CloudEvents
- Exercise 03 - SAP's adoption of CloudEvents (15')
- Exercise 04 - Event-Driven Architectures (15')
- Exercise 05 - Explore SAP Integration Suite, advanced event mesh (15')
- Exercise 06 - Publish and subscribe to events (15')

SAP CodeJam - Exercises (Part 2)

- Exercise 07 - Exchanging messages between Event Broker Services (Dynamic Message Routing) (15')
- Exercise 08 - Create a CloudEvent programmatically (CloudEvents SDK) (15')
- Exercise 09 - Forward messages in Queue to REST Consumer (REST Delivery Points/webhooks) (15')
- Exercise 10 - Consuming messages from CAP project (AMQP protocol) (15')
- Exercise 11 - Process messages from Cloud Integration (AEM Adapter and SMF protocol) (15')



Event-driven integration CodeJam

- Participants Handbook

URL: <https://url.sap/mxtsd5>

Password:  *Provided by instructor*

Exercise 01 - Events in the SAP Ecosystem (10')

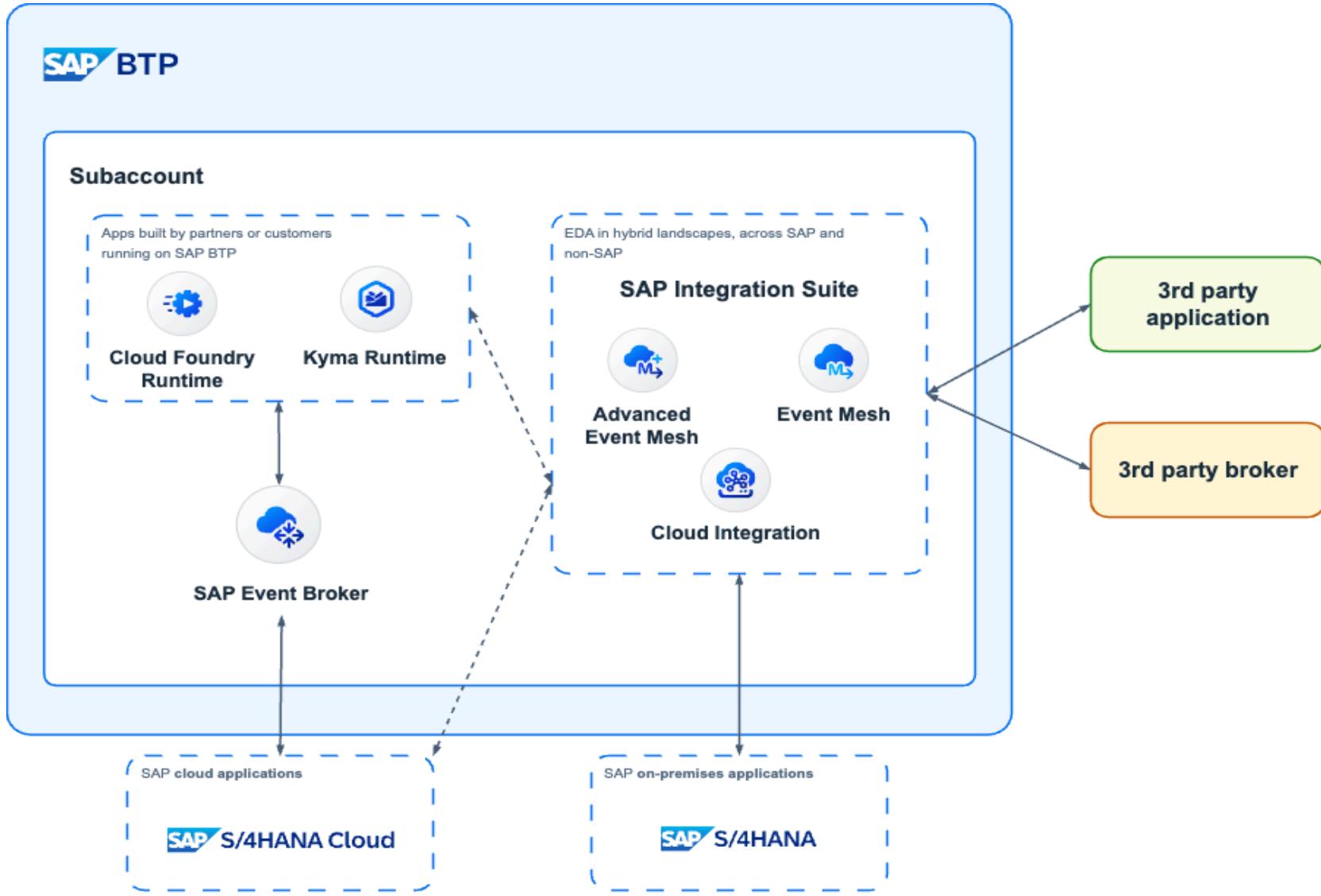
The screenshot shows the SAP Business Accelerator Hub interface, specifically the 'Events' section. The top navigation bar includes links for 'Explore', 'Resources', 'Discover Integrations', 'Partner with Us', and a 'Login' button. Below the header, a banner displays the word 'Events' and the sub-instruction 'Explore all events in the SAP Business Accelerator Hub.' The main content area features a grid of event objects, each represented by a card. The cards include icons for 'Event Object', the event name, a brief description, and status information (Version and ACTIVE). A 'Feedback' button is located on the right side of the grid. The bottom right corner contains a 'Chat (Beta)' button.

Event Object	Description	Status
Allergen Events	Informs a remote system about created, changed, and deleted allergen in an SAP S/4HANA system	Version 1.0.0 ACTIVE
Allowance Events	Informs about the life cycle of an allowance, such as when the allowance expires or reaches a designated usage threshold.	Version 1 ACTIVE
Annual Product Quality Review Data Inbound	Informs SAP Batch Release Hub for Life Sciences about the creation or update of annual product quality review data	Version 4.0.0 ACTIVE
Annual Product Quality Review Documents Inbound		
Artwork Data Inbound		
Artwork Orders Inbound		

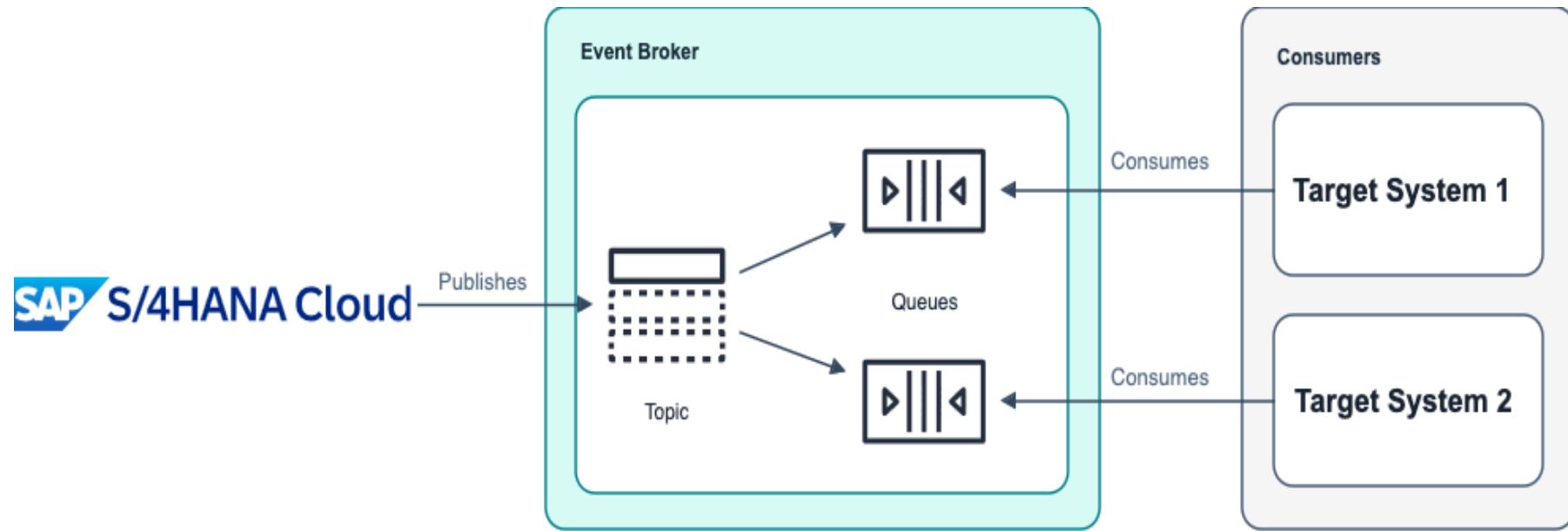
Exercise 02 - Cloud Events (15')



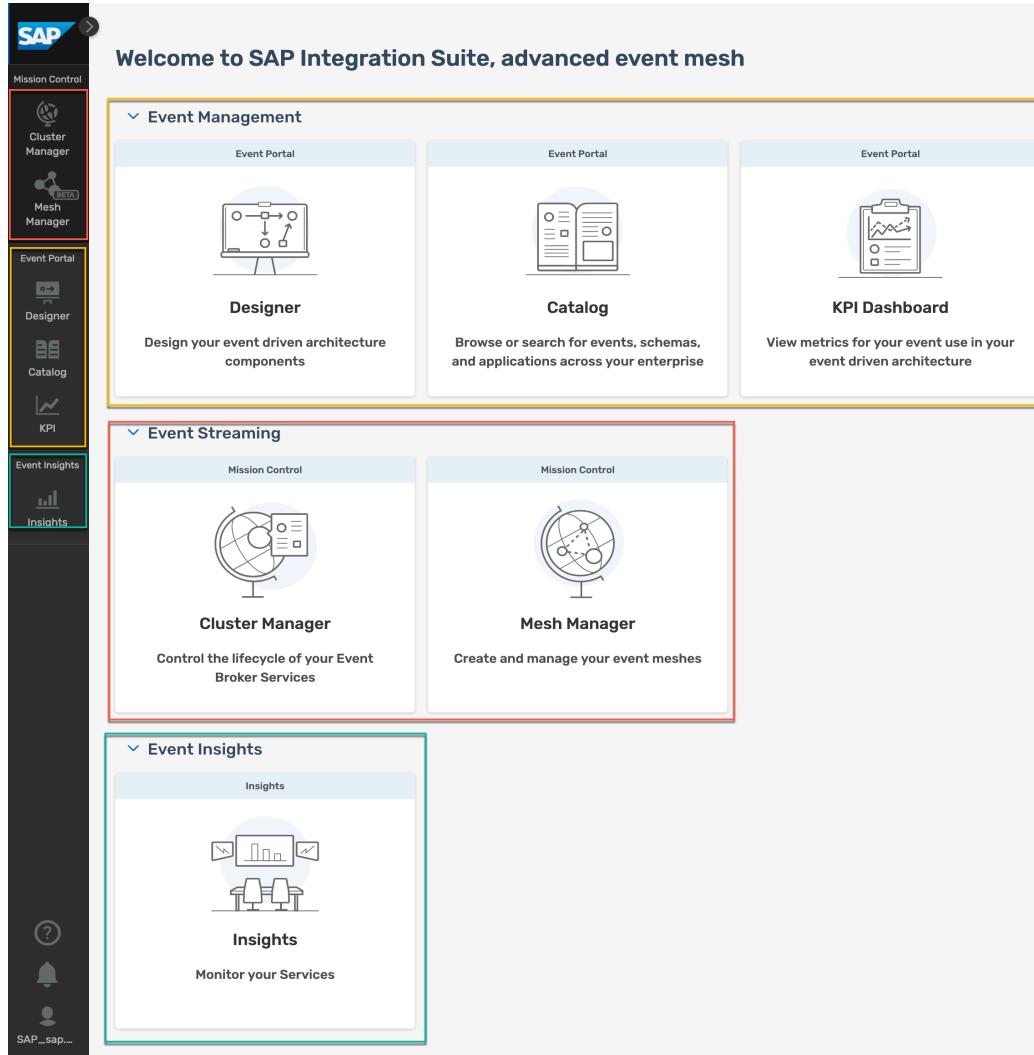
Exercise 03 - SAP's adoption of CloudEvents (15')



Exercise 04 - Event-Driven Architectures (15')



Exercise 05 - Explore SAP Integration Suite, advanced event mesh (25')



Exercise 06 - Publish and subscribe to events (20')

Send and Receive

Publisher

Establish Connection

 Not Connected

Broker URL

Message VPN

Client Username

Client Password

Exercise 07 - Exchanging messages between Event Broker Services (Dynamic Message Routing) (15')

The screenshot shows the SAP APJ-IN-Broker interface with the following details:

Publisher Side:

- Establish Connection:** Not Connected. Connect button.
- Publish:** Select a topic or queue to publish to.
 - Topic** (radio button selected)
 - Queue**
- try-me** (Topic name input field)
- Delivery Mode:**
 - Direct** (radio button selected)
 - Persistent**
- Message Content:** Hello world!
- Publish** button.
- Messages Published:** 0 Direct 0 Persistent. Clear Stats button.

Subscriber Side:

- Establish Connection:** Not Connected. Connect button.
- Broker URL:** Same as Publisher. wss://mr-connection-bbr9po1xplk.messaging.solace.cloud:44
- Message VPN:** Same as Publisher. apj-in-broker
- Client Username:** Same as Publisher. solace-cloud-client
- Client Password:** (redacted)
- Subscribe:** How do you want to receive messages?
 - Subscribe to a topic to receive direct messages:** codejam/edi/ce/ajmaradiaga/dmr. Subscribe button.
 - Bind to an endpoint to receive guaranteed messages:** Bind button.
- Messages (Most Recent 20):** 0 Direct 0 Persistent 0 Non-Persistent. Clear Stats button.

Exercise 08 - Create a CloudEvent programmatically (CloudEvents SDK) (20')

```
● node → .../event-driven-integrations-codejam/exercises/08-cloud-events-sdk/code (main) $ node app.js
{"id":"321e1607-2b23-447f-b181-f5c275cc78fe","time":"2024-03-30T06:01:12.012Z","type":"itelo.tms.ticket.v1.Ticket.Purchased.v1","source":"https://tms-prod.itelo-entertainment.com/tickets","specversion":"1.0","datacontenttype":"application/json","data":{"ID":"VPHAH00C","Customer":{"Name":"John Doe","Email":"john.doe@gmail.com"},"CustomerAddress":{"Street":"123 Main St","City":"Anytown","State":"CA","Postcode":"12345","Country":"USA"},"TicketType":{"ID":1,"Description":"General Admission"},"DeliverTicketsByMail":true,"NumberOfTickets":2}, "sapcommunityid":"ajmaradiaga"}
Sending processed message to topic codejam/edi/ce/ajmaradiaga/nodejs
Headers:
{
  "content-type": "application/cloudevents+json; charset=utf-8",
  "Authorization": "Basic c29sYWNlLWNsb3VklWNsaWudDo222JsnjhiznFwZGJs0G8xNWU5aWNPbHNwcg=="
}

Body:
{"id":"321e1607-2b23-447f-b181-f5c275cc78fe","time":"2024-03-30T06:01:12.012Z","type":"itelo.tms.ticket.v1.Ticket.Purchased.v1","source":"https://tms-prod.itelo-entertainment.com/tickets","specversion":"1.0","datacontenttype":"application/json","data":{"ID":"VPHAH00C","Customer":{"Name":"John Doe","Email":"john.doe@gmail.com"},"CustomerAddress":{"Street":"123 Main St","City":"Anytown","State":"CA","Postcode":"12345","Country":"USA"},"TicketType":{"ID":1,"Description":"General Admission"},"DeliverTicketsByMail":true,"NumberOfTickets":2}, "sapcommunityid":"ajmaradiaga"}

Submitted processed message to topic codejam/edi/ce/ajmaradiaga/nodejs
```

Exercise 09 - Forward messages in Queue to REST Consumer (REST Delivery Points/webhooks) (25')

The screenshot shows the SAP Fiori interface for managing messaging clients. The left sidebar lists various messaging components: Change VPN, Messaging (Message VPN, Clients, Queues, Connectors, Access Control, Telemetry, Replay, Bridges, JMS JNDI, Try Me!, Advanced Messaging, Caches, Transactions), System (Clustering), and Version 10.6.1.89. The main area displays a table titled "REST Delivery Points | POST-BPCreated-ajmaradiaga Assets". The table has columns for Asset Type, Asset Name, and Operational State. It contains three rows:

Asset Type	Asset Name	Operational State
Connector / RDP	POST-BPCreated-ajmaradiaga	Down
RDP Client	#rdp/POST-BPCreated-ajmaradiaga	N/A

At the bottom, there are navigation links (Page, First, Next), a timestamp (Last Update: 2024-03-31 09:15:23), a Refresh Data button, and a Show dropdown set to 20.

Exercise 10 - Consuming messages from CAP project (AMQP protocol) (30')

- > Solace Messaging
Start messaging with client libraries that use the Solace Message Format (SMF) protocol over TCP.



- > Solace Web Messaging
Start messaging with client libraries that use the Solace Message Format (SMF) protocol over Web Sockets or HTTP.



- > AMQP
Start messaging with open APIs that use the AMQP.



- > MQTT
Start messaging with open APIs that use the MQTT protocol.



- > REST
Start messaging with the Solace Messaging REST API.

REST

Exercise 11 - Process messages from Cloud Integration (AEM Adapter and SMF protocol) (25')

The screenshot shows the SAP Integration Suite interface. The left sidebar is open, showing the navigation menu with 'Integrations and APIs' selected. The main content area displays a package named 'Event-driven Integrations CodeJam'. The package details are as follows:

- Package including components used in the CodeJam
- Vendor: (empty)
- Mode: Editable
- Version: 1.0.0

The 'Artifacts (1)' tab is selected, showing a single artifact named 'Process_Events_from_AEM_Queue'. The artifact details are:

- Type: Integration Flow
- Version: 1.0.0

A context menu is open over the artifact, with the 'Configure' option highlighted. Other options in the menu include 'Copy', 'View metadata', 'Download', and 'Deploy'.



Interested in learning more?

Developing Event-Driven Integration with SAP BTP:
https://www.sap-press.com/developing-event-driven-integrations-with-sap-btp_6021/
(October 2024)

**Thanks for
attending!!!**

