



Discover Event-Driven Architecture in and around SAP Business Suite and see how customers benefit from it

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Agenda

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Introduction to Event-Driven Architecture

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See how customers benefit



Event-Driven Architecture

- An **event** is a **significant change** in state.
- **Event source** sends an event to inform of change.
- Message holding event description in encoded format is distributed through **event broker**.
- **Event consumers** have registered with event broker and are informed of event.
- Events come in different flavors: **notification events** or **data events**.



```
{ "type": "sap.s4.beh.product.v1.Product.Changed.v1",  
  "specversion": "1.0",  
  "source": "/default/sap.s4.beh/0000000007", "id":  
    "fa163e0b-4824-1eec-83f7-  
    32dfc754759c", "time": "2023-09-07T08:57:17Z", "  
    datacontenttype": "application/json", "data":  
      {"Product": "160", "ProductType": "FRIP"} }
```

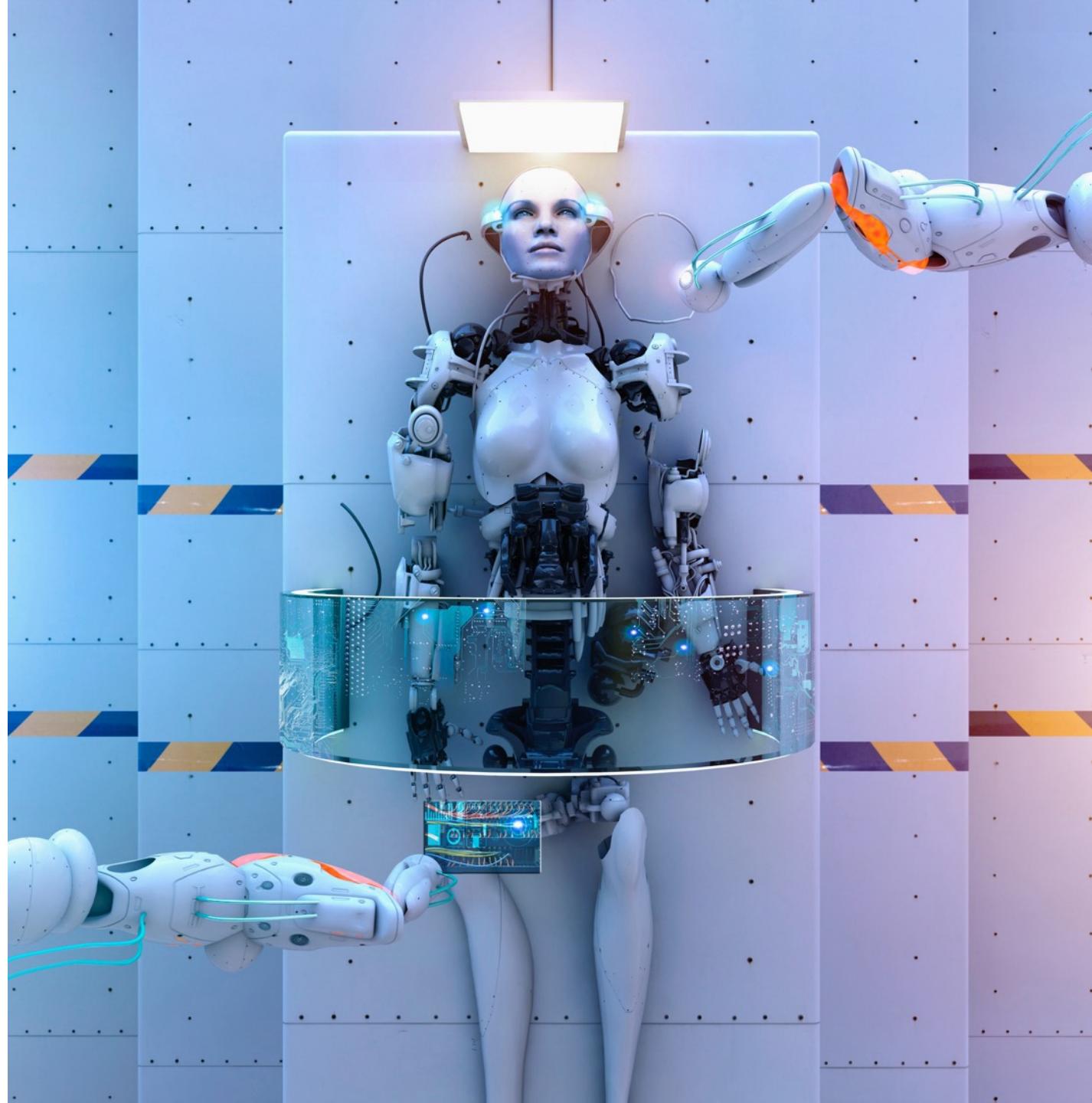
A Mindset Shift

Event Driven Architecture

=

Mindset Shift

Think Events!



Event-Driven Business Architecture



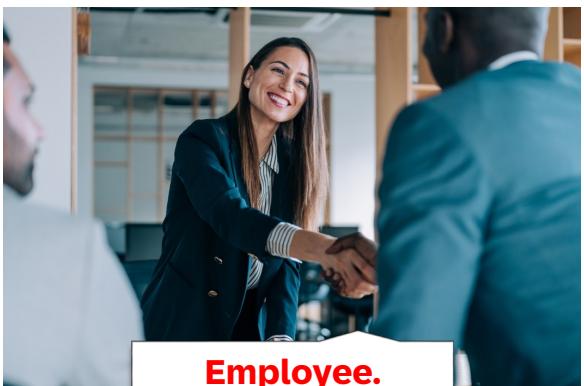
Each event can be described with:

- **A noun:** The “Thing”
- **A verb:** What happened to the “Thing”
- **Properties:** Description

Event =

(noun) + (verb) + [properties]

Event Driven SAP Business Architecture



SAP Business Accelerator Hub Integrations Data Products SAP Build Analytics Transformation

Events

Explore all events in the SAP Business Accelerator Hub.

Event Objects Packages

Showing 1-12 of 455 results

< Previous 1 of 37 Next >

| | | |
|---|--|--|
| Release Decision Trigger Release Scopes Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of release scopes for release decision triggers Version 7.0.0 ACTIVE | Batch Release Countries Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of batch release countries Version 7.0.0 ACTIVE | Transport Records Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of transport records Version 7.0.0 ACTIVE |
| Restriction Driver Data Changes Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of restriction driver data changes Version 7.0.0 ACTIVE | Temperature Records Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of temperature records Version 7.0.0 ACTIVE | Certificates Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of certificate data Version 7.0.0 ACTIVE |
| Certificate Documents Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of certificate documents Version 7.0.0 ACTIVE | Release Decision Triggers Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of release decision triggers Version 7.0.0 ACTIVE | Characteristics for Inspection Lots Inbound Informs SAP Batch Release Hub for Life Sciences about the creation or update of characteristics for inspection lots Version 7.0.0 ACTIVE |

Successful Event-driven Team: Turn your ERP into a team player

- Communicates in **real time**
- Automates **processes**
- Breaks down **silos**
- Crosses **vendor boundaries**
- Uses **pub/sub style** integration
- Decouples** and **buffers**



25+1 Event-Driven Uses Cases

| | | | | |
|----------------------------|--------------------------------|-------------------------------|----------------------------------|------------------------------|
| Industrial Maintenance | Data lake updates | Digital Twin | HR Across Multiple Environment | Personalized Apps |
| Weather-based Supply Chain | Supply chain visibility | Mobile Workforce Connectivity | Smart Water Platform | Real-time inventory |
| Sales Order Shock Absorber | Business Process Documentation | Meter to Cash | Oil well monitoring | Demand-based supply chain |
| Water Quality Monitoring | S/4HANA Extensions | Real Time HR | Medication delivery and tracking | Across Vendor Mesh |
| Price Distribution | Predictive maintenance | Real-time order management | Regulatory Reporting | Document update notification |



365x

increase in in-house leak detection, from a yearly to a daily cadence.

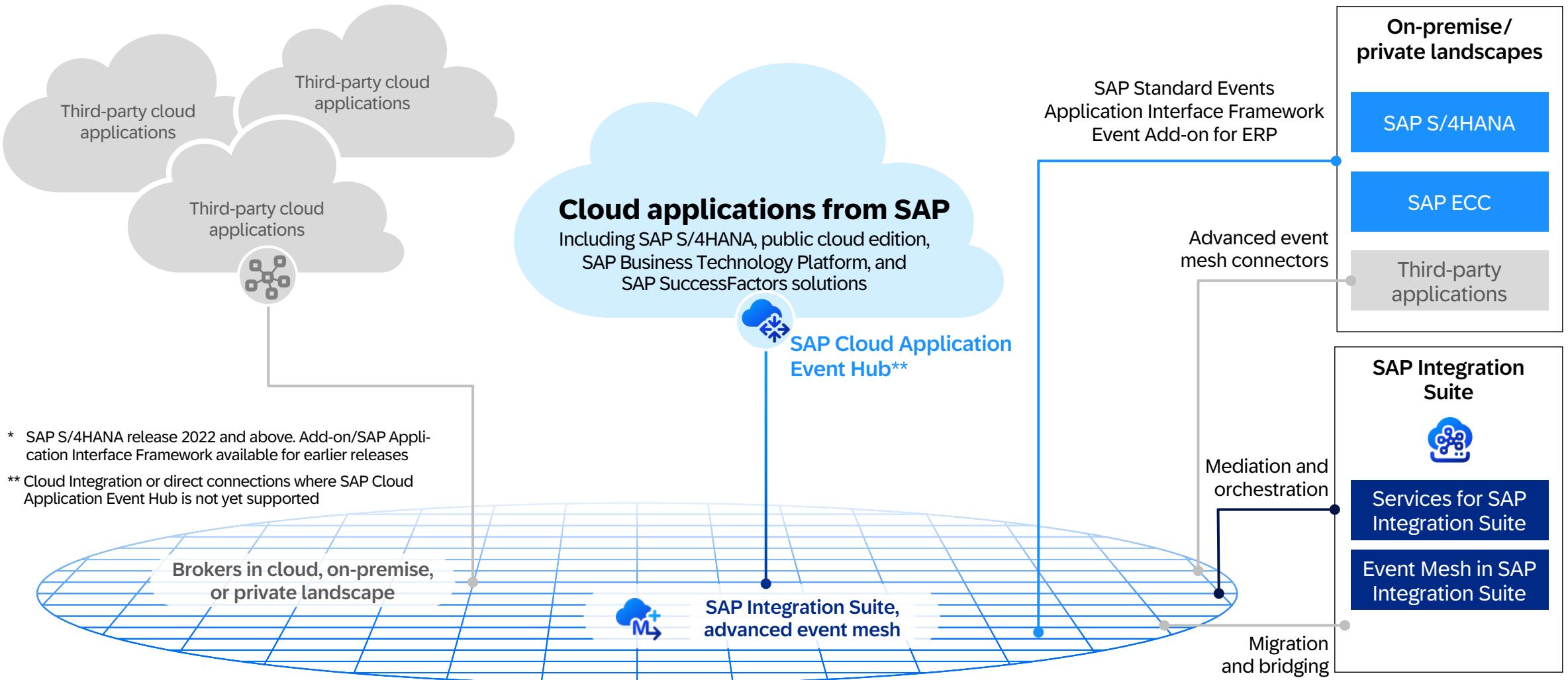
1 day

lead time for annual invoice generation, down from weeks.

30%

cost reduction potential, thanks to more efficient processes.

SAP's Event-Driven Technical Ecosystem and Strategy



Event Brokers – EMIS and Advanced Event Mesh

The screenshot shows the SAP Integration Suite interface with the 'Event Mesh' module selected. On the left, there's a sidebar with options like Graph, B2B Scenarios, Custom Type Systems, MIGs, MAGs, Test, APIs, and Configure. The main area is titled 'Event Mesh' and has tabs for 'Overview' and 'Queues'. Under 'Event Queues (3)', there's a table with columns: Name, Queue Size (bytes), Messages Queued, Unacknowledged Messages, Access Type, and Actions. The table lists three queues: 'capEventTest', 'sap/s4/businessPartner', and 'sap/s4/salesOrder', all with 0 messages and Non Exclusive access type.

★ Event Mesh in SAP Integration Suite

- Low-entry hurdle and shared infrastructure
- Focused feature set, limited to extension and smaller integration
- Notification events and limited amount of data events
- Frequent migration to advanced event mesh once use cases get more demanding

→ Great for basic and “isolated” small to medium use cases

The screenshot shows the SAP Integration Suite interface with the 'advanced event mesh' module selected. On the left, there's a sidebar with 'Mission Control' sections for Cluster Manager, Mesh Manager (Beta), Event Portal, and Designer. The main area is titled 'Welcome to SAP Integration Suite, advanced event mesh' and shows 'Event Management' with a toggle switch for 'New Event Portal 2.0 : On'. It features three 'Event Portal' cards: 'Designer' (showing a flowchart icon), 'Catalog' (showing a document icon), and 'Runtime Event Manager' (showing a monitor icon).

★ SAP Integration Suite, advanced event mesh

- Leading event broker with almost no scale limits (# of brokers, broker size)
- Sophisticated features
- Platform includes Event Portal, Insights, DT, Deployment options ...
- All kinds of events and 3rd-party integration
- Small to extremely large event meshes
- Future-ready for AI and employee-initiated EDA

→ Great for EDA use cases offering distributed EDA

SAP Integration Suite, advanced event mesh

Advanced Event Mesh the **heart of SAP's EDA ecosystem**

Advanced Event Mesh is a **complete business EDA platform** offering event streaming, event management, and sophisticated monitoring

It is an optional capability of **SAP Integration Suite**

AEM **accelerates EDA adoption** and **enables use cases** that demand real-time, intelligent event-driven architecture

EDA @ Enterprise Scale

The screenshot shows the SAP Integration Suite interface with the "Event Portal" selected. The sidebar on the left lists several modules: Designer, Catalog, Runtime Manager, KPI, Cluster Manager, Mesh Manager, and Insights. The "Event Portal" section at the top includes a toggle for "New Event Portal 2.0 : On". Below this, there are four main cards:

- Designer**: Shows a diagram of interconnected nodes. Description: "Design your event driven architecture components".
- Catalog**: Shows a document icon. Description: "Browse or search for events, schemas, and applications across your enterprise".
- Mission Control**: Shows a globe icon. Description: "Control the lifecycle of your Event Broker Services".
- Insights**: Shows a bar chart and two people icons. Description: "Monitor your Services".

SAP Integration Suite, advanced event mesh

Welcome to SAP Integration Suite, advanced event mesh

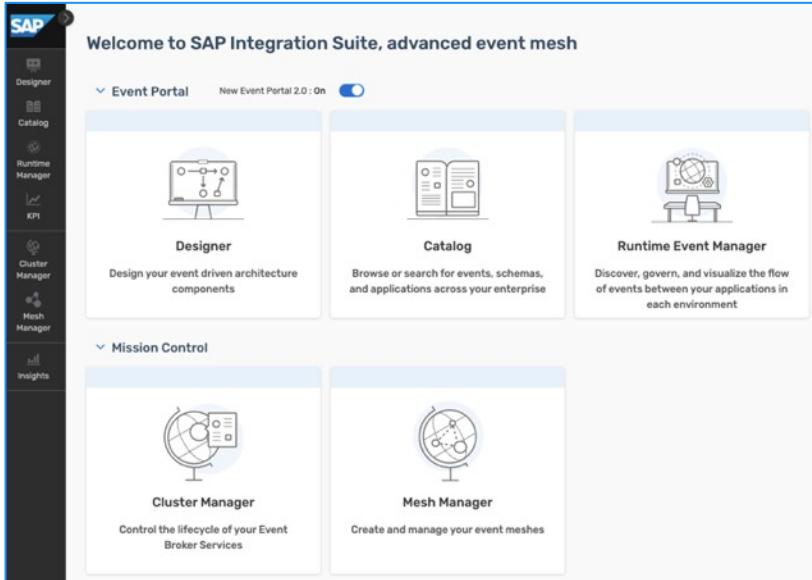
Event Portal New Event Portal 2.0 : On

Designer Catalog Runtime Event Manager

Design your event driven architecture components Browse or search for events, schemas, and applications across your enterprise Discover, govern, and visualize the flow of events between your applications in each environment

Mission Control Cluster Manager Mesh Manager

Control the lifecycle of your Event Broker Services Create and manage your event meshes



Fully managed cloud service

Infrastructure model

Exclusive in T-shirt sizes

Deployment options

Private and public clouds

Connecting SAP and third-party systems

Native support for SAP S/4HANA

Support of standard protocols

Message size and storage Up to 30MB / Up to 6TB

Typical use case size Small to ultra large

Network of event brokers

Create Service

Default Cluster Manager > Create Service

Service Name * My Broker

Environment Default

Cloud * Microsoft Azure

Region * aks-francecentral

Broker Release * 10.11 Default

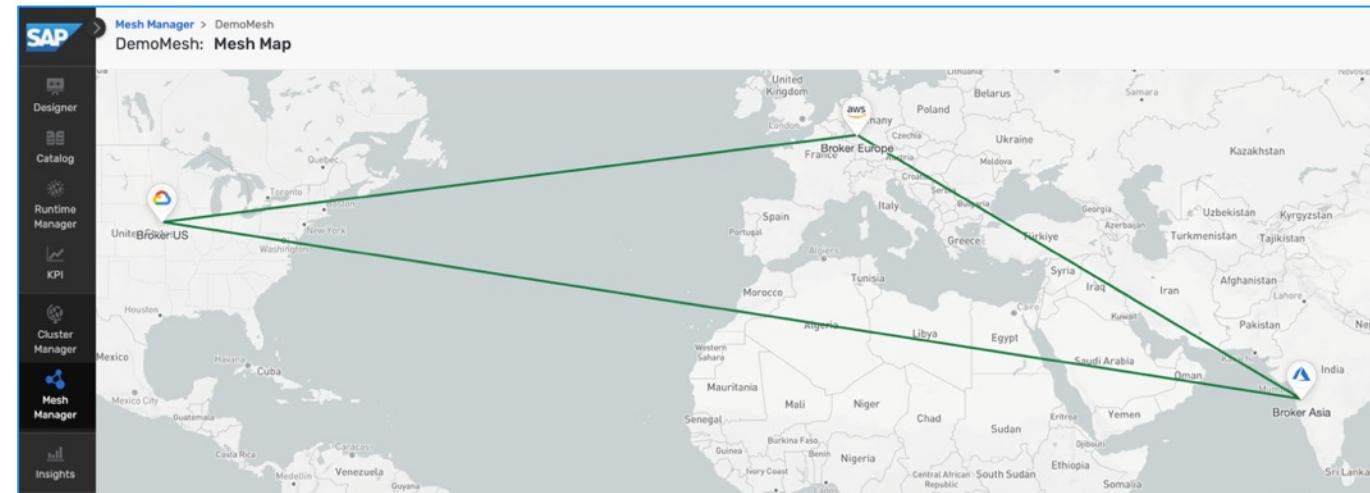
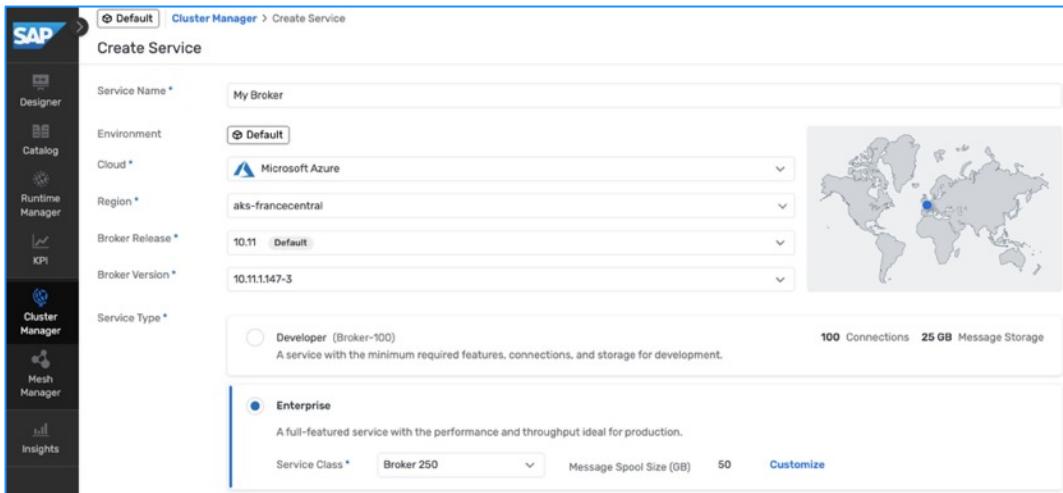
Broker Version * 10.11.147-3

Service Type * Developer (Broker-100)
A service with the minimum required features, connections, and storage for development.

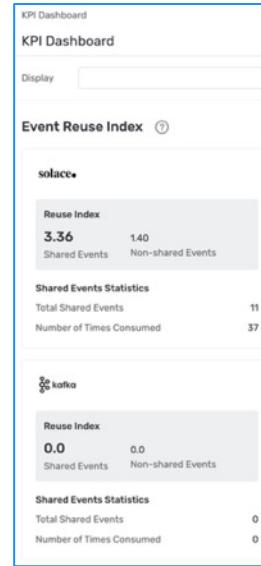
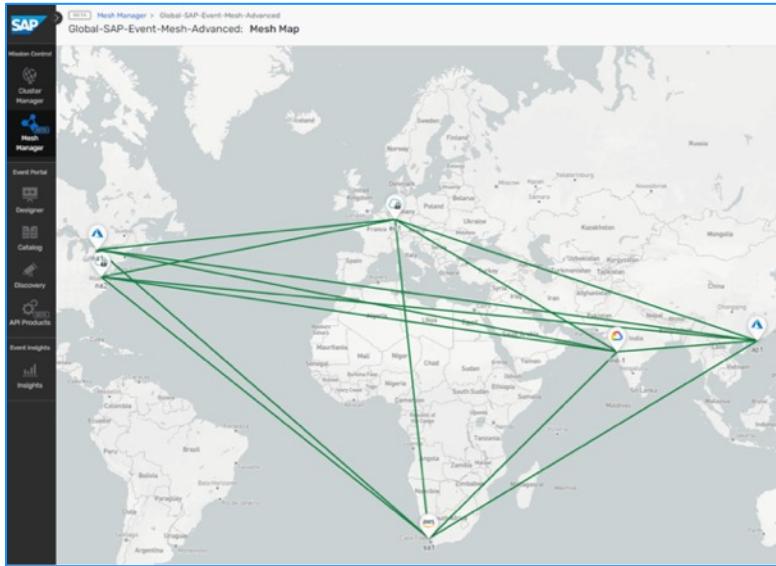
Enterprise
A full-featured service with the performance and throughput ideal for production.

100 Connections 25 GB Message Storage

Service Class * Broker 250 Message Spool Size (GB) 50 Customize



SAP Integration Suite, advanced event mesh: Sophisticated Features



A screenshot of the Replay settings page. The 'Settings' tab is active. It includes sections for 'Incoming' (toggle switch), 'Outgoing' (toggle switch), 'Maximum Spool Usage (MB)' (input field set to 50), and 'Topic Filter Enabled' (toggle switch). There are also tabs for 'Summary', 'Messages Logged', and 'Subscriptions'.

Advanced event monitoring and analysis



Dynamic event routing



Sophisticated filtering



Event replay



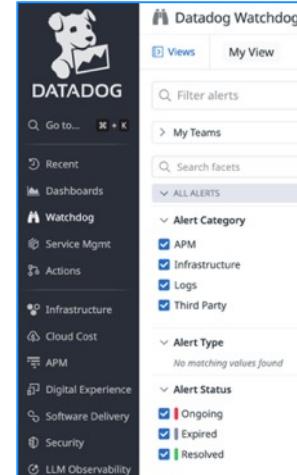
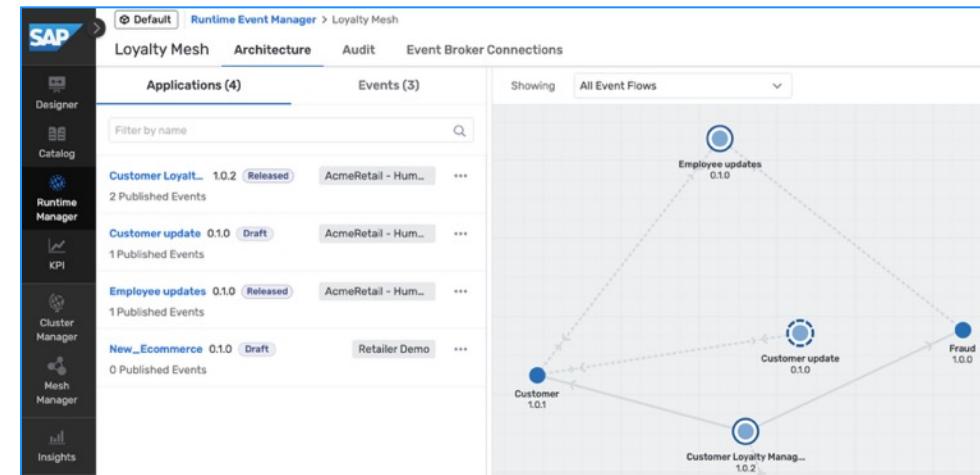
Event management



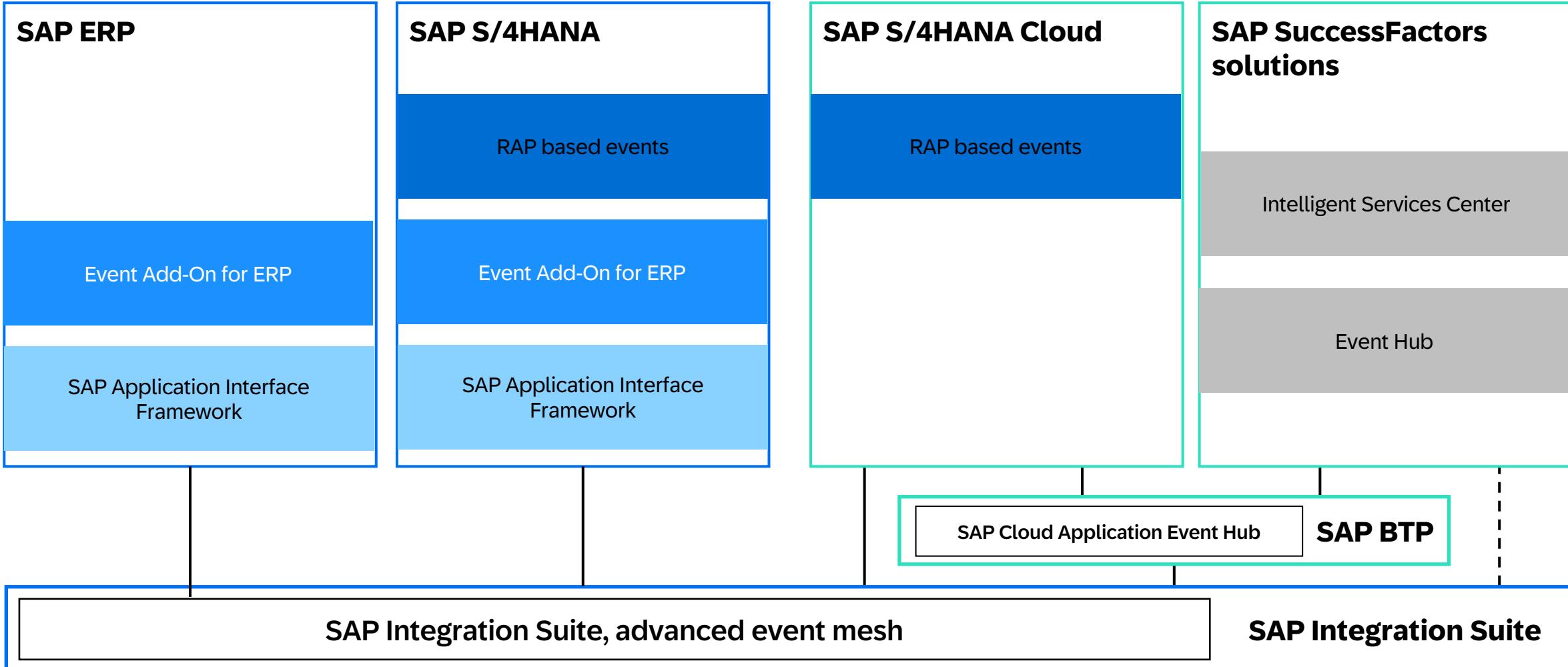
Distributed tracing



Partitioned queues



Selected Event sources for AEM



EDA with SAP – 8 Lessons Learned

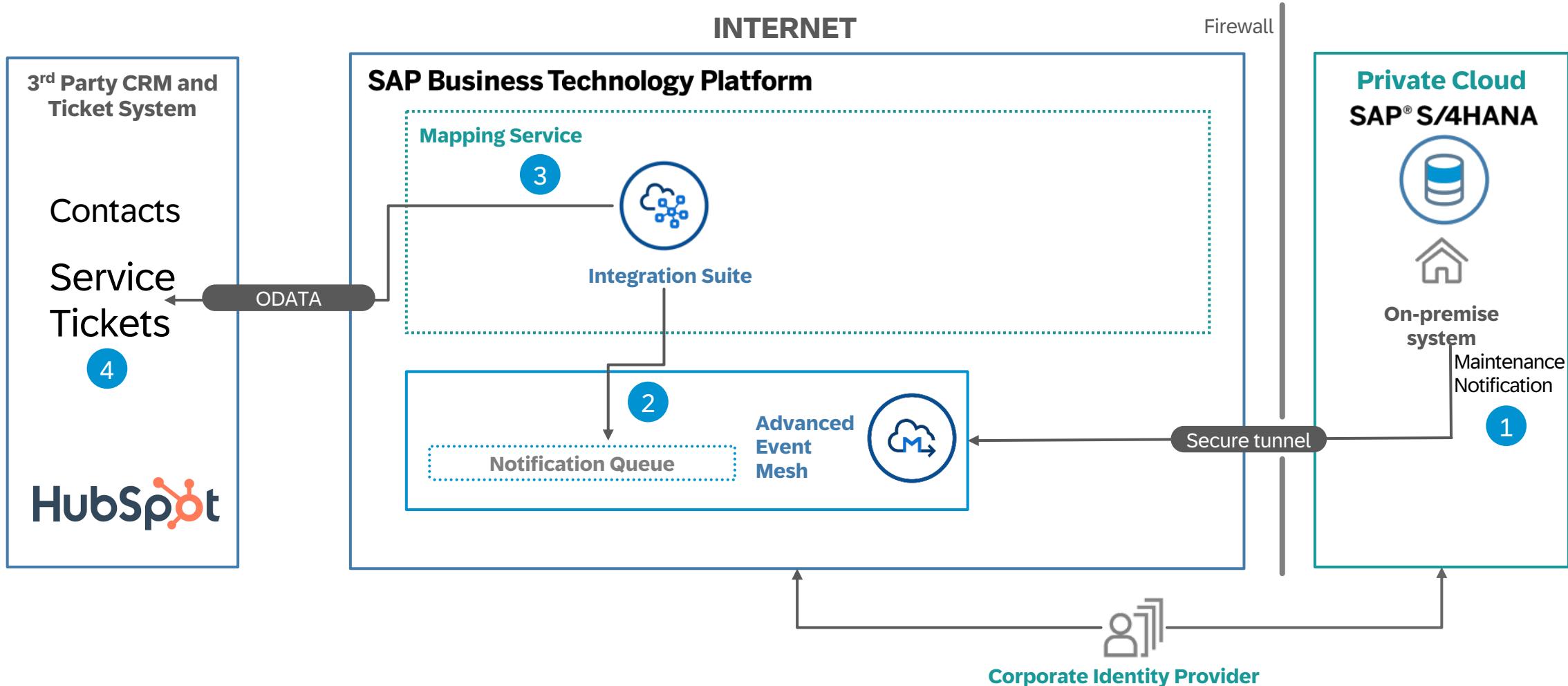
1. EDA is a whole **new approach**: try, adjust and learn
2. **Power Couple**: AEM and Integration Suite complement each other
3. EDA offers **combination of benefits**, individual customer benefit differs
4. **AEM usually offers everything** than you need
5. Effort is on the **event source side**
6. **Backend version** has large influence on available event enablement features
7. **EMIS good (though limited) starting point** if unsure about EDA → most customers will **migrate to AEM later (Land and Expand)**
8. Mid to long term AEM is **land and expand** as well: more use cases, bigger and/or more brokers



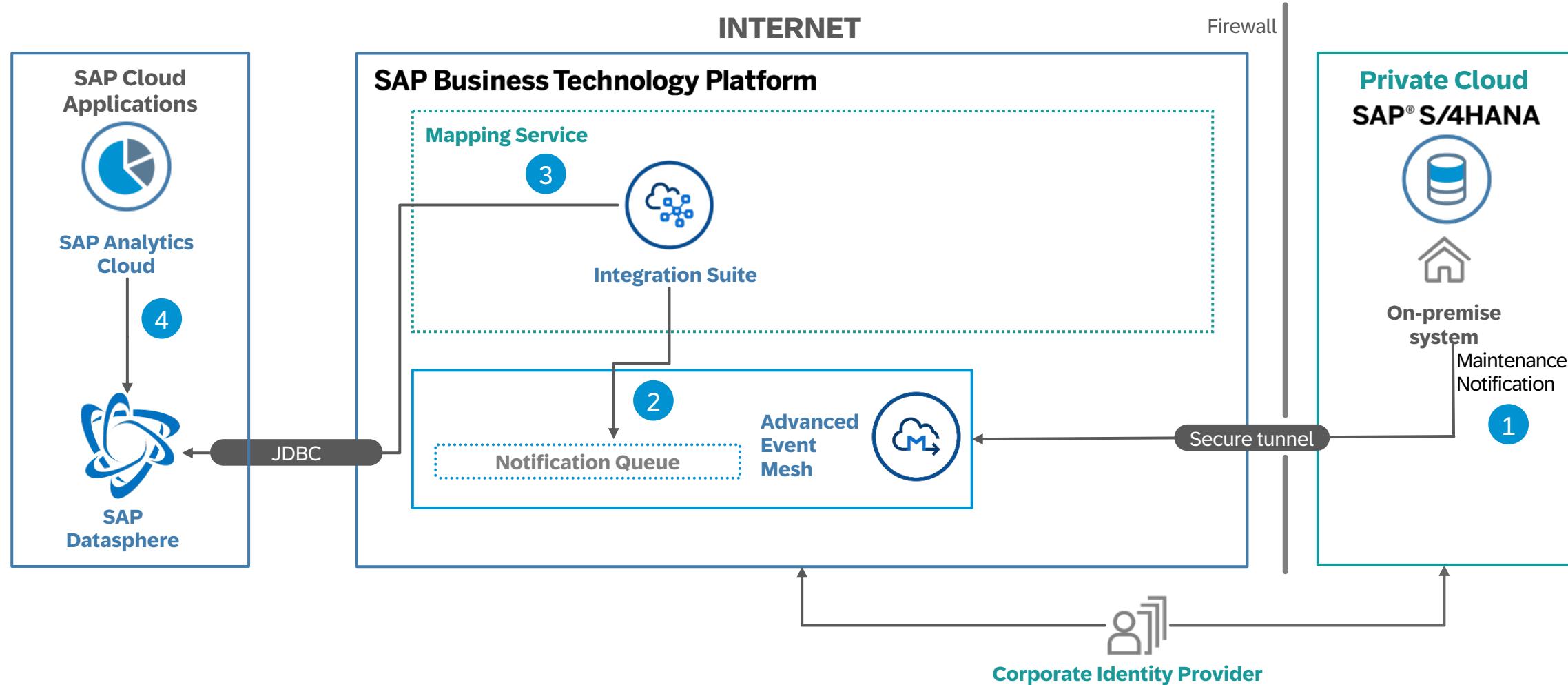


See how customers benefit

Example SAP Business Technology Platform, S/4HANA to 3rd Ticketing System (Maintenance Notification)

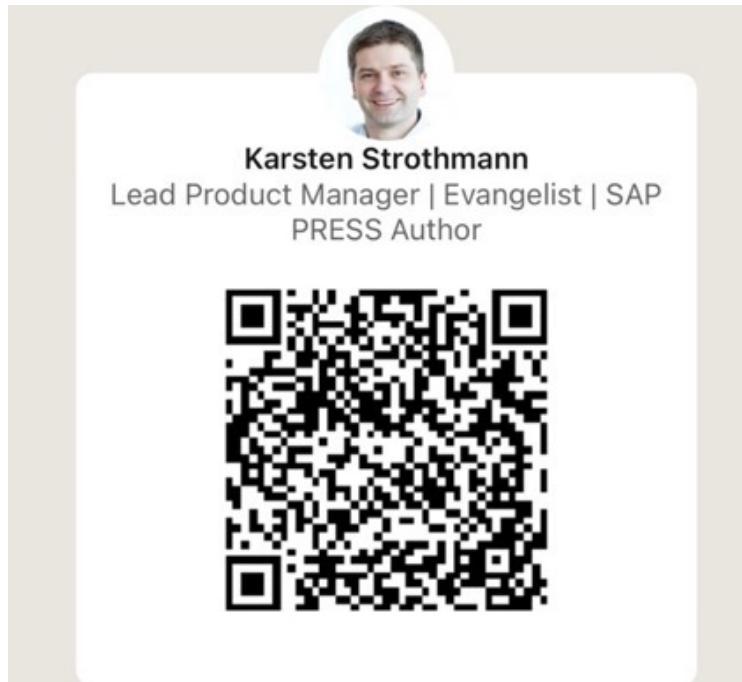


SAP Business Technology Platform, AEM to SAP Analytics Cloud (Maintenance Notification)



Thank You.

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SAP Bring out your best.