

# Operations of SAP Business Technology Platform with SAP Cloud ALM

Evan Stoddard, Senior Product Manager, SAP

Las Vegas

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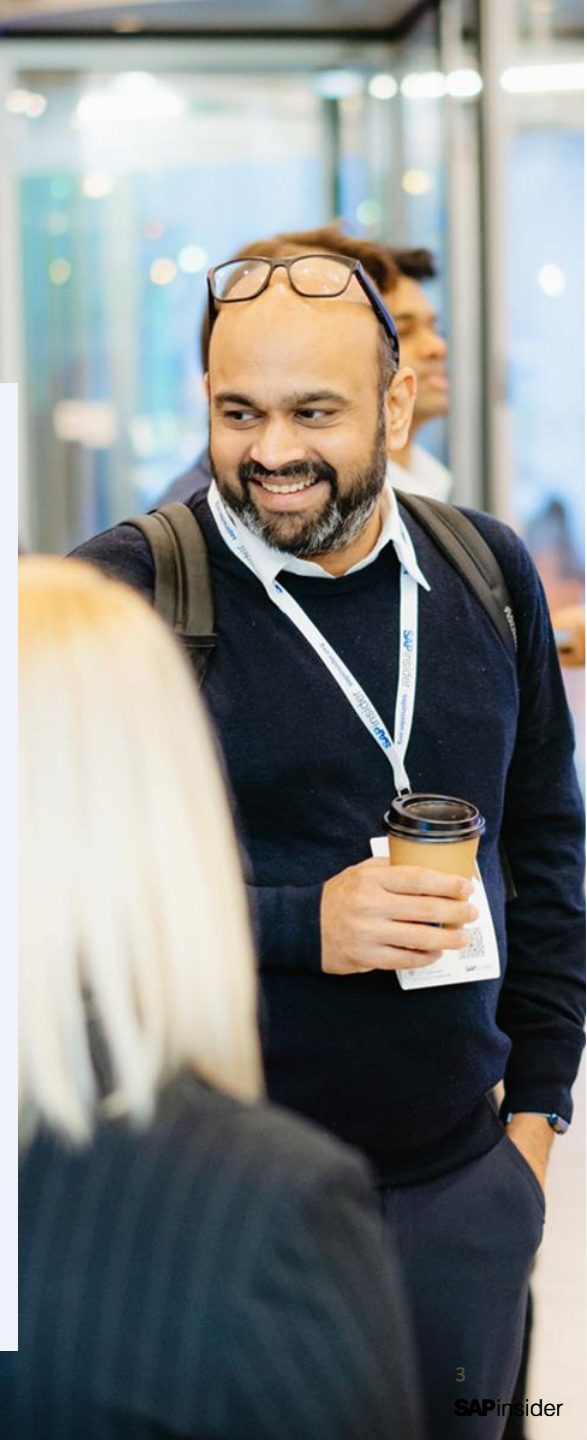
2024

**SAP**insider

# What We'll Cover

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- **SAP Cloud ALM for Operations Overview**
- **OpenTelemetry @ SAP**
- **SAP Cloud ALM - Support for SAP BTP**
- **SAP Cloud ALM - Roadmap for SAP BTP**
- **Wrap-Up**

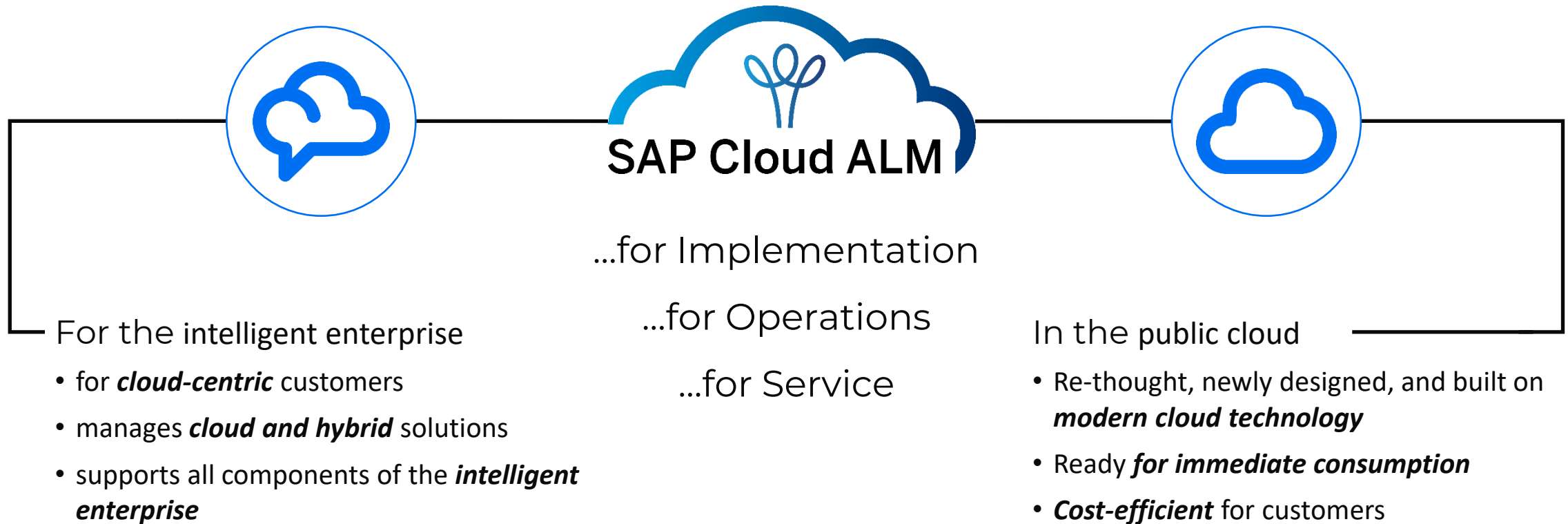


# SAP Cloud ALM - Overview

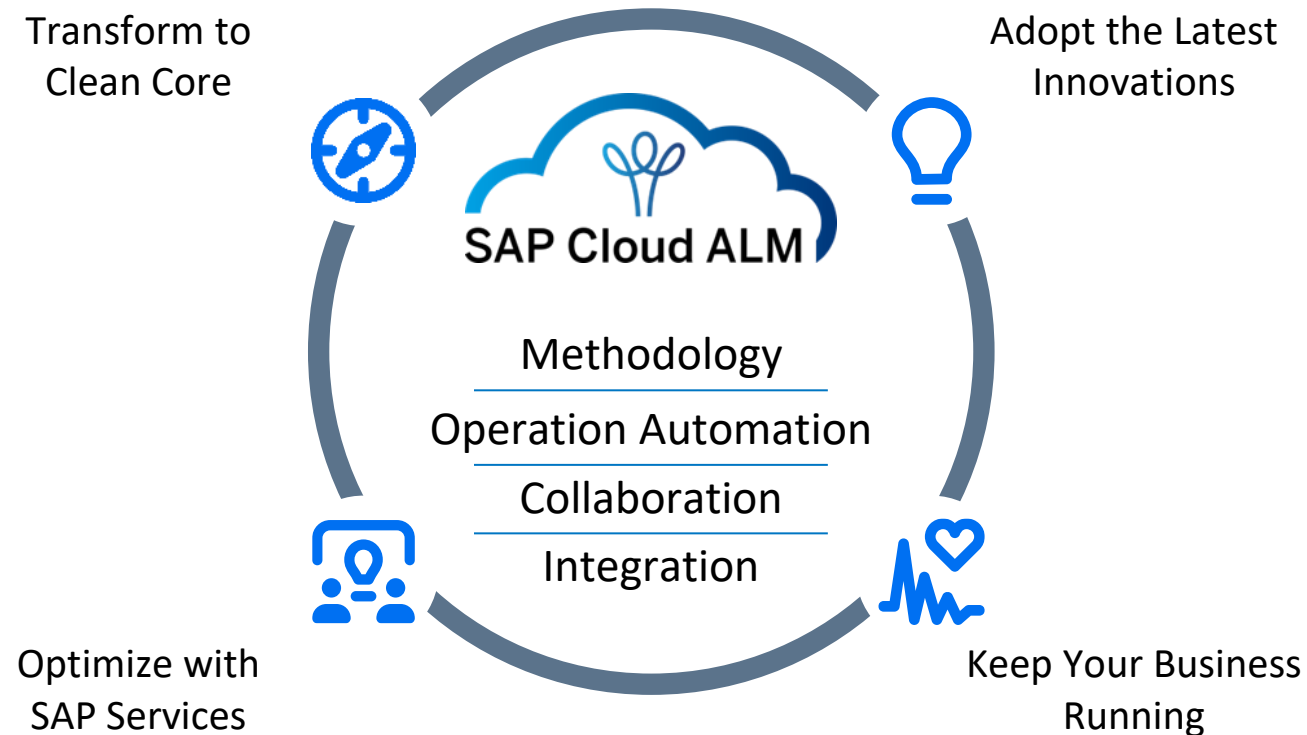
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# SAP Cloud ALM is *cloud-based* Application Lifecycle Management



# SAP Cloud ALM supports your cloud journey



# SAP Cloud ALM helps **keep your business running**

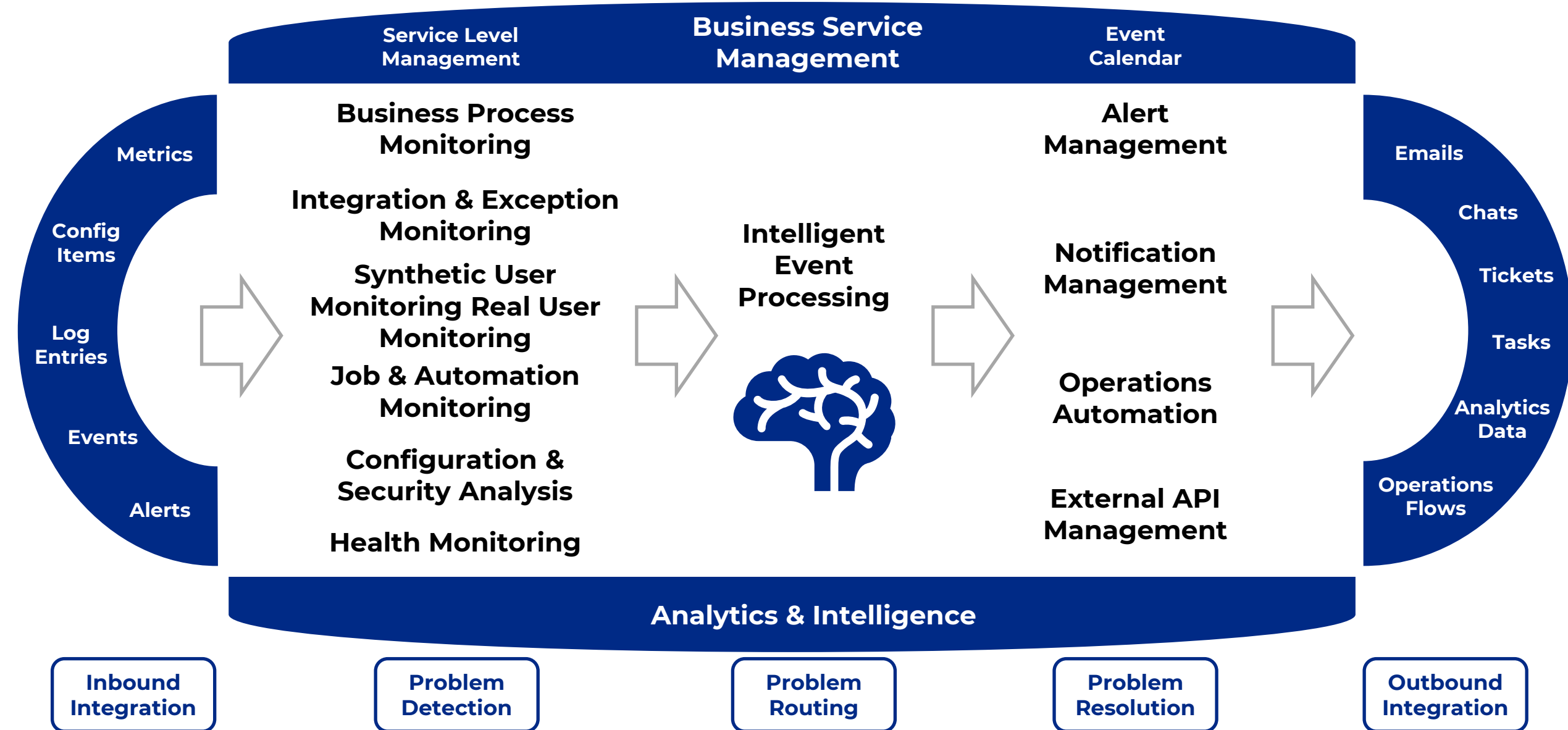
Customer benefits during operations

- **Ensures high performance quality** in all business processes
- **Alerts immediately** with advanced analytics
- **Predicts anomalies early** with machine learning
- **Automates corrective actions** for higher process efficiency
- **Achieves superior SLAs** with transparent reporting



**SAP Cloud ALM drives *business continuity!***

# SAP Cloud ALM for Operations – **Functional Overview**



# SAP Cloud ALM for Operations – Highlights

Around **3 million**  
**alerts** created per  
month

Around **114 million**  
**business process KPIs**  
calculated per month

Around **3 million API**  
**calls** executed per  
month

Around **2 billion interface**  
**calls, events and messages**  
monitored per month

Around **330 million user**  
**activities** monitored per  
month

Around **100 million jobs**  
**and tasks** monitored  
per month

Around **350,000**  
**exceptions** collected per  
month

Around **1,600**  
**live customers** in  
**operations**

Around **100**  
**million events**  
processed per  
month

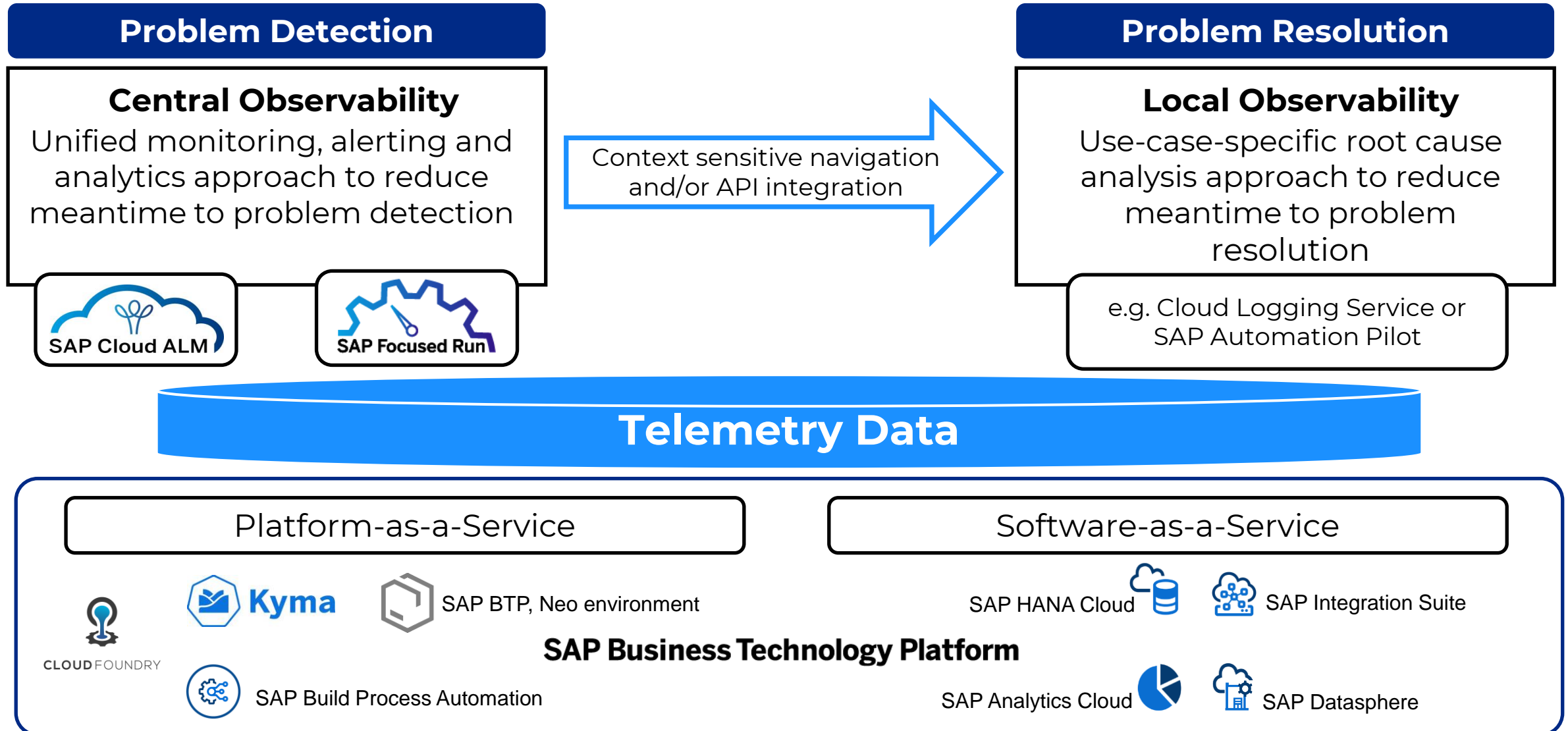
Around **3 billion health**  
**monitoring metrics** collected  
per month

Around **750,000 services and**  
**systems** registered in  
landscape management

Around **600,000**  
**notifications** sent per  
month

# Problem Detection & Problem Resolution for SAP BTP

Reducing mean time to detect and resolve problems



# OpenTelemetry @ SAP

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# OpenTelemetry @ SAP – Goals for Customers, Partners and SAP

## Minimize instrumentation efforts for Customers, Partners and SAP

- Use **standard OpenTelemetry**, whenever possible → Extend standard OpenTelemetry, if necessary
- Use **auto-instrumentation**, whenever possible → Use source code instrumentation, if necessary
- Support all use cases as **standardized** as possible e.g. unified connectivity handling
- Enable **correlation by hybrid approach** of SAP Passport and OpenTelemetry (W3C context)

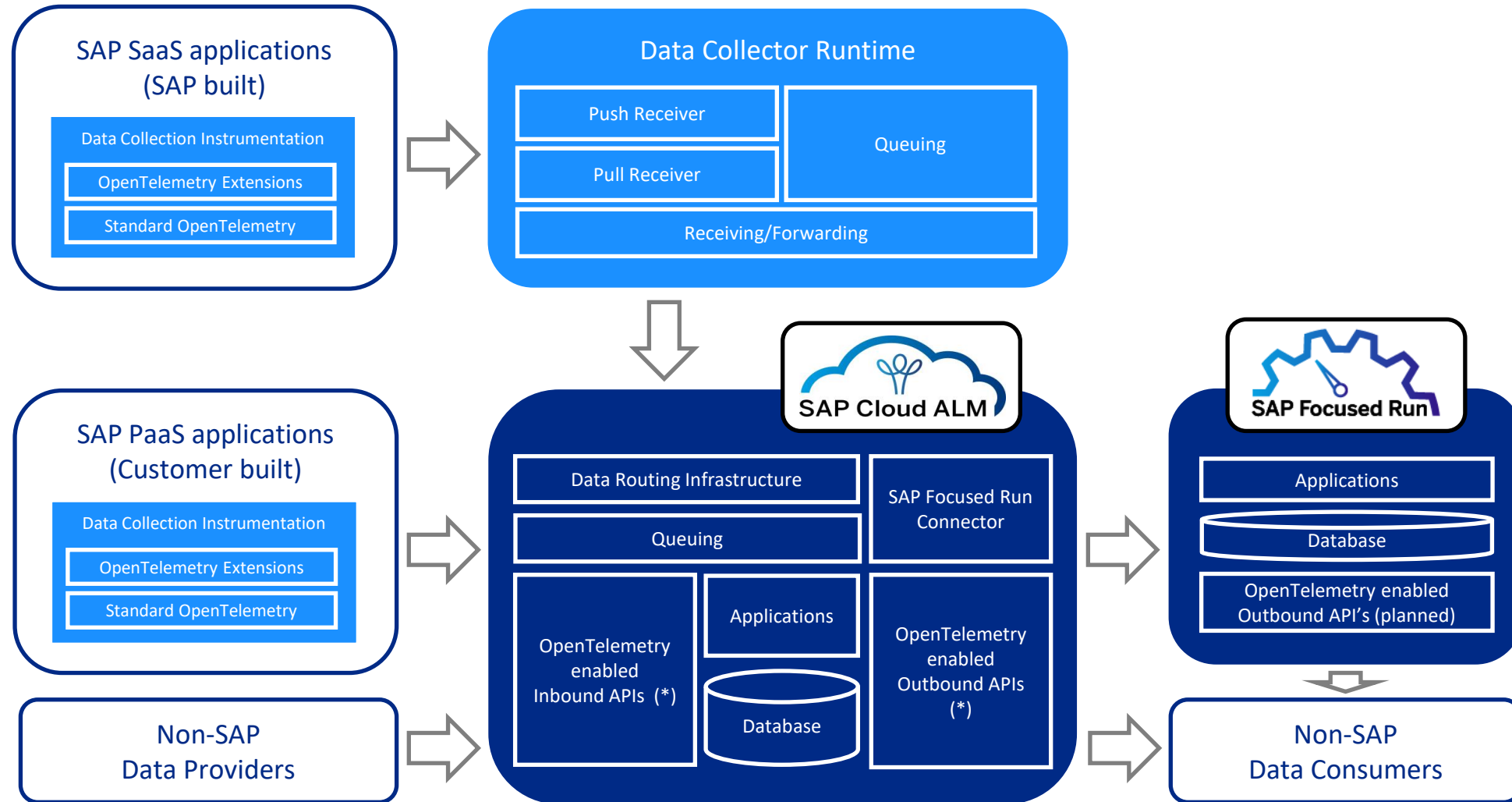
## Minimize connectivity setup efforts for Customers and Partners

- Replace **customer managed connectivity** (tenant-to-tenant) with **SAP managed connectivity** (application-to-application) → **No connectivity setup effort for customer and partners for SAP SaaS services**
- Introduce **unified data collector runtime** for **push based and pull based** data collection

## Enable integration for non-SAP Data Providers and non-SAP Data Consumers

- Retrieve data from **non-SAP data providers via OpenTelemetry** enabled inbound API's
- Expose data to **non-SAP data consumers via OpenTelemetry** enabled outbound API's
- Forward data to **SAP Focused Run**

# OpenTelemetry @ SAP – Customer Facing Observability



(\*) Availability see roadmap

# OpenTelemetry @ SAP - Support of OpenTelemetry Signals

Use Case	Metrics		Logs		Traces	
	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound
Business Process Monitoring	2024	2024	Not planned	Not planned	Not planned	Not planned
Integration Monitoring	2023	Not planned	2024	2024	Not planned	Not planned
Exception Monitoring	2023	Not planned	2023	2023	Not planned	Not planned
Real User Monitoring	2023	2024	Not planned	Not planned	2024	2024
Synthetic User Monitoring	2023	Not planned	Not planned	Not planned	2024	2024
Job & Automation Monitoring	2023	Not planned	2024	2024	Not planned	Not planned
Configuration & Security Analysis	2024	Not planned	2024	2024	Not planned	Not planned
Health Monitoring	2023	2023	2024	2024	Not planned	Not planned
Business Service Management	2023	Not planned	2024	2024	Not planned	Not planned
Intelligent Event Processing	2024	Not planned	2024	2024	Not planned	Not planned

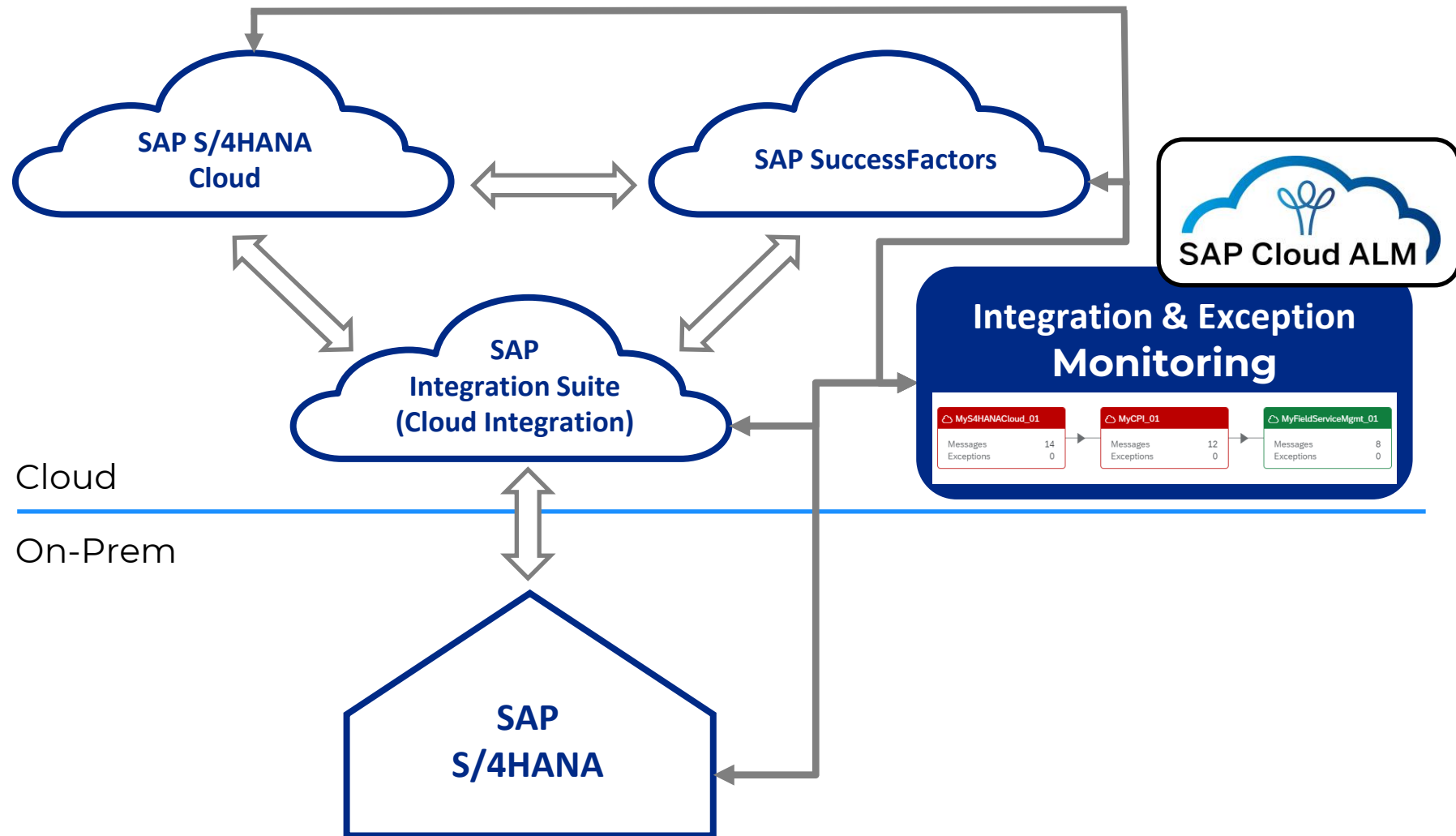
# SAP Cloud ALM Support for SAP BTP

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# Integration & Exception Monitoring

Ensure reliable data exchange between cloud services and systems



# Integration Monitoring for SAP BTP

## SAP Integration Suite Cloud Integration

- Monitoring of messages technically correlated to e2e message flows
- Find more details [here](#)

## SAP Mobile Services

- Monitoring of message send through SAP Mobile Services
- Find more details [here](#)

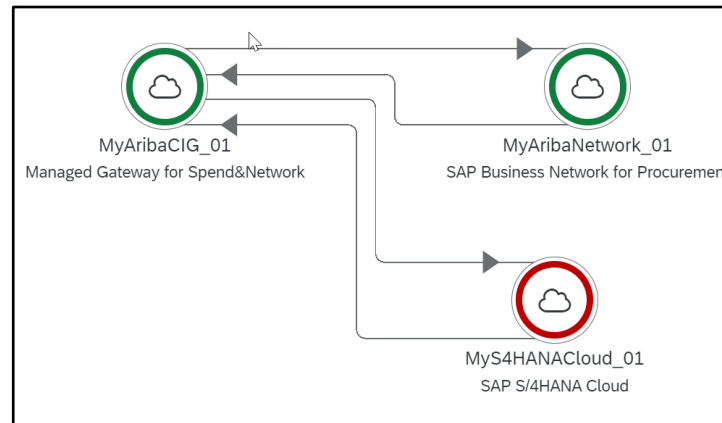
## SAP Event Broker for SAP cloud applications

- Monitoring of events processed via SAP Event Broker
- Find more details [here](#)



## Integration Monitoring

- Unified monitoring of integration artefacts
- Correlation of e2e message flows



## SAP Master Data Integration

- Monitoring of business objects handled by master data integration
- Find more details [here](#)

## SAP Master Data Governance cloud edition

- Monitoring of AIF messages sent to SAP Master Data Governance
- Find more details [here](#)

## SAP Data Intelligence

- Monitoring of messages sent from and to SAP Data Intelligence
- Find more details [here](#)

# Exception Monitoring for SAP BTP

## SAP Analytics Cloud

- Monitoring of exceptions in the activity log, which tracks user activities
- Find more details [here](#)

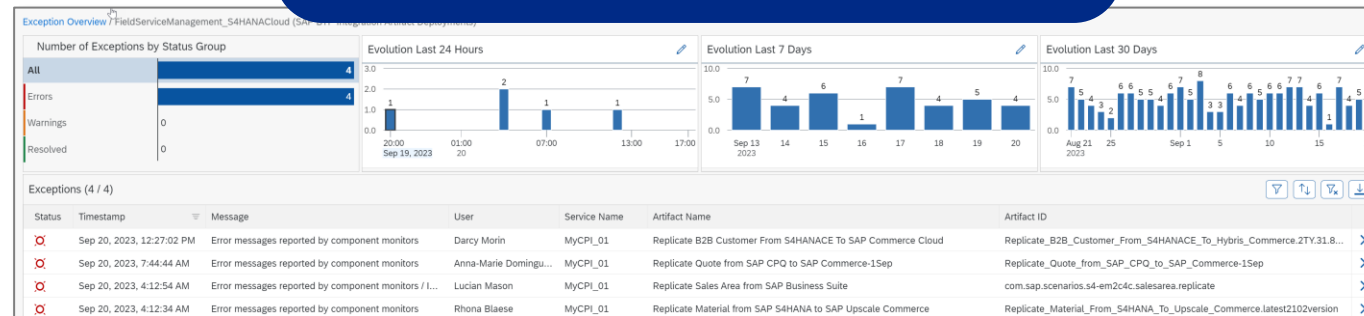


## Exception Monitoring

- Unified monitoring of exceptions
- Visualization of exception details

## SAP Integration Suite Cloud Integration

- Monitoring of exceptions related to integration artifact deployments
- Find more details [here](#)



## SAP BTP, Neo environment (custom built applications)

- Monitoring of exceptions in custom-built java applications
- Find more details [here](#)

## SAP BTP, Cloud Foundry env. (custom built applications)

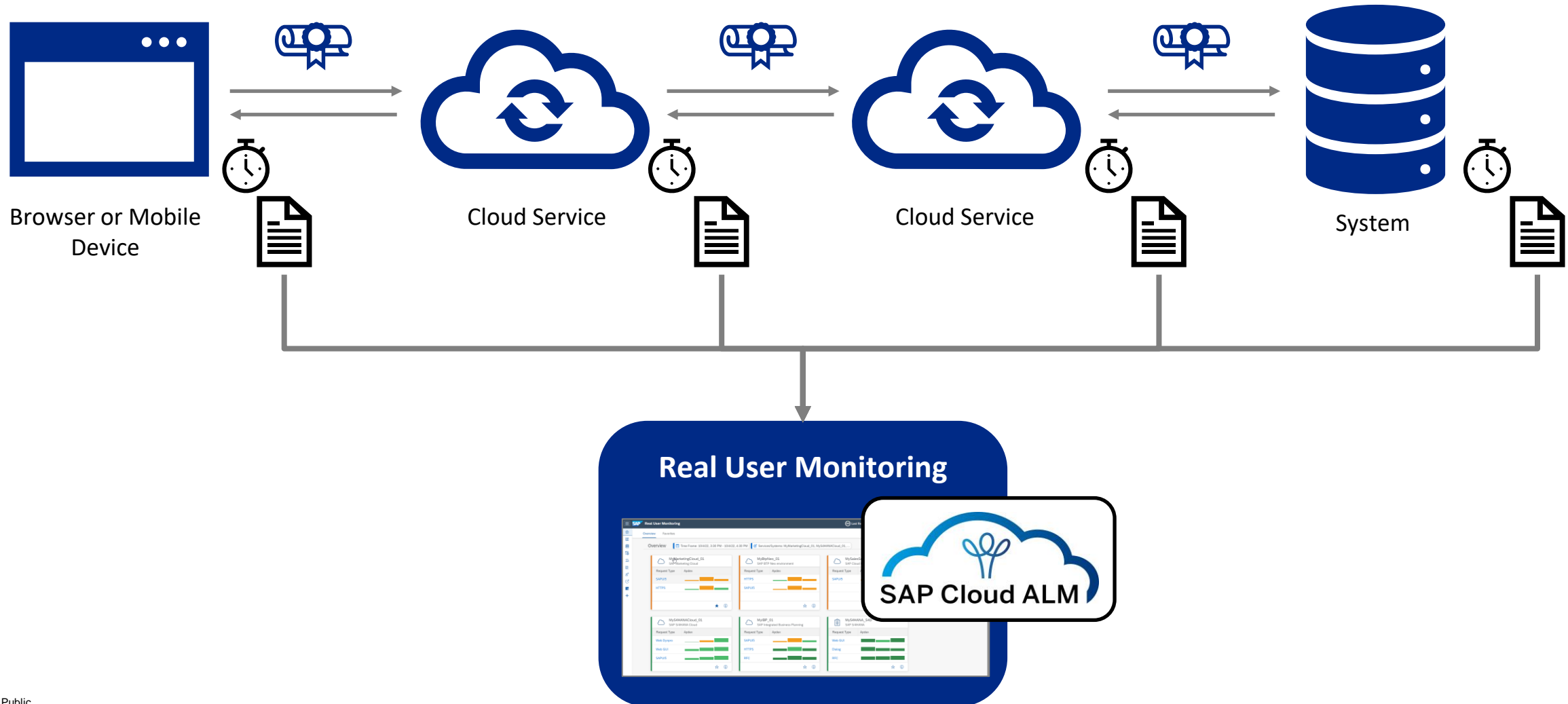
- Monitoring of exceptions in custom-built java applications (OTEL)
- Find more details [here](#)

## SAP BTP, ABAP environment (custom built applications)

- Monitoring of exceptions in custom-built ABAP applications
- Find more details [here](#)

# Real User Monitoring

Understand performance and utilization from the end user perspective

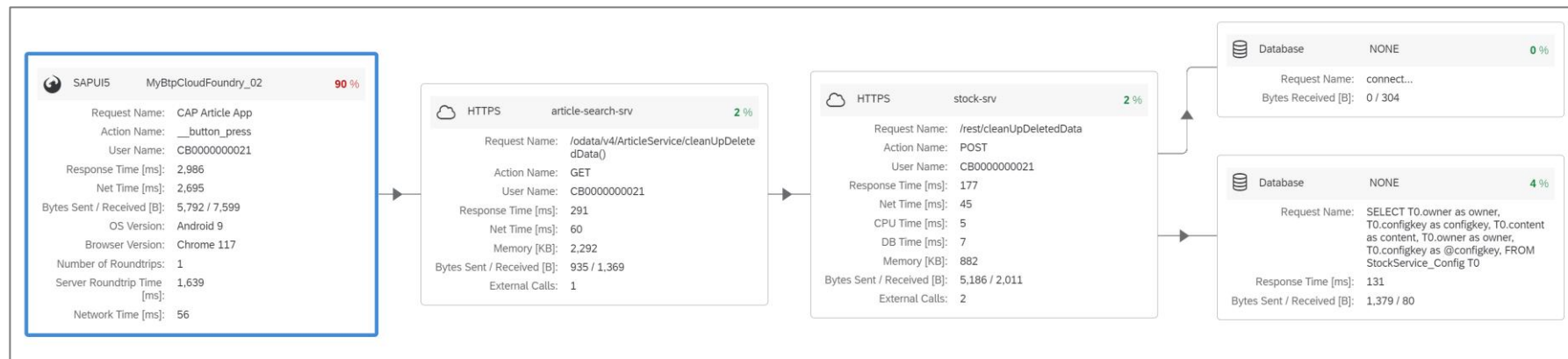


# Real User Monitoring for SAP BTP



## Real User Monitoring

- Unified monitoring of end users from performance, functional and utilization perspective
- Correlation of e2e user requests flow based on single request data



### SAP BTP, Neo environment (custom built applications)

- Monitoring of user experience in custom built java applications
- Find more details [here](#)

### SAP BTP, CF / Kyma env. (custom built applications)

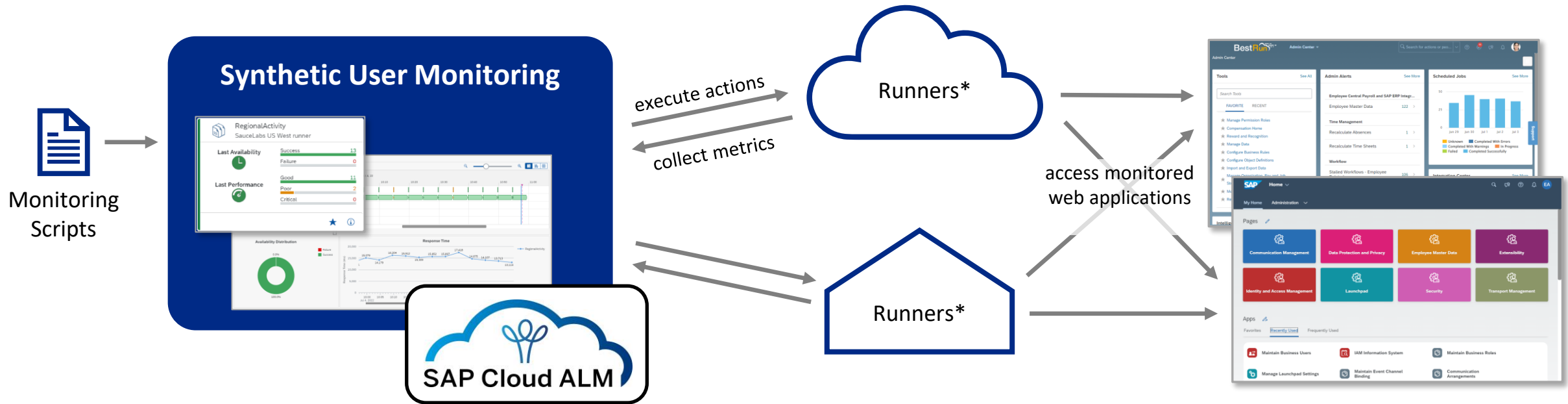
- Monitoring of user experience in custom built java and node.js applications (OTEL)
- Find more details [here](#)

### SAP BTP, ABAP environment (custom built applications)

- Monitoring of user experience in custom built ABAP applications
- Find more details [here](#)

# Synthetic User Monitoring

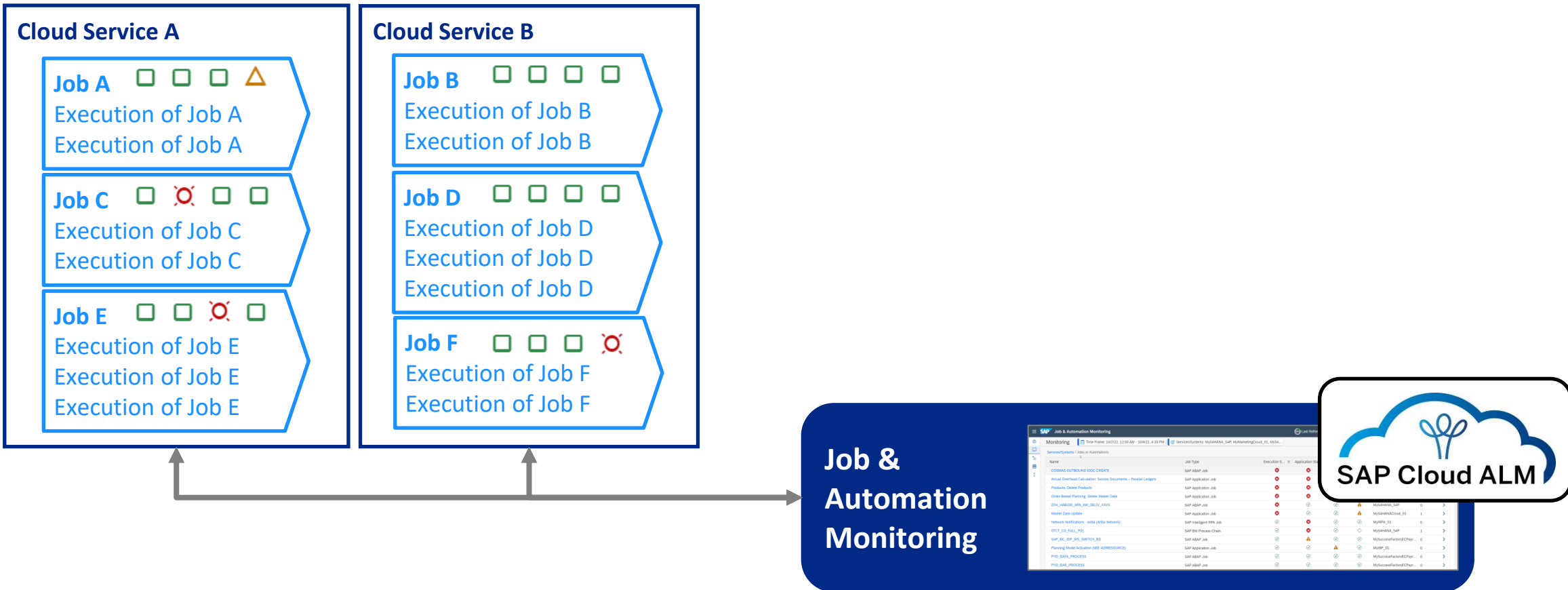
Monitor performance and availability of web applications from the user perspective



Note: Generic functionality which is available for all SAP BTP SaaS and PaaS services.

# Job & Automation Monitoring

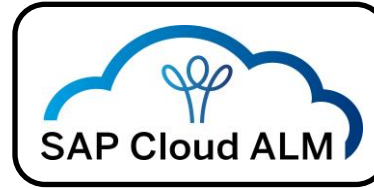
Provide transparency regarding job executions & automated activities



# Job & Automation Monitoring for SAP BTP

## SAP Intelligent RPA

- Monitoring of jobs scheduled in SAP Intelligent RPA
- Find more details [here](#)



## Job & Automation Monitoring

Unified monitoring of jobs and automation tasks

## SAP Build Process Automation

- Monitoring of jobs scheduled in SAP Build Process Automation
- Find more details [here](#)

The screenshot shows the SAP Job & Automation Monitoring web interface. The top header includes the SAP logo, the title "Job & Automation Monitoring", and a "Last Refresh" timestamp of "Sep 20, 2023, 5:50:29 PM". Below the header, there's a navigation bar with "Monitoring" selected, a "Time Frame" of "9/18/23, 5:50 PM - 9/20/23, 5:50 PM", and "Services/Systems: MyBtpCloudFoundry\_01". The main content area displays a table of job executions with columns: Name, Type, Execution Status, Application Status, Start Delay, Run Time, Service/System, and Open Alerts. A note above the table states "Rating is propagated from the list of job executions".

Name	Type	Execution Status	Application Status	Start Delay	Run Time	Service/System	Open Alerts
Products_DeleteProducts	SAP Job Scheduling Service Job	✗	✗	✓	✓	MyBtpCloudFoundry_01	2
Products_UpdateProducts	SAP Job Scheduling Service Job	✗	✗	✓	✓	MyBtpCloudFoundry_01	2
Products_CreateProducts	SAP Job Scheduling Service Job	✓	✓	✓	✓	MyBtpCloudFoundry_01	2

## SAP BTP, CF / Kyma env. (custom built applications)

- Monitoring of jobs scheduled with SAP Job Scheduling Service
- Find more details [here](#)

## SAP BTP, ABAP environment (custom built applications)

- Monitoring of application jobs used in custom built ABAP applications
- Find more details [here](#)

# Configuration & Security Analysis

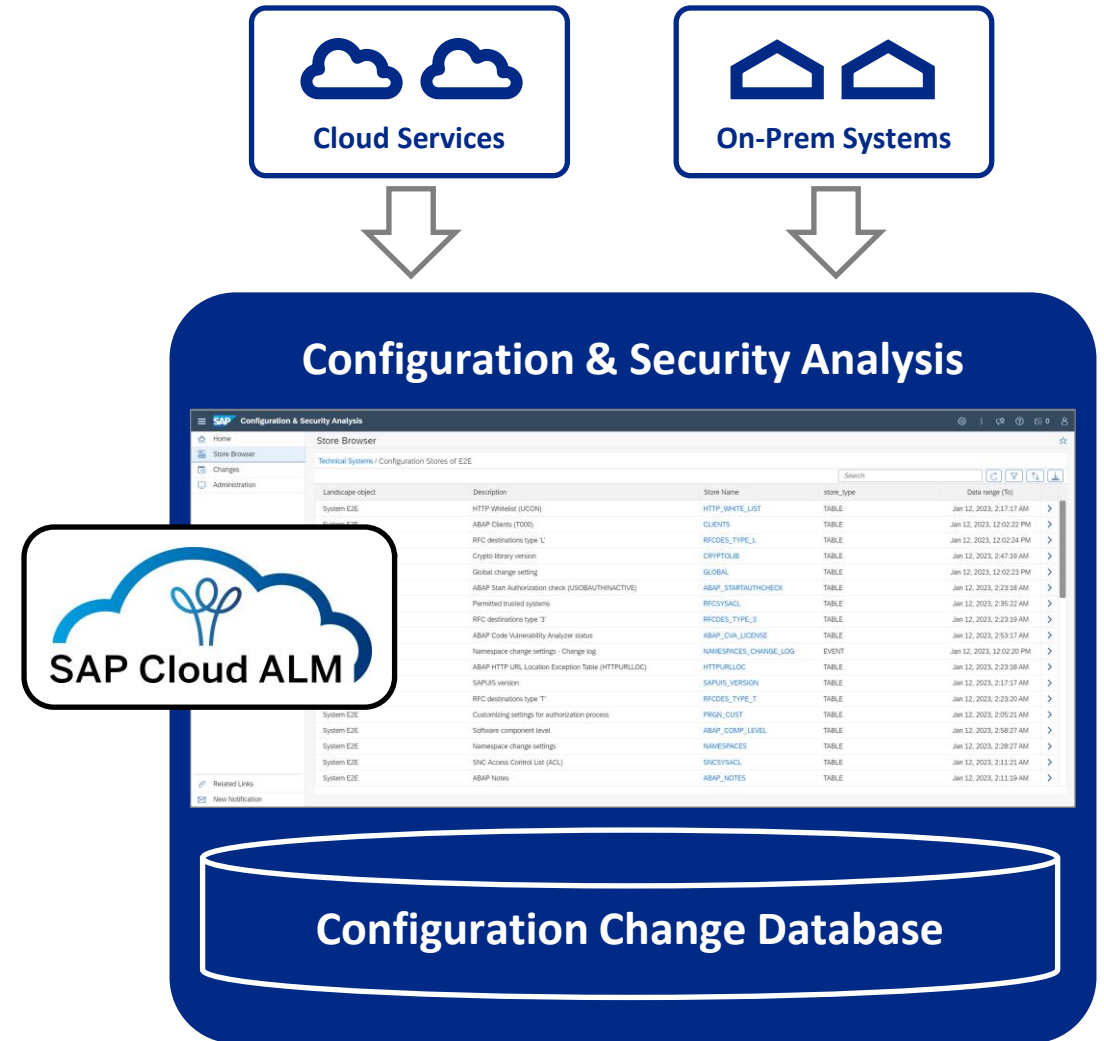
Validate configuration items and software levels automatically and regularly

## *Existing functionality:*

- **Regular collection of configuration items and software levels** into the configuration stores of the Configuration Change Database
- **Store browser** as user interface to **visualize content of configuration stores**
- **Change analysis** for selected scope and timeframe
- **Search capability** for pattern-based browsing into configuration items of selected scope

## *Planned functionality:*

- **Configuration validation** to compare TO-BE with AS-IS situation
- **Embedded alerting** to notify on critical issues
- **Embedded analytics** to analyze trends and root causes for discovered problems



# Configuration & Security Analysis for SAP BTP



## Configuration & Security Analysis

- Regular collection and centralized storage of configuration items and software levels
- Store browser, change analysis and search functionality for mass volume processing

The screenshot shows the 'Store Browser' interface within the 'SAP Configuration & Security Analysis' application. The breadcrumb path is 'Technical Systems / Configuration Stores of IdentityAuthentication02'. A search bar is present above a table of configuration stores. The table has columns for Landscape object, Description, Store Name, Store Type, and Data range (To). Each row includes a right-pointing arrow for further details.

Landscape object	Description	Store Name	Store Type	Data range (To)
SYSTEM_APP Administration Console	System Application Configuration	IAS_SYS_APP_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM
SYSTEM_APP User Profile	System Application Configuration	IAS_SYS_APP_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM
System IdentityAuthentication02	Landscape information	IAS_LANDSCAPE_INFO	TABLE	Dec 18, 2023, 4:02:00 AM
System IdentityAuthentication02	Identity Authentication Configuration	IAS_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM
CHARGED_APP test	Charged Application Configuration	IAS_CHARGED_APP_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM
CHARGED_APP BTP_App2	Charged Application Configuration	IAS_CHARGED_APP_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM
BUNDLED_APP GBaaS	Bundled Application Configuration	IAS_BUNDLED_APP_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM
BUNDLED_APP BTP_App1	Bundled Application Configuration	IAS_BUNDLED_APP_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM
BUNDLED_APP OpenID	Bundled Application Configuration	IAS_BUNDLED_APP_CONFIG	TABLE	Dec 18, 2023, 4:02:00 AM

### Credential Store

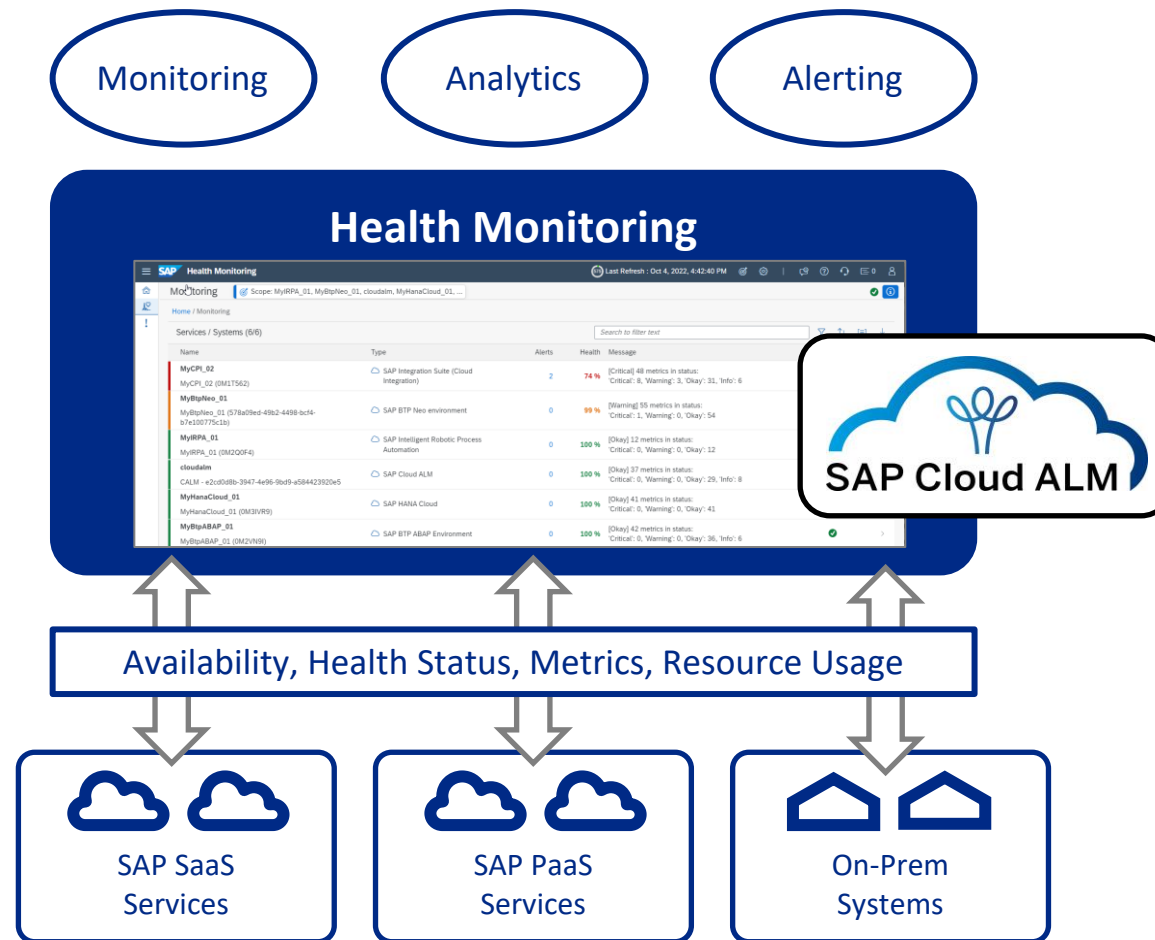
- Monitoring of security relevant configuration items, including recommendations from SAP
- Find more details [here](#)

### Identity Authentication

- Monitoring of security relevant configuration items, including recommendations from SAP
- Find more details [here](#)

# Health Monitoring

Checking the application health of cloud services and systems



# Health Monitoring for SAP BTP

## SAP Integration Suite

Monitoring of technical KPIs in [Cloud Integration](#) and [API Mgmt.](#)

## SAP HANA Cloud

Monitoring of technical KPIs for [SAP HANA Cloud](#)

## SAP Cloud Connector

Monitoring of technical KPIs for [SAP Cloud Connector](#)

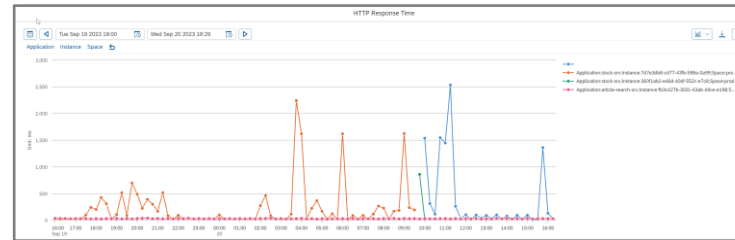
## SAP BTP, Neo environment (custom built applications)

Monitoring of technical KPIs in [custom built java applications](#)



## Health Monitoring

Monitoring of technical KPIs for BTP SaaS and PaaS



## SAP BTP, CF / Kyma env. (custom built applications)

Monitoring of technical KPIs in [custom built java and node.js applications](#) (OTEL)

## SAP Build Process Automation

Monitoring of technical KPIs for [SAP Build Process Automation](#)

## SAP Intelligent RPA

Monitoring of technical KPIs for [SAP Intelligent RPA](#)

## SAP Cloud ALM

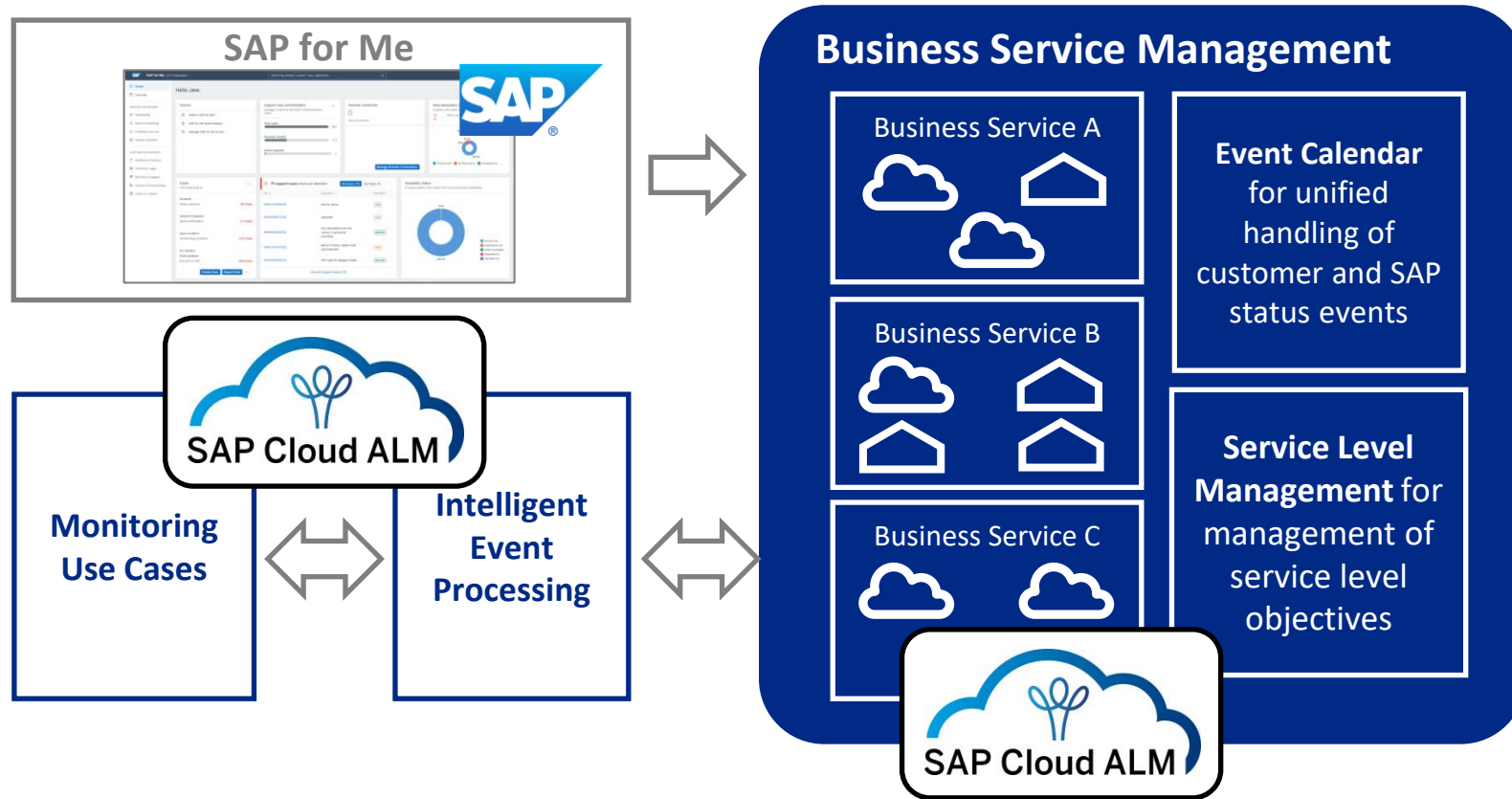
Monitoring of technical KPIs for [SAP Cloud ALM](#)

## SAP BTP, ABAP environment (custom built applications)

Monitoring of technical KPIs in [custom built ABAP applications](#)

# Business Service Management

Expose IT-related information to be understood by *business users*



# Business Service Management for SAP BTP

## Business Service Management

- SAP BTP SaaS and PaaS services can be summarized to business services in SAP Cloud ALM
- SAP initiated maintenance, disruptions, degradations, and communication events as available in SAP for Me are exposed to customers and can be used for customer specific service level management

The screenshot displays the SAP Business Service Management interface. At the top, the 'Event Calendar' shows a timeline from July 26, 2021, to August 8, 2021. Below the calendar, three 'Event Details' panels are shown, each displaying information for a specific event.

**Event Details (Left Panel):**

- Name: Nightly Deployment
- Type: Maintenance
- Source: Customer
- Start Time: Jul 4, 2021, 10:00:00 PM
- End Time: Jul 4, 2021, 11:00:00 PM
- Duration: 1 Hour
- Created By: mathias.bley@sap.com
- Created At: Jun 28, 2021, 12:54:38 PM
- Status: Closed
- Recurrence: Yes
- Description: Apply the latest changes to the DEV environment
- Service Name: SAP BTP Development
- Service Type: Business Service

**Event Details (Middle Panel):**

- Search: mathias.bley@sap.com New Maintenance
- 6/28/21 at 12:54 PM: Apply the latest changes to the DEV environment
- SAP Status Update: 7/4/21 at 9:59 PM. The event status has been set to "In Process".
- SAP Start: 7/4/21 at 9:59 PM. Started: A maintenance event has started for the business service "SAP BTP Development".
- SAP Status Update: 7/4/21 at 10:59 PM. The event status has been set to "Closed".
- SAP Completed: 7/4/21 at 10:59 PM. Completed: A maintenance event has been completed for the business service "SAP BTP Development".

**Event Details (Right Panel):**

- Service Name: SAP BTP Development
- Description: BTP tenants which are used for custom development
- Use Case: BSM
- Service Source: API
- Number of Cloud: 3
- Services:

Note: Generic functionality which is available for all SAP BTP SaaS and PaaS services.

# Demonstration

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Live Demo



# SAP Cloud ALM Roadmap for SAP BTP

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# Roadmap for SAP BTP Integration in SAP Cloud ALM

## SAP BTP applications built by SAP (SaaS Use Cases)

Configuration & Security Analysis of SAP BTP SaaS Service including SAP HANA Cloud (1 <sup>st</sup> wave)	Configuration & Security Analysis of SAP BTP SaaS Service (2 <sup>nd</sup> wave)
Health Monitoring for SAP Integration Suite - Edge Integration Cell	Integration Monitoring for SAP Event Broker for SAP cloud applications
Job & Automation Monitoring for work flows scheduled with SAP Build Process Automation / SAP Workflow Management	Integration Monitoring for SAP Integration Suite - Edge Integration Cell
Health Monitoring for SAP Event Broker for SAP cloud applications	Integration Monitoring for further components of SAP Integration Suite
Job & Automation Monitoring for SAP Data Privacy Integration	Health Monitoring for SAP DataSphere and SAP Analytics Cloud
Enable RUM front end measurement in SAP Workzone Service	Job & Automation Mon. for SAP DataSphere and SAP Analytics Cloud
	Real User Monitoring for SAP Analytics Cloud & SAP Workzone Service

## SAP BTP applications built by customers and partners (PaaS Use Cases)

Exception Monitoring for custom built node.js applications in SAP BTP Cloud Foundry and SAP BTP Kyma	More metrics for java and node.js for Health Monitoring
Forwarding of Real User Monitoring, Exception Monitoring & Health Monitoring data to SAP Focused Run	Integration of Exception Monitoring with Application Logging Service
Integration of Exception Monitoring with Cloud Logging Service	Optimized integration of SAP Job Scheduling Service with Job & Automation Monitoring

**Planned in H1 2024**

**Envisioned**

# SAP Cloud ALM – Content Roadmap for SAP BTP

Currently available			Planned	
Integration Monitoring	SAP Integration Suite - Cloud Integration SAP Master Data Integration SAP Event Broker	SAP Master Data Governance Cloud edition SAP Mobile Services SAP Data Intelligence	SAP Integration Suite - Edge Integration Cell Enhancements for SAP Event Broker SAP Integration Suite - SAP Event Mesh and SAP Advanced Event Mesh	
Exception Monitoring	SAP Analytics Cloud SAP BTP, ABAP - PaaS CAP BTP, NEO - PaaS SAP BTP, CF / Kyma - PaaS (java)		SAP BTP, CF / Kyma - PaaS (node.js) Integration with SAP Cloud Logging Service Integration with SAP Application Logging Service	
Real User Monitoring	SAP BTP, ABAP - PaaS SAP BTP, NEO - PaaS SAP BTP, CF & Kyma - PaaS (java/node.js)		SAP Analytics Cloud SAP Workzone Service	
Job & Automation Monitoring	SAP BTP, ABAP - PaaS SAP BTP, CF & Kyma - PaaS (java/node.js) SAP Intelligent RPA SAP Build PA (Jobs)		SAP Build PA (Processes) SAP Data Privacy Management	SAP DataSphere SAP Analytics Cloud
Configuration & Security Analysis	SAP BTP, Credential Store SAP BTP, Identity Authentication		SAP BTP, Mobile Service SAP BTP, Destination Service SAP HANA Cloud	
Health Monitoring	SAP BTP, ABAP - PaaS SAP BTP, NEO - PaaS SAP BTP, CF & Kyma - PaaS (java/node.js) SAP Build PA (Jobs)	SAP Intelligent RPA SAP Integration Suite (CI, APIM) SAP Cloud Connector SAP HANA Cloud & BTP Neo DB	SAP Edge Integration Cell SAP Event Broker	SAP DataSphere SAP Analytics Cloud

# SAP Customer Engagement Initiative

## Monitoring of *customer applications* built with SAP BTP

Started

### Project Scope

- SAP provides with the standard operations platform SAP Cloud ALM and SAP Focused Run coverage for the majority of SAP products and services from operations and monitoring perspective
- SAP developed a new data collection approach based on open standards
- We like to learn from customers, which monitoring content they are interested in and how this content shall be visualized

### Why Participate?

- Gain early insights into plans for SAP solutions
- Discuss planned functionality
- Influence development and provide feedback and ideas
- Guide customer through the implementation of the new approach and check with them the results from technical and semantical perspective within our tools

### Planned outcome

- Review of existing BTP monitoring use cases and content
- Identify gaps and define new monitoring content
- Collect feedback to improve BTP monitoring content as well as monitoring applications
- Establish continuous feedback channel

### Planned activities

- Kick-off Call
- Initial deep dive session (for all participants)
- Participants dependent workshops / deep dive sessions
- Participants dependent hands-on support (if requested)
- Regular cadence calls (for all participants)
- Closing Call

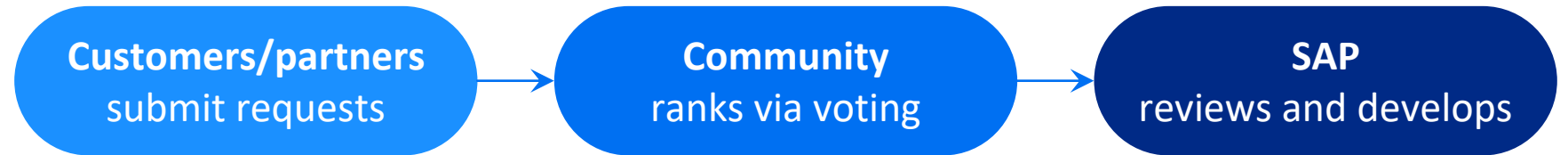


[SAP Customer Influence Opportunity](#)



# How can I submit my innovation requests?

## SAP Continuous Influence for SAP Cloud ALM



**Implementation**

*Available for you!*



**Operations**

# Wrap Up

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# SAP Cloud ALM – start your journey today!

Included with your SAP cloud subscription

## Learn



Browse presentations and watch recorded demos on the SAP Cloud ALM [home page](#).

## Try



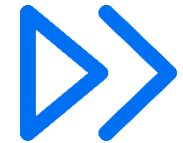
Access the [public demo system](#).

## Request



Request SAP Cloud ALM [here](#). It's usually available within 15 minutes!  
Just do a few [set-up](#) steps.

## Use



[Invite](#) your SAP Cloud ALM users.  
Network with other customers in the [ALM Community](#).

Easily adopt SAP Cloud ALM!

# Where to Find More Information

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## Product information

- [SAP Cloud ALM overview](#)
- [SAP Cloud ALM for Operations home page](#)
- [SAP Cloud ALM for Operations Expert Portal](#)
- [OpenTelemetry@SAP](#)
- [Operations for SAP BTP with SAP Cloud ALM](#)
- [SAP Cloud ALM Extended to Cover SAP BTP \(interview\)](#)

## Onboarding

- [How to request SAP Cloud ALM?](#)
- [How to set up SAP Cloud ALM?](#)
- [How to set up managed components \(like SAP BTP\)?](#)

## Stay current

- [Events](#)
- [Newsletter](#)
- [Community](#)

## Additional information

- [Documentation](#)
- [Supported Solutions](#)
- [Product Road Map](#)

## Training

- Introducing SAP Cloud ALM ([Start](#))
- SAP Cloud ALM for Operations ([Start](#))
- [SAP Cloud ALM for Operations YouTube channel](#)

# Join our webinars to get the latest news and ask your questions!



2<sup>nd</sup> Wednesday of every month  
Focus topic: ALM  
Target group: ALM practitioners in EMEA / NA

SAP Community Call for ALM

Host:  
Ben Schneider

A purple rectangular banner with a diagonal split. The top-left portion is a darker purple, and the bottom-right portion is a lighter magenta. The text 'SAP Community Call for ALM' is in white. A circular inset on the right shows a man speaking into a microphone. Below the inset is the text 'Host: Ben Schneider'.

SAP Community Call for ALM APJ edition

Host:  
Mohammed Suhaib

A blue rectangular banner with a diagonal split. The top-left portion is a darker blue, and the bottom-right portion is a lighter sky blue. The text 'SAP Community Call for ALM APJ edition' is in white. A circular inset on the right shows a man in a suit. Below the inset is the text 'Host: Mohammed Suhaib'.

4<sup>th</sup> Wednesday of every month  
Focus topic: ALM  
Target group: ALM practitioners in APJ

1<sup>st</sup> Wednesday of every month  
Focus topic: SAP Cloud ALM  
Target group: ALM practitioners

SAP Community Call for SAP Cloud ALM Experts

Host:  
Tonja Kehrer

A light teal rectangular banner with a diagonal split. The top-left portion is a darker teal, and the bottom-right portion is a lighter mint green. The text 'SAP Community Call for SAP Cloud ALM Experts' is in dark teal. A circular inset on the right shows a woman with glasses. Below the inset is the text 'Host: Tonja Kehrer'.

SAP Community Call for ALM Partners

Host:  
David Birkenbach

An orange rectangular banner with a diagonal split. The top-left portion is a darker orange, and the bottom-right portion is a lighter yellow-orange. The text 'SAP Community Call for ALM Partners' is in white. A circular inset on the right shows a man in a suit. Below the inset is the text 'Host: David Birkenbach'.

Once per quarter  
Focus topics around ALM  
Target group: ALM partners

# Key Points to Take Home

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- [Provision](#) your SAP Cloud ALM tenant (if not done)
- Check out the [SAP Cloud ALM home page](#) for details on operations capabilities
- Review the [Supported Solutions](#) page for your SAP BTP services
- Use the [Setup Managed Components](#) page to guide you through the process for defining your SAP BTP services
- Enable your monitoring scenarios, including follow-on actions from alerts
- Check the Supported Solutions and [Product Road Map](#) regularly for updates on features and content
- Join the [ALM Community](#) and learn from your peers!

# Thank you! Any Questions?

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**Evan Stoddard**

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[Linkedin.com](#)

Please remember to complete  
your session evaluation.



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