

# SAP Community Call for ALM August 16, 2023

CXS Customer Communications and Relations, SAP SE

**PUBLIC** 



#### **Disclaimer**

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. Except for your obligation to protect confidential information, this presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or any related document, or to develop or release any functionality mentioned therein.

This presentation, or any related document and SAP's strategy and possible future developments, products and or platforms directions and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this presentation is not a commitment, promise or legal obligation to deliver any material, code or functionality. This presentation is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. This presentation is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this presentation, except if such damages were caused by SAP's intentional or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

# Introduction



# **Hosts, Speakers & Background Experts**



John Krakowski



Evan Stoddard



Janko Budzisch



Tonja Kehrer



Cay Rademann



Andrea Schuhmann

# The Application Lifecycle Management Product Portfolio of SAP







## SAP Community Call for ALM: Agenda for August 16, 2023

Welcome and Introduction

**ALM Community News** 

#### Focus topics:

Operations for customer-built SAP BTP CF applications with SAP Cloud ALM

Interactive Poll

**Upcoming Events and Webinars** 

Q&A

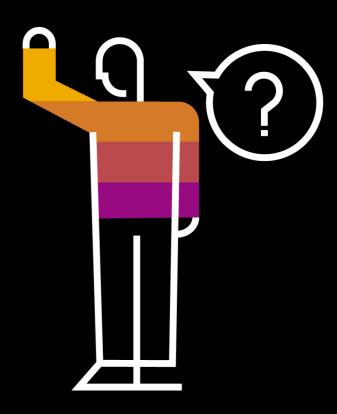


Please use the Q&A tool in Zoom to ask your questions also during the presentation!

# Ask you questions!

#### Please ask your questions!

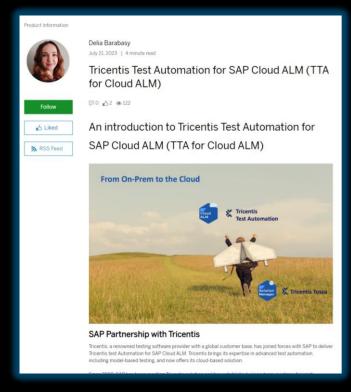
Use the Q&A panel in the Zoom webinar to ask your questions.



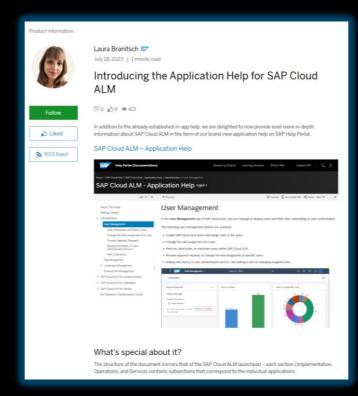
# **ALM Community News**



### **ALM Community News**



Tricentis Test Automation for SAP Cloud ALM (TTA for Cloud ALM)



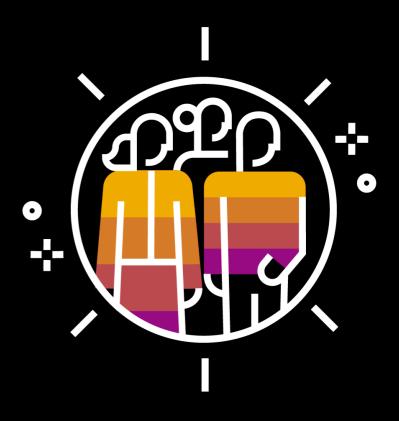
Introducing the Application Help for SAP Cloud ALM



How to Manage SAP S/4HANA
Cloud Upgrade 2308 in SAP
Cloud ALM

# **Community News**

- 1. Join the ALM Community
- Follow the tags
  SAP Cloud ALM, SAP Solution Manager, SAP
  Focused Run
- 3. Ask your questions to peers and experts!



# Focus Topic:

# Operations for customer-built SAP BTP CF applications with SAP Cloud ALM



## **Agenda**

SAP Cloud ALM – Overview

SAP Cloud ALM – Open Telemetry @ SAP

SAP Cloud ALM – Available Use Cases

- Exception Monitoring for SAP BTP CF PaaS (java)
- Real User Monitoring for SAP CF BTP PaaS (java / node.js)
- Job & Automation Monitoring for SAP BTP CF PaaS (java)
- Health Monitoring for SAP BTP CF PaaS (java / node.js)

SAP Cloud ALM – Roadmap & Rollout

# SAP Cloud ALM Overview



# SAP Cloud ALM for Operations – Value Proposition

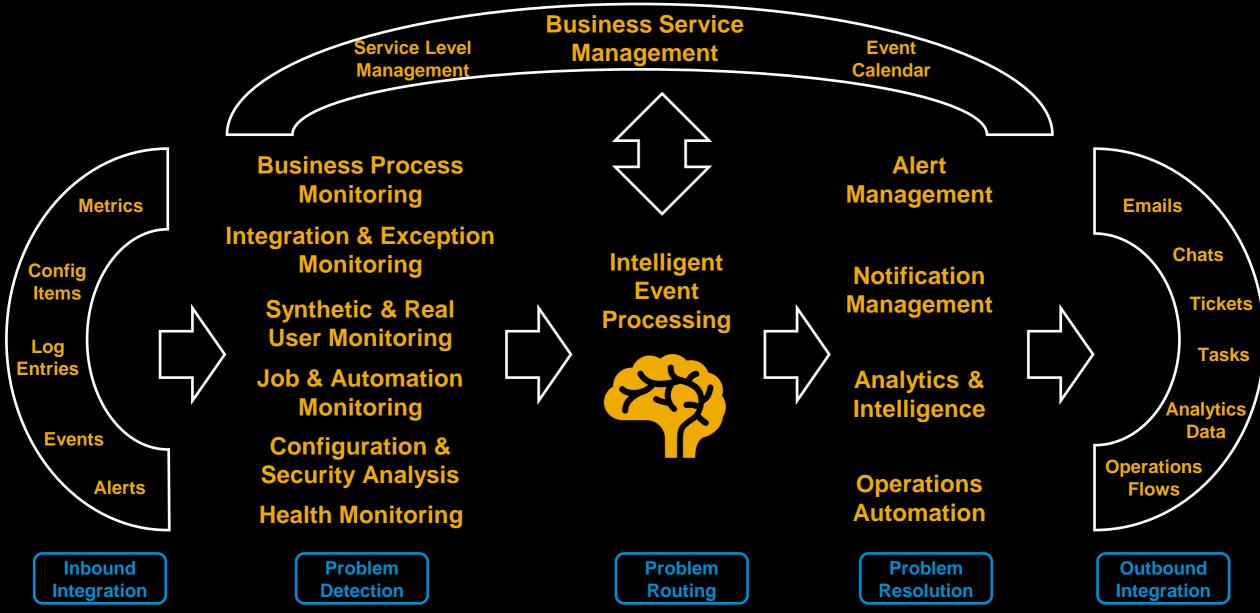
Ensures business continuity - Keeps the lights on - Increases operations efficiency - Predicts critical situations - Provides status events for business services - Reduces TCO

- SAP Cloud ALM empowers customers to understand health of SAP business solutions:
  - Provides full stack monitoring and alerting covering business processes, integration, users, jobs & tasks, applications, and health of services and systems
  - Allows to conduct root cause analysis on different levels via embedded dashboards
  - Acts as collaboration platform between LOB and IT



- SAP Cloud ALM enables operations automation by integrating existing automation solutions
- SAP Cloud ALM introduces intelligent event processing as central routing infrastructure to enable event correlation and intelligent alerting
- SAP Cloud ALM provides transparency regarding the health of business services including event calendar and service level management

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



# SAP Cloud ALM Open Telemetry @ SAP



#### Next Generation - Data Collection Infrastructure - Goals

#### Provide sufficient instrumentation support -> Addressed by Data Collection Instrumentation

- Minimize instrumentation efforts at customer and SAP side
- Use standard Open Telemetry, whenever possible > Extend standard Open Telemetry, whenever necessary
- Support all use cases as standardized as possible e.g. connectivity handling
- Enable end-to-end correlation by hybrid approach of SAP Passport and Open Telemetry based correlation

#### Provide unified data collection runtime -> Addressed by Data Collector Runtime

- Unify runtime for push based and pull based data collection
- Provide unified approach for customer facing as well as SAP internal use cases
- Replace customer managed connectivity with SAP managed connectivity for SaaS scenarios
- Increase quality of data delivery by efficient queuing

#### Provide unified approach for data routing and data exchange -> Addressed by SAP Cloud ALM

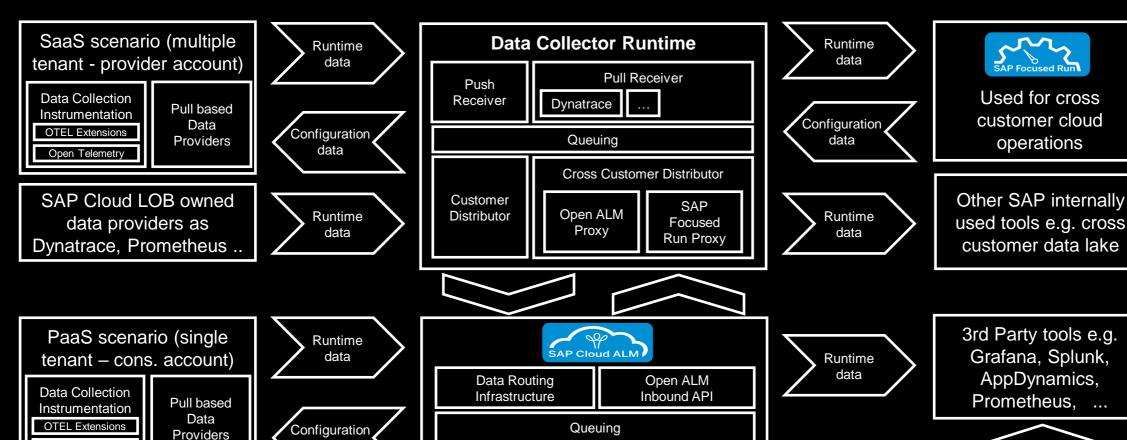
- Enable dynamic routing of data to corresponding SAP Cloud ALM tenant across data centers
- Embrace openness regarding data exchange:
  - Import data from 3<sup>rd</sup> party services/systems based on Open Telemetry based inbound API's
  - Export data to 3<sup>rd</sup> party services/systems based on Open Telemetry based outbound API's
  - Forward data to SAP Focused Run
- Increase quality of data delivery by efficient queuing

#### **Producer**

# Routing

#### Consumer

operations



3<sup>rd</sup> party data providers for non-SAP products e.g. data for salesforce.com

Open Telemetry

Runtime data

data

**CALM Customer Tenant CALM Database** SAP Focused Run Proxy Open ALM Outbound API 3rd Party tools e.g. Grafana, Splunk, AppDynamics, Prometheus, ...

Runtime Open ALM Outbound API data Configuration

data

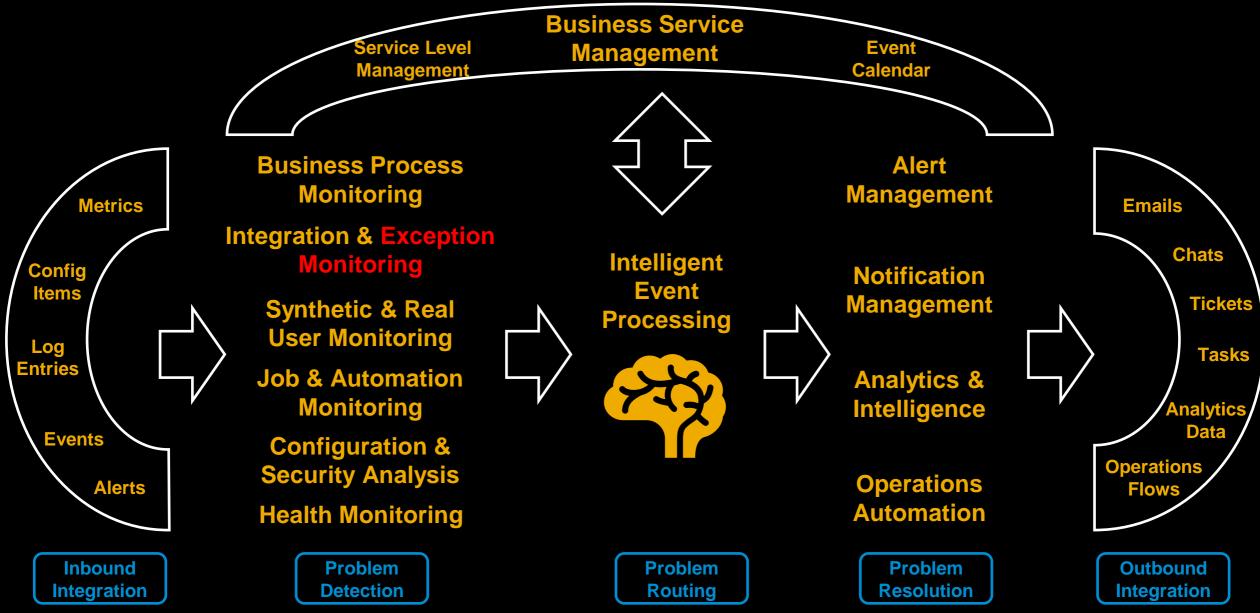
# **Planned Support for Open Telemetry Signals**

Use Case	Metrics		Logs		Traces	
	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound
Business Process Monitoring	Yes (2024)	Yes (2024)	No	No	No	No
Integration Monitoring	Yes (2024)	No	Yes (2023)	Yes (2024)	No	No
Exception Monitoring	Yes (2024)	No	Yes (2023)	Yes (2023)	No	No
Real User Monitoring	Yes (2023)	Yes (2024)	No	No	Yes (2023)	Yes (2023)
Synthetic User Monitoring	Yes (2024)	No	No	No	Yes (2024)	Yes (2024)
Job & Automation Monitoring	Yes (2024)	No	Yes (2023)	Yes (2024)	No	No
Configuration & Security Analysis	No	No	Yes (2023)	Yes (2024)	No	No
Health Monitoring	Yes (2023)	Yes (2023)	No	Yes (2024)	No	No
Business Service Management	Yes (2024)	No	Yes (2023)	Yes (2024)	No	No
Intelligent Event Processing	No	No	Yes (2024)	Yes (2024)	No	No

# SAP Cloud ALM Available Use Cases



# SAP Cloud ALM for Operations – Functional Overview



### **Exception Monitoring for SAP BTP CF PaaS - Overview**

#### **Objective**

Exceptions/errors retrieved from logs of custom-built SAP BTP CF application are transferred to Exception Monitoring in SAP Cloud ALM or SAP Focused Run for central processing as E2E monitoring, event & alert management and exposing data to external consumers.

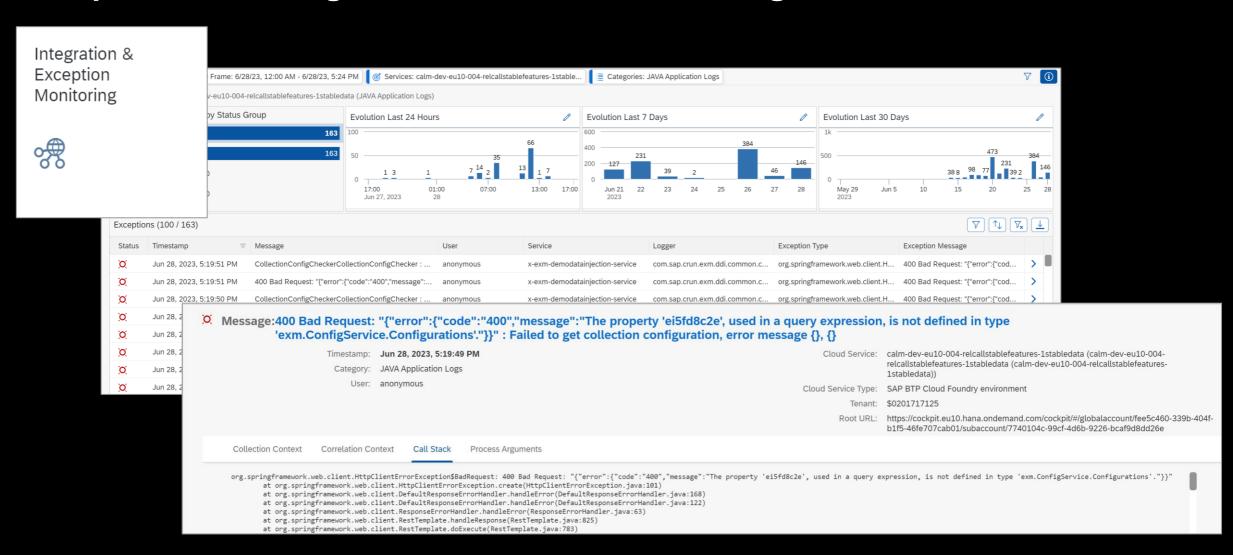
#### Scope

In scope are custom-built java applications based on SAP BTP CF using a standard logging API's as Log4J. Instrumentation is based on standard Open Telemetry. The monitored logs contain information as timestamp, application name, correlation information and error message. Support for SAP BTP CF node.js is planned based on Open Telemetry community implementation.

#### **Benefits**

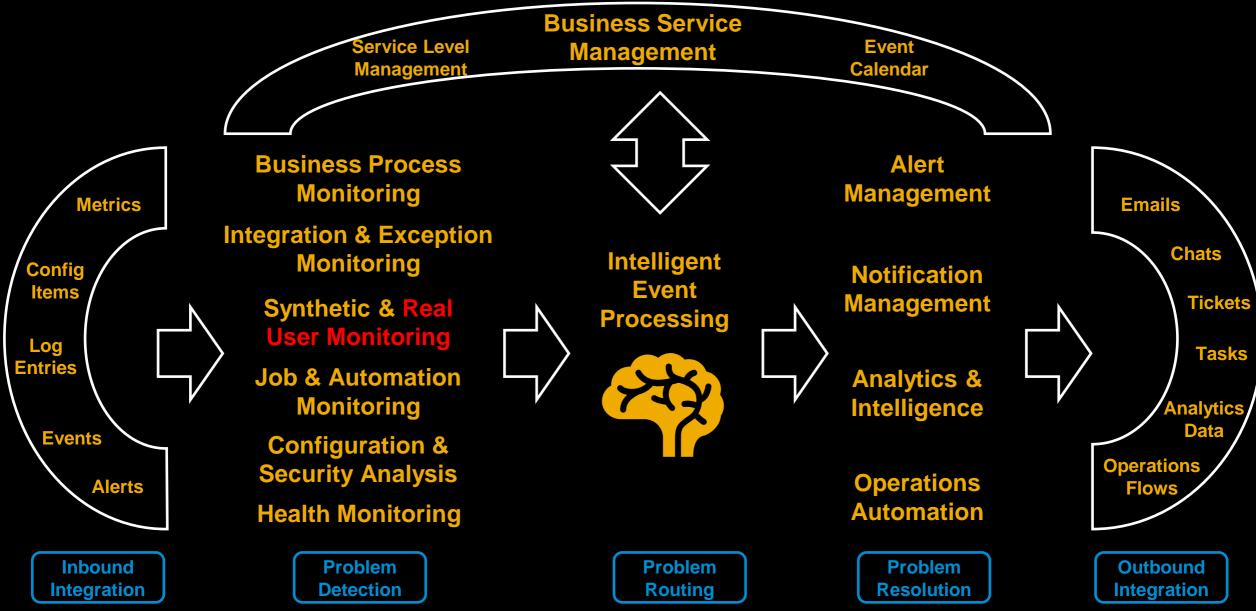
- Minimal implementation efforts for developers by using Data Collection Instrumentation (DCI)
  library including Open Telemetry and auto-instrumentation
- Minimal configuration efforts by connecting all managed customer tenants to one end point provided by Data Routing Infrastructure (DRI)
- Minimal runtime efforts by avoiding buffering and queuing in the application by using of DCI (fireand-forget)

# **Exception Monitoring for SAP BTP CF PaaS - Usage**



Example: Exception Monitoring in SAP Cloud ALM for custom-built application in SAP BTP CF Java

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



# Real User Monitoring for SAP BTP CF PaaS - Overview

#### **Objective**

Performance and usage data retrieved from customer built SAP BTP application are transferred to Real User Monitoring in SAP Cloud ALM or SAP Focused Run for correlation for central processing as E2E monitoring, event & alert management and exposing data to external consumers.

#### Scope

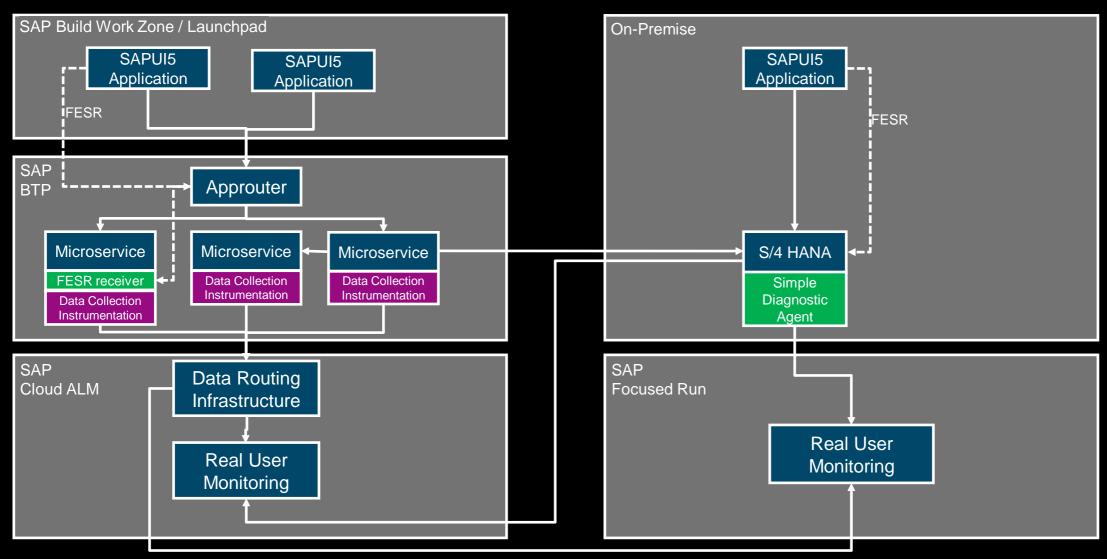
Two types of information will be provided for java and node.js based custom-built BTP applications:

- Front end measurements: Experienced response times measured by the SAPUI5 framework and exposed via so-called Frontend Statistic Records (FESR)
- Back end measurements: Experienced response times of incoming and outgoing requests

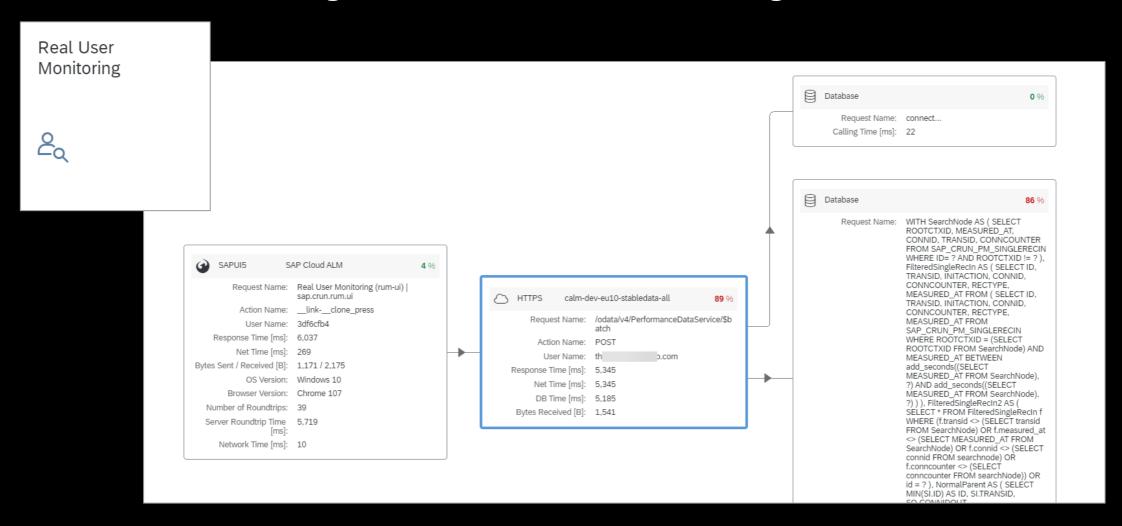
#### **Benefits**

- Minimal implementation efforts for developers by using Data Collection Instrumentation (DCI)
  library including Open Telemetry and auto-instrumentation (no need to measure by your-self)
- Minimal configuration efforts by connecting all managed customer tenants to one end point provided by Data Routing Infrastructure (DRI)
- Minimal runtime efforts by avoiding buffering and queuing in the application by using of DCI (fireand-forget) including correlation with other data sources (mapping between OTEL and SAP PP)

# Real User Monitoring for SAP BTP CF PaaS – Data flow

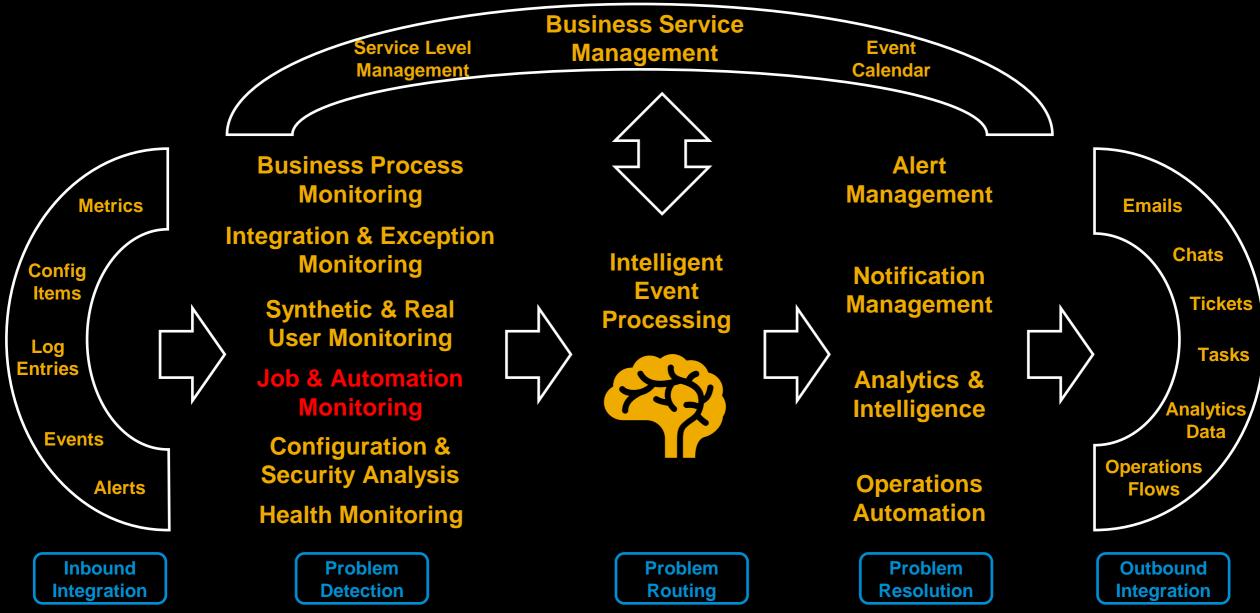


# Real User Monitoring for SAP BTP CF PaaS - Usage



Example: Real User Monitoring in SAP Cloud ALM for custom-built SAP BTP CF Java application with access to SAP HANA Cloud

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



## Job & Automation Monitoring for SAP BTP CF PaaS - Overview

#### **Objective**

Job configuration and runtime data for jobs scheduled with SAP BTP Job Scheduling service are retrieved from customer built SAP BTP application and transferred to SAP Cloud ALM or SAP Focused Run for central processing as E2E monitoring, event & alert management and exposing data to external consumers.

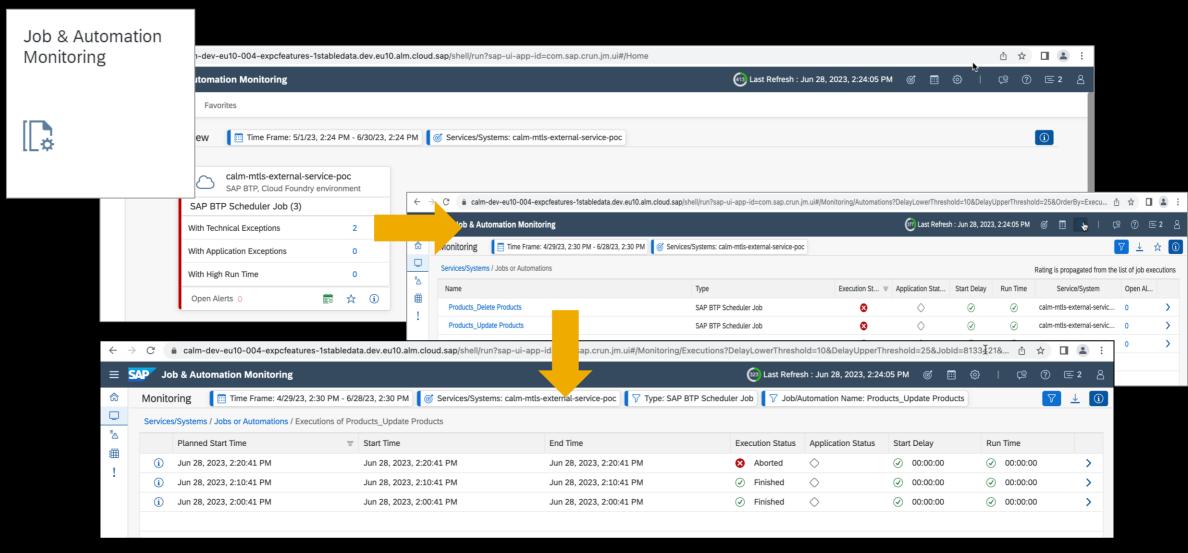
#### Scope

In scope are custom-built applications based on SAP BTP CF Java. Job configuration data is sent, when new jobs are scheduled in SAP BTP Job Scheduling service. Job runtime data is sent, when new information is available. Support for custom-built SAP BTP CF node.js applications is planned as subsequent step.

#### **Benefits**

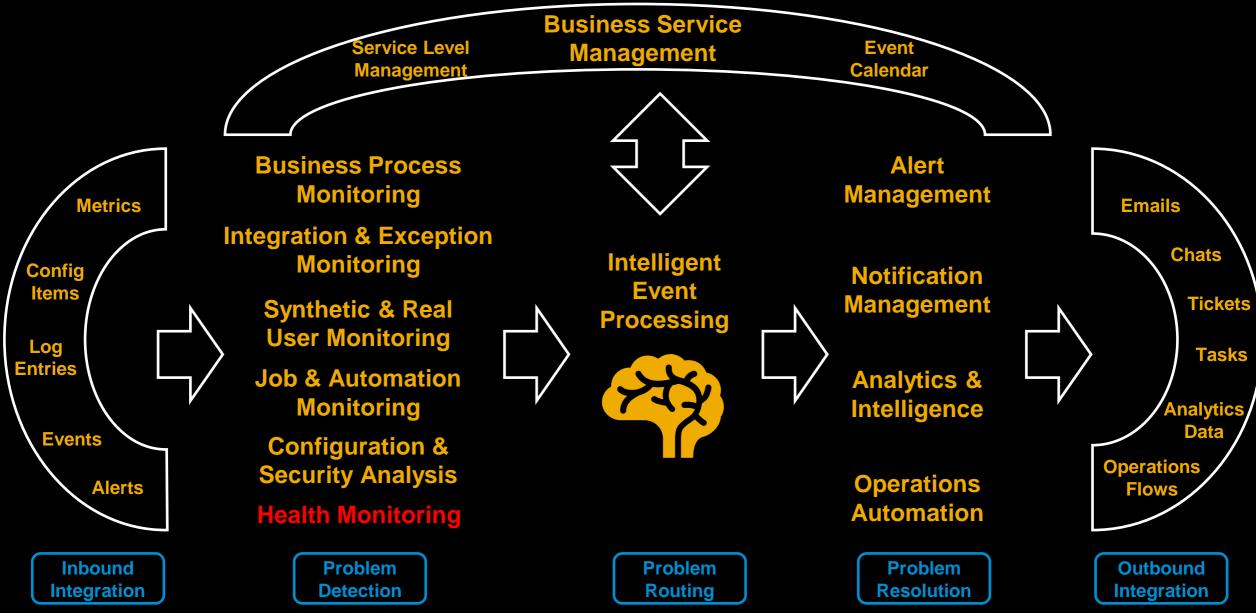
- Minimal implementation efforts for developers by using Data Collection Instrumentation (DCI) library including Open Telemetry and minimal instrumentation effort.
- Minimal configuration efforts by connecting all managed customer tenants to one end point provided by Data Routing Infrastructure (DRI)
- Minimal runtime efforts by avoiding buffering and queuing in the application by using of DCI (fire-and-forget)

# Job & Automation Monitoring for SAP BTP CF PaaS - Usage



Example: Job & Automation Monitoring in SAP Cloud ALM for custom-built SAP BTP CF PaaS Java using SAP BTP Job Scheduling service

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



### Health Monitoring for SAP BTP CF PaaS - Overview

#### **Objective**

Health metrics retrieved from customer built SAP BTP application are transferred to SAP Cloud ALM or SAP Focused Run for central processing as E2E monitoring, event & alert management and exposing data to external consumers.

#### Scope

For SAP BTP Java and node.js applications metrics are pushed to Health Monitoring every minute. All health monitoring metrics will contain the following information: space, application name and host name.

#### **Benefits**

- Minimal implementation efforts for developers by using Data Collection Instrumentation
   (DCI) library including Open Telemetry and auto-instrumentation (no need to measure by app)
- Minimal configuration efforts by connecting all managed customer tenants to one end point provided by Data Routing Infrastructure (DRI)
- Minimal runtime efforts by avoiding buffering and queuing in the application by using of DCI (fire-and-forget)

### **Health Monitoring for SAP BTP CF PaaS - Content**

The following metrics are transferred for customer built **SAP BTP CF Java:** 

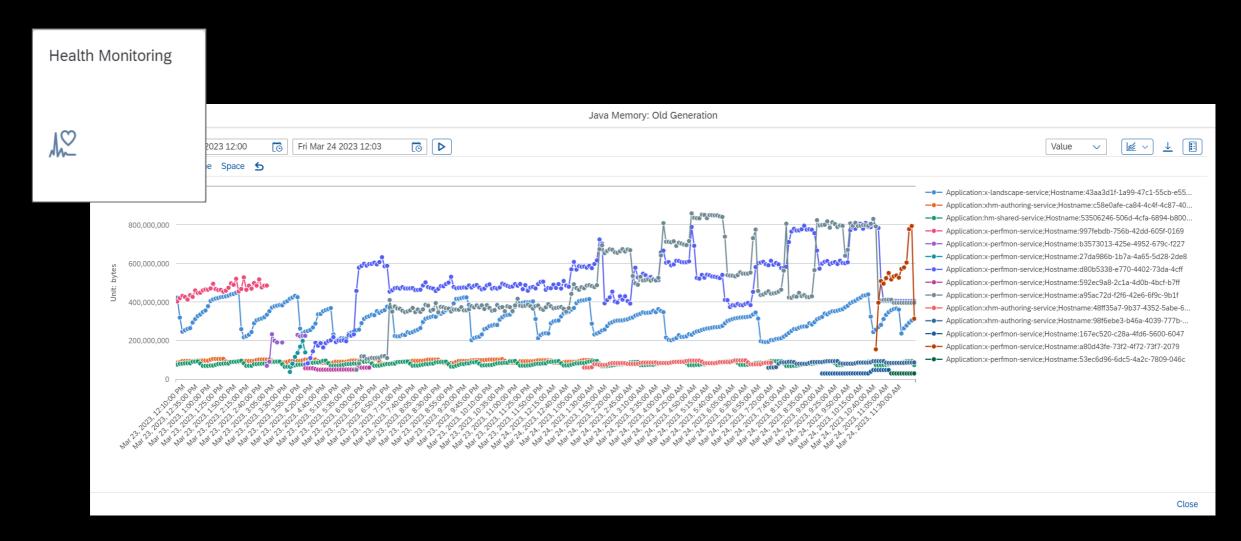
- CPU Utilization
- CPU Load Average
- Disk Utilization
- Java Garbage Collection Time
- Number of Java live threads
- Java Memory: Old Generation
- Java Memory: Eden Space
- Java Memory: Tenured Space
- Hikari Pool: Active Connections
- Hikari Pool: Queued Connections
- Database Connections

The following metrics are transferred for customer built **SAP BTP CF node.js:** 

- CPU Utilization
- CPU Load Average
- Disk Utilization
- Memory Utilization

Remark: The current scope should be considered as a starting point further. Further metrics will be provided based on customer feedback.

# Health Monitoring for SAP BTP CF PaaS - Usage



Example: Java Memory Utilization for several SAP BTP CF Java customer built applications for the last 24 hours

# SAP Cloud ALM Roadmap & Rollout



## **Roadmap for Next Generation – Data Collection Infrastructure**

SaaS Use Cases (instrumentation to be done by SAP)

Infrastructure Readiness PUSH communication for SaaS use case

IM for SAP Subscription Billing in SAP Cloud ALM

Infrastructure Readiness PULL communication for SaaS use case

IM, EM and RUM for several SAP SaaS applications in SAP Focused Run 4.0 FP02

List of monitoring/analysis use cases with acronyms:

BM - Business Process Monitoring RUM - Real User Monitoring

IM – Integration Monitoring JAM – Job & Automation Monitoring

EM – Exception Monitoring CSA – Configuration & Security Analysis

SUM – Synthetic User Monitoring HM – Health Monitoring

IM, RUM, CSA and HM integration for further SAP SaaS applications in SAP Cloud ALM

RUM for Ariba (pull based approach with Dynatrace as data provider) in SAP Cloud ALM

IM, RUM, CSA and HM integration for further SAP SaaS applications in SAP Cloud ALM

JAM for SAP SaaS applications using SAP BTP Job Scheduling Service in SAP Cloud ALM

PaaS Use Cases (instrumentation to be done by customers)

Infrastructure Readiness PUSH communication for PaaS use case

HM and RUM for SAP BTP CF Java in SAP Cloud ALM EM for SAP BTP CF Java in SAP Cloud ALM

HM and RUM for SAP BTP CF node.js in SAP Cloud ALM

JAM for SAP BTP CF Java in SAP Cloud ALM

HM and RUM for SAP BTP CF Java and node.js in SAP Focused Run 4.0 FP01 EM for SAP BTP CF in SAP Focused Run 4.0 FP02

EM and JAM for SAP BTP CF node.js in SAP Cloud ALM

**Support for SAP BTP Kyma** 

Q1 2023

Q2 2023

Q3 2023

Q4 2023

## Instrumentation for Next Generation – Data Collection Infrastructure

**Prerequisites** 

- The cloud application to be monitored may consist of several micro services and run on SAP BTP Cloud Foundry.
- At least one application handling Front-end Statistical Records (FESR) requests must exist (only relevant for RUM)

**Supported Types** 

Programming Language

Front-end

CAP and custom built apps

Java and Node.js

SAP UI5

```
mta.yaml

- name: calmpoc-srv

type: nodejs

path: gen/srv

properties:

SAP_CALM_SERVICE_NAME: lcap-poc

SAP_CALM_DCI_LOG_LEVEL: info

SAP_CALM_FESR_LOG_LEVEL: info

OTEL_RESOURCE_ATTRIBUTES: account=lcap-poc

NODE_ARGS: -r @sap/xotel-agent-ext-js/dist/common/tracer
```

```
EXPLORER
                                   JS server.js X
CALM-POC
                                    srv > JS server.is > ...
                                          const cds = require("@sap/cds");
.settings
                                          const fesr = require("@sap/fesr-to-otel-js");
.vscode
                                          cds.on("bootstrap", (app) => {
> build
                                               console.log("bootstrap, register fesr endpoint");
> db
                                               fesr.registerFesrEndpoint(app);
V SIV
> external
                                          module.exports = cds.server:
> lib
JS LCAPApplicationService.is
JS server.is
```

Landing in Expert Portal: Next Generation – Data Collection Infrastructure

© 2023 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC

# **SAP Customer Engagement Initiative** Monitoring of customer applications built with SAP BTP



### **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 to 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





# Thank you.

### **Contact information:**

Janko Budzisch Chief Product Owner janko.budzisch@sap.com

Stefan Lahr Chief Solution Owner <a href="mailto:stefan.lahr@sap.com">stefan.lahr@sap.com</a>

SAP Cloud ALM Mailing list cloudalm@sap.com

## **Additional information:**

### **SAP Cloud ALM for Operations Home Page:**

https://support.sap.com/en/alm/sap-cloud-alm/operations.html

### **SAP Cloud ALM for Operations Expert Portal:**

https://support.sap.com/en/alm/sap-cloud-alm/operations/expert-portal.html

### **SAP Cloud ALM Online Help:**

https://help.sap.com/viewer/product/CloudALM/2021-04-07/en-US?task=discover\_task



# Poll



# Let's ask some questions!



Please open www.menti.com

and use code 2505 7533

https://www.menti.com/alaa16vukrhn



© 2023 SAP SE or an SAP affiliate company. All rights reserved. | PUBLIC

# **Upcoming Events**



### **ALM Events: Save the date!**

What's New in SAP Cloud ALM Q3/2023: November 29 and 30 (register here)

### SAP ALM Community Call: (register here)

- September 20: Transition to SAP Cloud ALM
- October 18: SAP ALM Summit EMEA recap with special guests
- November 15: Transition to SAP Cloud ALM
- December 20: Year-end recap

### SAP Community Call for SAP Cloud ALM Experts: (register here)

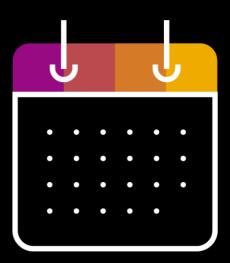
- September 6: SAP Cloud ALM Implementation
- October 4: SAP Cloud ALM Operations
- November 8: SAP Cloud ALM Implementation
- December 6: SAP Cloud ALM Operations

DSAG Jahreskongress 2023: September 19 – 21 (register here)

SAP ALM Summit EMEA: October 10 – 13 (register here)

SAP TechEd Virtual 2023: November 2 – 3 (<u>learn more</u>)

ASUG TechConnect 2023: November 7 – 9 (register here)



Find all ALM Events here:

nttps://support.sap.com/alm-events

© 2023 SAP SE or an SAP affiliate company. All rights reserved. | PUBLIC 43

# **SAP ALM Summit EMEA**

# **Energize your ALM transformation!**

October 10–13, 2023 | Manufaktur Mannheim, Germany

**Benefit** from 4 packed days with 70+ sessions.

**Learn** from our ALM customers.

**Leverage** our partners' experience.

**Discuss** with ALM experts.

**Make use** of countless networking possibilities..



### REGULAR TICKET

1.690 € + 19% VAT

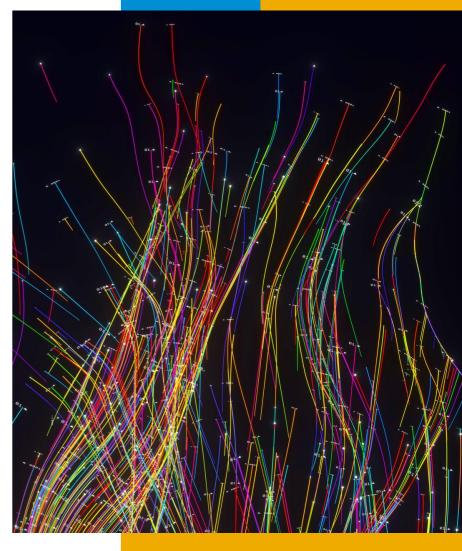
















November 7-9 • New Orleans, LA

A New In-Person Learning Experience, Following Virtual SAP TechEd

**Open** to non-members!

3 packed days with 125+ sessions.

**Keynotes** from prominent SAP leaders.

Interactive deep dives, roadmaps, and hands-on labs.

1:1 connections with SAP experts and partners.

**Networking Opportunities** to meet peers and make new connections.



Register now!

https://www.asug.com/events/asug-tech-connect-2023



### { Tech Connect } Learning Tracks:

#### **Data & Analytics**

Effectively manage your mission-critical data while providing your business with real-time insights. Dive into the mechanics around deploying and supporting SAP analytics and planning tools while exploring how SAP BTP can provide an end-to-end analytics and planning solution for your organization.

## Application Development & Automation

Create and augment enterprise apps, automate processes, and design business sites visually. See how no-code, low-code, and pro-code development solutions in SAP BTP can provide you with the building blocks for innovation throughout your enterprise.

### Managing the Business of IT

Technology is only part of the challenge in managing IT. Learn best practices for everything from managing partner relations to delivering business value to upskilling your teams.

### SAP Technology Fundamentals

Understanding the capabilities of key SAP technology solutions is critical to leveraging those solutions for business success. Learn the fundamentals of cloud adoption and key SAP BTP solutions for integration, data & analytics, application development, and intelligent technologies to gain insights on how to solve your biggest challenges.

#### Integration

Learn to achieve seamless business processes efficiently and at scale with a holistic approach to application, data, and process integration. See how SAP BTP can allow you to leverage pre-built integration scenarios to help accelerate your toughest integration challenges.

## Systems Operation & Administration

Learn the best practices for operating and maintaining your SAP systems. Understand the tools, processes, and solutions available to help your organization get the most from your SAP technology investment.

## System Modernization & Artificial Intelligence

Adopting new technology solutions can be both daunting and exciting. Learn how and where Al and intelligent technologies can fit into your technology roadmap. Hear more about the tools and solutions available for moving your ERP and other workloads to the cloud to help maximize the value of your modernization journey.

# **Stay Updated: ALM Newsletter**

Stay updated about the latest news in Application Lifecycle Management!

Register now for our monthly ALM newsletter here:

Register here



# Mark your calendar!

The next SAP Community Call for ALM will take place on

September 20, 4pm CEST / 10am EST.

Reminder: Re-Register yourself here to receive e-mail invites for future calls!

© 2023 SAP SE or an SAP affiliate company. All rights reserved. | PUBLIC

# Q&A



# Thank you.

Contact information:

ALM Customer Communications, SAP SE <a href="mailto:sap\_cxs\_social\_media@sap.com">sap\_cxs\_social\_media@sap.com</a>

