



SAP Community Call for ALM – APJ edition

August 22, 2023

SAP ALM Go-to-market APJ, SAP Labs India

PUBLIC

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SAP Community Call for ALM – APJ edition : Agenda for August 22, 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!

Introduction



Speakers



Suhaib Mohammed



Umesh Jagadesh

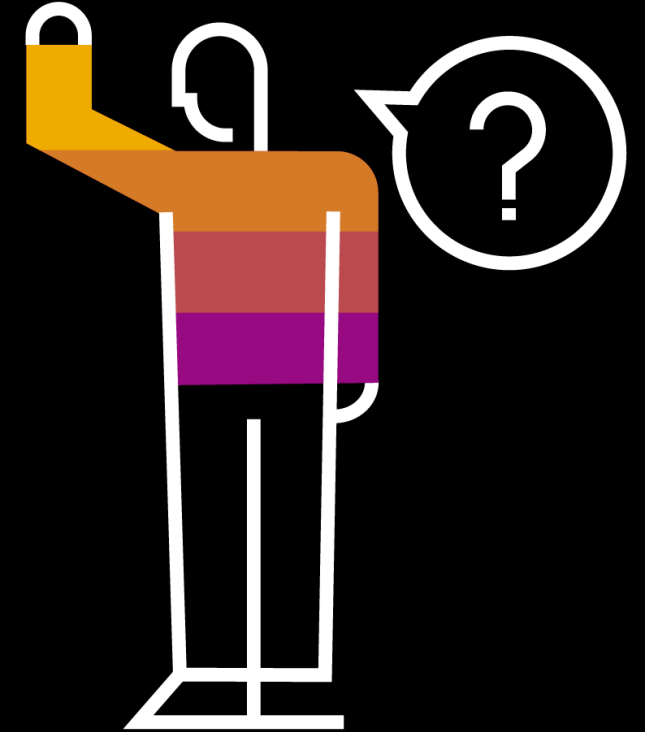
The Application Lifecycle Management Product Portfolio of SAP



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

Product Information

 Delia Barabasy
July 21, 2023 | 4 minute read

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


0 2 122

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An introduction to Tricentis Test Automation for SAP Cloud ALM (TTA for Cloud ALM)




From On-Prem to the Cloud

SAP Partnership with Tricentis

Tricentis, a renowned testing software provider with a global customer base, has joined forces with SAP to deliver Tricentis test Automation for SAP Cloud ALM. Tricentis brings its expertise in advanced test automation, including model-based testing, and now offers its cloud-based solution.

[Tricentis Test Automation for SAP Cloud ALM \(TTA for Cloud ALM\)](#)

Product Information

 Laura Branitsch
July 28, 2023 | 1 minute read

Introducing the Application Help for SAP Cloud ALM

0 9 413

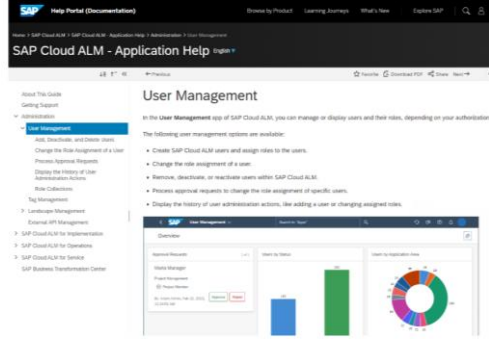
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RSS Feed

In addition to the already established in-app help, we are delighted to now provide even more in-depth information about SAP Cloud ALM in the form of our brand-new application help on SAP Help Portal.

SAP Cloud ALM – Application Help



User Management

In the User Management app of SAP Cloud ALM, you can manage or display users and their roles, depending on your authorization.

The following user management options are available:


- Create SAP Cloud ALM users and assign roles to the users.
- Change the role assignment of a user.
- Remove, deactivate, or reactivate users within SAP Cloud ALM.
- Process approval requests to change the role assignment of specific users.
- Display the history of user administration actions, like adding a user or changing assigned roles.

What's special about it?

The structure of the document mirrors that of the SAP Cloud ALM launchpad – each section (Implementation, Operations, and Service) contains subsections that correspond to the individual applications.

[Introducing the Application Help for SAP Cloud ALM](#)

Product Information

 Megha Nagar
July 25, 2023 | 4 minute read

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

0 3 94

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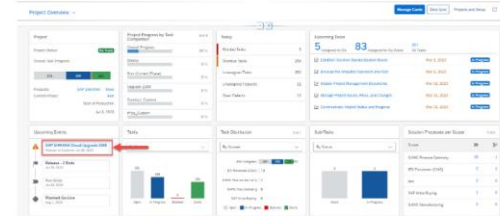
Introducing some features that are now available to help SAP S/4 HANA Cloud customers to manage and track their major upgrade tasks. They can manage upcoming upgrade 2308 in two ways:

- Option 1: Managing Upgrade tasks in your active/ongoing implementation project
- Option 2: Managing Upgrade tasks in your upgrade Project in parallel to your active implementation project

1. How to Manage Upgrade Tasks in Your Active/Ongoing Implementation Project?

If you already have a project in SAP Cloud ALM implementing S/4 HANA Cloud solution and the project is currently in phase 'Run', you can manage your upgrade tasks by following these steps:

Step 1: Observe the upgrade information on the 'Overview Page' of your project. In the 'Upcoming Events' card on overview page, you get an early access to S/4 HANA Cloud Major Upgrade release event information.



Step 2: You can click on the event to inform yourself about detailed system wise downtime schedule planned by SAP. You can utilize this information to ensure that you do not have any clashes with go-live milestones or deployments planned in your project with these events, create your custom phase for upgrades etc.

[How to Manage SAP S/4HANA Cloud Upgrade 2308 in SAP Cloud ALM](#)



Special interest group:
SAP Application Lifecycle Management
August 2023



**Submit your nominations
for ALM awards 2023**



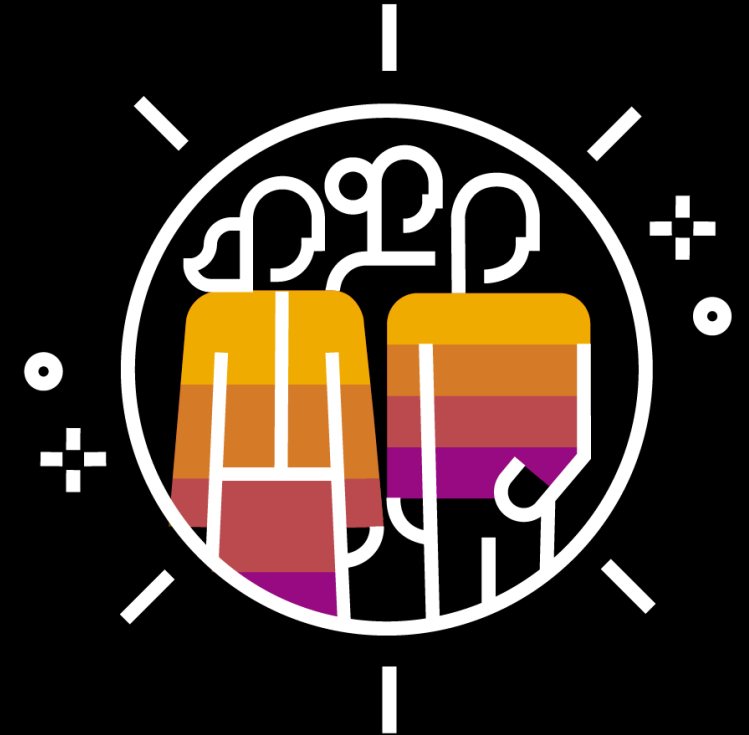
Community News

1. [Join the ALM Community](#)

Follow the tags

2. [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**

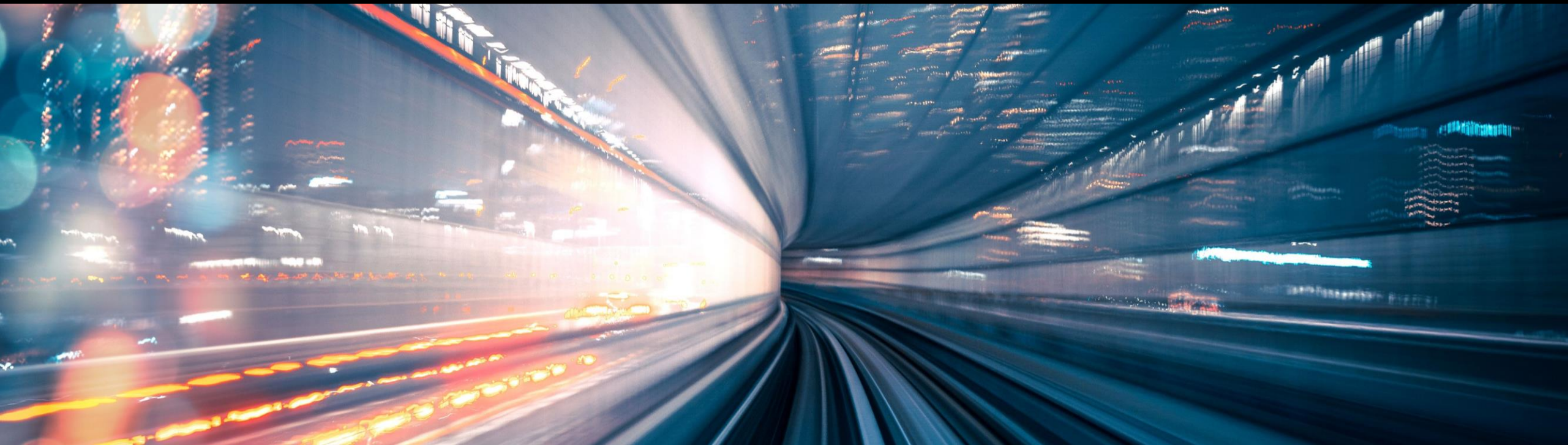
SAP Cloud ALM – **Open Telemetry @ SAP**

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



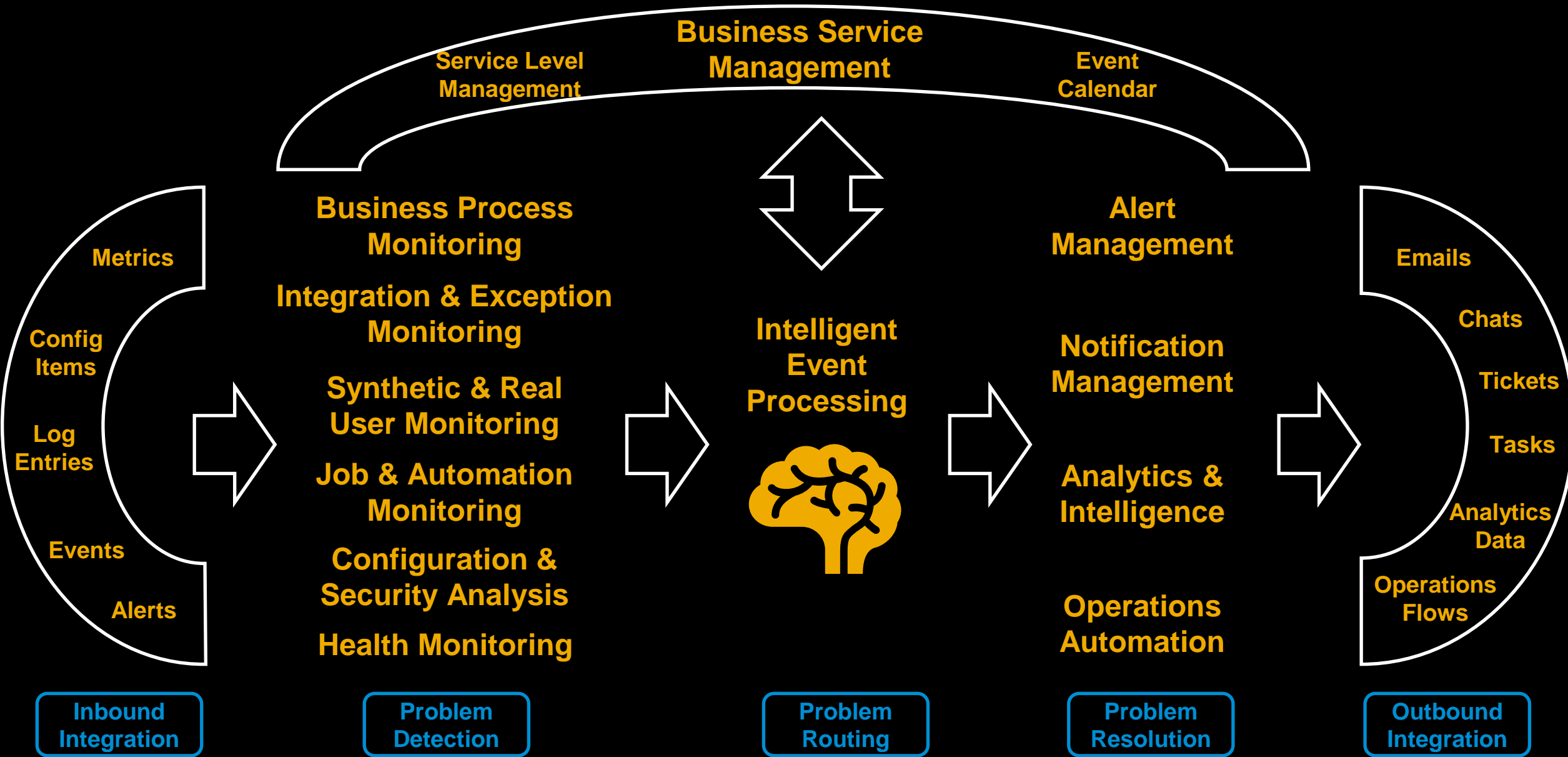
SAP Cloud ALM for Operations – Value Proposition

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

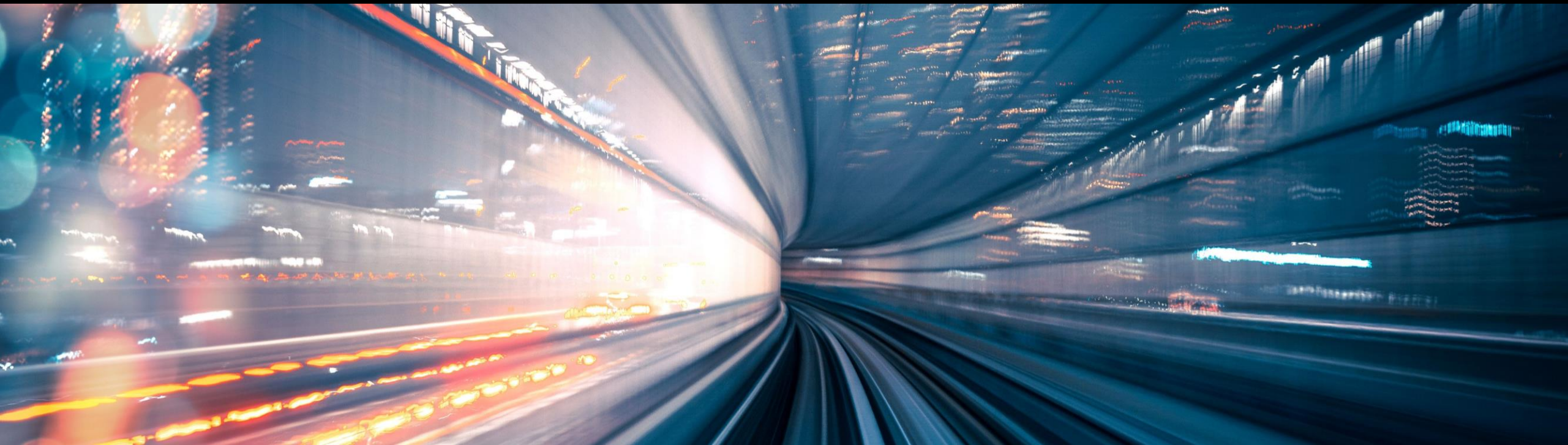


SAP Cloud ALM for Operations – Functional Overview



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

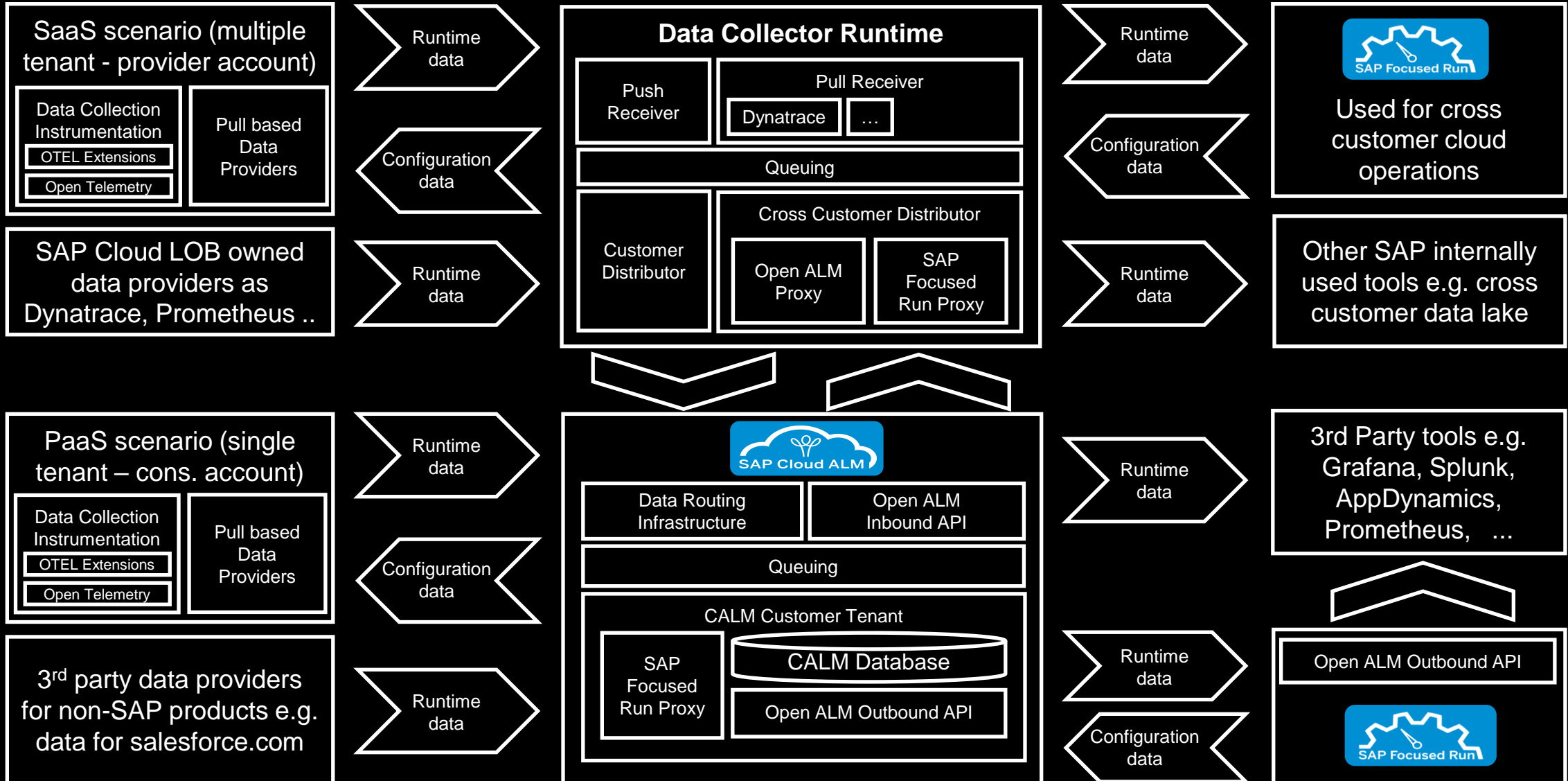
Provide **unified approach for data routing and data exchange** → Addressed by **SAP Cloud ALM**

- Enable dynamic routing of data to corresponding SAP Cloud ALM tenant across data centers
- Embrace openness regarding data exchange:
 - Import data from 3rd party services/systems based on Open Telemetry based inbound API's
 - Export data to 3rd 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



SAP Internal

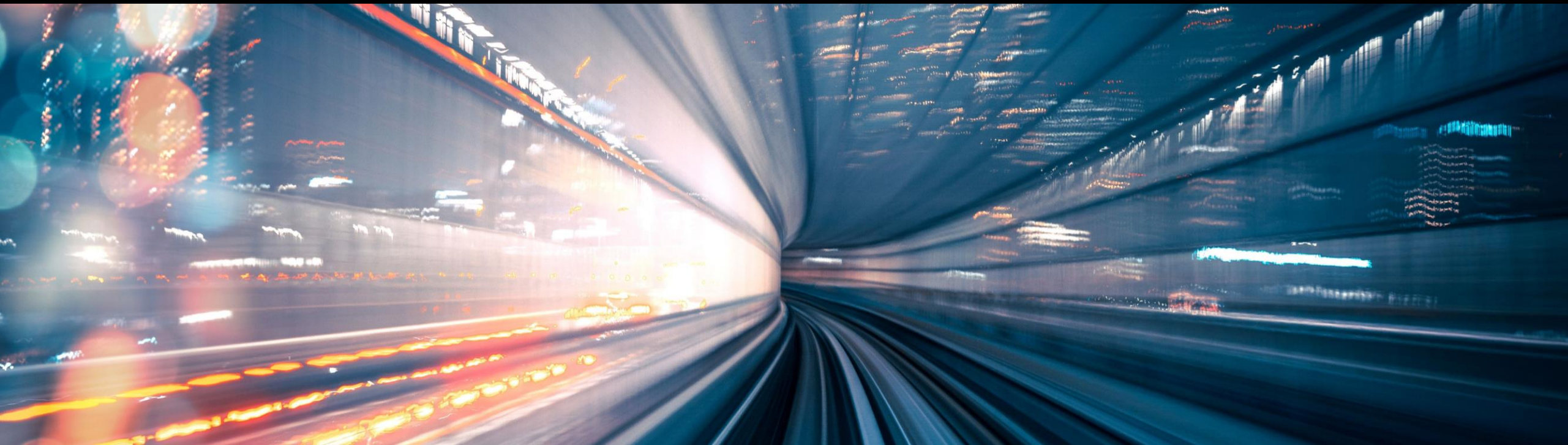
Customers/Partners

Planned Support for Open Telemetry Signals

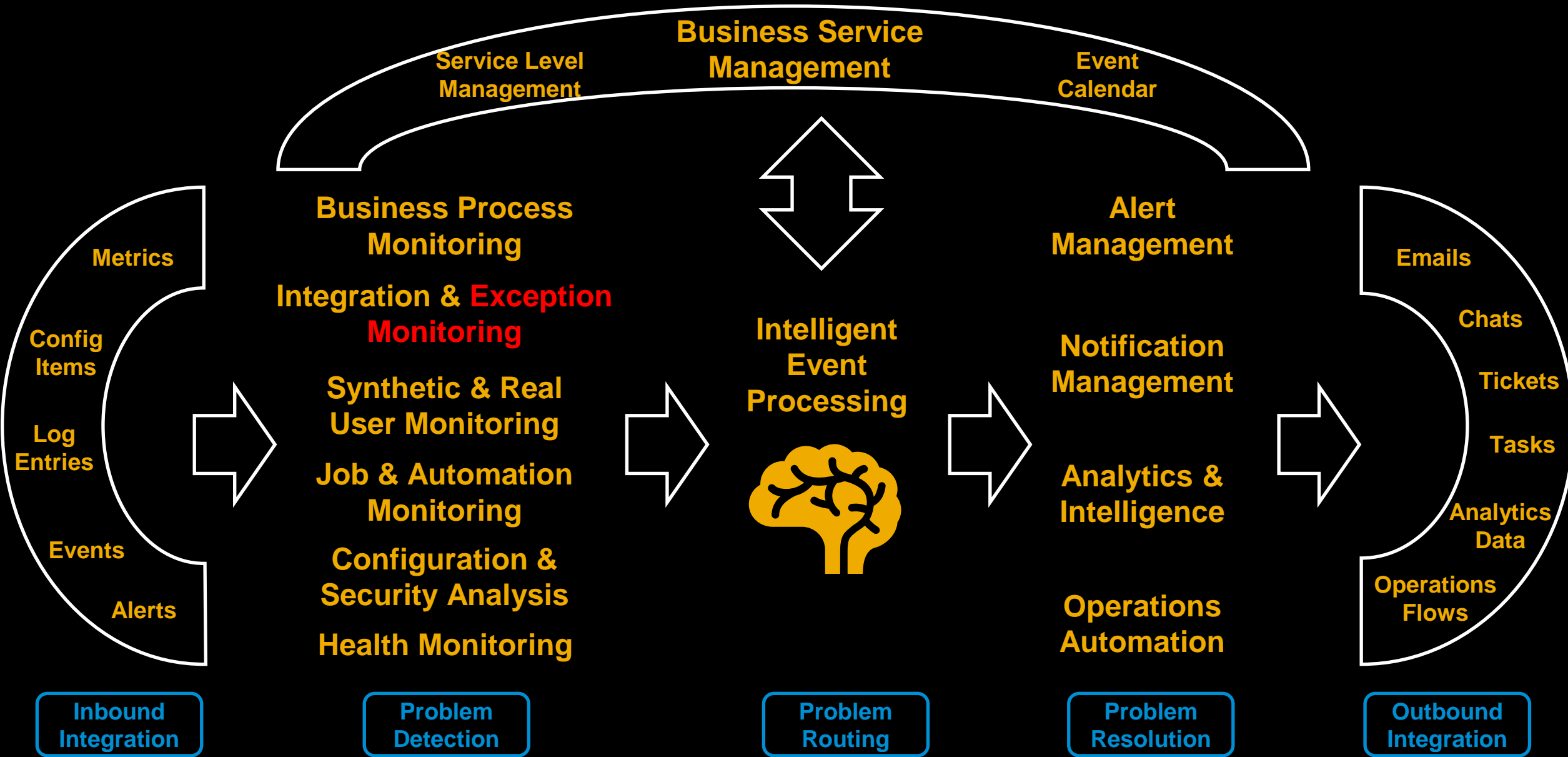
Use Case	Metrics		Logs		Traces	
	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound
Business Process Monitoring	Yes (2024)	Yes (2024)	No	No	No	No
Integration Monitoring	Yes (2024)	No	Yes (2023)	Yes (2024)	No	No
Exception Monitoring	Yes (2024)	No	Yes (2023)	Yes (2023)	No	No
Real User Monitoring	Yes (2023)	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

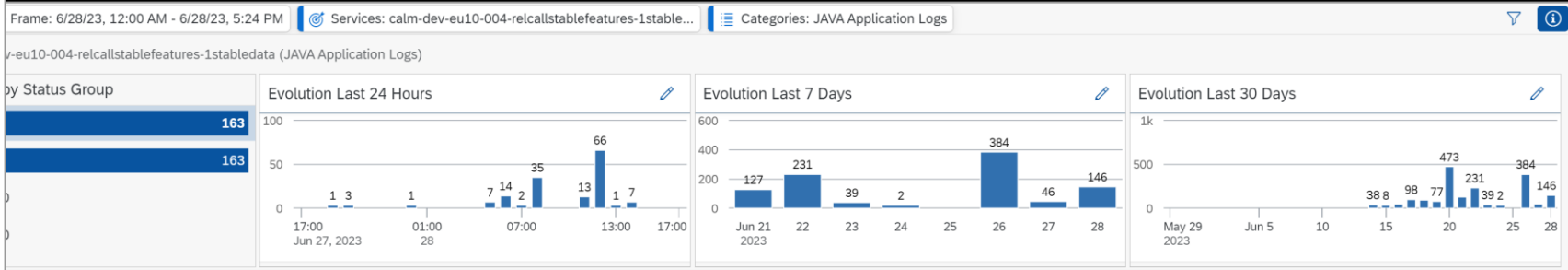
In scope are custom-built java applications based on SAP BTP CF using a standard logging API's as Log4J. Instrumentation is based on standard Open Telemetry. The monitored logs contain information as timestamp, application name, correlation information and error message. Support for SAP BTP CF node.js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

Exception Monitoring for SAP BTP CF PaaS - Usage

Integration &
Exception
Monitoring



Exceptions (100 / 163)

Status	Timestamp	Message	User	Service	Logger	Exception Type	Exception Message
✖	Jun 28, 2023, 5:19:51 PM	CollectionConfigCheckerCollectionConfigChecker : ...	anonymous	x-exm-demodatainjection-service	com.sap.crun.exm.ddi.common.c...	org.springframework.web.client.H...	400 Bad Request: "{"error":{"cod...
✖	Jun 28, 2023, 5:19:51 PM	400 Bad Request: "{"error":{"code":"400","message":...	anonymous	x-exm-demodatainjection-service	com.sap.crun.exm.ddi.common.c...	org.springframework.web.client.H...	400 Bad Request: "{"error":{"cod...
✖	Jun 28, 2023, 5:19:50 PM	CollectionConfigCheckerCollectionConfigChecker : ...	anonymous	x-exm-demodatainjection-service	com.sap.crun.exm.ddi.common.c...	org.springframework.web.client.H...	400 Bad Request: "{"error":{"cod...

Message: 400 Bad Request: "{"error":{"code":"400","message":"The property 'ei5fd8c2e', used in a query expression, is not defined in type 'exm.ConfigService.Configurations'}"}" : Failed to get collection configuration, error message {}, {}

Timestamp: Jun 28, 2023, 5:19:49 PM

Category: JAVA Application Logs

User: anonymous

Cloud Service: calm-dev-eu10-004-relcallstablefeatures-1stabledata (calm-dev-eu10-004-relcallstablefeatures-1stabledata)

Cloud Service Type: SAP BTP Cloud Foundry environment

Tenant: \$0201717125

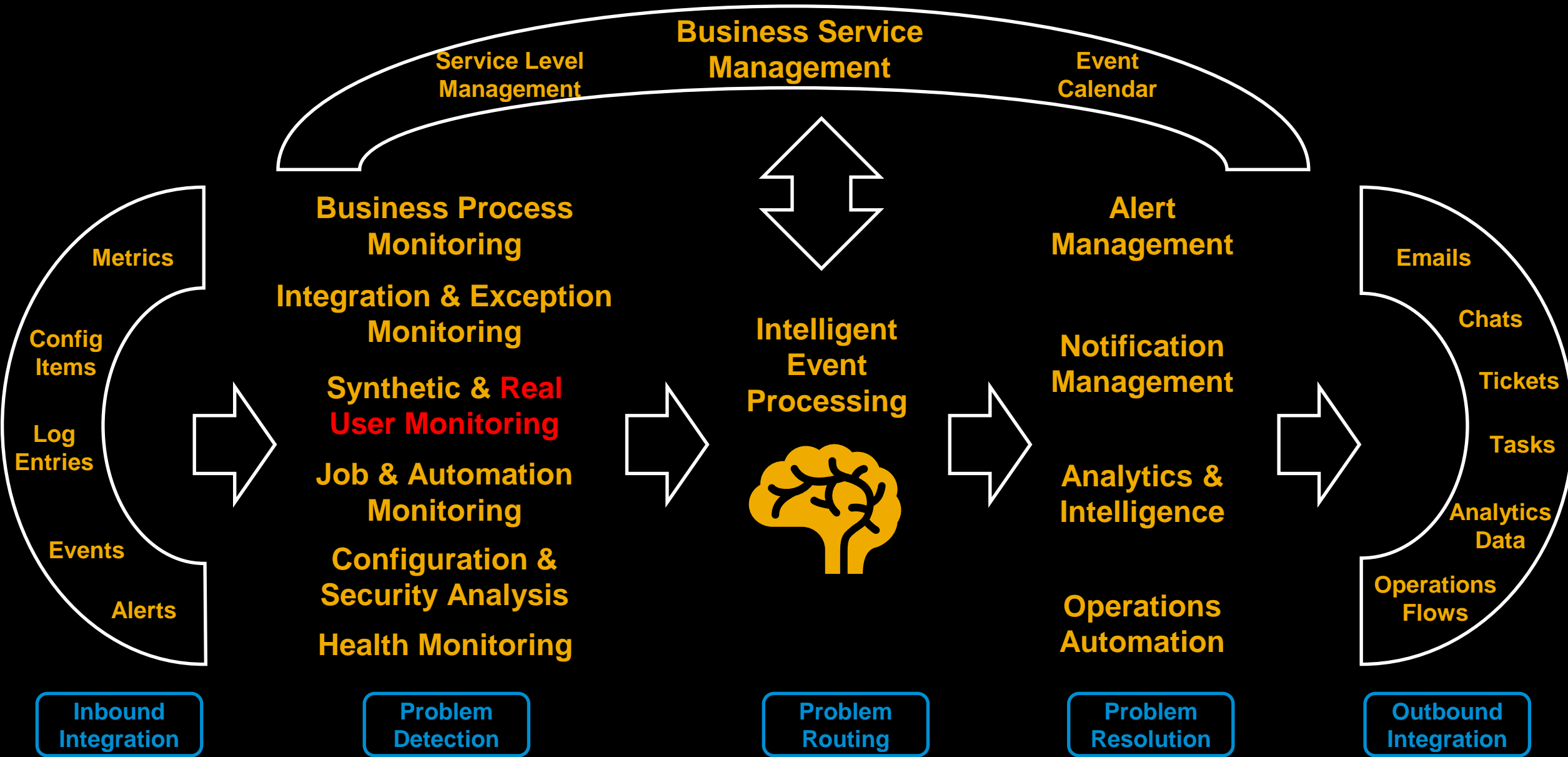
Root URL: https://cockpit.eu10.hana.ondemand.com/cockpit/#/globalaccount/fee5c460-339b-404f-b1f5-46fe707cab01/subaccount/7740104c-99cf-4d6b-9226-bcaf9d8dd26e

Collection Context Correlation Context **Call Stack** Process Arguments

```
org.springframework.web.client.HttpClientErrorException$BadRequest: 400 Bad Request: "{"error":{"code":"400","message":"The property 'ei5fd8c2e', used in a query expression, is not defined in type 'exm.ConfigService.Configurations'}"}"
    at org.springframework.web.client.HttpClientErrorException.create(HttpClientErrorException.java:101)
    at org.springframework.web.client.DefaultResponseErrorHandler.handleError(DefaultResponseErrorHandler.java:168)
    at org.springframework.web.client.DefaultResponseErrorHandler.handleError(DefaultResponseErrorHandler.java:122)
    at org.springframework.web.client.ResponseErrorHandler.handleError(ResponseErrorHandler.java:63)
    at org.springframework.web.client.RestTemplate.handleResponse(RestTemplate.java:825)
    at org.springframework.web.client.RestTemplate.doExecute(RestTemplate.java:783)
```

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

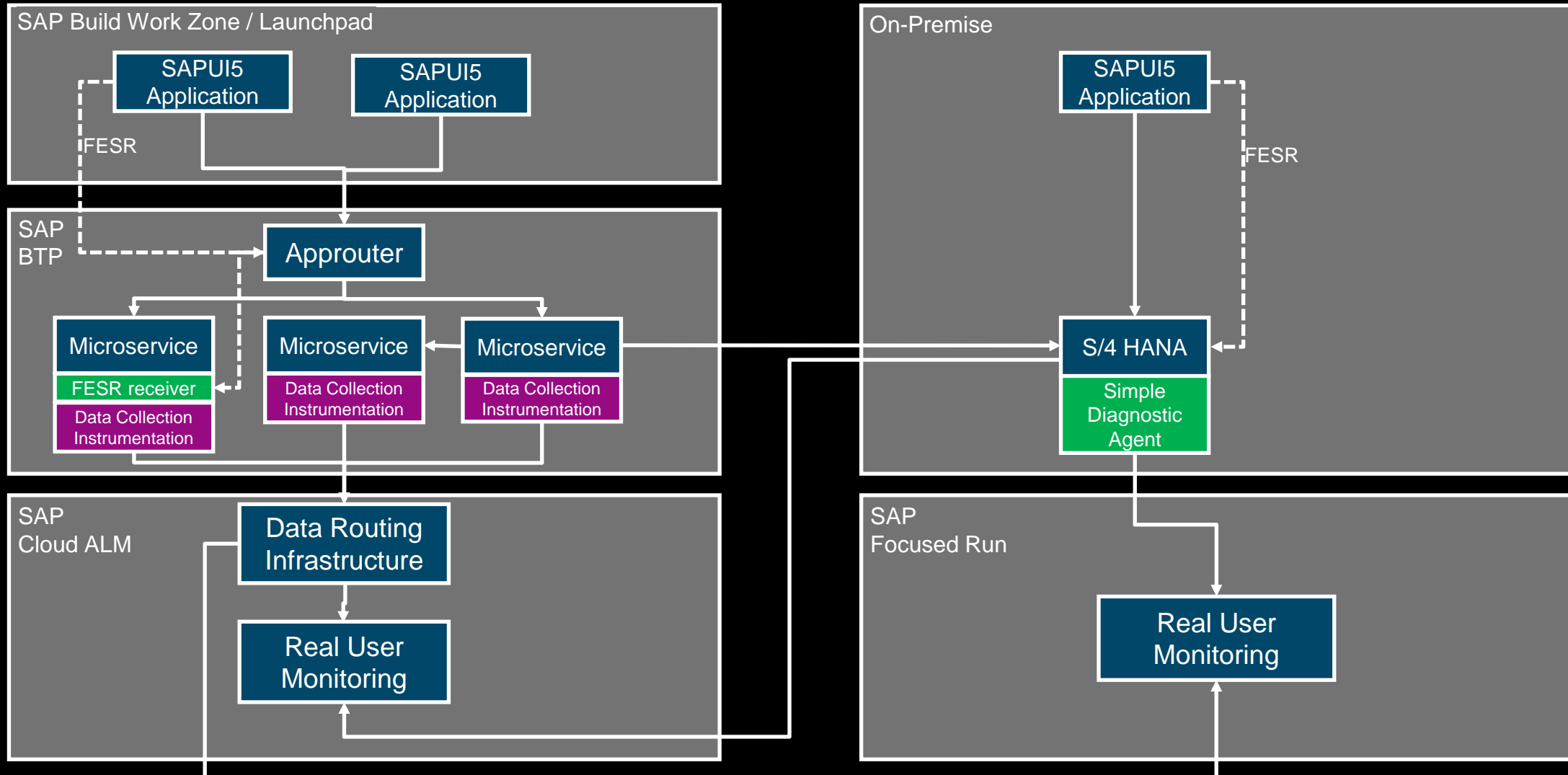
Two types of information will be provided for java and node.js based custom-built BTP applications:

- **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

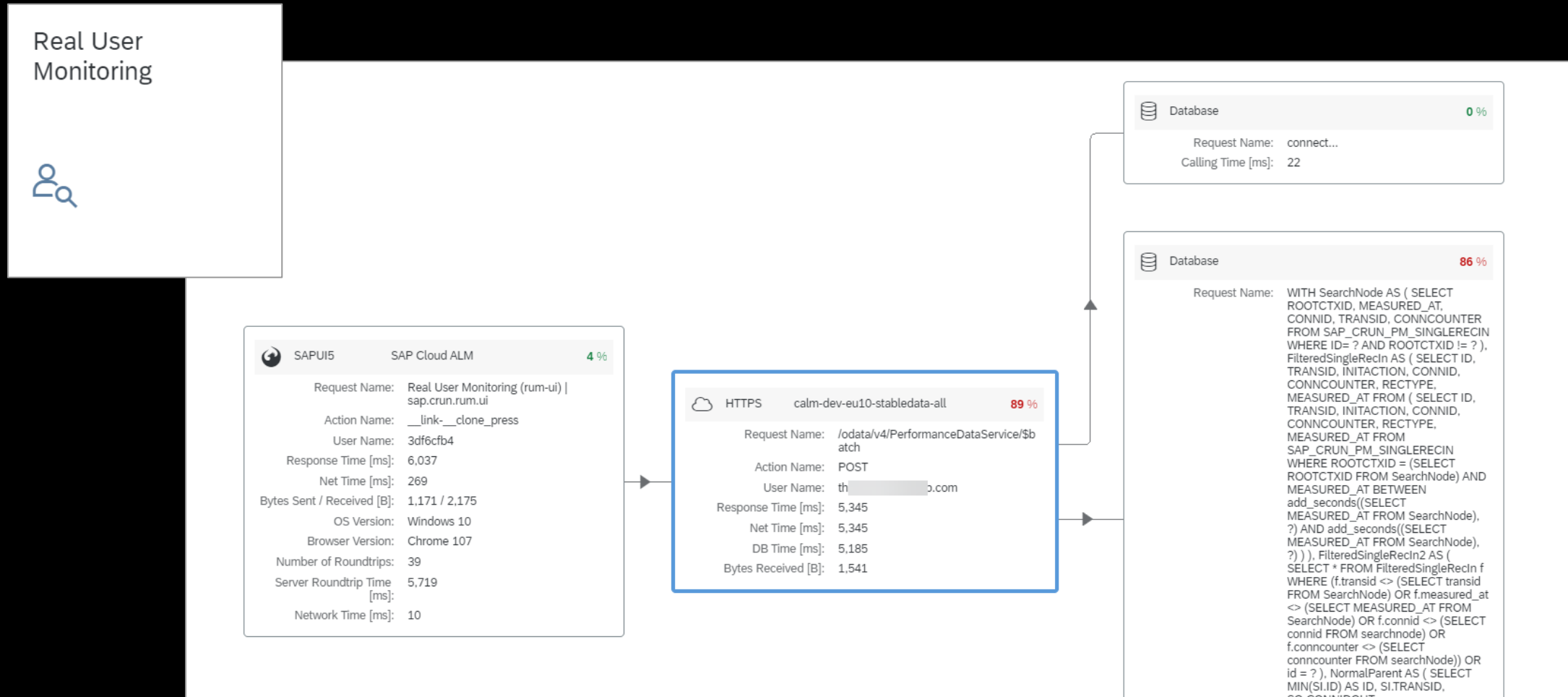
Benefits

- **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 (fire-and-forget) including correlation with other data sources (mapping between OTEL and SAP PP)

Real User Monitoring for SAP BTP CF PaaS – Data flow

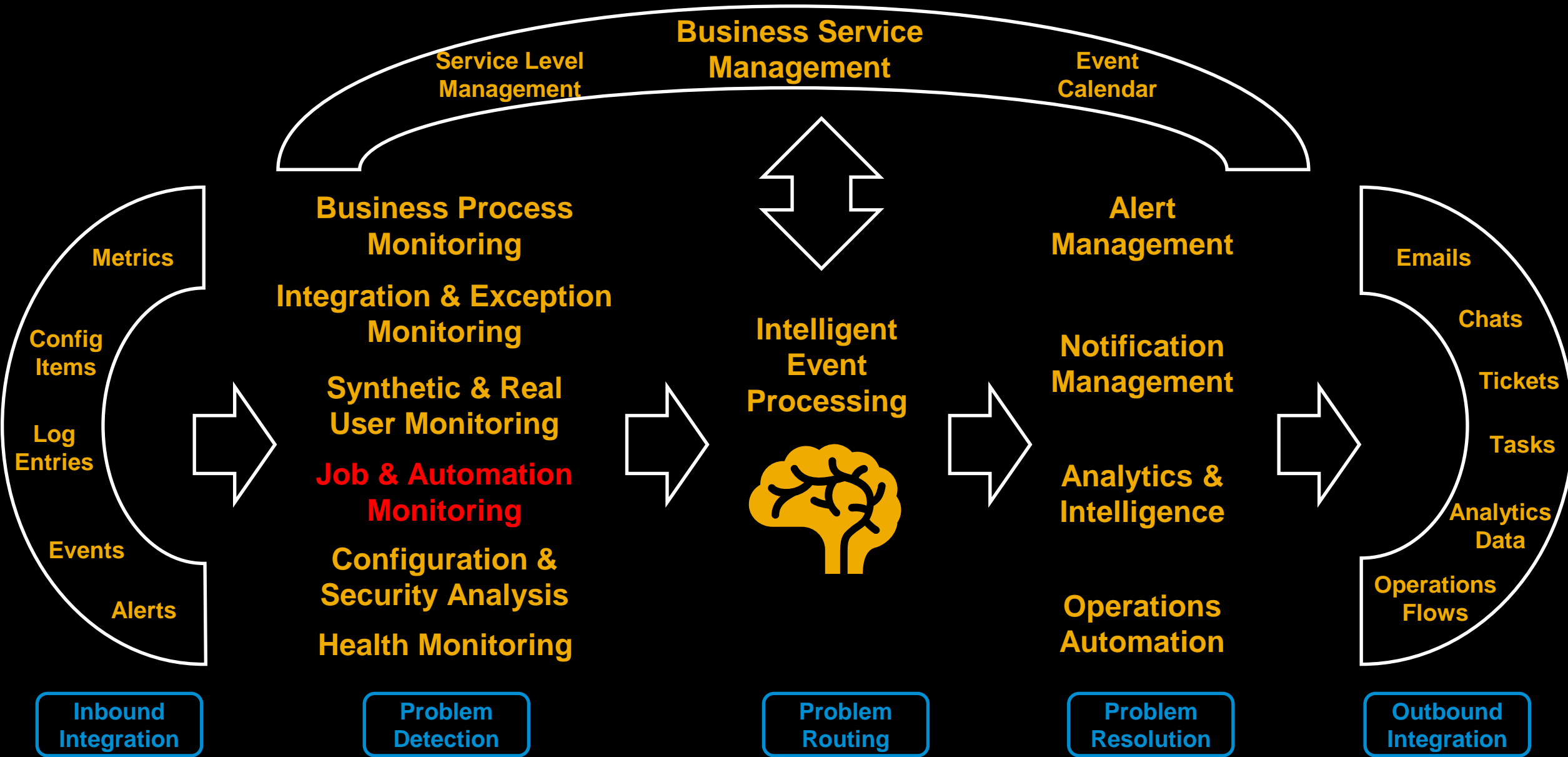


Real User Monitoring for SAP BTP CF PaaS - Usage



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

Job & Automation Monitoring

The screenshot displays the SAP Job & Automation Monitoring interface. It shows a summary table for 'SAP BTP Scheduler Job (3)' with the following data:

Category	Count
With Technical Exceptions	2
With Application Exceptions	0
With High Run Time	0
Open Alerts	0

Below the summary, a table lists the jobs:

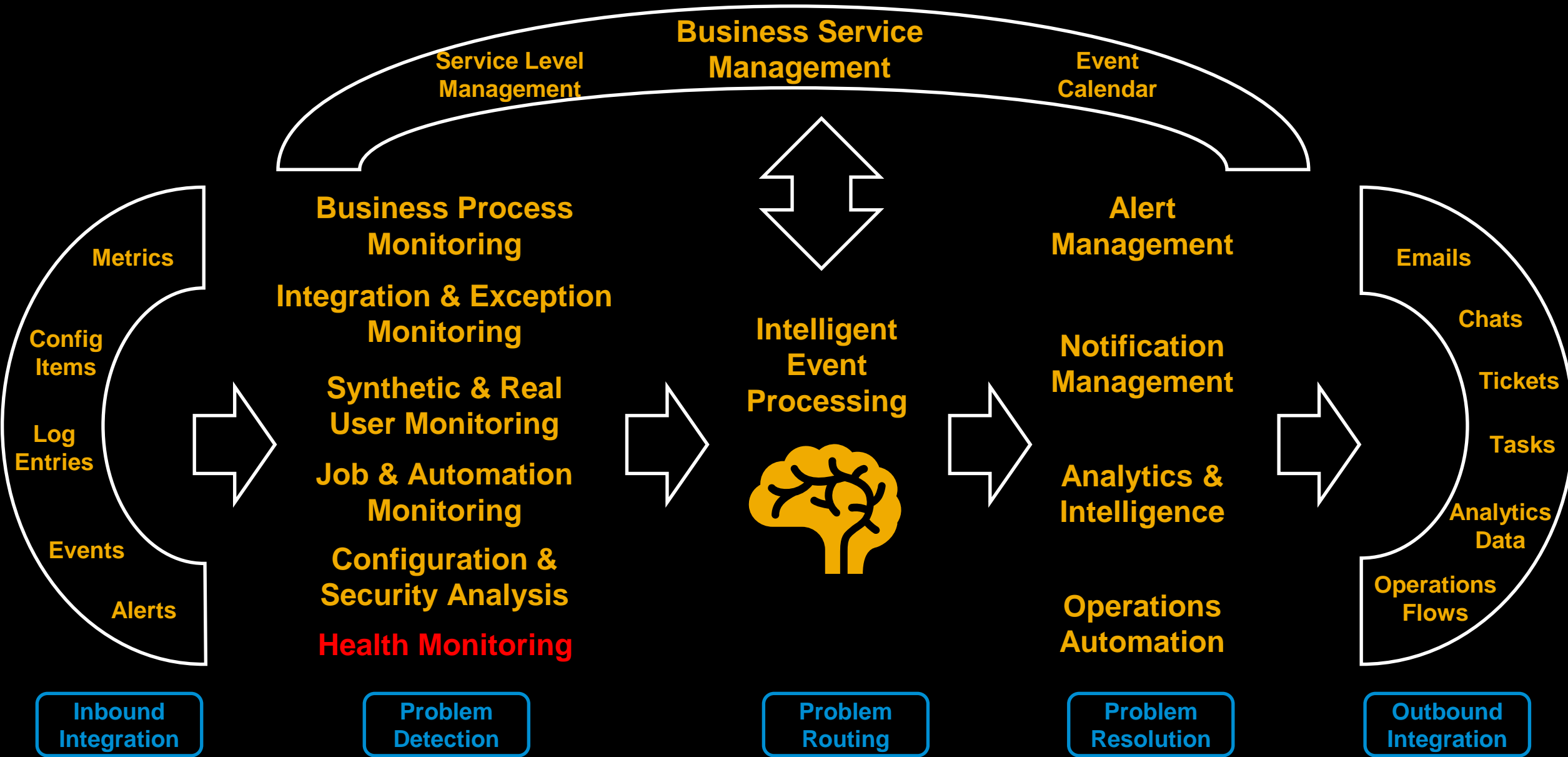
Name	Type	Execution St...	Application Stat...	Start Delay	Run Time	Service/System	Open AL...
Products_Delete Products	SAP BTP Scheduler Job	✖	◇	✓	✓	calm-mtls-external-servic...	0
Products_Update Products	SAP BTP Scheduler Job	✖	◇	✓	✓	calm-mtls-external-servic...	0

The detailed view for 'Products_Update Products' shows the following execution log:

Planned Start Time	Start Time	End Time	Execution Status	Application Status	Start Delay	Run Time
Jun 28, 2023, 2:20:41 PM	Jun 28, 2023, 2:20:41 PM	Jun 28, 2023, 2:20:41 PM	✖ Aborted	◇	✓ 00:00:00	✓ 00:00:00
Jun 28, 2023, 2:10:41 PM	Jun 28, 2023, 2:10:41 PM	Jun 28, 2023, 2:10:41 PM	✓ Finished	◇	✓ 00:00:00	✓ 00:00:00
Jun 28, 2023, 2:00:41 PM	Jun 28, 2023, 2:00:41 PM	Jun 28, 2023, 2:00:41 PM	✓ Finished	◇	✓ 00:00:00	✓ 00:00:00

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

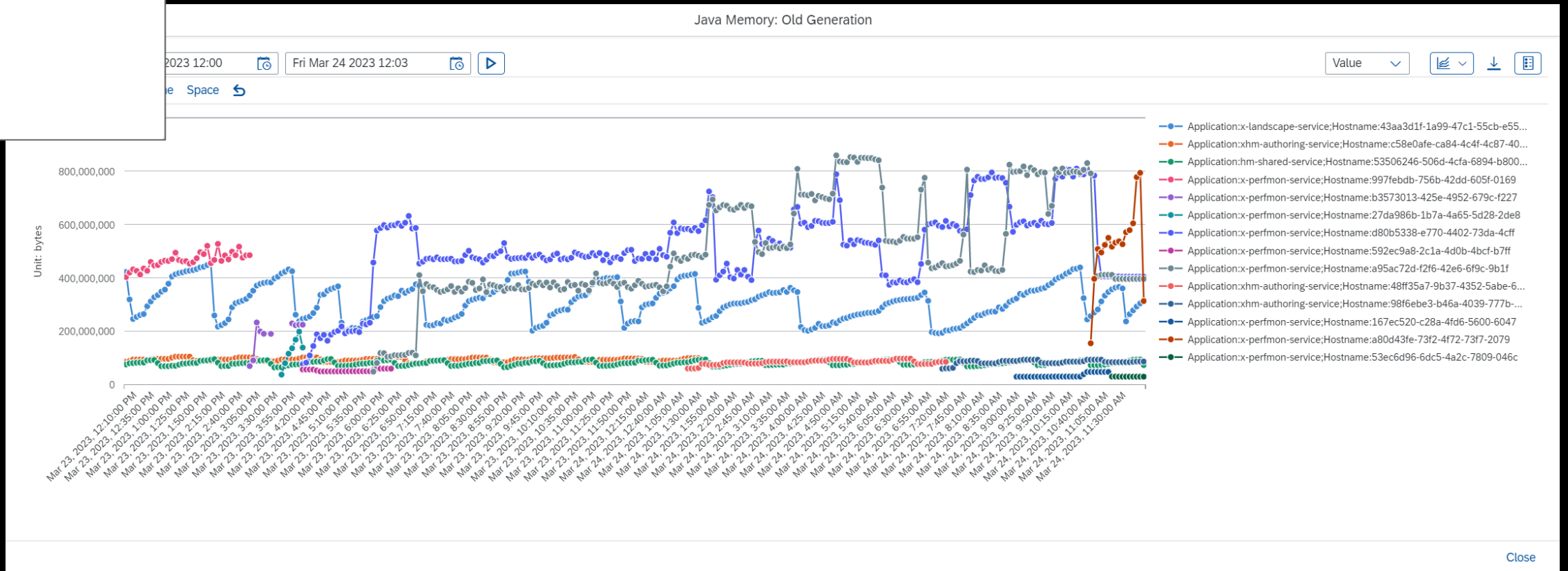

The following metrics are transferred for customer built **SAP BTP CF node.js**:

- 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

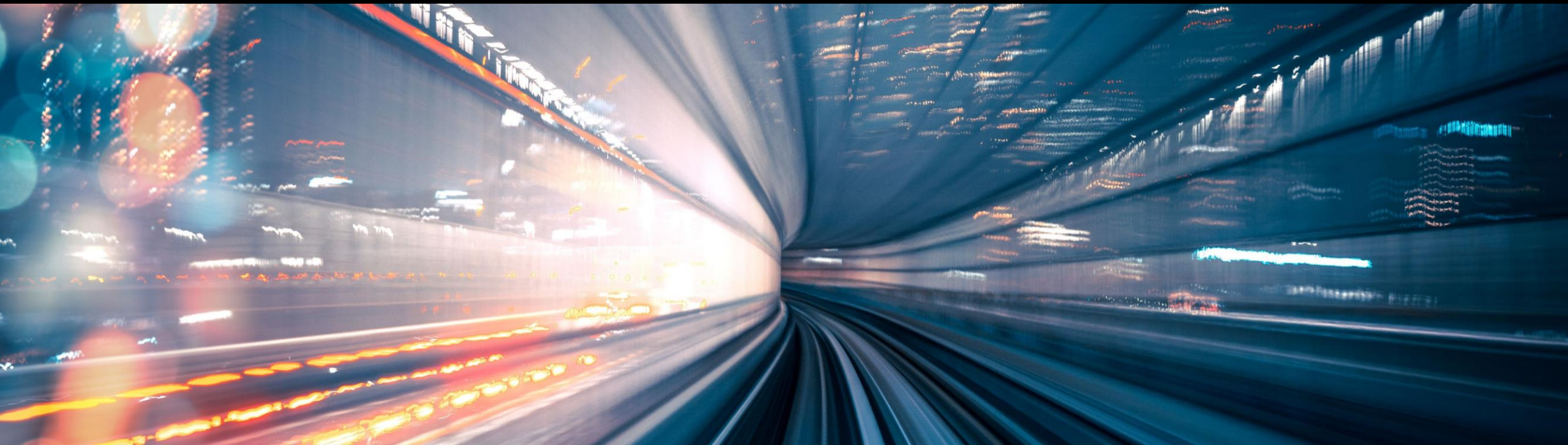
Health Monitoring



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

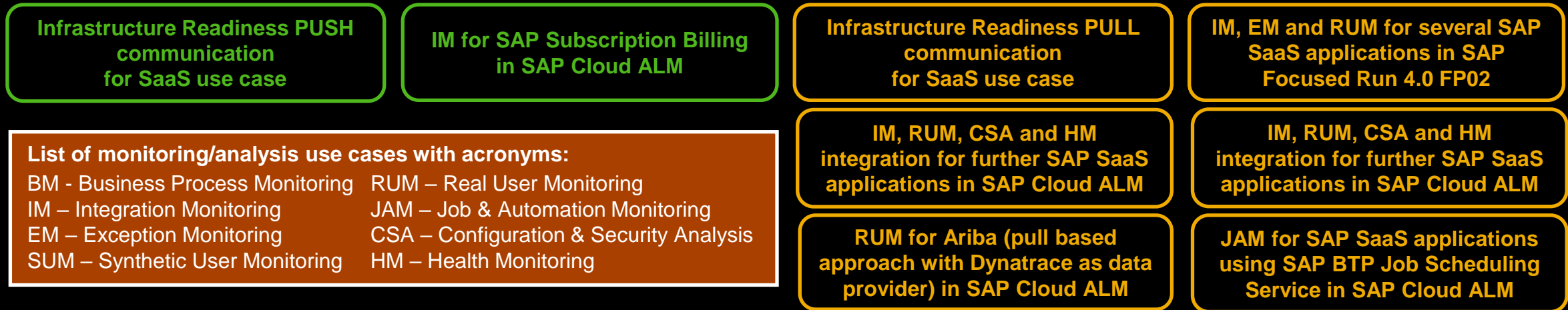
SAP Cloud ALM

Roadmap & Rollout

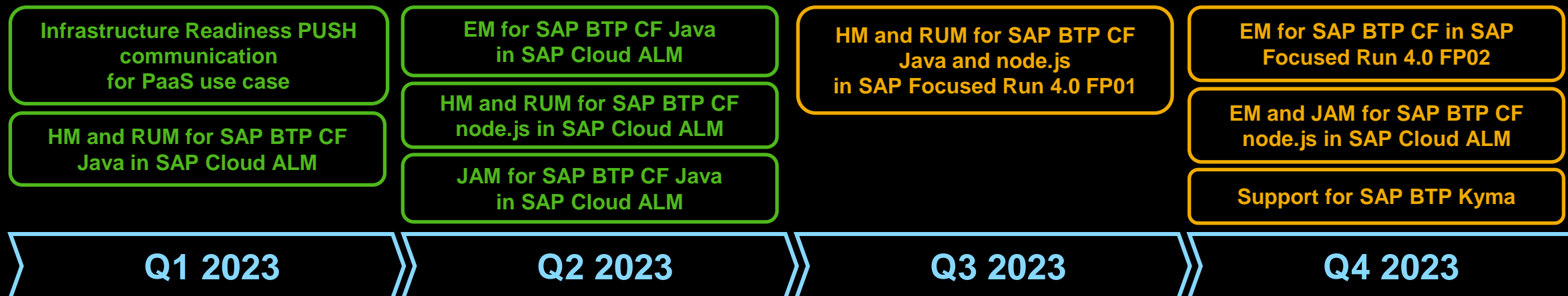


Roadmap for Next Generation – Data Collection Infrastructure

SaaS Use Cases (instrumentation to be done by SAP)



PaaS Use Cases (instrumentation to be done by customers)



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

CAP and custom built apps

Programming Language

Java and Node.js

```
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
```

Front-end

SAP UI5

The screenshot shows a code editor with a file explorer on the left and a code editor on the right. The file explorer shows a project structure with folders like .settings, .vscode, app, build, db, and srv. The code editor shows the content of server.js, which includes the following code:

```
1 const cds = require("@sap/cds");
2 const fesr = require("@sap/fesr-to-otel-js");
3
4 cds.on("bootstrap", (app) => {
5   console.log("bootstrap, register fesr endpoint");
6   fesr.registerFesrEndpoint(app);
7 });
8
9 module.exports = cds.server;
```

Landing in Expert Portal: [Next Generation – Data Collection Infrastructure](#)

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 to Participate

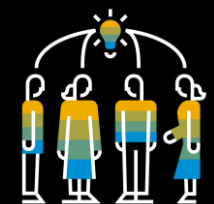
- Gain early insights into plans for SAP solutions
- Discuss planned functionality
- Influence development and provide feedback and ideas
- Guide customer through the implementation of the new approach and check with them the results from technical and semantical perspective within our tools

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:

Umesh Jagadesh
Regional Go-to-market Lead, SAP ALM Operations APJ
umesh.jagadesh@sap.com

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 2443 0413

<https://www.menti.com/a11bikk2q2ss>



Upcoming Events





SAP ALM Summit APJ 2024

July 25th to 27th, 2024 | Bangalore



Interested..?



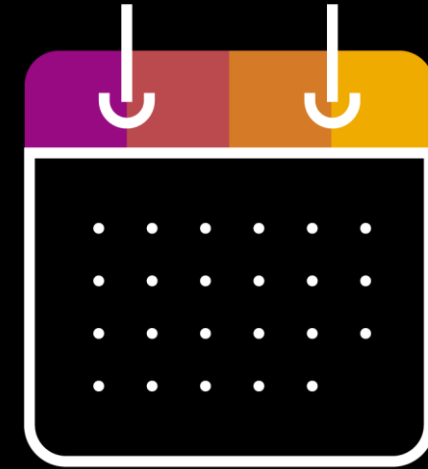
ALM Events: Save the date!

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

SAP ALM Community Call – APJ edition: ([register here](#))

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

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



Find all ALM Events here:
<https://support.sap.com/alm-events>

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 – APJ edition will take place on

September 26, 10 am IST / 12:30 pm SGT.

Reminder: **Re-Register yourself** [here](#) to receive e-mail invites for future calls!

Q&A



Thank you.

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