

Event Messaging with SAP systems: **ASAPIO Cloud Integrator for Solace PubSub+**

Product Overview

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ASAPIO – Your Partner for SAP Procurement Solutions and Cloud Integration

ASAPIO is an SAP silver partner and provides services and software for SAP customers

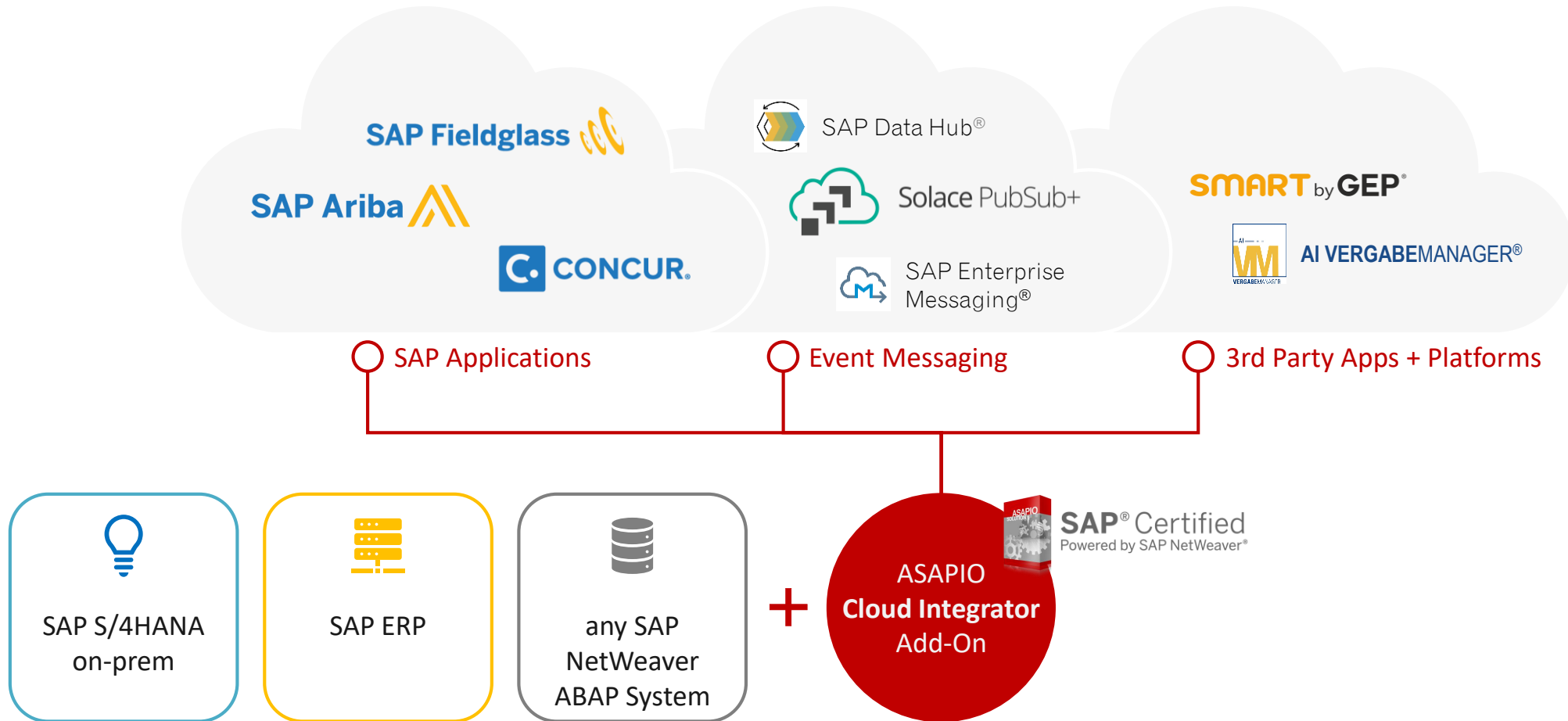
- Founded in 2003 and owned by 3 former SAP employees, today we are a growing team of over 40 SAP experts
- Serving all industries and SAP customers, including large enterprises
- Headquarter in Munich, various offices in Germany and a nearshore center in Voronezh/Russia



Software & Service Portfolio:

- Design, implementation and support services for SAP procurement solutions
 - S/4HANA, SAP Fieldglass, SAP Ariba, SAP PLM and more
 - SAP developments, e.g. SAP ABAP, SAP Fiori, SAP Cloud Platform
- Integration of cloud solutions to SAP systems
- ASAPIO Cloud Integrator, the SAP certified add-on for cloud integration
- Event messaging integration with SAP on-prem systems

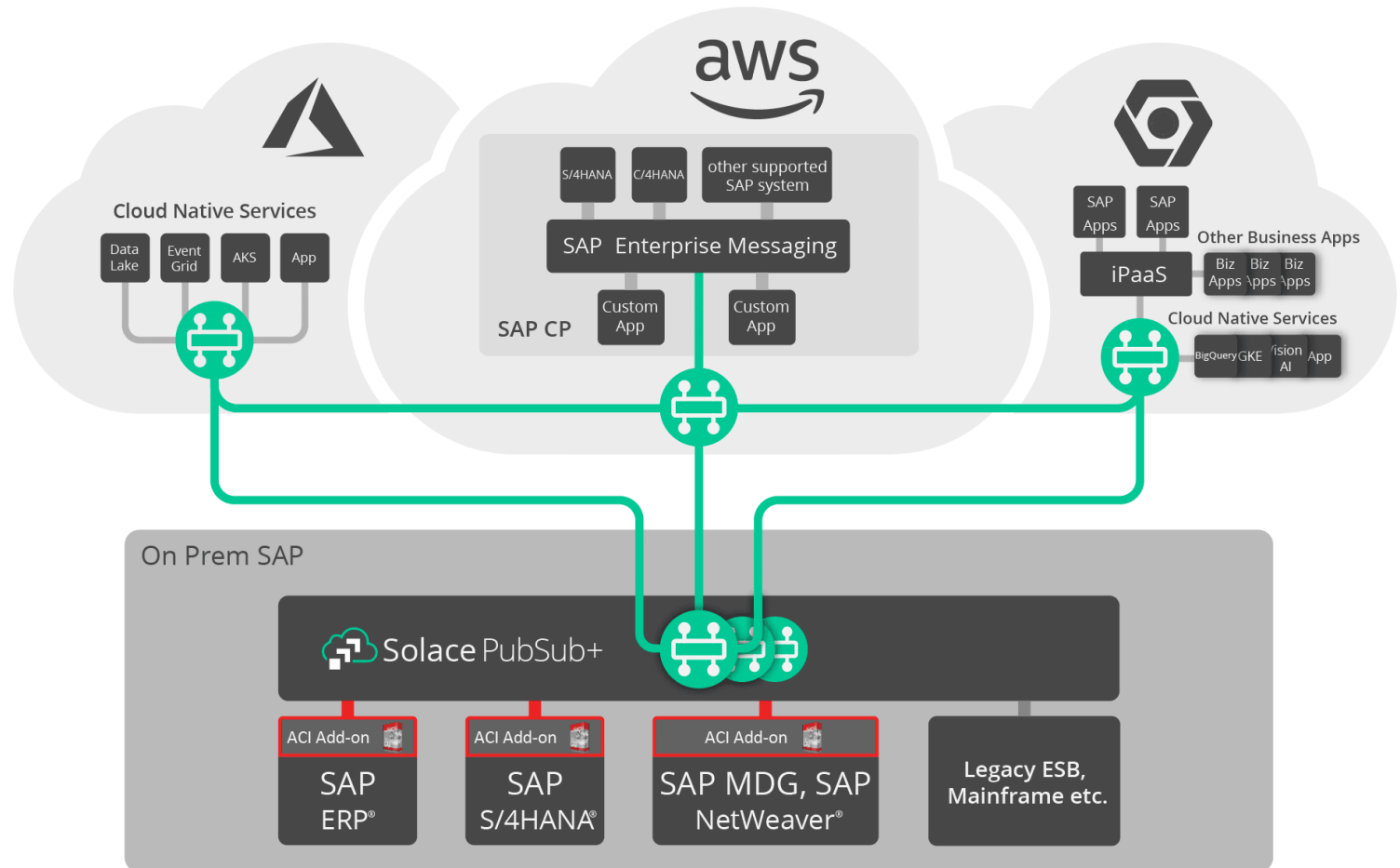
ASAPIO Cloud Integrator connects SAP on-prem systems to the cloud and Solace PubSub+



- ❑ ASAPIO Cloud Integrator installs as add-on to SAP NetWeaver ABAP systems
- ❑ Brings native cloud interfaces to SAP systems, does not require middleware systems
- ❑ Supports multi-backend SAP landscapes and multi-cloud connectivity

Free your SAP data with ASAPIO Cloud Integrator and Solace PubSub+

- Create and consume Solace event messages **natively** on your SAP on-prem system
- Works for both **batch/microbatch messages** and **real-time event messages**
- Supports **Business Object Event** coupling for event message creation, out-of-the-box
- Allows **dynamic topics** e.g. from SAP business object data
- Built-in extensive **monitoring**, including payload
- Installs as Add-On to SAP **NetWeaver ABAP** on-prem systems (SAP certified) as of Release 4.6 up to 7.x incl. S/4HANA



Why Event Messaging with SAP systems?

Use-Cases for ASAPIO Cloud Integrator for Event Messaging



New Connectivity:

e.g. connect non-SAP systems, SaaS/PaaS systems and platforms, cloud applications, mobile platforms, data lakes etc. to on-prem SAP systems, or wherever SAP does not provide standard connectivity



Performance & Scalability:

e.g. switch batch interfaces to event-based/realtime interfaces, allow microbatching/partitioning and parallel data loads for high-volume batch interfaces, redesign high-frequency / high-load SAP standard interfaces to event-based, enable 1:n connectivity without middleware



Security & API Management:

e.g. build custom interfaces with ACI, to benefit from its uniform approach for all kind of external connectivity, including central monitoring, or replace (specific) 1:1 interfaces with event-bus-architecture

What it is not: ACI does not generally or globally replace e.g. all SAP-to-SAP connectivity, but it allows for new and better connectivity, where applicable

ASAPIO Cloud Integrator offers various possibilities for event coupling

SAP Business Object Events:

- Create outbound event messages from any SAP business object event (standard or custom methods supported)
- Inbound processing also possible
- Event binding through SAP business object repository event linkage
- Works Out-of-the box, easy configuration layer included
- Highly efficient, very fast, no relevant additional system load

IDoc Interfaces:

- ACI receives e.g. an IDoc creation event through an SAP Business Object Event
- IDOC message content is then converted to an event message
- Inbound processing also possible (currently in development)

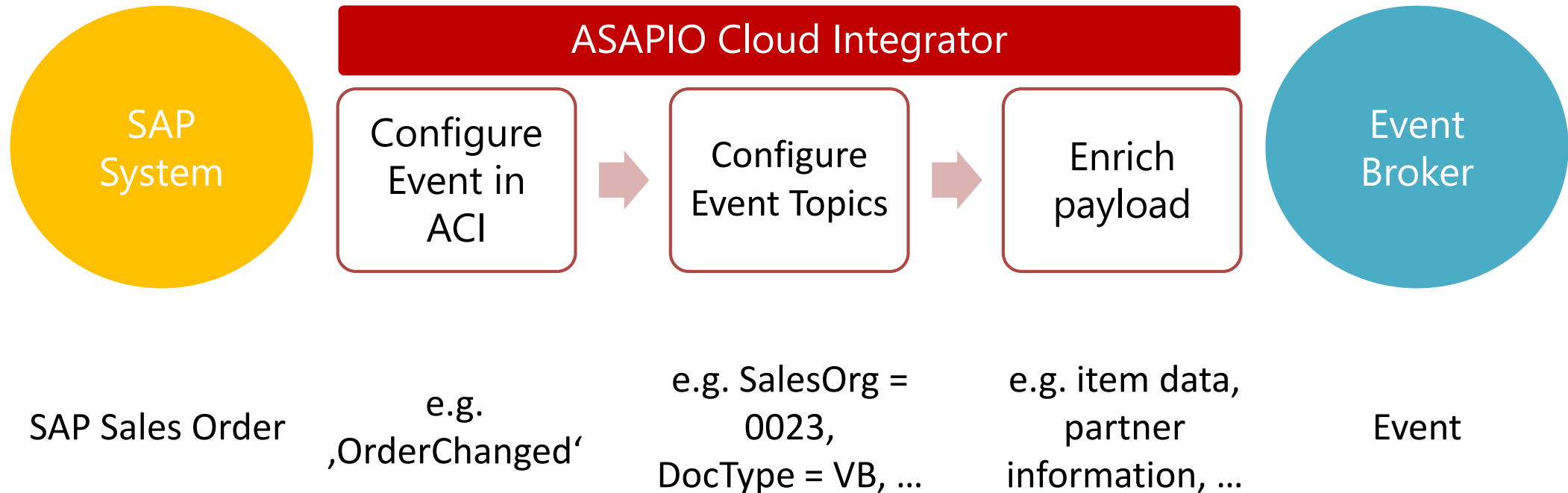
BAPI/RFC function module interfaces:

- Typical for custom interfaces or older 1:1 SAP integrations (e.g. SAP SRM to ERP, WM to ERP etc.)
 - To convert to event-based, a local ACI function module instead of the BAPI/RFC function module is called, and subsequently creates the event message etc.
 - ACI also be used to convert synchronous to asynchronous interfaces
- Requires development

How to set-up events with ASAPIO Cloud Integrator?

Example: Publish SAP sales order changes as an event to Solace.

→ Building an event message from SAP data is simple with ASAPIO Cloud Integrator.



Business use-cases and examples for event messaging integration

Our customers have a wide range of use-cases for event messaging integration of SAP systems:

Sales:

- Provide sales order status and tracking info to customers through websites and mobile apps
- Connect consumer after-sales applications with SAP SD or CRM

Procurement & Logistics:

- Provide purchase order information to employee apps
- Report quality management issues (e.g. from SAP QM) to quality cockpit solutions in real-time

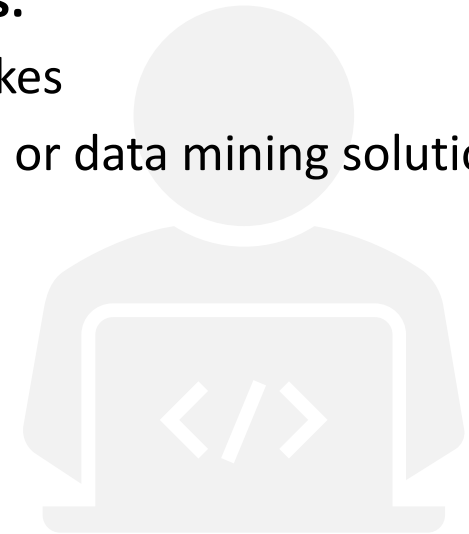
Maintenance/IoT:

- Failing equipment / sensor data can create SAP maintenance order

IT Infrastructure/Analytics:

- Send SAP data to data lakes
- Side-load cloud analytics or data mining solutions

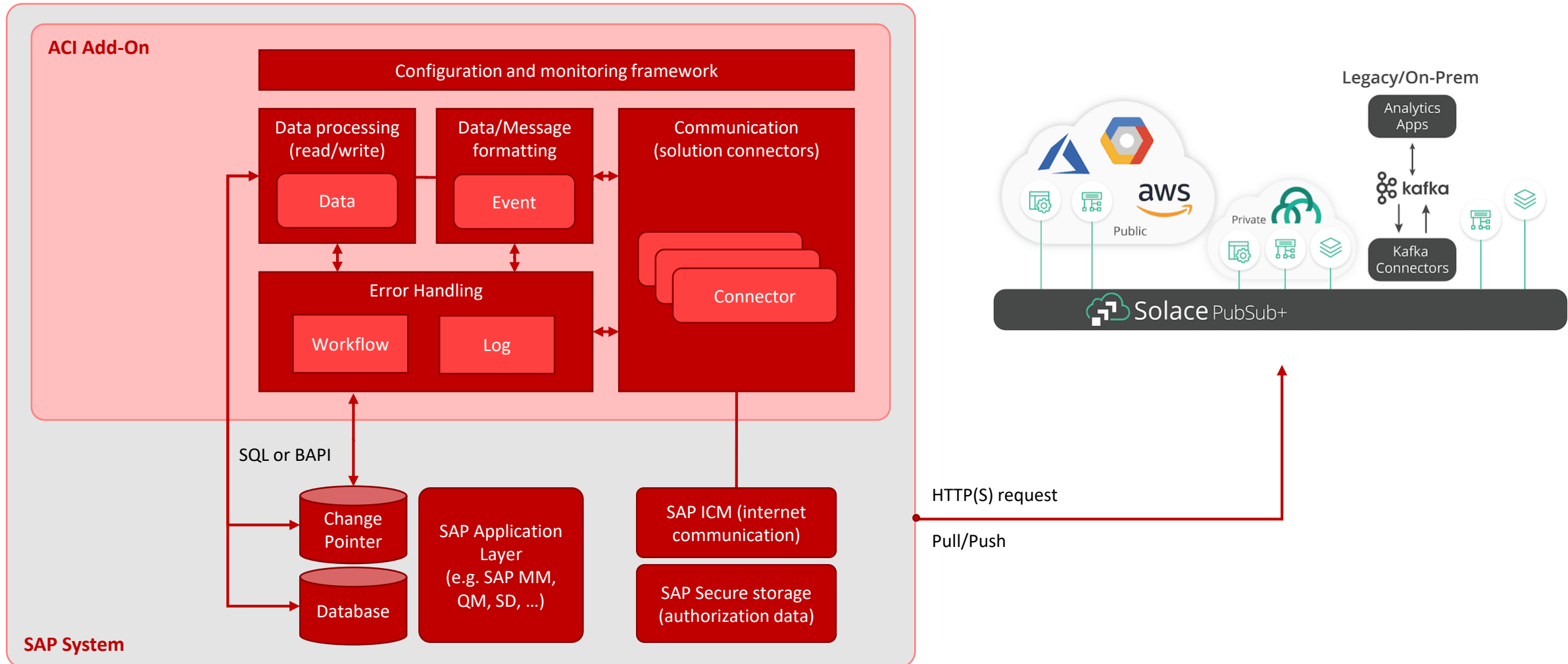
+ many more..!





Solution Details and Features

Application Architecture of ASAPIO Cloud Integrator



ASAPIO Cloud Integrator: Configuration

The screenshot displays the SAP Customizing Implementation Guide (IMG) interface. The main menu includes 'Implementation Guide', 'Edit', 'Goto', 'Additional Information', 'Utilities', 'System', and 'Help'. The toolbar contains various icons for navigation and actions. The title bar reads 'Display IMG'. Below the title bar, there are tabs for 'Existing BC Sets', 'BC Sets for Activity', 'Activated BC Sets for Activity', 'Release Notes', 'Change Log', and 'Where Else Used'. The 'Structure' pane on the left shows a tree view of the configuration objects. The 'ASAPIO Cloud Integrator' folder is expanded, revealing a list of configuration objects under 'ALE Delta Customizing'. A red box highlights this list, and a red callout box points to it with the text 'Configurable from within SAP Customizing Implementation Guide'.

Structure

- SAP Customizing Implementation Guide
 - ASAPIO Cloud Integrator
 - ALE Delta Customizing
 - Message Types in ALE for Cloud Interface
 - Definition of change relevant fields per message type
 - Change Pointer Deletion
 - Activate Change Pointers for Message Types
 - Activate Change Pointers - Generally
 - Additional Data for Message Type
 - Determine Change Pointer Target for Message Type
 - ACI: Connection Customizing File Transfer
 - ACI: Connection Customizing (via web services)
 - ACI: Maintain Cloud Adapter
 - ACI: Cloud Codepages
 - ACI: Import Events
 - ACI: Multi Backend System Plugins
 - ACI: Set the cloud connection password
 - ACI: Reset of change pointers for table BDCP2
 - ASAPIO Ariba Catalog Upload
 - Open Text Archiving and Document Access for SAP Solutions
 - SAP Field Service (Mobile App)
 - Open Text Business Suite for SAP Solutions
 - OpenText Travel Receipts Management
 - Retail Workforce Management

Configurable from within SAP Customizing Implementation Guide

ASAPIO Cloud Integrator: Key Benefits Of Our Architecture

ASAPIO Cloud Integrator is unique in many ways:

- ACI is an add-on to your SAP systems and operates within your established SAP infrastructure in all aspects (application management, security, logging etc.)
- ACI has a modular and open architecture: we deliver content packages for data extraction and mapping and connectors for the different cloud solutions.
- ACI allows to enhance or create custom content (extractors, formatters) and connectors
- ACI uses highly scalable techniques to bring your data into the cloud or to on-prem event brokers:
 - event based triggers
 - delta loads / change pointers
 - parallel data processing (in multiple SAP work processes)
 - data splitting
 - direct SQL reads or BAPI calls for data selection possible
- ACI supports outbound AND inbound process and data flows
- ACI supports interface clustering for efficient provisioning to multiple cloud applications
- ACI does not require any middleware

ASAPIO Cloud Integrator

Product Highlights

Connect applications, services, systems

Connect applications, services, and systems seamlessly across different landscapes using asynchronous communication.

- ✓ Initial Data Loads
- ✓ Incremental Data Loads
- ✓ Cross-system aggregation

Event-driven extensions for SAP systems

Build applications and extensions that can react to events from your SAP system, out-of-the-box.

- ✓ Unlimited extensibility of events
- ✓ Easy to add to flexible framework
- ✓ Utilization of ALE change pointer

Communicate reliably at scale

Reliably send and receive messages through applications, services, and systems using standard messaging protocols and exchange patterns.

- ✓ End-to-End Monitoring
- ✓ Message re-processing
- ✓ Secure communication

High throughput of messages, low latency

The messaging infrastructure decouples communication to scale and handle unexpected peaks in data traffic.

- ✓ Configurable frequency
- ✓ Configurable package sizes
- ✓ Parallel processing

ASAPIO Cloud Integrator: Feature overview (I)

Supported trigger technologies:

- SAP Workflow Event Linkage: direct ACI call through SAP RFC connection (e.g. for single events)
- Scheduled processing of SAP change pointers (data enrichment, formatting for cloud application, communication)

Processing options:

- For **low volume** use-cases, a connection via HTTP REST API is possible (without multi-threading)
- For bulk loads and **high-volume** use-cases, ACI supports multi-threading for packaged data retrieval and cloud communication calls:
 - ACI supports use of SAP server groups to control the load of the ABAP system, to minimize risk of system overload e.g. after mass data changes in the application system

ASAPIO Cloud Integrator: Feature overview (II)

Supported connection types:

- HTTP REST API
- Optional: MQTT via Websockets (min. NW 7.40 SP08)*

Supported monitoring and logging features:

- ACI offers a monitoring transaction to view all logged information
- ACI monitoring includes statistical and graphical analysis of data volume, times and errors
- Logging of HTTP return codes and messages
- Logging of requests (RAW data) can be switched on/off in app customizing
- In case of errors: retransmission control through SAP change pointers (to ensure event delivery)
- Notification / Escalation in case of multiple errors to system administrators or via SAP workflow possible

* in planning / product roadmap

How to get ASAPIO Cloud Integrator?



SAP® Certified
Powered by SAP NetWeaver®

ASAPIO Cloud Integrator

ACI Framework
+ **Connector for Solace®**
Pubsub+®

- ✓ Maintenance included
- ✓ Yearly subscription

ASAPIO Cloud Integrator is the only ready-to-run solution for SAP event messaging integration:

- ACI installs as SAP Add-On on any supported SAP system, including SAP S/4HANA
- No separate system, no middleware required (but optionally possible)
- Multi-backend SAP landscapes supported
- No downtime required for implementation
- Maintenance & service included, including product updates

ASAPIO Cloud Integrator for Solace PubSub+ is available through Solace!

→ Please contact your Solace or ASAPIO sales representative for further information

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