

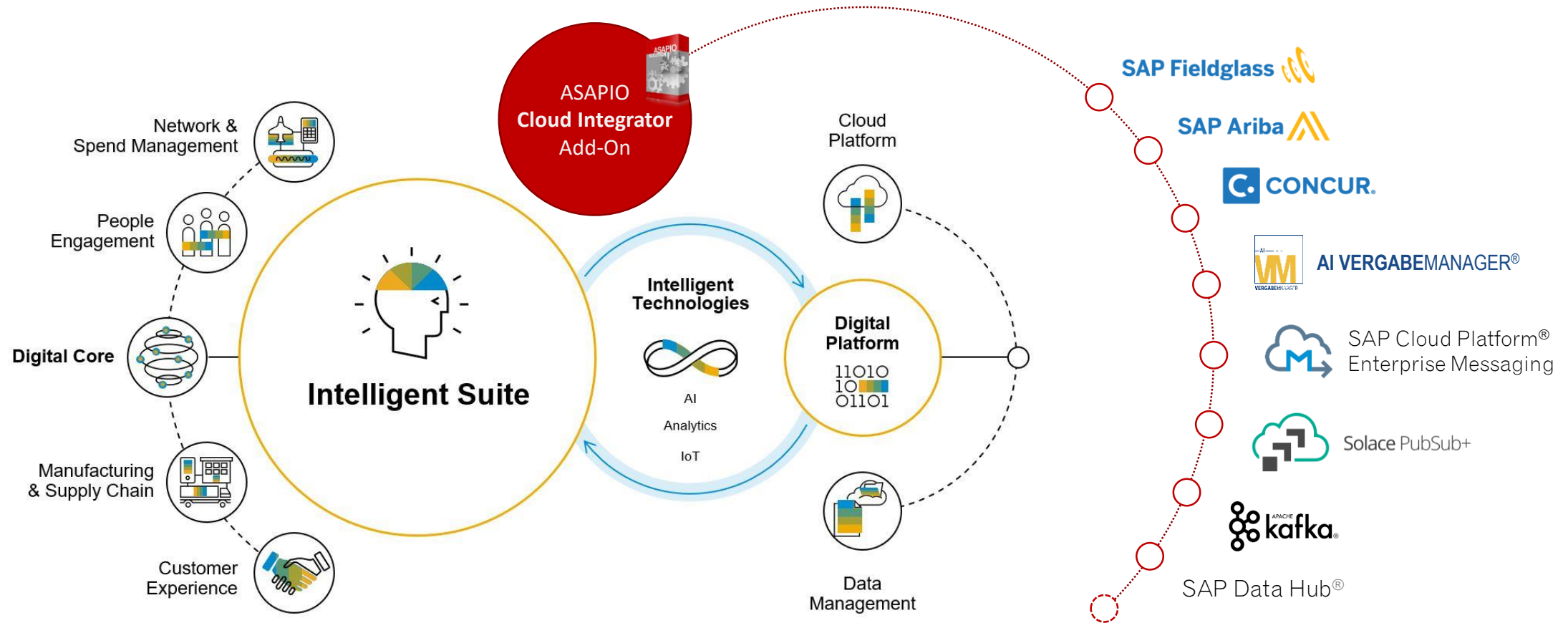
ASAPIO Cloud Integrator and Solace PubSub+

Connect your SAP systems to the cloud

Product Overview

17.7.2019

Integration is crucial in today's solution landscapes: ASAPIO Cloud Integrator connects your SAP systems to the cloud



ASAPIO **Cloud Integrator** connects your SAP systems to the cloud:

- ❑ Add-on for SAP NetWeaver ABAP systems including SAP ERP and S/4HANA
- ❑ Native cloud integration without middleware
- ❑ Supports multi-backend landscapes

ASAPIO – Your SAP Partner for Procurement Solutions, Cloud Integration and PLM

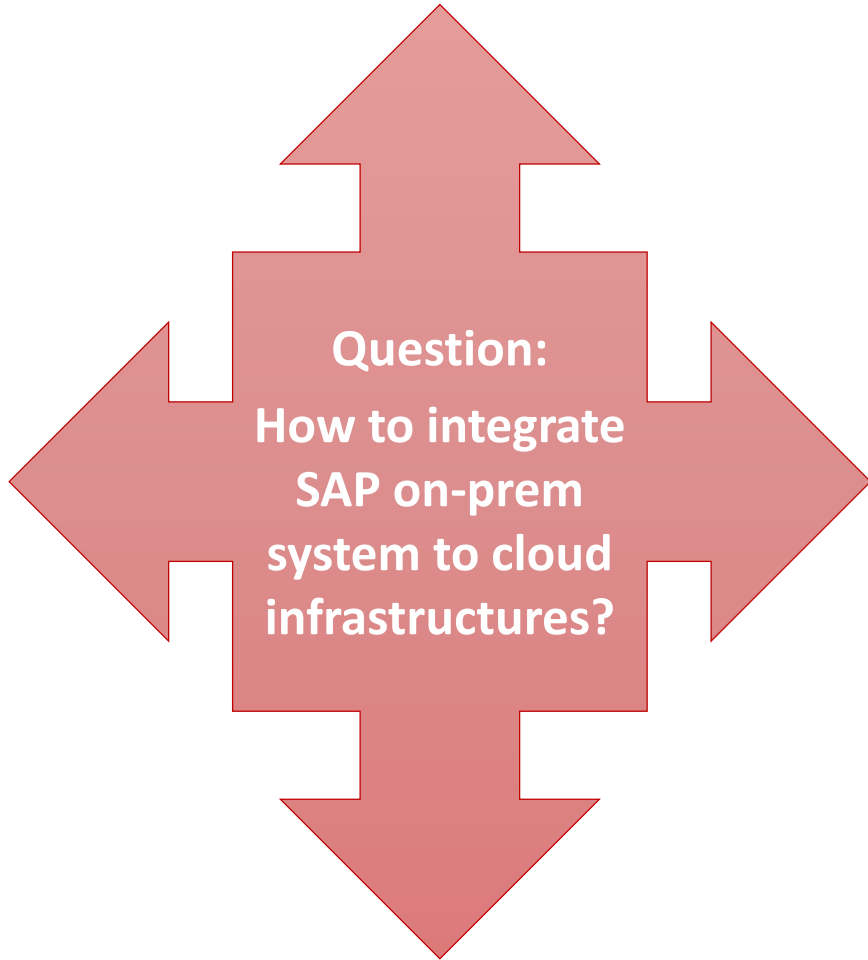
- ✓ Founded in 2003 by former SAP managers and senior consultants
- ✓ A team of over 40 SAP experts with many years of experience and in close cooperation with SAP
- ✓ Headquarters in Munich, locations in Hamburg, Heidelberg, Stuttgart and our Nearshore-Center in Voronezh/Russia
- ✓ Visit us at [asapio.com](https://www.asapio.com) for more information



Our scope of services:

- SAP S/4HANA Sourcing & Procurement, SAP SRM, SAP ERP
- SAP Ariba, SAP Fieldglass and other cloud solutions
- Cloud Integration with ASAPIO Cloud Integrator
- SAP Automotive Solutions and SAP PLM
- Fiori, ABAP, Web Dynpro and other developments
- ASAPIO Add-Ons for SAP Procurement solutions

Business Case: Why choose ASAPIO Cloud Integrator?



Requirement:

Digital enterprise architectures typically require to collect all available data from data **producers**, allow for highly scalable and use-case-specific **data processing** with **microservices** and fast data provisioning to all kind of **consumers** and **front-ends**.

Solution:

ASAPIO Cloud Integrator connects your on-prem SAP systems to cloud applications and acts as **Data Integration Layer** for collection, aggregation, partitioning, provisioning and communication of all kind of SAP data.

Enable your SAP systems for digital integration: ASAPIO Cloud Integrator for Solace PubSub+

- ASAPIO Cloud Integrator directly connects to **Solace PubSub+®**
- Built for performance: in our test environment, we could achieve a message throughput of up to 8.000 msg/s
- ASAPIO Cloud Integrator enables your SAP systems to “talk” natively with cloud applications. No additional middleware required.

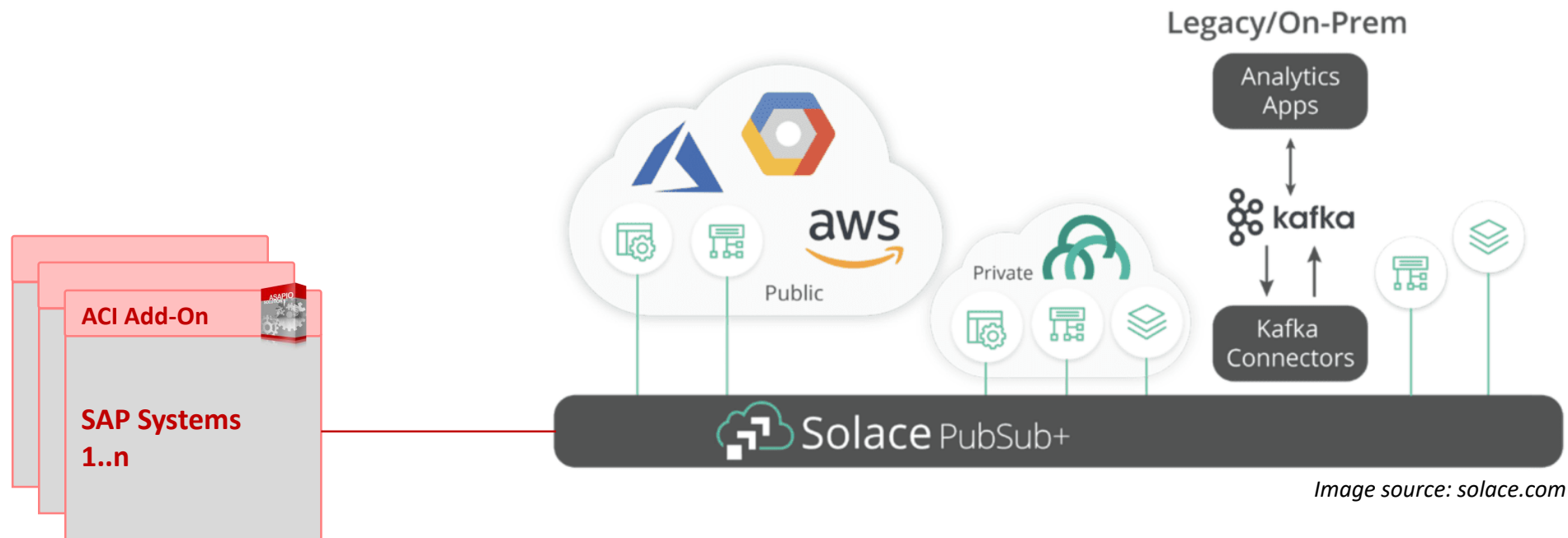
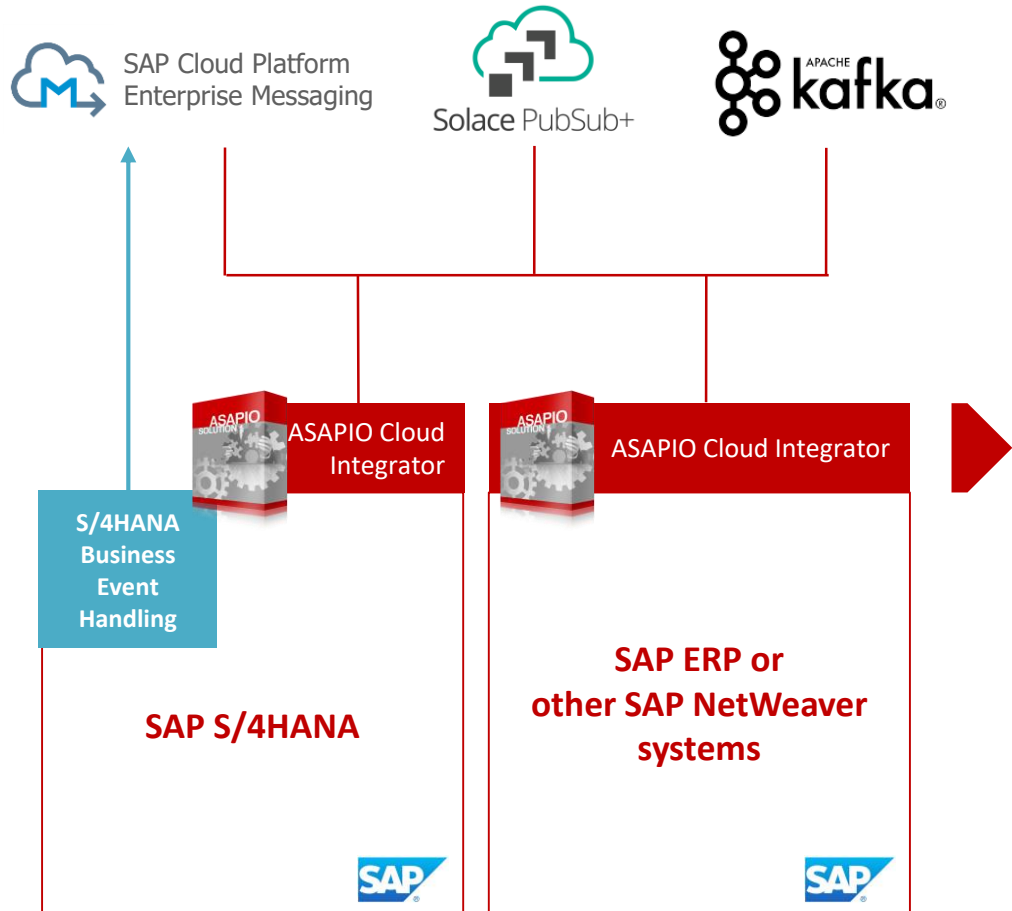


Image source: solace.com

ASAPIO Cloud Integrator: Integration Layer for SAP data in hybrid landscapes



Event-based Integration Layer

Routes to:

- Consumer level / Front Ends
- Data processing / Microservices
- Data storage / Data lakes

Data Integration Layer

Collection, aggregation, partitioning, provisioning and communication

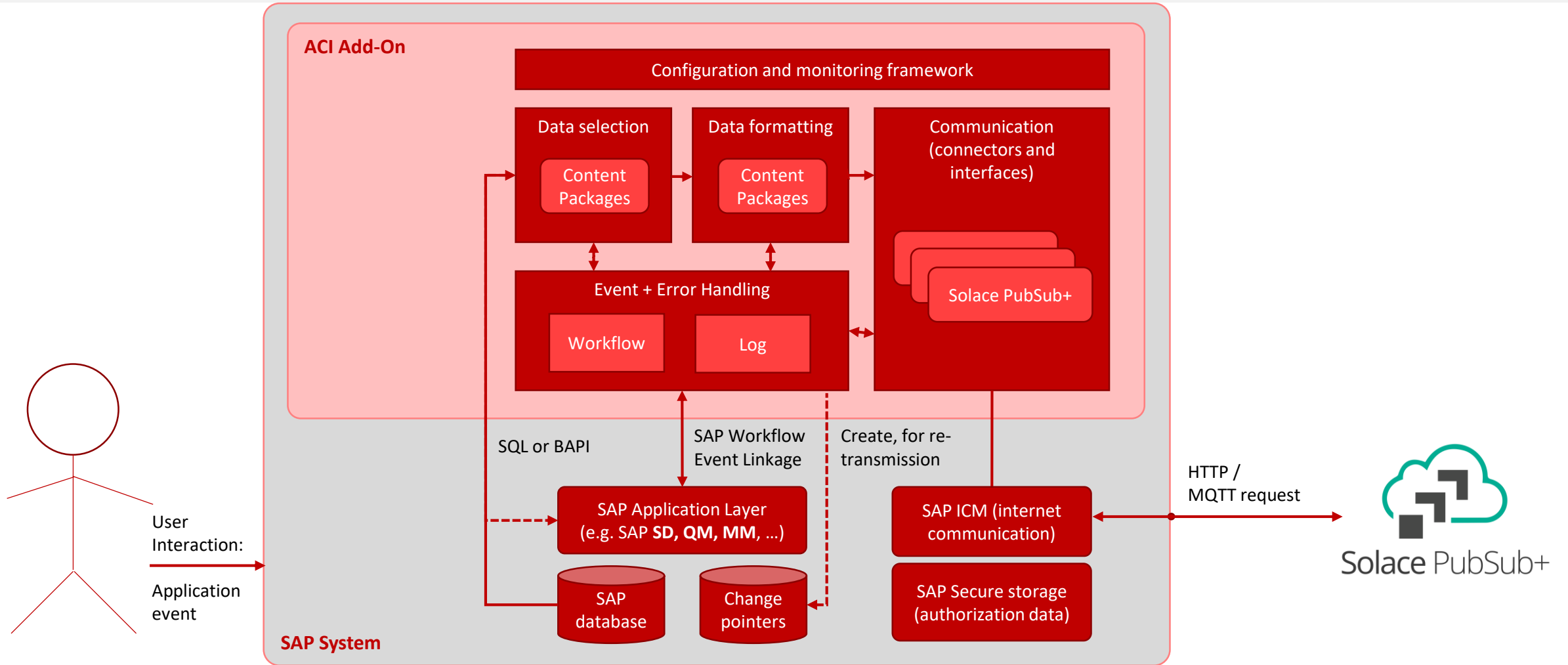
Available solutions:

- ASAPIO Cloud Integrator
- S/4HANA Business Event Handling is the recommended solution for S/4HANA customers

System of Record

- SAP System
- Data and application

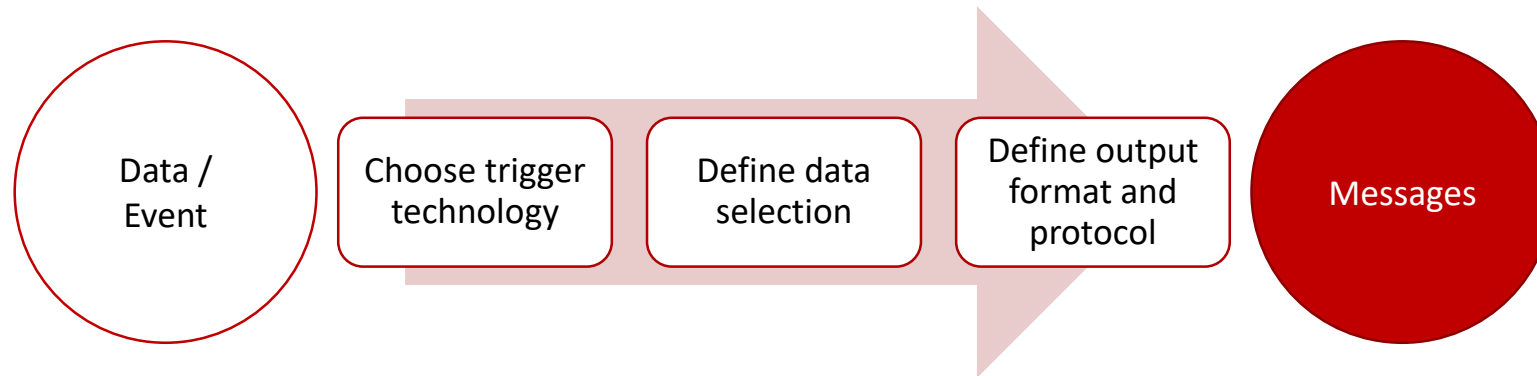
ASAPIO Cloud Integrator: Application Architecture



Enterprise Messaging with ASAPIO Cloud Integrator

You can use ASAPIO Cloud Integrator to model any kind of event for enterprise messaging:

1. Choose a trigger technology
2. Choose or develop a data selection module/method
3. Choose or develop an output format and protocol
4. Register Event



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: 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
 - MQTT for data streaming is optionally possible

ASAPIO Cloud Integrator: Feature overview (II)

Supported connection types:

- HTTP REST API
- 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

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 navigation and utility icons. The current view is titled 'Display IMG'. Below the title bar, there are navigation options: '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' and other categories. A red box highlights the 'ALE Delta Customizing' section, and a red callout box points to it with the text 'Configurable from within SAP Customizing Implementation Guide'.

Implementation Guide Edit Goto Additional Information Utilities System Help

Display IMG

Existing BC Sets BC Sets for Activity Activated BC Sets for Activity Release Notes Change Log Where Else Used

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: Built-in Monitoring and Analytics

Extensive monitoring and analytic functions included

ASAPIO ACI Monitor

O/I	Cloud Instance Name	Replication Object	Timestamp	Cloud Response Code	Cloud Response
▶	AI_PROTO	DOWNLOAD_PARTLIST	14.06.2019 13:27:10	200	MJO 0 00:00:00
▶	AI_PROTO	DOWNLOAD_PARTLIST	14.06.2019 13:27:10	200	MJO 0 00:00:00
▶	AI_PROTO	DOWNLOAD_PARTLIST	14.06.2019 13:27:09	200	MJO 0 00:00:00
▶	AI_PROTO	DOWNLOAD_PARTLIST	14.06.2019 13:27:09	200	MJO 0 00:00:00
▶	AI_PROTO	DOWNLOAD_PARTLIST	14.06.2019 13:27:08	200	MJO 0 00:00:00
▶	AI_PROTO	DOWNLOAD_PARTLIST	14.06.2019 13:27:07	200	MJO 0 00:00:00

ASAPIO Cloud Integrator Statistics - Data Volume

KB ()

Cloud Instance Name

Time Period

Time Period
10.06.2019
11.06.2019
12.06.2019
13.06.2019
14.06.2019
15.06.2019
16.06.2019
17.06.2019
18.06.2019
19.06.2019

KB ()

Time Period

Cloud Instance Name

10.06.2019	11.06.2019	12.06.2019	13.06.2019
14.06.2019	15.06.2019	16.06.2019	17.06.2019
18.06.2019	19.06.2019	20.06.2019	21.06.2019
22.06.2019	23.06.2019	24.06.2019	

Running SAP Business Graphics...

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

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

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

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 Offering

ASAPIO delivers the one-stop-solution for cloud connectivity!

Package contains:

- **Connectors** for your cloud solution, e.g. for Solace PubSub+ and others
- **Add-On - instant and convenient** deployment
- **Monitoring** for **extraction** and **communication**
- **Data extraction templates** for your customization

Key benefits:

- ✓ Ready-to-run
- ✓ Packaged add-on for **SAP ERP and S/4HANA**
- ✓ Available for **multi-backend** scenarios
- ✓ Extensive features for data extraction, **enhancements**, mapping and monitoring
- ✓ **Maintenance** through ticket system available (English, German), **free updates** included
- ✓ Both subscription or up-front license model available
- ✓ Future-proof: ACI also works with SAP Fieldglass, SAP Ariba and many other cloud solutions



ASAPIO Cloud Integrator

+ Connector package

- ✓ Add-On solution
- ✓ Maintenance
- ✓ Subscription or up-front license model

FAQ / Typical questions

Is ACI a middleware?

- No, ACI is not a middleware. ACI is a connectivity add-on for SAP systems. It extracts, filters and formats SAP data consumable to the connected cloud solution.

Is ACI ready for big data?

- Yes, ACI supports event-based communication, delta loads and multi-threading. This allows large amounts of data and high-frequency.

Can ACI aggregate data from multiple SAP systems?

- Yes, ACI can e.g. aggregate data from multiple SAP instances (central or decentral deployment possible)

and ACI allows pre-fixing of data, e.g. to combine overlapping master data from multiple source systems.

Is ACI an SAP product?

- ACI is a partner product developed and offered by ASAPIO GmbH & Co. KG, Munich / Germany

Is there SAP standard integration available for SAP Cloud Platform

- Yes, but not for SAP ERP. For S/4HANA, standard integration scenarios are available for SAP Cloud Platform Enterprise Messaging.



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