How to Apply the Integration Solution Advisory Methodology

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Speakers

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Agenda

Integration Challenge for Enterprise Architects
ISA-M in Action
CIO Guides for Integration
ISA-M Template for Enterprise Architects
Integration Challenge for Enterprise Architects
Intelligent enterprises are integrated enterprises

Key integration principles

1. Out-of-the-Box Integration
2. Open Integration
3. Holistic Integration
4. AI-Driven Integration
The increased scope of integration
Integration challenge for enterprise architects

Fast evolving hybrid landscapes

<table>
<thead>
<tr>
<th>Hybrid Cloud</th>
<th>Intelligent Enterprise</th>
<th>M&amp;A</th>
<th>B2C</th>
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<tbody>
<tr>
<td>SaaS IoT</td>
<td>SAP API Economy</td>
<td>B2B</td>
<td>Blockchain</td>
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<td>Cloud ERP</td>
<td>Non-SAP Industry 4.0</td>
<td>Analytics</td>
<td>Distributed</td>
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<td>Digital Transformation</td>
<td>Machine Learning</td>
<td>Business Processes</td>
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</tbody>
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Customer context

Enterprise architecture strategy | Future application landscape | Existing investments | Skillsets | Commercial aspects
Integration Solution Advisory Methodology (ISA-M)
Simplify integration by a systematic integration approach

Overview
- Helps enterprise architects to shape their integration strategy
- Collection of typical integration styles and patterns
- Mapping to integration services (based on customer context)
- Open to SAP and Non-SAP services / technologies
- Target Group: Enterprise Architects / Integration Architects

ISA-M Template
- Free PPT template available
- Successfully adopted in multiple global organizations
- SAP Consulting Services (optional)
- +1.300 registered customers, partners and SAP consultants
ISA-M In Action

How to Define Your Integration Strategy
ISA-M cycle
Overview: Use cases for enterprise architects
ISA-M cycle
Phase 1: Assess your integration strategy

Objectives and approach
- Documentation/review of your integration architecture
- Scoping of focus areas e.g. future building blocks
- Use-case driven approach (technology-agnostic)

Reasons for integration strategy assessment
- Need to cover new integration patterns
- Implementation of new cloud applications
- Transition to SAP S/4HANA
- Standardization and Governance
- Integration technology consolidation
- Mergers and acquisitions
Integration domains
Assessment and scoping of your hybrid integration landscape
Integration styles and use case patterns
Technology-agnostic library of integration use cases*

Integration Styles

<table>
<thead>
<tr>
<th>Process Integration</th>
<th>Data Integration</th>
<th>User Integration</th>
<th>Thing Integration</th>
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<tbody>
<tr>
<td>A2A Integration</td>
<td>Master Data Synchronization</td>
<td>UI Integration</td>
<td>Thing to Analytics</td>
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<tr>
<td>B2B Integration</td>
<td>Data Replication</td>
<td>Mobile Integration</td>
<td>Thing to Process</td>
</tr>
<tr>
<td>Business Network Integration</td>
<td>Data Virtualization</td>
<td>Desktop Integration</td>
<td>Thing to Data Lake</td>
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<tr>
<td>Customer-Specific Use Case</td>
<td>Data Quality Management</td>
<td>...</td>
<td>Thing to Thing</td>
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</table>

Cross Use Cases

- API-Managed Integration
- Event-Based Integration
- Stream Analytics
- Workflow Management
- Robotic Process Automation
- Digital Integration Hub
- ...

* Extensible by customers
ISAM cycle
Phase 2: Define Hybrid Integration Platform for your organization

Objectives and approach
- Mapping of use case patterns to integration technologies and services
- Open to SAP and Non-SAP integration services
- Derive integration guidelines for your organization
- Highly depends on the customer context

Sample customer context
- Enterprise architecture strategy
- Future application landscape
- Existing investments
- Skillsets
- Commercial aspects
Integration technology mapping

Important: Customer context

Integration styles
- Process Integration
- Data Integration
- User Integration
- Thing Integration
- Cross Use Cases

Use case patterns
- P1, P2, ...
- D1, D2, ...
- U1, U2, ...
- T1, T2, ...
- C1, C2, ...

Integration technologies
- T1, T2, T3, T4, T5, T6, ...

Customer context
- ESB | iPaaS | B2B gateway | API management | ETL | Data management | IoT platform | ...

Technology-agnostic concepts
- SAP and/or Non-SAP components
SAP technology mapping for your hybrid integration platform

Example 1: Process integration

1. Select integration domain(s) and integration style

2. Sample mapping to SAP technologies / services

**SAP Cloud Platform Integration Suite**
- SAP’s IPaaS for cloud and hybrid integration
- Prepackaged content for SAP and non-SAP apps (+1.100 pre-packaged integration flows)
- SAP Cloud Platform Integration Advisor (Simplified integration supported by Artificial Intelligence)
- SAP Cloud Platform Open Connectors (+160 pre-built connectors for Non-SAP apps)
- Complementary: SAP Process Orchestration and SAP Application Interface Framework (AIF)

**Key characteristics**
- A2A, B2B/B2G, master data synchronization use cases
- API-based integration and near real-time processing
- Transactional process integrity
SAP technology mapping for your hybrid integration platform

Example 2: Process integration – future direction for SAP-2-SAP scenarios

1. Select integration domain(s) and integration style

2. Sample mapping to SAP technologies / services

**Simplified integration approach for the Intelligent Suite**
- Standardized integration approach
- E2E processes in the context of the Intelligent Enterprise
- Stepwise adoption of technology standards

**Technology standards**
- E2E process documentation
- Aligned APIs and content SAP Cloud Platform Integration
- Leverage SAP Cloud Platform Master Data Services
- Application lifecycle management
- Security and identity management
- User experience
- Analytics

* Lab Preview

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SAP technology mapping for your hybrid integration platform

Example 3: Data integration

1. Select integration domain(s) and integration style

2. Sample mapping to SAP technologies / services

SAP Data Hub
- Part of SAP Data Intelligence
- Holistic data management across hybrid landscapes
- Pipelining and orchestration of big data
- Leverages SAP EIM tools, e.g. SAP HANA Smart Data Integration (SDI) or SAP Data Services (DS)

Key characteristics
- Support of multiple data integration use cases
- Data focused (table/view, storages, processing, libraries)
- High frequent event processing (e.g. via Kafka)
- Advanced data transformations & processing (e.g. ML)
Technology guidance
SAP Cloud Platform Integration and SAP Data Hub

Process Integration — Interoperability — Data Integration

SAP Cloud Apps — 3rd Party Cloud Apps — Business Partner — SAP Cloud Platform Integration — Data Ingestion — Business Transaction — Interoperability — Data Integration

Key Use Cases and Characteristics
- Chaining of distributed business processes
- A2A / B2B, B2G / Master Data Synchronization
- API focused (synch., async., business events)*
- Message-based processing (mapping, routing, monitoring)
- Transactional Integrity (reliable messaging and error handling)
- Pre-packaged integration content for SAP/Non-SAP scenarios

Key Use Cases and Characteristics
- Pipelining and orchestration of big data in complex landscapes
- Big Data Warehousing, IoT Ingestion, EIM (e.g. batch, streaming)
- Data focused (table/view, storages, processing, libraries)*
- Distributed data processing & server less computing
- High frequent event processing (e.g. via Kafka)
- Advanced data transformations & processing (e.g. ML, Predictive, Code)

* Also table access possible by CPI (like CPI-DS) and API level access possible by SAP Data Hub, but not key focus
SAP technology mapping for your hybrid integration platform

Example 4: UI integration

1. Select integration domain(s) and integration style

2. Sample mapping to SAP technologies / services

**SAP Fiori Launchpad**
- Single point of entry for business applications
- Based on SAP Fiori user experience

**SAP Cloud Platform Mobile Services**
- Development platform for enterprise mobile apps
- SDKs available for multiple devices (e.g. iOS, Android)

**Key characteristics**
- Role-based access
- Online / offline support
- Application lifecycle management
- Device management
SAP technology mapping for your hybrid integration platform

Example 5: Thing integration

1. Select integration domain(s) and integration style

2. Sample mapping to SAP technologies / services

SAP Leonardo IoT and SAP Cloud Platform Internet of Things
- Integrate data from devices (e.g. machines, products, assets) and process it in business or analytical IoT applications
- Interoperability with device management and connectivity components of other cloud providers (e.g. Azure or AWS)
- Data processing at the edge close to the source of IoT data

Key characteristics
- Device lifecycle management
- IoT specific protocol support (e.g. MQTT, OPC-UA)
- Data ingestion, big data storage and time series management
- Edge-level processing capabilities
SAP technology mapping for your hybrid integration platform

Example 6: Event-based integration

1. Select integration domain(s) and integration style

2. Sample mapping to SAP technologies / services

SAP Cloud Platform Enterprise Messaging

- Cloud-based messaging and event-enabling service
- Integration of loosely-coupled microservices
- Consume business events in side-by-side extension apps
- Event enablement e.g. for S/4HANA Cloud
- Supported protocols: REST, AMQP, MQTT

Key characteristics

- High flexibility by decoupling of applications
- Publish/subscribe and point-to-point messaging patterns
- Handle unexpected peaks in data traffic
Summary
Simplify integration by a holistic integration approach for the Intelligent Enterprise

Further Information
ISA-M cycle
Phase 3: Define solution architecture blueprints*

Objectives and approach
- Refine technology agnostic use case patterns with solution architecture blueprints
- Add decision criteria and key characteristics
- Illustrate components and interactions

Usage scenarios
- Use solution architecture blueprints as templates/examples for your projects
- Use solution architecture blueprints as documentation for your integration scenarios

* Outlook: sample blueprints will be added in future versions of ISA-M
Use case pattern: Digital Integration Hub
Sample solution architecture blueprint

Integration styles and use case patterns

Digital Integration Hub Pattern
- Emerging architecture for implementing large-scale, high-throughput APIs
- Inserting an in-memory data store layer between the API layer and the system of record

Key characteristics
- Responsive user experience
- Decoupling of backend apps and front-end APIs
- Protection of backend apps from excessive front-end APIs
- Normalization of the APIs for certain domains
- Real time business insights and analytics
Use case pattern: Digital Integration Hub
Sample solution architecture blueprint

SAP® Cloud Platform

Your Application

SAP HANA Database

Smart Data Integration (SDI)

Data Provisioning Agent

Third-Party Cloud Apps

End User

Desktop

SAP Fiori

Mobile

API Management

Read

Write

Open Connectors

Pub/Sub

Cloud Integration

Enterprise Messaging

TCP

HTTP/RFC

Firewall

Your Datacenter

SAP® S/4HANA or Business Suite

LT116
ISA-M cycle
Phase 4: Enable an agile integration practice in your organization

Objectives
- Establish integration as recognized discipline
- Position integration as a strategic differentiator
- Provide holistic view on integration
- Democratize integration delivery
- Establish knowledge sharing culture (best practices)
- Improve communication between teams / SIs

Sample approach*
- Setup a dedicated integration strategy team
- Roll-out integration guidelines in your organization
- Establish an enterprise architecture board
- Rollout solution architecture blueprints
- Define areas for self-service integration

* Highly depends on your organizational context
ISA-M: Benefits for your organization
Increase your integration maturity level

0: Ad hoc integration
1: Common terminology
2: Integration strategy
3: Integration governance
4: Practice of empowerment

Integration Solution Advisory Methodology (ISA-M)
CIO Guides for Integration
ISA-M Template for Enterprise Architects
SAP integration architecture community

Download ISA-M template

ISA-M Template
Derive Integration Guidelines for Your Organization

< Your Organization >

- Free PPT template
- Successfully adopted in multiple global organizations
- Usage in your organizations, projects or services
- SAP Consulting Services (optional)
- Contribute to ISA-M evolution (optional)

If you are interested in subscribing to the ISA-M template please send a mail to:
matthias.allgaier@sap.com
Key takeaways
Summary and outlook

Key use cases

Outlook

1. Enhancement of ISA-M based on customer and partner feedback
2. Enhancement of ISA-M with additional integration patterns
3. Enhancement of ISA-M with sample solution architecture blueprints
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Related SAP TechEd Learning Journeys

- INT1 – Connect with an Intelligent Suite in an hybrid landscape
- INT2 – Master integration technologies uniting your intelligent suite
- iENT1 – Deliver the Intelligent Enterprise along key end-to-end processes

Related SAP TechEd sessions

- INT101 - Integrate It All with SAP Cloud Platform Integration Suite
- INT202 - AI-Driven and Open Integration to Customize Intelligent Suite Scenarios
- INT203 - SAP Cloud Platform API Management: Customer Use Cases and Best Practices
- INT362 - Event-Driven Integration of SAP S/4HANA to Non-SAP Apps with Agility
- INT823 – Road Map for SAP Cloud Platform Integration Suite
- INT833 – SAP Process Orchestration Software Road Map
- iENT200 - Experience the Next-Generation Processes of the Intelligent Suite from SAP
- iENT211 - Architecture Blueprint for SAP Leonardo IoT
- iENT212 - Innovate, Extend, and Embed Field Service Management with the IoT
- DAT103 - The Data Management Strategy from SAP
- DAT200 - Data Integration Outlook: What to use when?
- UX203 - All You Need to Know About SAP Fiori Launchpad
- UX210 - Go Mobile with SAP Cloud Platform
- LT116 – Digital Integration Hub: Building Agile Data Grids and Microservices

Public SAP Web sites

- SAP Community: https://www.sap.com/community/topics/cloud-integration.html
- SAP products: https://cloudplatform.sap.com/integration.html
Thanks for attending this session.

Feedback

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