



User Guide | PUBLIC
2026-09-07

SAP Integration Solution Advisory Methodology

Content

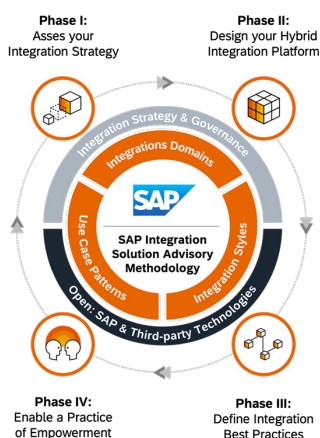
- 1 SAP Integration Solution Advisory Methodology Overview. 3**
- 2 The Phases of the SAP Integration Solution Advisory Methodology. 4**
 - 2.1 Assess Your Integration Strategy. 7
 - Perform a Scoping of Your Integration Domains. 8
 - Perform a Scoping of Your Integration Styles. 11
 - Perform a Scoping of Your Integration Use-Case Patterns. 13
 - Catalog of Integration Use-Case Patterns. 16
 - 2.2 Design Your Hybrid Integration Platform. 28
 - Perform a Technology Mapping. 29
 - Define Your Integration Policies. 35
 - Assess Your Interfaces. 37
 - 2.3 Define Integration Best Practices. 39
 - Specify Your Integration Dos and Don'ts. 40
 - Create Your Architecture Blueprints. 42
 - Create Tailored Development Guidelines. 45
 - 2.4 Enable a Practice of Empowerment. 48
 - Establish the Right Organizational Structure. 49
 - Introduce Integration Governance. 54
 - Ensure Integration Quality Assurance. 56
- 3 Glossary. 59**
- 4 Version History. 60**

1 SAP Integration Solution Advisory Methodology Overview

Integrating end-to-end processes whether these span SAP, partner, or third-party solutions is a top priority of SAP's integration strategy aimed at delivering an integrated, intelligent suite of SAP business applications.

SAP's integration approach goes far beyond technical integration of applications: Comprehensive integration of data, technology, and business processes delivers significant business value such as accelerated speed of innovation.

A key element of this strategy is the SAP Integration Solution Advisory Methodology. It helps you to define, document, and execute a strategy for enterprise integration to increase the integration maturity level in your organization. The methodology offers a framework that includes integration use case patterns, architecture blueprints, and additional best practices for cloud and hybrid IT landscapes. Its scope isn't limited to technical aspects, but also covers the organizational dimension of enterprise integration like setting up an Integration Center of Excellence and defining integration roles including their tasks. It is an open framework whose concepts you can apply to integration technologies from SAP or the ones from other vendors. You can also adapt and enrich its concepts and content according to your needs. A well-defined adoption path allows you to apply the methodology in your organization step by step.



Phases of the SAP Integration Solution Advisory Methodology

Along its phases the SAP Integration Solution Advisory Methodology is used by various personas, which are mainly:

- Enterprise architects: They define company-wide integration technology selection guidelines.
- Integration architects: They define integration best practices.
- Integration developers: They use the methodology to identify the best fitting integration technologies for a given integration scenario, including its implementation.

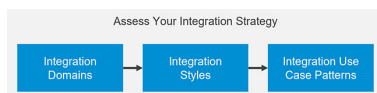
2 The Phases of the SAP Integration Solution Advisory Methodology

The SAP Integration Solution Advisory Methodology offers a well-defined adoption path along four phases that guide you through the process from defining to executing an enterprise integration strategy.

Each phase is comprised of a set of steps describing the context, procedure and related information. The graphic shows the current scope of phases and steps of this methodology:

1. Assess Your Integration Strategy

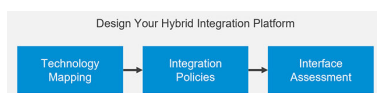
As a starting point an enterprise architect uses the SAP Integration Solution Advisory Methodology to identify the future building blocks for an organization's integration architecture. For this purpose, the methodology offers a technology-agnostic scoping approach, which supports hybrid IT environments that are comprised of SAP and third-party technologies and applications, too. As a result, you will have defined the functional scope of an organization's future hybrid integration platform.



- [Perform a Scoping of Your Integration Domains \[page 8\]](#)
- [Perform a Scoping of Your Integration Styles \[page 11\]](#)
- [Perform a Scoping of Your Integration Use-Case Patterns \[page 13\]](#)

2. Design Your Hybrid Integration Platform

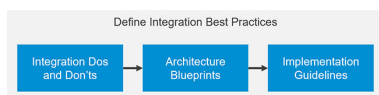
In this phase, an enterprise architect maps the results of the integration strategy assessment to the matching integration technologies based on customer context factors. For each integration technology the enterprise architect specifies integration policies that describe when to use which technology. Whenever integration developers plan to implement an integration scenario, they can perform an interface assessment to determine the best fitting integration technology with the help of the concepts of this methodology.



- [Perform a Technology Mapping \[page 29\]](#)
- [Define Your Integration Policies \[page 35\]](#)
- [Assess Your Interfaces \[page 37\]](#)

3. Define Integration Best Practices

Next, an integration architect defines architecture blueprints for the integration use case patterns that are relevant for their organization. These blueprints outline the scope of technologies, how they're interconnected and further information, which is relevant for integration scenarios. Furthermore, the integration architect can define integration dos and don'ts, which integration developers can use as guardrails to implement integration scenarios in a consistent fashion. The integration architect also prepares development guidelines for applicable integration technologies, for instance by enriching vendor-specific best practices with customer-specific aspects (such as naming conventions for integration artifacts).



- [Specify Your Integration Dos and Don'ts \[page 40\]](#)
- [Create Your Architecture Blueprints \[page 42\]](#)
- [Create Tailored Development Guidelines \[page 45\]](#)

4. Enable a Practice of Empowerment

The last phase focuses on non-technical but organizational aspects of enterprise integration. These include concepts for institutionalizing an Integration Center of Excellence, which allows decentralized project teams to develop integration scenarios in an agile way based on the defined integration strategy. Furthermore, you will get to know concepts for introducing integration governance and integration quality assurance across an organization.

By following the SAP Integration Solution Advisory Methodology, you'll create several deliverables to define, document, and execute an integration strategy for an enterprise.



- [Establish the Right Organizational Structure \[page 49\]](#)
- [Introduce Integration Governance \[page 54\]](#)
- [Ensure Integration Quality Assurance \[page 56\]](#)

Getting Started with Applying the Methodology

SAP provides two options for applying the SAP Integration Solution Advisory Methodology in an organization.

	Templates-based	Tool-based
Asset	Collection of templates (Microsoft PowerPoint, Excel, Word files)	Integration Assessment capability within SAP Integration Suite
Objective	Define and document an enterprise integration strategy	Define, document, and govern the execution of an enterprise integration strategy
Prerequisite	None	SAP Integration Suite subscription, which includes Integration Assessment
Access	You can choose one of the following options: 1. Download single templates from the respective sections of this documentation. 2. Download the "SAP Integration Solution Advisory Template Collection", which contains all templates.	You can choose one of the following options: 1. Activate the SAP Integration Suite capability Integration Assessment and follow the steps of the Integration Assessment Process. 2. Start the SAP Discovery Center Mission "Get started with SAP Integration Suite – Integration Assessment", which includes a sample scenario for performing your first integration assessment.

It is also possible to combine both options: You start with the templates-based approach followed by the tool-based one:

1. Starting with the templates-based approach you can make yourself familiar with the concepts of the methodology and you can collaborate with others on defining and reviewing your enterprise integration strategy.
2. You enter your previously defined integration strategy in the Integration Assessment capability within SAP Integration Suite and maintain any updates in this tool.

Related Information

[Assess Your Integration Strategy \[page 7\]](#)

[Design Your Hybrid Integration Platform \[page 28\]](#)

[Define Integration Best Practices \[page 39\]](#)

[Enable a Practice of Empowerment \[page 48\]](#)

[SAP Integration Solution Advisory Methodology Template Collection \(.zip file\)](#) 

[SAP Integration Suite - Activating and Managing Capabilities](#)

[SAP Integration Assessment - Integration Assessment Process](#)

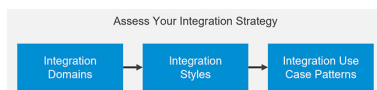
[Get started with SAP Integration Suite – Integration Assessment](#) 

2.1 Assess Your Integration Strategy

Start by assessing the current integration strategy of your organization.

Description

You start the assessment with the review of the existing integration architecture followed by a scoping of its future building blocks. To conduct such an assessment, the methodology offers a well-defined top-down approach for scoping of requirements toward the to-be integration architecture. This is done with the help of integration domains, integration styles, and integration use case patterns.



- [Perform a Scoping of Your Integration Domains \[page 8\]](#)
- [Perform a Scoping of Your Integration Styles \[page 11\]](#)
- [Perform a Scoping of Your Integration Use-Case Patterns \[page 13\]](#)

The motivation for performing such an integration strategy assessment can be various: One of the most common drivers is the transition toward SAP S/4HANA, which also allows you to streamline your integration approach and to benefit from new integration options. Depending on the business and technology strategy of your organization, other drivers to revisit the integration strategy can apply such as:

- Need to cover new integration use case patterns, for instance when adopting new technologies
- Implementation of new cloud-based solutions, which offer new integration options
- Standardization and governance of the technology landscape
- Consolidation of existing integration technologies, which can require to phase out selected integration technologies
- Mergers and acquisitions to remove any possible redundancies or overlaps in integration technologies

Goal

The goal is to have the building blocks of your organization's integration architecture defined which meet both the current and future integration requirements of an organization.

Deliverables

During this phase you'll create three documents:

- List of relevant integration domains
- List of relevant integration styles
- List of relevant integration use case patterns

. If the SAP delivered templates don't meet all your requirements, you can adapt and enrich them according to your needs.

Personas

It's recommended to involve the following personas in this phase:

- Enterprise architect
- Integration architect
- Integration developer

Related Information

[Perform a Scoping of Your Integration Domains \[page 8\]](#)

[Perform a Scoping of Your Integration Styles \[page 11\]](#)

[Perform a Scoping of Your Integration Use-Case Patterns \[page 13\]](#)

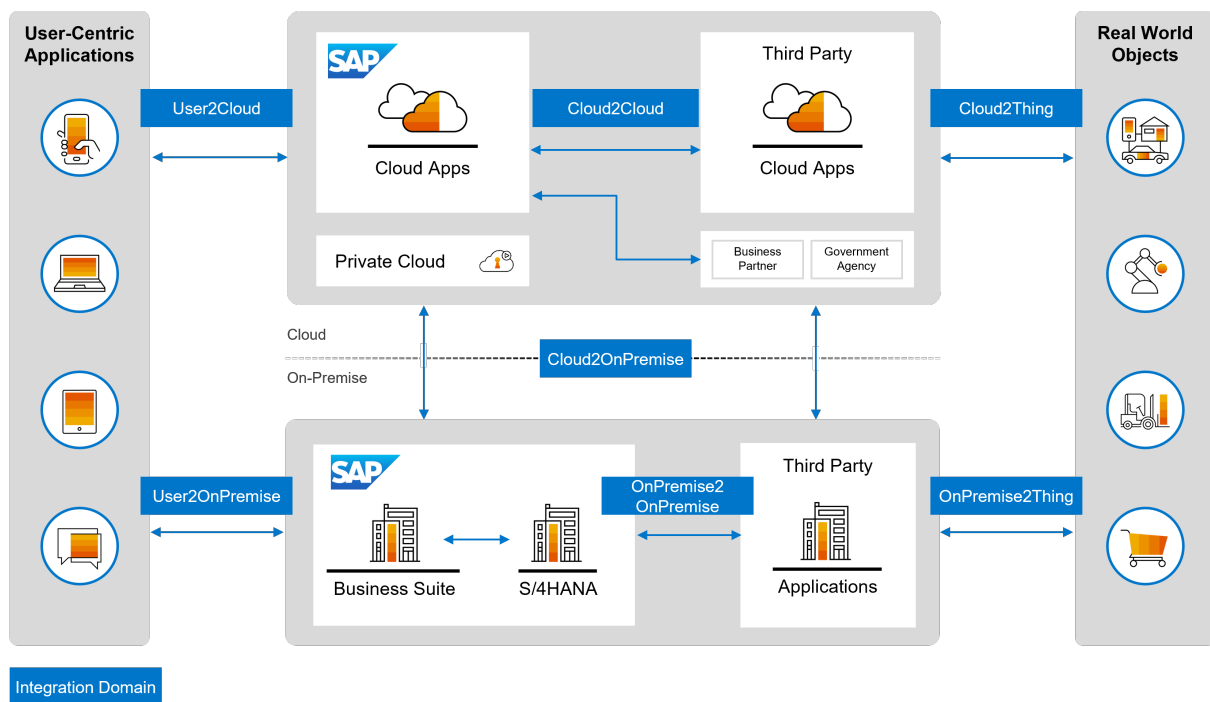
[Catalog of Integration Use-Case Patterns \[page 16\]](#)

2.1.1 Perform a Scoping of Your Integration Domains

Get the first level of integration architecture assessment by selecting integration domains that are relevant for your organization.

Context

You conduct the first level of scoping of your to-be integration architecture with the help of integration domains. Integration domains provide the entry point into the methodology and can be used as a “big picture” for integration. They represent different integration touchpoints of business applications in today's cloud and hybrid IT landscapes such as business applications, user-centric applications, and real-world objects. Integration domains are defined in a technology agnostic fashion. They can therefore also help in blueprinting a hybrid integration platform, which can consist of integration technologies from different vendors (SAP/third-party).



Overview of Integration Domains

Current Scope of Integration Domains

Integration Domain	Description
Cloud2Cloud	Integration of cloud-based business applications with other cloud-based business applications
Cloud2OnPremise	Integration of cloud-based business applications with business applications that are deployed on premises
OnPremise2OnPremise	Integration of business applications that are deployed on premises
User2Cloud	Integration of cloud-based business applications with user-centric applications
User2OnPremise	Integration of business applications that are deployed on premises with user-centric applications
Thing2Cloud	Integration of cloud-based business applications with real world objects (Internet of Things)
Thing2OnPremise	Integration of business applications that are deployed on premises with real world objects (Internet of Things)

Note

Integration domains also cover the opposite direction. Example: The integration domain Cloud2OnPremise is also applicable for integration scenarios sending data from business applications that are deployed on premises to cloud-based business applications.

Typically an enterprise architect conducts the scoping of integration domains who oversees the entire IT landscape in an organization.

Procedure

1. Templates-based approach

Assess Your Integration Strategy:

Integration Domains

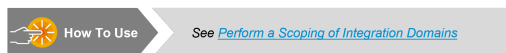
Integration Styles

Technology Mapping

Integration Domains

High-Level Assessment of Your Integration Architecture

Integration Domain	Relevance			Integration Technologies
	Relevant	Not Relevant	Under Evaluation	As Is
Cloud2Cloud				
Cloud2OnPremise				
OnPremise2OnPremise				
User2Cloud				
User2OnPremise				
Thing2Cloud				
Thing2OnPremise				



Integration Domain Scoping Template

Download this “Integration Domain Scoping Template” and fill it out as follows:

- Specify the relevance of each integration domain for your organization.
- For every integration domain, which is currently in use, add the integration technologies, if existing.

2. Tool-based approach

Perform this step using the Integration Assessment capability within SAP Integration Suite. For more information, see: [Integration Domains](#).

Related Information

[Download the Integration Domain Scoping Template](#)

2.1.2 Perform a Scoping of Your Integration Styles

Get the second level of integration architecture assessment by selecting integration styles that are relevant for your organization.

Context

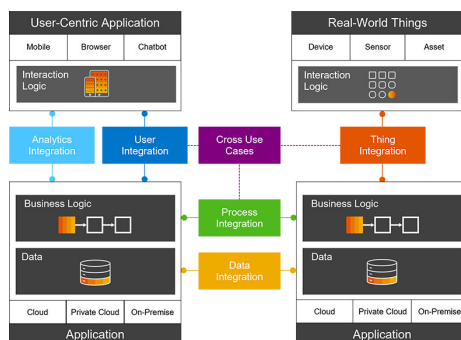
After you have determined relevant integration domains, you take the next step by identifying relevant integration styles. Integration styles represent key integration archetypes, which describe how an integration scenario between a business application and its target is realized.

The current version of the methodology includes five integration styles, which are:

- Process integration: Connects business processes across business applications and further entities.
- Data integration: Synchronizes or accesses data across business applications and data sources.
- Analytics integration: Derives and exposes data from data sources to support business intelligence, augmented analytics and/or enterprise planning scenarios.
- User integration: Integrates user-centric applications with business applications.
- Thing integration: Integrates real-world things with business applications.

All integration styles are technology agnostic and are applicable within multiple integration domains.

Cross use pattern can complement an integration style. These build a category for all integration-related use cases that can be combined with one or more of the five core integration styles. For example, “API-managed integration” provides full-lifecycle management for APIs that you can use in user- or process-centric integration scenarios.



Overview of Integration Styles

Each integration style has specific requirements toward integration. The following table provides an overview of decision criteria, which can help you to identify relevant integration styles.

Integration Styles Decision Criteria

	Process integration	Data integration	Analytics integration	User integration	Thing integration
Objective	Chaining of business processes	Synchronization of data	Deriving business insights from business applications and data sources	Omni-channel access to back-end applications	Capturing and processing of real-world data
Interaction type	System-2-system	System-2-system	System-2-user	User-2-system	Thing-2-system
Coupling to application	Process-level	Data-level	Data-level / business-level	User interface level	Thing event
Primary trigger	Application event	Schedule or application event	User event	User event	Thing event
Urgency of completion	(Near) real time	Batch or near real time	(Near) real time or batch	(Near) real time	(Near) real time or batch
Unit of data exchange	Single objects	Bulk-data or single objects	From aggregated to line-item data	Single objects or bulk-data	Single objects or bulk-data
Specific requirements	• Transactional integrity • Reliable messaging • Message orchestration • B2B protocol support	• Data orchestration • Complex transformations • Data quality management • Big Data processing	• Local and remote data sources • Data & predictive modeling, planning • Data privacy & authentication • Data volume	• Online / off-line support • Device management • End-user management • Application management	• Thing management • Edge intelligence • IoT protocol support • Event stream processing

Typically an integration architect who has a solid understanding of integration requirements across business applications performs the scoping of integration styles.

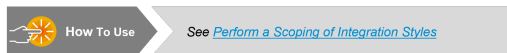
Procedure

1. Templates-based approach

Integration Styles

High-Level Assessment of Your Integration Architecture

Integration Styles	Relevance			Integration Technologies
	Relevant	Not Relevant	Under Evaluation	As Is
Process Integration				
Data Integration				
Analytics Integration				
User Integration				
Thing Integration				



Integration Style Scoping Template

Download the "Integration Style Scoping Template" and fill it out as follows:

- Specify the relevance of each integration style for your organization.
 - For every integration style, add the integration technologies, which are currently in use, if existing.
2. Tool-based approach
- Perform this step using the Integration Assessment capability within SAP Integration Suite. For more information, see: [Integration Styles](#).

Related Information

[Download the Integration Style Scoping Template](#)

2.1.3 Perform a Scoping of Your Integration Use-Case Patterns

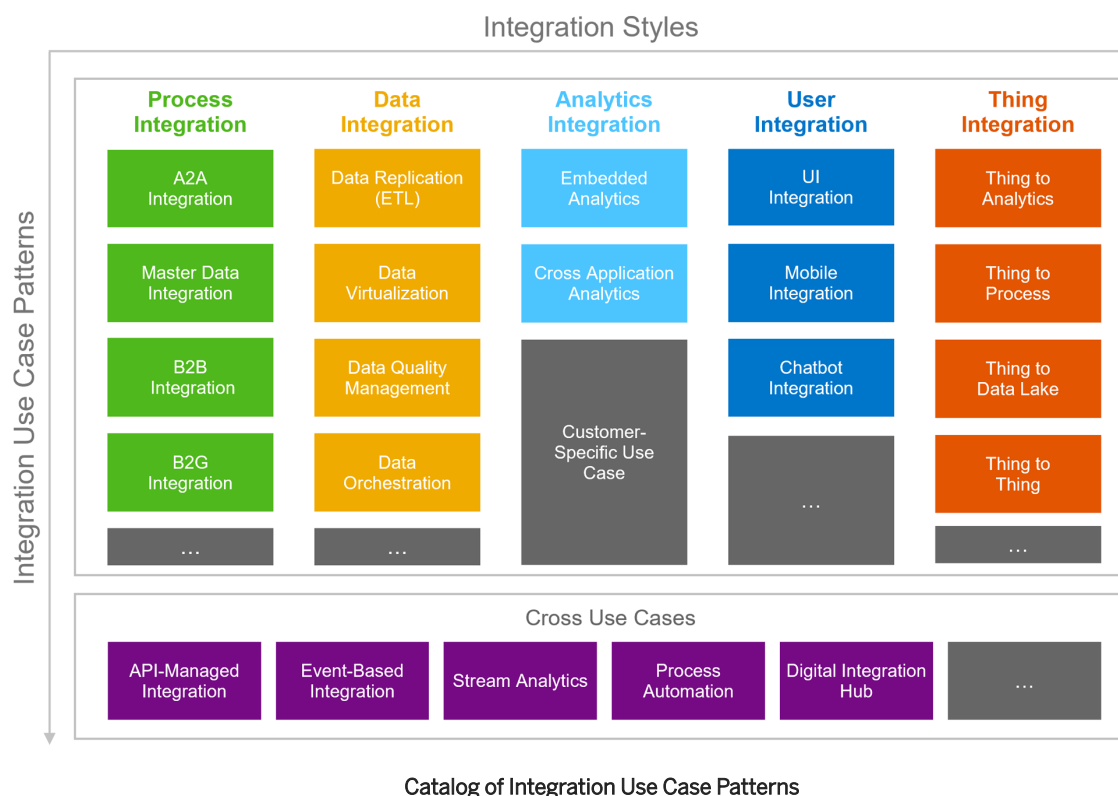
Get the third level of integration architecture assessment by selecting integration use case patterns that are relevant for your organization.

Context

As part of the last step to assess your integration strategy, you identify the integration use-case patterns, which are relevant for your organization. Each integration style can be refined by use case patterns, which

describe frequently used integration use-cases in enterprise landscapes. Based on the same principles, cross use-case patterns can complement one or more of the five core integration styles such as “API-managed integration” or “event-based integration”. Like integration domains and integration styles, integration use-case patterns are also defined in a technology agnostic way.

The SAP Integration Solution Advisory Methodology includes a catalog of integration use-case patterns that you can use as a starting point for your organization. If needed, you can flexibly adjust the library of integration use-case patterns, for instance by adding customer-specific integration use-case patterns or remove the ones that aren't relevant in your organization.



An integration architect who has a strong knowledge about integration requirements across the enterprise performs the scoping of integration use-case patterns.

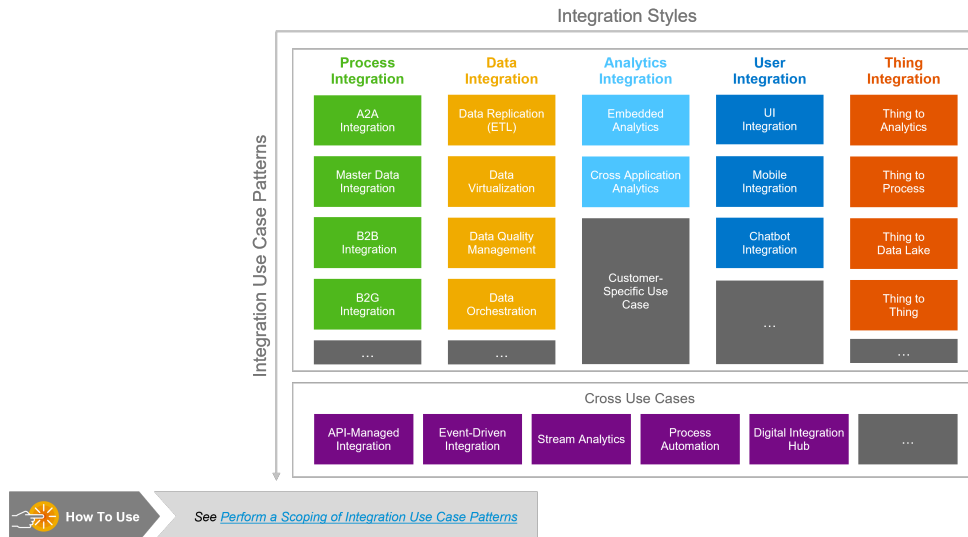
In the following section, you can find the catalog of integration use-cases patterns grouped per integration style. Each pattern is complemented with examples in an SAP context. These are either examples, which are predefined by SAP or, which are typically custom-defined by customers or partners.

Procedure

1. Templates-based approach

Integration Use Case Patterns

High-Level Assessment of Your Integration Architecture



Integration Use Case Pattern Scoping Template

Download the "Integration Use Case Pattern Scoping Template" for performing a scoping of integration use case patterns.

To perform the scoping of integration use case patterns, you first check the predelivered catalog regarding the relevance to your organization. You can indicate the various relevance options using different font types:

- Relevant as of today: Apply bold type (example: A2A Integration)
 - Relevant in future: Apply normal type (example: Data Virtualization)
 - Not relevant: Strike through (example: Event-Based Integration)
 - Under evaluation: Apply italic type (example: Thing-to Process Integration)
- If you have identified integration use case patterns in your organization, which, aren't part of predelivered catalog (for example: industry specific or custom integration use case patterns), you can add them to the related integration style (or cross use case pattern). It's recommended to apply a different border type (for example, dotted line) which will allow you to differentiate the custom ones from the predelivered ones.
- Tool-based approach

Perform this step using the Integration Assessment capability within SAP Integration Suite. For more information, see: [Integration Use Case Patterns](#).

Related Information

[Integration Use Case Pattern Scoping Template](#)

[Catalog of Integration Use-Case Patterns \[page 16\]](#)

2.1.4 Catalog of Integration Use-Case Patterns

The SAP Integration Solution Advisory Methodology includes a catalog of predefined integration use-case patterns, which can be adapted according to your needs.

Description

The integration usecase patterns are grouped along integration styles and the cross-use case patterns form their own group.

For each pattern of this catalog, a description, illustration, and examples in an SAP business application context are available. There are two different types of examples:

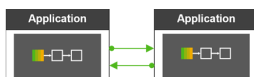
- Predefined by SAP: These integration examples are delivered by SAP, like predefined integration scenarios as part of SAP solutions or integration content packages, which you can find at SAP API Business Hub.
- Defined by customers or partners: These are custom integration examples, which are configured and implemented by customers or partners.

Integration Use-Case Patterns of the Process Integration Style

The process integration style foresees four integration use-case patterns describing various needs of connecting business processes across business applications and other involved entities.

A2A Integration

The application to application (A2A) integration use-case pattern allows you to implement a message-based exchange of transactional data along internal company processes by connecting involved business applications. Transactional data is about ongoing business activities such as physical goods movement or sales order documents. This transactional data is typically exchanged in a (near-) real-time fashion across involved business applications using an integration technology.



Application to Application Integration Use-Case Pattern

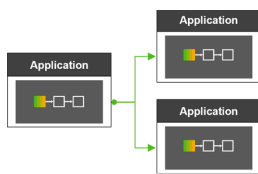
Examples of A2A integration use-case patterns in an SAP context, which are predefined by SAP:

- Exchange sales orders between SAP Customer Experience solutions and SAP S/4HANA as part of the Lead to Cash process for cloud deployment. For more information, see [Transactional Data Flow](#).
- Transfer purchase requisitions for materials that have no source of supply between SAP Ariba Sourcing and SAP S/4HANA as part of the Source to Pay process for hybrid deployment. For more information, see: [Transactional Data Flows](#).

- Replicate service entry sheets or timesheets from SAP Fieldglass Vendor Management System to SAP S/4HANA as part of the External Workforce process for hybrid deployment. For more information, see: [Transactional Data Flows](#).

Master Data Integration

With the help of the master data integration use-case pattern, you can share master data objects across connected business applications. Master data is basic data about business-relevant objects that is required in different contexts, such as materials or business partners. To ensure data consistency the master data is synchronized across connected business applications in (near-) real-time fashion using APIs.



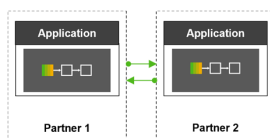
Master Data Integration Use-Case Pattern

Examples of the master data integration use-case pattern in an SAP context, which are predefined by SAP:

- Synchronization of the workforce person master data object between SAP S/4HANA Cloud and SAP SuccessFactors HXM Suite as part of the Hire to Retire process for cloud deployment. For more information, see: [Data Flows for HR Data](#).
- Synchronization of the cost center master data object as part of the Source to Pay process for hybrid deployment. For more information, see: [Master Data Flow](#).
- Synchronization of the customer master data object as part of the Lead to Cash process for cloud deployment. For more information, see: [Master Data Flow for Business Partner Customer](#).

B2B Integration

Using the business to business (B2B) integration use-case pattern you can electronically exchange business documents with other organizations. It allows you to extend your business processes beyond your organization's boundaries to include your business partners such as customers and suppliers. For enabling an electronic data exchange with those business partners, you first need to align with them on common B2B standards, which includes document types, transport protocols, partner identification, security features and more.



Business to Business Integration Use-Case Pattern

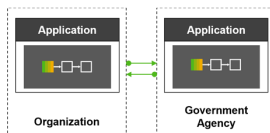
Examples of the B2B integration use-case pattern in an SAP context, which are custom-defined :

- Receive bank statements per Electronic Data Interchange (EDI) in SAP S/4HANA. For more information, see: [Receiving a Bank Statement per EDI](#).

- Send out shipment documents per EDI to inform the customer about the upcoming shipment (shipment notification) using SAP S/4HANA. For more information, see: [Outbound EDI Messages](#).
- Receive just-in-time delivery calls by manufacturers of the automotive industry using SAP S/4HANA using EDI. For more information, see: [JIT Inbound](#).

B2G Integration

In many countries or regions organizations need to comply with local requirements mandating the submission of electronic documents to authorities or business partners. For this purpose, the business to government (B2G) integration use-case pattern allows you to exchange electronic documents, such as invoices, summaries, or transport registrations that conform to legally required data formats and security standards as mandated by the respective authority. You exchange these electronic documents with external systems, for example with business partners' systems with or without the authorities being involved in the process.



Business to Government Integration Use-Case Pattern

Examples of the B2G integration use-case pattern in an SAP context, which are predefined by SAP:

- Send electronic invoices, which include a generated Invoice Reference Number (IRN) from SAP S/4HANA to the Goods and Services Tax (GST) Suvidha Provider as per the legal compliance in India. For more information, see: [SAP ERP Integration with GST Suvidha Provider for India e-Invoice](#).
- Exchange electronic documents created in SAP Document and Reporting Compliance from SAP S/4HANA Cloud with the Spanish tax agency's system Suministro Inmediato de Informacion del IVA (SII). For more information, see: [SAP Document and Reporting Compliance: Electronic Tax Register Books for Spain](#).
- Transfer German tax-specific notifications for sales tax summary reports (UsTVA) from SAP S/4HANA Cloud to German authorities using mandatory message security settings (ERIC libraris). For more information, see: [SAP Finance Applications Integration with ELSTER](#).

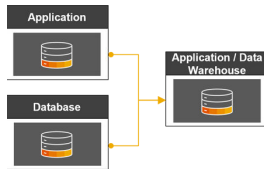
Integration Use-Case Patterns of the Data Integration Style

The data integration style foresees four integration use-case patterns describing different approaches for synchronizing or accessing data across business applications and data sources.

Data Replication (ETL)

With the help of the data replication use-case pattern, you can copy data from one database to another, using only changed data, which is replicated into a secondary database. This can also follow the steps of an extract, transform, load (ETL) process, which is comprised of the following steps:

- **Extract:** Data is moved from a source system to a temporary staging data repository where it is cleaned, and its quality assured.
- **Transform:** Data is structured and converted to match the target source.
- **Load:** The structured data is loaded into a data warehouse or some other storage entity.



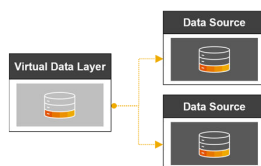
Data Replication (ETL) Integration Use-Case Pattern

Examples of the data replication use-case pattern in an SAP context, which are predefined by SAP:

- Integrate SAP Integrated Business Planning for Supply Chain solution with different SAP and third party solutions for different purposes, for example, so that data such as master data and transactional data can be exchanged. For more information, see: [Data Integration Scenarios](#).
- Replicate shop orders from SAP Digital Manufacturing to SAP Manufacturing Execution. For more information, see: [Integrating SAP Manufacturing Execution On-Premise to Resource Orchestration \(Inbound\)](#).
- Replicate business data to SAP Document and Reporting Compliance service. For more information, see: [Data Replication](#).

Data Virtualization

By creating a virtual abstraction layer, data virtualization offers a single view of all data that resides in a database. The data virtualization use-case pattern enables real-time access to data regardless of its location, source system, or type. It uses a data services layer to integrate data and content from heterogeneous sources on demand. This integration can happen in real time or near-real time, in a stream or a batch – supporting a wide range of business processes.



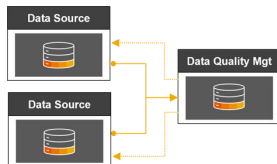
Data Virtualization Integration Use-Case Pattern

Examples of the data virtualization use-case pattern in an SAP context, which are custom defined by SAP customers or partners:

- Look up shared master data from various data sources, such as virtual data access in SAP HANA to remote data sources.
- Create virtual tables in SAP HANA that point to tables in remote sources without replicating the data into SAP HANA, for example, directly accessing data from other databases or Hadoop® clusters in the Hadoop® Distributed File System (HDFS) and caching data there.
- Run queries on combined data sources in real time, including DML (Data Manipulating Language) queries such as SQL (Structured Query Language), with updates being written back to the remote source.

Data Quality Management

The data quality management integration use-case pattern helps you to integrate data from multiple sources for cleansing, matching, and consolidation (central business terms). The data quality process also include correction, standardization, and duplicate matching steps.



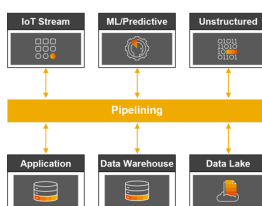
Data Quality Management Integration Use-Case Pattern

Examples of the data quality management integration use-case pattern in an SAP context, which are predefined by SAP:

- Automatic cleansing of address data when the user saves the record or chooses to check the address in SAP S/4HANA. For more information, see: [Postal Address Validation](#).
- Person and organization name cleansing in SAP S/4HANA, which standardizes various components related to a person's or organization's name. For more information, see: [Data Quality Management](#).
- Validation of employee and employee's dependents address in SAP SuccessFactors Employee Central. For more information, see: [Implementing Address Validation Service](#).

Data Orchestration

The data orchestration integration use-case pattern extends data integration: It combines data discovery, preparation, integration, processing, and the connection of data across multiple and complex landscapes. Data orchestration follows a pipeline-driven data integration approach for disparate kinds of data supporting also distributed processing.



Data Orchestration Integration Use-Case Pattern

Examples of the data orchestration use-case pattern in an SAP context, which are custom defined by SAP customers or partners:

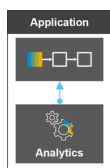
- Optimize inventory management by creating a parameterized replenishment policy to optimally balance materials that are in supply or on stock. It orchestrates data from various SAP and third-party data sources such as warranty data, demand forecast, and component order strategy to determine the best order point for common components.
- Determine best fitting job candidates in SAP SuccessFactors for a specific location by orchestrating data from SAP and third-party solutions.
- Achieve total capital management through financial data consolidation from SAP and third-party solutions, including data matching and advanced customer analytics.

Integration Use-Case Patterns of the Analytics Integration Style

The analytics integration style foresees two integration use-case patterns for enabling analytical queries and insights along business applications.

Embedded Analytics

With this integration use-case pattern, analytical content such as charts and key performance indicator (KPI) reports are embedded in a business application, integrating both on the level of data and user interfaces.



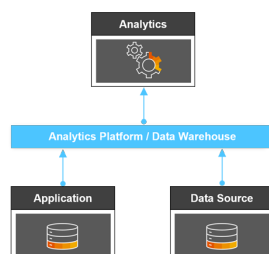
Embedded Analytics Integration Use-Case Pattern

Examples of the embedded analytics integration use-case pattern in an SAP context, which are predefined by SAP:

- Order to Cash Dashboard that is embedded SAP S/4HANA Cloud allows sales managers to analyze key figures using predefined charts. For more information, see: [Order to Cash Dashboard](#).
- People Analytics in SAP SuccessFactors allowing you to leverage predefined stories for compensation, employment, recruiting, time management and more, including option to define custom stories. For more information, see: [Template Stories in People Analytics](#).
- Embedded analytics in SAP Digital Manufacturing delivering Operational reports to production supervisor, line manager, or plant manager, to monitor and analyze the production processes and derive insights from them. For more information, see: [Operational Analytics](#).

Cross Application Analytics

With the help of this integration use-case pattern you can combine data of several source systems using an analytics or data warehouse solution. On top of the combined data, you can build an analytic consumption model to enable (cross application) reporting.



Cross Application Analytics Integration Use-Case Pattern

Examples of the embedded analytics integration use-case pattern in an SAP context, which are predefined by SAP:

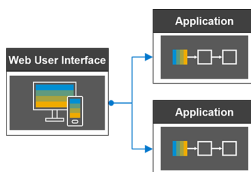
- Financial Analytics Dashboard enables a workforce performance analysis that is based on a cross-application data model and combines financial information from SAP S/4HANA Cloud and HR information from SAP SuccessFactors. For more information, see: [Financial Analytics Dashboard for SAP Analytics Cloud](#).

Integration Use-Case Patterns of the User Integration Style

The user integration style foresees three integration use-case patterns. These allow users to access data from one or more business applications through different user interfaces (UI), such as web-based user interfaces, mobile applications, or chat.

UI Integration

With the help of the UI integration use-case pattern, you can integrate the user interface of multiple business applications into a single point of entry including the consumption of back-end application services in a web user interface.



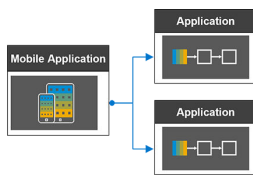
User Interface Integration Use-Case Pattern

Examples of the UI integration use-case pattern in an SAP context, which are predefined by SAP or custom defined by SAP customers or partners:

- Federate content from SAP business applications such as SAP S/4HANA Cloud, SAP S/4HANA (on-premise), SAP Integrated Business Planning for Supply Chain and option to integrate custom-build, and third-party applications into a point of access. For more information, see: [What Is SAP Build Work Zone, standard edition?](#)
- Leverage human resource-focused templated content in SAP SuccessFactors HXM Suite offering teams and departments guided experiences that integrate with different products. For more information, see: [What Is SAP SuccessFactors Work Zone](#).
- Enable a digital workplace by allowing business users to build and publish content, integrate unstructured content (such as documents, videos), apply predefined SAP content and integrate data from third-party applications. For more information, see: [What Is SAP Build Work Zone, advanced edition?](#)

Mobile Integration

The mobile integration use-case pattern enables the consumption of back-end application services in a mobile application, using native or hybrid device capabilities including offline data synchronization.



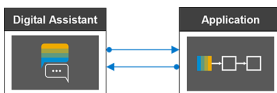
Mobile Integration Use-Case Pattern

Examples of the mobile integration use-case pattern in an SAP context, which are predefined by SAP:

- Enable a mobile entry point to SAP business applications such as SAP S/4HANA, SAP SuccessFactors, SAP Ariba solutions for iOS and unified Android devices allowing access to native or web-responsive (such as SAPUI5) business apps, data, and information. For more information, see: [SAP Mobile Start](#).

Chatbot Integration

This integration use-case pattern integrates chatbots into various communication channels including integration with business applications to trigger a transaction or retrieve further information.



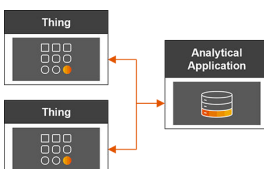
Chatbot Integration Use-Case Pattern

Integration Use-Case Patterns of the Thing Integration Style

The thing integration style is comprised of four integration use-case patterns, which allows you to connect real world objects (such as sensor equipped machines or devices) with business applications and data sources.

Thing to Analytics

The thing to analytics integration use-case pattern supports the real-time integration of IoT data from machines or devices with analytical solutions. As a result, you can gain insights about the time series data recorded by sensors with the help of graphics and visualizations.



Thing to Analytics Integration Use-Case Pattern

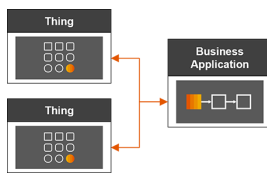
Examples of the thing to analytics integration use-case pattern in an SAP context that are predefined by SAP:

- Connect SAP Warehouse Insights with an IoT platform to receive positioning information from IoT devices about to visualize the resource indoor positioning on the warehouse layout, monitor the status of resources or view geofences and geofence alerts. For more information, see: [Administration Guide for SAP Warehouse Insights](#).

- Bring together OT data (operational equipment sensor data) and IT data (business data) by using SAP Predictive Asset Insights. It also applies analysis methods such as analytics and data mining to create insights that can be used to optimize business in areas such as maintenance, production, after-sales service, and procurement. For more information, see: [SAP Predictive Asset Insights](#).

Thing to Process

With the help of the thing to process integration use-case pattern you can exchange data from physical objects for triggering a process step within a business application.



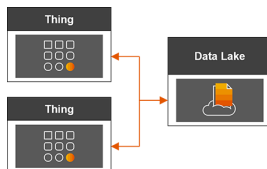
Thing to Process Integration Use-Case Pattern

Examples of the thing to process integration use-case pattern in an SAP context that are predefined by SAP:

- Connect SAP Digital Manufacturing to the shop floor to retrieve machine data for analytics and run production processes. For more information, see: [Shopfloor Integration](#).
- Integrate SAP Warehouse Robotics with physical robots to move handling units from source storage bins to destination storage bins in a warehouse. For more information, see: [Integration Services for SAP Warehouse Robotics](#).

Thing to Data Lake

This integration use-case pattern enables the collection of thing or machine data such as time series data. Next this data is stored in a data lake to derive future value out of it, for instance by applying machine learning, predictive analytics, data discovery and profiling algorithms.



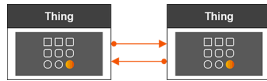
Thing to Data Lake Integration Use-Case Pattern

Examples of the thing to data lake integration use-case pattern in an SAP context that are custom-defined by SAP customers or partners:

- Ingest time series data from sensor equipped assets in a data lake to predict equipment malfunctions with the help of predictive analytics.
- Ingest time series data from sensor equipped manufacturing lines in a data lake to optimize the production process with the help of machine learning algorithms.

Thing to Thing

This integration use-case pattern enables machine-to-machine integration scenarios where devices, robots, or similar can communicate with each other with the help of sensors and industrial standards such as the MQTT (MQ telemetry transport) protocol.



Thing to Thing Integration Use-Case Pattern

Examples of the thing to thing integration use-case pattern in an SAP context, which are predefined by SAP:

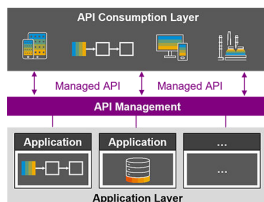
- Integrate industry-specific standard data sources of different manufacturers, for example, process control systems, plant Historian systems with other internal or external data sources using standard protocols for machine-to-machine communication. For more information, see: [SAP Plant Connectivity](#).
- Establish machine-to-machine communication in SAP S/4HANA Manufacturing for production engineering and operation for supporting automation scenarios such as start and complete, component assembly, and collection of inspection data from smart tools or testing equipment. For more information, see: [Integration with Smart Tools and Machines](#).

Cross Use-Case Patterns

Cross use-case patterns can complement one or more integration styles. The current version of the SAP Integration Solution Advisory Methodology foresees five cross use cases.

API-Managed Integration

API-managed integration allows you to provide omni-channel and secure access to business applications that can also hide the complexity of underlying heterogeneous landscapes. With the help of API-managed integration you can enforce usage policies for APIs, controlling API access, analyzing usage data and more.



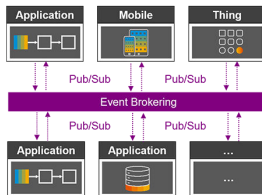
API-Managed Integration Use-Case Pattern

Examples of the API-managed integration use-case pattern in an SAP context, which are custom defined by SAP customers or partners:

- Exchange business data with customers and partners with the help of secured and protected APIs.
- Meter the consumption of APIs as part of integration scenarios for internal cost accounting purposes.
- Modernize legacy interfaces by standardizing protocol, access, and authorization concepts.

Event-Driven Integration

With the help of the event-driven integration use-case pattern you can implement a loosely coupled integration of business applications and extensions, which is based on events. An event represents a significant change in state of a (business) object. Whenever such a change occurs the event source publishes this information as event to an event infrastructure. These are intermediaries that broker and manage events. Event consumers are software components that subscribe to the event infrastructure to be informed about events.



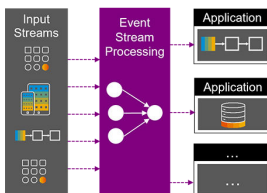
Event-Based Integration Use-Case Pattern

Examples of the events-driven integration use-case pattern in an SAP context, which are custom defined by SAP customers or partners:

- Inform remote systems about created, changed, and deleted customer returns in SAP S/4HANA through business events. For more information, see: [Customer Return Events](#).
- Publish bill events from SAP Subscription Billing in order to inform event consumers about the lifecycle of a bill, such as when the bill was opened or closed, or becomes due. For more information, see: [Bill Events](#).
- Inform remote systems when a freight booking is created, changed, or cancelled in SAP S/4HANA. This information can be used to reserve freight space on a ship or airplane and to track the actual execution. For more information, see: [Freight Booking](#).

Stream Analytics

When applying the stream analytics use-case pattern you can process streams of incoming event data in real time, and collect and act on incoming information.



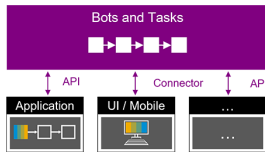
Stream Analytics Integration Use-Case Pattern

Examples of the stream analytics use-case pattern in an SAP context, which are custom-defined by SAP customers or partners:

- Detect and prevent fraud by analyzing credit card transactions of payments in SAP S/4HANA.
- Target marketing offers to customers based on context from SAP Emarsys Customer Engagement.
- Monitor click streams on Web sites for optimizing user experience in context of SAP Commerce Cloud, context-driven services.

Process Automation

This cross-use case pattern lets you automate workflow processes and tasks across business applications, office software and more with the help of workflows, bots, and connectors.



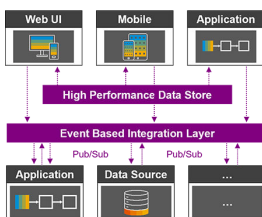
Process Automation Integration Use-Case Pattern

Examples of the process automation use-case pattern in an SAP context that are predefined by SAP:

- Extract sales order requests automatically from Excel files and create sales orders in the SAP S/4HANA system. For more information, see: [Automatic Creation of Sales Orders from Excel \(4G5\)](#).
- Schedule interviews in SAP SuccessFactors solutions by automating the update of various details for interview scheduling. For more information, see: [Interview Scheduling with the help of SuccessFactors](#).
- Automatically export experience measurement scores from Qualtrics to SAP Sales Cloud and Service Cloud using screen scraping. For more information, see: [Automatic export of XM scores and intelligent X-data \(Qualtrics, SAP Sales Cloud and Service Cloud\)](#).

Digital Integration Hub

The digital integration hub use-case pattern allows you to implement large scale, high-throughput APIs by inserting a high-performance data store layer between the API service layer and business applications in a decoupled fashion. As a result, you can provide high responsive front-end API services while preventing business applications from excessive API services-generated workloads.



Digital Integration Hub Integration Use-Case Pattern

Examples of the digital integration hub integration use-case pattern in an SAP context that are custom-defined by SAP customers or partners:

- Create a single access layer for all data sources, including SAP and third-party systems accelerating the implementation of digital processes to interact efficiently with customers. For more information, see: [Digital integration hub customer use case](#).
- Enable fast data access as well as high availability when transitioning from an on-premise centric application landscape towards a cloud-based one. For more information, see: [Digital integration hub customer use case](#).

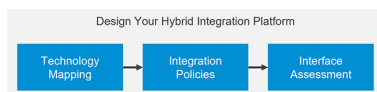
2.2 Design Your Hybrid Integration Platform

Use technology mapping, integration policies, and interface assessment to design your future hybrid integration platform.

Description

In this phase, you design your future hybrid integration platform. In regard to the SAP Integration Solution Advisory Methodology, the term “hybrid” isn’t limited to the support of hybrid deployment models but also includes the ability to support all relevant integration domains and styles. Furthermore, a hybrid integration platform needs to address the needs of different personas such as integration experts, application developers, and lines of business users as needed.

As a first step you conduct a technology mapping to determine the scope of your future hybrid integration platform. Next, you define integration policies that describe when to choose which technology of this platform. The third step – to conduct an interface assessment – is a continuous activity, which is typically done by integration developers: Whenever a new integration scenario is needed the interface assessment helps integration developers to determine the right integration technology or technologies.



- [Perform a Technology Mapping \[page 29\]](#)
- [Define Your Integration Policies \[page 35\]](#)
- [Assess Your Interfaces \[page 37\]](#)

Goal

The objective of the second phase is to have the scope of relevant integration technologies defined which will form your organization’s hybrid integration platform. Furthermore, you’ll have defined integration policies that can help integration developers to identify the best fitting integration technologies for a new integration requirement as part of an interface assessment.

Deliverables

As part of the second phase of the SAP Integration Solution Advisory Methodology you create the following assets:

- Technology mapping describing which integration technologies to choose for each integration style and use case pattern that are in scope
- List of integration policies, which are defined for each integration technology in use
- Interface assessment using the Integration Assessment capability within SAP Integration Suite

Personas

- Enterprise architect
- Integration architect
- Integration developer

Related Information

[Perform a Technology Mapping \[page 29\]](#)

[Define Your Integration Policies \[page 35\]](#)

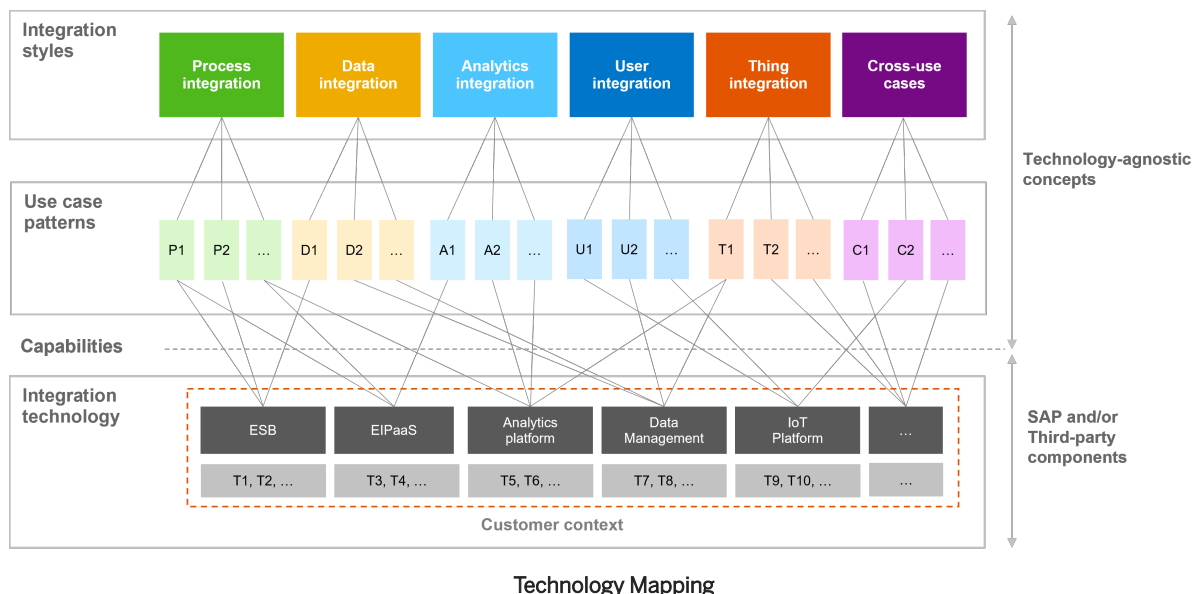
[Assess Your Interfaces \[page 37\]](#)

2.2.1 Perform a Technology Mapping

Define the high-level scope of your hybrid integration platform with the help of a technology mapping.

Context

The scoping results of the first phase of the SAP Integration Solution Advisory Methodology describe the functional requirements toward your organization's future hybrid integration platform. You perform a technology mapping to relate these functional requirements to corresponding integration technologies from SAP or from other vendors based on their supported capabilities.



In a lot of cases there is no 1:1 mapping between integration use case patterns possible, but an n:m mapping. Therefore, you require more than one integration technology for an integration use case pattern and in turn a lot of integration technologies support more than a single integration use case pattern.

Examples:

- Integration use case requiring more than one integration technology: For the B2B integration use case some customers leverage a B2B gateway solution, to support the exchange of electronic data interchanges with trading partners, together with an Enterprise Service Bus (ESB) to integrate with internal business applications.
- Integration technology supporting more than one integration use case pattern: An Enterprise Integration Platform as a Service (EIPaaS) solution allows you to implement the A2A integration, master data integration, API managed integration and more use case patterns.

Customer Context Factors

When conducting such a technology mapping you need to consider specific context factors, too. These factors influence the decision-making process for integration technologies and are customer-specific. Examples of such customer context factors are the following:

- Enterprise architecture strategy: This architecture domain determines the overarching IT strategy of an organization. Hence it specifies the boundary conditions for choosing integration technologies.
- Future application landscape: If your organization pursues a “cloud first” strategy regarding its application landscape then the integration technology landscape should follow this strategy, too.
- Existing investments: If an organization has already invested in specific integration technologies they often prefer to reuse existing investments for new integration requirements rather than investing in new integration technologies. In such cases you need to carefully evaluate if this solution would really meet future requirements, too.
- Skillsets: If an organization prefers to outsource parts of their IT related tasks, then naturally the same principle applies for integration related tasks. In such cases a cloud-based integration technology is likely preferred over an integration software that you run on premises.

- Commercial aspects: Depending on the commercial models with your IT vendors, you may prefer one vendor over the other (for example, because of existing contracts).

The technology mapping is typically conducted by an enterprise architect.

For selected integration styles sample technology mappings are available using services of SAP Business Technology Platform. For more information, see [Sample Technology Mappings \[page 32\]](#).

Procedure

1. Templates-based approach

Define Integration Best Practices:
Technology Mapping
Integration Policies
Interface Assessment

Technology Mapping

This template belongs to the SAP Integration Solution Advisory Methodology. It can be used to perform a technology mapping for designing the hybrid integration platform of your enterprise.

Worksheet Name	Description
Integration Use Case Patterns	Adapt the list of pre-delivered integration use case patterns: Remove the ones which are not relevant for your organization and add custom ones if needed. For each integration use case pattern select the integration technology from the drop down menu to be used in your organization.
Integration Technologies	Maintain the list of integration technologies which are / are to be used in your organization.

© 2023 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to SAP Materials for general audiences.

Technology Mapping Template

Download the “Technology Mapping Template” and fill it out as follows:

- Go to the worksheet “Integration Technologies” and maintain the integration technologies in your organization.
 - Go to the worksheet “Integration Use Case Patterns” and do the following:
 - Adapt the list of integration use case patterns in case you’ve modified the SAP delivered ones, like you removed unneeded ones or added custom ones.
 - Select the integration technology, which you want to use in your organization for each integration use case pattern.
2. Tool-based approach
- Perform this step using the Integration Assessment capability within SAP Integration Suite. For more information, see: [Review Integration Technology](#).

Sample Technology Mappings

In the following section you can find sample technology mappings for each selected integration style that uses services of the SAP Business Technology Platform. The sample technology mappings are supposed to describe the high-level building blocks, which can form a hybrid integration platform.

Sample Technology Mapping for the Process Integration Style

SAP Integration Suite is the recommended SAP integration technology for process integration. It is an Enterprise Integration Platform as a Service solution (EIPaaS) for cloud and hybrid integration scenarios. For SAP Integration Suite you can discover, test and consume digital content at SAP API Business Hub, such as predefined integration content packages, adapters, APIs, and events for integrating SAP and third-party applications. SAP Integration Suite enables an API-based integration of business applications and supports near real-time processing and transactional process integrity.

Furthermore, you can use the SAP Application Interface Framework as complementing technology: This interface management tool that is embedded in SAP S/4HANA and serves as an add-on to SAP Business Suite and allows business users to monitor interfaces, trigger alerts, and manage errors without IT support.

SAP Integration Suite is comprised of the following capabilities:

Capability	Description
Cloud Integration	Integrate SAP and non-SAP, cloud, and on-premise applications and process messages in real-time scenarios spanning different companies, organizations, or departments within one organization.
API Management	Get access to simple, scalable, and secure digital assets through application programming interfaces (APIs) and consume these.
Open Connectors	Build seamless integrations with over 160 non-SAP applications using prebuilt connectors.
Integration Advisor	Accelerate the development of business-oriented interfaces and mappings, generate runtime artifacts quickly, and significantly reduce efforts.
Trading Partner Management	Manage B2B relationships with multiple trading partners through this easy-to-use user interface that helps simplify the B2B communication between trading partners.
Integration Assessment	Define and execute an enterprise integration strategy based on the SAP Integration Solution Advisory Methodology.
Migration Assessment	Assess your existing integration scenarios from SAP Process Orchestration to migrate them to SAP Integration Suite.

The key characteristics of SAP Integration Suite are as follows:

- Support of A2A, Master Data, B2B, B2G integration use cases
- Enables API-based integration and near real-time processing
- Ensures transactional process integrity

Sample Technology Mapping for the Data Integration Style

SAP Data Intelligence Cloud is SAP's strategic data management solution and the tool of choice, in particular for cloud and hybrid data integration, metadata management, and data processing needs. It allows you to connect with SAP and third-party data sources. With the help of SAP Data Intelligence Cloud, you can govern, integrate, process, and orchestrate the volume, velocity, and variety of data in on-premise, cloud, multi-cloud, and hybrid distributed system landscapes. The solution is available both as a fully managed public cloud service offering and as a perpetual license product that can be deployed BYOL ("bring your own license") or on-premise.

The core capabilities delivered by SAP Data Intelligence Cloud are as follows:

- Data integration, which supports data ingestion, data enrichment and data workflows
- Data processing, which includes exploration, model design, machine learning orchestration
- Data catalog and metadata management comprising of data discovery, data profiling and metadata cataloging

The key characteristics of SAP Data Intelligence Cloud are as follows:

- Support of advanced data integration requirements that go beyond traditional ETL scenarios
- Data focused approach (tables/views, storages, processing, libraries)
- High frequency event processing, for instance via Kafka

You can complement SAP Data Intelligence Cloud with other enterprise information and data management solutions from SAP, if existing. To help customers to protect investments in those products you can integrate these with SAP Data Intelligence Cloud whenever it makes sense from a business and technology standpoint, for example, to establish additional connectivity to new target systems.

Sample Mapping for the Analytics Integration Style

You can enable the integration use case patterns of the analytics integration style with the help of two solutions:

1. SAP Analytics Cloud: This is an Enterprise Business Intelligence solution that supports business intelligence, planning, and augmented analytics for reporting, simulation, and planning, all augmented by machine learning. It provides connectivity to SAP and third-party systems, and to cloud and on-premise systems through live connections (online) or data acquisition (batch). For SAP Analytics Cloud predefined industry and lines of business content for analytics and planning scenarios is available.
2. SAP Datasphere: This solution enables a business data fabric architecture that harmonizes business data across the organization, allowing business experts to make sound decisions. It combines previously discrete capabilities into a unified service for data integration, cataloging, semantic modeling, data warehousing, and virtualizing workloads across SAP and non-SAP data. Customers using SAP Business Warehouse (BW) and SAP BW/4HANA can leverage existing investments in these products with the help of SAP BW Bridge capability. With that you can move between 70% and 80% of your existing SAP BW and SAP BW/4HANA artifacts into SAP Datasphere.

The key characteristics covering both solutions can be summarized as follows:

- Integration of local and remote data sources
- Model management and data cataloging

- Predictive and planning capabilities (available with SAP Analytics Cloud, Enterprise Edition)

Sample Mapping for the User Integration Style

You can implement the integration use case patterns of the user integration style with the help of the following solutions:

- SAP Build Work Zone: Its standard edition allows you to create a role-based, personalized business site, which establishes a unified point of access to SAP cloud and on-premise, custom-built, and third-party applications. You can also extend and customize your business site, which as needed (such as branding, translation, shell plug-ins, domains URL). Its advanced edition offers additional capabilities for delivering a digital experience solution bringing together business processes with unstructured content (documents, videos, knowledge bases, etc.), including enhanced capabilities for content management, web content, team workspaces and integration with third-party solutions.
- SAP Mobile Start: This is a native mobile application allowing you to access native or web-responsive (such as SAPUI5) business apps, data, and information from the SAP Build Work Zone, standard edition.

The key characteristics of both solutions are as follows:

- Enabling a role-based access, including single-sign on
- Supporting session management
- Providing online/offline support (for mobile only)

Related Information

[Download the Integration Use Case Pattern Scoping Template](#) 

[SAP Integration Suite](#)

[SAP API Business Hub](#) 

[SAP Application Interface Framework](#)

[SAP Data Intelligence Cloud](#)

[SAP Analytics Cloud](#)

[SAP Datasphere](#)

[SAP Build Work Zone, standard edition](#)

[SAP Build Work Zone, advanced edition](#)

2.2.2 Define Your Integration Policies

Define guardrails for integration developers that help them to select the right integration technology of the hybrid integration platform for a given integration requirement.

Context

After you have defined the scope of your hybrid integration platform with the help of the technology mapping, you specify one or more policies for each technology. These act as guardrails for the integration developers and can help them to identify the appropriate technologies for a new integration requirement.

You can specify integration policies for integration domains and integration styles. If needed, you can add applicable integration use case patterns, too. When defining such policies, you should also consider customer context factors (if existing).

The SAP Integration Solution Advisory Methodology foresees different recommendation degrees for the policies: These include general recommendations, reasonable alternatives, possible exceptions, and techniques that you would like to avoid in your organization.

Recommendation degree of an integration policy	Description
General recommendation	Assign this degree to your default recommendation for a specific integration style and/or use case pattern. By doing so, you can standardize your integration approach company-wide.
Reasonable alternative	Assign this degree to possible alternatives that are valid for specific integration scenarios. By doing so, you can also define integration recommendations on a more detailed level than on integration styles and/or use case patterns.
Possible exception	Assign this degree to possible exceptions for your general recommendations that you would like to allow for restricted use cases. By doing so, you can better govern and document deviations.
To be avoided	Assign this degree to explicitly cover integration techniques/approaches that you wouldn't like to be further used for new integration scenarios. By doing so, you can gradually phase out some nonstrategic integration technologies in your organization.

Integration architects define such integration policies. In this role an enterprise architect oversees the current integration technologies in an organization.

Procedure

1. Templates-based approach

Integration Policies

High Level Definition of Your Hybrid Integration Platform

Integration Style: <Process | Data | Analytics | User | Thing> Integration

Integration Policies					
Integration Technology / Service	Recommendation Degree <u>Sample Values:</u> 1) General Recommendation 2) Reasonable Alternative 3) Possible Exception 4) To be avoided	Description Optionally: Refer to integration use case patterns	Integration Domains		
			Cloud2Cloud	Cloud2OP	:



Integration Policy Template

- Download the "Integration Policy Template" and fill it out for each integration style that has been identified as relevant as part of your enterprise integration strategy:
 - In **column "Integration Technology/Service"** you can select the relevant integration technology for which you want to define an integration policy guideline (such as the Cloud Integration capability within SAP Integration Suite).
 - In **column "Recommendation Degree"**, you can define the recommendation degree that you would like to assign to the integration technology within your organization (such as general recommendation).
 - In **column "Description"**, you can further describe your integration policy, optionally by referring to the relevant integration use case patterns.
 - Column "Integration Domains"** allows you to assign the integration technology to the relevant integration domains, such as Cloud2OnPremise or Cloud2Cloud.
- If needed, you can also adjust the integration policy template to your specific needs, for instance by adding further columns for additional selection criteria.
- Tool-based approach
Perform this step using the Integration Assessment capability within SAP Integration Suite. For more information, see: [Analyze and Edit Integration Policies](#).

Related Information

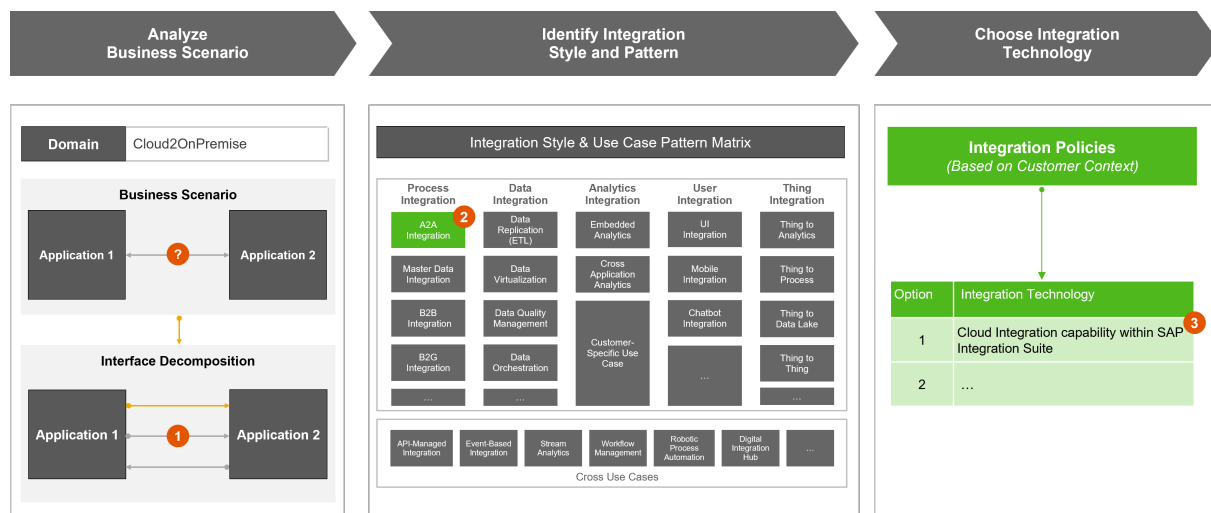
[Download the Integration Policy Template](#)

2.2.3 Assess Your Interfaces

Integration developers determine the right integration technology by assessing interfaces of business applications to integrate with.

Context

A typical task of integration developers in implementation projects is to blueprint integration scenarios between two business applications (see ? in the image below). Typically, a business scenario is broken down into technical interfaces. Next, an integration developer needs to classify/assess the technical interface whether it belongs to a process-, data-, analytics-, user-, or thing-centric integration style (see 1 in the image below) followed by the applicable integration use case pattern (see 2 in the image below). An integration developer can select the appropriate integration technology with the help of the defined integration policies (see number 3 in the image below).



For identifying the integration style and use case pattern, the first phase of the SAP Integration Solution Advisory Methodology provides a set of characteristics.

In addition to that, it also offers detailed guidance for integration developers on selected topics where more than one implementation option exists. The following example compares the API management and the integration layer with the help of sample characteristics. Depending on the required characteristics, an integration developer can make a sound decision about which implementation option to choose.

Sample key characteristics	API management layer	Integration layer
Integration technology	API Management capability within SAP Integration Suite	Cloud Integration capability within SAP Integration Suite
API traffic management policies	●	○
API security policies	●	○
API analytics and monetization	●	○
Structure mapping	◐	●
Protocol adaptation	◐	●
Routing	○	●
Splitter	○	●
Aggregator	○	●
Value mapping	○	●

● Good fit ◐ Partial fit ○ Not a fit

Typically integration developers conduct such interface assessments.

Procedure

You should use the Integration Assessment capability within SAP Integration Suite for interface assessments: It offers a questionnaire-based approach which helps integration developers to determine the best fitting integration technology (or a combination of several integration technologies) for a specific integration requirement. Integration Assessment includes recommendations for SAP integration technologies that you can also adapt to reflect customer context factors. These recommendations are updated by SAP on a regular basis. It also documents the technology decisions made. You can also define your own questionnaires for enabling more tailored and/or detailed recommendations for your integration developers.

1. Templates-based approach
Not available. Leverage the Integration Assessment capability within SAP Integration Suite instead (see below).
2. Tool-based approach
Perform this step using Integration Assessment. For more information, see: [Determine an Integration Technology](#).

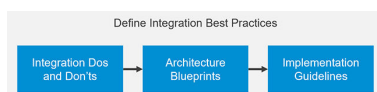
2.3 Define Integration Best Practices

After you've designed your hybrid integration platform in the previous phase, you continue with defining integration best practices for implementing the respective integration scenarios.

Description

The SAP Integration Solution Advisory Methodology describes vendor-agnostic concepts for integration best practices, which have been proven as most useful and valuable by SAP customers and partners. These are complemented with examples in an SAP context.

This phase consists of the following steps:



- [Specify Your Integration Dos and Don'ts \[page 40\]](#)
- [Create Your Architecture Blueprints \[page 42\]](#)
- [Create Tailored Development Guidelines \[page 45\]](#)

The first task is to describe integration dos and don'ts which is a set of most important rules to follow when designing and implementing integration scenarios. The second task is to create architecture blueprints as reusable designs for relevant integration use case patterns. These describe the scope of integration technologies and services, their interactions among each other and together with business applications. The last task is to prepare implementation guidelines that cover your organization's technology and business requirements.

Goal

The objective of this phase to govern and safeguard the implementation of integration scenarios. Documented and shared best practices are especially useful for integration development teams, which are organized in a decentral or distributed fashion. These help to agree on joint integration standards which increases the organization's integration maturity level.

Deliverables

At the end of this phase, you'll have created the following set of assets:

- List of integration dos and don'ts

- Architecture blueprints (enterprise architecture diagrams)
- Integration development guidelines for integration technologies that are in use

Personas

- Integration architect

Related Information

[Specify Your Integration Dos and Don'ts \[page 40\]](#)

[Create Your Architecture Blueprints \[page 42\]](#)

[Create Tailored Development Guidelines \[page 45\]](#)

2.3.1 Specify Your Integration Dos and Don'ts

Define “golden rules” for integration development to standardize integration scenarios at higher quality.

Context

Integration dos and don'ts are easy-to-apply principles about aspects to consider or to avoid when designing and implementing integration scenarios. When defining such integration dos and don'ts, you should focus on the most important rules. Otherwise, there's a high risk that integration developers will not follow all of them. The SAP Integration Solution Advisory Methodology attempts to define integration dos and don'ts for integration styles. If needed, you can deliver detailed guidance (for instance for integration technologies) as part of integration development guidelines.

The list below shows an example of dos and don'ts applicable for the process integration style, including the reasons why.

Integration dos and don'ts	Reason
Leverage integration packages (content) wherever possible	Reduces integration development effort
Decouple business applications via asynchronous messaging and events	Better scaling runtime behavior and resilience
Use synchronous calls only in selected use cases	Risk of slow, unreliable or no responses
Avoid a tight coupling of applications	Negative impact on resilience, availability, maintenance of the integration scenario

Integration dos and don'ts	Reason
Prefer (near) real-time distribution of data over batch-oriented processes	Ensures that data is up to date in connected business applications
Avoid chaining of too many integration runtime components	Makes it more difficult to monitor and operate such integration scenarios

When defining integration dos and don'ts, you need also to consider customer context factors, which may lead to deviations from generic best practices.

Integration dos and don'ts are typically defined by an integration architect.

Procedure

For specifying integration dos and don'ts you use the templates-based approach. Integration Assessment doesn't support the SAP Integration Solution Advisory Methodology: Integration dos and don'ts are related to the design and implementation of integration scenarios, which is not addressed by Integration Assessment.

1. Templates-based approach

Define Integration Best Practices: **Integration Dos and Don'ts** Architecture Blueprints Implementation Guidelines

Integration Dos and Don'ts

For the <Process | Data | Analytics | User | Thing > Integration Style

Integration Dos

- ...
- ...
- ...
- ...
- ...

Integration Don'ts

- ...
- ...
- ...
- ...
- ...

 How To Use [See Specify Integration Dos and Don'ts](#)

Integration Dos and Don'ts Template

Download the "Integration Dos and Don'ts Template" and fill it out as follows:

1. In the header row, specify an integration style you want to define integration dos and don'ts for
2. In the first column, you enter the integration dos
3. In the second column you enter the integration don'ts

As a rule of thumb: Make sure that you don't define more than ten integration dos or don'ts in total.

2. Tool-based approach

Not supported by the Integration Assessment capability with SAP Integration Suite. Please choose the templates-based approach instead (see above).

Related Information

[Download the Integration Dos and Don'ts Template](#) 

2.3.2 Create Your Architecture Blueprints

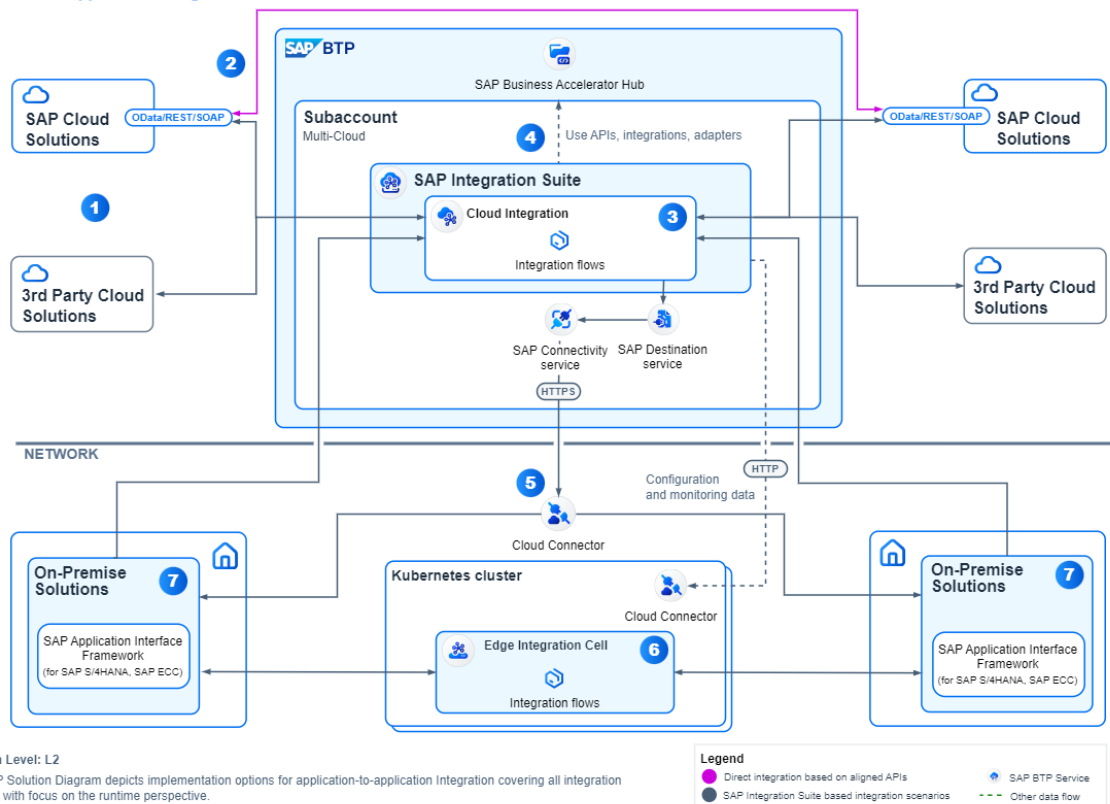
Describe the scope of integration technologies, including relationships and characteristics with the help of architecture diagrams.

Context

Architecture blueprints provide a template solution of an architecture for a particular domain. For the domain of enterprise integration, an architecture blueprint is a visual representation that maps out the components of an integration architecture, including their relationship and integration touch points with business applications. Other details such as interface technologies, security features and data types used should be added if these are essential for an IT architecture.

Following the concepts of this methodology you create your architecture blueprints on the level of an integration use case pattern and an integration domain. Sometimes more than one architectural option for an integration architecture may exist, for instance because of a business specific or infrastructure-specific solution design.

A good starting point for creating your own architecture blueprints are the reference architectures for SAP BTP: You can download the diagrams of a reference architecture and can adapt its scope to your needs. The following graphic shows the reference architecture of the integration use case pattern "Application-to-Application Integration" applicable to the integration domains Cloud2Cloud, Cloud2OnPremise and OnPremise2OnPremise.



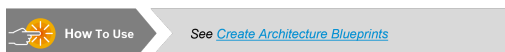
Furthermore, the reference architectures for SAP BTP also include guiding information which helps you to identify the right architecture that meets your requirements.

For creating architecture blueprints in an SAP context, it's recommended that you use content provided by the BTP solution diagram repository.. It includes a comprehensive set of official SAP Business Technology Platform service icons, capability icons, graphical design elements and a set of sample diagrams. You use these tools also to design architecture blueprints for enterprise integration, which illustrate the work of SAP Business Technology Platform, its services, solutions and SAP products, and the ways of their use.

1. Templates-based approach

Architecture Blueprint for <Integration Use Case Pattern> (<Integration Domain>) Info Sheet

	Details
Description	
Involved technologies	• ...
When to apply	
How to apply	• ...
Example	



Architecture Blueprint Description Template

1. Check the reference architecture catalog at SAP Discovery Center if there is already a reference architecture for SAP BTP available which would meet your requirements. If yes, then download the diagram (draw.io file) from SAP Discovery Center
2. Go to the BTP solution diagram design repository to view or download the latest diagram version, examples and shapes for the diagram tool of your choice (currently draw.io, Lucidchart or Microsoft Powerpoint).D.
3. Create your architecture blueprint based on a reference architecture for SAP BTP from SAP Discovery Center or based on a sample from BTP solution diagram design repository.F
4. Download the "Architecture Blueprint Description Template" and do the following:
 - On the first slide: Add the architecture blueprint diagram you've created before and supply it with a set of characteristics/selection criteria.
 - On the second slide (info sheet) add the following information:
 1. Description: Describe the purpose of the architecture blueprint.
 2. Involved technologies: List mandatory and conditional technologies
 3. When to apply: Describe the business context.
 4. How to apply: Refer to implementation information, such as how-toguides, tutorials.
 5. Example: Add a concrete example about an implementation of this blueprint in your organization.
2. Tool-based approach
This step is not supported by the Integration Assessment capability within SAP Integration Suite. Please leverage the templates-based approach (see above).

Related Information





Download the Architecture Blueprint Description Template 

<https://d.dam.sap.com/a/nXJJmw/>

[SAP%20Business%20Technology%20Platform%20Diagrams%20and%20Icons%20Terms%20of%20Use.p
df?rc=10](https://d.dam.sap.com/a/nXJJmw/SAP%20Business%20Technology%20Platform%20Diagrams%20and%20Icons%20Terms%20of%20Use.pdf?rc=10) 

2.3.3 Create Tailored Development Guidelines

Provide integration developers detailed guidance by creating development guidelines for integration technologies.

Context

Integration development guidelines (often also called integration handbooks, integration best practices, or similar) are a common means for sharing integration best practices across distributed integration development teams. The objective of such guidelines is to ensure that integration flows are being designed and implemented in a robust fashion to safeguard your company's mission-critical business processes. Implementation guidelines address both technical and organizational aspects of integration developments. Examples of the latter one are for instance naming conventions for developed integration artifacts, processes for integration governance, and quality assurance.

An implementation guideline should cover the following best practices:

Topic	Examples
Design of integration scenarios	• Definition of reusable building blocks, such as enterprise integration patterns • Naming conventions for integration artifacts • Documentation of integration scenarios
Integration qualities	• Designing reliable, resilient, secure, well performing integration scenarios
Back-end configuration	• Integration-related configurations of connected business applications (such communication arrangements and scenarios in SAP S/4HANA)
Lifecycle management	• Releasing, updating, and deprecating integration scenarios • Testing integration scenarios (unit tests, end-to-end tests) • Transporting integration content and configurations across multi-tier-landscapes • Monitoring integration scenarios (for technical experts, for business users, end-to-end integration monitoring)

As such guidelines are defined for specific integration technology products, you may check for best practices offered by the respective technology vendor. For example, for the Cloud Integration capability within SAP

Integration Suite a comprehensive set of integration flow design guidelines is available covering the following topics:

Guideline	Scope (examples)
Learn the basics	• Configuration • Configuration · Exception handling • Content transport • Monitoring
Guidelines to implement specific integration patterns	• Enterprise integration patterns such as aggregator, splitter, content enricher, content filter
Guidelines to design enterprise-grade integration flows	• Run an integration flow under well-defined boundary conditions. • Relax dependencies to external components. • Apply the highest security standards.

For more information, see: [Integration Flow Design Guidelines](#).

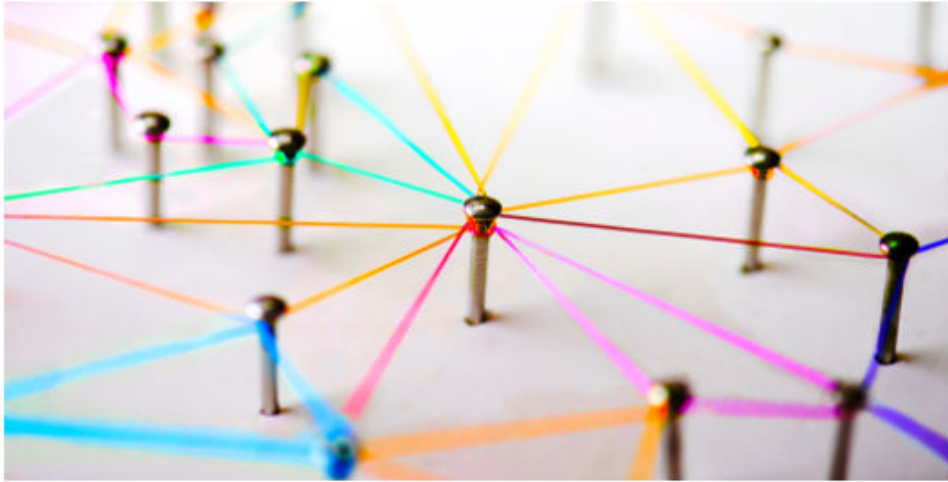
The lifecycle management of integration scenarios isn't limited to the actual integration technology as it also needs to include connected business applications. Concluding guidelines for integration lifecycle management need to address integration scenarios end-to-end, reflecting lifecycle management aspects of related business applications, too. As a best practice for SAP-centric integration scenarios it's recommended that you use SAP Solution Manager or SAP Cloud ALM to manage integration scenarios end-to-end.

Implementation guidelines are typically defined by integration architects with expert knowledge in specific integration technologies.

How to Apply

If you don't have a kind of integration development guideline in place, you can use the SAP delivered template as a starting point. This step is not supported by the Integration Assessment capability within SAP Integration Suite as it relates to the integration development process that is not addressed by this tool.

1. Templates-based approach



PUBLIC

Integration Development Guideline Template

SAP Integration Solution Advisory Methodology



Integration Development Guideline Template

Download the "Integration Development Guideline Template" and fill it out as follows:

1. Check the scope of sections. Add and/or remove sections as needed.
 2. For every section, specify your customer context-specific integration best practices.
2. Tool-based approach
- This step is not supported by the Integration Assessment capability within SAP Integration Suite. Please use the templates-based approach instead.

Related Information

[SAP Solution Manager](#)

[SAP Cloud ALM](#)

[Download the Integration Development Guideline Template](#) 

2.4 Enable a Practice of Empowerment

The last phase of the SAP Integration Solution Advisory Methodology addresses mainly non-technical aspects of enterprise integration covering organizational and operational structure of an integration practice.

Description

As a first task you define its organizational structure starting with specifying integration roles and institutionalizing an Integration Center of Excellence. The second and third tasks relate to the operational structure of enterprise integration where you define an approach for introducing integration governance and ensuring integration quality assurance.



- [Establish the Right Organizational Structure \[page 49\]](#)
- [Introduce Integration Governance \[page 54\]](#)
- [Ensure Integration Quality Assurance \[page 56\]](#)

Goal

The objective of the fourth phase of the SAP Integration Solution Advisory Methodology is to establish integration as a recognized discipline and to position integration as a strategic differentiator in your

organization. Furthermore, this phase aims at improving the operational structure of your integration practice changing toward an agile integration delivery approach. This includes, for instance, the democratization of integration delivery, establishing a knowledge sharing culture, and improving the communication between development teams (internal/external).

Deliverables

At the end of the fourth phase of this methodology you will have created the following assets:

- List of applicable integration roles, responsibilities, and tasks assigned to organizational units/employees
- Interface requests processed using the Integration Assessment capability within SAP Integration Suite
- Integration quality check list

Personas

- Integration architect
- Chief Technology Officer
- Human resources management specialists

Related Information

[Establish the Right Organizational Structure \[page 49\]](#)

[Introduce Integration Governance \[page 54\]](#)

[Ensure Integration Quality Assurance \[page 56\]](#)

2.4.1 Establish the Right Organizational Structure

Define integration roles, including responsibilities, and form an Integration Center of Excellence in order to establish enterprise integration as a recognized discipline.

Context

Enterprise integration is a team exercise where employees of various roles are performing specific tasks in orchestration to achieve a common goal such as the delivery of integrated business applications or business processes that are integrated end-to-end.

For this purpose, the SAP Integration Solution Advisory Methodology includes a list of frequently used integration roles in organizations, together with their typical responsibilities and some sample activities in

an SAP context. The concrete definition of integration roles depends on your specific customer context. You can use the outlined integration roles as a starting point and adapt/extend them to your specific needs.

Role	Responsibilities	Sample task in an SAP context
Chief Integration Officer	• Creation of a strategy for successful business and technology integration • Identification of business opportunities to collaborate and share digital assets beyond the company's boundaries • Introduction of an Integration Center of Excellence (ICoE)	• Identification of business opportunities enabled by enterprise integration • Definition of an API monetization strategy using the API Management capability within SAP Integration Suite
Enterprise architect	• Definition, communication, and continuous improvement of an integration reference architecture based on an overall IT strategy • Definition of integration standards and technology selection guidelines (cross-vendor, hybrid integration platform) • Evaluation of new integration technologies	• Definition and rollout of company-wide technology selection guidelines using the SAP Integration Solution Advisory Methodology • Rollout of integration standards • Review and adjustment of SAP delivered content as part of the Integration Assessment capability within SAP Integration Suite
Integration architect	• Definition of technical integration architectures with a focus on specific integration technologies • Definition of technical specifications for integration scenarios based on business requirements • Definition and communication of patterns, templates, and best practices	• Definition of development guidelines for SAP Integration Suite • Definition of best practices for integration flows using the Cloud Integration capability within SAP Integration Suite
Integration developer	• Implementation and testing of integration scenarios based on technical specifications • Implementation and extension of predefined integration content	• Leveraging the Integration Assessment capability within SAP Integration Suite to determine the best fitting integration technology. • Implementation of integration flows in the Cloud Integration capability within SAP Integration Suite • Implementation of data orchestration flows using the SAP Data Intelligence solution.

Role	Responsibilities	Sample task in an SAP context
Integration administrator	• Technical setup and operations of integration scenarios (for example, archiving or certificate management) • Technical monitoring of interfaces, including root-cause analysis and technical error handling	• Technical monitoring of messages from SAP Integration Suite in SAP Solution Manager or SAP Cloud ALM • Deployment of certificates in SAP Integration Suite
Business domain expert	• Specification of business requirements for a business process domain or line of business • Semantic definition of interface customizations and messages mapping (together with an integration architect)	• Specify integration requirements from a business perspective leveraging the Integration Assessment capability within SAP Integration Suite • Definition of customized B2B interfaces and mappings using the Integration Advisor capability within SAP Integration Suite
Business user	• Processing of workflow tasks • Interacting with business applications (omni-channel access) • Monitoring and error correction of messages in a specific business process domain or line of business	• Processing of workflow tasks, such as of SAP Build Process Automation • Error correction, canceling, or restart of messages in the SAP Application Interface Framework as part of SAP S/4HANA or SAP Business Suite
Citizen integrator	• Performing simple integration tasks independently (self-service) • Elimination of need for deep integration knowledge	• Leverage Integration Assessment to determine the best fitting technology • Implementation of simple integration scenarios by HR business users in the integration center of SAP SuccessFactors • Integration of buyers and suppliers in SAP Integration Suite, managed gateway based for spend management an SAP Business Network
Application/API developer	• Customization of business applications • Provisioning of customer-specific APIs • Development of extension applications or mobile applications	• Customization of applications with SAP S/4HANA • Development of extension applications on SAP Business Technology Platform • Development of innovative, API-based applications

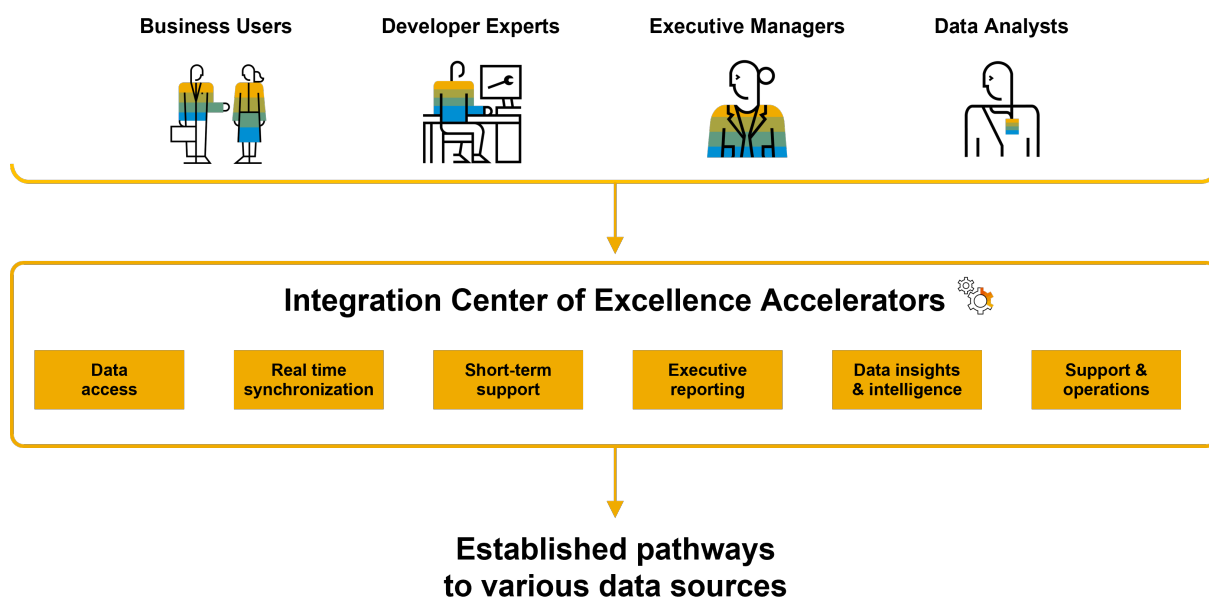
Furthermore, you need an organizational unit that owns and continuously evolves the integration strategy of your enterprise: The SAP Integration Solution Advisory Methodology recommends introducing an Integration Center of Excellence. This is a cross-departmental team of experts from various disciplines with different perspectives – lines of business whose applications and data are directly affected by integration – as well as representatives from compliance and security. The Integration Center of Excellence is driving the adoption of

the SAP Integration Solution Advisory Methodology in an organization. Thus, this team is responsible for the following activities:

- Defines and oversees the execution of an enterprise integration strategy
- Designs and oversees the implementation of the hybrid integration platform
- Defines and oversees the adoption of integration best practices across the organization's virtual integration community
- Provides integration enablement and coaching

This team also takes care to coach the organization's virtual integration community that may include integration developers, citizen integrators, and a subset of API/application developers (the ones working on integration-related developments) in order to establish standards and to harness and advance competency within the organization. It is important that the Integration Center of Excellence is well connected with other strategic IT units such as an Enterprise Architecture Board and executive sponsoring is ensured.

Such an Integration Center of Excellence can not only optimize tactical integration projects but can also empower strategic initiatives by delivering data access, insights, and intelligence with the help of standardized and scalable APIs to business users, developer experts, executive managers, and data analysts. This is accomplished by accelerators to enable not only data access but also data insights and intelligence, and executive reporting.



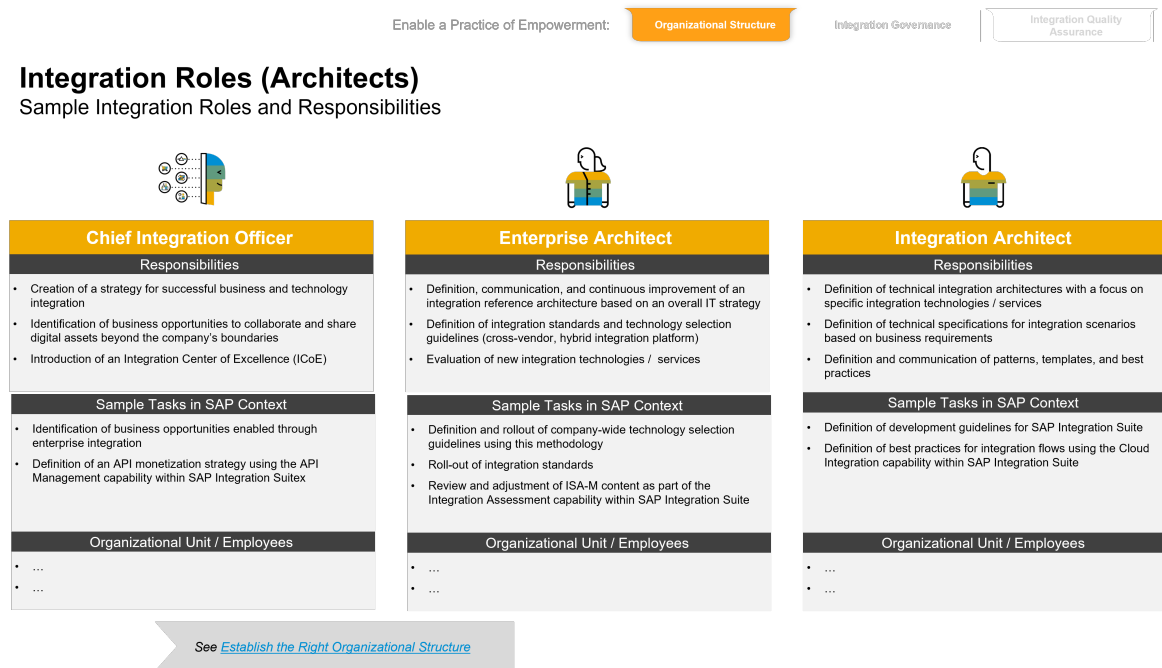
Overview of an Integration Center of Excellence

The high-level organizational structure for IT that includes enterprise integration, too, is typically defined by the Chief Technology Officer (CTO) together with the Human Resources department.

Procedure

You use a template for performing this step as you can't define integration roles in regard to responsibilities and tasks in Integration Assessment. However, as part of Integration Assessment a subset of these roles is being reused. Thus, it provides role collections for an enterprise architect, integration architect and business domain expert, which are the personas using this tool.

1. Templates-based approach



Integration Roles Template

Download the "Integration Roles Template" and fill it out as follows:

1. Review the scope of integration roles, including their responsibilities and sample tasks. Adapt them if needed.
 2. For each relevant role, you can add company-specific information (in section "Organizational Unit/ Employees") such as responsible organizational units and/or specific employees.
2. Tool-based approach

A descriptive definition of integration roles is not supported by the Integration Assessment capability within SAP Integration Suite. Please use the templates-based approach instead (see above).

Related Information

[Integration Center of Excellence: A Strategic Imperative for the Agile, Innovative Organization by SAP and Capgemini](#)

[Unlocking Innovation through Integration: Future proof your organization by establishing integration as a strategic imperative by SAP and Deloitte](#)

[Download the Integration Roles Template](#)

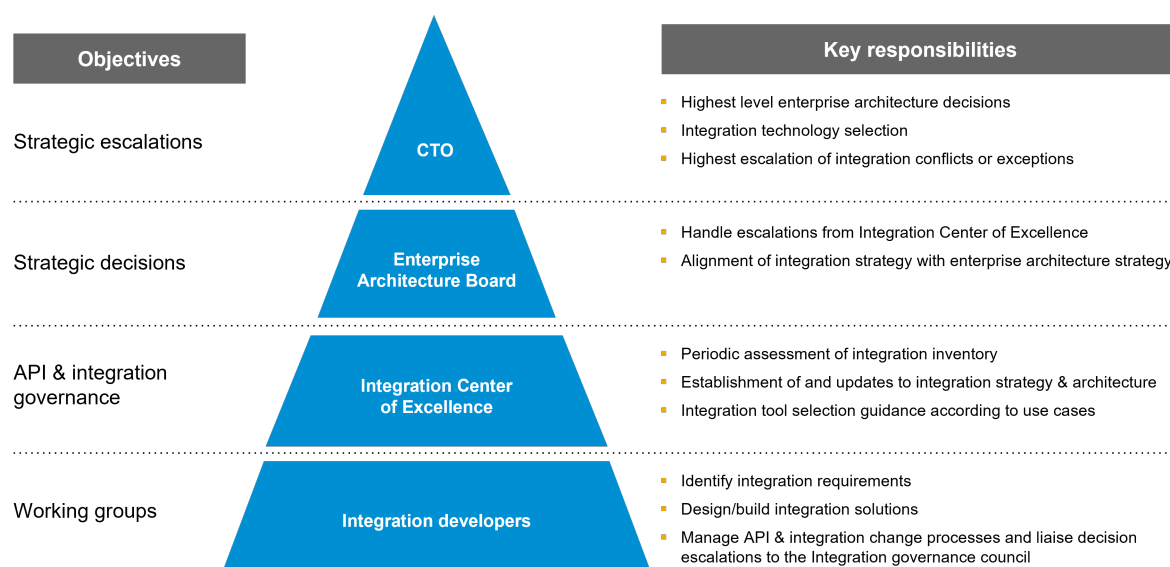
2.4.2 Introduce Integration Governance

Introduce an integration governance process to ensure that developers design integration scenarios based on agreed upon standards.

Context

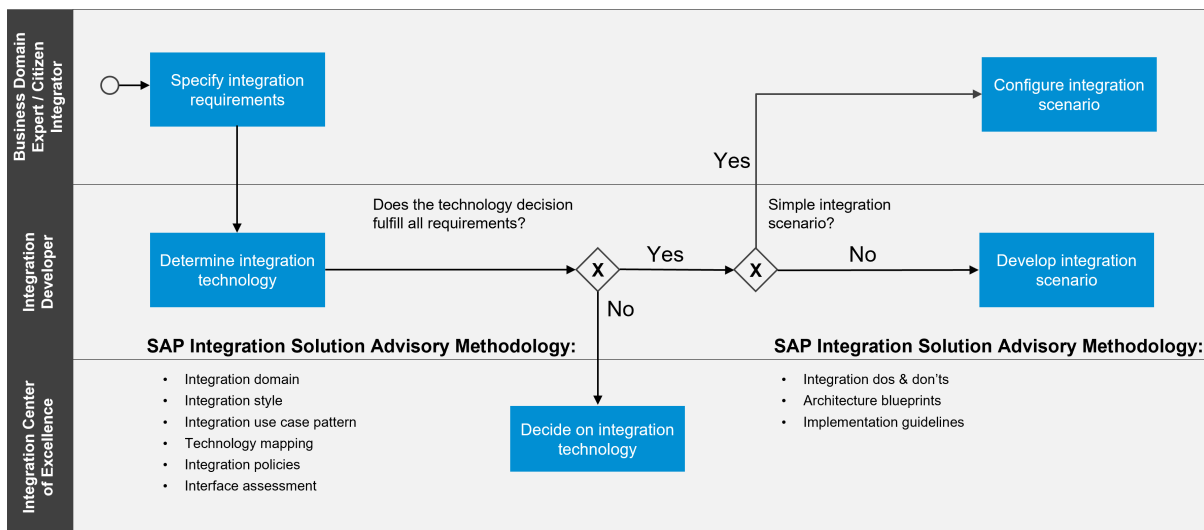
After you've defined your enterprise integration strategy you need make sure that your virtual integration community is executing on it, for instance that integration scenarios are being designed and implemented in a consistent fashion based on agreed upon standards. By doing so, you can deliver enterprise-grade integration scenarios to safeguard your company's mission-critical business processes. Integration governance includes organizational structures to oversee the adoption of integration technology to create value and manage associated risks.

As integration technology belongs to the information technology practice within an organization, integration governance needs to contribute to the overall IT governance process. This includes defined responsibilities and escalation paths: Whenever strategic decisions regarding the integration architecture are required, they must follow the overarching enterprise architecture strategy. In such cases the Integration Center of Excellence team needs to align such decisions with the Enterprise Architecture Board. The latter one is also consulted in case of escalations within the Integration Center of Excellence team. The highest level of enterprise architecture decisions and technology selection is owned by the Chief Technology Officer. The graphic below shows a simplified example of an organizational structure for integration governance.



Organizational Structure for Integration Governance (Example)

The SAP Integration Solution Advisory Methodology includes a set of templates that you can apply along a governance process for integration developments. The following graphic shows an example of an integration governance process, including involved roles, tasks per role and applicable accelerators.



Operational Structure for Integration Governance (Example)

The concepts and templates of this methodology can help integration developers to identify the right integration technology and approach based on agreed upon integration best practices. If no existing integration technology can fulfill the requirements, the developer can consult the Integration Center of Excellence for advice.

The approach for integration governance needs to comply with the overarching IT governance process within an organization. The concept for the latter one is typically being defined by the Chief Technology Officer, which builds the foundation for an integration governance approach that is detailed out by integration architects belonging to the Integration Center of Excellence.

Procedure

For this step no template is available: As integration governance is a continuous activity, it is important to embed it as integral part of the integration development process. Hence, it isn't sufficient to define an integration governance approach using a template as a one-off exercise. It's recommended to leverage the Integration Assessment capability within SAP Integration Suite for introducing integration governance across decentralized integration development teams.

1. Templates-based approach
There is no template for this step available. Leverage Integration Assessment instead (see Tool-based approach below).
2. Tool-based approach
Perform this step using the Integration Assessment capability within SAP Integration Suite. For more information, see: [Create a Business Solution Request and Interface Request](#).

2.4.3 Ensure Integration Quality Assurance

Enrich existing quality assurance measures with a lightweight integration checklist to coach integration developers, too.

Context

Most organizations have quality assurance methods for their IT projects in place to ensure compliance against defined standards such as security, performance and usability standards. Integration is an integral part of most IT projects like implementing a new business application or upgrading/migrating an existing one. In this way, integration aspects need also be reflected as part of those quality assurance methods. Quality assurance measures are ideally part of every stage of an IT project, ranging from the requirements gathering, design, implementation, testing, go-live, and operations.

The SAP Integration Solution Advisory Methodology is an ideal means for supporting the quality assurance measures in an organization: It helps you to define certain standards for integration scenarios, for instance by propagating integration best practices, and to introduce integration governance.

An integral part of quality assurance measures is testing. Here again, integration developments are supposed to follow the general testing approach for software developments in an organization. These consist of different testing types such as unit, integration, and regression testing and techniques such as manual or automated tests that may cover requirements that are functional or non-functional (such as performance, updates). The table below shows test types which are common for enterprise integration.

Test type	Description	Example in an integration context
Unit testing	Verify the functional correctness of individual software modules. Tests are conducted by the respective developer.	• Testing connectivity (configured APIs, connectors) • Testing mapping programs
Integration testing	Verify the interfaces between components against a software design.	• Testing of an integration scenario • Testing of replication batch jobs
Regression testing	Finding defects after a major code change has occurred. Specifically, it seeks to uncover software regressions, as degraded or lost features, including old bugs that have come back.	• Retesting existing integration scenarios after the upgrade of an integrated business application

You can complement your existing quality assurance process with an integration quality checklist that is a questionnaire-based assessment of a developed integration scenario. The objective of this complementing measure is to increase the integration quality of developed integration scenarios while coaching integration developers at the same time. Such checks can be offered as self-service to integration development teams, including citizen integrators. The Integration Center of Excellence team should also offer to run such assessments in an interview-based style, which will allow them to coach integration developers regarding quality requirements. The results of such checks are properly documented and can be assigned to corresponding test cases.

The integration quality checklist is defined and is supervised by integration architects of the Integration Center of Excellence.

Procedure

SAP offers a template of an integration quality checklist, which is meant to complement – and not to replace – classical integration testing processes within an organization. Integration testing is not supported by the Integration Assessment capability within SAP Integration Suite. However, SAP and SAP partners offer tools and services that make integration testing possible such as the Customer Test Service for the Cloud Integration capability within SAP Integration Suite.

1. Templates-based approach

Enable a Practice of Empowerment: Organizational Structure

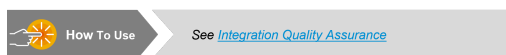
Integration Governance

Integration Quality Assurance

Integration Quality Assurance

Integration Quality Check List For Developed Integration Scenarios

No.	Topic	Questions				Remarks
1	Integration Technology Selection					
2	Integration Development					
3	Enterprise-Grade Integration Design					
4	Integration Documentation					
5	Integration Testing					
6	Integration Monitoring					



Integration Quality Checklist Template

Download the “Integration Quality Checklist Template” and do the following (one time activity):

1. Check the list of proposed topics: Adjust them and add your own ones if needed.
2. For every topic, add appropriate questions about integration quality requirements to the questions section.

For a developed integration scenario fill this template out as follows:

1. Rate the fulfillment level of each requirement per question and color code the corresponding table field as follows:
 - If the integration quality requirement is met, then apply a green background color.
 - If the integration quality requirement isn't met, then apply a red background color.
2. Tool-based approach

This step is not supported by the Integration Assessment capability within SAP Integration Suite. Please use the templates-based approach instead (see above) and utilize testing tools and services applicable for your specific integration technologies.

Related Information

[Customer Test Service for the Cloud Integration capability within SAP Integration Suite](#)

[Download the Integration Quality Check List Template](#) 

3 Glossary

Terminology used in SAP Integration Solution Advisory Methodology.

Term	Definition
Cross use case pattern [page 13]	A category for all integration-related use cases that can be combined with one or more of the core integration styles. For example, "API-managed integration" provides full-lifecycle management for APIs that can be leveraged in user- or process-centric integration scenarios.
Hybrid integration platform [page 28]	A platform that forms the integration layer of an enterprise addressing all integration needs which may include the integration of business applications (cloud, on-premise), data, users, things. It covers the full lifecycle from the design, development, implementation and operation of related integration scenarios.
Integration Center of Excellence [page 49]	A cross-departmental team of experts from various disciplines with different perspectives – lines of business whose applications and data are directly affected by integration—as well as representatives from compliance and security. The Integration Center of Excellence is driving the adoption of the SAP Integration Solution Advisory Methodology in an organization.
Integration domain [page 8]	A "big picture" for integration that provides the entry point into the SAP Integration Solution Advisory Methodology. These They describe represent the different integration touchpoints of business applications in today's cloud and hybrid IT landscapes such as business applications, user-centric applications and real-world objects. They're defined in a technology agnostic fashion.
Integration style [page 11]	A description of an integration scenario between a business application and its target is being realized. It represents key integration archetypes. Current scope: Process integration, data integration, analytics integration, user integration, thing integration.
Integration use case pattern [page 13]	An integration style can be refined by use case patterns, which describe frequently used integration use cases in enterprise landscapes. Examples: Master data integration, data orchestration, UI integration.
Interface assessment [page 37]	Process for classifying each technical interface of an integration scenario with the help of key characteristics. As a result, a sound decision regarding the appropriate integration technology can be made.
Technology mapping [page 29]	The means to relate functional requirements to corresponding integration technologies from SAP or from other vendors based on their supported capabilities.

4 Version History

SAP Integration Solution Advisory version history since release of this documentation.

Version	Release Month
5.0	June 2023

Last Changes

Title	Description	Version
New: Release of documentation	Release of the SAP Integration Solution Advisory Methodology documentation	5.0

Important Disclaimers and Legal Information

Hyperlinks

Some links are classified by an icon and/or a mouseover text. These links provide additional information.

About the icons:

- Links with the icon  : You are entering a Web site that is not hosted by SAP. By using such links, you agree (unless expressly stated otherwise in your agreements with SAP) to this:
 - The content of the linked-to site is not SAP documentation. You may not infer any product claims against SAP based on this information.
 - SAP does not agree or disagree with the content on the linked-to site, nor does SAP warrant the availability and correctness. SAP shall not be liable for any damages caused by the use of such content unless damages have been caused by SAP's gross negligence or willful misconduct.
- Links with the icon  : You are leaving the documentation for that particular SAP product or service and are entering an SAP-hosted Web site. By using such links, you agree that (unless expressly stated otherwise in your agreements with SAP) you may not infer any product claims against SAP based on this information.

Videos Hosted on External Platforms

Some videos may point to third-party video hosting platforms. SAP cannot guarantee the future availability of videos stored on these platforms. Furthermore, any advertisements or other content hosted on these platforms (for example, suggested videos or by navigating to other videos hosted on the same site), are not within the control or responsibility of SAP.

Beta and Other Experimental Features

Experimental features are not part of the officially delivered scope that SAP guarantees for future releases. This means that experimental features may be changed by SAP at any time for any reason without notice. Experimental features are not for productive use. You may not demonstrate, test, examine, evaluate or otherwise use the experimental features in a live operating environment or with data that has not been sufficiently backed up.

The purpose of experimental features is to get feedback early on, allowing customers and partners to influence the future product accordingly. By providing your feedback (e.g. in the SAP Community), you accept that intellectual property rights of the contributions or derivative works shall remain the exclusive property of SAP.

Example Code

Any software coding and/or code snippets are examples. They are not for productive use. The example code is only intended to better explain and visualize the syntax and phrasing rules. SAP does not warrant the correctness and completeness of the example code. SAP shall not be liable for errors or damages caused by the use of example code unless damages have been caused by SAP's gross negligence or willful misconduct.

Bias-Free Language

SAP supports a culture of diversity and inclusion. Whenever possible, we use unbiased language in our documentation to refer to people of all cultures, ethnicities, genders, and abilities.

© 2026 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company. The information contained herein may be changed without prior notice.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

Please see <https://www.sap.com/about/legal/trademark.html> for additional trademark information and notices.

