Integrating Ariba Cloud Solutions with SAP

December 2016
CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>The Customer Comes First</td>
<td>3</td>
</tr>
<tr>
<td><strong>Ariba Cloud Solutions Integration with SAP ERP and S/4 HANA On-Premise</strong></td>
<td>4</td>
</tr>
<tr>
<td>Ariba Network</td>
<td>4</td>
</tr>
<tr>
<td>Ariba Sourcing Solutions</td>
<td>9</td>
</tr>
<tr>
<td>Ariba Procurement and Invoicing Solutions</td>
<td>11</td>
</tr>
<tr>
<td><strong>Ariba Cloud Integration Gateway, powered by SAP HANA Cloud Integration</strong></td>
<td>13</td>
</tr>
<tr>
<td><strong>The Future of SAP: S/4HANA and the Integrated Business Network</strong></td>
<td>14</td>
</tr>
<tr>
<td>Upcoming Ariba Cloud Integration Enhancements</td>
<td>14</td>
</tr>
<tr>
<td><strong>Appendix</strong></td>
<td>15</td>
</tr>
</tbody>
</table>
INTRODUCTION

SAP Ariba is the only cloud provider with true bi-directional integration into SAP ERP and SAP S/4 HANA including more than 100 Integration processes and over 5000 fields integrated to the SAP Core.

Integration with the Ariba solutions is achieved via the Ariba Cloud Integration framework. The Ariba Cloud Integration framework is a suite of components and complementary technologies that can be optionally deployed depending on a customer’s specific landscape. It can be installed as an
• Add-on to SAP ERP to directly connect to Ariba cloud solutions
• Adapter for SAP Process Integration (PI/PO)

This document provides an executive-level summary of some of the most typical integration options between the procurement capabilities provided by SAP ERP and the Ariba on-demand solutions.

The Customer Comes First

SAP Ariba understands that customers have already made significant investments in IT and infrastructure, and that SAP ERP and S/4 HANA On-Premise landscapes in particular can be very complex for large enterprises. Many SAP ERP customers have a long history of customizations and extensions that fine-tune the solution to perfectly fit their specific need. Hence, no two SAP ERP landscapes are exactly alike. As a result, there is no single integration solution that can be deployed in exactly the same way for all environments. However, that does not mean that there cannot be a consistent and simple approach to integration.

SAP Ariba’s approach to integration starts with the following customer-centric integration goals:
• Protect and leverage customer’s SAP ERP and S/4 HANA On-Premise investments
• Minimize overall integration costs.
• Deliver a best-in-class, seamlessly integrated procurement business process.
• Align with SAP’s strategy, assuring that today’s investments will continue to deliver value to customers for years to come.

To meet these customer-centric integration goals, SAP Ariba designed a flexible and simple integration framework and integration solutions based on:
• Choice – By designing the Ariba Cloud Integration framework to provide flexible integration options that fit into a customer’s landscape
• Open Standards – By using open standards and common technologies for connectivity and data exchange, allowing customers to leverage existing IT expertise
• Simplicity – By eliminating the need for new components, keeping the integration solution simple, and taking advantage of existing infrastructure and components
• Extensible Business Processes – By providing a rich portfolio of standard integrated business processes that customers can extend and adapt to meet their specific needs

![Diagram of Ariba Cloud Integration Framework](image-url)
ARIBA CLOUD SOLUTIONS INTEGRATION WITH SAP ERP and S/4 HANA ON-PREMISE

SAP Ariba’s products are focused on two key areas:
• Ariba Network
• Ariba Applications - Ariba Procurement Solutions and Ariba Strategic Sourcing Solutions

In this paper we’ll explore the value proposition that each of these product areas brings to you, and how they can be integrated seamlessly to provide added benefits for SAP ERP and S/4 HANA On-Premise customers.

Ariba Network

The Ariba Network is a cloud-based network where buyers and suppliers collaborate by managing different business processes either via the Ariba Network portal or by exchanging commerce extensible markup language (cXML) messages. Buying organizations use the Ariba Network to find suppliers and to run automated business transactions from ordering to issuing payments. Suppliers use the Ariba Network to find new business opportunities and to work more efficiently and effectively with their customers on all the shared aspects of business commerce: proposals, contracts, orders, invoices, and payments.

The Ariba Network is
• Open – Ariba Network can integrate various kinds of buyers and suppliers using different technologies and protocols.
• Comprehensive – Ariba Network supports all business processes and collaborations that are relevant for the procurement of goods and services.

• Intelligent - Ariba Network does not just transmit messages, but also validates their content to eliminate errors that delay processing and drive up cost. SAP ERP and S/4 HANA On-Premise customers integrate their system with Ariba Network when they want to manage their procurement process within their SAP ERP or S/4 HANA On-Premise while also benefiting from the collaboration capabilities and efficiency gains that the Ariba Network can provide.

Ariba Network integration with SAP ERP and S/4 HANA On-Premise is not limited to buying organizations. Suppliers on the Ariba Network can have their SAP ERP systems integrated with the Ariba Network as well.

Ariba Network and cXML

Ariba, with the input of many other companies, has defined cXML as an open protocol for business-to-business transactions in a commerce domain. This is the most comprehensive XML standard covering a wide variety of common business processes and the integration protocol that the Ariba Network is built upon. The cXML protocol is continuously updated to support new business processes and new business documents. See https://cXML.org for more information.
Ariba Network and SAP ERP and S/4 HANA On-Premise

The Ariba Cloud Integration framework provides the following standard paths to integrate SAP ERP and S/4 HANA On-Premise with Ariba Network:
- SAP Business Suite Add-On for Ariba Network
- Ariba Network Adapter for SAP NetWeaver

SAP Business Suite Add-On for Ariba Network
The SAP Business Suite Add-On for Ariba Network is installed in the SAP ERP system. Its main purpose is to enable SAP ERP to natively communicate with the Ariba Network via cXML without the need for a protocol mapping between cXML and SAP technologies such as BAPI and IDOC.

With the SAP Business Suite Add-On for the Ariba Network, SAP ERP systems can send and receive cXML either directly or mediated via the SAP PI middleware. If SAP PI is already used for connecting legacy systems, mediated communication via SAP PI provides a flexible configuration option to also enable cXML connectivity.

Ariba Network Adapter for SAP NetWeaver
The Ariba Network Adapter for SAP NetWeaver is deployed in the SAP PI system to translate between cXML and traditional SAP interfaces such as IDOC, BAPI, and RFC. It consists of the following components:
- The design package in the SAP NetWeaver PI component, which contains integration processes, interface objects, and mappings.
- The cXML Adapter installed on the SAP NetWeaver PI component, which conforms to the J2EE Connector Architecture (JCA) specification, and implements the cXML transport protocol.
- SAP Transport files installed on the SAP ERP system

SAP Ariba also provides native integration with SAP S/4 HANA On-Premise for select business scenarios – PO and Invoice Automation. In fact, S/4 HANA speaks the cXML language by default, which means you don’t need any additional installation to integrate S/4 HANA with the Ariba Network for those scenarios. This will be extended to other business scenarios in the coming releases.

Ariba Network and SAP ERP or S/4 HANA On-Premise Integration Scenarios

**Document Automation**
SAP Ariba offers many different integration scenarios to support many business processes, but the most typical process is Document Automation for purchase order (PO) and invoice automation. In this scenario, users create POs in their SAP ERP or S/4 HANA On-Premise system, which sends them to the suppliers on the Ariba Network for processing. Suppliers confirm orders or let their customers know if items are backordered, they can notify them that items have shipped, and send a PO invoice for payment. Business rules enforce process and document compliance. For example, you can require that a supplier must confirm an order, create a ship notice, or wait for a goods receipt notice before they can send an invoice.

**Ariba Collaborative Supply Chain (CSC)**
Ariba Network provides enhanced supply chain visibility for direct materials for discrete and process manufacturing, consumer products and life sciences and for merchandise spend in the retail industry.
To improve poor supply chain visibility, communication, and collaboration among supply chain partners, CSC was developed to be comprehensive direct material and supply chain collaboration tools with industry specific aspects and a single access point and collaboration platform for all partners across different supply chains.

**ARIBA DOCUMENT AUTOMATION and COLLABORATIVE SUPPLY CHAIN – BASIC SCENARIO**

<table>
<thead>
<tr>
<th>Ariba Network</th>
<th>Forecast/Demand</th>
<th>Forecast/Commit</th>
<th>Purchase order</th>
<th>Order confirmation</th>
<th>Advanced ship notice</th>
<th>Order update with receipts</th>
<th>Invoice</th>
<th>Invoice status update</th>
<th>Payment status update</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP ERP or S/4 HANA</td>
<td>Forecast/Demand</td>
<td>Forecast/Commit</td>
<td>Purchase order</td>
<td>Order confirmation</td>
<td>Inbound delivery</td>
<td>Good receipt</td>
<td>Invoice (MIRO)</td>
<td>Invoice status update</td>
<td>Payment status update</td>
</tr>
</tbody>
</table>

Buyer activity

Supplier activity

Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. * Vertical gray topics have integration to many areas. Arrows not shown for brevity.
Contract Manufacturing Collaboration (Subcontract PO)

There are several steps in the Subcontracting process. The first is the basic Subcontracting purchase orders with components, purchase order confirmation and ship notice of finished goods to the buyer. The buyer sends a goods receipt and invoice to the supplier.

In addition, basic subcontracting allows buyers/sellers to monitor component shipments/deliveries. Component shipments are supported as well as visibility of component inventory, and component acknowledgement. In the flow below, there are two different options for component shipments.

- **1-step process**: In this process both the Ship Notice Request and Product Activity Message is sent in a single step. The Proof of Delivery is triggered at the seller side once the components have been received in.

- **2-step process**: Although the overall steps are the same as the 1-step process, the main difference is when these steps are taken. The 2-step process waits for the product to be received before the product is moved into the buyer system and a Product Activity Message is triggered.

- **Finished production**: Integrated suppliers have the option to notify the buyer of production of the finished goods via Manufacturing Execution System (MES) visibility. These messages are usually triggered from completed production orders in the supplier system and sent to inform the buyer of how much finished goods has been produced.

- **Real Time Consumption**: Real Time Consumption is when the supplier uses up the components originally shipped by the buyer, and notifies them. Once the buyer receives the notification, a Product Activity Message is sent to supplier from SAP with current component quantities as SAP needs to be the system of record. If real time computation is not used, then the Product Activity Message for Component overview is sent when the Goods Receipts from the ship notice of finished goods is sent.

The following illustrates typical contract manufacturing process flows along with consumption and execution visibility at the component level:

### COLLABORATIVE SUPPLY CHAIN COLLABORATION – CONTRACT MANUFACTURING PROCESS FLOWS

<table>
<thead>
<tr>
<th></th>
<th>Basic Subcontracting</th>
<th>Component Shipment (Direct Consumption)</th>
<th>Component Shipment (Stock in Transit/Consumption)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ariba Network</strong></td>
<td>Subcontract PO</td>
<td>PO Confirmation</td>
<td>Component Ship Notice &amp; Inventory Overview of Components</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Component Acknowledge</td>
</tr>
<tr>
<td><strong>SAP ERP or S/4 HANA</strong></td>
<td>Subcontract PO</td>
<td>PO Confirmation</td>
<td>Component Ship Notice &amp; Inventory Overview of Components</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Proof of Delivery</td>
</tr>
<tr>
<td><strong>MES Visibility</strong></td>
<td>Manufacturing Execution Visibility</td>
<td>Component Consumption Recording per PO</td>
<td>Inventory Overview of Components</td>
</tr>
<tr>
<td><strong>Real Time Consumption</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Basic Subcontracting</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ariba Network</strong></td>
<td>Ship Notice</td>
<td>Inventory Overview of Components</td>
<td></td>
</tr>
<tr>
<td><strong>SAP ERP or S/4 HANA</strong></td>
<td></td>
<td></td>
<td>Goods Receipt &amp; Component Inventory (no Real Time Consumption)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Invoice for Subcontracting</td>
</tr>
<tr>
<td><strong>Buyer activity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supplier activity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. * Vertical gray topics have integration to many areas. Arrows not shown for brevity.
Supply Chain Financing

Supply Chain Financing (SCF) is a solution that allows third party funders to provide financing for early payment to a supplier in exchange for discounts on the total invoice amount. The supplier receives funds early at a discount and the buyer increases DPO by extending terms. Each trading participant may therefore meet its opposing working capital objective. The financing is facilitated by a Financier who has relationships with one or more funders to pay approved invoices early in exchange for payment from the buyer on the net due date (at maturity).

ARIBA SUPPLY CHAIN FINANCING – BASIC SCENARIO

<table>
<thead>
<tr>
<th>SAP ERP or S/4 HANA</th>
<th>Ariba Network</th>
<th>Supply Chain Platform</th>
<th>Remittance Advice</th>
<th>Liabilities Cleared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Invoices or SCF payment type</td>
<td>Payment Proposal</td>
<td>Payment Proposal</td>
<td>Remittance Advice</td>
<td>Liabilities Traded</td>
</tr>
<tr>
<td>Transfer posting</td>
<td>New FI docs created</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remittance Advice</td>
<td>Liabilities Cleared</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AribaPay

AribaPay allows buyers to send payments to the bank using the Payment Provider’s Network. It also provide suppliers with rich and timely remittance advice about each electronic payment—before the payment is received. Now you can complete the procure-to-pay process simply, securely, and with a high degree of certainty about who is paying, to whom, for what, and when. All because the Ariba Network’s capacity for facilitating buyer-supplier collaboration has been enhanced with the Payment Provider’s expertise in securely managing sensitive bank information and moving money.

ARIBAPAY – BASIC SCENARIO

<table>
<thead>
<tr>
<th>SAP ERP or S/4 HANA</th>
<th>AribaPay</th>
<th>Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic payments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ariba Network

Payment batch

Payment Provider

Processes Payments

General flow is left to right. Arrows illustrate the key integration touchpoints between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas. Arrows not shown for brevity.

Integrating Ariba Cloud Solutions with SAP

© 2016 SAP SE. All rights reserved.
**Ariba Quote Automation**

Sometimes buyers have an unplanned and immediate need for certain items that are not covered by contracts and strategic sourcing. These ad-hoc, one-time purchases are known as tactical spend. Ariba Quote Automation, which builds upon the core functionality provided by Ariba Discovery and Ariba Network, is a solution that optimizes such ad-hoc activities and automates the process completely or partially. Ariba Quote Automation also includes supplier enablement features of the Ariba Network to onboard new suppliers and to import their vendor data from the buyer’s ERP system.

The Ariba Quote Automation with SAP ERP or S/4 HANA On-Premise integration starts in the SAP system, when a user creates an RFQ (Request for Quotation) from a Purchase Requisition or from scratch. Users enter event open and close dates, and specify line items with material groups and receiving plants.

The RFQs are sent through the Ariba Network Adapter for SAP PI to the Ariba Network which automatically creates a Quote Automation posting and publishes it on Ariba Discovery. Suppliers can either be invited as part of the Quote Automation posting or matched through Ariba Discovery based on product and service categories and location. If an invited supplier is not registered on Ariba Network, an Ariba Network account is automatically created for them.

Invited and matched suppliers receive notifications about the Quote Automation posting from Ariba and can then respond directly to the posting on Ariba Discovery. Depending on how Ariba Quote Automation is configured, supplier responses can automatically be sent back to the SAP ERP or S/4 HANA system as purchase orders with no action from project owners, or buyers can manually award suppliers directly in the Ariba Quote Automation solution.

### ARIBA QUOTE AUTOMATION

<table>
<thead>
<tr>
<th>Ariba Discovery</th>
<th></th>
<th>Ariba Network</th>
<th></th>
<th>SAP ERP or S/4 HANA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quote Automation posting created</td>
<td>Supplier response</td>
<td>Awarding (manual/automated)</td>
<td>Run rules and create event</td>
<td>Award</td>
</tr>
<tr>
<td>Purchase Requisition</td>
<td>ERP RFQ</td>
<td>Purchase Order automatically created</td>
<td>Confirmation/Goods Receipt</td>
<td>Invoice/Payment</td>
</tr>
</tbody>
</table>

- **Yellow**: Buyer activity
- **Blue**: Supplier activity
- **Purple**: Ariba activity (automated or manual)
- **Gray**: Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas. Arrows not shown for brevity.
Ariba Sourcing Solutions

The Ariba strategic sourcing and contract management solutions cover what is sometimes called strategic procurement. This includes collaborative sourcing (finding suppliers for a given need), collaborative contract management, supplier information and performance management, and spend analysis.

Ariba strategic sourcing and contract management integration with SAP ERP or S/4 HANA On-Premise is implemented when a customer wants to manage their operational procurement process within their SAP ERP or S/4 HANA On-Premise, separate from their strategic procurement process in Ariba Sourcing.

Ariba Sourcing & Contract Management Integration with SAP ERP and S/4 HANA

Ariba Sourcing

The standard integration between SAP and Ariba Sourcing supports integrated sourcing events initiated from SAP ERP or S/4 HANA On-Premise:

- Manually created purchase requisitions in SAP ERP MM that then create a Request for Quotation (RFQ)
- Automatically created purchase requisitions during MRP run that then create an RFQ
- Manual creation of SAP ERP RFQ without purchase requisition

An RFQ is sent through the Ariba Network Adapter for SAP PI to the Ariba Network and from there to Ariba Sourcing as a sourcing request. The sourcing request is routed to the appropriate Sourcing Manager based upon the header data sent from ERP or S/4 HANA On-Premise. The sourcing manager is notified to review the sourcing request, edit and send it for approval if required, and then creates a sourcing project based upon the most appropriate template.

The sourcing project allows the sourcing manager to manage every aspect of the sourcing event from creation, collaboration with suppliers, monitoring the execution, scoring and grading of supplier responses, and awarding suppliers. A sourcing event can be a Request for Information (RFI), Request for Proposal (RFP) or an auction. When the sourcing manager creates awards for the event, Ariba Sourcing sends an cXML document based on the award and sends it to the ERP system. The ERP creates a purchase order or contract from the cXML document.

Ariba Contract Management

When a buyer publishes a contract, Ariba Contract Management sends contract information such as the contract header data and line-item data to SAP ERP or S/4 HANA On-Premise. SAP ERP then creates an outline agreement based on the contract information received from Ariba Contract Management.

Master Data Integration

Buyers using Ariba Sourcing or Ariba Contract Management can import organizational data, cross application data such as incoterms and payment terms, and material master data from SAP ERP systems. This allows buyers to initiate the sourcing process in Ariba Sourcing and send the award to SAP ERP or S/4 HANA.

Direct Material Sourcing

Buyers using Ariba Collaborative Sourcing Professional will be able to integrate additional master data elements such as Bill of Material (BOM) and Purchasing Info Records (PIR) with SAP ERP or S/4 HANA On-Premise.

Service Items Integration

External Services Procurement containing a flat list of service line items is supported in the integration flow from RFQ in SAP ERP or S/4 HANA On-Premise to Ariba Sourcing Request, Ariba Award to PO and Outline Agreement in SAP ERP, and Ariba Contract to SAP ERP Outline Agreement.

ARIBA SOURCING & CONTRACTS

Ariba Sourcing & Contracts

Sourcing Request

Sourcing Project

RFX/Auction

Award

Contract

Ariba Network

Supplier response

Ariba Contract

Purchase Requisition

RFQ

Purchase Order

Contract (OA

MK/WK)

SAP ERP or S/4 HANA

Arrow not shown for brevity

General flow is left to right. Arrows illustrate the key integration touchpoints between solutions. Integration flows inside a solution are not considered. Vertical gray topics have integration to many areas. Arrows not shown for brevity.
Supplier Management
The integration of Ariba Supplier Management (SM) application with SAP Master Data Governance (MDG), SAP ERP and S/4 HANA now enables seamless sharing and reuse of supplier information between the systems. This bi-directional integration is available in both the DirectConnect as well as the mediated connectivity option using SAP NetWeaver PI, and includes the initial load as well as incremental updates. The two main use cases supported are:

- Upload existing supplier master data from SAP ERP or S/4 HANA or MDG with SM followed by the invitation to suppliers to register via AribaNetwork.
- Download new supplier data from SM with SAP ERP or S/4 HANA or MDG for suppliers who self-register and who are successfully qualified.

ARIBA SUPPLIER MANAGEMENT

<table>
<thead>
<tr>
<th>Ariba Network</th>
<th>Supplier Registration</th>
<th>Supplier Invitation</th>
<th>Supplier Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ariba Supplier Management</td>
<td>Qualification</td>
<td>Approvals</td>
<td>Integrate</td>
</tr>
<tr>
<td>SAP ERP, MDG-S or S/4 HANA</td>
<td>Requires ERP EHP6</td>
<td>Create Supplier</td>
<td>New/ existing Supplier</td>
</tr>
</tbody>
</table>

Buyer activity  
Supplier activity  
Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touch points between solutions. Integration flows inside a solution are not considered. Arrows are not shown for brevity.
Ariba Procurement and Invoicing Solutions

Ariba procurement and invoicing solutions cover the operational procurement processes, which include:

- Managing catalogs
- Creating and approving purchase requisitions
- Creating and sending POs
- Recording the receipt of goods and services
- Receiving invoices (sent from the suppliers electronically through the Ariba Network, or as paper invoices)
- Reconciling invoices against contracts, POs and/or receipts
- Real-time budget check with fund reservation in SAP ERP
- Taxes and charges in requisitions and purchase orders

SAP Ariba Procurement and Invoicing Solution Integration with SAP ERP and S/4 HANA On-Premise

The data managed by the Ariba procurement and invoicing solution includes the buyer catalogs, transaction documents (for example requisitions, POs, receipts, invoices) and master data, such as user, accounting, and supplier data. The Ariba Cloud Integration framework enables the integration between the Ariba procurement solution and SAP ERP or S/4 HANA On-Premise for the exchange of both transactional data and master data.

Data can be extracted and transferred directly between SAP ERP or S/4 HANA On-Premise and the Ariba procurement solution or through a mediated connectivity using SAP NetWeaver PI.

Master Data Integration

Among the master data that the Ariba procurement solutions can import from an SAP ERP systems are users, user groups, vendors, accounting information, purchasing organizations, tax codes, currency exchange rates, plant, internal orders, WBS elements, and fund management accounting objects.

The Ariba Cloud Integration framework supports the integration of these without requiring complex customizations or mappings. Options for master data integrations are:

- **Direct connectivity**: File-based through CSV file integration
- **Mediated connectivity through SAP NetWeaver PI**: File-based through CSV file integration

For a complete list of master data that are integrated with SAP ERP and S/4 HANA On-Premise, see the “Ariba Procurement Solution Integration – Supported SAP Master Data” appendix on page 2.

Integrating Transactional Data

On the SAP ERP or S/4 HANA On-Premise side, Ariba procurement solutions integration for transactional documents are based on SAP BAPI technology. This allows for a fully synchronous integration process, providing real-time integration, validation, and SAP PO number generation all within a single step.

Integrate transactional data using the following methods:

- **Direct connectivity**: File-based through CSV file integration using the Ariba Data Transfer Tool
- **Mediated connectivity through SAP NetWeaver PI**: web-service based integration or file-based through CSV file integration using the Ariba Data Transfer Tool

The following process diagram demonstrates a typical integration flow between SAP ERP or S/4 HANA On-Premise and Ariba Procure-to-Pay. The process begins when a user creates a requisition in Ariba Procure-to-Pay. The user can optionally check real-time availability of budget in SAP ERP or S/4 HANA On-Premise and reserve against the budget. When the requisition is fully approved one or more POs are created that are sent to the suppliers on the Ariba Network and to SAP ERP or S/4 HANA. Depending on the integration technology you choose from the Ariba Cloud Integration framework, any changes or cancellations to POs in Ariba Procure-to-Pay can be reflected in SAP ERP or S/4 HANA On-Premise in near-real-time. If receiving is enabled in Ariba Procure-to-Pay, good receipts information can also be transferred from the Ariba solution to SAP ERP or S/4 HANA On-Premise.

Suppliers typically create invoices on the Ariba Network by “flipping” a PO into an invoice. The Ariba Network’s business rules engine ensures that the invoice meets certain defined criteria. If the invoice passes validation, it is sent to Ariba Procure-to-Pay, where the invoice is either manually or automatically checked (reconciled) against receipts and the PO in a 3-way match. If the invoice is successfully reconciled, it is sent to SAP ERP or S/4 HANA as an approved invoice for payment.

Service Procurement Integration

Service procurement is now integrated among SAP ERP and S/4 HANA On-Premise, Ariba Network and Ariba Procurement. The process begins with service requisitions. Service items support a single level of sub-items to represent service lines. The supplier has to create the service entry sheet and submit in Ariba Network. After the buyer (Ariba P2P) receives the service sheet document, and approves the same then the supplier in Ariba Network can flip the approved service sheet document to create and invoice.
ARIBA PROCURE-TO-PAY – BASIC SCENARIO

Ariba Network | Punch-out catalog | Purchase order | Order confirmation | Advanced ship notice | Order update with receipts | Invoice | Invoice status update | Payment status update
---|---|---|---|---|---|---|---|---
Ariba Procure-to-Pay | Purchase Requisition | Catalogs | Budget Check | Approval | Purchase Order(s) | Order confirmation | Advance Payment Request | Advance Ship notice | Good receipt | Invoice | Reconcile

SAP ERP or S/4 HANA | Budget Check & Reserve | Purchase Order(s) | Down Payment Request | Good receipt | Invoice (MIRO or FB01) | Payment

- Buyer activity
- Supplier activity
- Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touchpoints between solutions. Integration flows inside a solution are not considered. * Vertical gray topics have integration to many areas. Arrows not shown for brevity.

ARIBA PROCURE-TO-PAY – SERVICE PROCUREMENT INTEGRATION

Ariba Network | View Service Request | Quotation for Service Request | Receive Purchase order for Services | Purchase Order confirmation | Create Service Entry Sheet | Create Service Invoice
---|---|---|---|---|---|---
Ariba Procure-to-Pay | Create Service Purchase Requisition | Request for Proposals and Vendor Selection | Receive and Accept one of the Quotation | Approval Purchase Requisitions | Create Purchase Order for services | Receive PO Confirmation | Receive and Approve SES | Receive and Approve Service Invoice

Yes, No

SAP ERP or S/4 HANA | Create Purchase Order for Services | Create Service Entry Sheet | Create Invoice

- Buyer activity
- Supplier activity
- Existing standard integration scenarios

General flow is left to right. Arrows illustrate the key integration touchpoints between solutions. Integration flows inside a solution are not considered. * Vertical gray topics have integration to many areas. Arrows not shown for brevity.
CLOUD INTEGRATION GATEWAY, powered by SAP HANA

Cloud Integration Gateway, powered by SAP Hana Cloud Integration (HCI), redefines how our customers integrate with the world’s largest B2B network. It provides our suppliers a simple and efficient way to integrate with Ariba Network using standards, other than cXML. It reduces the deployment time for our suppliers to integrate with the Ariba Network. This is currently only available for Network supplier-side integration.

**Integration wizard**: The integration wizard automates complex integration tasks by asking a series of easy-to-answer questions. The answers you provide help Cloud Integration Gateway derive transaction configurations. What’s more, you can reuse all these configurations for future integrations with other customers.

**Developer tools**: The Cloud Integration Gateway has various tools that are designed to make integrations with Ariba Network simple. The Transformation tool transforms the data and verifies that the data meet your customers’ requirements. The Schema Validation tool allows easy validation to ensure that the formatting is accurate and acceptable.

**1-click deployment**: Once you have verified your integration project, a single-click deployment option deploys the integration project to production.

**Transaction tracker with search capability**: The Transaction tracker allows easy search and tracking of the status of transactions on Ariba Network. User can also download the source & destination transactions; including attachment(s), processed by Cloud Integration Gateway.

**Test Central**: Test Central offers a brand new approach on how suppliers should self-test & integrate with the Ariba Network. It reduces the overall testing timeframe for suppliers to transact with the Ariba Network. Suppliers testing integrations using the Test Central can validate connectivity, transformation and content of the documents before they can go live.

---

**Standard Features**

**Connect once**: Cloud Integration Gateway changes how suppliers integrate and manage their integration. With Cloud Integration Gateway, you connect once to the Ariba Network and manage a single configuration based on your core transaction capabilities regardless of your customer requirements.

**Single sign-on with Ariba Network**: Using the single sign-on functionality, users can access their Cloud Integration Gateway account from their Ariba Network account.

**Standard(s) mapping repository**: Cloud Integration Gateway supports various standards that provide suppliers the flexibility to use non-cXML data formats to transact with their customers on Ariba Network. Transactions include Purchase Order, Order Confirmation, Advance Ship Notification and Invoice.

**Connection protocol(s)**: Cloud Integration Gateway supports AS2 and HTTPS protocol to provide enhanced security for suppliers transacting on Ariba Network. Suppliers can manage their connections by using certificate-based or basic authentication.

---

**CLOUD INTEGRATION GATEWAY AND SAP HCI**

---

**Cloud Integration Gateway**

- **One-Click Deployment**
- **Developer Tools**
- **Connection Protocols**
- **SSO**
- **Standards Mapping Repository**
- **IT Test Central**
- **Multi Tenant**
- **Portal**
- **Suppliers**

**Powered by**

HANA Cloud Integration
SAP S/4HANA is the next-generation business suite product that provides innovative, tightly-coupled solutions that support end-to-end business processes integration between SAP S/4HANA Core components and SAP SaaS Cloud Solutions, such as

- **Ariba** procurement and sourcing solutions -- The Ariba Network connects more than 1.8 million buyers and sellers generating close to U.S. $1 trillion in commerce annually.
- **Concur** travel and expense (T&E) -- Concur’s travel and expense ecosystem consists of 20,000 customers, 30 million end users, and hundreds of developer partners, all processing more than U.S. $50 billion worth of T&E spend a year.
- **SAP Fieldglass** contingent labor and services -- More than 7 million users and 40,000 suppliers are managing over U.S. $25 billion in global spend annually using SAP Fieldglass solutions, placing 1.4 million contingent workers in over 100 countries.

SAP S/4HANA can be deployed on-premise or in the cloud. It is built on the SAP HANA core, where the basic setup, master data, and core processes are defined and applied, and around which everything else can be built in a sustainable way.

Today, SAP ERP integration to SAP Ariba cloud solutions is made possible via SAP ERP add-ons and the Ariba Network Adapter for SAP NetWeaver. With SAP S/4HANA, the add-ons become the basis for native integration support. Currently, S/4HANA 1511 On-Premise version is supported.

Ariba will continue to provide integration support through the SAP NetWeaver PI adapter and upcoming SAP HANA Cloud Integration releases.

**Upcoming Ariba Cloud Integration Enhancements**

SAP Ariba will deliver major innovations in its next Ariba Cloud Integration release to help customers integrate their back-end SAP ERP and S/4 HANA systems, and reduce the time needed to integrate Ariba solutions.

On the Ariba Network side, the key planned integration enhancements are

- CSC subcontracting and control keys
- Enhancements to Documented Automation and Temporary Price
- Planned Inspection days to PO Compliance for Japanese SubContracting Act

On the Ariba Applications side, the key planned integration enhancements are:

- Support S/4 HANA On-Premise 1610
- Ariba Cloud Integration Gateway for Network buy-side integration
- Integration support for Spend Visibility
- Supporting various Pricing conditions on Sourcing integration
- Supporting Requisition and Goods Receipts from SAP ERP & S/4 HANA On-Premise to Procurement

The key planned integration features on the Cloud Integration Gateway for supplier-side include partner portal, support for EANCOM and GUSI.
APPENDIX

Integration Message Formats

<table>
<thead>
<tr>
<th>SAP ERP Protocols</th>
<th>Ariba Protocols</th>
<th>EDI</th>
<th>Industry Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>• IDOCs</td>
<td>• cXML</td>
<td>• EDIFACT</td>
<td>• PIDX</td>
</tr>
<tr>
<td>• RFCs</td>
<td>• MIME</td>
<td>• ANSI X12</td>
<td>• OAGiS</td>
</tr>
<tr>
<td>• Web Services (SOAP)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Enterprise Services (EOOA)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Supported SAP systems

<table>
<thead>
<tr>
<th>SAP ERP Releases</th>
<th>SAP NetWeaver PI Releases</th>
<th>SAP MDG releases</th>
<th>S/4HANA</th>
<th>SAP HANA Cloud Integration *</th>
</tr>
</thead>
<tbody>
<tr>
<td>• SAP ERP 6.0</td>
<td>• SAP NetWeaver 7.1</td>
<td>• SAP Master Data Governance 6.1</td>
<td>• 1503 OnPremise</td>
<td>• SAP HANA Cloud Integration</td>
</tr>
<tr>
<td>• SAP ERP 6.0 EhP2</td>
<td>• SAP NetWeaver 7.3</td>
<td></td>
<td>• 1511 OnPremise</td>
<td></td>
</tr>
<tr>
<td>• SAP ERP 6.0 EhP3</td>
<td>• SAP NetWeaver 7.4</td>
<td></td>
<td>• 1605 OnPremise</td>
<td></td>
</tr>
<tr>
<td>• SAP ERP 6.0 EhP4</td>
<td>• SAP NetWeaver 7.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SAP ERP 6.0 EhP5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SAP ERP 6.0 EhP6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SAP ERP 6.0 EhP7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SAP ERP 6.0 EhP8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Network supplier-side integration only

Ariba Cloud Integration Supported Solutions

<table>
<thead>
<tr>
<th>Ariba Network</th>
<th>Strategic Procurement</th>
<th>Operational Procurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ariba Collaborative Finance</td>
<td>• Ariba Collaborative Sourcing (Transaction Data)</td>
<td>• Ariba Procure-to-Pay</td>
</tr>
<tr>
<td>• Ariba Collaborative Commerce</td>
<td>• Ariba Sourcing Professional (Transaction Data)</td>
<td>• Ariba Procure-to-Pay Federated Process Control</td>
</tr>
<tr>
<td>• Ariba Document Automation (Includes Invoice and PO Automation)</td>
<td>• Ariba Spend Visibility Professional</td>
<td>• Ariba Procure-to-Order</td>
</tr>
<tr>
<td>• Ariba Collaborative Supply Chain</td>
<td>• Ariba Contract Management</td>
<td>• Ariba Procure-to-Order Federated Process Control</td>
</tr>
<tr>
<td>• Ariba Contract and Services Invoicing</td>
<td>• SIPM (Supplier Information &amp; performance Management)</td>
<td>• Ariba Procurement Content</td>
</tr>
<tr>
<td>• Ariba Discount Professional</td>
<td>• Ariba StartSourcing</td>
<td>• Ariba Invoice Professional</td>
</tr>
<tr>
<td>• AribaPay</td>
<td>• Ariba StartContracts</td>
<td></td>
</tr>
<tr>
<td>• Ariba Spot Quote</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ariba Network Integration – Supported Transactions – Buy side

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• PO</td>
<td>• Payment Copy (CC) Invoice</td>
<td>• Status Update Request</td>
</tr>
<tr>
<td>• Change PO</td>
<td>• Payment Remittance</td>
<td>• Quote Request</td>
</tr>
<tr>
<td>• Cancel PO</td>
<td>• Remittance Status Update</td>
<td>• Quote Message</td>
</tr>
<tr>
<td>• Order Confirmation</td>
<td>• Order Inquiry Request</td>
<td>• Inbound Payment Proposal</td>
</tr>
<tr>
<td>• ASN</td>
<td>• Scheduling Agreement (includes Forecast/Delivery Schedule &amp; JIT)</td>
<td>• Outbound Payment Proposal</td>
</tr>
<tr>
<td>• Receipt</td>
<td>• Transfer movement / Product activity</td>
<td>• Quote Request &amp; Quote Message (Sourcing Request)</td>
</tr>
<tr>
<td>• Service Entry Sheet &amp; Status update</td>
<td>• Forecast / Demand</td>
<td>• Sourcing Award</td>
</tr>
<tr>
<td>• Invoice (includes Credit Memo)</td>
<td>• Component consumption</td>
<td>• Payment Instruction File (PIF)</td>
</tr>
<tr>
<td>• Invoice Status</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Ariba Network Integration – Supported Transactions – Sell side

- PO
- Change PO
- Cancel PO
- Order Confirmation
- Invoice
- Shipment Notification
- Remittance Advice
- Delivery Schedule (forecast)
- Delivery Schedule (JIT)

### Ariba Sourcing Solution Integration – Supported Master Data

- Purchasing Organization
- Purchasing Groups
- Company Code
- Payment Terms
- Purchase Info Record
- Supplier (Inbound)
- Supplier (Outbound)
- Plants
- Incoterm
- Manufacturer part number
- Material Groups (Product Categories)
- Material Master
- Material Master Plant
- Bill of Material

### Ariba Sourcing Solution Integration – Supported Transactions

- RFQ (Quote Request)
- Quote Message
- Award (Award to PO & Award to Outline Agreement)
- Contract Workspace/Outline Agreement

### Ariba Procurement Solution Integration – Supported Master Data

- Account Category Field Status
- Account Categories
- Assets
- Company Codes
- Company Code Internal Order mapping
- Cost Centers
- Cost Center Languages
- Currency Conversion Rates
- ERP Commodity Codes
- Internal Orders
- General Ledger
- General Ledger Languages
- Plant
- Plan to Purchasing Organization
- Purchase Groups
- Purchasing Organizations
- Purchasing Organization Supplier Combo
- Tax Codes
- Supplier Data
- Supplier Location
- User Data
- User Group mapping
- WBS Elements
- Company Code WBS Element mapping
- Remittance Locations
- Payment Terms
- Contracts
- Fund Management Objects
- FM Derive

### Ariba Procurement Solution Integration – Supported Transactions

<table>
<thead>
<tr>
<th>To SAP ERP</th>
<th>From SAP ERP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO (Material as well as Service Items)</td>
<td>PO Status</td>
</tr>
<tr>
<td>Change PO (includes Cancel PO)</td>
<td>Change PO Status</td>
</tr>
<tr>
<td>Close PO</td>
<td>Receipt Status</td>
</tr>
<tr>
<td>Receipts</td>
<td>Invoice Status</td>
</tr>
<tr>
<td>Service Entry Sheet &amp; SES Status</td>
<td>SES Response</td>
</tr>
<tr>
<td>Invoices</td>
<td>Remittances</td>
</tr>
<tr>
<td>Payment Request (Ok-to-Pay)</td>
<td>Advance Payment requests</td>
</tr>
<tr>
<td>Expense Report</td>
<td>Advance Payments</td>
</tr>
<tr>
<td>Budget Check</td>
<td>Cancel Advance Payment</td>
</tr>
<tr>
<td>Purchase Requisition (for Fund Reservation)</td>
<td>Requisition</td>
</tr>
<tr>
<td>Catalog</td>
<td>Change Requisition</td>
</tr>
</tbody>
</table>

### Integration Partners

- **Technology Partners**
  - Dell Boomi
  - Liaison Technologies

- **Value Added Partners**
  - Discover (Payments)
  - OpenText (Invoice Management)
  - Prime Revenue (Supply Chain Financing)