ERP-854 System Interface Purchase Order replication from S/4Hana into Business Network

Status	Approved
Owner	
Stakeholders	
Jira Request ID	ERP-745 - Jira project doesn't exist or you don't have permission to view it.
Jira Development ID	ERP-854 - Jira project doesn't exist or you don't have permission to view it.

High- Level Specification

Implementing System	S/4 Hana
Invoked by/Invokes	
Business Process Reference	03.04.03.05. Process PO Output

Functional Overview

Interface describes the Purchase Order message send from S/4 Hana to the suppliers in Business Network. Origin of the Purchase Order is not relevant, any Purchase Order from S/4 Hana that falls under the Output Control definition is send to the Business Network

Supplier receives Purchase Order via Business Network based on his integration setup. Once a PO is generated in S/4HANA, it is transmitted to the SAP Business Network. Suppliers are instantly notified via an email, which contains the PO as a PDF attachment. Suppliers have the flexibility to review the PO details either in their email inbox or by logging into their SAP Business Network account.

Fully integrated Suppliers receive POs directly within their ERP

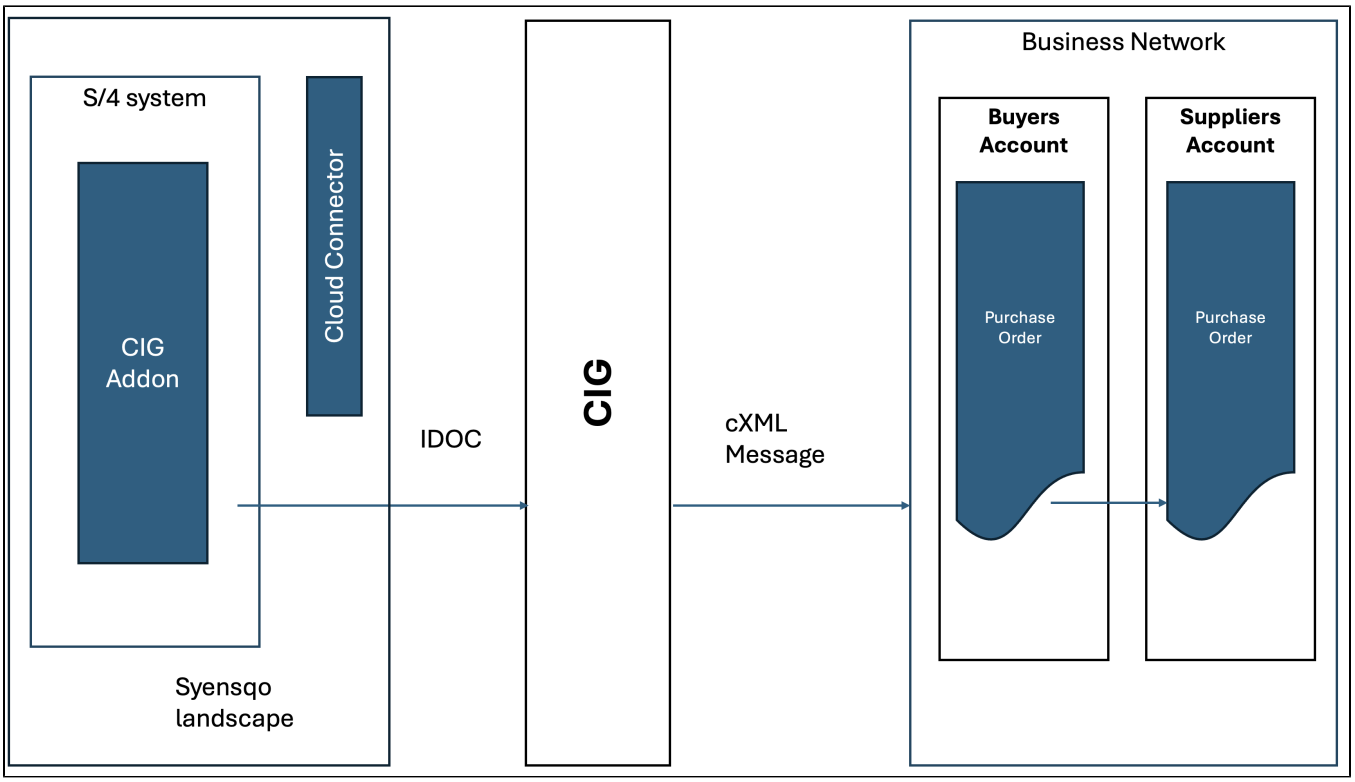
Interface is triggered via the standard Output Control of the Purchase Order in S/4 Hana. IDOC message is send to CIG where it's translated into cXML message that is sent to the Business Network. In the Business Network the PO is routed to the suppliers account in a case the trading relationship is created with the supplier. If the supplier doesn't have the trading relationship created yet, PO is sent to him via email along with the invitation to join SAP Business Network.

Scope and Objectives

This document describes S/4 Hana outbound interface for sending Purchase Order information into Business Network and the basic configuration needed in all the components in order for this interface to be operational.

Message is generated real time via the S/4 standard Output Control. Type of the IDOC is **ARBCIG_ORDERS**.

Process Flow Diagram



Step	Description	Comment
1.	Indirect Purchase Order is created in S/4 Hana from Guided Buying	
2.	Indirect Purchase Order is created with the document type ZAR	
3.	Output control defined for the document type ZAR and specific Supplier ID triggers IDOC generation	
4.	IDOC of type ARBCIG_ORDERS is generated and send over to the CIG	
5.	CIG receives the message and applies the standard mapping over the IDOC, generates cXML document	
6.	cXML document is sent to the Business network	
7.	Business network receives the cXML order in the buyers account and routes it to the suppliers account	

Step	Description	Comment
1.	Direct Purchase Order is created in S/4 Hana	
2.	Direct Purchase Order is created with the document type NB (or other PO type)	
3.	Output control defined for the document type NB and specific Supplier ID triggers IDOC generation	
4.	IDOC of type ARBCIG_ORDERS is generated and send over to the CIG	
5.	CIG receives the message and applies the standard mapping over the IDOC, generates cXML document	
6.	cXML document is sent to the Business network	
7.	Business network receives the cXML order in the buyers account and routes it to the suppliers account, if account is created - trading relationship is already established with the supplier	

Assumptions

- Purchase order Document Types are configured in S/4 Hana
- Output control using NAST via IDOC is configured in S/4 Hana and output conditions are maintained.

Dependencies

- CIG Addon installed in S/4 Hana
- Cloud Connector installed in Syensqo landscape
- Initial setup of CIG Addon is done already as described in ERP-92, section Configuration Requirements.CIG Configuration.
- Connectivity from CIG Addon to CIG is established, as described in ERP-92

Security, Integrity and Controls

The following are the Security and Authorization considerations for this interface:

- Message exchange between S/4 and CIG is encrypted over https.
- Access to interface parameters in CIG Addon is only available to the person with access to the SPRO authorization.
- Access to the CIG is restricted to the integration administrators within Ariba Guided Buying or Ariba Business Network

Configuration Requirements

CIG Configuration

Project setup is required in CIG to cover product type Ariba Network. One project is required per system ID of the backend S/4 system - Global, US and China. There are no additional setting for the Document Type ServiceSheetExportRequest.

CIG Routing

Each IDOC sent from S/4 Hana contains System ID Reference. No additional routing is needed in the CIG Addon as all the messages related to the initial Purchase Order sent from S/4 Hana will use System ID of the initial Purchase Order

CIG Addon Configuration

Configuration for CIG addon is consolidated in one place and should be completed in the logical order of the menu items. In the S/4 instance, navigate to ***SPRO SAP Reference IMG SAP Customizing Implementation Guide Integration with Other SAP Components Managed Gateway for Spend&Network for Buyer***

Logical order of the menu is as following :

- Global Settings - majority of the common configuration is shared with Procurement solution and is already described in ERP-92, section Configuration. Only sections that are different are described in here
  - Create RFC Destination - new RFC destination to be added under *HTTP Connections to External Server.* Official documentation can be found here. Values are as following:

Parameter Name	Value - TEST	Value - PROD
Technical Settings.Target System Settings.Host	http://test-integration.eu.managedgateway.cloud.sap	http://integration.eu.managedgateway.cloud.sap
Technical Settings.Target System Settings.Path Prefix	/cxf/receiveAddonIDOC	/cxf/receiveAddonIDOC
Login And Security User	P007937	TBD - Not available at the moment
Login And Security Password	<confidential>	<confidential>

  - Create Logical System - new Logical System to be created for Business Network. Apart from the name definition, there's no additional setting needed. Official documentation can be found here
- SAP Business Network Integration
  - General Settings.Setup Interface.**Configure the Connections to Send Messages** In the section for **Interface Setup for IDOC** select Logical System created for the Business Network. Select Purchase Order document type and execute program
  - Application Specific Settings.Purchase Order.Define Message Output Control for Purchase Order - official documentation can be found here. Idea is to setup output control for both, NEU and ZAR document types. CIG Addon uses NACE output management

Special Requirements

Not Applicable

Design Rationale

Not Applicable

API Use

Not Applicable

Data Structure

Source Structure and Target Structure

Standard mappings are a subject to change and are not linked in this documentation, latest excel sheet can be downloaded from CIG Resources Implementation Guides Mapping Specs Ariba Network

- Order (IDOC to cXML)

Mapping contains basic field mapping from the IDOC message into the cXML target structure with a basic logic explained in the pseudo code

Processing Logic

Processing within Source

Message to the CIG is initiated by the standard SAP logic trough the output control defined for the document type. IDOC structure is enhanced by the CIG specific segments. These segments are added by the following includes.

- ***ARBCIG_ORDER_REQUEST_002***
- ***ARBCIG_ORDER_REQUEST_011***
- ***ARBCIG_PO_ITEM_LINEDEL_002***

Above includes are activated in customer exists of MM module - as referenced in the official documentation

Processing within Middleware

At this moment, standard transformation as referenced above is in place. In a case of any custom field is needed, custom fields must be added to the IDOC via CIG Includes, then mapped in the CIG OrderRequest Map into <Extrinsic> elements

Processing within Target

Message Received by Business Network is routed to the Suppliers account if the trading relationship is established. In a case it's not, email is sent to the supplier with the invitation to join Business Network.

Interface Alert & Monitoring

System to be monitored	How to monitor	What can be monitored
S/4 Hana	WE02 transaction	Outbound IDOC message under the ARBCIG_ORDERS basic type
CIG	Transaction Tracker -> OrderRequest	Transactions are stored for 30 days. Each transaction is referenced by the PO ID. Payloads can be downloaded, both - IDOC and cXML one
Business Network	Orders Purchase Orders	List of Purchase Orders received by Ariba Network. Order Detail Order History shows the routing of the Purchase Order

Language Requirements

Not Applicable

User Interface Requirements

Not Applicable

Sequencing

Not Applicable

Volumetrics

approximately 50-100 POs a day are expected on the PROD environment.

Performance Consideration

There are no specific performance requirements or considerations related to this interface.

Error Handling

In a case IDOC fails to be sent to the CIG, it can be reprocessed from WE02.

In a case Purchase Order fails to be sent to the supplier, it can be found under "Failed Orders to Private Supplies" from where it can be resend or permanently removed

Testing

How to Test

Test Supplier account must be available and accessible.

Test Conditions and Expected Results

ID	Condition	Expected Results
	Direct PO is created automatically as a conversion from a PR in S/4HANA	PO is created, doc type is set as NB (or other PO type) Output control sets output method as IDOC
	Direct PO is automatically send to the CIG	CIG receives Direct PO IDOC, maps it into cXML acceptable by the Business Network
	Business Network receive Purchase Order cXML, routes it to the Supplier	Purchase Order is visible in the Suppliers Account of the Business Network

ID	Condition	Expected Results
	Indirect PO is created in Ariba Guided Buying and integrated into S/4 Hana	PO is created in S/4 Hana, doc type is set as ZAR Output control sets output method as IDOC
	IndirectPO is automatically send to the CIG	CIG receivesIndirect PO IDOC, maps it into cXML acceptable by the Business Network
	Business Network receive Purchase Order cXML, routes it to the Supplier	Purchase Order is visible in the Suppliers Account of the Business Network

Test Considerations/Dependencies

Other Information

Development Details

Package

Package Name	Parent Package

Other Development Objects

Object Type	Object Name	Purpose/High Level Logic	Design Rationale Reference

Appendix

See also

File	Modified

No files shared here yet.

Change log

Version	Published	Changed By	Comment
CURRENT (v. 19)	**Dec 11, 2025 19:02**	**WILLIAMS-ext, Julie**	
v. 18	Dec 10, 2025 09:03	**TONHAUSER-ext, Juraj**	
v. 17	Dec 07, 2025 21:34	**TONHAUSER-ext, Juraj**	
v. 16	Dec 02, 2025 10:40	**TONHAUSER-ext, Juraj**	
v. 15	Dec 02, 2025 10:28	**TONHAUSER-ext, Juraj**	
v. 14	Dec 01, 2025 11:03	**TONHAUSER-ext, Juraj**	
v. 13	Nov 30, 2025 21:10	**TONHAUSER-ext, Juraj**	
v. 12	Nov 28, 2025 12:56	**TONHAUSER-ext, Juraj**	
v. 11	Nov 25, 2025 18:07	**TONHAUSER-ext, Juraj**	
v. 10	Nov 19, 2025 14:00	**TONHAUSER-ext, Juraj**	

Go to Page History

Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Dec 17, 2025	Actor	Type	Activity	Version
Approved	WILLIAMS-ext, Julie	State	changed state to Approved at 11:13 pm	v19

Lead Approval	WILLIAMS-ext, Julie	State	gave *POD Lead Review* approval at 11:13 pm	
Dec 16, 2025				
	TORRES-ext, Benedict	State	changed expiry date to '23 Dec, 2025 06:36 am' at 6:36 am	
		State	changed state to Lead Approval at 6:36 am	v19
Tech Review	TORRES-ext, Benedict	State	gave *Tech Review* approval at 6:36 am	
			Aligned with standard practice for Ariba CIG for Business Network	
Dec 11, 2025				
	WILLIAMS-ext, Julie	Edit	updated the page at 7:02 pm	
		State	changed expiry date to '16 Dec, 2025 06:03 pm' at 6:03 pm	
		State	changed state to Tech Review at 6:03 pm	v19