



SAP Fieldglass 

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SAP Fieldglass

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SAP Fieldglass and SAP S/4HANA Integration

Business Synopsis

1 SAP Fieldglass and SAP S/4HANA Integration Business Synopsis

Provides an overview of integrating SAP Fieldglass with SAP S/4HANA.

Introduction

Many clients utilizing SAP S/4HANA Enterprise Resource Planning (ERP) may also utilize SAP Fieldglass to manage their contingent labor and external services activity and spend. Since the SAP Fieldglass application is an offering within SAP's product suite, the need for seamless connectivity to be present is imperative and something that should be available for clients to easily implement and configure.

There are three integration scenarios:

- Scenario 1: [Business Partner Integration \[page 2\]](#) – Replicating Business Partner vendors from SAP S/4HANA to SAP Fieldglass.
- Scenario 2: [Master Data Integration \[page 3\]](#) – Replicating master data from SAP S/4HANA to SAP Fieldglass.
- Scenario 3: [Transactional Data Integration \[page 4\]](#) – Creating transactional data integrations from SAP Fieldglass to SAP S/4HANA.

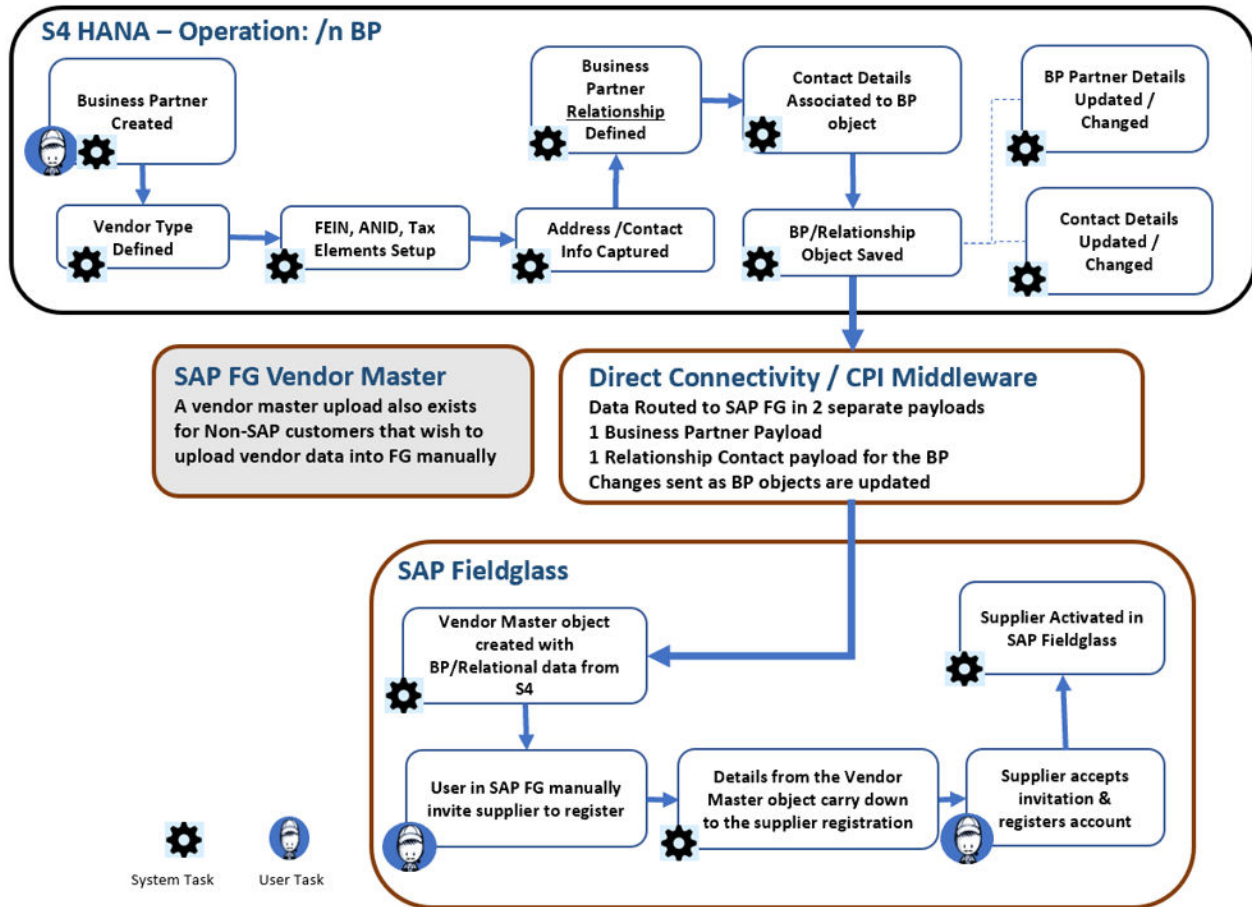
1.1 Integration Workflows

Describes the workflows and high-level summaries of the implementation tasks associated with each business partner, master data, and transactional data integration.

1.1.1 Business Partner Integration

Learn about the workflow of business partner integration with SAP Fieldglass and SAP S/4HANA.

The following diagram shows the replication of Business Partner vendors (integration scenario 1) from SAP S/4HANA to SAP Fieldglass. Once the replication is complete, the end user can select the preferred vendors to onboard within the SAP Fieldglass application. After selection, the vendor's suppliers are then invited to register for SAP Fieldglass.



The following is a high-level summary of the implementation tasks associated with this integration:

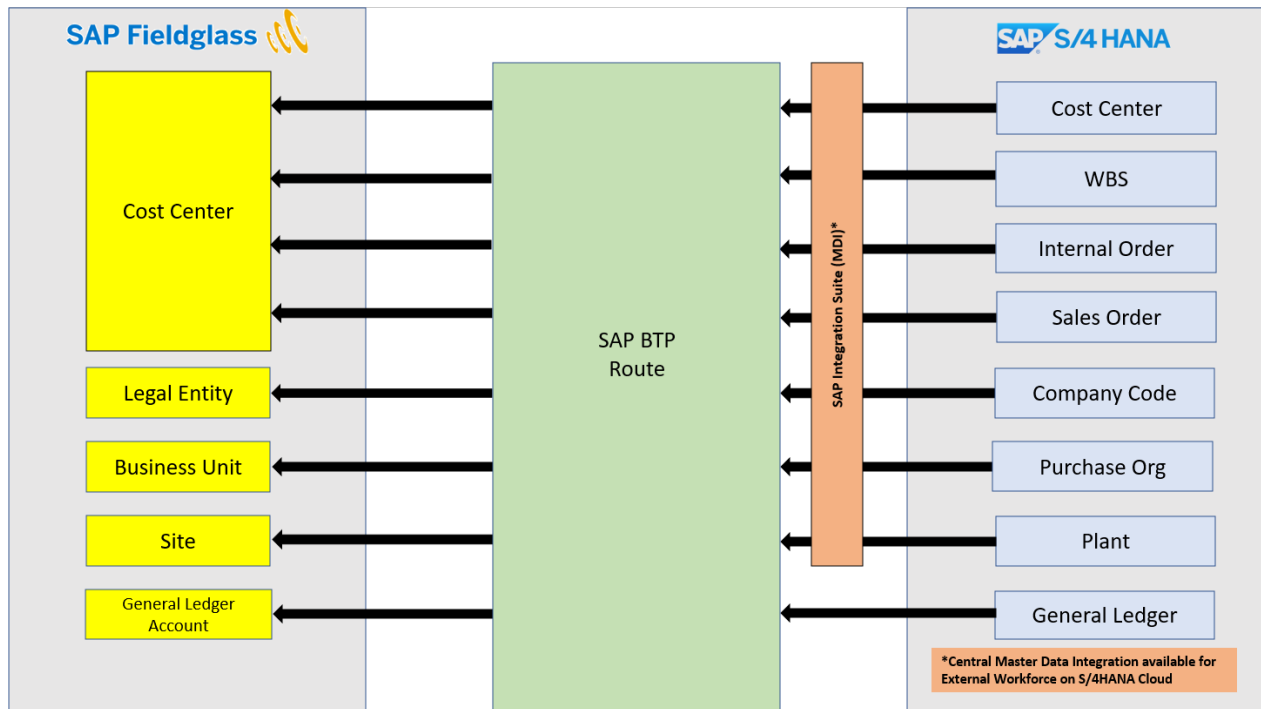
- Business Partner created and saved in SAP S/4HANA ERP system.
- Automated Direct Connectivity (DRF) integration initiates the business partner push to SAP Fieldglass.
 - Pass-through optionally available via SAP Business Technology Platform.
- Business Partner is loaded into the Vendor Master object within the SAP Fieldglass application.
- User manually selects the supplier required to register.
- Email *invitation* is distributed to the vendor to register and accept agreement.
- After the supplier is *invited* and *registered* from the invitation, the Vendor Master record will be marked as *registered* and no further invitations can be driven off of it.
- Suppliers registered with SAP Fieldglass can transact within the SAP Fieldglass network.

1.1.2 Master Data Integration

Learn about the workflow of master data integration with SAP Fieldglass and SAP S/4HANA.

The following diagram shows the data flow and field mapping for replication of master data (integration scenario 2) from SAP S/4HANA to SAP Fieldglass.

The following is a high-level summary of the implementation tasks associated with this integration.



- Configure integration connectivity based on the direct connectivity or mediated connectivity integration method. The preferred method for both SAP S/4HANA Cloud and SAP S/4HANA is to use the SAP BTP mediated connectivity path and the developed integration flows for master data management. Both formats can be used based on the client's configuration and/or preference.
- In SAP Fieldglass, configure web services and enable integration connectors for the buyer company. Send related web services files and details to the client for configuration on the client's system.
- Map fields for each of the master data objects supported by SAP Fieldglass and SAP S/4HANA. The mapping specifications for data imports are provided by SAP Fieldglass.
- Replicate master data from the SAP S/4HANA system and import it into the SAP Fieldglass application.

i Note

For the most current master data flows for cloud, go to <https://api.sap.com/dfd/EW1H1-DFDMasterDataFlows>.

For the most current master data flows for hybrid, go to <https://api.sap.com/dfd/EW1H2-DFDMasterDataFlows>.

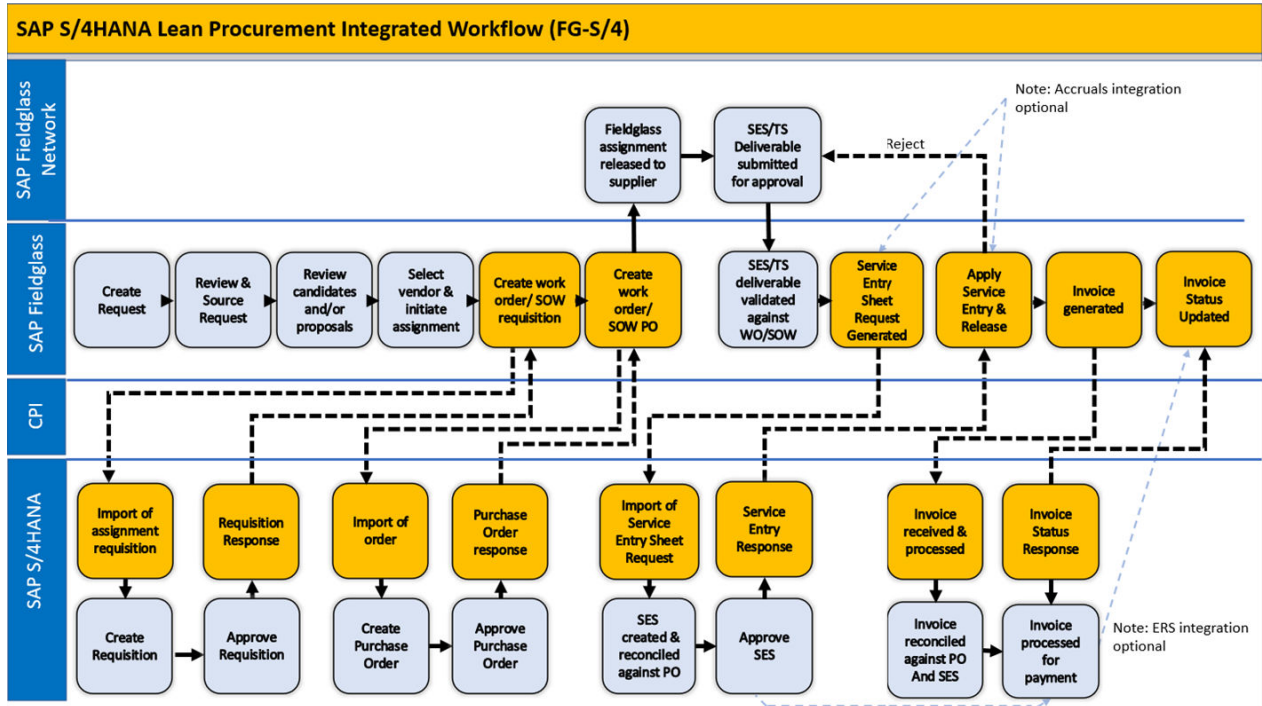
1.1.3 Transactional Data Integration

Learn about the workflow of transactional data integration and Evaluated Receipt Settlement (ERS) with SAP Fieldglass and SAP S/4HANA.

The following diagram reflects the end-to-end transactional integration described in integration scenario 3 below.

i Note

Replication of master data (scenario 2) is a prerequisite for scenario 3.



1. In SAP Fieldglass, the requester (for example, a hiring manager) creates and submits a work order (WO) or SOW in SAP Fieldglass.
2. The WO or SOW progresses through the approval flow, eventually being routed to SAP S/4HANA when reaching final human approval in the SAP Fieldglass application. At this point, information from the submitted WO or SOW is passed from SAP Fieldglass to the SAP S/4HANA system – via a web service integration task – for financial approval and requisition creation.
3. The SAP S/4HANA platform uses the WO or SOW information to create a high-level requisition from SAP Fieldglass and submits it for approval. The requisition requester is the user who created the work order or SOW in SAP Fieldglass.
4. When the status of the requisition is either **Approved** or **Rejected**, the SAP S/4HANA system sends a status update (and the PR ID, if it exists) to SAP Fieldglass.
5. SAP S/4HANA sends a requisition ID back to SAP Fieldglass, using the SAP Fieldglass "Requisition Response Upload" connector (custom named "Standard_PR_Response_Upload"). This upload provides the **Approved** or **Rejected** status of the Purchase Requisition, as well as the Purchase Requisition (PR) reference ID that's captured in a custom field in the application.
6. Depending on whether SAP Fieldglass receives a status of **Approved** or **Rejected** from SAP S/4HANA, one of the following actions occurs:
 - When SAP Fieldglass receives a requisition status of **Approved**, the PR Ref ID custom field is also updated in the *Posting Information* section of the WO or SOW *Details* tab, and the PR status custom field reflects **Approved**. The WO or SOW continues through the SAP Fieldglass approval flow. When fully approved, the status of the WO or SOW changes to **Created**, and SAP Fieldglass sends it to the supplier.
 - When SAP Fieldglass receives a requisition status of **Rejected**, the WO or SOW status changes to **Rejected**. The user can edit the WO or SOW and resubmit it, if desired.
7. The requisition of the WO or SOW is then automatically routed through the workflow, into the next step of acceptance in SAP Fieldglass.

8. For contingent WOs, the supplier accepts the WO and the WO moves into a status of **Pending External Acceptance** within the SAP Fieldglass system. At this time, a secondary integration push is sent from SAP Fieldglass to SAP S/4HANA – via a web service integration task – for final approval and formal Purchase Order creation.
9. For SOW requests, the supplier accepts through a Response action in SAP Fieldglass. Once their formal response is approved by the SAP Fieldglass buyer, the SOW Response object then moves into a status of **Pending External Acceptance** within the SAP Fieldglass system. At this time, a secondary integration push is sent from SAP Fieldglass to SAP S/4HANA – via a web service integration task – for final approval and formal Purchase Order creation.
10. For the applicable WO or SOW, SAP S/4HANA then sends a Purchase Order ID back to SAP Fieldglass, using the SAP Fieldglass "Requisition Response Upload" connector (custom renamed to "Standard_PO_Response_Upload"). This upload provides the **Approved** or **Rejected** status of the Purchase Order, as well as the Purchase Order (PO) reference ID captured in a custom field in the application.
Optional ERS Workflow: Referencing the second diagram shown above, if a 22K lean services procurement tenant chooses to enable and configure ERS external invoicing workflows for a supplier in SAP, the PO response may reflect an ERS flag value that is equal to TRUE as part of the PO status update in SAP Fieldglass. The ERS flag is maintained as a custom field on all WO and SOW objects in SAP Fieldglass if used for the tenant. The flag determines if the external invoicing workflow applies for that given order.
11. Once the WO or SOW object is fully activated in the SAP Fieldglass system, applicable worker time sheets (TS), expense sheets (ES), or SOW line items may be submitted for approval against the associated object. If the optional Service Entry Sheet (SES) integration is enabled for a client, after a last level of manual approval of the object is performed in SAP Fieldglass, a push is sent from SAP Fieldglass to SAP S/4HANA via a web service integration task for final approval and formal SES creation.
Optional Accruals Workflow: When the timesheet, expense sheet, or SOW line item is submitted, and automatic accrual of the cost for the pending approval item is posted. When the timesheet, expense sheet, or SOW line item reaches full approval, the accrual is automatically adjusted against the service entry.
12. For the applicable TS, ES, or SOW line item, SAP S/4HANA then sends an SES ID back to SAP Fieldglass, using the SAP Fieldglass "Service Entry Service Status Update Upload" connector. This upload provides the **Approved** or **Rejected** status of the SES, as well as SES reference ID captured in a custom field in the application.
Optional ERS Workflow: For 22K lean services procurement tenants using the ERS external invoicing workflow, the SES status response provides an SES ID and approval back into SAP Fieldglass. However, it doesn't ultimately approve the applicable line item in SAP Fieldglass. The line item approval requires SAP Fieldglass configured to have an additional approval level of the line item that requires the ERS Invoice Upload to perform for this item, and an external invoice object provided from the ERP.
13. Whether or not the SES functionality and integration is enabled, any invoiced element in the SAP Fieldglass application can be integrated into the SAP S/4HANA system. For the 19W OP clients, an invoice polling call is scheduled against the SAP Fieldglass web service, which executes the SAP Fieldglass "CXML Formatted Invoices Download". The connector retrieves all approved invoices present for the client and allows SAP S/4HANA to process these objects on that system. For 22K lean procurement tenants, the approval of an invoice object in SAP Fieldglass automatically generates an integration push that's sent outbound from SAP Fieldglass into SAP S/4HANA via a web service task for final approval and payment processing in SAP S/4HANA.
Optional ERS Workflow: For 22K lean services procurement tenants using the ERS external invoicing workflow, auto-invoicing doesn't apply as it does for standard SES approvals. As explained in step 12, a separate ERS invoice payload is sent into SAP Fieldglass via a CPI middleware integration flow. The ERS payload is loaded into SAP Fieldglass via the "ERS Invoice Upload" connector within the SAP Fieldglass application. The "ERS Invoice Upload" approves the SES / Fieldglass line item and creates an SAP Fieldglass invoice with the details from the ERS invoice payload, as referenced in the second diagram above.

14. Regardless of the invoice integration configuration, SAP S/4HANA then sends back a final payment status of the invoice from their application into SAP Fieldglass. The SAP Fieldglass "Invoice Status Change Upload" connector is used to update the approved status on the invoice to a status of **Paid** in SAP Fieldglass.

Optional ERS Workflow: For all ERS-created invoices in SAP Fieldglass, the invoice object is marked PAID and no invoice information is sent outbound back to SAP S/4HANA. No status updates are provided for ERP invoices from SAP S/4HANA, as they're considered approved and paid when sent inbound to SAP Fieldglass. This applies to buyer-created invoices in SAP S/4HANA for item category E (lean services) for Enhanced Limits, in the lean service process of service procurement.

ERS is a specific procedure used by SAP for settling goods receipts automatically. When a customer uses ERS, they agree with the vendor that the latter doesn't submit an invoice in respect of a purchase order transaction. Instead, the system posts the invoice document automatically on the basis of the data in the purchase order and goods receipts.

ERS helps with autogenerating invoices in SAP S/4HANA once the SES are approved in the SAP Fieldglass application. The benefits include automatic settlement of the goods receipts, prevention of invoice variances, faster closure of transactions, and elimination of nonvalue-added work.

The following two procurement workflows are available:

1. Lean Procurement 22K (recommended) – Supported for both SAP S/4HANA Cloud and SAP S/4HANA customers. Includes service entry integrations, but doesn't include service hierarchy functions. 22K is the most recent and up-to-date procurement model delivered by SAP Finance.
2. Standard Procurement 19W – Supported for SAP S/4HANA On-Premise only (1709). Doesn't include service entry integrations. Functions as is, but depreciation commences as lean procurement features progress.

1.2 Integration Methods

Learn about direct connectivity and mediated connectivity integration methods.

The data export/import process supports the following integration methods.

Direct Connectivity

Master Data

Using the *SAP Fieldglass Web Service Technical Specification*, SAP S/4HANA configures their SOA Manager to directly connect to SAP Fieldglass and execute the master data objects as scheduled or configured within SAP S/4HANA. CSV files containing master data are sent via SOAP messages and mapped per the specific integration connector within SAP Fieldglass, based on the file name provided in the SOAP message header.

Business Partner

Using the *SAP Fieldglass Web Service Technical Specification*(SAPBusinessPartnerPush and SAPBusinessPartnerRelationshipPush), SAP S/4HANA configures their SOA Manager to connect directly to SAP Fieldglass. SOA Manager then executes the business partner master data objects, as well as their associated relationship contacts, which are scheduled or configured within SAP S/4HANA. XML files containing the master data elements are sent via SOAP messages and map accordingly to the SAP Fieldglass vendor master table in the database, ultimately reflecting in the UI vendor master object.

Mediated Connectivity

Mediated Connectivity is the preferred method of connection for all newer SAP S/4HANA Cloud and SAP S/4HANA tenants. Mediated Connectivity uses SAP Connectivity service or SAP NetWeaver PI (Process Integration)

middleware (or third-party PI middleware) between SAP S/4HANA and SAP Fieldglass. SAP Connectivity service and PI both allow clients the ability to either pass through data between the platforms with additional security and controls in place. They can also provide channels in which data and content is further managed before being sent to SAP Fieldglass for processing.

Within SAP Connectivity service, this activity is accomplished through the development of specific integration flows, which can be coded to handle specific requirements, mappings, and data conversions for a master data object to then meet the needs of the client and/or the SAP Fieldglass application. The integration flows can be used for the conversion of an XML file into a CSV format, to add external fields or data values, and so forth. Once completed, the integration flows can be published to the SAP BTP landscape and enabled for use between clients integrating SAP S/4HANA and SAP Fieldglass. Similar conversions can be developed and implemented within the PI middleware, if used. These methods provide additional security because they don't expose the URL of the ERP system to external systems.

Specific integration flows created for this integration workflow are available for download directly from the SAP API Business Hub at <https://api.sap.com/package/SAPS4HANAintegrationwithSAPFieldglass?section=Artifacts>.

1.3 System Requirements

Learn about the minimum release products required for each applicable integration to successfully implement packages between SAP Fieldglass and SAP S/4HANA.

The following table describes the distributed and planned solutions between SAP Fieldglass, SAP S/4HANA Cloud, and SAP S/4HANA, along with the associated release versions that are required for implementation.

Clients on a release package earlier or less than what is referenced here may require a systematic or platform upgrade on SAP S/4HANA before being able to successfully implement a specific solution.

SAP S/4HANA System Requirements

Integration Points	SAP S/4HANA OP			SAP S/4HANA CE		
	Direct Connectivity Release	SAP BTP Connectivity Release	Format	Direct Connectivity Release	SAP BTP Connectivity Release	Format
Master Data						
Upload Business Unit	1610	1610	CSV	1702	1702	CSV
Upload Cost Center	1610	1610	CSV	1702	1702	CSV
Upload Sites	1610	1610	CSV	1702	1702	CSV
Upload Internal Order	1610	1610	CSV	1702	1702	CSV
Upload WBS	N/A	1709	CSV	N/A	1708	CSV
Upload Legal Entity	N/A	1709	CSV	N/A	1711	CSV

Integration Points	SAP S/4HANA OP			SAP S/4HANA CE		
	Direct Connectivity Release	SAP BTP Connectivity Release	Format	Direct Connectivity Release	SAP BTP Connectivity Release	Format
Upload General Ledger	N/A	1709	CSV	N/A	1711	CSV
Business Partner						
Upload Vendor Supplier	1709	1709	CSV	1705	1708	CSV
Transactional Data						
Requisition Request	N/A	1709 (Standard/deprecated) 1809	XML	N/A	1811	XML
Requisition Response	N/A	1709 (Standard/deprecated) 1809	XML	N/A	1811	XML
Purchase Order Request	N/A	1709 (Standard/deprecated) 1809	XML	N/A	1811	XML
Purchase Order Status Response	N/A	1709 (Standard/deprecated) 1809	XML	N/A	1811	XML
Service Entry Sheet Request	N/A	1809	XML	N/A	1811	XML
Service Entry Sheet Response	N/A	1809	XML	N/A	1811	XML
Invoice Request	1610	1610 (Standard/deprecated) 1809	CXML	1809	1811	CXML
Invoice Status Response	1610	1610 (Standard/deprecated) 1809	CXML	1809	1811	CXML

1.4 Where To Go Next

Learn about additional resources related to SAP Fieldglass and SAP S/4HANA integration.



- For information on overviews and best practices (22k) related to SAP S/4HANA and SAP Fieldglass lean service procurement integrations, go to <https://rapid.sap.com/bp/#/browse/scopeitems/22K>.
- For package information on configuring the business partner, master data, and transactional integrations in SAP S/4HANA, go to <https://api.sap.com/package/SAPS4HANAintegrationwithSAPFieldglass?section=Overview>:
 - 22K for lean procurement
 - 19W/ 1L8 for standard (1709) features
- To learn more about information flows related to mediated transfer, go to <https://api.sap.com/package/SAPS4HANAintegrationwithSAPFieldglass?section=Artifacts>.

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