

# ERP-224 Integration Process - Supplier Data Replication from Ariba to Keelvar

|                     |                                                                                                                                                                            |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Status              | Approved                                                                                                                                                                   |
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| Stakeholders        |                                                                                                                                                                            |
| Jira Request ID     | <div> ERP-225 - Jira project doesn't exist or you don't have permission to view it.</div> |
| Jira Development ID | <div> ERP-224 - Jira project doesn't exist or you don't have permission to view it.</div> |

## High-Level Specification

|                             |                                       |
|-----------------------------|---------------------------------------|
| Application System (Source) | Ariba Guided Sourcing                 |
| Application System (Target) | Keelvar                               |
| Source System Interface     | Standard webhooks and APIs            |
| Target System Interface     | Standard APIs                         |
| Business Process Reference  | 03.03.03.01. Manage Sourcing Projects |

## Functional Overview

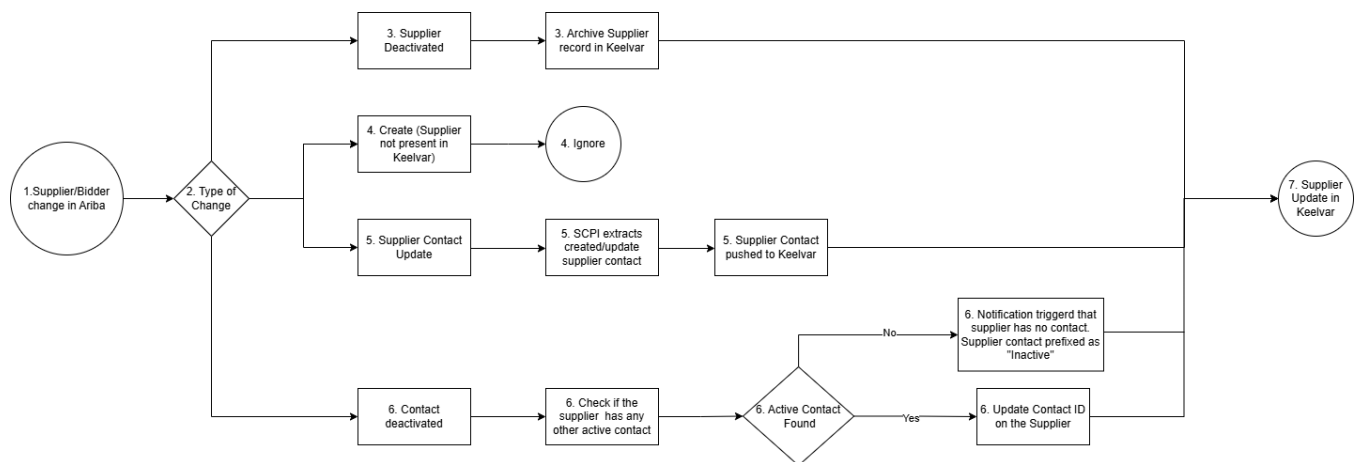
Ariba Guided Sourcing is interfaced with SAP ECC system (PRS) to sync Supplier Master Data. Bidders and Supplier Contacts Master Data is maintained in Ariba Guided Sourcing directly. The Supplier Master Data (including Bidders) along with Supplier Contact information is interfaced with Keelvar as well to allow the Sourcing Specialists the flexibility to invite participants to Keelvar Event. Ariba Supplier ID (System ID) is maintained as External ID in Keelvar ensuring the sync between the two systems. Whenever a supplier or Bidder is deactivated in Ariba Guided Sourcing, the supplier is also archived in Keelvar.

## Scope and Objectives

The scope of this Functional Specification is to describe the interface between Ariba and Keelvar for synchronizing Supplier Master Data. When a supplier/bidder is updated in Ariba, the Keelvar record will be updated via the Keelvar API. Similarly, whenever, a supplier/bidder is deactivated in Ariba, the Keelvar supplier record will be archived. Ariba Master Data API for Sourcing will be used to extract the data from Ariba Guided Sourcing. The supplier contact information is also push from Ariba Guided Sourcing to Keelvar.

If a supplier is not present in Keelvar, the same will be created via the Event creation from Ariba to Keelvar (ERP-108)

## Process Flow Diagram



| Step | Description                                                                                                                                                                                                                                                                                                                                                        |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Supplier is created or deactivated in Ariba Guided Sourcing based on SAP ECC details using an Integration Event. Alternatively, a Bidder is created/deactivated in Ariba Guided Sourcing by Sourcing Specialist. Supplier Contact can also be updated in Ariba Guided Sourcing. All of these constitute a change in Supplier/Bidder data in Ariba Guided Sourcing. |
| 2    | A Scheduled Task picks up the list of all Suppliers or Contacts modified since the last run. Subsequent action depends on the type of change.                                                                                                                                                                                                                      |
| 3    | If the Supplier active flag is false i.e the supplier has been deactivated, SPCPI send a request to Keelvar to archive the supplier records.                                                                                                                                                                                                                       |
| 4    | If the Supplier active flag is true i.e the supplier has been updated, SCPI extracts the supplier details and creates a payload for Keelvar Supplier Management API and pushes it to Keelvar.<br><br>If the Supplier is not present in Keelvar, the supplier will get created during the event creation from Ariba to Keelvar                                      |
| 5    | If the Supplier Contacts which have been modified since the last run, SCPI extracts the corresponding supplier details and pushes the supplier contact details along with the contact ID to Keelvar.                                                                                                                                                               |
| 6    | If the Supplier Contacts which have been deactivated since the last run, SCPI checks Ariba for other active contacts for the said supplier. If no contacts are found, a notification is triggered and the contact of the supplier record is prefixed as "Inactive". Otherwise, the supplier details along with an active contact ID is pushed to Keelvar.          |
| 7    | Based on the request from SCPI through Keelvar Supplier Management API, Keelvar updates the supplier record.                                                                                                                                                                                                                                                       |

## Assumptions

- Following three fields have been added to the Supplier object in Keelvar:

| Field Name    | Field Type | Required |
|---------------|------------|----------|
| Contact Name  | Text       | Yes      |
| Contact Email | Text       | Yes      |
| Contact ID    | Text       | Yes      |

## Dependencies

- Depending on the build of [ERP-116 Integration of Suppliers from SAP PRS \(ECC\) into Ariba](#)

## Security, Integrity and Controls

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

- Access to Ariba and Keelvar APIs is limited via a shared secret to secure End Point connection
- Access to API authorization in SAP Ariba Sourcing are being addressed by Ariba standard security controls. Only authorized persons with Ariba administrator's role can access/ change API OAuth Keys.
- Similarly, access to API authorization in Keelvar are being addressed by Keelvar standard security controls. Only authorized persons with Keelvar Organization User role can access/ change the Keelvar authorization token.

## Configuration Requirements

In order to activate the Master Data API for Sourcing, following steps need to be completed:

1. Sign in to the SAP Ariba Developer Portal.
2. Click Create application from the home page.
3. Fill out the Create a new application form by entering an application name and description, then click Submit.
4. This generates an Application key that identifies your application within the system. Every API request your application makes must include this key as the value of the apiKey parameter.
5. Ask your organization admin to request API access for your application by displaying the application in My applications and clicking Actions. Ask your admin to request API access.
6. A user with the Organization Admin role requests approval for API access.
7. SAP Ariba assesses the request, and once processed and approved, the Organization Admin user receives email with an OAuth client ID for the application.
8. A user with the Organization Admin role generates the OAuth secret and base64-encoded client and secret.

In order to activate Keelvar API, following steps need to be completed:

1. Log into Keelvar Portal
2. Go to Account settings and navigate to API Keys section
3. Click New token button and provide the name and Expiration of the token. Click create to get the token details.

Ariba Guided Sourcing configuration details are described as under:

|                      | Supplementary                                                                                                                           | Test                                                                                                                                    | Production                                                                                                                              |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Ariba Technical User | R_BTP_ARB_ADMIN                                                                                                                         |                                                                                                                                         |                                                                                                                                         |
| Ariba Realm ID       | 745255310-SS-T                                                                                                                          | 745255310-T                                                                                                                             | 745255310                                                                                                                               |
| OAuth URL            | <a href="https://api-eu.ariba.com/v2/oauth/token">https://api-eu.ariba.com/v2/oauth/token</a>                                           | <a href="https://api-eu.ariba.com/v2/oauth/token">https://api-eu.ariba.com/v2/oauth/token</a>                                           | <a href="https://api-eu.ariba.com/v2/oauth/token">https://api-eu.ariba.com/v2/oauth/token</a>                                           |
| Request URL          | <a href="https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod">https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod</a> | <a href="https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod">https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod</a> | <a href="https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod">https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod</a> |

Keelvar configuration is described below:

|             |                                                                         |                                                                     |
|-------------|-------------------------------------------------------------------------|---------------------------------------------------------------------|
| Request URL | <a href="https://test.keelvar.dev/api">https://test.keelvar.dev/api</a> | <a href="https://my.keelvar.app/api">https://my.keelvar.app/api</a> |
|-------------|-------------------------------------------------------------------------|---------------------------------------------------------------------|

## Special Requirements

Not Applicable

## Design Rationale

The Supplier Master Data along with Contact details must be in sync between Ariba Guided Sourcing and Keelvar.

## Data Structure

### Source Structure

The following fields will be used to provide the required information for this interface:

| Field                   | Description                                                            |
|-------------------------|------------------------------------------------------------------------|
| organization - Name_en  | The name of the Supplier Organization                                  |
| organization - SystemID | The ERP vendor ID of the supplier or the Ariba System ID of the Bidder |
| organization - Active   | The flag on organization indicating if the Supplier is active or not   |
| users - Name_en         | The name of the Supplier Contact                                       |

|                      |                                                                                                                                                                             |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| users - EmailAddress | The email address of the Supplier Contact                                                                                                                                   |
| users - UniqueName   | The User ID of the Contact User. One Ariba Supplier can have multiple contacts and contact ID. But ID of any one of the active contacts is maintained in Keelvar at a time. |
| users - Active       | The flag on user (contact) indicating if the Supplier is active or not                                                                                                      |

## Target Structure

The following fields will be used to provide the required information for this interface:

| Field                | Description                                                                                                                                           |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| name                 | The name of the Supplier Organization                                                                                                                 |
| external_id          | The ERP vendor ID of the supplier or the Ariba System ID of the Bidder                                                                                |
| fields/Contact Name  | The name of the Supplier Contact                                                                                                                      |
| fields/Contact Email | The email address of the Supplier Contact                                                                                                             |
| fields/Contact ID    | The User ID of the Contact User. The Contact ID of the supplier is used to push Surrogate Bid to Ariba which is described in <a href="#">E RP-137</a> |
| archived             | The flag on Keelvar Supplier record indicating if the supplier is archived or not.                                                                    |

## Mapping and Calculation

| API or Portlet Name         | Source Field | Required (Y/N) | Description                                                            | API or Portlet Name        | Target Field          | Required (Y/N) | Description                                                            | Rule Type | Rule Instruction                                            |
|-----------------------------|--------------|----------------|------------------------------------------------------------------------|----------------------------|-----------------------|----------------|------------------------------------------------------------------------|-----------|-------------------------------------------------------------|
| Entity Type - organizations | Name_en      | Y              | The name of the Supplier Organization                                  | /manage /supplier_c hanges | name                  | N              | The name of the Supplier Organization                                  |           | Required only if Supplier is to be created/updated          |
| Entity Type - organizations | SystemID     | Y              | The ERP vendor ID of the supplier or the Ariba System ID of the Bidder | /manage /supplier_c hanges | external_id           | Y              | The ERP vendor ID of the supplier or the Ariba System ID of the Bidder |           |                                                             |
| Entity Type - organizations | Name_en      | Y              | The name of the Supplier Contact                                       | /manage /supplier_c hanges | fields /Contact Name  | N              | The name of the Supplier Contact                                       |           | Required only if Supplier Contact is to be created /updated |
| Entity Type - users         | EmailAddress | Y              | The email address of the Supplier Contact                              | /manage /supplier_c hanges | fields /Contact Email | N              | The email address of the Supplier Contact                              |           | Required only if Supplier Contact is to be created /updated |
| Entity Type - users         | UniqueName   | Y              | The User ID of the Contact User                                        | /manage /supplier_c hanges | fields /Contact ID    | N              | The User ID of the Contact User                                        |           | Required only if Supplier Contact is to be created /updated |
| Entity Type - organizations | Active       | Y              | The flag on organization indicating if the Supplier is active or not   | /manage /supplier_c hanges | archived              | N              | The flag on organization indicating if the Supplier is active or not   |           | Required if Supplier is to be archived                      |

## Processing Logic

### Processing within Source

Ariba Master Data Retrieval API does not provide notification of event changes via Webhook, the integration is triggered via a timer. Hence, for the integration to execute, no processing is required within the Source

### Processing within Middleware

Due to rate-limit restrictions in Ariba and Keelvar APIs, a JMS Queue oriented integration pattern is used for the end-to-end synchronisation of Suppliers.

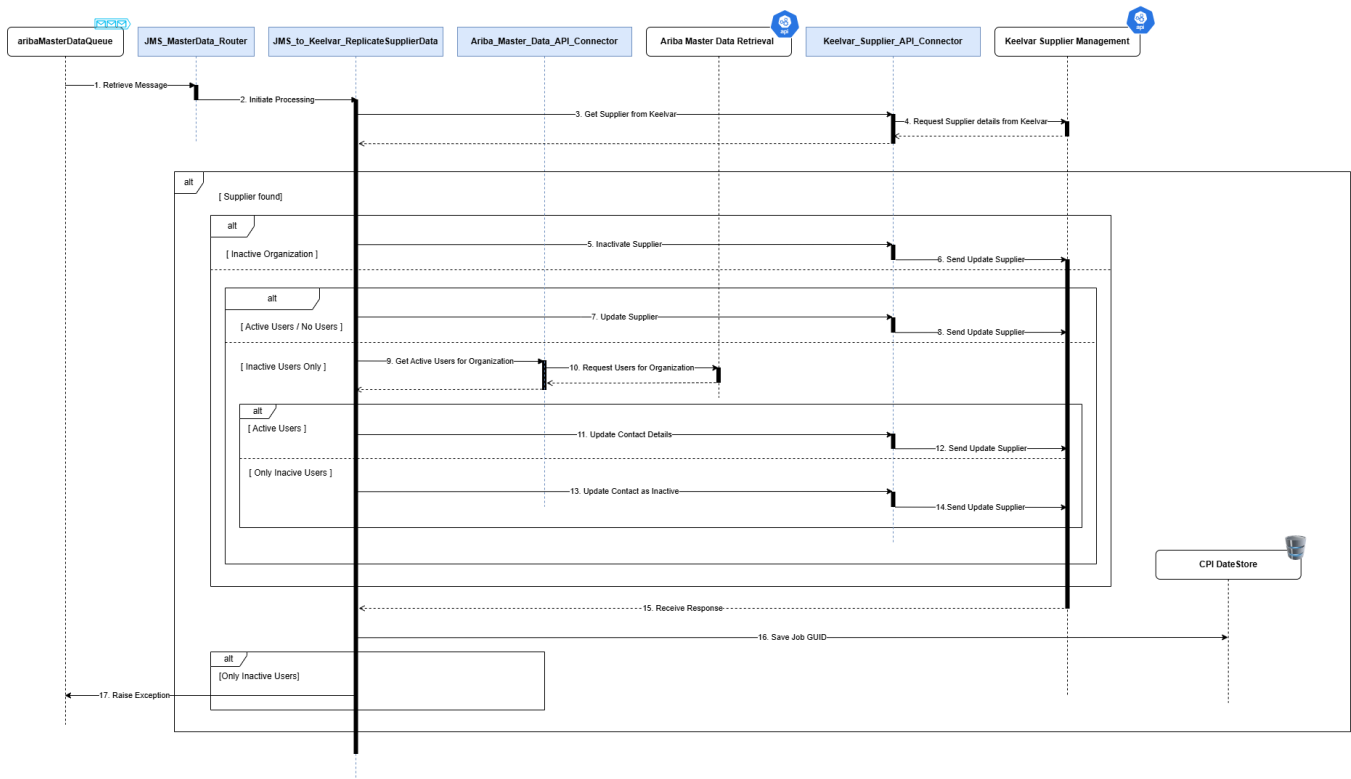
IFlows that use Ariba APIs or Keelvar APIs are queued into a single-threaded processing Router, thereby reprocessing of failed API due to exceeded rate-limits ( i.e. HTTP 429 response ) in Ariba are avoided. Both Ariba and Keelvar APIs are initiated using "Connector" IFlows, which provides a single point of authentication and rate-limits.

|   | Description                                                                                                                                                                                                                       | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Integration Scheduler runs <b>Ariba_to_JMS_InitiateSupplierDataReplication</b> to initiate processing of Supplier Data                                                                                                            | There is no transformation logic in this IFlow. However, the ProcessDirect path to the next IFlow is defined in the header field <b>jmsProcessDirectPath</b> .                                                                                                                                                                                                                                                                                           |
| 2 | The IFlow pushes a dummy message into <b>aribaMasterDataQueue</b>                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3 | IFlow <b>JMS_MasterData_Router</b> reads the message from the Queue,                                                                                                                                                              | The Router checks whether the message is a Retry of a previously failed message and once the retry count has exceeded pushes them to a Dead Letter Queue                                                                                                                                                                                                                                                                                                 |
| 4 | The Router forwards the messages to the iFlow <b>JMS_to_JMS_SelectSupplierDataForProcessing</b> to gather the changed Supplier Organisations and Users from Ariba end point defined in message header                             | The forwarded path is defined by the header field <b>jmsProcessDirectPath</b>                                                                                                                                                                                                                                                                                                                                                                            |
| 5 | The processing is initiated by getting the last runtime from a saved Datastore as the start time and current time as the end time                                                                                                 | The start and end times from the previous integration is saved in the Datastore.                                                                                                                                                                                                                                                                                                                                                                         |
| 6 | The IFlow makes a Synchronous call to the Ariba Master Data Connector IFlow <b>Ariba_Master_Data_API_Connector</b> to retrieve Supplier Organisations that have changed - created, updated or archived - in the selected Interval | <p>The filter parameter used in the API is <b>TimeUpdated</b>. The maximum number of records to be selected are defined by Externalised parameter <b>Maximum Suppliers to Process</b> ( default value 100 ).</p> <p>Header fields that are passed to the Connector are:</p> <ul style="list-style-type: none"> <li>• <b>aribaUrlPath</b> - URL path to get Organizations ( Suppliers )</li> <li>• <b>aribaUrlQuery</b> - selection parameters</li> </ul> |
| 7 | The Connector IFlow calls the Ariba Master Data Retrieval API to get Supplier Organisations that have changed - created, updated or archived - in the selected Interval                                                           | The Connector IFlow reads OAuth credentials and API Key from Security Material in CPI                                                                                                                                                                                                                                                                                                                                                                    |
| 8 | If the number of records retrieved is equal to the maximum number, the end time value is updated with the latest date stamp in the retrieved Supplier records                                                                     | By changing the end time, and then persisting it, the next run of the Integration will then select the remaining changes up to the maximum limit                                                                                                                                                                                                                                                                                                         |

|    |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9  | The IFlow makes a Synchronous call to the Ariba Master Data Connector IFlow <b>Ariba_Master_Data_API_Connector</b> to retrieve Users that have changed - created, updated and archived - in the selected interval | <p>The filter parameter used in the API is the <b>TimeUpdate</b>. The maximum number of records to be selected are defined by the Externalised parameter <b>Maximum Users to Process</b> ( default value 1000 )</p> <p>Header fields tha are passred to the Connector are:</p> <ul style="list-style-type: none"> <li>• <b>aribaUriPath</b> - URL path to get Users</li> <li>• <b>aribaUriQuery</b> - selection parameters</li> </ul> |
| 10 | The Connector IFlow calls the Ariba Master Data Retrieval API to get Users that have changed - created, updated or archived - in the selected Interval                                                            | The maximum user count should be set to a significant higher number. A default value of 1000 is therefore set which is much higher than the number of records expected in a day (15)                                                                                                                                                                                                                                                  |
| 11 | Once Organisations and User details are received, the IFlow arranges the payload to wrap Users with Organisation data                                                                                             | The response can contain User records but not the Organisation that the User belongs to. Since the User record also contains the Supplier Id, this is used to arrange Users that belong to the same Organisation.                                                                                                                                                                                                                     |
| 12 | The payload is split by the Organisation ID, and each record is sent to the JMSQueue for Replication to Keelvar                                                                                                   | The ProcessDirect path the IFlow to process the message is again defined by Header field <b>jmsProcessDirectPath</b> . See the Sequence Diagram below for the Replication Process.                                                                                                                                                                                                                                                    |

## Sequence Diagram 2: Replicate Supplier to Keelvar

This part of the Interface validates the Supplier Information retrieved from Ariba and, if requires, updates the information to Keelvar.

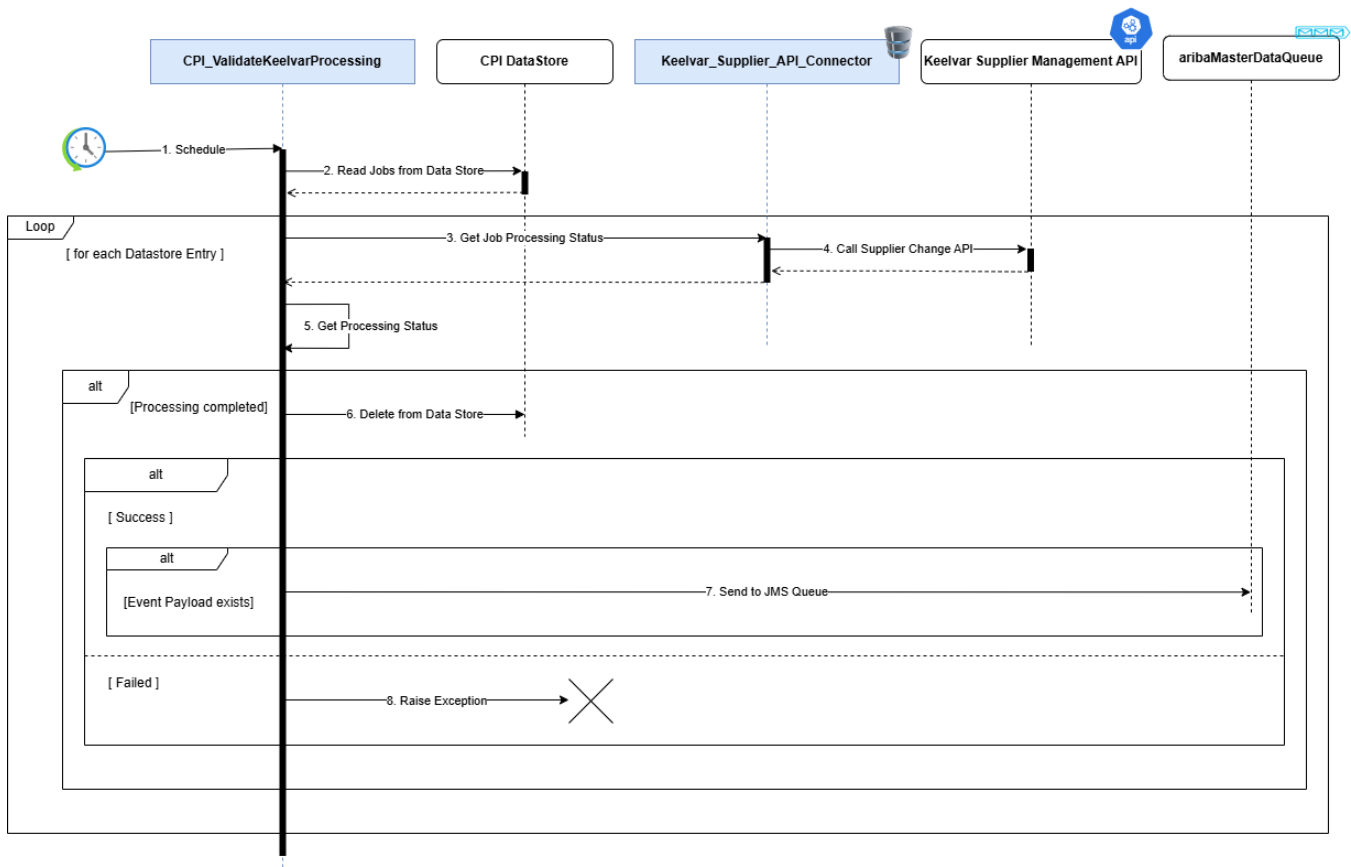


|   | Description                                                                                                            | Comment                                                                                                                                                    |
|---|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | IFlow <b>JMS_MasterData_Router</b> reads message containing Supplier Data                                              | The Router checks if the message is a Retry, and if the Retry Counter is higher than the defined threshold, the message is pushed to the Dead Letter Queue |
| 2 | The Router forwards the message to the ProcessDirect path defined in IFlow <b>JMS_to_Keelvar_ReplicateSupplierData</b> | Header field is defined in <b>jmsProcessDirectPath</b> .                                                                                                   |

|    |                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                         |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3  | IFlow <b>JMS_to_Keelvar_ReplicateSupplierData</b> calls Keelvar Supplier API Connector to check if the Supplier record exists                                                                                                               | As per CR-347, only existing suppliers are updated via this Interface. See <a href="#">ERP-108</a> on how suppliers not existing in Keelvar are created during Event Creation Process. Header fields passed to the Connector are: <ul style="list-style-type: none"> <li>• <b>keelvarUriPath</b> - Supplier Changes endpoint</li> </ul> |
| 4  | Keelvar Supplier API Connector forwards the call to Keelvar Supplier Management API. If the Supplier does not exist, integration terminates successfully.                                                                                   | If the supplier exists, the returned code includes the record of the Supplier, otherwise, a blank response is received.<br><br>The Connector IFlow read the Keelvar API key from Security Material in CPI                                                                                                                               |
| 5  | If the Organisation is flagged as Inactive, the IFlow prepares the archive payload and calls the Keelvar Supplier API Connector                                                                                                             | The Archive flag in the payload is set as true                                                                                                                                                                                                                                                                                          |
| 6  | Keelvar Supplier API Connector calls the Supplier Management API to Update the Supplier Record                                                                                                                                              | Supplier Update end point of the Keelvar Supplier API URL path is used in this step                                                                                                                                                                                                                                                     |
| 7  | If the Organisation is Active and if there are no Users associated or at least one Active User, the IFlow prepares the Create/Update payload with the first Active User details as the Contact and calls the Keelvar Supplier API Connector | Contact node of the Supplier Changes endpoint is mapped. Same header fields as Step 3.                                                                                                                                                                                                                                                  |
| 8  | Keelvar Supplier API Connector calls the Supplier Management API to Update the Supplier Record                                                                                                                                              | Supplier Update end point of the Keelvar Supplier API URL path is used in this step as well                                                                                                                                                                                                                                             |
| 9  | If the Organisation is Active and the Payload contains only Inactive Users, the IFlow invokes the <b>Ariba_Master_Data_API_Connector</b> iFlow to get if there are any active Users in the Supplier in Ariba                                | Header fields that are passed to the Connector are: <ul style="list-style-type: none"> <li>• <b>aribaUriPath</b> - URL path to get Organizations ( Suppliers )</li> <li>• <b>aribaUriQuery</b> - Supplier ID</li> </ul>                                                                                                                 |
| 10 | The Ariba Connector IFlow calls the Ariba Master Data Retrieval API to get Active Users defined for the Supplier Organisation                                                                                                               | The Connector IFlow reads OAuth credentials and API Key from Security Material in CPI                                                                                                                                                                                                                                                   |
| 11 | If any Active Users are found, the IFlow prepares Supplier Update payload with the first Ariba User as the Contact, and calls the Keelvar Supplier Management API                                                                           | Same Keelvar Supplier Management API URL path is used in this IFlow.                                                                                                                                                                                                                                                                    |
| 12 | Keelvar Supplier API Connector calls the Supplier Management API to Update the Supplier Record                                                                                                                                              | Supplier Update end point of the Keelvar Supplier API URL path is used in this step as well                                                                                                                                                                                                                                             |
| 13 | if no Active Users are found, the IFlow prepares the Supplier Update payload with the first Ariba User as the Contact, adds the prefix "Inactive_" to Contact ID, and calls the Keelvar Supplier Management API                             | In Keelvar, this prefix acts as an indication that the Supplier record's Contact details are deactivated in Ariba<br><br>Same Keelvar Supplier Management API URL path is used in this IFlow.                                                                                                                                           |
| 14 | Keelvar Supplier API Connector calls the Supplier Management API to Update the Supplier Record                                                                                                                                              | Supplier Update end point of the Keelvar Supplier API URL path is used in this step as well                                                                                                                                                                                                                                             |
| 15 | The IFlow raises an exception                                                                                                                                                                                                               | Notification of this exception is used as the indicator to reactivate or create Users in Ariba                                                                                                                                                                                                                                          |

### Sequence Diagram 3: Validate Supplier Processing Keelvar

This part of the Interface checks the Processing status of the Supplier update in Keelvar. If the Supplier Creation was triggered by ERP-108, then this also triggers the process to complete the Event Creation in Keelvar.



|   | Description                                                                                                                      | Comment                                                                                                                                                                                                                                                                  |
|---|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Scheduler in CPI initiates the IFlow <b>CPI_ValidateKeelvarProcessing</b>                                                        | The schedule is set to run every 5 minutes                                                                                                                                                                                                                               |
| 2 | The IFlow checks if there are any Jobs awaiting Validation by reading the Data Store entries                                     | <p>The jobs are saved via either via <b>JMS_to_Keelvar_ReplicateSupplierData</b> (See Sequence Diagram 2 above) or via <b>JMS_to_Keelvar_ReplicateSourcingEvents</b> (See ERP-108).</p> <p>A maximum of 10 jobs ( Configurable ) per run is loaded per interface run</p> |
| 3 | For each Job found, CPI calls the Keelvar Supplier API Connector with the Job Guid retrieved from DataStore Entry                | The same Supplier Changes API endpoint is used in this step                                                                                                                                                                                                              |
| 4 | The Connector calls Keelvar Supplier Management API and sends the respond containing the Processing status                       | The Response is forwarded to the IFlow                                                                                                                                                                                                                                   |
| 5 | The IFlow analyses the Response payload and extracts the Processing Status                                                       | The Status shows that the job is completed successfully or with errors, or if the Job is still being processed.                                                                                                                                                          |
| 6 | If the job is completed, the IFlow calls the Datastore and deletes the specific entry                                            | If still being processed, the entry is ignored, and will be rechecked in the next interface run                                                                                                                                                                          |
| 7 | If the retrieved Job contains the Event payload, the Integration forwards the payload to JMS Queue for Event creation in Keelvar | The payload of the event is passed when the Supplier Creation Job was initiated by <b>JMS_to_Keelvar_ReplicateSourcingEvents</b> IFlow. This was implemented as part of CR-347.                                                                                          |
| 8 | If the Job is completed with Errors, then IFlow fails, raising an Exception                                                      | Manual intervention is required to validate the reasons for failure and rectify Data in Ariba and/ or Keelvar                                                                                                                                                            |

## Processing within Target

The Supplier details in Keelvar are updated as a background job.

## Interface Dependency

Not Applicable



## Interface Constraints

Rate Limit for Ariba Event Management API - (Requests): 5/second, 80/minute, 3500/hour

Rate Limit for Keelvar create/update Event API - Burst (120/hour), sustained (500/day)

Rate Limit for Keelvar Job API - Burst (30/min), sustained (600/hour)

## Delivery Requirements

Scheduled task in CPI retrieves changes (new, updates and deactivations) ever every 10 minutes.

## Delta or Full Load Requirements

All requests for creation and update of sourcing events are done via delta load since last run.

## Interface Alert & Monitoring

The following should be monitored:

- API endpoints are available.
- Keelvar token expiration.
- Failures on inbound processing and outbound side need to be handled . Please check the Error Handling section.
- Messages are processed in reasonable time (XX elapse time).

## Interface Reporting

Not Applicable

## Language Requirements

Not Applicable

## User Interface Requirements

Not Applicable

## Volumetrics

Expected load for subsequent loads - 25 updates per day

## Performance Consideration

Not Applicable

## Error Handling

General error handling tips:

- SAP Cloud ALM (CALM) will be used to capture integration execution errors.
- To correct the error, the Ariba Administrator must ensure that the data inconsistency is resolved in the concerned system. Corrections done in Ariba Guided Sourcing will be picked up in the next Schedule Job cycle.
- Refer to this link for details on troubleshooting Error Messages Returned by the Event Management API: [Error Messages Returned by the Event Management API](#)
- Refer to this link for details on troubleshooting Error Messages Returned by Keelvar API: [Open API specification](#)

This integration has an Exception raised when there are no Active Users are maintained for a Supplier in Ariba - a rectification that needs to be done in Ariba. Once the Exception is raised

- Identify the Supplier ID from the Message Log in CPI
- Delete the message from JMS Queue
- Update the Supplier details in Ariba

## Testing

### How to Test

- Create/update a new Bidder and Bidder Contact in Ariba
- Deactivate a new Bidder and/or Bidder Contact in Ariba

## Test Conditions and Expected Results

| ID | Condition                                                                                                                       | Expected Results                                                                                    |
|----|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1  | Create a new Bidder in Ariba                                                                                                    | A Supplier record should be created in Keelvar                                                      |
| 2  | Update the Bidder name, Contact Name or Email Address                                                                           | The Supplier record should be updated in Keelvar                                                    |
| 3  | Deactivate a Bidder in Ariba                                                                                                    | The Supplier record should be archived in Keelvar                                                   |
| 4  | Choose a supplier/bidder in Ariba with two contacts. Deactivate a contact for which the contact ID is not maintained in Keelvar | The Supplier record should be updated with the Contact ID of the second contact                     |
| 5  | Deactivate all contacts for a supplier/bidder                                                                                   | The supplier record should be archived and the contact ID should be prefixed with the word Inactive |

## Test Considerations/Dependencies

Not Applicable

## Other Information

## Development Details

### Package

| Package Name                               | Parent Package |
|--------------------------------------------|----------------|
| Ariba to Keelvar - Master Data Integration | N/A            |

## Other Objects

| Object Type | Object Name                     | Configuration Parameters |                                                                                                                                 |              |                    | Comment                                                               |
|-------------|---------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------|-----------------------------------------------------------------------|
|             |                                 | Name                     | Value - Development                                                                                                             | Value - Test | Value - Production |                                                                       |
| IFlow       | Ariba_Master_Data_API_Connector | Ariba Base URL           | <a href="https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod">eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod</a> |              |                    | Configurable base URL for Master Data Retrieval API                   |
|             |                                 | Credential Name          | OAuth_Ariba_Sourcing_MasterData_API                                                                                             |              |                    | OAuth Credential for the Application created for Supplier Integration |
|             |                                 | Ariba API Delay          | 2                                                                                                                               |              |                    | Pause interval Rate-limit is reached                                  |
|             |                                 | Ariba Realm              | 745255310-SS-T                                                                                                                  | 744368466-T  |                    | Ariba Tenant Identifier                                               |
|             |                                 | Ariba API Key            | APIKEY_AribaMasterData_CPI_Dev                                                                                                  |              |                    | API Key for the Application created for Supplier Integration          |

|       |                                              |                                           |                                    |                                  |                                  |                                                                                               |
|-------|----------------------------------------------|-------------------------------------------|------------------------------------|----------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------|
| IFlow | Keelvar_Supplier_API_Connector               | Keelvar Supplier API Base URL             | test.keelvar.dev/api               |                                  | my.keelvar.com/api               | Keelvar API URL                                                                               |
|       |                                              | Keelvar API Key Security Material         | KeelvarToken_Dev                   |                                  | KeelvarToken_Prod                | Security Material in CPI containing the Keelvar API Token                                     |
| IFlow | JMS_MasterData_Router                        | Queue Name                                | aribaMasterDataQueue               |                                  |                                  | Main Processing JMS Queue Name                                                                |
|       |                                              | Maximum Retries Allowed                   | 2                                  |                                  |                                  | Maximum retries before moving to DLQ (Configurable)                                           |
|       |                                              | Dead Letter Queue Name                    | DLQ_aribaMasterDataQueue           |                                  |                                  | Dead Letter Queue name                                                                        |
| IFlow | Ariba_to_JMS_InitiateSupplierDataReplication | Receiver IFlow Process Direct Path        | /ariba-suppliers/trigger           |                                  |                                  | Path to the downstream IFlow that extracts changed data                                       |
|       |                                              | Queue Name                                | aribaMasterDataQueue               |                                  |                                  | Main Processing JMS Queue Name                                                                |
| IFlow | JMS_to_JMS_SelectSupplierDataForProcessing   | Data Store Name                           | Sourcing_Runtime_Collection        |                                  |                                  | Data store containing the runtimes                                                            |
|       |                                              | Last Runtime Entry Name                   | Supplier_LastRun_Timeslice         |                                  |                                  | Data Store entry for Master Data Integration Runtimes                                         |
|       |                                              | Queue Name                                | aribaMasterDataQueue               |                                  |                                  | Main processing JMS Queue                                                                     |
|       |                                              | Ariba Master Data Connector ProcessDirect | /ariba/masterData/connector        |                                  |                                  | Path to Ariba Master Data Connector IFlow                                                     |
|       |                                              | Receiver ProcessDirect Path               | /keelvar/supplier/update           |                                  |                                  | Path the IFlow that updates Keelvar Suppliers                                                 |
|       |                                              | Maximum Suppliers to Process              | 100                                |                                  |                                  | The maximum number of new and changed Suppliers to be selected per API                        |
|       |                                              | Maximum Users to Process                  | 1000                               |                                  |                                  | The maximum number of new and changed Users to be selected per API                            |
|       |                                              | Initial Starting Epoch Time               | 1770289876000                      | To be calculated when Activating | To be calculated when Activating | The initial starting point to select changed Supplier records from Ariba in Epoch time stamp. |
| IFlow | JMS_to_Keelvar_ReplicateSupplierData         | Ariba Master Data Connector Path          | /ariba/masterData/connector        |                                  |                                  | Path to Ariba Master Data Connector IFlow                                                     |
|       |                                              | Keelvar Supplier API Connector Path       | /keelvar/supplier/connector        |                                  |                                  | Path to Keelvar Supplier Management API Connector IFlow                                       |
|       |                                              | Data Store for Keelvar Job Processing     | KeelvarSupplierProcessingResponses |                                  |                                  | Data Store where the Keelvar Job Creation details are retrieved from.                         |
| IFlow | CPI_ValidateKeelvarProcessing                | JMS Queue Name                            | aribaEventMgtQueue                 |                                  |                                  | Ariba Event Management JMS Queue, where Event payload will sent to                            |
|       |                                              | Keelvar Supplier API Connector Path       | /keelvar/supplier/connector        |                                  |                                  | Path to Keelvar Supplier Management API Connector IFlow                                       |
|       |                                              | Data Store for Keelvar Job Processing     | KeelvarSupplierProcessingResponses |                                  |                                  | Data Store where the Keelvar Job Creation details are retrieved from.                         |
|       |                                              | Event Create ProcessDirectPath            | /events-to-keelvar/eventPayload    |                                  |                                  | The Process Direct path to the IFlow which initiates Event Creation                           |

## Appendix

### API Examples

|   | IFlow                                      | Curl                                                                                                                                                                                                                                                                                                                                                                  | Sample Payloads |
|---|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1 | JMS_to_JMS_SelectSupplierDataForProcessing | curl --location 'https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod/entities/organizations?%24filter=((TimeUpdated%20gt%20dateTime))&%24includeInactive=true' \ --header 'Accept-Language: en' \ --header 'X-Realm: ARIBA_REALM_ID' \ --header 'Accept: application/json' \ --header 'Authorization: Bearer ARIBA_TOKEN' \ --header 'apiKey: ARIBA_API_KEY' | N/A             |

|   |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                 |
|---|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 |                                      | curl --location 'https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod/entities/users?%24filter=(PasswordAdapter%20eq%20%27SourcingSupplierUser%27%20and%20TimeUpdated%20gt%20dateTime)' \ --header 'Accept-Language: en' \ --header 'X-Realm: ARIBA_REALM_ID' \ --header 'Accept: application/json' \ --header 'Authorization: Bearer 2ARIBA_TOKEN' \ --header 'apiKey: ARIBA_API_KEY'                       | N/A                                                                                                                                             |
| 3 |                                      | curl --location 'https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod/entities/users?%24filter=((PasswordAdapter%20eq%20%27SourcingSupplierUser%27%20andTimeUpdated%20gt%20dateTime))&%24includeInactive=true' \ --header 'Accept-Language: en' \ --header 'X-Realm: ARIBA_REALM_ID' \ --header 'Accept: application/json' \ --header 'Authorization: Bearer ARIBA_TOKEN' \ --header 'apiKey: ARIBA_API_KEY' | N/A                                                                                                                                             |
| 4 | JMS_to_Keelvar_ReplicateSupplierData | curl --location 'https://test.keelvar.dev/api/manage/supplier_changes' \ --header 'Authorization: Bearer YOUR_API_KEY' \ --header 'Content-Type: application/json' \ --data-raw 'PAYLOAD_CREATED_AS_ABOVE_JSON';                                                                                                                                                                                                     | Create or Update Active Supplier:<br><br>Archive Supplier:<br><br>Create or Update Active Supplier Contact:<br><br>Inactivate Supplier Contact: |
| 5 |                                      | curl --location 'https://eu.openapi.ariba.com/api/sourcing-mds-search/v1/prod/entities/users?%24filter=((PasswordAdapter%20eq%20%27SourcingSupplierUser%27%20andOrganization.SystemID%20eq%20%27<SystemID>%27))' \ --header 'Accept-Language: en' \ --header 'X-Realm: ARIBA_REALM_ID' \ --header 'Accept: application/json' \ --header 'Authorization: Bearer ARIBA_TOKEN' \ --header 'apiKey: ARIBA_API_KEY'       | N/A                                                                                                                                             |

## See also

| File                                                                                                                                             | Modified                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| File drawio-backup-Ariba_Keelvar_Supplier_Interface-rev-2 draw.io diagram backup                                                                 | Feb 24, 2026 by EPASINGHE-ext, Kapila       |
| File Ariba_Keelvar_Supplier_Interface draw.io diagram                                                                                            | Feb 17, 2026 by MUKHOPAD HYAY-ext, Aakshita |
| File ~Ariba_Keelvar_Supplier_Interface.tmp draw.io Draft                                                                                         | Feb 17, 2026 by MUKHOPAD HYAY-ext, Aakshita |
| File Validate Supplier Creation Job in Keelvar draw.io diagram                                                                                   | Feb 17, 2026 by EPASINGHE-ext, Kapila       |
| File ~Validate Supplier Creation Job in Keelvar.tmp draw.io Draft                                                                                | Feb 17, 2026 by EPASINGHE-ext, Kapila       |
| File Keelvar Supplier Update draw.io diagram                                                                                                     | Feb 16, 2026 by EPASINGHE-ext, Kapila       |
| File ~Keelvar Supplier Update.tmp draw.io Draft                                                                                                  | Feb 16, 2026 by EPASINGHE-ext, Kapila       |
| File IFlow-Sequence draw.io diagram                                                                                                              | Jan 23, 2026 by EPASINGHE-ext, Kapila       |
| Microsoft Word Document R2_Ariba Guided Sourcing_Keelvar_ERP-224_Functional_Acceptance_Test Evidence.docx Functional Acceptance Testing Evidence | Nov 26, 2025 by MOHAMMAD-ext, Farhan        |
| File ~IFlow-Sequence.tmp draw.io Draft                                                                                                           | Oct 30, 2025 by EPASINGHE-ext, Kapila       |

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# Change log

| Version         | Published          | Changed By                 | Comment                                |
|-----------------|--------------------|----------------------------|----------------------------------------|
| CURRENT (v. 44) | Apr 21, 2026 13:47 | WENNINGER-ext, Sascha      |                                        |
| v. 43           | Feb 26, 2026 11:54 | EPASINGHE-ext, Kapila      | Reverted from v. 41                    |
| v. 42           | Feb 17, 2026 09:38 | EPASINGHE-ext, Kapila      | Minor updates for grammer and spelling |
| v. 41           | Feb 17, 2026 09:22 | MUKHOPADHYAY-ext, Aakshita |                                        |
| v. 40           | Feb 17, 2026 09:20 | MUKHOPADHYAY-ext, Aakshita |                                        |
| v. 39           | Feb 17, 2026 09:17 | MUKHOPADHYAY-ext, Aakshita |                                        |
| v. 38           | Feb 17, 2026 09:08 | MUKHOPADHYAY-ext, Aakshita |                                        |
| v. 37           | Feb 17, 2026 07:31 | MUKHOPADHYAY-ext, Aakshita |                                        |
| v. 36           | Feb 17, 2026 07:28 | MUKHOPADHYAY-ext, Aakshita |                                        |
| v. 35           | Feb 17, 2026 07:24 | EPASINGHE-ext, Kapila      |                                        |

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## Workflow history

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

| Apr 21, 2026                      | Actor                                                                                                  | Type  | Activity                                                                                                                                                    | Version |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Approved                          | WENNINGER-ext, Sascha                                                                                  | State | changed state to <span>Approved</span> at 1:47 pm                                                                                                           | v44     |
| Revision under Review             | WENNINGER-ext, Sascha                                                                                  | State | gave <i>Minor change</i> approval at 1:47 pm                                                                                                                |         |
|                                   |                                                                                                        |       | <i>formatting changes</i>                                                                                                                                   |         |
|                                   |                                                                                                        | State | changed state to <span>Revision under Review</span> at 1:47 pm                                                                                              | v44     |
| Revision in progress              | WENNINGER-ext, Sascha                                                                                  | State | changed state to <span>Revision in progress</span> at 1:47 pm                                                                                               | v44     |
| From Feb 26, 2026 to Apr 21, 2026 |                                                                                                        |       |                                                                                                                                                             |         |
| Approved                          | EPASINGHE-ext, Kapila and WENNIN GER-ext, Sascha                                                       | Edit  | multiple updates from  EPASINGHE-ext, Kapila and WENNINGER-ext, Sascha |         |
|                                   |  TILBEE-ext, Amanda | State | changed state to <span>Approved</span> at 11:10 am                                                                                                          | v43     |