**SAP Integration Suite   
Cloud Integration - Technical Specification  
 iFlow Name : Post\_Bulk\_Order\_SV**

Version: 1.0

Author: Generated by AI

Date: 2025-10-28

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# 1. Change History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Description** |
| 1.0 | 2025-10-28 | Generated by AI | Initial version |

# 2. Overview

This technical specification document, derived from the iFlow's XML definition, serves as a central repository for the configuration details of the `Post\_Bulk\_Order\_SV` integration flow. It outlines the iFlow's properties, including namespace mappings, logging behavior, and security settings. Crucially, it details the sender and receiver endpoints, specifying adapter types (HTTPS, OData), communication protocols, and relevant connection parameters like addresses and authentication methods. Furthermore, the document captures message flow definitions, encompassing data mappings and processing steps. The document allows developers and administrators to understand, maintain, and troubleshoot the iFlow's functionality.

# 3. High level iFlow Design

The iFlow `Post\_Bulk\_Order\_SV` processes bulk order data from a Sender to a Receiver system. It begins by initializing data using "Content Modifier 1," then maps the data structure using "Message Mapping 1". The message is then enriched with header information based on A\_SalesContractItemType using "Content Modifier 3" and an external web service is called using "Request Reply 1". After the external call, the iFlow splits the response using "General Splitter 1," then routes based on the `statusCode`. Successful status codes will "Write 1" to a data store while errors will modify the content using "Content Modifier 2" before ending the process.

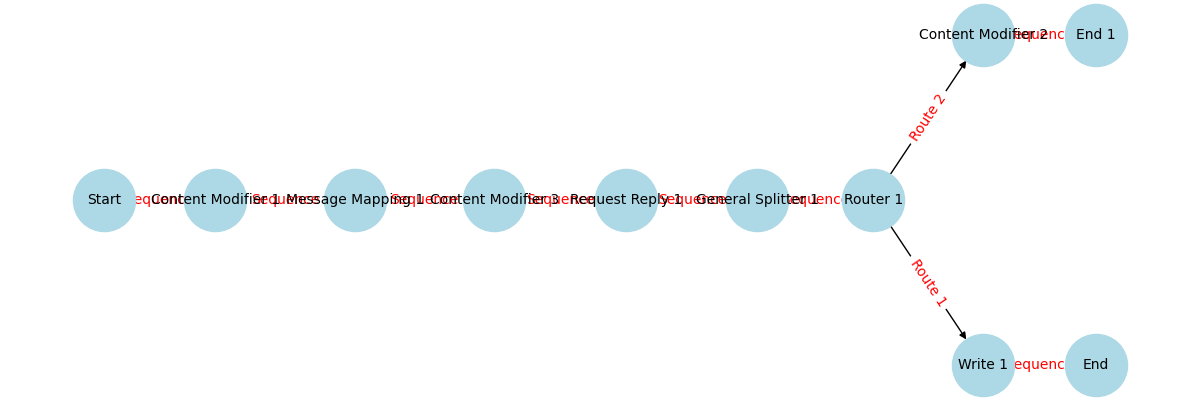


Figure: High level BPMN iFlow message and sequence flow

# 4. Message Flow

The iFlow contains two message flows. The first, named "OData", is a receiver channel using the OData V2 protocol over HTTP to connect to `http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV` and create Sales Contract (`A\_SalesContract`). Basic authentication is enabled, leveraging the `UST\_S4\_Cred` alias, and the proxy type is `sapcc`. The second, named "HTTPS", is a sender channel using the HTTPS protocol and configured with Role Based authentication using `ESBMessaging.send` role, it exposes the endpoint `/post\_bulk/order\_sv`. The maximum body size is limited to 40MB.

|  |  |  |
| --- | --- | --- |
| **Source** | **Target** | **Name** |
| Request Reply 1 | Receiver1 | OData |
| Sender | Start | HTTPS |

# 5. Technical Description

## 5.1. Main Integration Process

The main integration process, "Integration Process" (Process\_1), starts with a Message Start Event and then enriches the message content using "Content Modifier 1" (CallActivity\_5). The message is then mapped using "Message Mapping 1" (CallActivity\_91), followed by "Content Modifier 3" (CallActivity\_341642) and an external service call with "Request Reply 1" (ServiceTask\_75189). The response is split by "General Splitter 1" (CallActivity\_341644) before it is processed by "Router 1" (ExclusiveGateway\_75193). Depending on the evaluation of the status code, the message is either persisted in "Write 1" (CallActivity\_75201) and the iFlow ends with "End" (EndEvent\_2) or modified by "Content Modifier 2" (CallActivity\_75198) and the iFlow ends with "End 1" (EndEvent\_75196).

|  |  |  |
| --- | --- | --- |
| **Component Name** | **Key** | **Value** |
| Integration Process | Transaction Timeout | 30 |
| Integration Process | Component Version | 1.2 |
| Integration Process | Cmd Variant Uri | ctype::FlowElementVariant/cname::IntegrationProcess/version::1.2.1 |
| Integration Process | Transactional Handling | Not Required |

### serviceTask Request Reply 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Component Version | 1.0 |
| Activity Type | ExternalCall |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::ExternalCall/version::1.0.4 |

### endEvent End Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Component Version | 1.1 |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::MessageEndEvent/version::1.1.0 |

### endEvent End 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Component Version | 1.1 |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::MessageEndEvent/version::1.1.0 |

### callActivity Content Modifier 2 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Body Type | expression |
| Property Table | <row><cell id='Action'>Create</cell><cell id='Type'>xpath</cell><cell id='Value'>//batchChangeSetPart/A\_SalesContract//A\_SalesContractItemType/Material</cell><cell id='Default'></cell><cell id='Name'>Material\_Number</cell><cell id='Datatype'>java.lang.String</cell></row> |
| Header Table |  |
| Wrap Content | Order is not created Sucessfully ${header.Mat2} |
| Component Version | 1.6 |
| Activity Type | Enricher |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::Enricher/version::1.6.0 |

### callActivity Content Modifier 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Body Type | constant |
| Property Table |  |
| Header Table |  |
| Wrap Content | <ROOT>  <select\_response>  <row>  <BULK\_ORDER\_NO>16101702</BULK\_ORDER\_NO>  <BULKTYPE/>  <START\_DATE>2017-10-16T00:00:00</START\_DATE>  <LASTEDTDT>2018-10-16T00:00:00</LASTEDTDT>  <SAP\_MATERIAL\_ID>TG12</SAP\_MATERIAL\_ID>  <ORDER\_QTY>1</ORDER\_QTY>  <UOM>EA</UOM>  <CURRENCY>USD</CURRENCY>  <SOLDTO>17100001</SOLDTO>  <STYLE\_NO>TAMFD30TAR</STYLE\_NO>  <COLCD>JS0</COLCD>  <TEAMKEY>817</TEAMKEY>  <SIZ>M </SIZ>  <LOGOCD>4YV</LOGOCD>  <PACKNOTES>HWSF</PACKNOTES>  </row>  <row>  <BULK\_ORDER\_NO>16101701</BULK\_ORDER\_NO>  <BULKTYPE/>  <START\_DATE>2017-10-16T00:00:00</START\_DATE>  <LASTEDTDT>2018-10-16T00:00:00</LASTEDTDT>  <SAP\_MATERIAL\_ID>TG12</SAP\_MATERIAL\_ID>  <ORDER\_QTY>1</ORDER\_QTY>  <UOM>EA</UOM>  <CURRENCY>USD</CURRENCY>  <SOLDTO>17100001</SOLDTO>  <STYLE\_NO>TAMFD30TAR</STYLE\_NO>  <COLCD>JS0</COLCD>  <TEAMKEY>817</TEAMKEY>  <SIZ>M </SIZ>  <LOGOCD>4YV</LOGOCD>  <PACKNOTES>HWSF</PACKNOTES>  </row>  <row>  <BULK\_ORDER\_NO>16101703</BULK\_ORDER\_NO>  <BULKTYPE/>  <START\_DATE>2017-10-16T00:00:00</START\_DATE>  <LASTEDTDT>2018-10-16T00:00:00</LASTEDTDT>  <SAP\_MATERIAL\_ID>INVALID\_MAT</SAP\_MATERIAL\_ID>  <ORDER\_QTY>-5</ORDER\_QTY>  <UOM>ZZ</UOM>  <CURRENCY>XXX</CURRENCY>  <SOLDTO>00000000</SOLDTO>  <STYLE\_NO>TAMFD30TAR</STYLE\_NO>  <COLCD>JS0</COLCD>  <TEAMKEY>817</TEAMKEY>  <SIZ>M </SIZ>  <LOGOCD>4YV</LOGOCD>  <PACKNOTES>HWSF</PACKNOTES>  </row>  </select\_response> </ROOT> |
| Component Version | 1.6 |
| Activity Type | Enricher |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::Enricher/version::1.6.0 |

### callActivity Content Modifier 3 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Body Type | constant |
| Property Table |  |
| Header Table | <row><cell id='Action'>Create</cell><cell id='Type'>xpath</cell><cell id='Value'>//A\_SalesContractItemType/Material</cell><cell id='Default'></cell><cell id='Name'>Mat2</cell><cell id='Datatype'>java.lang.String</cell></row> |
| Wrap Content |  |
| Component Version | 1.6 |
| Activity Type | Enricher |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::Enricher/version::1.6.0 |

### exclusiveGateway Router 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Component Version | 1.1 |
| Activity Type | ExclusiveGateway |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::ExclusiveGateway/version::1.1.2 |
| Throw Exception | false |

### startEvent Start Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Component Version | 1.0 |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::MessageStartEvent/version::1.0 |

### callActivity General Splitter 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Expr Type | XPath |
| Streaming | true |
| Stop On Execution | true |
| Splitter Threads | 10 |
| Split Expr Value | /batchPartResponse/batchChangeSetResponse/batchChangeSetPartResponse |
| Parallel Processing | false |
| Component Version | 1.6 |
| Activity Type | Splitter |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::GeneralSplitter/version::1.6.0 |
| Grouping | 1 |
| Split Type | GeneralSplitter |
| Time Out | 300 |

### callActivity Message Mapping 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Mappinguri | dir://mmap/src/main/resources/mapping/Bulk2.mmap |
| Mappingname | Bulk2 |
| Mapping Source Value |  |
| Mapping Type | MessageMapping |
| Mapping Reference | static |
| Mappingpath | src/main/resources/mapping/Bulk2 |
| Component Version | 1.3 |
| Activity Type | Mapping |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::MessageMapping/version::1.3.1 |
| Message Mapping Bundle Id |  |

### callActivity Write 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Visibility | global |
| Alert | 2 |
| Encrypt | true |
| Expire | 30 |
| Message Id | Post\_BO\_SV |
| Component Version | 1.7 |
| Override | true |
| Activity Type | DBstorage |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::put/version::1.7.1 |
| Operation | put |
| Storage Name | Post\_BO\_SV |
| Include Message Headers | false |

### sequenceFlow Route 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Expression Type | XML |
| Component Version | 1.0 |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::GatewayRoute/version::1.0.0 |

### sequenceFlow Route 2 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| Expression Type | XML |
| Component Version | 1.0 |
| Cmd Variant Uri | ctype::FlowstepVariant/cname::GatewayRoute/version::1.0.0 |

## 5.2. Local Integration Process

The SAP iFlow Process\_1 orchestrates the core integration logic. It uses a sequential execution flow with various integration components. Specifically, it includes a Content Modifier step to manipulate message payloads and a Router step for conditional processing. Furthermore, the process leverages a Request-Reply step, suggesting interaction with an external service, and finally culminates with a Send step to dispatch the processed message. The integration process is designed to transform and route data before sending it to a destination.

No process with id='Process\_1' found.

## 5.3. Sender

The sender system utilizes the HTTPS adapter to receive data. Authentication is role-based, requiring the "ESBMessaging.send" role. The endpoint is accessible via the URL path "/post\_bulk/order\_sv". The maximum allowed body size is limited to 40 bytes. This endpoint's business role is to receive and initiate messages, likely for processing bulk orders by external sources.

|  |  |
| --- | --- |
| **Key** | **Value** |
| Component Type | HTTPS |
| Description |  |
| Maximum Body Size | 40 |
| Component N S | sap |
| Component Version | 1.5 |
| Url Path | /post\_bulk/order\_sv |
| Name | HTTPS |
| Transport Protocol Version | 1.5.2 |
| Component S W C V Name | external |
| System | Sender |
| Xsrf Protection | 0 |
| Transport Protocol | HTTPS |
| Cmd Variant Uri | ctype::AdapterVariant/cname::sap:HTTPS/tp::HTTPS/mp::None/direction::Sender/version::1.5.2 |
| User Role | ESBMessaging.send |
| Sender Auth Type | RoleBased |
| Message Protocol | None |
| Message Protocol Version | 1.5.2 |
| Component S W C V Id | 1.5.2 |
| Direction | Sender |
| Client Certificates |  |

## 5.4. Receiver

|  |  |
| --- | --- |
| **Key** | **Value** |
| Description |  |
| Pagination | 0 |
| Odata Cert Auth Private Key Alias |  |
| Api Artifact Type |  |
| Provider Auth |  |
| Component N S | sap |
| Resource Path | A\_SalesContract |
| Custom Query Options |  |
| Metadata Allowed U R I Params |  |
| Name | OData |
| Internet Proxy Type |  |
| Transport Protocol Version | 1.25.0 |
| Proxy Port |  |
| Component S W C V Name | external |
| Enable M P L Attachments | true |
| Receive Time Out | 1 |
| Alias | UST\_S4\_Cred |
| Content Type | application/atom+xml |
| Component S W C V Id | 1.25.0 |
| Provider Name |  |
| Message Protocol | OData V2 |
| Direction | Receiver |
| Scc Location Id | UST-OPTUM-CPI |
| Metadata Allowed Headers |  |
| Component Type | HCIOData |
| Address | http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV |
| Query Options |  |
| Proxy Type | sapcc |
| Is C S R F Enabled | false |
| Component Version | 1.25 |
| Proxy Host |  |
| Edmx File Path | edmx/sentrydev\_44300\_sap\_opu\_odata\_sap\_API\_SALES\_CONTRACT\_SRV.edmx |
| Provider Url |  |
| Enable T L S Session Reuse | true |
| Odatapagesize |  |
| System | Receiver1 |
| Authentication Method | Basic |
| Whitelist Response Headers |  |
| Enable Batch Processing | 1 |
| Transport Protocol | HTTP |
| Character Encoding | none |
| Fields | SalesContract,SalesContractType,SalesOrganization,DistributionChannel,SalesContractValidityStartDate,SalesContractValidityEndDate,SalesContractValidityPerdUnit,CustomerPurchaseOrderType,OrganizationDivision,SoldToParty,CustomerPurchaseOrderDate,PurchaseOrderByCustomer,to\_Item/SalesContractItem,to\_Item/SalesContract,to\_Item/Material,to\_Item/RequestedQuantity |
| Cmd Variant Uri | ctype::AdapterVariant/cname::sap:HCIOData/tp::HTTP/mp::OData V2/direction::Receiver/version::1.25.0 |
| Whitelist Request Headers |  |
| Operation | Create(POST) |
| Message Protocol Version | 1.25.0 |
| Provider Relative Url |  |

## 5.5. Mappings

The iFlow's Mappings section defines a single message mapping activity with ID "1". This activity executes a "MessageMapping" named "Bulk2", located at `dir://mmap/src/main/resources/mapping/Bulk2.mmap`. The mapping is statically referenced and its path within the project is `src/main/resources/mapping/Bulk2`. The mapping component version is 1.3, and it utilizes a FlowstepVariant of type "MessageMapping" with version 1.3.1. No specific source value or message mapping bundle ID is provided within this configuration.

### Mapping Activity 1 Properties

|  |  |
| --- | --- |
| **Key** | **Value** |
| mappinguri | dir://mmap/src/main/resources/mapping/Bulk2.mmap |
| mappingname | Bulk2 |
| mappingSourceValue |  |
| mappingType | MessageMapping |
| mappingReference | static |
| mappingpath | src/main/resources/mapping/Bulk2 |
| componentVersion | 1.3 |
| activityType | Mapping |
| cmdVariantUri | ctype::FlowstepVariant/cname::MessageMapping/version::1.3.1 |
| messageMappingBundleId |  |

## 5.6. Security

The iFlow's security configuration includes disabled CORS (Cross-Origin Resource Sharing), no HTTP session handling, and `returnExceptionToSender` is set to false. Basic Authentication is disabled for the Sender participant. The flow logs "All events" and enforces role-based authentication ("ESBMessaging.send") for the HTTPS Sender adapter at the path "/post\_bulk/order\_sv". The flow utilizes an OData V2 receiver adapter configured for Basic Authentication, accessing "A\_SalesContract" resource at `http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV` via sapcc proxy, and CSRF protection is disabled. The OData adapter also enables TLS session reuse and MPL attachments.

|  |  |
| --- | --- |
| **Key** | **Value** |
| Namespace Mapping |  |
| Http Session Handling | None |
| Access Control Max Age |  |
| Return Exception To Sender | false |
| Log | All events |
| Cors Enabled | false |
| Exposed Headers |  |
| Component Version | 1.2 |
| Allowed Header List |  |
| Server Trace | false |
| Allowed Origins |  |
| Access Control Allow Credentials | false |
| Allowed Headers |  |
| Allowed Methods |  |
| Cmd Variant Uri | ctype::IFlowVariant/cname::IFlowConfiguration/version::1.2.4 |

## 5.7. Groovy Scripts

The `Post\_Bulk\_Order\_SV` iFlow doesn't directly contain Groovy scripts within the provided XML snippet. However, it leverages several content modifiers and a general splitter which could potentially incorporate Groovy scripts in the configuration. The iflow starts and goes through a series of Content Modifiers and mapping. After splitting the message in the splitter the message goes to an exclusive gateway. The gateway sends the successful message to a DB write operation. The presence and function of groovy scripts depends on the configurations of each step of the iflow, and not necessarily explicitly mentioned in the properties.

No Groovy scripts found in the specified folder.

## 5.8. Error Handling & Logging

The provided SAP iFlow XML snippet indicates a basic error handling and logging configuration. Specifically, the `<Exceptions>` tag is empty, meaning that there are no explicitly defined exception handlers or specific error handling logic implemented within this section of the iFlow. As a result, the iFlow will rely on default SAP CPI error handling mechanisms, which typically involve retries (if configured) and eventually logging the error to the monitoring system. Consequently, detailed custom error logging is likely absent, relying instead on standard CPI logging for troubleshooting. Without custom exception blocks, the iFlow lacks the ability to perform specific actions or transformations upon encountering errors.

No exception subprocesses found in the iFlow.

# 6. Version and Metadata

|  |  |
| --- | --- |
| **Key** | **Value** |
| componentVersion | 1.0 |
| ComponentNS | sap |
| ComponentSWCVName | external |
| ComponentSWCVId | 1.5.2 |

# 7. Appendix

This SAP iFlow processes data, incorporating several technical artifacts. It utilizes three Content Modifiers: "Content Modifier 1" (sets a constant body), "Content Modifier 2" (creates an xpath property, Material\_Number) and "Content Modifier 3" (creates a header from xpath Material). A "Message Mapping 1" task references the mapping `Bulk2.mmap`. The iFlow also uses a "General Splitter 1" which splits the message based on the xpath `/batchPartResponse/batchChangeSetResponse/batchChangeSetPartResponse`. Finally it uses a "Write 1" which stores information in `Post\_BO\_SV` data store.

|  |  |
| --- | --- |
| **Key** | **Value** |
| mappinguri | dir://mmap/src/main/resources/mapping/Bulk2.mmap |
| mappingname | Bulk2 |
| mappingType | MessageMapping |
| mappingReference | static |
| mappingpath | src/main/resources/mapping/Bulk2 |