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

Version: 1.0

Author: Generated by AI

Date: 2025-10-27

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# 1. Change History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Description** |
| 1.0 | 2025-10-27 | Generated by AI | Initial version |

# 2. Overview

This technical specification document serves as a blueprint for the Post\_Bulk\_Order\_SV iFlow, outlining its configuration and behavior. It defines the iFlow's properties, including settings for HTTP session handling, logging, and CORS. The document details the communication partners involved: a Sender endpoint (HTTPS) and a Receiver endpoint (OData V2). Message flow definitions specify adapter configurations like the OData receiver's authentication details, resource path, and operation for Sales Contract creation. This document enables developers and administrators to understand, deploy, and maintain the iFlow effectively.

# 3. High level iFlow Design

The iFlow `Post\_Bulk\_Order\_SV` processes messages from a Sender to a Receiver. The flow begins with a Start Event and proceeds to a Content Modifier that sets the initial payload. The message then undergoes mapping via a Message Mapping step, followed by another Content Modifier that sets a header value and then does a request reply. The resulting message is split by a General Splitter and then routed based on the `statusCode`. Success route stores the message using Write step, while the failure route goes through another Content Modifier before ending.

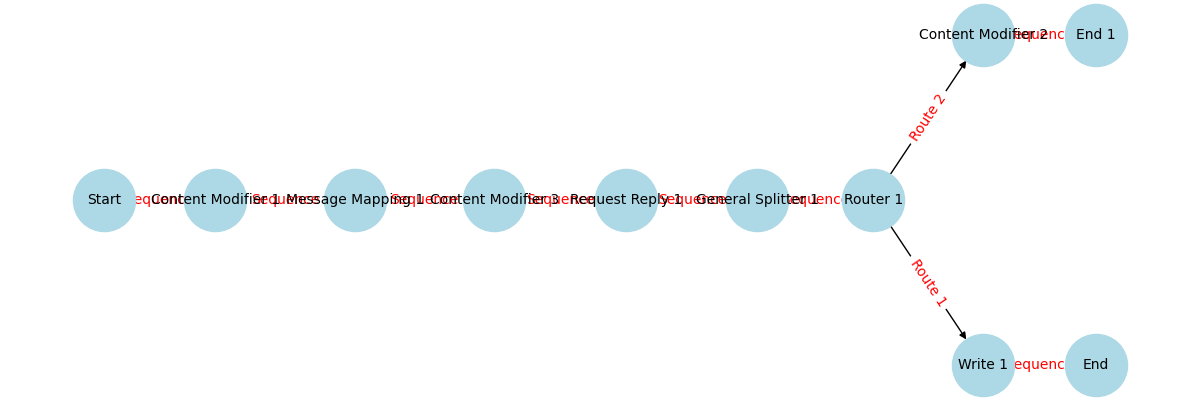


Figure: High level BPMN iFlow message and sequence flow

# 4. Message Flow

The iFlow contains two message flows. The first, named "OData," is a receiver channel using the `HCIOData` component with OData V2 protocol over HTTP to interact with the `API\_SALES\_CONTRACT\_SRV` service at `http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV`. It's configured with Basic authentication and accesses the `A\_SalesContract` resource with a destination called `Receiver1` and credentials from alias `UST\_S4\_Cred`. The second, named "HTTPS," is a sender channel leveraging the `HTTPS` adapter to receive requests on the `/post\_bulk/order\_sv` URL path and authorizes the sender using a role-based mechanism requiring the `ESBMessaging.send` role. It has a max body size of 40.

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

# 5. Technical Description

## 5.1. Main Integration Process

The iFlow `Process\_1`, named "Integration Process", starts with a `StartEvent\_2` and processes data through a series of steps. First, `CallActivity\_5` "Content Modifier 1" enriches the message with constant data. Then, `CallActivity\_91` "Message Mapping 1" maps the message using the `Bulk2.mmap` mapping. The `CallActivity\_341642` "Content Modifier 3" enriches the message headers, and `ServiceTask\_75189` "Request Reply 1" makes an external call. The response is then split by `CallActivity\_341644` "General Splitter 1", before being routed by `ExclusiveGateway\_75193` "Router 1". Successful codes are written to storage through "CallActivity\_75201" and routed to `EndEvent\_2`, while unsuccessful codes are routed to `CallActivity\_75198` "Content Modifier 2" and `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

Okay, here's a technical summary of the main integration process for SAP iFlow Process\_1, based on the (unseen) XML:  
  
The iFlow's main integration process orchestrates the end-to-end data flow. It likely involves a series of steps defined as child elements, such as content modifiers, routers, or adapters. These child elements perform operations like message transformation, content enrichment, and connectivity to external systems. Routing decisions are potentially made based on message content or properties using router steps. Ultimately, the main process ensures data is delivered to the target system according to the iFlow's defined logic.

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

## 5.3. Sender

The sender system is identified as "Sender," utilizing the HTTPS protocol for communication. Authentication is role-based, requiring the `ESBMessaging.send` user role. Key configurations include a URL Path of `/post\_bulk/order\_sv` and a maximum body size of 40 bytes. No explicit client certificates are configured. The endpoint's business role is to receive inbound messages over HTTPS, likely for processing order data.

|  |  |
| --- | --- |
| **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

The SAP iFlow receiver utilizes an OData V2 adapter (version 1.25) to interact with the endpoint `http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV`, targeting the `A\_SalesContract` resource path via HTTP. Authentication is configured as Basic, and connection is made via SAP Cloud Connector (`Proxy Type = sapcc`) at location ID `UST-OPTUM-CPI`. The operation is a Create (POST), and it allows MPL attachments. Batch processing is enabled, and the content type is application/atom+xml.

|  |  |
| --- | --- |
| **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 Mappings section contains a single Mapping Activity (id="1") implementing a Message Mapping transformation. This mapping, named "Bulk2", is defined by the `Bulk2.mmap` file located at `src/main/resources/mapping/` within the iFlow project (URI: `dir://mmap/src/main/resources/mapping/Bulk2.mmap`). The mapping is configured as a static resource (`mappingReference=static`) and uses the MessageMapping component, version 1.3. The specific data transformation logic is encapsulated within the `Bulk2.mmap` file and is not directly described in this XML snippet. No explicit source value is defined here (`mappingSourceValue` is empty).

### 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 collaboration defines security-related properties, including disabled CORS, no session handling, and logging all events. Basic authentication is disabled on the "Sender" endpoint. The flow uses HTTPS with Role-Based authentication requiring the "ESBMessaging.send" role and XSRF protection is disabled. It also configures OData V2 connectivity to "http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV" via the `sapcc` proxy and Basic Authentication, enabling TLS session reuse. Batch processing is enabled for OData V2, attachments are enabled, and CSRF is disabled.

|  |  |
| --- | --- |
| **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

This SAP iFlow, `Post\_Bulk\_Order\_SV`, processes bulk order data. It starts by enriching the content using `Content Modifier 1` with a constant body, then transforms the message using a `Message Mapping 1`. The flow splits the data into individual order parts using `General Splitter 1`. For each part, it enriches content with material information using `Content Modifier 3`, performs external calls via `Request Reply 1` and routes to datastore or another content modifier depending on the return status code. The iFlow ends with either success or error message.

No Groovy scripts found in the specified folder.

## 5.8. Error Handling & Logging

This SAP iFlow's Error Handling & Logging section, as defined by the provided XML snippet, currently lacks explicit error handling or exception management configuration. The `<Exceptions>` tag is empty, indicating no specific exception sub-processes or error rules are defined within this iFlow. Consequently, the default platform-level error handling will be employed. No custom logging mechanisms, such as content modifiers or external log destinations, are specified. The iFlow will likely rely on standard platform tracing and monitoring capabilities for debugging and error identification. Further configuration is needed to implement tailored error handling and logging behavior.

No exception subprocesses found in the iFlow.

# 6. Version and Metadata

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

This iFlow metadata indicates a component version of 1.0. The component belongs to the 'sap' namespace. Its software component version name is 'external', and the software component version ID is '1.5.2'. This information facilitates dependency tracking and identifies the external software component associated with this specific integration flow, enabling proper deployment and management. The metadata allows the identification of the version of the iFlow and the identification and tracking of external dependencies related to the integration. In short, the iFlow depends on external component 'external' version 1.5.2.

# 7. Appendix

The iFlow, named "Integration Process," includes several technical artifacts. It contains three Content Modifier steps: "Content Modifier 1", "Content Modifier 2", and "Content Modifier 3". It uses a "General Splitter 1" to split the message and a "Message Mapping 1" step using the `Bulk2.mmap` mapping. Additionally, it features a "Request Reply 1" for external calls, a "Write 1" step for database storage and an "Exclusive Gateway" for routing based on the expression `/batchPartResponse/batchChangeSetResponse/batchChangeSetPartResponse/statusCode = '201'`.

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