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

Version: 1.0

Author: Generated by AI

Date: 2025-10-28

# Table of Contents

1. Change History

2. Overview

3. High level iFlow Design

4. Message Flow

5. Technical Description

5.1. Main Integration Process

5.2. Local Integration Process

5.3. Sender

5.4. Receiver

5.5. Mappings

5.6. Security

5.7. Groovy Scripts

5.8. Error Handling & Logging

6. Version and Metadata

7. Appendix

# 1. Change History

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

# 2. Overview

This technical specification document for the Post\_Bulk\_Order\_SV iFlow serves as a comprehensive reference guide outlining the iFlow's configuration and properties. It details crucial aspects such as endpoint definitions (sender and receiver), communication protocols (HTTPS and OData V2), message flow configurations, and adapter-specific parameters. The document provides insights into security settings, versioning, and other essential technical details required for deployment, maintenance, and troubleshooting. By encapsulating these specifications, this document facilitates a clear understanding of the iFlow's intended behavior and dependencies. The document also provides a history or changes and a point of reference.

# 3. High level iFlow Design

The iFlow `Post\_Bulk\_Order\_SV` begins with a `StartEvent`, receiving a message and enriching it with a constant payload in `Content Modifier 1`. This enriched message is then mapped using `Message Mapping 1` (`Bulk2.mmap`) and subsequently modified by `Content Modifier 3`, creating a header `Mat2` via XPath. A `Request Reply` step is used for external communication, followed by a `General Splitter 1` that splits the message based on the `/batchPartResponse/batchChangeSetResponse/batchChangeSetPartResponse` XPath. Based on the `statusCode` of the split message from the external system, the iFlow either persists the message in storage via `Write 1` if the status code is 201, or enriches it in `Content Modifier 2` to add error information to the message to be ended.

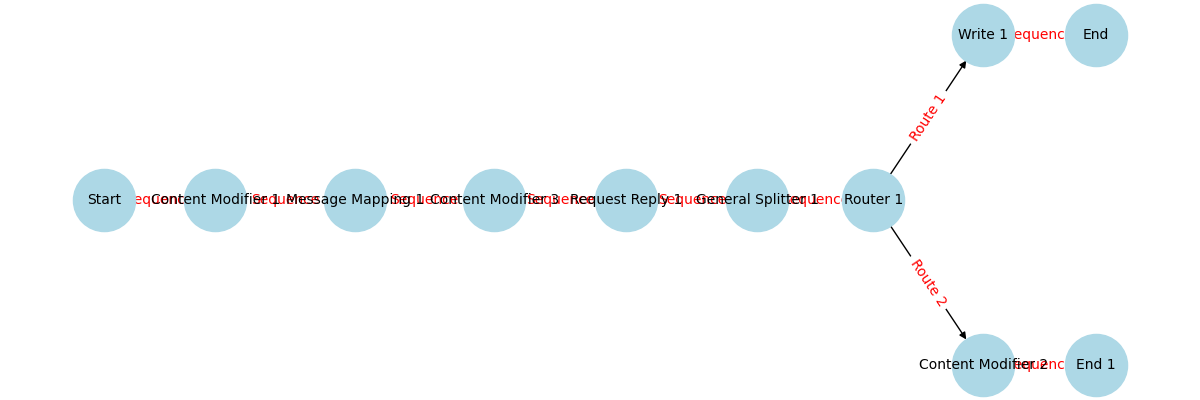


Figure: High level BPMN iFlow message and sequence flow

# 4. Message Flow

The iFlow contains two message flows. The first, named "OData," facilitates a receiver OData V2 communication using the `HCIOData` adapter. It retrieves data from `http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV` for the resource path "A\_SalesContract" using Basic Authentication and is configured to create(POST) using OData. The system name is "Receiver1". The second message flow, named "HTTPS," is a sender HTTPS communication using the `HTTPS` adapter. It exposes the endpoint `/post\_bulk/order\_sv`, requires the `ESBMessaging.send` role and doesn't implement XSRF protection.

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

# 5. Technical Description

## 5.1. Main Integration Process

The iFlow "Integration Process" (Process\_1) starts with a message start event. It enriches the message content using "Content Modifier 1" with hardcoded XML payload, followed by a message mapping ("Message Mapping 1") based on the "Bulk2.mmap" file. The data is then passed through "Content Modifier 3", then sent to a service task to create a request and reply. Next, the iFlow splits the message using a "General Splitter 1" based on the `/batchPartResponse/batchChangeSetResponse/batchChangeSetPartResponse` XPath expression. Finally, the route takes one path depending on the success code: If the statusCode is '201' then the message is persisted to the datastore and ends, if it is unsuccessful, the message is enriched before the process ends.

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

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

## 5.3. Sender

The sender system in this SAP iFlow is identified as "Sender" and utilizes the HTTPS protocol for communication. Authentication is "RoleBased," requiring the "ESBMessaging.send" user role. Key configuration parameters include a maximum body size of 40 (likely kilobytes or megabytes, without units it's unclear), and a URL path of "/post\_bulk/order\_sv". No message protocol is specified, meaning the raw HTTPS body is transmitted. The business role of this endpoint is to receive inbound order data for bulk processing via HTTPS.

|  |  |
| --- | --- |
| **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 iFlow receiver uses an OData V2 adapter (version 1.25.0) to interact with the `API\_SALES\_CONTRACT\_SRV` service at `http://sentrydev:44300/sap/opu/odata/sap/API\_SALES\_CONTRACT\_SRV`. It uses Basic authentication and accesses the `A\_SalesContract` resource path. The adapter is configured to use the SAP Cloud Connector (SCC) with location ID `UST-OPTUM-CPI`. MPL attachments and TLS session reuse are enabled, and batch processing is also activated. The system identifier is `Receiver1`, and a list of fields has been configured for inclusion in the payload.

|  |  |
| --- | --- |
| **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 contains a single Mapping Activity (id: 1) that executes a Message Mapping. This mapping, named "Bulk2", is defined by the message mapping artifact located at `dir://mmap/src/main/resources/mapping/Bulk2.mmap`. The mapping is statically referenced and resides in the project at `src/main/resources/mapping/Bulk2`. No source value for the mapping is provided explicitly in the configuration. The mapping engine version is 1.3.

### 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. HTTP session handling is disabled. CORS is disabled. Basic Authentication is disabled on the sender endpoint. Server-side tracing is disabled. The iFlow allows role-based authentication for the Sender with user role "ESBMessaging.send." The receiver OData endpoint leverages basic authentication via the 'UST\_S4\_Cred' alias and connects through SAP Cloud Connector.

|  |  |
| --- | --- |
| **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 iFlow `Post\_Bulk\_Order\_SV` does not directly use Groovy Script according to the provided XML. It primarily leverages Content Modifiers, Message Mapping, a General Splitter, and database operations to process bulk order data. The flow starts with a message start event, enriches content with constant values and XPath expressions, maps the message using `Bulk2.mmap`, and splits the message based on `/batchPartResponse/batchChangeSetResponse/batchChangeSetPartResponse`. A router then directs the flow based on the `statusCode` of the split parts, either writing to a database or enriching the content with an error message, eventually ending the process. External systems are called via the "Request Reply" service task.

No Groovy scripts found in the specified folder.

## 5.8. Error Handling & Logging

The provided SAP iFlow XML snippet indicates a lack of explicitly defined error handling and logging configurations within the `<Exceptions>` element. This suggests a reliance on default system behavior for error management. Without specific exception handling, errors may propagate up the processing chain, potentially causing iFlow termination. No custom logging mechanisms are configured, meaning standard system logs will capture error information. Consequently, in-depth error analysis and proactive issue resolution might be limited without further configuration.

No exception subprocesses found in the iFlow.

# 6. Version and Metadata

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

The iFlow's component version is 1.0, originating from the "sap" namespace. This component is associated with the Software Component Version (SWCV) named "external," specifically identified by the SWCV ID of 1.5.2. These metadata elements describe the foundational framework upon which the iFlow is built. Understanding the component version is important for tracking changes and ensuring compatibility with other SAP systems and services.

# 7. Appendix

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