

Design Integration Flow





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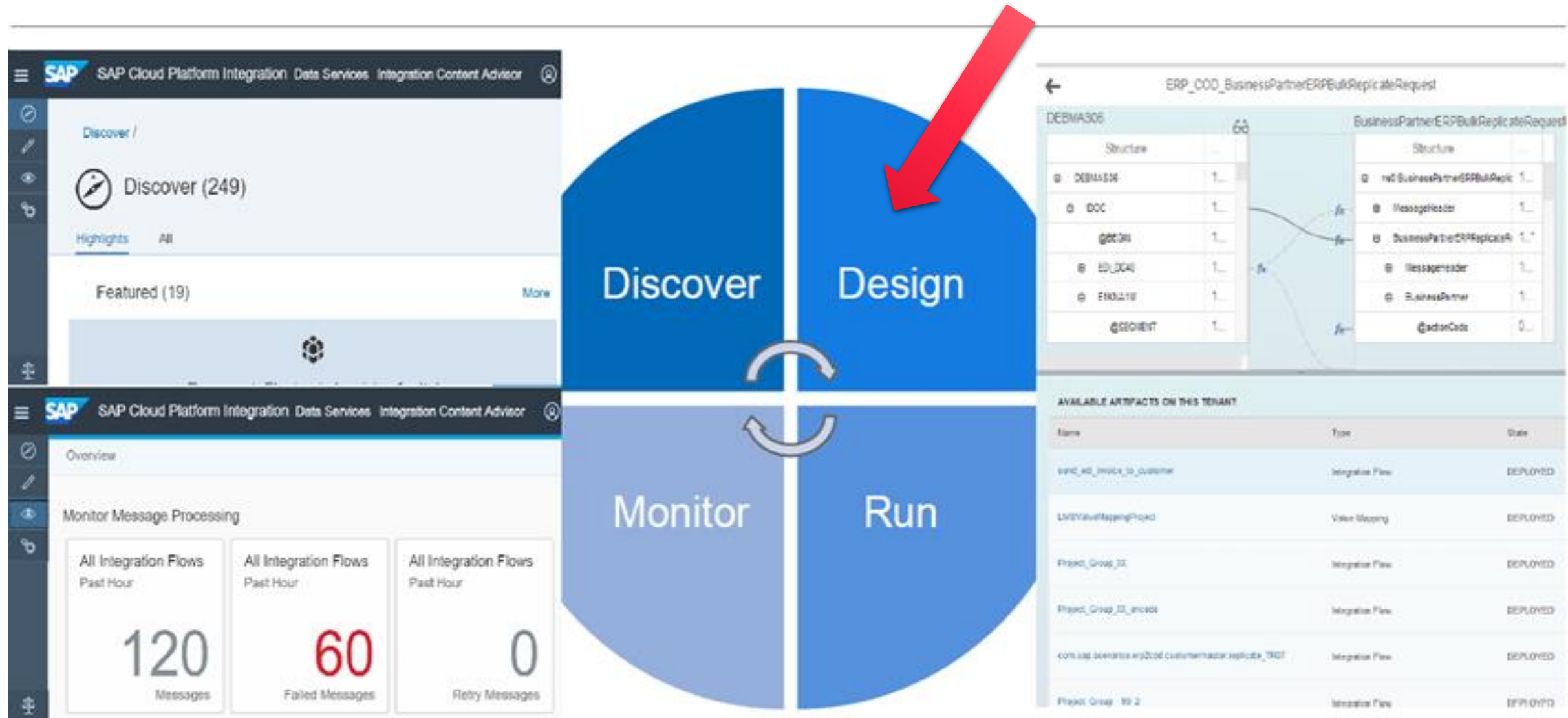
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1. Available options in CPI



2. Design – Home Page



SAP

SAP Cloud Platform Integration

Data Services

Design /

Create Import

Design

Packages (296)

Name	Mode	Version	Created By	Created Date	Description	A...
101_integration_pack	Editable	1.0	S001	Mon, 11 Sep 2017 11:54:54 GMT	Pack of various random artefacts.	
AB_POC_INT	Editable	1.0	S0015	Fri, 16 Mar 2018 10:28:08 GMT	Integration project for Proof of Concept	
AD_Connection	Editable		S00061	Fri, 12 May 2017 14:56:56 GMT	ADConnection	

3. Integration Flow

SAP

Discover

Design

Monitor

SAP Cloud Platform Integration

Design / 101_integration_pack /

101_integration_pack

Header

Overview

Artifacts (2)

Documents

Tags

Add

Delete

Actions

<input type="checkbox"/>	Name	
<input type="checkbox"/>	script_processing Same process as soap_iflmap but uses script to process the message data Created	Integration Flow
<input type="checkbox"/>	soap_iflmap Created	Integration Flow

Data Integration

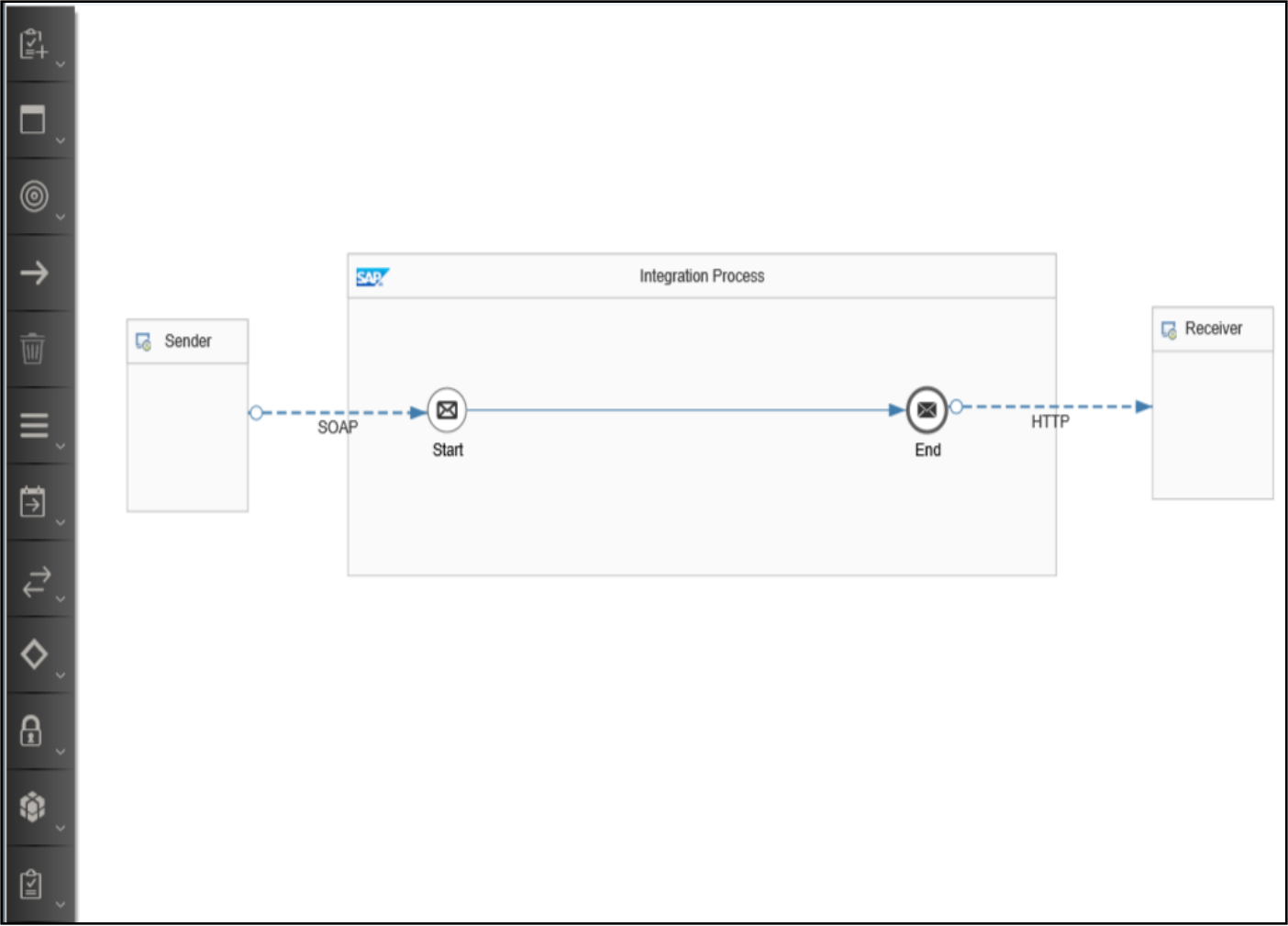
Integration Flow

OData Service

Value Mapping

4. Integration Flow build page(palettes)

Integration Flow



Few sample palettes

Participant
List of Participant elements

- Receiver
- Sender

Mapping
List of Mapping components

- Message Mapping
- Operation Mapping
- XSLT Mapping

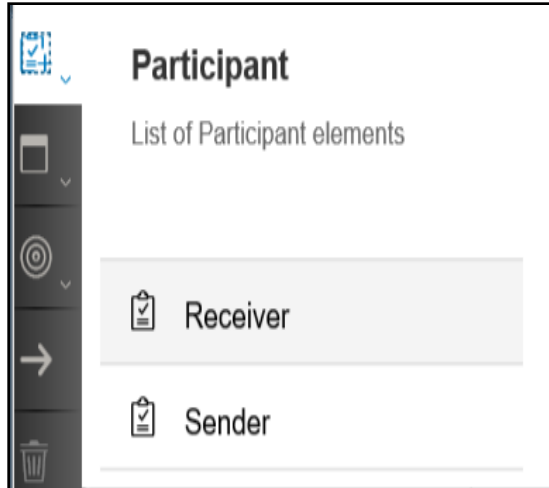
Routing
Lists of Message Routing elements

- Aggregator
- Gather
- Join
- Multicast
- Router
- Splitter

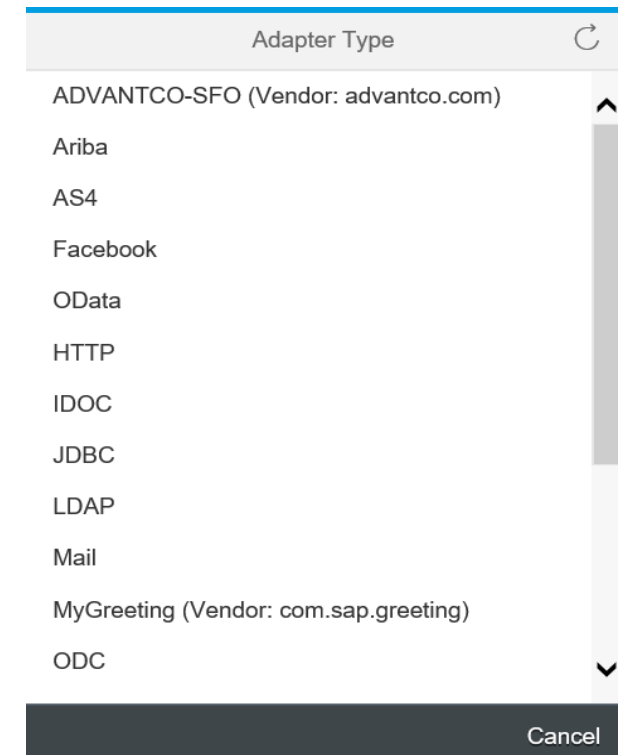
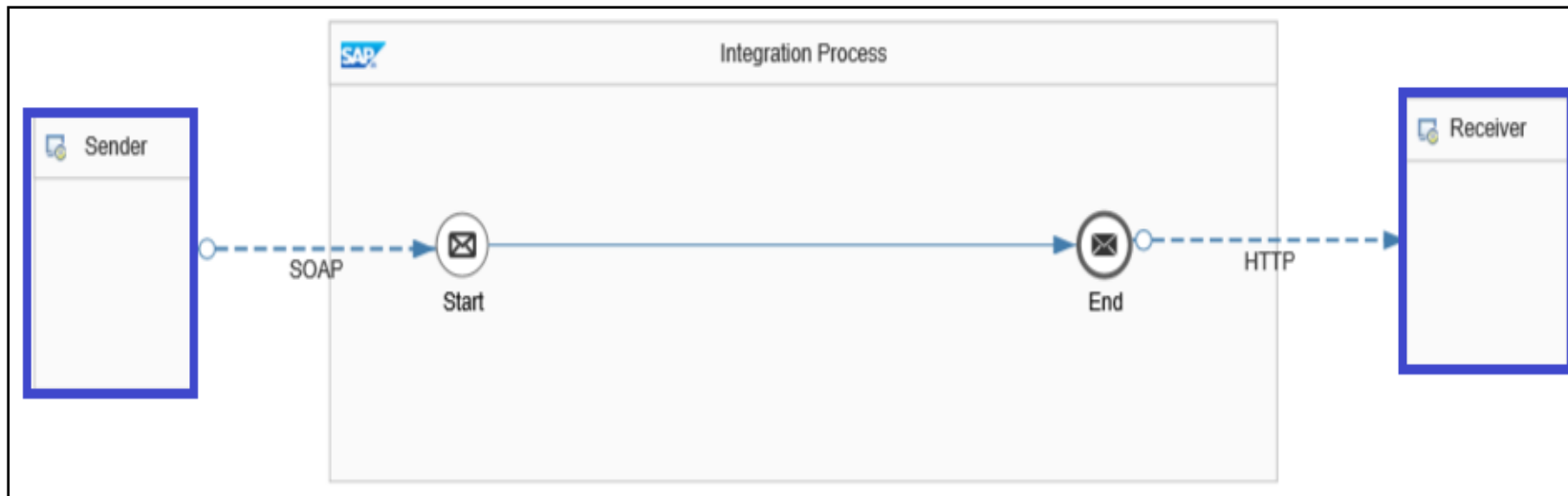
Event
List of Participant elements

- End Event
- End Message
- Error End Event
- Error Start Event
- Escalation
- Start Event
- Start Message
- Terminate Message
- Timer

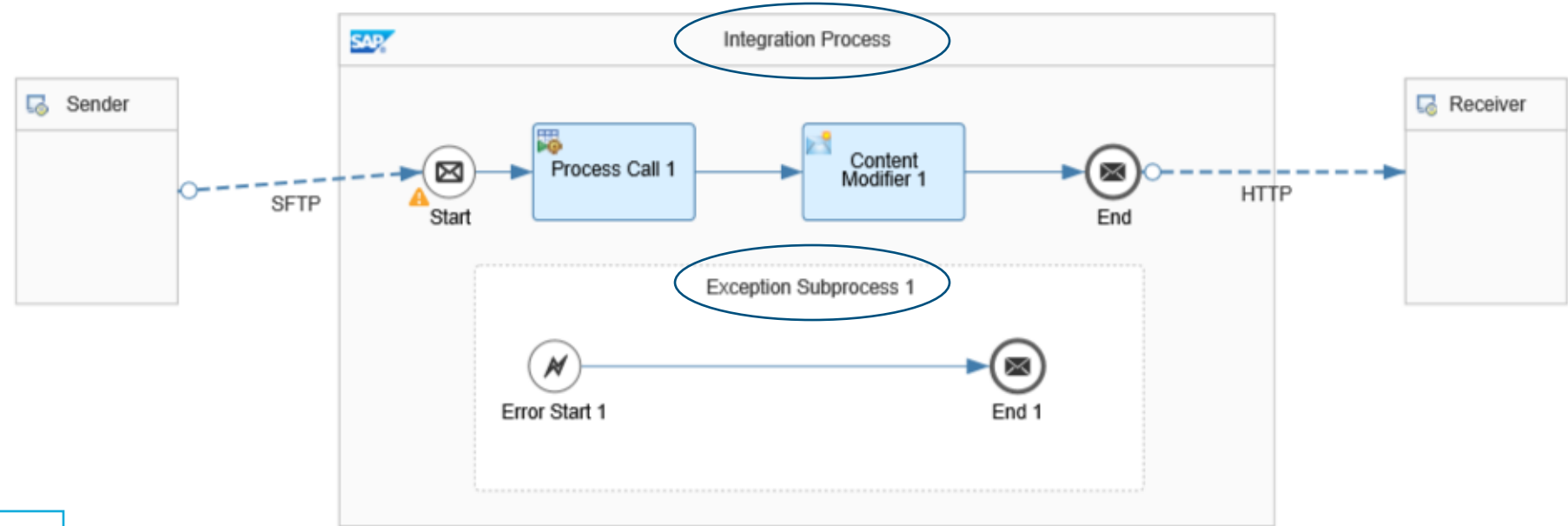
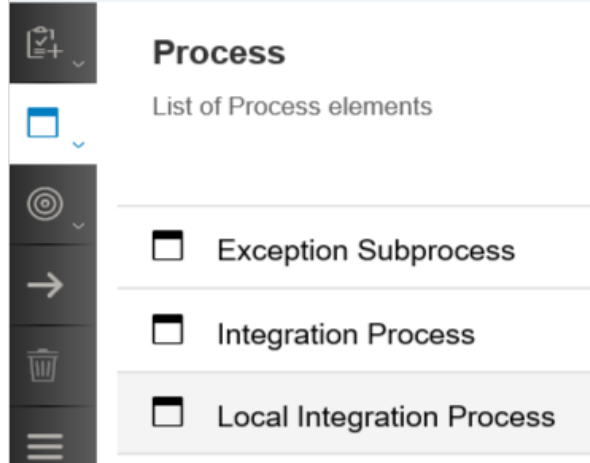
4.1 Participants and Adapters



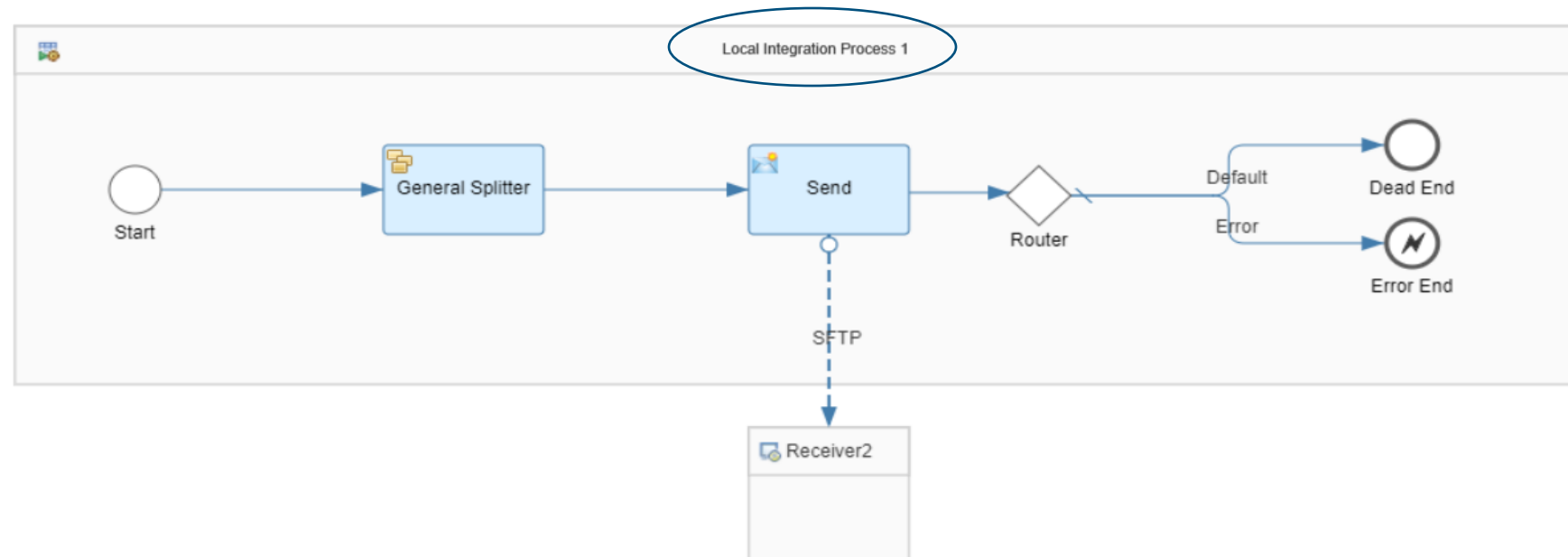
- No SLD (System Landscape Directory) available in CPI
- Sender/Receiver can be added directly from the palette
- Options to select the adapters for sender and receiver appears when we connect adapter with start, end, send events.



4.2 Process

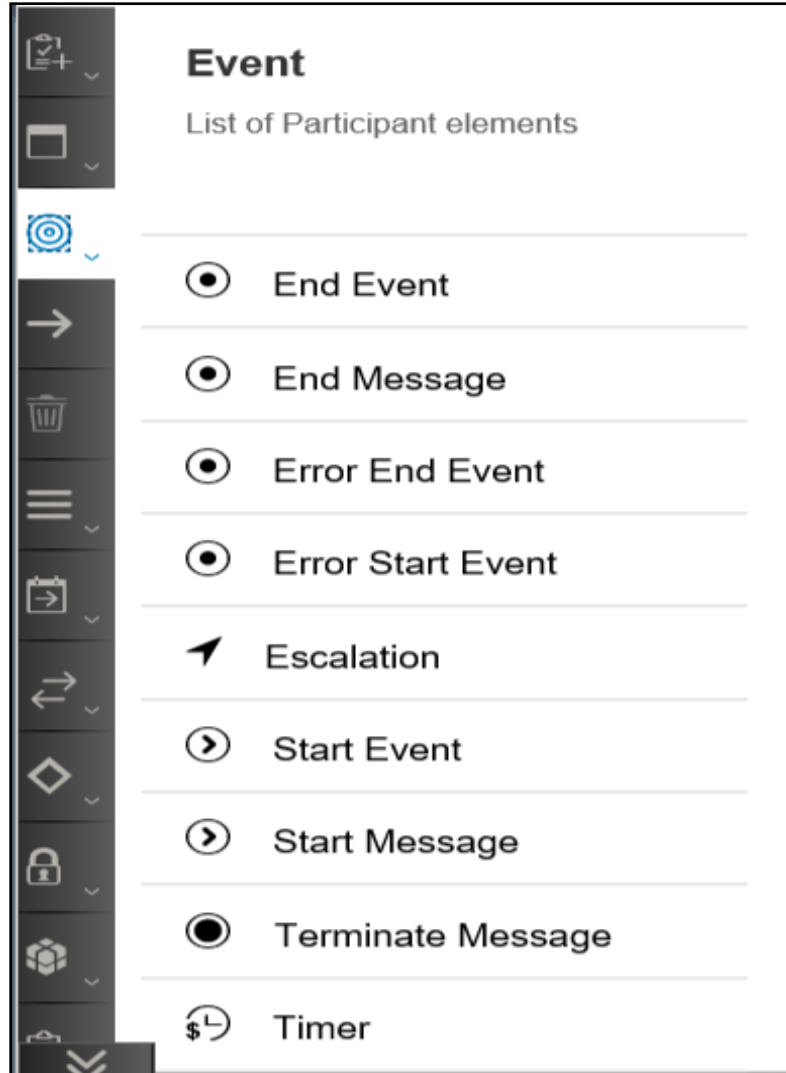


- ❑ **Exception Subprocess :-** Triggered automatically when there is exception in the Integration process. It is not connected with any of the process.
- ❑ **Local Integration Process :-** It is the sub-process for specific task and that can be called from the Integration Process using Process call.





4.3 Events



Start Message -SAP Cloud Platform Integration *receives* a message from a Sender

End Message - SAP Cloud Platform Integration *sends* a message to a Receiver.

Error Start Event and **Error End** Event- Can be used *only* within an exception sub-process.

Timer start is especially useful in scenarios where you have go and pull data from systems or have to trigger Web services at specified time/ intervals.

Terminate Message – this is useful if you want to stop further processing of a message.

Start Event – Start of Local Integration process

End Event – End of local Integration process

Escalation - The Escalation Event does not abort the integration flow processing as a whole but only throws the Escalation Event.

4.4 Mapping



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Mapping

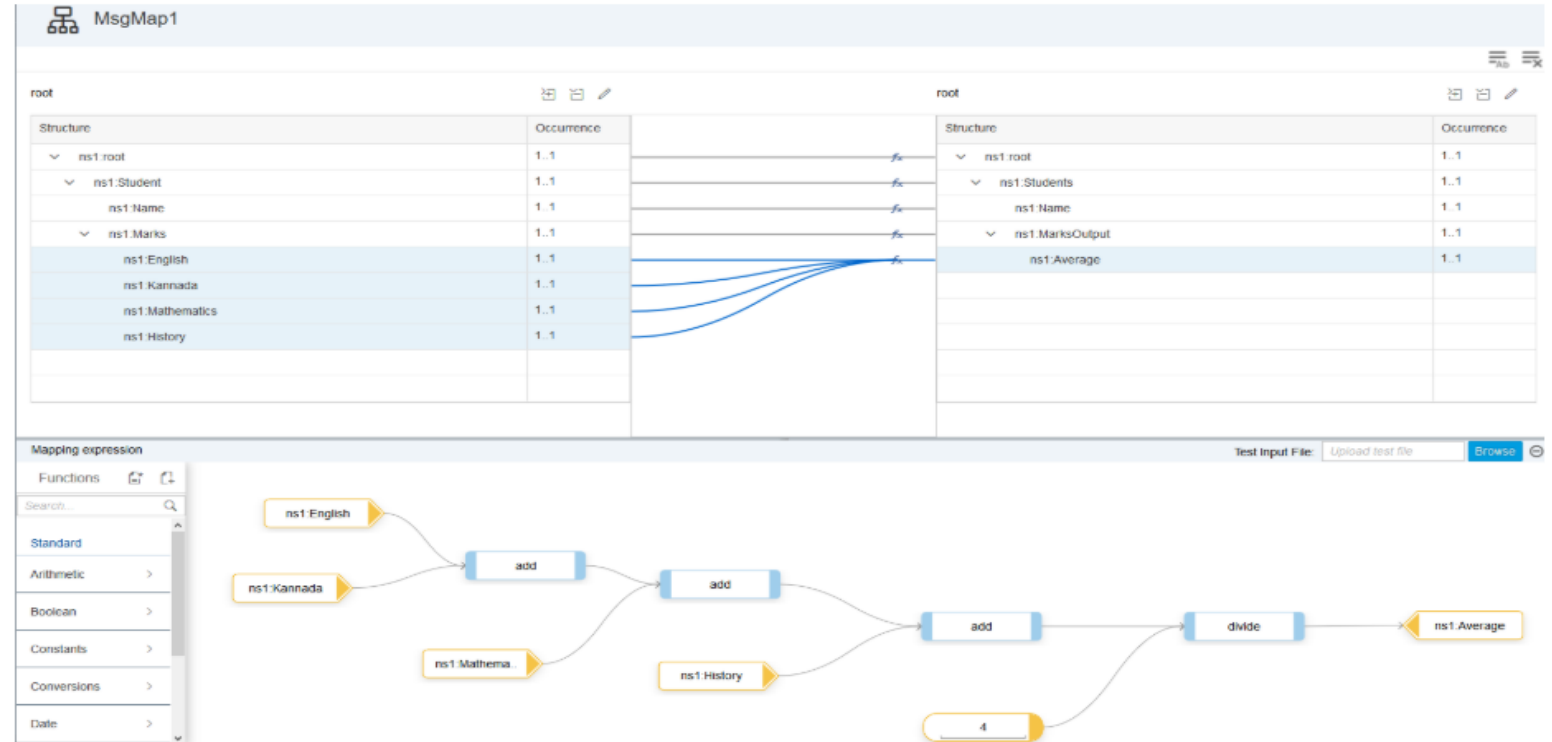
List of Mapping components

Message Mapping

Operation Mapping

XSLT Mapping

Message Mapping



XSLT Mapping

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="2.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:template match="/">
    <xsl:copy-of select="."/>
  </xsl:template>
</xsl:stylesheet>
```



4.5 Transformation

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Transformation

List of Message Transformers

✉ Content Modifier

↺ Converter

✉ Decoder

🔗 Encoder

🔎 Filter

📶 Message Digest

📄 Script

Content Modifier: You use the content modifier step to modify the content of incoming message by providing additional information in the header or body of the message.

Converters: It allows XML to JSON, JSON to XML, XML to CSV and CSV to XML conversion.

Decoder: You use this task to decode the message received over the network to retrieve original data.

Encoder: You use this task to encode messages using an encoding scheme (Base64, GZIP Compress, ZIP Compress and MIME Multipart Encode) to secure any sensitive message content during transfer over the network.

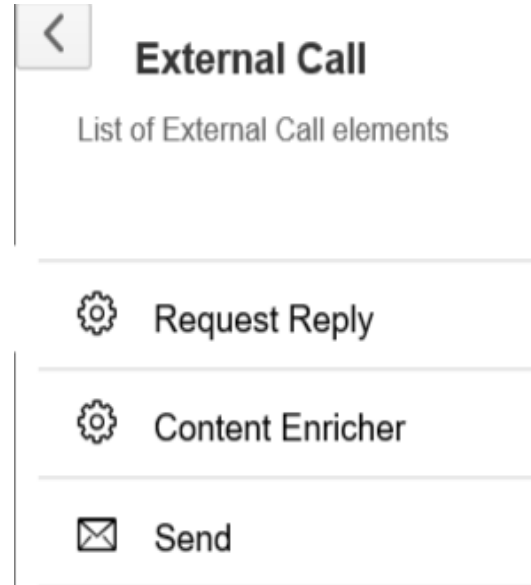
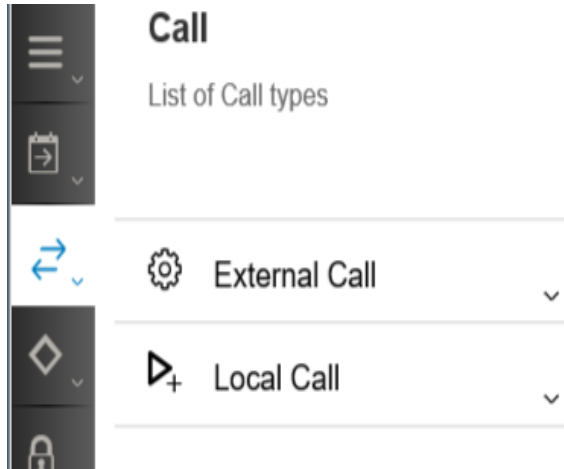
Filter: You use Filter to extract information from an incoming message. In other words, you filter out parts of the message that you do not want and extract only the data that you want.

Message Digest: It transforms a message into a canonical XML document.

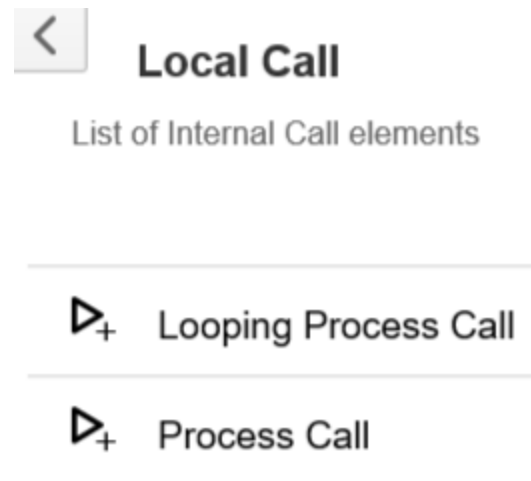
Script: You use this task to execute custom Java script or Groovy script for message processing.



4.6 Call



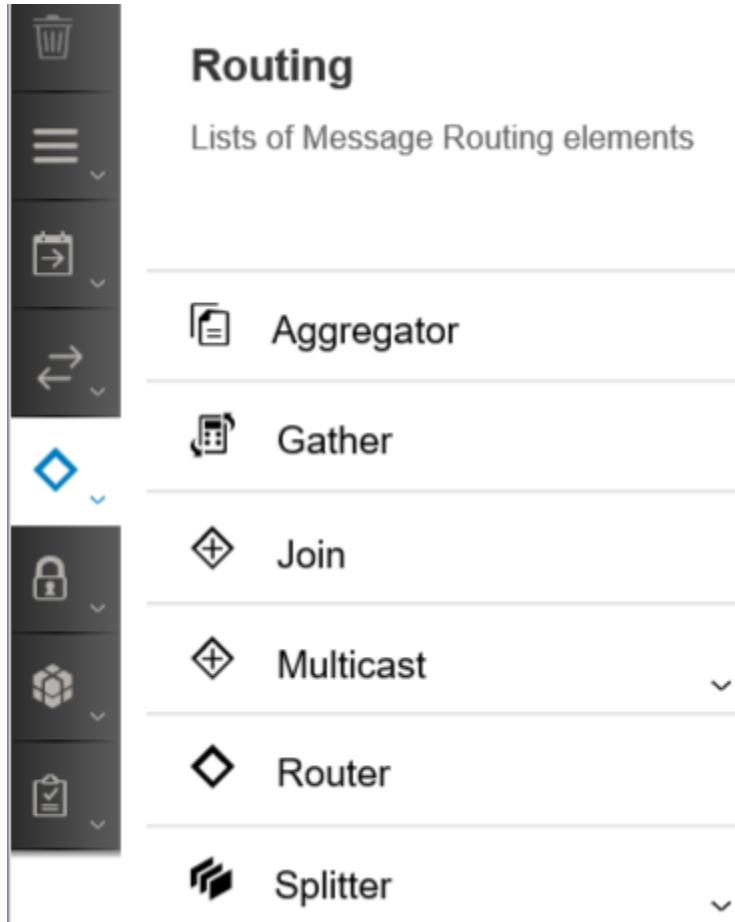
Request Reply flow step sends the request message, waits for the reply message, then processes the reply. **Content Enricher** accesses an external data source in order to augment a message with missing information. **Send** step makes a service call to a receiver system for scenarios and adapters where no reply is expected.



Looping Process Call is used to execute *local integration process* multiple times depending on some condition and maximum Numbers of allowed Iterations.

Process Call is used to execute *local integration process* once without any condition or maximum Numbers of iteration option.

4.7 Routing



Aggregator: It bundles the incoming messages; it is N:1 vice versa to Splitter, that means it is used to combine multiple incoming messages into a single message.

Gather: The Gather step enables you to merge messages from one or more than one route in an integration process.

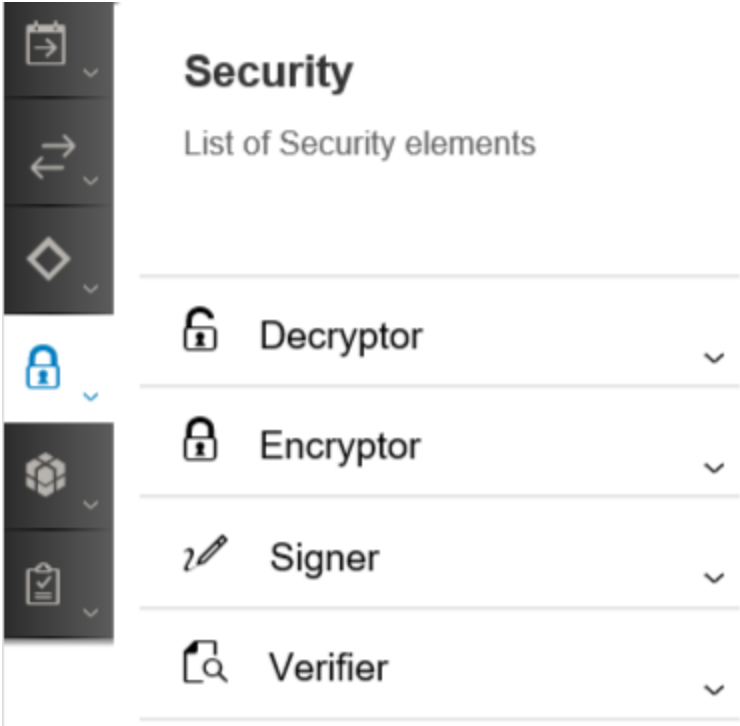
Join: Join helps to connect multiple process branches to one. Join followed by Gather can help to gather and merger messages from multiple process route.

Multicast: This process step is used to send the message to more than one receiver (flow) either parallel or sequential. This is unconditional routing.

Router: This process step is used to determine the receivers to deliver the messages. We can have routing conditions and all branches should have the same type of condition either xml or non-xml, we can make one of the branch as default.

Splitter: Break down a message into multiple individual messages.

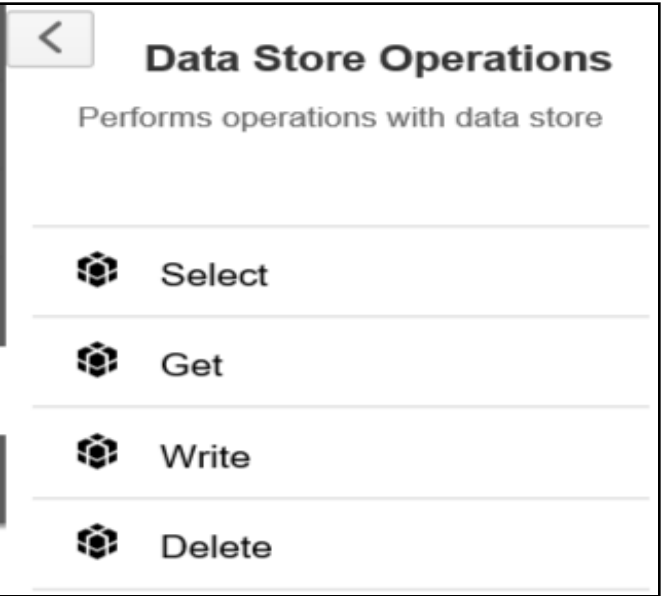
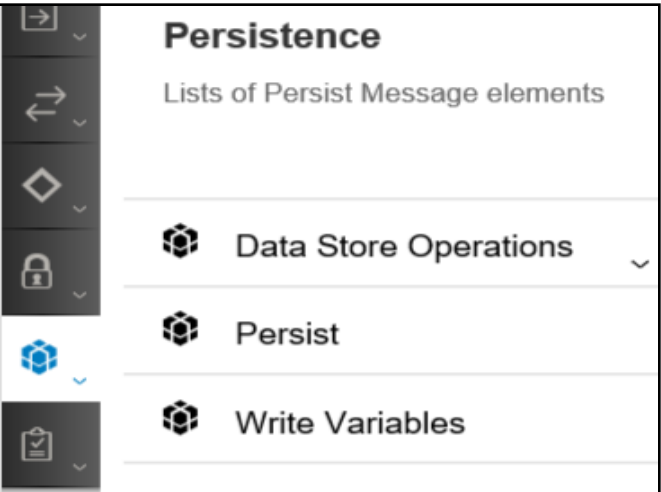
4.8 Security



- Decryptor:** CPI allows you to Decrypt the PGP and PKCS7 encrypted messages.
- Encryptor:** CPI allows you to Encrypt messages with PGP and PKCS7 keys.
- Signer:** Outgoing messages may be signed in CPI system. Receiver system can validate the sender system.
- Verifier:** Verifier step is used for check if CPI has received the message from known valid sender system.



4.9 Persistence



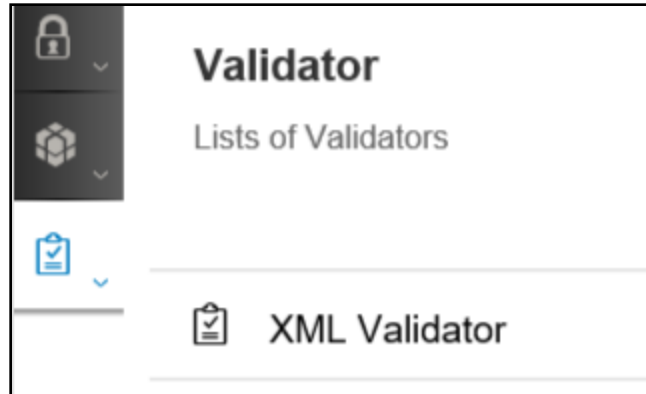
Persist –At runtime, information such as message GUID, timestamp, and payload are stored for the messages at the persistence process steps. The message storage feature is useful for auditing purposes and analyse it at a later point in time.

Write Variables - CPI allows you to temporarily persists name-value pairs.

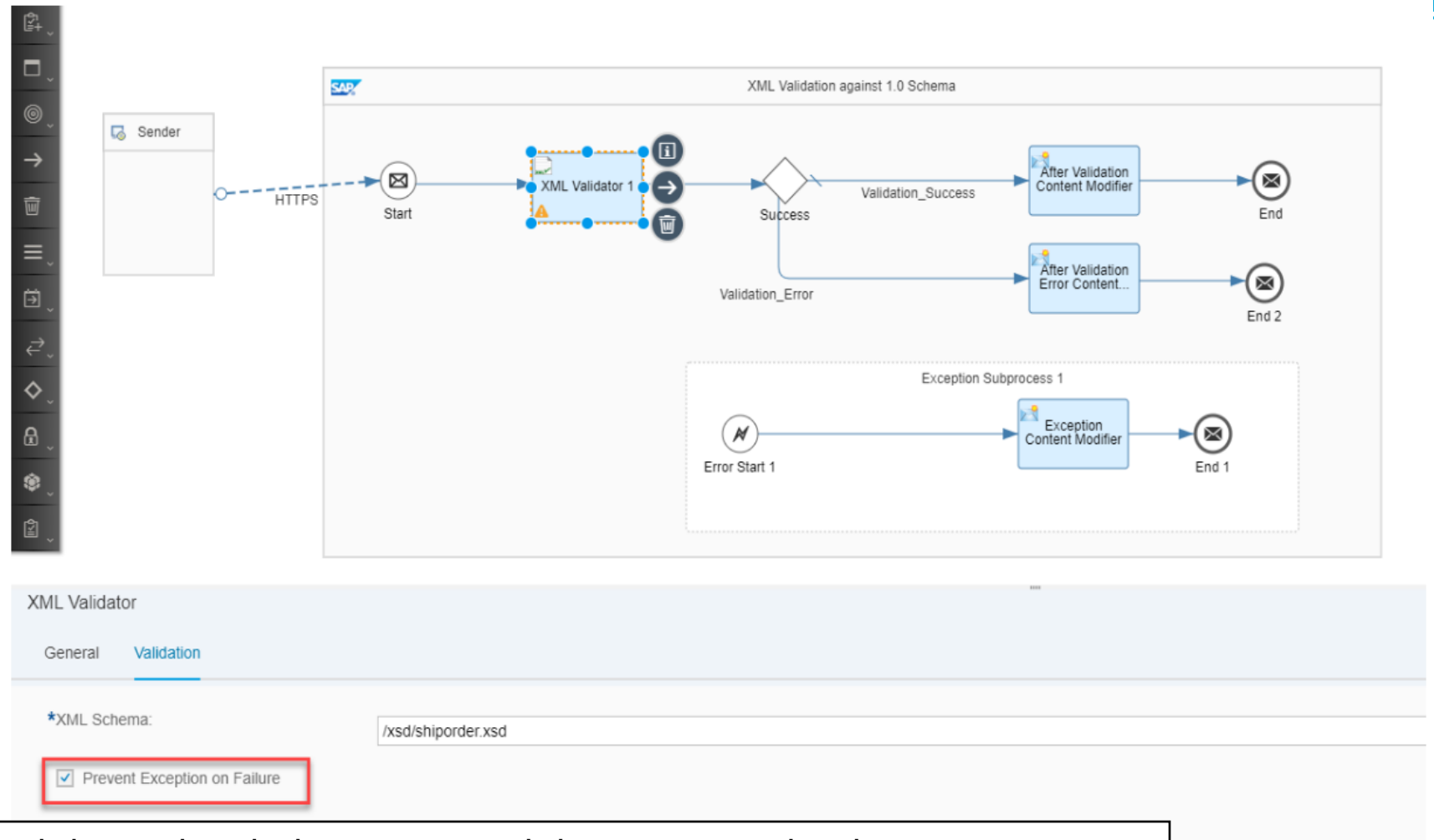
Data Store Operations - helps to store complete message in the Datastore.

Operation	Used to ...
Select	Fetch messages in bulk from the data store.
Get	Fetch a specific message from the data store.
Write	Store the messages temporarily in the data store. If you use a Write operation, you can store the messages in the data store by configuring the data store name and a unique Entry ID.
Delete	Trigger the deletion of messages in the data store.

4.10 Validator



SAP Cloud Platform Integration offers capabilities to validate the XML payload against a given XML Schema.



XML Validator

General Validation

*XML Schema: /xsd/shiporder.xsd

☒ Prevent Exception on Failure

- Following are the features of XMLValidator that helps you to validate XML payloads.
- Stop Message Processing on Validation Failure(**Uncheck** Prevent Exception on Failure)
 - Continue Message Processing During Validation Failure (**Check** Prevent Exception on Failure)



People matter, results count.

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