

Configuration Guide
Message Transformation Guidelines - IDOCFlatConvertor
October 2025
English

Message Transformation Guidelines - IDOCFlatConvertor



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1 Introduction

The IDOCFlatConvertor is the alternative created to convert IDOC files from XML to flat and vice versa. In SAP PI/PO the modules used were: IDOCFlatToXmlConvertor and IDOCXmlToFlatConvertor.

This solution is comprised by an Integration Flow, that handles the SAP S/4HANA requests to get the IDOC metadata and storing it into a Datastore to ‘cache’ the metadata, and a Groovy script that by using the metadata converts the IDOC.

The Integration Flow is triggered by a process direct, where some headers must be defined to ‘configure’ the conversion.

1.1 Headers

- **idoc_ConversionType:** This field indicates which conversion to execute. Two values are supported: **XML2Flat** and **Flat2XML**.
- **idoc_Destination***: BTP destination to be used for the RFC request (IDOCTYPE_READ_COMPLETE) to get the IDOC metadata from SAP S/4HANA ([Create RFC Destinations | SAP Help Portal](#)).
- **idoc_SAPRelease:** Input parameter for the RFC request. This field is optional.
- **idoc_APPREL:** Input parameter for the RFC request. This field is optional.
- **idoc_RenumberSegments:** This header is only relevant for Flat2XML conversions. Indicates if the parent node information from each line should be calculated. If ‘true’, the parent node information is calculated. If ‘false’, the parent node information from the file will be used. The default value is ‘false’. This field is optional.
- **idoc_TrimFields:** This header is only relevant for Flat2XML conversions. If ‘true’, the spaces from the start and end of each field are removed. Otherwise, only the end of the value is trimmed. The default value is ‘false’. This field is optional.
- **idoc_RemoveEmptyNodes:** This header is only relevant for Flat2XML conversions. If ‘true’, the empty nodes are removed from the final payload. Otherwise, they are kept. The default value is ‘true’. This field is optional.

Destination Configuration

Name: *	[REDACTED]	Additional Properties
Type:	RFC	jco.client.ashost
Description:	[REDACTED]	jco.client.client
Proxy Type:	OnPremise	jco.client.sysnr
User:	[REDACTED]	
Password:	*****	
Alias User:		
Authorization Type:		
Repository User:		
Repository Password:		
Location ID:	[REDACTED]	

*Sample of the BTP Destination to be used.

1.2 Example

1.2.1 XML2Flat

The following transformation would occur:

1. Input Payload:

```
<ORDERS05>
  <IDOC BEGIN="1">
    <EDI_DC40 SEGMENT="1">
      <TABNAM>EDI_DC40</TABNAM>
      <MANDT>800</MANDT>
      <DOCU</DOCNUM>
      <DOCREL>758</DOCREL>
      <STATUS>30</STATUS>
      <DIRECT>1</DIRECT>
      <OUTMOD>2</OUTMOD>
      <IDOCTYP>ORDERS05</IDOCTYP>
      <MESTYP>ORDERS</MESTYP>
      <STDMES>ORDERS</STDMES>
      <SNDPOR>SAPT33</SNDPOR>
      <SNDPRT>LS</SNDPRT>
      <SNDPRN>T33CLNT800</SNDPRN>
      <RCVPOR>PORT_RM</RCVPOR>
      <RCVPRT>LS</RCVPRT>
      <RCVPRN>CPI</RCVPRN>
      <CREDAT>20240731</CREDAT>
      <CRETIM>162035</CRETIM>
    </EDI_DC40>
    <E1EDK01 SEGMENT="1">
      <ACTION>000</ACTION>
      <CURCY>EUR</CURCY>
      <BSART>IIL4</BSART>
      <BELNR>P8218007</BELNR>
      <BRGEW>5</BRGEW>
      <GEWEI>KG</GEWEI>
      <ABLADE>IRGENDWO</ABLADE>
      <VSART>02</VSART>
      <VSART_BEZ>RISK/PENSION</VSART_BEZ>
    </E1EDK01>
    <E1EDK14 SEGMENT="1">
      <QUALF>008</QUALF>
      <ORGID>1000</ORGID>
    </E1EDK14>
    <E1EDK14 SEGMENT="1">
      <QUALF>007</QUALF>
      <ORGID>10</ORGID>
    </E1EDK14>
  </IDOC>
```

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    <ORGID>00</ORGID>
</E1EDK14>
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    <DATUM>20201215</DATUM>
</E1EDK03>
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<E1EDK05 SEGMENT="1"/>
<E1EDKA1 SEGMENT="1">
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    <PARTN>1460</PARTN>
    <NAME1>RECIPIENT</NAME1>
    <STRAS>1234 BT DRIVE</STRAS>
    <ORT01>CAMBRIDGE</ORT01>
    <PSTLZ>02138</PSTLZ>
    <E1EDKA3 SEGMENT="1">
        <QUALP>001</QUALP>
        <STDPN>LS_D44</STDPN>
    </E1EDKA3>
</E1EDKA1>
<E1EDKA1 SEGMENT="1">
    <PARVW>AG</PARVW>
    <PARTN>1460</PARTN>
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        <QUALP>001</QUALP>
        <STDPN>LS_D44</STDPN>
    </E1EDKA3>
</E1EDKA1>
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    <QUALF>001</QUALF>
    <BELNR>P8218007</BELNR>
    <DATUM>20201215</DATUM>
</E1EDK02>
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<E1EDK18 SEGMENT="1"/>
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<E1EDK36 SEGMENT="1"/>
<E1EDKT1 SEGMENT="1">
    <E1EDKT2 SEGMENT="1"/>
</E1EDKT1>
<E1EDP01 SEGMENT="1">
    <POSEX>1</POSEX>
    <MENGE>1</MENGE>
    <E1EDP02 SEGMENT="1"/>
    <E1CUREF SEGMENT="1"/>
    <E1ADDI1 SEGMENT="1"/>

```

```

<E1EDP03 SEGMENT="1"/>
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    <E1EDPS5 SEGMENT="1"/>
</E1EDP05>
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<E1EDPA1 SEGMENT="1">
    <E1EDPA3 SEGMENT="1"/>
</E1EDPA1>
<E1EDP19 SEGMENT="1">
    <QUALF>003</QUALF>
    <IDTNR>M-12</IDTNR>
</E1EDP19>
<E1EDPAD SEGMENT="1">
    <E1TXTH1 SEGMENT="1">
        <E1TXTP1 SEGMENT="1"/>
    </E1TXTH1>
</E1EDPAD>
<E1EDP17 SEGMENT="1"/>
<E1EDP18 SEGMENT="1"/>
<E1EDP35 SEGMENT="1"/>
<E1EDPT1 SEGMENT="1">
    <E1EDPT2 SEGMENT="1"/>
</E1EDPT1>
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    <E1EDC02 SEGMENT="1"/>
    <E1EDC03 SEGMENT="1"/>
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    <E1EDC05 SEGMENT="1"/>
    <E1EDC06 SEGMENT="1"/>
    <E1EDC07 SEGMENT="1"/>
    <E1EDCA1 SEGMENT="1"/>
    <E1EDC19 SEGMENT="1"/>
    <E1EDC17 SEGMENT="1"/>
    <E1EDC18 SEGMENT="1"/>
    <E1EDCT1 SEGMENT="1">
        <E1EDCT2 SEGMENT="1"/>
    </E1EDCT1>
</E1EDC01>
</E1EDP01>
<E1CUCFG SEGMENT="1">
    <E1CUINS SEGMENT="1"/>
    <E1CUPRT SEGMENT="1"/>
    <E1CUVAL SEGMENT="1"/>
    <E1CUBLB SEGMENT="1"/>
</E1CUCFG>
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    <E1EDL39 SEGMENT="1"/>
    <E1EDL38 SEGMENT="1"/>
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```

</E1EDL37>
<E1EDS01 SEGMENT="1"/>
</IDOC>
</ORDERS05>

```

2. Output Payload:

		ORDERS	ORDERSSAP	LS
EDI_DC40	1234655546454566566758	3012	ORDERS05	4343434
234234	LS CPI			
		20240731162035		
E2EDK01005	123465554645456656600000100000001000	EUR	BLA	BLA123
5	KG BLABLA	02BLABLA		
E2EDK14	123465554645456656600000200000002111000			
E2EDK14	12346555464545665660000030000000222210			
E2EDK14	12346555464545665660000040000000233300			
E2EDK03	12346555464545665660000050000000244420201215			
E2EDK04001	123465554645456656600000600000002			
E2EDK05001	123465554645456656600000700000002			
E2EDKA1003	123465554645456656600000800000002WE	1111	RECIPIENT	
ewfwf		wfefwe		
32323				
E2EDKA3	12346555464545665660000090000080311123232			
E2EDKA1003	123465554645456656600001000000002AG	5555	BT	
NAME				
E2EDKA3	12346555464545665660000110000100311123232			
E2EDK02	123465554645456656600001200000002444213123		20201215	
E2EDK17	123465554645456656600001300000002			
E2EDK18	123465554645456656600001400000002			
E2EDK35000	123465554645456656600001500000002			
E2EDK36000	123465554645456656600001600000002			
E2EDKT1002	123465554645456656600001700000002			
E2EDKT2001	123465554645456656600001800001703			
E2EDP01008	1234655546454566566000019000000021	1		
E2EDP02001	123465554645456656600002000001903			
E2CUREF	123465554645456656600002100001903			
E2ADDI1001	123465554645456656600002200001903			
E2EDP03	123465554645456656600002300001903			
E2EDP04001	123465554645456656600002400001903			
E2EDP05002	123465554645456656600002500001903			
E2EDPS5000	123465554645456656600002600002504			
E2EDP20001	123465554645456656600002700001903			
E2EDPA1003	123465554645456656600002800001903			
E2EDPA3	123465554645456656600002900002804			
E2EDP19002	123465554645456656600003000001903003p-70			
E2EDPAD001	123465554645456656600003100001903			
E2TXTH1001	123465554645456656600003200003104			
E2TXTP1	123465554645456656600003300003205			
E2EDP17001	123465554645456656600003400001903			
E2EDP18001	123465554645456656600003500001903			
E2EDP35000	123465554645456656600003600001903			
E2EDPT1001	123465554645456656600003700001903			
E2EDPT2001	123465554645456656600003800003704			

E2EDC01	123465554645456656600003900001903
E2EDC02	123465554645456656600004000003904
E2EDC03	123465554645456656600004100003904
E2EDC04	123465554645456656600004200003904
E2EDC05	123465554645456656600004300003904
E2EDC06000	123465554645456656600004400003904
E2EDC07000	123465554645456656600004500003904
E2EDCA1	123465554645456656600004600003904
E2EDC19	123465554645456656600004700003904
E2EDC17	123465554645456656600004800003904
E2EDC18	123465554645456656600004900003904
E2EDCT1	123465554645456656600005000003904
E2EDCT2	123465554645456656600005100005005
E2CUCFG003	123465554645456656600005200000002
E2CUINS002	123465554645456656600005300005203
E2CUPRT002	123465554645456656600005400005203
E2CUVAL002	123465554645456656600005500005203
E2CUBLB000	123465554645456656600005600005203
E2EDL37005	123465554645456656600005700000002
E2EDL39000	123465554645456656600005800005703
E2EDL38	123465554645456656600005900005703
E2EDL44004	123465554645456656600006000005703
E2EDS01	123465554645456656600006100000002

1.2.2 Flat2XML

3. Input Payload:

→ Same as the **OUTPUT** of the previous sample.

4. Output Payload:

<ORDERS05>

```

<IDOC BEGIN="1">
  <EDI_DC40 SEGMENT="1">
    <TABNAM>EDI_DC40</TABNAM>
    <MANDT>800</MANDT>
    <DOCNUM>000000000225645</DOCNUM>
    <DOCREL>758</DOCREL>
    <STATUS>30</STATUS>
    <DIRECT>1</DIRECT>
    <OUTMOD>2</OUTMOD>
    <IDOCTYP>ORDERS05</IDOCTYP>
    <MESTYP>ORDERS</MESTYP>
    <STDMES>ORDERS</STDMES>
    <SNDPOR>SAPT33</SNDPOR>
    <SNDPRT>LS</SNDPRT>
    <SNDPRN>T33CLNT800</SNDPRN>
    <RCVPOR>PORT_RM</RCVPOR>

```

```

<RCVPRT>LS</RCVPRT>
<RCVPRN>CPI</RCVPRN>
<CREDAT>20240731</CREDAT>
<CRETIM>162035</CRETIM>
</EDI_DC40>
<E1EDK01 SEGMENT="1">
  <ACTION>000</ACTION>
  <CURCY>EUR</CURCY>
  <BSART>IIL4</BSART>
  <BELNR>P8218007</BELNR>
  <BRGEW>5</BRGEW>
  <GEWEI>KG</GEWEI>
  <ABLADE>IRGENDWO</ABLADE>
  <VSART>02</VSART>
  <VSART_BEZ>RISK/PENSION</VSART_BEZ>
</E1EDK01>
<E1EDK14 SEGMENT="1">
  <QUALF>008</QUALF>
  <ORGID>1000</ORGID>
</E1EDK14>
<E1EDK14 SEGMENT="1">
  <QUALF>007</QUALF>
  <ORGID>10</ORGID>
</E1EDK14>
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  <QUALF>006</QUALF>
  <ORGID>00</ORGID>
</E1EDK14>
<E1EDK03 SEGMENT="1">
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  <DATUM>20201215</DATUM>
</E1EDK03>
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<E1EDK05 SEGMENT="1"/>
<E1EDKA1 SEGMENT="1">
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  <PARTN>1460</PARTN>
  <NAME1>RECIPIENT</NAME1>
  <STRAS>1234 BT DRIVE</STRAS>
  <ORT01>CAMBRIDGE</ORT01>
  <PSTLZ>02138</PSTLZ>
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  <QUALP>001</QUALP>
  <STDPN>LS_D44</STDPN>
</E1EDKA3>
</E1EDKA1>
<E1EDKA1 SEGMENT="1">
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  <PARTN>1460</PARTN>
  <NAME1>BT NAME</NAME1>

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</E1EDKA1>
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    <DATUM>20201215</DATUM>
</E1EDK02>
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    <E1EDKT2 SEGMENT="1"/>
</E1EDKT1>
<E1EDP01 SEGMENT="1">
    <POSEX>1</POSEX>
    <MENGE>1</MENGE>
    <E1EDP02 SEGMENT="1"/>
    <E1CUREF SEGMENT="1"/>
    <E1ADDI1 SEGMENT="1"/>
    <E1EDP03 SEGMENT="1"/>
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    <E1EDP05 SEGMENT="1">
        <E1EDPS5 SEGMENT="1"/>
    </E1EDP05>
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    <E1EDPA1 SEGMENT="1">
        <E1EDPA3 SEGMENT="1"/>
    </E1EDPA1>
    <E1EDP19 SEGMENT="1">
        <QUALF>003</QUALF>
        <IDTNR>M-12</IDTNR>
    </E1EDP19>
    <E1EDPAD SEGMENT="1">
        <E1TXTH1 SEGMENT="1">
            <E1TXTP1 SEGMENT="1"/>
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    </E1EDPAD>
    <E1EDP17 SEGMENT="1"/>
    <E1EDP18 SEGMENT="1"/>
    <E1EDP35 SEGMENT="1"/>
    <E1EDPT1 SEGMENT="1">
        <E1EDPT2 SEGMENT="1"/>
    </E1EDPT1>
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</E1EDP01>
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    <E1CUVAL SEGMENT="1"/>
    <E1CUBLB SEGMENT="1"/>
</E1CUCFG>
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</E1EDL37>
<E1EDS01 SEGMENT="1"/>
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</ORDERS05>

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