

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 (IDOC\_TYPE\_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: *	<input type="text"/>	<b>Additional Properties</b>  <input type="text" value="jco.client.ashost"/> <input type="text" value="jco.client.client"/> <input type="text" value="jco.client.sysnr"/>
Type:	<input type="text" value="RFC"/>	
Description:	<input type="text"/>	
Proxy Type:	<input type="text" value="OnPremise"/>	
User:	<input type="text"/>	
Password:	<input type="password" value="*****"/>	
Alias User:	<input type="text"/>	
Authorization Type:	<input type="text"/>	
Repository User:	<input type="text"/>	
Repository Password:	<input type="password"/>	
Location ID:	<input type="text"/>	

\*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>
      <DOCNUM>0000000000225645</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>
      <ABLAD>IRGENDWO</ABLAD>
      <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">
    <IDDAT>011</IDDAT>
    <DATUM>20201215</DATUM>
</E1EDK03>
<E1EDK04 SEGMENT="1"/>
<E1EDK05 SEGMENT="1"/>
<E1EDKA1 SEGMENT="1">
    <PARVW>WE</PARVW>
    <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>
    <NAME1>BT NAME</NAME1>
    <E1EDKA3 SEGMENT="1">
        <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"/>
<E1EDK35 SEGMENT="1"/>
<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"/>
<E1EDP04 SEGMENT="1"/>
<E1EDP05 SEGMENT="1">
    <E1EDPS5 SEGMENT="1"/>
</E1EDP05>
<E1EDP20 SEGMENT="1"/>
<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>
<E1EDC01 SEGMENT="1">
    <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>
<E1EDL37 SEGMENT="1">
    <E1EDL39 SEGMENT="1"/>
    <E1EDL38 SEGMENT="1"/>
    <E1EDL44 SEGMENT="1"/>

```

</E1EDL37>

<E1EDS01 SEGMENT="1"/>

</IDOC>

</ORDERS05>

## 2. Output Payload:

EDI_DC40	1234655546454566566758	3012	ORDERS05	ORDERS	ORDERSSAP	LS 4343434
234234	LS	CPI		20240731162035		
E2EDK01005	123465554645456656600000100000001000	EUR			BLA	BLA123
5	KG	BLABLA	02BLABLA			
E2EDK14	1234655546454566566000002000000021111000					
E2EDK14	12346555464545665660000030000000222210					
E2EDK14	12346555464545665660000040000000233300					
E2EDK03	12346555464545665660000050000000244420201215					
E2EDK04001	1234655546454566566000006000000002					
E2EDK05001	1234655546454566566000007000000002					
E2EDKA1003	123465554645456656600000800000002WE 1111			RECIPIENT		
ewfwf	wfefwe					
32323						
E2EDKA3	12346555464545665660000090000080311123232					
E2EDKA1003	123465554645456656600001000000002AG 5555			BT		
NAME						
E2EDKA3	12346555464545665660000110000100311123232					
E2EDK02	123465554645456656600001200000002444213123			20201215		
E2EDK17	1234655546454566566000013000000002					
E2EDK18	1234655546454566566000014000000002					
E2EDK35000	1234655546454566566000015000000002					
E2EDK36000	1234655546454566566000016000000002					
E2EDKT1002	1234655546454566566000017000000002					
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>
        <ABLAD>IRGENDWO</ABLAD>
        <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>
    <E1EDK14 SEGMENT="1">
        <QUALF>006</QUALF>
        <ORGID>00</ORGID>
    </E1EDK14>
    <E1EDK03 SEGMENT="1">
        <IDDAT>011</IDDAT>
        <DATUM>20201215</DATUM>
    </E1EDK03>
    <E1EDK04 SEGMENT="1"/>
    <E1EDK05 SEGMENT="1"/>
    <E1EDKA1 SEGMENT="1">
        <PARVW>WE</PARVW>
        <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>
        <NAME1>BT NAME</NAME1>

```

```

    <E1EDKA3 SEGMENT="1">
        <QUALP>001</QUALP>
        <STDPN>LS_D44</STDPN>
    </E1EDKA3>
</E1EDKA1>
<E1EDK02 SEGMENT="1">
    <QUALF>001</QUALF>
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    <DATUM>20201215</DATUM>
</E1EDK02>
<E1EDK17 SEGMENT="1"/>
<E1EDK18 SEGMENT="1"/>
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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"/>
    <E1EDP04 SEGMENT="1"/>
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    </E1EDP05>
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        <E1EDPA3 SEGMENT="1"/>
    </E1EDPA1>
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        <QUALF>003</QUALF>
        <IDTNR>M-12</IDTNR>
    </E1EDP19>
    <E1EDPAD SEGMENT="1">
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        </E1TXTH1>
    </E1EDPAD>
    <E1EDP17 SEGMENT="1"/>
    <E1EDP18 SEGMENT="1"/>
    <E1EDP35 SEGMENT="1"/>
    <E1EDPT1 SEGMENT="1">
        <E1EDPT2 SEGMENT="1"/>
    </E1EDPT1>
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```

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        <E1EDC06 SEGMENT="1"/>
        <E1EDC07 SEGMENT="1"/>
        <E1EDCA1 SEGMENT="1"/>
        <E1EDC19 SEGMENT="1"/>
        <E1EDC17 SEGMENT="1"/>
        <E1EDC18 SEGMENT="1"/>
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</E1EDP01>
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    <E1CUPRT SEGMENT="1"/>
    <E1CUVAL SEGMENT="1"/>
    <E1CUBLB SEGMENT="1"/>
</E1CUCFG>
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    <E1EDL39 SEGMENT="1"/>
    <E1EDL38 SEGMENT="1"/>
    <E1EDL44 SEGMENT="1"/>
</E1EDL37>
<E1EDS01 SEGMENT="1"/>
</IDOC>
</ORDERS05>

```