

FMXML handler

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Introduction

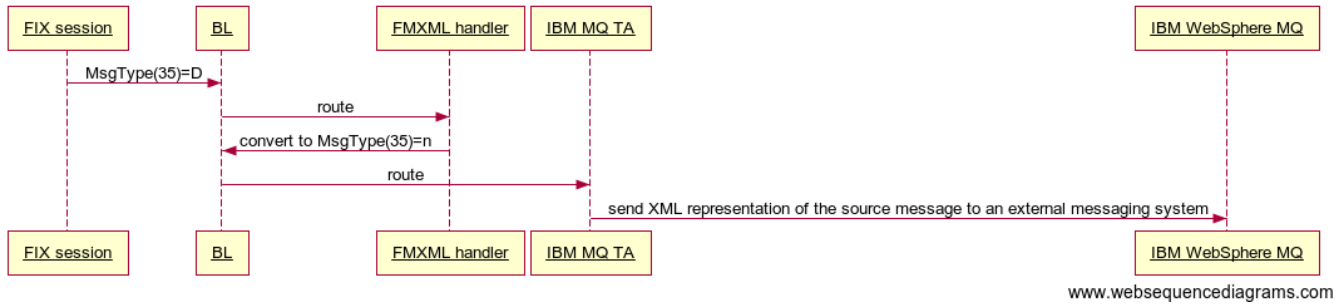
FMXML handler is a FIXEdge component used in BL configurations. Its primary task to convert any FIX message (except MsgType(35)=n) to XML representation. In case of 35=n messages FMXML handler does the reverted conversion. An example of a FIX message and the result of such conversion is given in the table below:

FIX 4.4 representation	FMXML representation
<pre> 8=FIX.4.4 9=0332 35=D 49=FTRDRETD0 56=IDEALRETD0 43=N 52=20131118-10:21:56 97=N 115=NFSC 2007=e6a85d48-81df-40c3-a54c-23b2aa85191b: RETAILEQUITY 21=2 22=1 48=0456BC5L1 54=1 38=1000 40=1 44=0 59=1 1=Account10 2002=CH1 2005=12345 2000=Act10Name 2001=N 2003=C1TD 11=e6a85d48-81df-40c3-a54c-23b2aa85191b 60=20131118-05:21:46 2008=G12345 2011=Rep1 </pre>	<pre> <FIXMessage> <f8>FIX.4.4</f8> <f35>D</f35> <f49>FTRDRETD0</f49> <f56>IDEALRETD0</f56> <f43>N</f43> <f52>20131118-10:21:56</f52> <f97>N</f97> <f115>NFSC</f115> <f2007>e6a85d48-81df-40c3-a54c-23b2aa85191b: RETAILEQUITY</f2007> <f21>2</f21> <f22>1</f22> <f48>0456BC5L1</f48> <f54>1</f54> <f38>1000</f38> <f40>1</f40> <f44>0</f44> <f59>1</f59> <f1>Account10</f1> <f2002>CH1</f2002> <f2005>12345</f2005> <f2000>Act10Name</f2000> <f2001>N</f2001> <f2003>C1TD</f2003> <f11>e6a85d48-81df-40c3-a54c-23b2aa85191b</f11> <f60>20131118-05:21:46</f60> <f2008>G12345</f2008> <f2011>Rep1</f2011> </FIXMessage> </pre>

Typical use case

Here is a sequence diagram for a typical FMXML's use case.

Typical FMXML use case



There are three main components in it:

- FIX session: FIXEdge receives FIX messages from it (say FIX messages with 35=D)
- FMXML handler: FIXEdge converts source messages to XML and wrap them into 35=n messages.
- IBM MQ Transport adapter: FIXEdge sends XML data wrapped into 35=n messages to an external messaging system (IBM WebSphere in this case).

FMXML handler specification

FMXML handler does the following steps on FIX messages:

- If there is 35=n message in the input of the handler then FMXML to FIX transformation takes place.
- In case of other MsgType messages in the input of the handler FIX to FMXML transformation takes place.
- Standard FIX tags like CheckSum(10), BodyLength(9), MsgSeqNum(34) are ignored during transformations.

FMXML format specification

```
<FIXMessage>
  <!-- FIX tags -->
  <f[tag1]>value1</f[tag1]>
  <f[tag2]>value2</f[tag2]>
  <!-- FIX repeating group -->
  <g[tag3] v="value3">
    <e>
      <f[tag4]>value4</f[tag4]>
    </e>
    <e>
      <f[tag5]>value5</f[tag5]>
    </e>
  </g[tag3]>
</FIXMessage>
```

Further XML message transformations

It is not necessary that external system can process XML messages in the format FMXML Handler produces. One may use [XSLT transformations](#) to transform FMXML output to any XML schema.

Date/Time conversions

By default FMXML handler does not change values of FIX tags during transformations. However there are differences between Date/Time data representation in FIX and in XML. See the table below for further details.

	FIX	XML
UTCimestamp	YYYYMMDD-HH:MM:SS YYYYMMDD-HH:MM:SS. sss	YYYY-MM-DDTHH:MM:SS YYYY-MM-DDTHH:MM:SS.sss
UTCDateOnly	YYYYMMDD	YYYY-MM-DD
LocalMktDate	YYYYMMDD	YYYY-MM-DD

Use the ConvertDateTime = "true" attribute to convert date/time values properly. See the example of BL rule:

```
<DllHandlers>
  <Handler Name="FMXMLHandler"
    Description="FMXML Handler"
    DllName="bin/FMXMLHandler-vc10-MD-x64.dll"
    VerifyHandlersVersion="true"
    ProcessorsCount="2" />
</DllHandlers>

<Rule>
  <Source>
    <Client Name="SplitterTA" />
  </Source>
  <Condition>
    <MatchField Field="35" Value="n" />
  </Condition>
  <Action>
    <Script Language="XSLT" Field="213" LengthField="212" FileName="AE.xslt"/>
    <HandlerAction Name="FMXMLHandler" ConvertDateTime = "true"/>
    <Send>
      <FixSession/>
    </Send>
  </Action>
</Rule>
```