

CME/NYMEX Trade Capture Solution: Workflow example

Workflow description:

1. FIXEdge connects to CME on start, sends User Request - Logon FIXML message and maintains connection to CME ClearPort.
2. CME ClearPort responses with User Response - Logon Acknowledgment message.
3. Client application connects to FIXEdge via TIB, MQ or any other middleware.
4. FIXEdge sends Trade Capture Report Request - Subscribe (either with or without filters) FIXML message to CME.
5. CME responds with Trade Capture Report Request Ack FIXML message.
6. FIXEdge sends Trade Capture Report Request - Poll FIXML messages to retrieve Trade Captures.
7. CME responds with either Trade Capture Report FIXML messages or empty Batch FIXML messages. Trade Capture Report FIXML messages are converted to FIX, then stored in the database and passed back to client application.
8. In case CME ClearPort session expires, FIXEdge sends User Request - Logoff FIXML message and after received User Response - Logoff Acknowledgment message new session with CME will be established.
9. At the end of the day FIXEdge closes connection with CME ClearPort by sending User Request - Logoff FIXML message. CME responds with User Response - Logoff Acknowledgment message.

Example of CME ClearPort FIXML messages:

User Request (Logon) from client application:

```
<FIXML v="4.4" s="20040109" r="20030618">
<UserReq UserReqID="@REQID@" UserReqTyp="1" Username="Username" Password="Password"/>
</FIXML>
```

User Response (Logon Ack) from CME:

```
<FIXML v="4.4" s="20040109" r="20030618">
<UserRsp UserReqID="@REQID001@" Username="Username" UserStat="1">
<Hdr SID="NYMEX" SSub="utbapi" />
</UserRsp>
</FIXML>
```

Trade Capture Report Request (Subscription) for all data from client application:

```
<FIXML v="4.4" s="20040109" r="20030618">
<TrdCaptRptReq ReqID="@REQID@" ReqTyp="0" SubReqTyp="1">
<TrdCapDt LastUpdateTm="2009-07-06T17:00:00.000-05:00"/>
</TrdCaptRptReq>
</FIXML>
```

Trade Capture Report Request (Subscription) with filters from client application:

```
<FIXML v="4.4" s="20040109" r="20030618">
<TrdCaptRptReq ReqID="@REQID@" ReqTyp="1" SubReqTyp="1">
<TrdCapDt LastUpdateTm="2009-07-06T17:00:00.000-05:00"/>
<Instrmt ID="NN"/>
</TrdCaptRptReq>
</FIXML>
```

Trade Capture Report Request Ack from CME:

```
<FIXML v="4.4" s="20040109" r="20030618">
<TrdCaptRptReqAck ReqID="@REQID@" ReqTyp="0" SubReqTyp="1" ReqRslt="0" ReqStat="1" Txt="Sign On">
<Hdr SID="NYMEX" SSub="utbapi" />
<Instrmt />
</TrdCaptRptReqAck>
</FIXML>
```

Trade Capture Report Request (Subscription Polling) from client application:

```
<FIXML v="4.4" s="20040109" r="20030618">
<TrdCaptRptReq ReqID="@REQID@" ReqTyp="3" SubReqTyp="1"/>
</FIXML>
```

Trade Capture Report from CME:

```
<FIXML v="4.4" s="20040109" r="20030618">
<Batch>
<TrdCaptRpt ExecID="29BJ" TrdID="2929772" LastPx="4.340" TxnTm="2009-07-09T09:26:23" TrdDt="2009-07-09"
BizDt="2009-07-09" TransTyp="0" PrevlyRpted="N" MLEGRptTyp="1" ReqID="@REQID005@" QtyTyp="1"
LastQty="4">
<Hdr SID="NYMEX" SSub="utbapi" />
<Instrmt ID="NN" Sym="NNF10" Desc="HENRYHSWAP-Jan10" SecTyp="FUT" MMY="201001" Exch="NYMEX"
Mult="2500" CFI="FXXXX" SubTyp="F-EFS" />
<RptSide Side="1" OrdID="214629" InptSrc="CPC" Ccy="USD">
  <Pty R="12" ID="test_pty1">
    <Sub Typ="27" ID="test_Sub1" />
    <Sub Typ="9" ID="test_Sub2"/>
  </Pty>
  <Pty R="1" ID="test_pty2">
    <Sub Typ="5" ID="test_Sub3" />
  </Pty>
  <Pty R="37" ID="test_pty3" />
  <Pty R="36" ID="test_pty4">
    <Sub Typ="9" ID="test_Sub4" />
  </Pty>
  <Pty R="7" ID="test_pty5">
    <Sub Typ="5" ID="test_Sub5" />
  </Pty>
  <Alloc IndAllocID="425877287" Qty="4">
    <Pty R="24" ID="test_pty6">
      <Sub Typ="26" ID="test_Sub6" />
    </Pty>
    <Pty R="4" ID="test_pty7" />
    <Pty R="1" ID="test_pty8" />
  </Alloc>
</RptSide>
</TrdCaptRpt>
</Batch>
</FIXML>
```

Empty Batch from CME:

```
<FIXML v="4.4" s="20040109" r="20030618">
<Batch>
<Hdr SID="NYMEX" SSub="utbapi" />
</Batch>
</FIXML>
```

User Request (Logoff) from client application:

```
<FIXML v="4.4" s="20040109" r="20030618">
<UserReq UserReqID="@REQID001@" UserReqTyp="2" Username="Username" />
</FIXML>
```

User Response (Logoff Ack) from CME:

```
<FIXML v="4.4" s="20040109" r="20030618">
<UserRsp UserReqID="@REQID001@" Username="Username" UserStat="2">
<Hdr SID="NYMEX" SSub="utbapi" />
</UserRsp>
</FIXML>
```