

Jakhar, Ashwini

From: Erick.Yiu@thomsonreuters.com
Sent: Wednesday, August 01, 2018 1:35 PM
To: Jakhar, Ashwini; ryan_henning@freddimac.com; Bojji, Ananda K
Cc: hank.blackburn@thomsonreuters.com; Paul.Linko@thomsonreuters.com; Erick.Yiu@thomsonreuters.com; Erick.Yiu@thomsonreuters.com
Subject: RE: Ripple To functionality / JSFC 356E3 -- Can someone please help us to resolve this production issue ASAP

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ash/Ananda, so my support team and product manager advised the best way to have your API coding questions answered in regards to TR products is to utilize the developers portal: <https://developers.thomsonreuters.com/>. It is free to register and you can post your question and get feedback direct from our developers. I suggest you post your java code as well as return code which captures of the ripple statement. Please let me know if you have any questions.

Regards,
Erick

From: Yiu, Erick (Financial & Risk)
Sent: Wednesday, August 01, 2018 11:23 AM
To: Jakhar, Ashwini; ryan_henning@freddimac.com; Bojji, Ananda K
Cc: Blackburn, Hank (Financial & Risk); Linko, Paul (Financial & Risk); Yiu, Erick (Financial & Risk)
Subject: RE: Ripple To functionality / JSFC 356E3 -- Can someone please help us to resolve this production issue ASAP

Hi Ash, I sent your code along with return screens (ripple msg) to our support team to further investigate. I provided Ryan's contact info a reference. Just fyi, below is exactly what I requested of our support team. I will let you know as soon as I have an update.

"I am attaching code that client provided me. It appears they are using java. They are trying to pull BID (fid 22) and ASK (fid 25) example RIC **USDSB3L5Y=SX** but it returns ripple (see attached PNG file) value BID_1 (fid 23) and ASK_1 (fid 26). On initial email I also provided example when their code did work but only if there were not multiple BID and ASK fields."
"

Regards,
Erick

From: Jakhar, Ashwini [mailto:ashwini_jakhar@freddimac.com]
Sent: Wednesday, August 01, 2018 10:38 AM
To: Yiu, Erick (Financial & Risk); ryan_henning@freddimac.com; Bojji, Ananda K
Cc: Blackburn, Hank (Financial & Risk); Linko, Paul (Financial & Risk)
Subject: RE: Ripple To functionality / JSFC 356E3 -- Can someone please help us to resolve this production issue ASAP

Please find attached sample code.

```
USDSB3L5Y=SX Quote  USDSB3L5Y=SX
X_CURRENCY      (-11) : USD
X_RIC_NAME      (-1) : USDSB3L5Y=SX
PROD_PERM       (1) : +3774
RDNDISPLAY      (2) : 152
DSPLY_NAME      (3) : 5YR TSY
RDN_EXCHID      (4) :
TRDPRC_1        (6) : +0
NETCHNG_1       (11) : +0.035
HIGH_1          (12) : +2.995
LOW_1           (13) : +2.945
CURRENCY         (15) : USD
TRADE_DATE      (16) :
TRDTIM_1        (18) :
OPEN_PRC        (19) : +2.955
HST_CLOSE       (21) : +2.955
BID             (22) : +2.990
BID_1           (23) : +2.992
BID_2           (24) : +2.990
ASK             (25) : +3.030
ASK_1           (26) : +3.032
ASK_2           (27) : +3.030
NEWS            (28) :
NEWS_TIME       (29) :
ACVOL_1         (32) : +0
TRD_UNITS       (53) : 3DP
PCTCHNG         (56) : +0
MATUR_DATE      (68) :
COUPN_RATE      (69) : +0
NUM_MOVES       (77) : +0
OFFCL_CODE      (78) :
```

Output from Sample code.

workbench - [C:\Oracle\workspace\fe_apps\workbench] - [java_farm_core_v1.2_main] - C:\Oracle\workspace\fe_apps\java_farm_c

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

fe_apps > java_farm_core_v1.2 > src > main > java > com > freddiemac > fir > liveupdate > RealT

RealTimeUpdate.java x RealTimeUpdateTest.java x Thread.java x RTRecord.class x JavaSapiSubscr

268 super();
 269
 270 m_COBValue = Double.valueOf(dCOBValue);
 271 m_InitialValue = Double.valueOf(dCOBValue);
 272
 273 // Default so we start with stale values

RealTimeUpdateTest > RealTimeUpdateTest()

Run RealTimeUpdateTest

```

RipplesTo: BID_1
Value: "+2.992"Ask = Field ASK:
Fid: 25
Name: "ASK"
Length: 17
Type: 4
IsRippledTo?: YES
RipplesTo: ASK_1
Value: "+3.032"
processRecord Update :
Bid = Field BID:
Fid: 22
Name: "BID"
Length: 17
Type: 4
IsRippledTo?: YES
RipplesTo: BID_1
Value: "+2.992"Ask = Field ASK:
Fid: 25
Name: "ASK"
Length: 17
Type: 4
IsRippledTo?: YES
RipplesTo: ASK_1
Value: "+3.032"
processRecord Update :
Bid = Field BID:
Fid: 22
Name: "BID"
Length: 17
Type: 4
IsRippledTo?: YES
RipplesTo: BID_1
Value: "+2.992"Ask = Field ASK:
Fid: 25
Name: "ASK"
Length: 17
Type: 4
IsRippledTo?: YES

```

favorites Web

Thanks
Ashwini Jakhar

From: Erick.Yiu@thomsonreuters.com <Erick.Yiu@thomsonreuters.com>
Sent: Tuesday, July 31, 2018 3:38 PM
To: Jakhar, Ashwini <ashwini_jakhar@freddiemac.com>; ryan_henning@freddimac.com; Bojji, Ananda K <ananda_bojji@freddiemac.com>
Cc: hank.blackburn@thomsonreuters.com; Paul.Linko@thomsonreuters.com; Erick.Yiu@thomsonreuters.com
Subject: RE: Ripple To functionality / JSFC 356E3 -- Can someone please help us to resolve this production issue ASAP

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Ryan,

Please respond here with your sample code. In the meantime, I will submit a ticket on your behalf since DJ and Elvis are out of office. So just to recap, the API issue of ripple is only affecting IRS where elektron have multiple bid/ask fields (ie USDSB3L5Y= SX) but works fine in case where only single big/ask (ie USDSB3L2Y= SX).. The Ripple issue also affects the SEC_ACT_# and PRIMACT_# fields.

Regards,
Erick

From: Linko, Paul (Financial & Risk)
Sent: Tuesday, July 31, 2018 3:15 PM
To: Yiu, Erick (Financial & Risk)
Cc: Blackburn, Hank (Financial & Risk)
Subject: FW: Ripple To functionality / JSFC 356E3 -- Can someone please help us to resolve this production issue ASAP
Importance: High

Just got this from Freddie. This is urgent.

From: Jakhar, Ashwini [mailto:ashwini_jakhar@freddiemac.com]
Sent: Tuesday, July 31, 2018 3:14 PM
To: Perera, Dhanika J; Bojji, Ananda K; Henning, Ryan; Brown, Elvis; Arnold, Ken (Financial & Risk); Brown, Elvis G. (Financial & Risk); Phan, Chinh
Cc: Linko, Paul (Financial & Risk); Blackburn, Hank (Financial & Risk); Scott, Jared S. (Financial & Risk)
Subject: RE: Ripple To functionality / JSFC 356E3 -- Can someone please help us to resolve this production issue ASAP
Importance: High

Team,

Any update on this issue, can someone please help us to resolve this production issue ASAP.

Thanks
Ashwini Jakhar

From: Perera, Dhanika J
Sent: Tuesday, July 31, 2018 12:07 PM
To: Bojji, Ananda K <ananda_bojji@freddiemac.com>; Jakhar, Ashwini <ashwini_jakhar@freddiemac.com>; Henning, Ryan <Ryan_Henning@freddiemac.com>; Brown, Elvis <Elvis_Brown@freddiemac.com>; Ken.arnold@tr.com;

Elvis.Brown@thomsonreuters.com; Phan, Chinh <chinh_phan@freddiemac.com>

Cc: Paul.Linko@thomsonreuters.com; hank.blackburn@thomsonreuters.com; jared.s.scott@thomsonreuters.com

Subject: RE: Ripple To functionality / JSFC 356E3

+++ Paul Linko, Hank and Jared.

TR Team,

Please respond to Andy's question.

Thanks!

DJ Perera
Systems Admin Tech Lead
Enterprise Service Operations
IT
571-382-3603

From: Bojji, Ananda K

Sent: Tuesday, July 31, 2018 11:58 AM

To: Jakhar, Ashwini <ashwini_jakhar@freddiemac.com>; Henning, Ryan <Ryan_Henning@freddiemac.com>; Perera, Dhanika J <DJ_Perera@freddiemac.com>; Brown, Elvis <Elvis_Brown@freddiemac.com>; Ken.arnold@tr.com; Elvis.Brown@thomsonreuters.com; Phan, Chinh <chinh_phan@freddiemac.com>

Subject: Ripple To functionality / JSFC 356E3

Reuters team,

We would like to better understand how Reuters makes the decision to "RippleTo" the next field. Some RICS (2 Year Swap) have just one entry for BID and other RIC (5 year Swap) has multiple entries and it ripples thru to the next field.

How can we turn this off ?

We attempted explicit programmatic change on our end to set it to false but it seems to make no difference. This setting seems to be controlled by Reuters library.

Thanks

From: Jakhar, Ashwini

Sent: Tuesday, July 31, 2018 11:52 AM

To: Bojji, Ananda K <ananda_bojji@freddiemac.com>; Henning, Ryan <Ryan_Henning@freddiemac.com>

Subject: RE: Looks Like its not straight forward to turn off Ripple

Only one bid (22)and ask(25)

Field Name	Value
X_CURRENCY	(-11) : USD
X_RIC_NAME	(-1) : USDSB3L2Y=SX
PROD_PERM	(1) : +3774
RDNDISPLAY	(2) : 152
DSPLY_NAME	(3) : 2YR TSY
RDN_EXCHID	(4) :
TRDPRC_1	(6) : +0
NETCHNG_1	(11) : +0.007
HIGH_1	(12) : +2.872
LOW_1	(13) : +2.833
CURRENCY	(15) : USD
TRADE_DATE	(16) :
TRDTIM_1	(18) :
OPEN_PRC	(19) : +2.857
HST_CLOSE	(21) : +2.857
BID	(22) : +2.864
ASK	(25) : +2.904
NEWS	(28) :
NEWS_TIME	(29) :
ACVOL_1	(32) : +0
TRD_UNITS	(53) : 3DP
PCTCHNG	(56) : +0
MATUR_DATE	(68) :
COUPN_RATE	(69) : +0
NUM_MOVES	(77) : +0
OFFCL_CODE	(78) :
HSTCLSDATE	(79) : 30 JUL 2018
YRHIGH	(90) : +0
YRLOW	(91) : +0
LIFE_HIGH	(94) : +0
LIFE_LOW	(95) : +0
COUPN_DATE	(102) :
RATING	(103) :
BOND_TYPE	(104) : IRS
ISSUE_DATE	(107) :
PUTCALLIND	(109) : CALL
CALL_DATE	(112) :
RATING_ID	(113) :
DAYS_MAT	(116) : +0
CUM_EX_MKR	(117) :
PRC_QL_CD	(118) :
DURATION	(130) : +0

Three fields for bid (22-24) three for ask (25-27)

19.2 12.0		USDSB3L5Y=SX Quote	Q	USDSB3L5Y=SX
X_CURRENCY	(-11)	: USD		
X_RIC_NAME	(-1)	: USDSB3L5Y=SX		
PROD_PERM	(1)	: +3774		
RDNDISPLAY	(2)	: 152		
DSPLY_NAME	(3)	: 5YR TSY		
RDN_EXCHID	(4)	:		
TRDPRC_1	(6)	: +0		
NETCHNG_1	(11)	: -0.005		
HIGH_1	(12)	: +2.965		
LOW_1	(13)	: +2.923		
CURRENCY	(15)	: USD		
TRADE_DATE	(16)	:		
TRDTIM_1	(18)	:		
OPEN_PRC	(19)	: +2.955		
HST_CLOSE	(21)	: +2.955		
BID	(22)	: +2.950		
BID_1	(23)	: +2.952		
BID_2	(24)	: +2.950		
ASK	(25)	: +2.990		
ASK_1	(26)	: +2.992		
ASK_2	(27)	: +2.990		
NEWS	(28)	:		
NEWS_TIME	(29)	:		
ACVOL_1	(32)	: +0		
TRD_UNITS	(53)	: 3DP		
PCTCHNG	(56)	: +0		
MATUR_DATE	(68)	:		
COUPN_RATE	(69)	: +0		
NUM_MOVES	(77)	: +0		
OFFCL_CODE	(78)	:		
HSTCLSDATE	(79)	: 30 JUL 2018		
YRHIGH	(90)	: +0		
YRLOW	(91)	: +0		
LIFE_HIGH	(94)	: +0		
LIFE_LOW	(95)	: +0		
COUPN_DATE	(102)	:		
RATING	(103)	:		
BOND_TYPE	(104)	: IRS		
ISSUE_DATE	(107)	:		
PUTCALLIND	(109)	: CALL		
CALL_DATE	(112)	:		
RATING_ID	(113)	:		
DAYS_MAT	(116)	: +0		
CUM_EX_MKR	(117)	:		

Ripples to 23 and 26 instead of 22 and 25.

Alpha WorkBench 8.5.0 SIT, 08.10.2018

File Options Themes Help

Logger Tool loaded in 0.0 Seconds

Live Updates - 0

Live Feed

- Reuters
- MPx Curve Data Service

Live Curve Comparison

Generate Report

Logger, Version 1.1 - 0

- VolCalibrationExec
- LMMVolCalibrationExec
- PartialVegaExec
- DBReaders
 - SwaptionDBReader
 - CallableDebtDBReader
 - CallableDebtDBReader
 - ShortTermDebtDBReader
 - EuroDollarFutureDBReader
 - FedFundFutureDBReader
 - SOFRFutureDBReader
 - SwapDBReader
 - CapFloorDBReader
 - DebtDBReader
- Workbench
 - Tools.MortgagePricer
 - Tools.MarketMonitor
 - Tools.MarketMonitor.BloombergFeed
 - Tools.MarketMonitor.MPFFeed
 - Tools.MarketMonitor.PFECalculation
 - Tools.TraderLimits
 - Tools.MarketMonitor.ReutersFeed
 - Tools.CreditPricer
 - Tools.MortgageRates
 - Tools.PortfolioPricer
 - Tools.DerivativePricer
 - Tools.Rates
 - Tools.BondCalculator
 - Tools.DebtPricer
 - Tools.DebtPricerMultIDX
 - Tools.DatabaseManagementController
 - Tools.ChangePasswordController
 - Tools.LiveUpdates**
 - Tools.ROECalculator
 - Tools.PrepayModelPerformance
 - Tools.DefaultModelPerformance
 - Tools.CapitalAggregation
 - ScenarioBuilder
 - ScenarioAnalysis

Logging Level

Logging Directory

Display Message Headings

All Logged Messages

```

IsRippedT
RipplesTo:
Value: "+2
Ask = Field ASK:
Fid: 25
Name: "AS
Length: 17
Type: 4
IsRippedT
RipplesTo:
Value: "+2
Spread = -0.040000000
CurrentValue = 2.972

*****Message Time Tu
Level: CONFIG
Message: processRecor
Valid Midpoint[5 Yr Swap
Bid = Field BID:
Fid: 22
Name: "BII
Length: 17
Type: 4
IsRippedT
RipplesTo:
Value: "+2
Ask = Field ASK:
Fid: 25
Name: "AS
Length: 17
Type: 4
IsRippedT
RipplesTo:
Value: "+2
Spread = -0.040000000
CurrentValue = 2.972

```

Cluster

31%

106MB

340MB

Thanks
Ashwini Jakhar

From: Jakhar, Ashwini
Sent: Tuesday, July 31, 2018 11:21 AM
To: Bojji, Ananda K <ananda_bojji@freddiemac.com>; Henning, Ryan <Ryan_Henning@freddiemac.com>
Subject: FW: Looks Like its not straight forward to turn off Ripple

```
private final void manageState( RTRecord aRecord )
{
    // We need to make the decision to accept the update or not here
    // Down the line functions that get called will not get a chance to
    // access the previous value if we don't do this
    RTPriceField priceBidField;
    RTPriceField priceAskField;

    if( m_BaseField.equals( c_BID ) )
    {
        processManageStateForBaseFieldTypeBid( aRecord );
    }
    else if( m_BaseField.equals( c_ASK ) )
    {
        processManageStateForBaseFieldTypeAsk( aRecord );
    }
    else if( m_BaseField.equals( c_MIDPOINT ) )
    {
        priceBidField = (RTPriceField) m_Record.field( m_Info.getBidFieldCode() );
        priceAskField = (RTPriceField) m_Record.field( m_Info.getAskFieldCode() );
        priceAskField.fidDefinition().setIsRippledTo( false );
        priceBidField.fidDefinition().setIsRippledTo( false );

        if( ( priceBidField != null ) && ( priceAskField != null ) )
        {
            if( ( priceBidField.toDouble() != 0.0 ) && ( priceAskField.toDouble() != 0.0 ) )
            {
                m_Record = aRecord;

                double dConvertedBid = priceBidField.toDouble();
                double dConvertedAsk = priceAskField.toDouble();

                m_dCurrentValue = Double.valueOf( ( dConvertedBid + dConvertedAsk ) / 2 );

                m_lastknownSpread = Double.valueOf( dConvertedBid - dConvertedAsk );

                processDebugMessage( priceBidField, priceAskField, "Trying to Failover for
Midpoint" );

                m_nState = 0;

                // We don't have to process failover logic
                return;
            }

            processDebugMessage( priceBidField, priceAskField, "Trying to Failover for Midpoint" );

            m_nState = -1;
        }

        if( m_FailoverTo.equals( c_MAINTAIN_SPREAD ) )
        {
            processStateForMaintainSpread( priceBidField, priceAskField );
        }
        else
        {

```

```

// Failover Action Scenario : We could not get a Bid + We could not add a spread to Ask
as it is also empty
    m_nState = -1;

    if( LoggerUtilities.isDebugEnabled( LoggerName.c_TOOL_LIVE_UPDATES ) )
    {
        StringBuilder message = new StringBuilder();
        message.append( "processRecord Update : \n" );
        synchronized( this )
        {
            message.append( "Midpoint Failover Maintainspread failed Update recieved for "
+ "|" + m_Info.getName() + "|" "
                + c_DateFormatter.format( new Date() ) + "\n" );
        }
        LoggerUtilities.debug( LoggerName.c_TOOL_LIVE_UPDATES, message.toString(), null );
    }

    // We don't have to accept this update in this case
}
}
else
{
    if( LoggerUtilities.isDebugEnabled( LoggerName.c_TOOL_LIVE_UPDATES ) )
    {
        StringBuilder message = new StringBuilder();
        message.append( "processRecord Update : \n" );
        String dateStr;
        synchronized ( this ) {
            dateStr = c_DateFormatter.format( new Date() );
        }

        message.append( "failed to recieve Update due to unknown Strategy in XML" + "|" +
m_Info.getName() + "|" "
            + dateStr + "\n" );
        LoggerUtilities.debug( LoggerName.c_TOOL_LIVE_UPDATES, message.toString(), null );
    }
}
}
}
}

```

From: Jakhar, Ashwini
Sent: Tuesday, July 31, 2018 10:46 AM
To: Bojji, Ananda K <ananda_bojji@freddiemac.com>
Subject: Looks Like its not straight forward to turn off Ripple

```

priceAskField.fidDefinition().setIsRippledTo( false );
priceBidField.fidDefinition().setIsRippledTo( false );

```

19.2 12.0		USDSB3L5Y=SX Quote	USDSB3L5Y=SX
ACT_TP_4	(273)	: IB	
ACT_TP_5	(274)	: IB	
SEC_ACT_1	(275)	: +2.995	
SEC_ACT_2	(276)	: +2.997	
SEC_ACT_3	(277)	: +2.999	
SEC_ACT_4	(278)	: +3.000	
SEC_ACT_5	(279)	: +2.999	
SC_ACT_TP1	(280)	: IA	
SC_ACT_TP2	(281)	: IA	
SC_ACT_TP3	(282)	: IA	
SC_ACT_TP4	(283)	: IA	
SC_ACT_TP5	(284)	: IA	
OPEN_TIME	(285)	: 22:30	
HIGH_TIME	(286)	: 13:31	
LOW_TIME	(287)	: 04:33	
SETTLEDATE	(288)	:	
STOP_HIGH	(348)	:	
STOP_LOW	(349)	:	
RT_YIELD_1	(356)	: +0	
RT_YIELD_2	(357)	: +0	
RT_YIELD_3	(358)	: +0	
RT_YIELD_4	(359)	: +0	
RT_YIELD_5	(360)	: +0	
YLD_NETCHG	(361)	: +0	
BID_YIELD	(362)	: +0	
ASK_YIELD	(363)	: +0	
OPEN_YLD	(364)	: +0	
HIGH_YLD	(365)	: +0	
LOW_YLD	(366)	: +0	
HST_CLSYLD	(367)	: +0	
ISS_AMOUNT	(370)	: +0	
IRGPRC	(372)	: +0	
IRGCOND	(374)	:	
TIMCOR	(375)	:	
PRIMACT_1	(393)	: +2.955	
PRIMACT_2	(394)	: +2.957	
PRIMACT_3	(395)	: +2.959	
PRIMACT_4	(396)	: +2.960	
PRIMACT_5	(397)	: +2.959	
BCAST_REF	(728)	: GVD-US	
DEALT_VL1	(791)	: +0	
DEALT_VL2	(792)	: +0	
DEALT_VL3	(793)	: +0	
LONGLINK1	(800)	:	

*****Message Time Tue Jul 31 10:44:08 EDT 2018*****

Level: CONFIG

Message: processRecord Update :

Valid Midpoint|5 Yr Swap| Jul 31, 2018 at 10:44:08 EDT

Bid = |Field PRIMACT_1:

Fid: 393
 Name: "PRIMACT_1"
 Length: 17
 Type: 4
 IsRippledTo?: YES
 RipplesTo: PRIMACT_2
 Value: "+2.957"

Ask = |Field SEC_ACT_1:

Fid: 275
 Name: "SEC_ACT_1"
 Length: 17

Type: 4

IsRippledTo?: YES

RipplesTo: SEC_ACT_2

Value: "+2.997"

Spread = -0.040000000000000036

CurrentValue = 2.977

Thanks

Ashwini Jakhar