



S&P Capital IQ Real-Time Solutions

FeedOS™ Developer's Notice

CHIX CANADA – Feed Update

Reference n°: 20150804 – 22829 – 27328 – 28168

Standard FH, effective as of: 07 September 2015*

Action required from users: MANDATORY ACTION

*For the actual day when the changes to your custom feed handler take effect, please contact your FeedOS project manager.

S&P Capital IQ Real-Time Solutions
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Reference 20150804 – 22829 – 27328 – 28168
August 11, 2015

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UPDATE OF THE CHIX CANADA MARKET DATA STREAM

To reflect the changes caused by the addition of Chi-X Market-On-Close (MOC) order type on the CHIX CANADA market data stream, S&P Capital IQ Real-Time Solutions has decided to enhance the content of FeedOS.

This developer's notice contains late-breaking information about the implementation of this modification in your applications, which may not be included otherwise in the published documentation. The topics this notice covers include:

- [1. Update Summary](#)
- [2. FeedOS Technical Implementation](#)
- [3. Finding the Latest Information.](#)

1. Update Summary

Table 1 Current update summary

Notice Reference	20150804 – 22829 – 27328 – 28168
Exchanges	CHIX CANADA
Concerned MICs	CHIC
Internal Source ID	243
Effective Date	2015-09-07*
Impact	<ul style="list-style-type: none">• Update of the Quotation Tags• Update of the Quotation Context Tags• Update of the Level1 Market Data Kinematics
Action required	MANDATORY ACTION - see sections: <ul style="list-style-type: none">• 2.5. Update of the Level1 Market Data Kinematics – CLOSE and TradingStatus.

2. FeedOS Technical Implementation

Effective Monday, **September 07*** 2015, S&P Capital IQ Real-Time Solutions enhances the quotation data and updates the Level1 Market Data Kinematics to accommodate the information disseminated on the CHIX CANADA market data stream, as described below:

* This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, the date and Source IDs may differ. For the actual day when the changes to your custom feed handler will take effect, please contact your FeedOS™ project manager.

- [2.1. Changes to the Quotation Data](#)
- [2.2. Changes to the Quotation Context Data](#)
- [2.5. Update of the Level1 Market Data Kinematics – CLOSE and TradingStatus.](#)

2.1. Changes to the Quotation Data

S&P Capital IQ Real-Time Solutions **introduces** the quotation tags below to accommodate the information disseminated on the CHIX CANADA market data stream:

Table 2 Quotation tags added on the CHIX CANADA market data stream

Tag Name	Numeric ID	Type
InternalDailyClosingPriceType	9155	Char

2.1.1. InternalDailyClosingPriceType

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the CHIX CANADA market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the type of the internal daily closing price:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `InternalDailyClosingPriceType` is described in the table below (the values disseminated as of 2015-09-07 are highlighted in **green**):

Table 3 InternalDailyClosingPriceType – technical implementation in FeedOS

Component	Value	Description
Tag Name	<code>InternalDailyClosingPriceType</code>	FeedOS tag name.
Numeric ID	9155	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	Char	Char data type.
Format	<i>[Internal Specific Value]</i>	An <i>internal specific value</i> , detailing the type of daily closing price, as described below.

Table 3 InternalDailyClosingPriceType – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	0	Undefined
	a	Official Close – Explicit closing price value calculated and distributed by an exchange for the main trading session of a given trading day.
	b	Official Indicative – Exchange has provided an indicative price and marked it as indicative, however no trading activity is observed.
	c	Official Carry Over – Explicit Closing price value from a previous trading day carried forward by the exchange to the given trading day.
	d	Last Price – Final price disseminated by the exchange for the main trading session or dissemination period of a given trading day (for indices).
	e	Last Eligible Price – Execution price of the final trade (subject to trade qualifiers) accepted by the exchange for the main trading session of a given trading day.
	z	Manual – Price disseminated manually (in case of production correction).

Quotation Data Sample

Below is an example showing the current implementation of the newly added (in **green**) quotation tags:

```

InstrumentStatusL1
-- 472/2638
    BID: 36.06      500      @2
    ASK: 36.25      200      @1
    LastPrice                float64{36.27}
    LastTradeQty              float64{100}
    DailyHighPrice            float64{36.36}
    DailyLowPrice             float64{35.86}
    DailyTotalVolumeTraded    float64{4500}
    DailyTotalAssetTraded     float64{162608.5}
    LastTradePrice            float64{36.27}
    LastTradeTimestamp         Timestamp{2015-08-04 13:30:44:794}
    InternalDailyOpenTimestamp Timestamp{2015-08-04 12:29:59:999}
    InternalDailyCloseTimestamp Timestamp{2015-07-31 21:00:00}
    InternalDailyHighTimestamp Timestamp{2015-08-04 13:30:03:463}
    InternalDailyLowTimestamp  Timestamp{2015-08-04 13:30:01:592}
    InternalPriceActivityTimestamp Timestamp{2015-08-04 13:30:53:978}
    TradingStatus              17=ReadyToTrade
    DailyOpeningPrice          float64{35.86}
    PreviousDailyTotalVolumeTraded float64{973214}
    PreviousDailyTotalAssetTraded float64{35707105.58}
    PreviousDailyClosingPrice   float64{36.7118}
    PreviousBusinessDay         Timestamp{2015-07-31}
    CurrentBusinessDay          Timestamp{2015-08-04}
    InternalDailyClosingPriceType char{d}
    PriceActivityMarketTimestamp Timestamp{2015-08-04 13:30:53:979}

```

2.2. Changes to the Quotation Context Data

S&P Capital IQ Real-Time Solutions **introduces** the quotation context tags below to accommodate the information disseminated on the CHIX CANADA market data stream:

Table 4 Quotation context tags added on the CHIX CANADA market data stream

Tag Name	Numeric ID	Type
Buyer	288	String
Seller	289	String

Moreover, S&P Capital IQ Real-Time Solutions **updates** the quotation context tags below:

Table 5 Quotation context tags added on the CHIX CANADA market data stream

Tag Name	Numeric ID	Type
TradeCondition	277	String

2.3. Buyer

Each time a trade occurs, the values of the quotation context tag **Buyer** conveyed on the CHIX CANADA market data stream are disseminated via FeedOS data stream in *Context* to identify the buyer side:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag Buyer is described in the table below:

Table 6 Buyer – technical implementation in FeedOS

Component	Value	Description
Tag Name	Buyer	FeedOS tag name.
Numeric ID	288	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	String	String data type.
Format / Possible Values	<i>[Exchange Specific value]</i>	An exchange specific value , detailing the value on the buyer side. Note: The Broker is always set to 001 (Anonymous) for Chi-X only.

2.4. Seller

Each time a trade occurs, the values of the quotation context tag **Seller** conveyed on the CHIX CANADA market data stream are disseminated via FeedOS data stream in *Context* to identify the seller side:

FeedOS implementation of the tag `Seller` is described in the table below:

Table 7 **Seller – technical implementation in FeedOS**

Component	Value	Description
Tag Name	<code>Seller</code>	FeedOS tag name.
Numeric ID	289	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	String	String data type.
Format / Possible Values	<i>[Exchange specific value]</i>	An exchange specific value , detailing the value on the seller side. Note: The Broker is always set to 001 (Anonymous) for Chi-X only.

2.4.1. TradeCondition

Each time a trade occurs, the values of the quotation context tag **TradeCondition** conveyed on the CHIX CANADA market data stream are disseminated via FeedOS data stream in *Context*:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

FeedOS implementation of the tag `TradeCondition` is described in the table below:

Table 8 **TradeCondition – technical implementation in FeedOS**

Component	Value	Description
Tag Name	<code>TradeCondition</code>	FeedOS tag name.
Numeric ID	277	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	String	String data type.
Format	<i>[Exchange specific value]</i>	An exchange specific value , detailing the conditions of a trade.
Possible Values	AJ	Official Closing Price Note: This value also applies to MOC trades.

Quotation Context Data Sample

Below is an example showing the current implementation of the newly added (in **green**) and updated (in **blue**) quotation context tags:

```
"TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"
```

```
TE 19:59:14:860.739 989857470 10.48 400 * * 10.48 300@2
Buyer=002, Seller=002
TE 19:59:14:860.768 989857470 10.48 100 * * 10.48 200@1
Buyer=002
TE 19:59:14:860.795 989857470 10.48 200 * * 10.49 1100@7
Buyer=002, Seller=011
```

[...]

```
TE 19:50:41:918.048 989857470 13.79 291 * * * * L
TradeCondition=AJ=official_closing_price, TradeID=130000170
TE 20:10:33:257.166 989857470 16.53 400 * * * * H
TradeCondition=AJ=official_closing_price, TradeID=130000119
TE 20:10:33:258.799 989857470 16.53 600 * * * *
TradeCondition=AJ=official_closing_price, TradeID=130000122
TE 20:13:06:432.525 989857470 16.53 1231 * * * *
TradeCondition=AJ=official_closing_price, TradeID=130003492
```

2.5. Update of the Level1 Market Data Kinematics – CLOSE and TradingStatus

In the Level1 Market Data Kinematics **before 2015-09-07**, at 21:00:00 UTC, the exchange sends the CLOSE signal and the TradingStatus is set to 18=NotAvailableForTrading, as shown in the example below:

```
"TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"
```

```
"VU (ValuesUpdate) : SERVER_TIME INSTRUMENT VALUES..."
```

```
"SI (TradeEvent) *SIGNAL* : SERVER_TIME INSTRUMENT SIGNAL LAST_PRICE"
```

```
TE 20:48:48:804 989858382 * * 34.75 200@2 * *
TE 20:59:03:584 989858382 * * 34.75 100@1 * *
TE 20:59:03:588 989858382 * * * * 34.87 2400@2
SI 21:00:00:000 989858382 CLOSE 35.13
TE 21:00:00:000 989858382 35.13 * * * * C
VU 21:00:00:000 989858382 TradingStatus=18
TE 21:00:06:543 989858382 * * * * 34.87 1200@1
TE 21:00:06:549 989858382 * * * * 35 100@1
TE 21:00:06:553 989858382 * * * * 35.09 500@1
TE 21:00:06:553 989858382 * * * * 36.08 100@1
TE 21:00:06:553 989858382 * * 34.56 200@1 * *
TE 21:00:06:553 989858382 * * 34.55 100@1 * *
TE 21:00:06:633 989858382 * * ! 0 * *
TE 21:00:06:673 989858382 * * * * ! 0
TE 23:00:00:583 989858382 * * ! 0 ! 0
```


In the Level1 Market Data Kinematics **after 2015-09-07**, at 21:00:00 UTC, the exchange will send the CLOSE signal, the TradingStatus will be set to 15=NewPriceIndication and the InternalDailyClosingPriceType set to d=LastPrice, accepting post-trade orders. One hour later, at 22:00:00 UTC, the TradingStatus will be set to 18=NotAvailableForTrading, as shown in the example below:

```

"TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"
"VU (ValuesUpdate) : SERVER_TIME INSTRUMENT VALUES..."
"SI (TradeEvent) *SIGNAL* : SERVER_TIME INSTRUMENT SIGNAL LAST_PRICE"

TE 20:48:48:804 989858382 * * 34.75 200@2 * *
TE 20:59:03:584 989858382 * * 34.75 100@1 * *
TE 20:59:03:588 989858382 * * * * 34.87 2400@2
SI 21:00:00:000 989858382 CLOSE 35.13
TE 21:00:00:000 989858382 35.13 * * * * * C
VU 21:00:00:000 989858382 InternalDailyClosingPriceType=d TradingStatus=15
TE 21:00:06:543 989858382 * * * * 34.87 1200@1
TE 21:00:06:549 989858382 * * * * 35 100@1
TE 21:00:06:553 989858382 * * * * 35.09 500@1
TE 21:00:06:553 989858382 * * * * 36.08 100@1
TE 21:00:06:553 989858382 * * 34.56 200@1 * *
TE 21:00:06:553 989858382 * * 34.55 100@1 * *
VU 22:00:00:000 989858382 TradingStatus=18

```

2.6. Microsecond Timestamp Precision on the Level1 Market Data

Effective **2015-09-07**, the server timestamps will display microsecond units on the Level1 Market Data, as shown in the example below (highlighted in **green**):

```

"TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"

TE 18:12:22:962.842 989857470 15.32 750 * * * *

```

3. Finding the Latest Information

For the latest documentation and product updates, additional support and training, please contact our support services:

- E-mail: rts-support@spcapitaliq.com
- Web: <http://support.quanthouse.com>.