S&P Capital IQ Real-Time Solutions

FeedOS™ Developer's Notice

NGM – Quotation Tags Update

Reference n°: 20150313 – 24493 – 24436

Effective as of: 13 April 2015*

Action required from users: MANDATORY ACTION

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

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Reference 20150313 – 24493 – 24436
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UPDATE OF THE QUOTATION TAGS ON THE NGM MARKET DATA STREAM

To improve the quality of the market data disseminated on the NGM 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	20150313 – 24493 – 24436
Exchanges	NGM
Concerned MICs	XNGM, NMTF
Internal Source ID	198
Effective Date	**2015-04-13**[*]
Impact	• Update of the Quotation Tags • Update of the Level1 Market Data Kinematics • Microsecond Timestamp Precision on the Level1 Market Data
Action required	**MANDATORY ACTION** - see sections: • 2.2. Update of the Level1 Market Data Kinematics – Trading Status of the Knocked Out Instruments.

2. FeedOS Technical Implementation

Effective Monday, **April 13[*] 2015,** S&P Capital IQ Real-Time Solutions enhances the quotation data and updates the Level1 Market Data Kinematics on the NGM market data stream, as described below:

- 2.1. Changes to the Quotation Data
- 2.2. Update of the Level1 Market Data Kinematics – Trading Status of the Knocked Out Instruments
- 2.3. Microsecond Timestamp Precision on the Level1 Market Data.

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 NGM market data stream:

Table 2 Quotation tags added on the NGM 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 NGM 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 2015-04-13 are highlighted in `green`):

Table 3 InternalDailyClosingPriceType – technical implementation in QuantFEED®

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

Table 3 InternalDailyClosingPriceType – technical implementation in QuantFEED® (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:

```
-- 252/14084
        BID: 84.34      1000000 @1
        ASK: 0  0       *NO ORDER*
        LastPrice                       float64{85.84}
        LastTradeQty                    float64{150000}
        DailyTotalVolumeTraded          float64{0}
        DailyTotalAssetTraded           float64{0}
        LastTradePrice                  float64{85.84}
        LastTradeTimestamp              Timestamp{2015-02-25 12:17:48:904}
        InternalDailyOpenTimestamp      Timestamp{2015-03-13 08:00:03:595}
        InternalDailyCloseTimestamp     Timestamp{2015-03-12 15:30:02:959}
        InternalDailyHighTimestamp      Timestamp{2015-02-25 12:17:50:981}
        InternalDailyLowTimestamp       Timestamp{2015-02-25 12:17:50:981}
        InternalPriceActivityTimestamp  Timestamp{2015-03-13 08:01:07:178}
        TradingStatus                   15=NewPriceIndication
        PreviousDailyTotalVolumeTraded  float64{0}
        PreviousDailyTotalAssetTraded   float64{0}
        PreviousDailyClosingPrice       float64{85.84}
        PreviousBusinessDay             Timestamp{2015-03-12}
        CurrentBusinessDay              Timestamp{2015-03-13}
        InternalDailyClosingPriceType   char{b}
```

2.2. Update of the Level1 Market Data Kinematics – Trading Status of the Knocked Out Instruments

In the Level1 Market Data Kinematics **before 2015-04-13**, when the tag `MARKET_NGM_KnockOutBuyback` received the value `Y=Knock out soft`, a halted knocked out instrument changed its Trading Status from `2=TradingHalt` to `17=ReadyToTrade` after the OPEN signal, 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"

VU   06:59:59:682   252/28794   TradingStatus=21
VU   07:00:00:475   252/28794   MARKET_NGM_KnockOutBuyback=Y TradingStatus=2
SI   08:00:00:244   252/28794   OPEN  *
TE   08:00:00:244   252/28794   *     *     *     *     *     *     0
VU   08:00:00:244   252/28794   MARKET_NGM_KnockOutBuyback=Y TradingStatus=17
```

In the Level1 Market Data Kinematics **after 2015-04-13**, when the tag `MARKET_NGM_KnockOutBuyback` received the value `Y=Knock out soft`, a halted knocked out instrument will remain halted (Trading Status `2=TradingHalt`) even after the OPEN signal, 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"

VU   07:00:00:475.254   252/28794   MARKET_NGM_KnockOutBuyback=Y TradingStatus=2
SI   08:00:00:244.178   252/28794   OPEN  *
TE   08:00:00:244.178   252/28794   *     *     *     *     *     *     0
VU   08:00:00:244.178   252/28794   MARKET_NGM_KnockOutBuyback=Y
```

2.3. Microsecond Timestamp Precision on the Level1 Market Data

Effective 2015-04-13, 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    14:06:20:564.560    528504599    *    *    133    1800@9    *    *
TE    14:06:20:564.560    528504599    *    *    133    1600@8    *    *
TE    14:06:20:564.560    528504599    *    *    133    1400@7    *    *
TE    14:06:20:564.560    528504599    *    *    133    1200@6    *    *
TE    14:06:20:564.560    528504599    *    *    133    1000@5    *    *
TE    14:06:20:564.560    528504599    *    *    133    800@4     *    *
```

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: https://support.quanthouse.com.