S&P Capital IQ Real-Time Solutions

FeedOS™ Developer's Notice

NASDAQ UTP – Quotation Data Update

Reference n°: 20150623 – 23653 – 26507 – 27568

Standard FH, effective as of: 27 July 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 20150623 – 23653 – 26507 – 27568
July 02, 2015

France
52 Rue de la Victoire
75009 Paris
France
Tel: +33 (0) 1 73 02 32 11

United States
55 Water Street, 44th floor
New York, NY 10041
United States of America
Tel: +1-(212)-438-4346

130 East Randolph
One Prudential Plaza, Suite 2900
Chicago, IL 60601
United States of America
Tel: +1-(312)-233-7129

United Kingdom
20 Canada Square
Canary Wharf
London E14 5LH
United Kingdom
Tel: +44 (0) 203 107 1676

Singapore
12 Marina Boulevard
#23-01 Marina Bay
Financial Centre Tower 3
Singapore 018982
Tel: +65 6530 6546

www.spcapitaliq.com

UPDATE OF THE QUOTATION DATA ON THE NASDAQ UTP MARKET DATA STREAM

To improve the quality of market data disseminated on the NASDAQ UTP 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

Table 1 Current update summary

Notice Reference	20150623 – 23653 – 26507 – 27568
Exchanges	NASDAQ UTP
Concerned MICs	CBSX, EDGA, EDGX, BATY, XBOS, XCHI, XCIS, Xudf, XASE, XISX, XNAS, XNYS, XPHL, ARCX, BATS, XADF
Internal Source ID	58
Effective Date	**2015-07-27**[*]
Impact	• Update of the Quotation Context Tags • Update of the Level1 Market Data Kinematics
Action required	**MANDATORY ACTION** - see sections: • 2.2. Update of the Level1 Market Data Kinematics – OPEN/HIGH/LOW/CLOSE.

2. FeedOS Technical Implementation

Effective Monday, **July 27*** **2015,** S&P Capital IQ Real-Time Solutions updates the quotation context data and the Level1 Market Data Kinematics to accommodate the information disseminated on the NASDAQ UTP market data stream, as described below:

- 2.1. Changes to the Quotation Context Data
- 2.2. Update of the Level1 Market Data Kinematics – OPEN/HIGH/LOW/CLOSE
- 2.3. Microsecond Timestamp Precision on the Level1 Market Data.

2.1. Changes to the Quotation Context Data

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

Table 2 Quotation context tags disseminating updated values on the NASDAQ UTP market data stream

Tag Name	Numeric ID	Type
`MARKET_NASDAQ_UTP_SaleCondition`	15650	String

2.1.1. MARKET_NASDAQ_UTP_SaleCondition

Each time an UTP participant enters a transaction, the values of the quotation context tag **MARKET_NASDAQ_UTP_SaleCondition** conveyed on the NASDAQ UTP market data stream are disseminated viaFeedOS data stream in *Context* to indicate the type of trade:

- 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 `MARKET_NASDAQ_UTP_SaleCondition` is described in the table below (updated values are in `blue`):

Table 3 MARKET_NASDAQ_UTP_SaleCondition – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_NASDAQ_UTP_SaleCondition`	FeedOS tag name.
Numeric ID	`15650`	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	*`[Exchange Specific Value]`*	An ***exchange specific value***, indicating the type of trade transaction entered by an UTP participant.
Possible Values	`1`	Stopped Stock (Regular Trade)
	`4`	Derivatively Priced
	`5`	Re-Opening Prints

* 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 MARKET_NASDAQ_UTP_SaleCondition – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	6	Closing Prints
	7	Qualified Contingent Trade
	8	Placeholder 611 Exempt
	9	Corrected Consolidated Close (per listing market) **Note:** This sale condition also triggers the update of the tag `DailyClosingPrice` (**NumericID:** `9132`, **Type:** `Float64`) for the consolidated instrument.
	@	Regular Trade
	A	Acquisition
	B	Bunched Trade
	C	Cash Sale
	D	Distribution
	E	Placeholder for Future Use
	F	Intermarket Sweep
	G	Bunched Sold Trade
	H	Price Variation Trade
	I	Odd Lot Trade
	K	Rule 155
	L	Sold Last
	M	Market Center Official Close Price
	N	Next Day
	O	Opening Prints
	P	Prior Reference Price
	Q	Market Center Official Open Price
	R	Seller
	S	Split Trade
	T	Form T
	U	Extended Trading Hours – Sold Out of Sequence
	V	Contingent Trade
	W	Average Price Trade
	X	Cross Trade
	Y	Yellow Flag
	Z	Sold (Out of Sequence)

Quotation Context Data Sample

The example below shows the current implementation of the updated (in `blue`) quotation tags:

```
"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   18:09:22:962.322    669491501   75.32   75000   *    *    *    *
MARKET_NASDAQ_UTP_SaleCondition=---V
```

2.2. Update of the Level1 Market Data Kinematics – OPEN/HIGH/LOW/CLOSE

In the Level1 Market Data Kinematics **before 2015-07-27**, the values `MARKET_NASDAQ_UTP_SaleCondition=V` and `MARKET_NASDAQ_UTP_SaleCondition=7` affected the OPEN/HIGH/LOW/CLOSE prices, 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   18:09:22:962   669491501    75.32   75000   *    *    *    *    HL
MARKET_NASDAQ_UTP_SaleCondition=---V
TE   18:11:22:962   669491501    75.40   75000   *    *    *    *    H
MARKET_NASDAQ_UTP_SaleCondition=-7--
TE   18:12:22:962   669491501    75.32   75000   *    *    *    *
OriginFOSMarketIdOf_LastPrice=XCHI,MARKET_NASDAQ_UTP_SaleCondition=---V
```

In the Level1 Market Data Kinematics **after 2015-07-27**, the values `MARKET_NASDAQ_UTP_SaleCondition=V` and `MARKET_NASDAQ_UTP_SaleCondition=7` will impact only the volume of Consolidated and Participant Instruments (Xudf), 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   18:09:22:962.322    669491501   75.32   75000   *    *    *    *
MARKET_NASDAQ_UTP_SaleCondition=---V
TE   18:11:22:962.645    669491501   75.40   75000   *    *    *    *
MARKET_NASDAQ_UTP_SaleCondition=-7--
TE   18:12:22:962.842    669491501   75.32   75000   *    *    *    *
```

2.3. Microsecond Timestamp Precision on the Level1 Market Data

Effective **2015-07-27**, 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    669491501   75.32   75000   *    *    *    *
```

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.