S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

NYSE ARCA INTEGRATED – Feed Update

Reference n°: 20140115

Effective as of: 27 January 2014

Action required from users: Attention Required (Optional)

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

S&P Capital IQ Real-Time Solutions (QuantHouse®) – QuantFEED®
QuantFEED® Developer's Notice
Reference 20140115
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UPDATE OF THE NYSE ARCA INTEGRATED MARKET DATA STREAM

To reflect the changes caused by the dissemination of new values on the NYSE ARCA INTEGRATED market data stream, S&P Capital IQ Real-Time Solutions has decided to enhance the content of QuantFEED®.

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	20140114
Exchanges	NYSE ARCA INTEGRATED
Concerned MICs	XNYS
Internal Source ID	145
Effective Date	**2014-01-27**
Impact	• Update of the Referential Tags • Update of the Quotation Tags
Action required	**Attention Required (Optional)**

2. Functional Description

Effective Monday, **January 27, 2014**, S&P Capital IQ Real-Time Solutions enhances the values of the referential tags `CFICode` (**NumericID**: `461`, **Type**: `String`) and `SecurityType` (**NumericID**: `167`, **Type**: `String`) to accommodate the information disseminated on NYSE ARCA INTEGRATED market data stream.

S&P Capital IQ Real-Time Solutions also introduces two new referential tags – `OperatingMIC` (**NumericID**: `9533`, **Type**: `String`) and `SegmentMIC` (**NumericID**: `9534`, **Type**: `String`) – to reflect the adoption of the ISO 10383:2012 standard by the exchange. This new edition of the ISO standard refines the level of granularity on NYSE ARCA INTEGRATED market data stream, by introducing two levels of MIC codes – *operating* (parent-like) and *market segment* (child-like) MICs.

Furthermore, S&P Capital IQ Real-Time Solutions adds two new quotation tags – `InternalDailyClosingPriceType` (**NumericID**: `9155`, **Type**: `char`) and `PreviousInternalDailyClosingPriceType` (**NumericID**: `9156`, **Type**: `char`) – to detail the type of the internal daily closing price on the NYSE ARCA INTEGRATED market data stream.

3. QuantFEED® Technical Implementation

The following sections describe the technical implementation of the new or updated tags:

- 3.1. CFI Code
- 3.2. Security Type
- 3.3. Operating MIC and Segment MIC
- 3.4. Internal Daily Closing Price Type
- 3.5. Previous Internal Daily Closing Price Type.

3.1. CFI Code

The values of the referential tag **CFI Code** conveyed on the NYSE ARCA INTEGRATED market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the standardized identification code of an instrument.

QuantFEED® implementation of the values currently available for the tag `CFICode` is described in the table below (enhanced values are in `blue`):

Table 2 CFICode – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`CFICode`	QuantFEED® tag name.
Numeric ID	`461`	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the standardized identification code of an instrument.

Table 2 CFICode – technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	DBXUXX	Debts – Bonds – Unsecured/unguaranteed
	DXXXXX	Debts
	EPXXXX	Equities – Preferred Shares
	ESXXXA	Equities – Shares – Registered Depository Receipt
	ESXXXX	Equities – Shares
	EUXXXE	Equities – Units – Exchange Traded Funds
	EUXXXX	Equities – Units
	EXXXXX	Equities
	MRXXXX	Referential Instruments
	MXXXXX	Other Instruments
	RWXXXX	Rights – Warrants
	RXXXXX	Rights

3.2. Security Type

The values of the referential tag **Security Type** conveyed on the NYSE ARCA INTEGRATED market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the type of security.

QuantFEED® implementation of the values currently available for the tag `SecurityType` is described in the table below (enhanced values are in `blue`):

Table 3 SecurityType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`SecurityType`	QuantFEED® tag name.
Numeric ID	167	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions's data stream. This is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format	*[Exchange Specific Value]*	An ***exchange specific value***, detailing the type of security.
Possible Values	NONE	Unknown Security Type
	CS	Common Stock
	ETF	Exchange-Traded Fund
	GO	Debentures
	MF	Mutual Fund
	PS	Preferred Stock
	WAR	Warrant
	XLINKD	Index Linked Notes

3.3. Operating MIC and Segment MIC

The values of the referential tags **Operating MIC** and **Segment MIC** conveyed on the NYSE ARCA INTEGRATED market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the parent and child MIC.

QuantFEED® implementation of the values currently available for the tag `OperatingMIC` and `SegmentMIC` is described in the table below:

Table 4 OperatingMIC and SegmentMIC – technical implementation in QuantFEED®

Component	Value		Description
Tag Name	`OperatingMIC`	`SegmentMIC`	QuantFEED® tag name.
Numeric ID	9533	9534	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`String`	`String`	String data type.
Format	*[Exchange Specific Value]*	*[Exchange Specific Value]*	An ***exchange specific value***, specifying the parent and child MICs.
Possible Values	XNYS	ARCX	Market places of NYSE Euronext

Below is an example of the current implementation of the newly added (in `green`) and updated (in `blue`) referential tags :

```
instr # 359/753508 = 753631076
    Symbol                      string{IWM}
    SecurityType                string{CS}
    FOSMarketId                 ARCX
    CFICode                     string{EXXXXX}
    InternalCreationDate        Timestamp{2014-01-08 15:28:35:685}
    InternalModificationDate    Timestamp{2014-01-08 15:28:35:685}
    InternalSourceId            uint16{145}
    LocalCodeStr                string{10187}
    OperatingMIC                string{XNYS}
    SegmentMIC                  string{ARCX}
```

3.4. Internal Daily Closing Price Type

The values of the quotation tag **Internal Daily Closing Price Type** conveyed on the NYSE ARCA INTEGRATED market data stream are disseminated via QuantFEED® 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.

QuantFEED® implementation of the tag `InternalDailyClosingPriceType` is described in the table below:

Table 5 InternalDailyClosingPriceType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`InternalDailyClosingPriceType`	QuantFEED® tag name.
Numeric ID	`9155`	QuantFEED® 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	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the type of the internal daily closing price.
Possible Values	`a`	**Official Close** – Explicit closing price value calculated and distributed by an exchange for the main trading session of a given trading day.
	`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.

3.5. Previous Internal Daily Closing Price Type

The values of the quotation tag **Previous Internal Daily Closing Price Type** conveyed on the NYSE ARCA INTEGRATED market data stream are disseminated via QuantFEED® data stream in *Other Values* to indicate the type of the previous 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.

QuantFEED® implementation of the tag `PreviousInternalDailyClosingPriceType` is described in the table below:

Table 6 PreviousInternalDailyClosingPriceType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`PreviousInternalDailyClosingPriceType`	QuantFEED® tag name.
Numeric ID	`9156`	QuantFEED® 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	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the type of the previous internal daily closing price.
Possible Values	`a`	**Official Close** – Explicit closing price value calculated and distributed by an exchange for the main trading session of a given trading day.
	`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.

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

```
InstrumentStatusL1
-- 359/753508
        BID: 114.31     2200    @2
        ASK: 114.32     100     @1
        LastPrice                       float64{114.32}
        LastTradeQty                    float64{436856}
        DailyHighPrice                  float64{115.48}
        DailyLowPrice                   float64{113.27}
        DailyTotalVolumeTraded          float64{11003425}
        DailyTotalAssetTraded           float64{1258194514.66}
        LastTradePrice                  float64{113.94}
        LastTradeTimestamp              Timestamp{2014-01-13 21:00:00:874}
        InternalDailyOpenTimestamp      Timestamp{2014-01-13 14:30:00:903}
        InternalDailyCloseTimestamp     Timestamp{2014-01-13 21:00:01:017}
        InternalDailyHighTimestamp      Timestamp{2014-01-13 14:34:52:745}
        InternalDailyLowTimestamp       Timestamp{2014-01-13 20:41:23:951}
        InternalPriceActivityTimestamp  Timestamp{2014-01-14 12:57:13:955}
        TradingStatus                   21=PreOpen
        LastOffBookTradePrice           float64{114.32}
        LastOffBookTradeQty             float64{300}
        LastOffBookTradeTimestamp       Timestamp{2014-01-14 12:56:57:600}
        DailyOpeningPrice               float64{115.28}
        DailyClosingPrice               float64{113.94}
        PreviousDailyTotalVolumeTraded  float64{436856}
        PreviousDailyTotalAssetTraded   float64{844006292.45}
        PreviousDailyClosingPrice       float64{113.94}
        PreviousBusinessDay             Timestamp{2014-01-10}
        CurrentBusinessDay              Timestamp{2014-01-13}
        LastAuctionPrice                float64{114.31}
        LastAuctionVolume               float64{2134}
        DailyTotalOffBookVolumeTraded   float64{416335}
        DailyTotalOffBookAssetTraded    float64{47487055.31}
        LastAuctionImbalanceSide        char{S}
        LastAuctionImbalanceVolume      float64{146}
        InternalLastAuctionTimestamp    Timestamp{2014-01-14 12:56:53:248}
        InternalDailyClosingPriceType   char{e}
        PreviousInternalDailyClosingPriceType   char{a}
        PriceActivityMarketTimestamp    Timestamp{2014-01-14 12:57:13:954}
        MARKET_NYSE_TradeCond           string{@FT }
```

4. 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.