S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

SWX – Feed Update

Reference n°: 19407 – 20973 – 20140609

Effective as of: 07 July 2014*

Action required from users: Attention Required

S&P CAPITAL IQ
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* This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, this date may differ. For the actual day when the changes to your custom feed handler take effect, please contact your QuantFEED® project manager.

S&P Capital IQ Real-Time Solutions (QuantHouse®) – QuantFEED®
QuantFEED® Developer's Notice
Reference 19407 – 20973 – 20140609
June 13, 2014

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UPDATE OF THE SWX MARKET DATA STREAM

To reflect the changes caused by the dissemination of new values on the SWX 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
- 2. Functional Description
- 3. QuantFEED® Technical Implementation
- 4. Finding the Latest Information.

1. Update Summary

Table 1 Current update summary

Notice Reference	19407 – 20973 – 20140609
Exchanges	SWX
Concerned MICs	XSWX, XVTX, LIQU, XQMH
Internal Source ID	29
Effective Date	**2014-07-07***
Impact	• Update of the Referential Tags • Update of the Quotation Tags
Action required	**Attention Required**

2. Functional Description

Effective Monday, **July 07*, 2014**, S&P Capital IQ Real-Time Solutions enhances the content of the referential and quotation data to accommodate the new information disseminated on the SWX market data stream, as described below:

- 2.1. Changes to the Referential Data

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- 2.2. Changes to the Quotation Data.

2.1. Changes to the Referential Data

S&P Capital IQ Real-Time Solutions **updates** the values of the referential tags below to accommodate the information broadcast on the SWX market data stream:

Table 2 Referential tags disseminating updated values on the SWX market data stream

Tag Name	Numeric ID	Type
`InternalModificationDate`	9401	Timestamp

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

```
instr # 298/500007 = 625451303
    PriceCurrency                string{CHF}
    Symbol                       string{NOVN}
    Issuer                       string{Novartis}
    Description                  string{NOVARTIS N}
    SecurityType                 string{CS}
    FOSMarketId                  XVTX
    PriceType                    uint8{2}
    CFICode                      string{ESXXXR}
    RoundLot                     float64{1}
    MinTradeVol                  float64{0}
    SecuritySubType              string{Registered Share}
    DatedDate                    Timestamp{2001-05-07}
    SecurityGroup                string{1110}
    MarketSegmentID              string{HS}
    MarketSegmentDesc            string{Main Market}
    InternalCreationDate         Timestamp{2014-01-11 09:39:40:368}
    InternalModificationDate     Timestamp{2014-08-11 00:00:05:623}
    InternalSourceId             uint16{29}
    InternalAggregationId        uint16{29}
    LocalCodeStr                 string{CH0012005267_CHF}
    ISIN                         string{CH0012005267}
    Telekurs_Valor               string{1200526}
    PriceIncrement_dynamic_TableId       uint32{1900664}
    SecurityTradingId            string{3000042}
    OperatingMIC                 string{XSWX}
    SegmentMIC                   string{XVTX}
    CCP_Eligible                 bool{True}
    DynamicVariationRange        float64{1.5}
    MARKET_SWX_IssuerCountry     string{CH}
    MARKET_SWX_TradingSessionID  string{ACoK}
    MARKET_SWX_ListingStateCode  string{LI}
    MARKET_SWX_ListingStateDesc  string{Listed}
```

2.2. Changes to the Quotation Data

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

Table 3 Quotation tags added on the SWX market data stream

Tag Name	Numeric ID	Type
InternalDailyClosingPriceType	9155	Char

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

```
InstrumentStatusL1
-- 298/500001
        BID: 2234       21      @5
        ASK: 2236       71      @12
        LastPrice                       float64{2234}
        LastTradeQty                    float64{4}
        DailyHighPrice                  float64{2238}
        DailyLowPrice                   float64{2226}
        DailyTotalVolumeTraded          float64{1221}
        DailyTotalAssetTraded           float64{2726018}
        LastTradePrice                  float64{2234}
        LastTradeTimestamp              Timestamp{2014-06-11 09:01:08:463}
        InternalDailyOpenTimestamp      Timestamp{2014-06-11 07:01:02:015}
        InternalDailyCloseTimestamp     Timestamp{2014-06-10 15:31:51:062}
        InternalDailyHighTimestamp      Timestamp{2014-06-11 08:33:06:571}
        InternalDailyLowTimestamp       Timestamp{2014-06-11 07:23:04:833}
        InternalPriceActivityTimestamp  Timestamp{2014-06-11 09:01:25:006}
        TradingStatus                   17=ReadyToTrade
        LastOffBookTradePrice           float64{2234}
        LastOffBookTradeQty             float64{8}
        LastOffBookTradeTimestamp       Timestamp{2014-06-11 08:55:29}
        DailyOpeningPrice               float64{2236}
        PreviousDailyTotalVolumeTraded  float64{11494}
        PreviousDailyTotalAssetTraded   float64{25609367}
        PreviousDailyClosingPrice       float64{2232}
        PreviousBusinessDay             Timestamp{2014-06-10}
        CurrentBusinessDay              Timestamp{2014-06-11}
        DailyTotalOffBookVolumeTraded   float64{26}
        DailyTotalOffBookAssetTraded    float64{58084}
        InternalDailyClosingPriceType   char{a}
        InternalLastAuctionTimestamp    Timestamp{2014-06-11 07:00:56:024}
        TradingReferencePrice           float64{2232}
        MARKET_SWX_BookCondition        int32{3}
        MARKET_SWX_SecurityTradingStatus  int32{17}
        MARKET_SWX_TradingSessionSubID  string{2}
```

3. QuantFEED® Technical Implementation

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

- 3.1. InternalModificationDate
- 3.2. InternalDailyClosingPriceType.

3.1. InternalModificationDate

The values of the referential tag **InternalModificationDate** conveyed on the SWX market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the date when the referential data of an instrument has changed internally.

QuantFEED® implementation of the values available for the tag `InternalModificationDate` is described below:

Table 4 InternalModificationDate – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`InternalModificationDate`	QuantFEED® tag name.
Numeric ID	`9401`	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Timestamp`	Timestamp data type.
Format / Possible Values	*`[Internal Specific Value]`*	An ***internal specific value***, detailing the date when the referential data of an instrument has changed internally. **NOTE:** After 2014-07-07, the update mechanism of the tag `InternalModificationDate` changes. Thus, the timestamp will no longer be updated on a daily basis, unless there is a significant change in the referential data of the instrument.

3.2. InternalDailyClosingPriceType

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the SWX 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 values available for the tag `InternalDailyClosingPriceType` is described in the table below (the values disseminated as of 2014-07-07 are highlighted in `green`):

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	*`[Internal Specific Value]`*	An ***internal specific value***, detailing the type of daily closing price, as described below.

Table 5 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).

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.