S&P CAPITAL IQ
McGRAW HILL FINANCIAL

S&P Capital IQ Real-Time Solutions

FeedOS™ Feed Description

RAPID ADH (VIENNA, BUDAPEST CASH)

Reference n°: 20150724 – 26364 – 26832 – 27163

S&P Capital IQ Real-Time Solutions
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Reference 20150724 – 26364 – 26832 – 27163
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FEEDOS™ RAPID ADH (VIENNA, BUDAPEST CASH) FEED DESCRIPTION

As part of the S&P Capital IQ Real-Time Solutions FeedOS™ documentation, this feed description provides you with details about the types of data broadcast on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream, their possible values and current FeedOS technical implementation.

The topics this feed description covers include:

1. Referential Data

The following sections describe the characteristics of the referential data on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream, in terms of:

1.1. Available Markets and Branches

This section details the list of Markets and Branches available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream.

1.1.1. Markets

The RAPID ADH (VIENNA, BUDAPEST CASH) market data stream broadcasts informations about the following markets:

Table 1 List of markets available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream

FeedOS Market ID	Market
XWBO	Wiener Boerse A.G.
XPRA	Prague Stock Exchange
XBUD	Budapest Stock Exchange
XLJU	Ljubljana Stock Exchange

The following example shows the complete list of markets available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream and their IDs, returned by the `dumps` command:

```
MARKETS
market # 25     CC=AT/AUSTRIA/VIENNA,DESCR=WIENER BOERSE AG, WEB=www.wienerboerse.at
    MIC = XWBO
    TimeZone = Europe/Vienna
    Country = AT
    NbMaxInstruments = 2000000
market # 66     CC=CZ/CZECH REPUBLIC/PRAGUE,DESCR=STOCK EXCHANGE PRAGUE CO. LTD; THE,
WEB=www.pse.cz
    MIC = XPRA
    TimeZone = Europe/Prague
    Country = CZ
    NbMaxInstruments = 2000000
market # 112    CC=HU/HUNGARY/BUDAPEST,DESCR=BUDAPEST STOCK EXCHANGE, WEB=www.fornax.hu
    MIC = XBUD
    TimeZone = Europe/Budapest
    Country = HU
    NbMaxInstruments = 2000000
market # 230    CC=SI/SLOVENIA/LJUBLJANA,DESCR=LJUBLJANA STOCK EXCHANGE; INC.,
WEB=www.ljse.si
    MIC = XLJU
    TimeZone = Europe/Ljubljana
    Country = SL
    NbMaxInstruments = 2000000
```

1.1.2. Branches

The example below shows the complete list of branches available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream for each market, returned by the `dumps` command. Each branch displays the following details: `FOSMarketID`, `SecurityType`, `CFICode` and `Quantity` (of instruments):

```
BRANCHES
    { XWBO CORP DBVXXX } qty: 220
    { XWBO CORP DBXXXX } qty: 285
    { XWBO CORP DBZXXX } qty: 70
    { XWBO CS   EXXXXX } qty: 123
    { XWBO ETF  EUXXXE } qty: 3
    { XWBO ETF  EUXXXX } qty: 15
    { XWBO GO   DBVTXX } qty: 4
    { XWBO GO   DBVXXX } qty: 1309
    { XWBO GO   DBXTXX } qty: 25
    { XWBO GO   DBXXXX } qty: 2125
    { XWBO GO   DBZXXX } qty: 212
    { XWBO TINT DBXTXX } qty: 220
    { XWBO WAR  RWXCCX } qty: 1553
    { XWBO WAR  RWXCPX } qty: 757
    { XWBO WAR  RWXXCX } qty: 17
    { XWBO WAR  RWXXXX } qty: 4604
    { XBUD CORP DBFXXX } qty: 107
    { XBUD CORP DBVXXX } qty: 22
    { XBUD CS   ESXXXX } qty: 76
    { XBUD GO   DBFTXX } qty: 17
    { XBUD GO   DBVTXX } qty: 5
    { XBUD MBS  DBFSXX } qty: 24
    { XBUD MBS  DBVSXX } qty: 3
    { XBUD MF   EUCXXX } qty: 137
    { XBUD MF   EUOXXX } qty: 28
    { XBUD TB   DBFTFX } qty: 8
    { XBUD WAR  RWXXXX } qty: 135
```

1.2. Types of Instruments

This following section describe the instruments available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream, according to their type:

1.2.1. Bonds

The sample below illustrates the details of a bond:

```
instr # 25/13811 = 52442611
    PriceCurrency               string{USD}
    Symbol                      string{IACAP LIQU.NOTES S.32 DUE 2035}
    Issuer                      string{IACS}
    Description                 string{IACAP LIQU.NOTES S.32 DUE 2035}
    SecurityType                string{CORP}
    StdMaturity                 string{203507}
    FOSMarketId                 XWBO
    CFICode                     string{DBVXXX}
    RoundLot                    float64{1000}
    MinTradeVol                 float64{1000}
    SecuritySubType             string{BON}
    SecurityGroup               string{CBS}
    MarketSegmentID             string{VIL}
    InternalCreationDate        Timestamp{2015-07-20 04:01:30:253}
    InternalModificationDate    Timestamp{2015-07-23 04:15:00:251}
    InternalSourceId            uint16{240}
    InternalAggregationId       uint16{240}
    InternalEntitlementId       int32{1121}
    LocalCodeStr                string{XS1246650862}
    ISIN                        string{XS1246650862}
    PriceIncrement_static       float64{0.01}
    MaturityYear                uint16{2035}
    MaturityMonth               uint8{7}
    MaturityDay                 uint8{5}
    OperatingMIC                string{XWBO}
    SegmentMIC                  string{XVIE}
    MARKET_XETRA_ISIX           uint32{3040}
    MARKET_XETRA_OptimalGatewayLocation string{0001}
```

1.2.2. Equities

The sample below illustrates the details of an equity:

```
instr # 25/6274 = 52435074
    PriceCurrency               string{EUR}
    Symbol                      string{WPAG}
    Description                 string{WP AG}
    SecurityType                string{CS}
    FOSMarketId                 XWBO
    CFICode                     string{EXXXXX}
    RoundLot                    float64{1}
    MinTradeVol                 float64{1}
    SecuritySubType             string{EQU}
    SecurityGroup               string{MIDC}
    MarketSegmentID             string{VIM}
    InternalCreationDate        Timestamp{2015-04-10 04:02:00:941}
    InternalModificationDate    Timestamp{2015-07-23 04:15:00:656}
    InternalSourceId            uint16{240}
    InternalAggregationId       uint16{240}
    InternalEntitlementId       int32{1121}
    LocalCodeStr                string{AT0000A1DDL3}
    ISIN                        string{AT0000A1DDL3}
    PriceIncrement_dynamic_TableId      uint32{15728740}
    OperatingMIC                string{XWBO}
    SegmentMIC                  string{XVIE}
    MARKET_XETRA_ISIX           uint32{567}
    MARKET_XETRA_OptimalGatewayLocation string{0001}
```

1.2.3. Warrants

The sample below illustrates the details of a warrant:

```
instr # 25/13803 = 52442603
    PriceCurrency               string{GBP}
    Symbol                      string{SOUND OIL CALL 15-20}
    Description                 string{SOUND OIL CALL 15-20}
    SecurityType                string{WAR}
    StdMaturity                 string{202005}
    StrikePrice                 float64{0.24}
    FOSMarketId                 XWBO
    CFICode                     string{RWXCCX}
    RoundLot                    float64{1}
    MinTradeVol                 float64{1}
    SecuritySubType             string{WAR}
    SecurityGroup               string{WA07}
    MarketSegmentID             string{VIW}
    InternalCreationDate        Timestamp{2015-07-17 04:01:31:207}
    InternalModificationDate    Timestamp{2015-07-23 04:15:00:759}
    InternalSourceId            uint16{240}
    InternalAggregationId       uint16{240}
    InternalEntitlementId       int32{1121}
    LocalCodeStr                string{GB00BY4JQH96}
    ISIN                        string{GB00BY4JQH96}
    MaturityYear                uint16{2020}
    MaturityMonth               uint8{5}
    MaturityDay                 uint8{22}
    PriceIncrement_dynamic_TableId      uint32{15728745}
    OperatingMIC                string{XWBO}
    SegmentMIC                  string{XVIE}
    MARKET_XETRA_ISIX           uint32{2654}
    MARKET_XETRA_OptimalGatewayLocation string{0001}
```

1.3. Specific Referential Tags

The following sections describe additional, specific referential tags available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream:

- 1.3.1. SecurityGroup
- 1.3.2. OperatingMIC
- 1.3.3. SegmentMIC
- 1.3.4. MARKET_XETRA_ISIX
- 1.3.5. MARKET_XETRA_OptimalGatewayLocation.

1.3.1. SecurityGroup

The values of the referential tag **Security Group** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Referential* to indicate an exchange specific name assigned to a group of related securities which may be concurrently affected by market events and actions.

FeedOS implementation of the tag `SecurityGroup` is described in the following table:

Table 2 SecurityGroup – technical implementation in FeedOS

Component	Value	Description
Tag Name	`SecurityGroup`	FeedOS tag name.
Numeric ID	`1151`	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	*`[Exchange Specific Value]`*	An ***exchange specific value***, indicating an exchange specific name assigned to a group of related securities which may be concurrently affected by market events and actions.

The table below shows the possible combinations of Security Types and CFI Codes, based on the instrument Security Group, before and after 2015-06-22:

Table 3 Possible Security Type and CFI Code combinations within Security Groups

Security Group	Values before 2015-06-22	Values after 2015-06-22
AOD	CS EXXXXX	CS EXXXXX
ATX	CORP DBXXXX CORP DBZXXX CS EXXXXX	CS EXXXXX ETF EUXXXX GO DBXXXX GO DBZXXX WAR RWXCCX WAR RWXCPX WAR RWXXXX
B01A	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX
B01S	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX
B03A	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX
B03S	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX
B04A	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX
B05A	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX
B05S	CORP DBVXXX CORP DBXXXX	GO DBVXXX GO DBXXXX
B07A	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX
B07S	CORP DBVXXX CORP DBXXXX CORP DBZXXX	GO DBVXXX GO DBXXXX GO DBZXXX

Table 3 Possible Security Type and CFI Code combinations within Security Groups (Continued)

Security Group	Values before 2015-06-22		Values after 2015-06-22	
B09A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B09S	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B11A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B11S	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
B12A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B13A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B13S	CORP	DBVXXX	GO	DBVXXX
B15A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B15S	CORP	DBXXXX	GO	DBXXXX
B17A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B17S	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B19A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
B21A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
B23A	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
BAC1	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
BNCA	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
BNCS	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX
	CORP	DBZXXX	GO	DBZXXX
BOST			WAR	RWXXXX
BSC1	CORP	DBVXXX	GO	DBVXXX
	CORP	DBXXXX	GO	DBXXXX

Table 3 Possible Security Type and CFI Code combinations within Security Groups (Continued)

Security Group	Values before 2015-06-22	Values after 2015-06-22
CBA	CORP DBVXXX CORP DBXXXX CORP DBZXXX	CORP DBVXXX CORP DBXXXX CORP DBZXXX GO DBVXXX GO DBXXXX GO DBZXXX
CBNS		WAR RWXXXX
CBON		WAR RWXXXX
CBS	CORP DBVXXX CORP DBXXXX CORP DBZXXX	CORP DBVXXX CORP DBXXXX CORP DBZXXX WAR RWXXXX
CCE1		WAR RWXXXX
CCE2		WAR RWXXXX
CDIS		WAR RWXXXX
CDIZ		WAR RWXXXX
CEA0		WAR RWXXCX WAR RWXXXX
CEAP	CORP DBVXXX CORP DBXXXX	GO DBVXXX GO DBXXXX
CEB1		WAR RWXCCX WAR RWXCPX WAR RWXXXX
CEB2		WAR RWXXXX
CEB3		WAR RWXXXX
CEB4		WAR RWXXXX
CEB5		WAR RWXXXX
CINV		WAR RWXXXX
CNU1		WAR RWXXXX
COL	CORP DBVXXX CS EXXXXX	CS EXXXXX GO DBVXXX WAR RWXXXX
COTH		WAR RWXXXX
CPC2	CORP DBXXXX	GO DBXXXX
CPCT	CORP DBVXXX CORP DBXXXX	GO DBVXXX GO DBXXXX
CTD	CS EXXXXX	CS EXXXXX WAR RWXXXX
CTP	CS EXXXXX	CS EXXXXX WAR RWXXXX
ETF		ETF EUXXXE ETF EUXXXX
FOAO		ETF EUXXXX
GOVB	CORP DBVXXX CORP DBXXXX	GO DBVTXX GO DBXTXX
GSTR	CORP DBXXXX	TINT DBXTXX
GTB	CORP DBZXXX	GO DBZXXX

Table 3 Possible Security Type and CFI Code combinations within Security Groups (Continued)

Security Group	Values before 2015-06-22	Values after 2015-06-22
MIDA	CS EXXXXX	CS EXXXXX
MIDC	CS EXXXXX	CS EXXXXX WAR RWXXXX
OLD	CORP DBVXXX CORP DBXXXX CORP DBZXXX CS EXXXXX	CORP DBVXXX CORP DBXXXX CORP DBZXXX CS EXXXXX ETF EUXXXX GO DBVXXX GO DBXXXX WAR RWXCCX WAR RWXCPX WAR RWXXXX
OLF	CS EXXXXX	CS EXXXXX
SNCS		WAR RWXCCX
WA01		WAR RWXCCX WAR RWXCPX
WA03		GO DBXXXX
WA03		WAR RWXCCX WAR RWXCPX
WA04		GO DBXXXX
WA04		WAR RWXCCX WAR RWXCPX
WA05		GO DBXXXX
WA05		WAR RWXCCX WAR RWXCPX
WA08		GO DBXXXX
WA08		WAR RWXCCX
WA11		GO DBVXXX GO DBXXXX
WA11		WAR RWXCCX WAR RWXCPX
WA12		GO DBXXXX
WA12		WAR RWXCCX WAR RWXCPX

1.3.2. OperatingMIC

The values of the referential tag **OperatingMIC** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Referential* to specify the parent MIC.

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

Table 4 OperatingMIC – technical implementation in FeedOS

Component	Value	Description
Tag Name	`OperatingMIC`	FeedOS tag name.
Numeric ID	`9533`	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***, specifying the parent MIC.
Possible Values	`XWBO`	Parent MIC for all Wiener Börse's branches.
	`XBUD`	Parent MIC for all udapest Stock Exchange's branches.

1.3.3. SegmentMIC

The values of the referential tag **SegmentMIC** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Referential* to specify the child MIC.

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

Table 5 SegmentMIC – technical implementation in FeedOS

Component	Value	Description
Tag Name	`SegmentMIC`	FeedOS tag name.
Numeric ID	`9534`	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***, specifying the child MIC.
Possible Values	`XVIE`	Child MIC for all Wiener Börse's branches.

1.3.4. MARKET_XETRA_ISIX

The values of the referential tag **MARKET_XETRA_ISIX** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Referential* to uniquely identify an instrument across the system.

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

Table 6 MARKET_XETRA_ISIX – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_XETRA_ISIX`	FeedOS tag name.
Numeric ID	`11101`	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	`UInt32`	UInt32 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, uniquely identifying an instrument across the system.

1.3.5. MARKET_XETRA_OptimalGatewayLocation

The values of the referential tag **MARKET_XETRA_OptimalGatewayLocation** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Referential* to identify the optimal performance gateway location for trading the instrument.

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

Table 7 MARKET_XETRA_OptimalGatewayLocation – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_XETRA_OptimalGatewayLocation`	FeedOS tag name.
Numeric ID	`11102`	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	***`[Exchange Specific Value]`***	An ***exchange specific value***, identifying the optimal performance gateway location for trading the instrument.

2. Quotation Data

The following sections describe the characteristics of the quotation data on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream, in terms of:

- 2.1. Quotation Values
- 2.2. TradingStatus
- 2.3. Specific Quotation Tags
- 2.4. MBL and MBO Data.

2.1. Quotation Values

The example below shows the possible values of an instrument on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream:

```
InstrumentStatusL1
-- 25/13195
        BID: 0.31       10000   @1
        ASK: 0.35       10000   @1
        LastPrice                       float64{0.31}
        InternalDailyOpenTimestamp      Timestamp{2015-07-23 07:15:05:268}
        InternalDailyCloseTimestamp     Timestamp{2015-07-22 21:00:00:183}
        InternalDailyHighTimestamp      Timestamp{2015-07-22 15:25:26:662}
        InternalDailyLowTimestamp       Timestamp{2015-07-22 15:25:26:662}
        InternalPriceActivityTimestamp  Timestamp{2015-07-23 14:08:59:921}
        TradingStatus                   5=PriceIndication
        PreviousDailyClosingPrice       float64{0.31}
        PreviousBusinessDay             Timestamp{2015-07-22}
        CurrentBusinessDay              Timestamp{2015-07-23}
        PreviousInternalDailyClosingPriceType   char{d}
        MARKET_XETRA_ULTRA_PLUS_InstrumentStatus        float64{39}
        MARKET_ADH_OrderbookStateCode   string{1}
```

For more details about the fields and tags available in quotation data type, and their possible values, see *FeedOS Quotation Tags Guide*.

2.2. TradingStatus

Each time a modification of the trading status occurs, the values of the quotation tag **TradingStatus** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Other Values*:

- 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 `TradingStatus` is described in the table below:

Table 8 TradingStatus – technical implementation in FeedOS

Component	Value	Description
Tag Name	`TradingStatus`	FeedOS tag name.
Numeric ID	9100	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`Enum`	Enumeration data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the characteristics of the trading status.

Table 8 TradingStatus – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	2	Trading Halt
	5	Price Indication
	15	New Price Indication
	17	Ready to Trade
	18	Not Available for Trading
	21	Pre-Open

2.3. Specific Quotation Tags

The following sections describe additional, specific quotation tags available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream:

- 2.3.1. Trade Conditions
- 2.3.2. Other Values.

2.3.1. Trade Conditions

The following subsections describe the trade conditions available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream:

- 2.3.1.1. MARKET_XETRA_ULTRA_PLUS_TradeType
- 2.3.1.2. MARKET_XETRA_ULTRA_PLUS_TradeTypeIndicator.

2.3.1.1. MARKET_XETRA_ULTRA_PLUS_TradeType

The values of the quotation tag **MARKET_XETRA_ULTRA_PLUS_TradeType** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Context* to detail the trade type:

- 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_XETRA_ULTRA_PLUS_TradeType` is described in the table below:

Table 9 XETRA Ultra Plus Trade Type – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_XETRA_ULTRA_PLUS_TradeType`	FeedOS tag name.
Numeric ID	`15900`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, as described below, concerning the characteristics of the trade type.

Table 9 XETRA Ultra Plus Trade Type – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	4	Last traded price (it indicates the normal trade; by default, not sent).
	9	Price from the subscription period
	10	BEST price
	11	Midpoint order trade
	25	Price determined with Bundesbank participation

2.3.1.2. MARKET_XETRA_ULTRA_PLUS_TradeTypeIndicator

The values of the quotation context tag **MARKET_XETRA_ULTRA_PLUS_TradeTypeIndicator** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Context* to detail 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_XETRA_ULTRA_PLUS_TradeTypeIndicator` is described in the table below:

Table 10 MARKET_XETRA_ULTRA_PLUS_TradeTypeIndicator – technical implementation in FeedOS

Component	Value	Description
Tag Name	`MARKET_XETRA_ULTRA_PLUS_TradeTypeIndicator`	FeedOS tag name.
Numeric ID	15901	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	*[Exchange Specific Value]*	An ***exchange specific value***, detailing the type of trade.
Possible Values	A	Auction
	C	Continuous Trading
	E	End-of-Day Auction
	F	Closing Auction
	L	Liquidity Interruption
	M	Mini Auction
	O	Opening Auction
	V	Volatility / Interruption in Continuous Trading

2.3.2. Other Values

The following subsections describe the other values available on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream:

- 2.3.2.1. LastAuctionImbalanceSide
- 2.3.2.2. InternalDailyClosingPriceType
- 2.3.2.3. XETRA_Ultra_Plus_InstrumentStatus.

2.3.2.1. LastAuctionImbalanceSide

The values of the quotation tag **LastAuctionImbalanceSide** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the imbalance side of a closing auction:

- 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 `LastAuctionImbalanceSide` is described in the table below:

Table 11 LastAuctionImbalanceSide – technical implementation in FeedOS

Component	Value	Description
Tag Name	`LastAuctionImbalanceSide`	FeedOS tag name.
Numeric ID	`9151`	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	*`[Exchange Specific Value]`*	An ***exchange specific value***, detailing the imbalance side of a closing auction.
Possible Values	`1`	Buy
	`2`	Sell

2.3.2.2. InternalDailyClosingPriceType

The values of the quotation tag **InternalDailyClosingPriceType** conveyed on the RAPID ADH (VIENNA, BUDAPEST CASH) 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 values available for the tag `InternalDailyClosingPriceType` is described in the table below (the values currently disseminated are highlighted in `green`):

Table 12 InternalDailyClosingPriceType – technical implementation in FeedOS

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

Table 12 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).

2.3.2.3. XETRA_Ultra_Plus_InstrumentStatus

Each time a change of the instrument status occurs, the values of the quotation tag **XETRA_Ultra_Plus_InstrumentStatus** tag in the RAPID ADH (VIENNA, BUDAPEST CASH) market data stream are disseminated via FeedOS data stream in *Other Values*:

- 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 `XETRA_Ultra_Plus_InstrumentStatus` is described in the table below:

Table 13 XETRA_Ultra_Plus_InstrumentStatus – technical implementation in FeedOS

Component	Value	Description	
Tag Name	`MARKET_XETRA_ULTRA_PLUS_InstrumentStatus`	FeedOS tag name.	
Numeric ID	`14480`	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.	
Type	`Float64`	Float64 data type.	
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, as described below, concerning the status of the instrument.	**Trading Status' Mapping**
Possible Values	0	Start	18 - NotAvailableForTrading
	1	Pre Trading	15 - NewPriceIndication
	2	Pre-call	18 - NotAvailableForTrading
	3	Crossing Period	5 - PriceIndication
	4	Closing Crossing Period	5 - PriceIndication
	5	Opening Auction Call	21 - PreOpen
	6	Intra Day Auction Call	5 - PriceIndication
	7	Closing Auction Call	5 - PriceIndication

Table 13 XETRA_Ultra_Plus_InstrumentStatus – technical implementation in FeedOS (Continued)

Component	Value	Description	
Possible Values	8	End Auction Call	5 - PriceIndication
	9	Auction Call	5 - PriceIndication
	10	Opening Auction IPO Call	21 - PreOpen
	11	Opening Auction IPO Freeze	2 - TradingHalt
	12	Intra Day Auction IPO Call	5 - PriceIndication
	13	Intra Day Auction IPO Freeze	2 - TradingHalt
	14	IPO	5 - PriceIndication
	15	Quote Driven IPO Freeze	2 - TradingHalt
	16	Opening Auction Pre-Orderbook Balancing	21 - PreOpen
	17	Intra Day Auction Pre-Orderbook Balancing	5 - PriceIndication
	18	Closing Auction Pre-Orderbook Balancing	5 - PriceIndication
	19	End-of-day Auction Pre-Orderbook Balancing	5 - PriceIndication
	20	Pre-Orderbook Balancing of Quote Driver Auction	5 - PriceIndication
	21	Opening Auction Orderbook Balancing	21 - PreOpen
	22	Intra Day Auction Orderbook Balancing	5 - PriceIndication
	23	Closing Auction Orderbook Balancing	5 - PriceIndication
	24	End-of-day Auction Orderbook Balancing	5 - PriceIndication
	25	Orderbook Balancing	5 - PriceIndication
	26	Continuous Trading	17 - ReadyToTrade
	27	In Between Auctions	15 - New Price Indication
	28	Post Trading	15 - NewPriceIndication
	29	End of Trading	18 - NotAvailableForTrading
	30	Halt	2 - TradingHalt
	31	Suspend	2 - TradingHalt
	32	Volatility Interruption	5 - PriceIndication
	35	Add	18 - NotAvailableForTrading
	36	Delete	18 - NotAvailableForTrading
	38	Call Unfreeze	17 - ReadyToTrade
	39	Continuous Auction Pre-Call	5 - PriceIndication
	40	Continuous Auction Call	5 - PriceIndication
	41	Continuous Auction Freeze	2 - TradingHalt
	51	Knocked Out	18 - NotAvailableForTrading
	52	Knocked Out / Revoked	5 - PriceIndication
	53	Midpoint Book Freeze	17 - ReadyToTrade
	54	Midpoint Book Unfreeze	17 - ReadyToTrade

2.4. MBL and MBO Data*

The MBL book has a 20-level depth. The MBO book is full depth.

3. Closing Price

The closing price is provided by the market. If the closing price is not sent by the market, the last trade is used instead. There is no settlement price.

4. Finding the Latest Information

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

- E-mail: support@quanthouse.com
- Web: http://support.quanthouse.com.

* The MBL and MBO data may not be included by default in your Level1 data subscription, but sold separately. Depending on your contract, additional terms, conditions and fees may apply. For more details about the subscription options, please contact S&P Capital IQ Real-Time Solutions.