Plaza-2 gateway for Securities and FX markets

version 7.12

Moscow 2023

Table of Contents

History of changes

Date	Changes
14.04.2022	Changes applied: • Stream MCXSPOT_INFO_REPL, table CURRENCY, field CROSSRATE: field type changed to ‘d16.6’. • Stream MCXSPOT_INFO_REPL, table SECURITIES, field FACEVALUE: field type changed to ‘d16.6’. • Stream MCXSPOT_INFO_REPL, table SECURITIES, field ACCRUEDINT: field type changed to ‘d16.6’. • Stream MCXSPOT_INFO_REPL, table SEC_SETTLECODE, field ACCRUEDINT: field type changed to ‘d16.6’. • Stream MCXSPOT_INFO_REPL, table SEC_SETTLECODE, field ACCRUEDINT2: field type changed to ‘d16.6’. • Stream MCXCC_INFO_REPL, table CURRENCY, field CROSSRATE: field type changed to ‘d16.6’. • Stream MCXCC_INFO_REPL, table SECURITIES, field FACEVALUE: field type changed to ‘d16.6’.
23.07.2021	Changes applied: • Stream MCXCC_INFO_REPL, table CURRENCY, field CROSSRATE: field type changed to ‘f’. • Stream MCXCC_MDCOMMON_REPL, table COMMON, field VOLTODAY: field type changed to ‘f’. • Stream MCXSPOT_MDCOMMON_REPL, table COMMON, field VOLTODAY: field type changed to ‘f’. • Stream MCXSPOT_INFO_REPL, table CURRENCY, field CROSSRATE: field type changed to ‘f’. • Stream MCXSPOT_INFO_REPL, table SECURITIES, field ACCRUEDINT: field type changed to ‘f’. • Stream MCXSPOT_INFO_REPL, table SECURITIES: deleted field FULLCOVEREDFLAG (c1). • Stream MCXSPOT_INFO_REPL, table SEC_SETTLECODE, field ACCRUEDINT: field type changed to ‘f’. • Stream MCXSPOT_INFO_REPL, table SEC_SETTLECODE, field ACCRUEDINT2: field type changed to ‘f’. • Stream MCXSPOT_INFO_REPL, table SEC_SETTLECODE: added field TRANSFERSONLY (c1). • Stream MCXSPOT_MDTRADE_REPL, table ALL_TRADES: deleted field REPO2VALUE (d16.2). • Stream MCXSPOT_MDTRADE_REPL, table ALL_TRADES: added field REPO2VALUEBALANCE (d16.2). • Stream MCXSPOT_MDTRADE_REPL, table ALL_TRADES: added field TRADINGSESSION (c1).

1. Introduction

1.1. Purpose of the document

The purpose of this document is to provide users with information which can be necessary in designing and developing software for accessing the securities market and FX market using the Plaza-2 SPECTRA gateway.

The document overviews some peculiarities of the gateway in accessing the securities and FX markets. Also, the document contains details of the translated data (including replication streams and tables), and list of controlling commands.

Please note that information on the main operational principles of the gateway, general overview of SPECTRA, as well as the software configuration, installation and configuration details are described on **p2gate_en.pdf** [http://ftp.moex.com/pub/ClientsAPI/Spectra/CGate/prod/docs/p2gate_en.pdf]. The rules for working with CGate API can be found on **cgate_en.pdf** [http://ftp.moex.com/pub/ClientsAPI/Spectra/CGate/prod/docs/cgate_en.pdf].

1.2. Target audience

The document is targeted at business analysts, system architects and developers, who take part in programming and developing software for accessing the Moscow Exchange markets.

Please note that this way of accessing is mostly designed for users who are already familiar with the Plaza-2 SPECTRA gateway. For all the less experienced users, it is strictly recommended to contact our technical support team in order to obtain the latest and up-to-date information about the markets accessing protocols specifications and peculiarities.

2. Replication scheme SPOT

2.1. Stream MCXSPOT_AGGR_REPL - quotes for instruments

2.1.1. Data scheme

Tables:

- ORDERBOOK - Orderbook

2.1.1.1. Table ORDERBOOK: Orderbook

Table 1. Fields of table ORDERBOOK

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Instrument
BUYSELL	c1	Buy/Sell
PRICE	d16.6	Currency exchange rate
QUANTITY	i8	Trade volume in lots
YIELD	d9.2	Yield
ACTIVATIONTIME	t	Order activation time
REPOVALUE	d16.2	Repo value

2.2. Stream MCXSPOT_MDCOMMON_REPL - general information on instruments

2.2.1. Data scheme

Tables:

- COMMON - Financial statistics

2.2.1.1. Table COMMON: Financial statistics

Table 2. Fields of table COMMON

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Instrument
STATUS	c1	Status
TRADINGSTATUS	c1	Trading status
BID	d16.6	Best bid price
BIDDEPTH	i8	Bid depth
BIDDEPTHT	i8	Total bid
NUMBIDS	i4	Number of bids
OFFER	d16.6	Best offer price
OFFERDEPTH	i8	Offer depth
OFFERDEPTHT	i8	Total offer
NUMOFFERS	i4	Number of offers
OPEN	d16.6	First trade price

Field	Type	Description
HIGH	d16.6	Maximum trade price
LOW	d16.6	Minimum trade price
LAST	d16.6	Last trade price
CHANGE	d16.6	Price change to the last price of the previous day
QTY	i8	Lots in the last trade
TIME	t	Time of the last trade
VOLTODAY	f	Daily volume of trades, expressed in securities
VALTODAY	i8	Volume, today, expressed in the currency of settlement
VALUE	d16.2	Value of the last trade, in the currency of settlement
WAPRICE	d16.6	Weighted-average price
HIGHBID	d16.6	Best bid price during the trading session
LOWOFFER	d16.6	Best offer price during the trading session
NUMTRADES	i4	Number of trades, today
YIELDATWAPRICE	d9.2	Yield at pricing
PRICEMINUSPREVWAPRICE	d16.6	Price change to the previous day pricing
CLOSEPRICE	d16.6	Post-trading price
CLOSEYIELD	d9.2	Yield at post-trading period price
LASTBID	d16.6	Last bid of the session
LASTOFFER	d16.6	Last offer of the session
LASTSETTLECODE	c12	Settlement code of the last trade
MARKETPRICE	d16.6	Market price of the previous day
MARKETPRICETODAY	d16.6	Market price
DURATION	d7.2	Duration
SETTLECODE	c12	Settlement code
LOPENPRICE	d16.6	Opening price
LCURRENTPRICE	d16.6	Current price
LCLOSEPRICE	d16.6	Closing price
MARKETPRICE2	d16.6	Average value of FX fixing Curr calculated from 11:59 till 12:00
ADMITTEDQUOTE	d16.6	Average value of FX fixing ME and FX fixing EBS
OPENPERIODPRICE	d16.6	Pre-trading price
CLOSING_AUCTION_PRICE	d16.6	CA price
CLOSING_AUCTION_VOLUME	i8	CA volume
DPVALINDICATORBUY	c1	Bid flag (dark pools)
DPVALINDICATORSELL	c1	Sell flag (dark pools)

2.3. Stream MCXSPOT_INFO_REPL - reference information

2.3.1. Data scheme

Tables:

- AUCTSTATS - Auction stats
- BCMESSAGES - Messages
- BOARDS - Trading boards
- CURRENCY - Currencies directory
- DPAUCTIONS - Dark pool auctions
- INDEXES - Indexes
- MARKETS - Markets
- SECURITIES - Financial instruments

- SEC_SETTLECODE - Accrued interest depending on the settlement date
- SETTLECODES - Settlement codes
- STATS - Parameters of the trading system
- TESYSTIME - System time of the trading server
- TRADETIME - Trading schedule
- TRDTIMEGROUPS - Events groups
- TRDTIMETYPES - Trading schedule event types

2.3.1.1. Table AUCTSTATS: Auction stats

Table 3. Fields of table AUCTSTATS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
PERIOD	c1	Period
SECBOARD	c4	Board
SECCODE	c12	Instrument
PLANNEDTIME	t	Planned Auction Time
STARTTIME	t	Auction start time
ENDTIME	t	Auction end time
AUCTPRICE	d16.6	Auction price
VALUE	d16.2	Auction trade value, in the currency of settlement
VOLUME	i8	Total volume of all trades, in number of securities
NUMTRADES	i4	Number of trades
IMBALANCE	i8	Imbalance (total volume of orders that will be left unmatched if the auction ends with currently expected price)
MARKETVOLB	i8	Total volume of market buy orders based on currently expected price, in number of securities
MARKETVOLS	i8	Total volume of market sell orders based on currently expected price, in number of securities

2.3.1.2. Table BCMESSAGES: Messages

Table 4. Fields of table BCMESSAGES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
URGENCY	c1	Urgency
FROMUSER	c12	Sender
MSGTIME	c8	Time
MSGTEXT	c256	Text

2.3.1.3. Table BOARDS: Trading boards

Table 5. Fields of table BOARDS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
BOARDID	c4	Board code

Field	Type	Description
BOARDNAME	c30	Board
STATUS	c1	Status
MARKETID	c4	Market
LATNAME	c30	Latin name

2.3.1.4. Table CURRENCY: Currencies directory

Table 6. Fields of table CURRENCY

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
CURRCODE	c4	Currency
CURRENCYNAME	c30	Name
CROSSRATE	d16.6	Price

2.3.1.5. Table DPAUCTIONS: Dark pool auctions

Table 7. Fields of table DPAUCTIONS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Instrument
PLANNEDTIME	t	Planned Auction Time
STARTTIME	t	Auction start time
ENDTIME	t	Auction end time
LCURRENTPRICE	d16.6	Official current price
PRICEBOUNDUP	d16.6	Maximum allowed price
PRICEBOUNDDOWN	d16.6	Minimum allowed price
AUCTPRICE	d16.6	Auction price
VALUE	d16.2	Volume
VOLUME	i8	Trade volume
NUMTRADES	i4	Trades

2.3.1.6. Table INDEXES: Indexes

Table 8. Fields of table INDEXES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
INDEXBOARD	c4	Board
INDEXCODE	c12	Index code
NAME	c30	Name
SHORTNAME	c10	Index
CURRENTVALUE	d16.6	Current
LASTVALUE	d16.6	Closing
DECIMALS	i1	Decimals
LATNAME	c30	Latin name
TIME	t	Calculation time

Field	Type	Description
OPENVALUE	d16.6	Opening
VALTODAY	i8	Trading volume
MIN	d16.6	Minimum
MAX	d16.6	Maximum
INDEXCROSSRATE	d9.4	Index currency exchange rate

2.3.1.7. Table MARKETS: Markets

Table 9. Fields of table MARKETS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
MARKETID	c4	Market
MARKETNAME	c30	Name
STATUS	c1	Status
LATNAME	c30	Latin name

2.3.1.8. Table SECURITIES: Financial instruments

Table 10. Fields of table SECURITIES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Instrument code
SECNAME	c30	Instrument name
REMARKS	c8	Notes
SHORTNAME	c10	Instrument shortened name
STATUS	c1	Status
TRADINGSTATUS	c1	Trading status
MARKETCODE	c4	Market
INSTRID	c4	Instruments group
LOTSIZE	i4	Lot size
MINSTEP	d16.6	Minimum price step
FACEVALUE	d16.6	Face value
FACEUNIT	c4	Face value currency
PREVDATE	t	Last trading date
PREVPRICE	d16.6	Last price of the previous day
DECIMALS	i1	Decimals
YIELD	d9.2	Last trade yield
ACCRUEDINT	d16.6	Accrued coupon interest
PRIMARYDIST	c1	Listing
MATDATE	t	Maturity date
COUPONVALUE	d13.2	Coupon value
COUPONPERIOD	i4	Coupon period
NEXTCOUPON	t	Coupon expiration date
ISSUESIZE	i8	Issue size
PREVWAPRICE	d16.6	Previous day pricing
YIELDATPREVWAPRICE	d9.2	Yield at the last day pricing

Field	Type	Description
REPO2PRICE	d16.6	Repo far leg price
CURRENCYID	c4	Underlying currency
BUYBACKPRICE	d16.6	Base price to calculate yield
BUYBACKDATE	t	Date to calculate yield for
AGENTID	c12	Listing agent
QUOTEBASIS	c1	Price type
ISIN	c12	ISIN
LATNAME	c30	Latin name
REGNUMBER	c30	Registration number
PREVLEGALCLOSEPRICE	d16.6	Closing price of the previous day
PREVADMITTEDQUOTE	d16.6	Admitted quote of the previous day
SECTYPE	c1	Security type
ACTIVATIONDATE	t	Activation date
PREVLOTSIZE	i4	Previous lot size
LOTSIZECHANGEDATE	t	Date of the lot size last change
ORIGINTRADINGSTATUS	c1	Session status
ISSUESIZEPLACED	i8	Placed volume
LISTLEVEL	i1	Listing level
COMMENTS	c128	Comments
DIVIDENDVALUE	d16.2	Dividend value, rub
DIVIDENDDATE	t	Dividend date

2.3.1.9. Table SEC_SETTLECODE: Accrued interest depending on the settlement date

Table 11. Fields of table SEC_SETTLECODE

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Security
SETTLECODE	c12	Settlement code
ACCRUEDINT	d16.6	Accrued interest
ACCRUEDINT2	d16.6	Accrued interest for the 2nd REPO leg
PRICE2	d16.6	Buyback price
REPORATE	d16.6	REPO rate
SETTLEDATE	t	Settlement date
SETTLEDATE2	t	Settlement date 2
REPOTERM	i4	REPO term
TRANSFERSONLY	c1	Transfers only

2.3.1.10. Table SETTLECODES: Settlement codes

Table 12. Fields of table SETTLECODES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SETTLECODE	c12	Settlement code
DESCRIPTION	c30	Details
SETTLEDATE	t	Settlement date

Field	Type	Description
SETTLEDATE2	t	Settlement date for the repo far leg

2.3.1.11. Table STATS: Parameters of the trading system

Table 13. Fields of table STATS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SESSION	i8	Session number
TEVERSION	c10	Version
SYSTEMID	c1	Type
TESTSYSTEM	c1	Test system

2.3.1.12. Table TESYSTIME: System time of the trading server

Table 14. Fields of table TESYSTIME

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TIME	t	Current time
DATE	t	Date
TOMORROWDATE	t	Next trading date
MICROSECONDS	i4	Time on the Trading System server, in microseconds
LASTTRTIME	t	Last transaction
LASTTRMSEC	i4	Microseconds of last transaction

2.3.1.13. Table TRADETIME: Trading schedule

Table 15. Fields of table TRADETIME

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TIME	t	Time
MARKETID	c4	Market
INSTRID	c4	Group
BOARDID	c4	Board
SECCODE	c12	Instrument
TYPE	c2	Event
STATUS	c1	Status

2.3.1.14. Table TRDTIMEGROUPS: Events groups

Table 16. Fields of table TRDTIMEGROUPS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TYPE	c1	Events group
NAME	c32	Group name
LATNAME	c32	Latin name

2.3.1.15. Table TRDTIMETYPES: Trading schedule event types

Table 17. Fields of table TRDTIMETYPES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TYPE	c2	Type of the event
DESCRIPTION	c50	Russian Description
GROUPTYPE	c1	Group
LAT_DESCRIPTION	c50	English Description

2.4. Stream MCXSPOT_MDTRADE_REPL - trading information

2.4.1. Data scheme

Tables:

- ALL_TRADES - All trades

2.4.1.1. Table ALL_TRADES: All trades

Table 18. Fields of table ALL_TRADES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TRADENO	i8	Trade #
TRADETIME	t	Time
SECBOARD	c4	Board
SECCODE	c12	Instrument
PRICE	d16.6	Price
QUANTITY	i8	Lots
VALUE	d16.2	Volume
ACCRUEDINT	d16.2	Accrued interest
YIELD	d9.2	Yield
PERIOD	c1	Period
SETTLECODE	c12	Settlement code
BUYSELL	c1	Buy/Sell
REPORATE	d16.6	Repo rate, %
REPOVALUE	d16.2	Repo value
REPO2VALUEBALANCE	d16.2	Balance of the REPO buy-back value
REPOTERM	i4	Repo term
MICROSECONDS	i4	Microseconds
SETTLEDATE	t	Settlement date
FACEAMOUNT	d16.2	Value of trade by face value, expressed in the currency of settlement
TRADINGSESSION	c1	Trading session ID

3. Replication scheme CURRENCY

3.1. Stream MCXCC_AGGR_REPL - quotes for instruments

3.1.1. Data scheme

Tables:

- ORDERBOOK - Orderbook

3.1.1.1. Table ORDERBOOK: Orderbook

Table 19. Fields of table ORDERBOOK

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Instrument
BUYSELL	c1	Buy/Sell
PRICE	d16.6	Price
QUANTITY	i8	Lots

3.2. Stream MCXCC_MDCOMMON_REPL - general information on instruments

3.2.1. Data scheme

Tables:

- COMMON - Financial statistics

3.2.1.1. Table COMMON: Financial statistics

Table 20. Fields of table COMMON

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Instrument
STATUS	c1	Status
TRADINGSTATUS	c1	Trading status
BID	d16.6	Bid
BIDDEPTH	i8	Bid depth
BIDDEPTHT	i8	Total bid
NUMBIDS	i4	Number of bids
OFFER	d16.6	Offer
OFFERDEPTH	i8	Offer depth
OFFERDEPTHT	i8	Total offer
NUMOFFERS	i4	Number of offers
OPEN	d16.6	Open
HIGH	d16.6	Maximum
LOW	d16.6	Minimum
LAST	d16.6	Last
LASTNEG	d16.6	Last negotiated trade

Field	Type	Description
CHANGE	d16.6	Price change to the last price of the previous day
QTY	i8	Lots in the last trade
TIME	t	Time of the last trade
VOLTODAY	f	Daily volume of trades, expressed in financial instrument's currency
VALTODAY	i8	Daily volume of trades, expressed in settlement currency
VALUE	d16.2	Amount of the last trade
WAPRICE	d16.6	Pricing
HIGHBID	d16.6	Best bid
LOWOFFER	d16.6	Best offer
NUMTRADES	i4	Number of trades, today
PRICEMINUSPREVWAPRICE	d16.6	Price change to the previous day pricing
CLOSEPRICE	d16.6	Post-trading price
LASTBID	d16.6	Last bid of the session
LASTOFFER	d16.6	Last offer of the session
LASTSETTLECODE	c12	Settlement code of the last trade
BASEPRICE	d16.6	Base SWAP price
MARKETPRICE	d16.6	Market price of the previous day
MARKETPRICETODAY	d16.6	Market price
SETTLECODE	c12	Settlement code
MARKETPRICE2	d16.6	Moscow Exchange fixing
ADMITTEDQUOTE	d16.6	International fixing
SETTLEDATE1	t	Settlement date (trade or REPO/swap near leg)
SETTLEDATE2	t	Settlement date (REPO/swap far leg)

3.3. Stream MCXCC_INFO_REPL - reference information

3.3.1. Data scheme

Tables:

- BCMESSAGES - Messages
- BOARDS - Trading boards
- CURRENCY - Currencies directory
- INDEXES - Indexes
- MARKETS - Markets
- SECURITIES - Financial instruments
- SETTLECODES - Settlement codes
- STATS - Parameters of the trading system
- TESYSTIME - System time of the trading server
- TRADETIME - Trading schedule
- TRDTIMETYPES - Trading schedule event types

3.3.1.1. Table BCMESSAGES: Messages

Table 21. Fields of table BCMESSAGES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
URGENCY	c1	Urgency
FROMUSER	c12	Sender

Field	Type	Description
MSGTIME	c8	Time
MSGTEXT	c256	Text

3.3.1.2. Table BOARDS: Trading boards

Table 22. Fields of table BOARDS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
BOARDID	c4	Board code
BOARDNAME	c30	Board
STATUS	c1	Status
MARKETID	c4	Market
LATNAME	c30	Latin name

3.3.1.3. Table CURRENCY: Currencies directory

Table 23. Fields of table CURRENCY

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
CURRCODE	c4	Currency
CURRENCYNAME	c30	Name
CROSSRATE	d16.6	Price

3.3.1.4. Table INDEXES: Indexes

Table 24. Fields of table INDEXES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
INDEXBOARD	c4	Board
INDEXCODE	c12	Index code
NAME	c30	Name
SHORTNAME	c10	Index
CURRENTVALUE	d16.6	Current index value
LASTVALUE	d16.6	Last value of the previous trading session
DECIMALS	i1	Decimals
LATNAME	c30	Latin name
TIME	t	Calculation time
OPENVALUE	d16.6	Opening value
VALTODAY	i8	Trading volume
MIN	d16.6	Minimum index value
MAX	d16.6	Maximum index value

3.3.1.5. Table MARKETS: Markets

Table 25. Fields of table MARKETS

Field	Type	Description
replID	i8	Service field of the replication subsystem

Field	Type	Description
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
MARKETID	c4	Market
MARKETNAME	c30	Name
STATUS	c1	Status
LATNAME	c30	Latin name

3.3.1.6. Table SECURITIES: Financial instruments

Table 26. Fields of table SECURITIES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SECBOARD	c4	Board
SECCODE	c12	Instrument
SECNAME	c30	Name
REMARKS	c8	Notes
SHORTNAME	c10	Instrument shortened name
STATUS	c1	Status
TRADINGSTATUS	c1	Trading status
MARKETCODE	c4	Market
INSTRID	c4	Instruments group
SECTORID	c4	Sector code
LOTSIZE	i4	Lot size
MINSTEP	d16.6	Minimum price step
FACEVALUE	d16.6	Face value
FACEUNIT	c4	Face value currency
PREVDATE	t	Last trading date
PREVPRICE	d16.6	Last price of the previous day
DECIMALS	i1	Decimals
PREVWAPRICE	d16.6	Previous day pricing
CURRENCYID	c4	Underlying currency
LATNAME	c30	Latin name

3.3.1.7. Table SETTLECODES: Settlement codes

Table 27. Fields of table SETTLECODES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SETTLECODE	c12	Settlement code
DESCRIPTION	c30	Details
SETTLEDATE	t	Settlement date
FIXINGDATE	t	Fixing date

3.3.1.8. Table STATS: Parameters of the trading system

Table 28. Fields of table STATS

Field	Type	Description
replID	i8	Service field of the replication subsystem

Field	Type	Description
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
SESSION	i8	Session number
TEVERSION	c10	Version
SYSTEMID	c1	Type
TESTSYSTEM	c1	Test system

3.3.1.9. Table TESYSTIME: System time of the trading server

Table 29. Fields of table TESYSTIME

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TIME	t	Current time
DATE	t	Date
TOMORROWDATE	t	Next trading date
MICROSECONDS	i4	Trade registration time, in microseconds

3.3.1.10. Table TRADETIME: Trading schedule

Table 30. Fields of table TRADETIME

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TIME	t	Time
MARKETID	c4	Market
INSTRID	c4	Group
BOARDID	c4	Board
SECCODE	c12	Instrument
TYPE	c2	Event
STATUS	c1	Status

3.3.1.11. Table TRDTIMETYPES: Trading schedule event types

Table 31. Fields of table TRDTIMETYPES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TYPE	c2	Type of the event
DESCRIPTION	c50	Details

3.4. Stream MCXCC_MDTRADE_REPL - trading information

3.4.1. Data scheme

Tables:

- ALL_TRADES - All trades

3.4.1.1. Table ALL_TRADES: All trades

Table 32. Fields of table ALL_TRADES

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem
replAct	i8	Service field of the replication subsystem
TRADENO	i8	Trade #
TRADETIME	t	Trade time
SECBOARD	c4	Board
SECCODE	c12	Instrument
PRICE	d16.6	Currency exchange rate
QUANTITY	i8	Trade volume, in lots
VALUE	d16.2	Trade value, in the currency of settlement
PERIOD	c1	Period of the trading session when the trade was concluded
SETTLECODE	c12	Settlement code
BUYSELL	c1	Buy/Sell
MICROSECONDS	i4	Trade time, in microseconds
SETTLEDATE	t	Settlement date
FIXINGDATE	t	Fixing date

List of return codes

Return code	Description
11123	Deal accepted.
11124	Deal accepted & matched.
11125	Deal accepted (unvalidated).
11129	Invalid security id.
11130	Negotiated deals not accepted for indices.
11131	Security is not trading yet.
11132	Security is in break period.
11133	Security is not currently trading.
11134	Trading in security is finished.
11135	Security is not trading today.
11136	Security is suspended.
11138	Instrument is suspended.
11139	Board is suspended.
11140	Invalid buy or sell indicator.
11141	Invalid counterparty firm.
11143	Invalid price.
11144	Invalid quantity.
11145	Invalid trading account.
11146	Trading account is suspended.
11147	Trading account's depository account is suspended.
11149	Account has insufficient balance to sell.
11155	Invalid deal number.
11156	Deal is currently unmatched.
11157	Deal is already validated.
11158	Deal is currently in an unknown state.
11159	Invalid order method for this security and board.

Return code	Description
11160	Buy order accepted.
11161	Sell order accepted.
11162	Buy order accepted.
11163	Sell order accepted.
11164	Order quantity is incorrect.
11165	Buy order accepted (open period).
11166	Sell order accepted (open period).
11167	Minimum price step is set.
11168	Lot size is set.
11169	Buy order accepted (unvalidated).
11170	Sell order accepted (unvalidated).
11171	Invalid market order value.
11172	Orders not accepted for indices.
11173	Invalid order type.
11174	Invalid price split flag.
11175	Invalid fill flag.
11176	A market order must allow price splits.
11177	Market orders not accepted during security's open period.
11178	Single price orders not accepted during security's open period.
11179	Immediate orders not accepted during security's open period.
11180	Price may not be 0 for a limit order.
11181	Immediate option not allowed for a market order that will stay in order book.
11182	Price is out of range.
11187	Unable to match order.
11193	Invalid order number.
11194	You may not specify an order number and a user.
11197	You do not have access to this function.
11198	Trading System unavailable.
11199	Trading System is suspended.
11201	Unable to service request.
11202	You do not have access to the Trading System.
11210	Order withdrawn.
11211	Deal withdrawn.
11213	Invalid price operator.
11218	Invalid firm code.
11219	No orders withdrawn, rejection(s).
11222	No negotiated deals to withdraw.
11230	Order value is incorrect.
11231	Only main board orders may be entered during primary auction.
11234	Order may not have immediate flag in primary auction.
11235	Only issuer agent may enter primary auction sell order.
11239	Sell order may not be a single price order in primary auction.
11240	Sell order should have zero quantity in primary auction.
11241	Auction bidding period is finished for security.
11242	Price must be 0 for market orders in primary auction.
11243	Market orders percentage limit will be breached.
11244	Firm cash limit will be breached for this instrument.
11245	Firm total cash limit will be breached.

Return code	Description
11246	Buy order accepted.
11247	Sell order accepted.
11252	Security is in primary distribution.
11263	Trading account limit will be exceeded.
11271	Negotiated deals are not allowed during this period.
11361	Invalid order method for firm.
11363	Only negotiated deal orders are accepted for this trading account.
11364	Buy orders are not accepted for this trading account.
11365	Sell orders are not accepted for this trading account.
11368	Unable to match Force Partial Withdraw Order.
11376	Orders canceled successfully.
11407	Invalid order method for trdacc.
11408	Fill Withdraw option not allowed for a market order.
11409	No weighted average price exists.
11413	Firm and Counterparty must be the same for deals on this board.
11414	Price is outside of allowed range.
11415	One side of the deal must have a client account.
11416	One side of the deal must have a members own account.
11419	No bid or offer price exists for the source security and board.
11424	No Second Part Price exists for REPO.
11425	No Rate Of Interest exists for REPO.
11429	REPO Upper limit breached.
11438	REPO rate out of range.
11439	REPO second part period is not closed.
11443	Yield is outside of allowed range.
11445	Cross trades not allowed for this instrument.
11446	Firm cash limit for the Second Part of REPO will be breached.
11447	Total cash limit for REPO operations will be breached.
11448	Invalid settle code specified.
11449	Invalid number of trades.
11450	Invalid trade number.
11451	You can not validate this trade.
11452	These trades can not be validated.
11453	Trade is already validated.
11454	There is a report for buy trade.
11456	Report accepted.
11457	Report accepted & matched.
11458	Invalid report number specified.
11459	Report withdrawn.
11460	No reports to withdraw.
11461	There already exists a buy quote for specified security and settlement code.
11462	There already exists a sell quote for specified security and settlement code.
11463	Quote withdrawn.
11464	No quotes to withdraw.
11465	Reports are not allowed during this period.
11486	Order value is incorrect.
11497	Invalid character in brokerref.
11498	Invalid character in matchref.

Return code	Description
11499	Invalid character in extref.
11507	Order quantity doesn't match security's granularity (lots).
11508	Account has insufficient convsecurity balance to sell.
11509	Immediate WAPrice orders not accepted during security's open period.
11510	Immediate WAPrice orders not accepted during primary auction.
11511	Immediate WAPrice orders could not be queued.
11512	Buy order accepted.
11513	Sell order accepted.
11515	Refund rate is not allowed for the settle code specified.
11516	Incomplete repo order.
11517	Invalid refund rate.
11518	Invalid REPO rate.
11519	Invalid price2.
11520	Negative or zero price2 resulted.
11521	Can't send report to trade due to invalid price.
11522	Invalid combination of market, board, instrument and security.
11523	REPO rate must not exceed.
11533	Invalid client code.
11536	Order must be a limit order.
11537	Order may not be a single price order.
11538	Order should have zero quantity.
11539	Buy order already entered.
11540	Price must be 0 for market orders in auction.
11543	Auction price can not be calculated.
11548	Repo Rate is incorrect.
11549	Repo Rate is incorrect.
11550	Limit will be breached for position.
11554	Invalid discount specified.
11555	Invalid lower discount specified.
11556	Invalid upper discount specified.
11557	Invalid block collateral flag.
11558	Invalid repo value specified.
11559	Invalid price resulted.
11560	Invalid quantity resulted.
11561	Invalid REPO value resulted.
11562	Invalid REPO repurchase value resulted.
11563	Main board is not defined for the security.
11565	Market price is not defined for the security.
11566	Starting discount can not be less than lower discount limit.
11567	Starting discount can not be greater than upper discount limit.
11568	This report can not be cleanly accepted.
11573	Invalid settlement code or REPO term specified.
11575	Buy Order accepted. Balance withdrawn to avoid a cross trade.
11576	Sell Order accepted. Balance withdrawn to avoid a cross trade.
11577	This order causes a cross trade.
11578	Total order value at single repo rate can not exceed limit.
11579	For this instrument price is less than allowed.
11580	For this instrument price is greater than allowed.

Return code	Description
11581	Starting discount is less than allowed.
11582	Starting discount is greater than allowed.
11583	Lower discount limit is incorrect.
11584	Upper discount limit is incorrect.
11585	Lower discount limit must not be specified.
11586	Upper discount limit must not be specified.
11587	Block collateral option must be set.
11588	Repo Rate is greater than allowed.
11594	REPO base condition is incorrect for this board.
11599	Invalid price2 resulted.
11600	Minimum rate step is incorrect.
11601	Minimum discount step is incorrect.
11602	REPO value for this instrument is incorrect.
11603	REPO repurchase value for this instrument is incorrect.
11608	Not allowed client code type for this trading account.
11609	Not allowed client code type for this trading account.
11612	Order value is larger than allowed.
11613	Order value is less than allowed.
11615	Invalid deal number.
11616	Unable to accept deal - deal is not active.
11617	Unable to accept deal.
11618	Unable to accept deal. Invalid security specified.
11619	Unable to accept deal. Invalid price specified.
11620	Unable to accept deal. Invalid quantity specified.
11621	Unable to accept deal. Invalid settlecode specified.
11622	Unable to accept deal. Invalid refundrate specified.
11623	Unable to accept deal. Invalid matchref specified.
11624	Unable to accept deal. Invalid buy/sell specified.
11625	Warning: this will breach REPO limit. If sure, set firm's limit check flag to 'N' for position and retry.
11626	Invalid trading account for marketmaker order.
11627	Marketmaker orders accepted only in normal trading period.
11628	Invalid order type for marketmaker order.
11629	Buy Order accepted. Balance withdrawn to avoid a trade between marketmakers.
11630	Sell Order accepted. Balance withdrawn to avoid a trade between marketmakers.
11631	This order causes a trade between marketmakers.
11632	Is in breach of MGF.
11633	Is in breach of MGF.
11635	Discount limits can not be set.
11636	Margin call does not need any counterpart's acceptance.
11647	Total sell quantity of a security for a firm can not exceed of its issue size on this board.
11648	Clearing session is in progress.
11649	Trade is already canceled -
11650	There is a cancel report for buy trade.
11651	There is a cancel report for sell trade.
11652	Trade can not be canceled.
11653	Cancel report accepted & matched.
11654	Cancel report accepted.
11655	Unable to select boards.

Return code	Description
11658	Invalid client code specified for this security.
11660	External trade registered:
11661	Invalid settle date specified.
11662	External trades withdrawn.
11663	Invalid external trade number.
11664	Invalid large trade flag.
11665	No external trades to withdraw.
11666	This trade have to be large.
11667	Invalid large flag specified.
11668	Invalid clearing type specified.
11669	Only one trade can be included in simple clearing report.
11670	Simple clearing is not currently available.
11671	Specified trade successfully settled.
11672	Invalid trade number specified: '
11673	Trade already settled.
11674	Trade unvalidated.
11675	Trade is not in simple clearing mode.
11676	REPO first part trade is not validated yet for trade.
11677	REPO first part trade is not settled yet for trade.
11678	Simple clearing is not allowed for position.
11679	Margin calls can not be included in simple clearing.
11680	Trade value must be not less than for simple clearing.
11694	Simple clearing is not allowed for this security and board.
11695	Simple clearing is not allowed for the same trading accounts.
11699	Counter price is not defined.
11700	Order must be entered with counter price flag.
11701	Order price is incorrect.
11702	Settlement date of the REPO second part trade is not a working day.
11704	Only BUY orders are allowed at this moment.
11705	Only SELL orders are allowed at this moment.
11706	You are not an underwriter. Only security underwriters are allowed to enter order at this moment.
11707	Invalid transaction reference.
11718	There is a confirm report for trade.
11719	Trade is not included into clearing.
11720	Special report a not available now.
11721	ClientCode is not allowed for this trading account.
11730	The price of the buy order should be less then the best offer price for this type of order.
11731	The price of the sell order should be greater then the best bid price for this type of order.
11732	The quantity of lots is less than allowed.
11733	The quantity of lots is greater than allowed.
11734	Volume of the order is less than allowed.
11735	Volume of the order is greater than allowed.
11736	Signature validation error.
11737	Used wrong signature or EXKEYUSAGEOID.
11740	Clients without signature are not supported.
11741	The trading account and the security belong to different depositories.
11742	Only NegDeals addressed to everyone available in that trading period.
11743	This settle code is unavailable.

Return code	Description
11744	The second part of REPO trade cannot be canceled.
11745	The transfer cannot be canceled.
11746	Specified trade successfully canceled.
11747	Unable to determine price move limit for this security.
11748	The price for this security should be in range from to
11749	Only one of RepoValue or Quantity can be specified.
11750	REPO price is not defined.
11751	Starting discount must not be specified.
11752	Discount limits must not be specified.
11754	You have got a deferred money debt. This debt should be settled by the end of this day or tomorrow during the settlement with the Central counterparty.
11755	You have got deferred security debts. These debts should be settled by the end of this day or tomorrow during the settlement with the Central counterparty.
11756	You have got a default on collaterals. All the defaults on collaterals must be settled by 15:00 today.
11757	You have got an unsettled deferred money debt. The default settlement procedure will be enforced.
11758	You have got an unsettled collaterals default. The default settlement procedure will be enforced.
11759	You have got a deferred money claim. This claim will be satisfied by the Central counterparty either by the end of this day or tomorrow during the settlement with CC.
11760	You have got deferred security claims. Claims will be satisfied by the Central counterparty either by the end of this day or tomorrow during the settlement with CC.
11761	The firm's limit on liabilities to the Central counterparty has been exceeded.
11782	Simple report can not be complex.
11783	Client code is suspended.
11784	Specified trade successfully notified as payment pended.
11786	Operations suspended by Firm Manager or Trading System Supervisor.
11787	User successfully suspended.
11788	User successfully suspended. Orders withdrawn.
11789	User successfully Unsuspended.
11790	The total amount of deferred debts of the unconscionable clearing participants exceeds the limit set for the settlement with the Central counterparty. CC's own assets will not be used during the settlement.
11791	There are no deferred debts for the settlement with the Central counterparty.
11792	You have got deferred security claims on the board for the position caused by the default on this position. Claims will be settled by the Central counterparty after the default settlement.
11793	You have got a deferred money claim on the board for the position caused by the default on this position. Claim will be settled by the Central counterparty after the default settlement.
11794	The total amount of deferred debts of the unconscionable clearing participants does not exceed the limit set for the settlement with the Central counterparty. CC's own assets will be used during the settlement.
11795	United limit breached.
11796	Trading limit breached.
11797	Limit for currency.
11802	Cash position for currency will be breached.
11807	Bank Account is in default mode.
11808	Bank Account is not in default mode.
11809	Bank Account is in early settle mode.
11810	Bank Account is in trading closed mode.
11812	Limits will be breached for position.
11813	Cannot cancel trade. Parent trade should be canceled.
11814	Maximum order hidden quantity ratio is incorrect.
11815	Minimum order visible quantity value is incorrect.
11816	Hidden quantity can not be specified for market maker order.
11817	Minimum order visible quantity is less than allowed.

Return code	Description
11819	Buy order accepted (closing auction).
11820	Sell order accepted (closing auction).
11821	Events in past time are not allowed.
11822	Buy order accepted (dark pool).
11823	Sell order accepted (dark pool).
11824	Client code type must a legal entity.
11826	Matchref must not be specified for this type of counter party.
11827	Allowed only trades with the same bank account for this period.
11828	Trading Account has not enough permissions for that type of reports.
11829	Either price or volume must be specified in the order.
11830	Counterparty should be specified for orders by value.
11831	Invalid price resulted.
11832	Buy order accepted (discrete auction).
11833	Sell order accepted (discrete auction).
11834	Discrete auction has started for
11835	Discrete auction has finished for. Normal trading period will continue.
11836	Discrete auction for has finished, but not all of the conditions required to determine auction price have been met. The new Discrete auction has started.
11837	Discrete auction has finished for.
11839	Either quantity or volume must be specified in the order.
11840	Collateral position has been breached:
11841	Transfer accepted, matched.
11843	Offering qty updated.
11844	Delivery obligations on buy are not specified. Order rejected.
11845	Delivery obligations on sell are not specified. Order rejected.
11846	Delivery obligations exceeded on securities. Order rejected.
11847	For specific trading account could not found CCP trading account.
11848	CCP trading account is suspending.
11849	Trading in securities not allowed for the trading account, tied to the securities account of a foreign nominee.
11850	Sell Market orders specified by value are not allowed.
11851	For Market orders on buy allowed specification by value only in current trade period.
11852	Close Auction Price is not defined. Order rejected.
11853	Only orders with Close Auction Price are available. Close Auction Price is
11854	Activation time orders cannot have other type event activation.
11855	Buy order accepted (Activation at the closing auction).
11856	Sell order accepted (Activation at the closing auction).
11857	For the odd lots board the order balance can not exceed the security's lot size on main board.
11858	Unable to accept deal. Invalid baseprice specified.
11859	Baseprice can not be specified for this sec.
11862	Trading with TODAY settlement is over.
11863	Limit order specified by value is not allowed.
11864	Fill Withdraw option of order is not allowed for selected Trading Period.
11865	For this instrument BasePrice is less than allowed.
11866	For this instrument BasePrice is greater than allowed.
11867	For this instrument SWAP Price is less than allowed.
11868	For this instrument SWAP Price is greater than allowed.