Plaza-2 gateway for Securities and FX markets

build
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Introduction

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** [ftp://ftp.moex.com/pub/FORTS/Plaza2/docs/]. The rules for working with CGate API can be found on **cgate_en.pdf** [ftp://ftp.moex.com/pub/FORTS/Plaza2/docs/].

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.

Gate usage specifics

Stream MCXCC_USERDATA_REPL specifics

It is not allowed to open more than one listener of the stream MCXCC_USERDATA_REPL at once. Opening another listener at the same time will force the previously opened listener to close.

It is not allowed to specify the opening mode 'snapshot' for this stream. All other opening modes will lead to the same result: once the stream has opened, you will obtain the current data along with the further changes in tables. Note that the parameters 'lifenum', 'rev.TABLE_NAME' and 'replstate' are not used.

Commands

When creating a new publisher, in order to send commands to the FX market it is necessary to specify 'NAME' as 'ASTSCUR_SRV' and 'category' as 'ASTSCUR_MSG'.

The return message type is 24 for all commands.

Name	Type	Default value	Description
ErrorCode	i4		Error code
ErrorMessage	c255		Error message

Replication scheme SPOT

Stream MCXSPOT_AGGR_REPL - quotes for instruments

Data scheme

Tables:

- ORDERBOOK - Orderbook

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	Price
QUANTITY	i8	Lots
YIELD	d9.2	Yield
ACTIVATIONTIME	t	Order activation time
REPOVALUE	d16.2	Repo value

Stream MCXSPOT_MDCOMMON_REPL - general information on instruments

Data scheme

Tables:

- COMMON - Financial statistics

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 code
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
HIGH	d16.6	Maximum
LOW	d16.6	Minimum
LAST	d16.6	Last
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	i8	Amount, today
VALTODAY	i8	Volume, today
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
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	Market price 2
ADMITTEDQUOTE	d16.6	Admitted quote
OPENPERIODPRICE	d16.6	Pre-trading price
OPEN	d16.6	Open
CLOSING_AUCTION_PRICE	d16.6	CA price
CLOSING_AUCTION_VOLUME	i8	CA volume

Field	Type	Description
DPVALINDICATORBUY	c1	Bid flag (dark pools)
DPVALINDICATORSELL	c1	Sell flag (dark pools)
SETTLEDATE	t	Settlement date

Stream MCXSPOT_INFO_REPL - referense information

Data scheme

Tables:

- BOARDS - Trading boards
- BCMESSAGES - Messages
- TRDTIMETYPES - Trading schedule event types
- SECURITIES - Financial instruments
- CURRENCY - Currencies directory
- TRADETIME - Trading schedule
- SETTLECODES - Settlement codes
- TESYSTIME - System time of the trading server
- MARKETS - Markets
- SEC_SETTLECODE - Settlement codes for instruments
- AUCTSTATS - Auction stats
- DPAUCTIONS - Dark pool auctions
- INDEXES - Indexes
- STATS - Parameters of the trading system
- TRDTIMEGROUPS - Events groups

Table BOARDS: Trading boards

Table 3. 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

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

Field	Type	Description
MSGTEXT	c256	Text

Table TRDTIMETYPES: Trading schedule event types

Table 5. 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	c1	Type of the event
DESCRIPTION	c50	Russian Description
GROUPTYPE	c1	Group
LAT_DESCRIPTION	c50	English Description

Table SECURITIES: Financial instruments

Table 6. 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	Name
REMARKS	c8	Notes
SHORTNAME	c10	Instrument
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
REPO2PRICE	d16.6	Repo far leg price
CURRENCYID	c4	Underlying currency
BUYBACKPRICE	d16.6	Base price to calculate yield

Field	Type	Description
BUYBACKDATE	t	Date to calculate yield for
AGENTID	c12	Listing agent
QUOTEBASIS	c1	Price type
ISIN	c12	ISIN
LATNAME	c30	Latin name
REGNUMBER	c20	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
FULLCOVEREDFLAG	c1	Uncovered trading, prohibited
LISTLEVEL	i1	Listing level
COMMENTS	c128	Comments
DIVIDENDVALUE	d16.2	Dividend value, rub
DIVIDENDDATE	t	Dividend date

Table CURRENCY: Currencies directory

Table 7. 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	c10	Price

Table TRADETIME: Trading schedule

Table 8. 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
INSTRID	c4	Group
BOARDID	c4	Board
TYPE	c1	Event
STATUS	c1	Status
SECCODE	c12	Instrument
MARKETID	c4	Market

Table SETTLECODES: Settlement codes

Table 9. Fields of table SETTLECODES

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
SETTLECODE	c12	Settlement code
DESCRIPTION	c30	Details
SETTLEDATE	t	Settlement date
SETTLEDATE2	t	Settlement date for the repo far leg

Table TESYSTIME: System time of the trading server

Table 10. 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
MICROSECONDS	i4	Trade registration time, in microseconds
TOMORROWDATE	t	Next trading date
LASTTRTIME	t	Last transaction
LASTTRMSEC	i4	Microseconds of last transaction

Table MARKETS: Markets

Table 11. 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

Table SEC_SETTLECODE: Settlement codes for instruments

Table 12. 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	Instrument
SETTLECODE	c12	Settlement code
ACCRUEDINT	d16.6	Accrued coupon interest
ACCRUEDINT2	d16.6	Accrued coupon interest of the repo far leg
PRICE2	d16.6	Repo far leg price
REPORATE	d16.6	Repo rate, %
SETTLEDATE	t	Settlement date
SETTLEDATE2	t	Repo settlement date
REPOTERM	i4	Repo term

Table AUCTSTATS: Auction stats

Table 13. 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	Volume
VOLUME	i8	Trade volume
NUMTRADES	i4	Trades
IMBALANCE	i8	Imbalance
MARKETVOLB	i8	Market Buy
MARKETVOLS	i8	Market Sell

Table DPAUCTIONS: Dark pool auctions

Table 14. 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

Table INDEXES: Indexes

Table 15. 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

Field	Type	Description
SHORTNAME	c10	Index
CURRENTVALUE	d16.6	Current
LASTVALUE	d16.6	Closing
DECIMALS	i1	Decimals
LATNAME	c30	Latin name
TIME	t	Calculation time
OPENVALUE	d16.6	Opening
VALTODAY	i8	Trading volume
MIN	d16.6	Minimum
MAX	d16.6	Maximum

Table STATS: Parameters of the trading system

Table 16. 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	i8	Version
SYSTEMID	c1	Type
TESTSYSTEM	c1	Test system

Table TRDTIMEGROUPS: Events groups

Table 17. 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

Stream MCXSPOT_MDTRADE_REPL - trading information

Data scheme

Tables:

- ALL_TRADES - All trades

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

Field	Type	Description
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
REPO2VALUE	d16.2	Repo far leg value
REPOTERM	i4	Repo term
MICROSECONDS	i4	Microseconds
SETTLEDATE	t	Settlement date

Replication scheme CURRENCY

Stream MCXCC_AGGR_REPL - quotes for instruments

Data scheme

Tables:

- ORDERBOOK - Orderbook

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

Stream MCXCC_MDCOMMON_REPL - general information on instruments

Data scheme

Tables:

- COMMON - Financial statistics

Table COMMON: Financial statistics

Table 20. Fields of table COMMON

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
SECBOARD	c4	Board
SECCODE	c12	Instrument code
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
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	i8	Amount, today
VALTODAY	i8	Volume, today
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
SETTLEDATE	t	Settlement date

Stream MCXCC_INFO_REPL - referense information

Data scheme

Tables:

- BOARDS - Trading boards
- BCMESSAGES - Messages
- TRDTIMETYPES - Trading schedule event types
- SECURITIES - Financial instruments

- INDEXES - Indexes
- CURRENCY - Currencies directory
- SETTLECODES - Settlement codes
- TESYSTIME - System time of the trading server
- MARKETS - Markets
- TRADETIME - Trading schedule
- STATS - Parameters of the trading system

Table BOARDS: Trading boards

Table 21. 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

Table BCMESSAGES: Messages

Table 22. 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

Table TRDTIMETYPES: Trading schedule event types

Table 23. 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	c1	Type of the event
DESCRIPTION	c50	Details

Table SECURITIES: Financial instruments

Table 24. 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

Field	Type	Description
SECCODE	c12	Instrument code
SECNAME	c30	Name
REMARKS	c8	Notes
SHORTNAME	c10	Instrument
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

Table INDEXES: Indexes

Table 25. 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
OPENVALUE	d16.6	Opening
VALTODAY	i8	Trading volume
MIN	d16.6	Minimum
MAX	d16.6	Maximum

Table CURRENCY: Currencies directory

Table 26. 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

Field	Type	Description
CROSSRATE	c10	Price

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

Table TESYSTIME: System time of the trading server

Table 28. 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
MICROSECONDS	i4	Trade registration time, in microseconds
TOMORROWDATE	t	Next trading date

Table MARKETS: Markets

Table 29. 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

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	c1	Event
STATUS	c1	Status

Table STATS: Parameters of the trading system

Table 31. 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	i8	Version
SYSTEMID	c1	Type
TESTSYSTEM	c1	Test system

Stream MCXCC_MDTRADE_REPL - trading information

Data scheme

Tables:

- ALL_TRADES - All trades

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	Time
SECBOARD	c4	Board
SECCODE	c12	Instrument
PRICE	d16.6	Price
QUANTITY	i8	Lots
VALUE	d16.2	Volume
PERIOD	c1	Period
SETTLECODE	c12	Settlement code
BUYSELL	c1	Buy/Sell
MICROSECONDS	i4	Microseconds
SETTLEDATE	t	Settlement date

Replication scheme USERDATA

Stream MCXCC_USERDATA_REPL - clients data

Data scheme

Tables:

- ASSETS - Assets
- BANK - Settlement authorities
- BANKACC - Settlement codes
- BANKUSE - Accounts in settlement authoruties
- CLIENTCODES - Brokerage Firm's clients
- EXT_MMSTATS - Market-maker obligations (ext.)
- FIRMS - Firms

- INSTRS - Financial instruments groups
- NEGDEALS - Negotiated deals
- ORDERS - Orders
- POSITIONS - Current positions, money
- POSTYPE - Positions type
- RM_HOLD - Obligations and demands on assets
- RM_INDICATIVE - Pecent risks parameters
- RM_PRICERANGE - Market risks parameters
- RM_PRICERANGE_FIRM - Individual risk parameters
- TRADES - Trades
- TRDACC - Trading acounts
- TRDTIMEGROUPS - Events groups
- USERS - Clients
- USER_TRDACC - Trading account

Table ASSETS: Assets

Table 33. Fields of table ASSETS

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
ASSET	c12	Asset code
RC	f	Central rate
RCRUB	f	Central rate, roubles
DECIMALS	i1	Decimals
COLLATERAL	c1	Flag of collateral
CBRATE	f	Central Bank rate, %

Table BANK: Settlement authorities

Table 34. Fields of table BANK

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
BANKID	c12	Settlement authority
SHORTNAME	c12	Name
BANKNAME	c120	Full name

Table BANKACC: Settlement codes

Table 35. Fields of table BANKACC

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
BANKACCID	c12	Settlement code
FIRMID	c12	Firm
DESCRIPTION	c30	Details

Field	Type	Description
DEFAULTER	c1	Extra session
EARLYSETTLE	c1	Early settlement
TRADINGCLOSED	c1	Trading session closed
STATUS	c1	Status
FULLCOVEREDBUY	c1	Uncovered trading, prohibited by the Management Company
CLIENTCODE	c12	Client code
CLEARINGFIRMID	c12	Clearing Firm
CLEARINGBANKACCID	c12	Clearing settlement code

Table BANKUSE: Accounts in settlement authoruties

Table 36. Fields of table BANKUSE

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
BANKACCID	c12	Settlement code
FIRMID	c12	Firm
BANKID	c12	Settlement authority
REALACCOUNT	c120	Account in the settlement authoruty
DESCRIPTION	c30	Details
CURRCODE	c4	Settlement currency
NCCREALACCOUNT	c20	Collateral account number

Table CLIENTCODES: Brokerage Firm's clients

Table 37. Fields of table CLIENTCODES

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
CLIENTCODE	c12	Client code
DETAILS	c20	Comment
CLIENTTYPE	c2	Type

Table EXT_MMSTATS: Market-maker obligations (ext.)

Table 38. Fields of table EXT_MMSTATS

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
FIRMID	c12	Firm
SECBOARD	c4	Board
SECCODE	c12	Instrument
MMID	c12	Record ID
PARENTMMID	c12	Parent record ID
SCHEMANAME	c20	Scheme
AGREEMENT	c12	Agreement#
AGREEMENTDATE	t	Agreement date
MINSPREADVOLUMEBUY	i8	Minimum volume to buy

Field	Type	Description
MINSPREADVOLUMESELL	i8	Minimum volume to sell
MAXTRADESVOLUME	i8	Maximum trade volume
MAXTRADESVALUE	d16.2	Maximum trade volume, roubles
MAXSPREADPERC	f	Maximum spread, %
MAXSPREADPERC1	f	Maximum spread, buy orders, %
MAXSPREADPERC2	f	Maximum spread, sell orders, %
MAXSPREADPRICE	d16.6	Maximum spread
MINKEEPPERCENT	d9.2	Exercise, minimum %
CURRENTSPREADPERC	f	Spread, %
CURRENTSPREADPRICE	d16.6	Spread
CURRENTMINBUYPRICE	d16.6	Minimum buy price
CURRENTMAXSELLPRICE	d16.6	Maximum sell price
CURRENTALLOWEDBUYPRICE	d16.6	Minimum buy price allowed
CURRENTALLOWEDSELLPRICE	d16.6	Maximum sell price allowed
TOTALBUYVOLUME	i8	Buy
TOTALSELLVOLUME	i8	Sell
TOTALBREACHTIME	t	Trading halt
TOTALKEEPTIME	t	Market making time, total
FACTTRADESVOLUME	i8	Volume
FACTTRADESVALUE	d16.2	Volume, roubles
FACTKEEPPERCENT	d9.2	Exercise, %
LEFTKEEPTIME	t	Time left to exercise
UPDATETIME	t	Update time
PROCESSED	c1	Obligations processed
KEEPSPREADVARIANT	c4	Spread type

Table FIRMS: Firms

Table 39. Fields of table FIRMS

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
FIRMID	c12	Firm code
FIRMNAME	c30	Firm
STATUS	c1	Status
EXCHANGE	c4	Exchange
FULLCOVEREDFLAG	c1	Uncovered trading, prohibited

Table INSTRS: Financial instruments groups

Table 40. Fields of table INSTRS

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
INSTRID	c4	Group
INSTRNAME	c30	Name
STATUS	c1	Status
INSTRTYPE	c1	Instrument type

Field	Type	Description
QUOTEBASIS	c1	Price type
INSTRFWD	c1	Long instrument

Table NEGDEALS: Negotiated deals

Table 41. Fields of table NEGDEALS

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
DEALNO	i8	Order #
DEALTIME	t	Time
STATUS	c1	Status
BUYSELL	c1	Buy/Sell
BROKERREF	c20	Notes
USERID	c12	Client
FIRMID	c12	Firm
CPFIRMID	c12	Counterparty
ACCOUNT	c12	Trading account
SECBOARD	c4	Board
SECCODE	c12	Instrument
PRICE	d16.6	Price
QUANTITY	i8	Lots
SETTLEDATE	t	Settlement date
MATCHREF	c10	Reference
SETTLECODE	c12	Settlement code
VALUE	d16.2	Volume
EXTREF	c12	External client code
REPORATE	d16.6	Rate, %
PERIOD	c1	Period
CLIENTCODE	c12	Client code
UPDATETIME	t	Update time
BANKACCID	c12	Settlement code
BASEPRICE	d16.6	Base price
CURRENCYID	c4	Settlement currency
BANKID	c12	Settlement authority

Table ORDERS: Orders

Table 42. Fields of table ORDERS

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
ORDERNO	i8	Order #
ORDERTIME	t	Order time
STATUS	c1	Status
MKTLIMIT	c1	Type
BUYSELL	c1	Buy/Sell
SPLITFLAG	c1	Type by price

Field	Type	Description
IMMCANCEL	c1	Type by balance
BROKERREF	c20	Notes
USERID	c12	Client
FIRMID	c12	Firm
ACCOUNT	c12	Trading account
SECBOARD	c4	Board
SECCODE	c12	Instrument
PRICE	d16.6	Price
QUANTITY	i8	Lots
HIDDEN	i8	Hidden lots
BALANCE	i8	Lots balance
VALUE	d16.2	Volume
SETTLEDATE	t	Settlement date
LINKEDORDER	i8	Replaced order #
ENTRYTYPE	c1	Order price entry type
PERIOD	c1	Period
EXTREF	c12	External client code
CLIENTCODE	c12	Client code
UPDATETIME	t	Update time
UPDATE_MICROSECONDS	i4	Update time, microseconds
MICROSECONDS	i4	Microseconds
BANKACCID	c12	Settlement code
CURRENCYID	c4	Settlement currency
BANKID	c12	Settlement authority
INTORDERNO	i8	Order

Table POSITIONS: Current positions, money

Table 43. Fields of table POSITIONS

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
FIRMID	c12	Firm
CURRCODE	c4	Settlement currency
TAG	c4	Position
BANKACCID	c12	Settlement code
DESCRIPTION	c30	Details
OPENBAL	d17.2	Opening
CURRENTPOS	d17.2	Current
PLANNEDPOS	d17.2	Planned
LIMIT1	d17.2	External limits
LIMIT2	d17.2	Internal limits
ORDERBUY	d17.2	Buy orders
ORDERSELL	d17.2	Sell orders
NETTO	d17.2	Netto
MARGINCALL	d17.2	Margin Call
DEBIT	d17.2	Debiting
CREDIT	d17.2	Depositing

Field	Type	Description
PLANNEDBAL	d17.2	Control position
POSNGROUP	c1	Positions group

Table POSTYPE: Positions type

Table 44. Fields of table POSTYPE

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
POSITIONTAG	c4	Money positions in market
CURRCODE	c4	Settlement currency
POSNGROUP	c1	Positions group
DESCRIPTION	c30	Details

Table RM_HOLD: Obligations and demands on assets

Table 45. Fields of table RM_HOLD

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
FIRMID	c12	Firm
ACCOUNT	c12	Trading account
BANKACCID	c12	Settlement code
ASSET	c12	Asset
DATE	t	Settlement date
DEBIT	d16.2	Obligations
CREDIT	d16.2	Demands
VALUEBUY	d16.2	Buy orders
VALUESELL	d16.2	Sell orders
MARGINCALL	d16.2	Margin Call
PLANNEDCOVERED	d16.2	Planned T+

Table RM_INDICATIVE: Pecent risks parameters

Table 46. Fields of table RM_INDICATIVE

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
ASSET	c12	Asset
DATE	t	Settlement date
NUM	i1	Limit
LIMITBEGIN	d16.2	Limit start
LIMITEND	d16.2	Limit end
LRATE_RUB	f	Lower rate limit
CRATE_RUB	f	Central rate
HRATE_RUB	f	Upper rate limit
LIMITBEGIN_RUB	d16.2	Limit start, roubles
LIMITEND_RUB	d16.2	Limit end, roubles

Field	Type	Description
CHANGETIME	t	Risk rates update time

Table RM_PRICERANGE: Market risks parameters

Table 47. Fields of table RM_PRICERANGE

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
ASSET	c12	Asset
NUM	i1	Limit
LIMITBEGIN	d16.2	Limit start
LIMITEND	d16.2	Limit end
RTL_RUB	f	Lower rate limit
RTH_RUB	f	Upper rate limit
LIMITBEGIN_RUB	d16.2	Limit start, roubles
LIMITEND_RUB	d16.2	Limit end, roubles
RCRUB	f	Central rate
CHANGETIME	t	Risk rates update time

Table RM_PRICERANGE_FIRM: Individual risk parameters

Table 48. Fields of table RM_PRICERANGE_FIRM

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
FIRMID	c12	Firm
ACCOUNT	c12	Trading account
BANKACCID	c12	Settlement code
ASSET	c12	Asset
K_EXCH	d16.2	Central rate coefficient, today
K_EXCH_SET	d16.2	Central rate coefficient, tomorrow
K_USER	d16.2	Management Company coefficient, today
K_USER_SET	d16.2	Management Company coefficient, tomorrow
COLLATERAL	c1	Flag of collateral

Table TRADES: Trades

Table 49. Fields of table 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 #
ORDERNO	i8	Order #
TRADETIME	t	Time
BUYSELL	c1	Buy/Sell
BROKERREF	c20	Notes
USERID	c12	Client
FIRMID	c12	Firm

Field	Type	Description
CPFIRMID	c12	Counterparty
ACCOUNT	c12	Trading account
SECBOARD	c4	Board
SECCODE	c12	Instrument
PRICE	d16.6	Price
QUANTITY	i8	Lots
VALUE	d16.2	Volume
SETTLEDATE	t	Settlement date
PERIOD	c1	Period
SETTLECODE	c12	Settlement code
TRADETYPE	c1	Type
EXTREF	c12	External client code
COMMISSION	d16.2	Total commission
REPORATE	d16.6	Rate, %
CLEARINGCENTERCOMM	d16.2	Clearing Center commission
EXCHANGECOMM	d16.2	Exchange trading commission
TRADINGSYSTEMCOMM	d16.2	Trading access commission
CLIENTCODE	c12	Client code
MICROSECONDS	i4	Microseconds
BANKACCID	c12	Settlement code
BASEPRICE	d16.6	Base price
PARENTTRADENO	i8	SWAP trade visible part
HIDDENQTYORDER	c1	Iceberg order trade
CURRENCYID	c4	Settlement currency
BANKID	c12	Settlement authority
TRADEDATE	t	Trading date
CLEARINGFIRMID	c12	Clearing Firm
CLEARINGBANKACCID	c12	Clearing settlement code

Table TRDACC: Trading acounts

Table 50. Fields of table TRDACC

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
TRDACCID	c12	Trading account
TYPE	c1	Deposit account type
FIRMID	c12	Firm
DESCRIPTION	c30	Details
BANKACCID	c12	Settlement code
STATUS	c1	Status
TRDACCTYPE	c1	Trading account type

Table TRDTIMEGROUPS: Events groups

Table 51. Fields of table TRDTIMEGROUPS

Field	Type	Description
replID	i8	Service field of the replication subsystem
replRev	i8	Service field of the replication subsystem

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

Table USERS: Clients

Table 52. Fields of table USERS

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
USERID	c12	Client code
USERNAME	c30	Client
FIRMID	c12	Firm
STATUS	c1	Status
TRADING	c1	Trading operations
USERGROUP	c12	Group
CODMODESUBSCR	c1	COD-subscription
CODMODE	c1	COD-mode
IPGATEWAY	c20	Gateway
IPCLIENT	c20	Workstation
LOGGEDON	c1	Active

Table USER_TRDACC: Trading account

Table 53. Fields of table USER_TRDACC

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
FIRMID	c12	Firm
USERID	c12	Client
TRDACCID	c12	Trading account

Commands description CURRENCY

Method CHANGE_LANGUAGE - Switch language of the Trading System messages

Message type: 1

Table 54. Input parameters

Name	Type	Default value	Description
LANGUAGEID	c1		Code

Method MESSAGE_SEND - Send message

Message type: 4

Table 55. Input parameters

Name	Type	Default value	Description
USERIDTO	c12		Recipient

Name	Type	Default value	Description
FIRMIDTO	c12		Firm
URGENCY	c1		Urgency
MESSAGE	c256		Message text

Method NEGDEAL - Negotiated order

Message type: 5

Table 56. Input parameters

Name	Type	Default value	Description
ACCOUNT	c12		Trading account
BUYSELL	c1		Buy/Sell
SECBOARD	c4		Board
SECCODE	c12		Instrument
CPFIRMID	c12		Counterparty
PRICE	c10		Cross-rate
QUANTITY	i8		Lots
BROKERREF	c20		Notes
MATCHREF	c10		Reference
SETTLECODE	c12		Settlement code
EXTREF	c12		External client code
CLIENTCODE	c12		Client code
BASEPRICE	c10		Base rate

Method ORDER - Standard order

Message type: 6

Table 57. Input parameters

Name	Type	Default value	Description
ACCOUNT	c12		Trading account
BUYSELL	c1		Buy/Sell
MKTLIMIT	c1		Type
SPLITFLAG	c1		Type by cross-rate
IMMCANCEL	c1		Type by balance
SECBOARD	c4		Board
SECCODE	c12		Instrument
PRICE	c10		Cross-rate
QUANTITY	i8		Lots
HIDDEN	i8		Lots hidden
BROKERREF	c20		Notes
EXTREF	c12		External client code

Method ORDER_AMEND - Amend order

Message type: 7

Table 58. Input parameters

Name	Type	Default value	Description
ORDERNO	i8		Order
ACCOUNT	c12		Trading account code
BUYSELL	c1		Buy/Sell

Name	Type	Default value	Description
SECBOARD	c4		Board
SECCODE	c12		Instrument
CLIENTCODE	c12		Client code
PRICE	c10		Cross-rate
QUANTITY	i8		Lots
BROKERREF	c20		Notes
EXTREF	c12		External client code
CANCELORIGONREJECT	c1		Cancel order

Method SET_LIMIT2 - Change the Firm's internal restrictions

Message type: 9

Table 59. Input parameters

Name	Type	Default value	Description
CURRCODE	c4		Settlement currency
TAG	c4		Position
BANKACCID	c12		Settlement code
LIMIT2SET	c1		Verify internal limit
LIMIT2	i8		Internal restriction
ALLOWBREACH	c1		Allow limit violation

Method USER_TRADE_SUSP - Prohibit trading operations for the client

Message type: 13

Table 60. Input parameters

Name	Type	Default value	Description
USERID	c12		Client
WITHDRAW	c1		Cancel the client's orders

Method USER_TRADE_UNSUSP - Allow trading operations for the client

Message type: 14

Table 61. Input parameters

Name	Type	Default value	Description
USERID	c12		Client

Method WD_NEGDEAL - Cancel negotiated orders

Message type: 15

Table 62. Input parameters

Name	Type	Default value	Description
DEALNO	i8		Order number
USERID	c12		Client
FIRMID	c12		Firm

Method WD_ORDERS - Cancel orders

Message type: 16

Table 63. Input parameters

Name	Type	Default value	Description
BUYSELL	c1		Buy/Sell
ACCOUNT	c12		Trading account code
SECBOARD	c4		Board
SECCODE	c12		Instrument
TRADERID	c12		Client
FIRMID	c12		Firm
EXTREF	c12		External client code
CLIENTCODE	c12		Client code

Method WD_ORDER_BY_NUMBER - Cancel order by number

Message type: 17

Table 64. Input parameters

Name	Type	Default value	Description
ORDERNO	i8		Order