4.16.1. CurGraphReply

Response with information for building charts.

Table 218. Fields of the message `CurGraphReply`

Name	Type	Description
security_id	int32	Primary record key of the currency instrument in the IRIS IS.
period	TotalsPeriod	Period for which data were provided.
interval	GraphIntervalType	Type of interval between countdowns in the series.
ohlc	GraphOhlc (array)	List of OHLC values.

4.16.2. CurGraphRequest

Request for receiving information for building charts for the currency market.

Table 219. Fields of the message `CurGraphRequest`

Name	Type	Description
instrument_id	int32	Primary record key for currency instrument in the IRIS IS. Field is mandatory for filling.
period	TotalsPeriod	The period for which data is requested . If the period is not specified, then the request will be answered with a chart for the entire period of trading on the currency market (starting from December 1998) .
need_empty_intervals	bool	Determines whether to include in the result empty intervals, for example, intervals throughout which not a single transaction was made.

4.17. Indicators

4.17.1. IndChangeReply

Response with information about the change in the value of the selected indicator for the year before the specified date.

Table 220. Fields of the message `IndChangeReply`

Name	Type	Description
type_id	int32	Primary key for recording the indicator type in IS "IRIS" (see Table 7, "Codes of indicator types").
last_time	DateTime	Time of last calculation of the indicator value on date on which information was requested.
last_value	Decimal	Latest value of the indicator on date on which information was requested.

Name	Type	Description
day_value	Decimal	Indicator value for the day from the date of the request.
week_value	Decimal	Indicator value for the week from the date of the request.
month_value	Decimal	Indicator value for the month from the date of the request.
quarter_value	Decimal	Indicator value for the quarter from the date of the request.
half_year_value	Decimal	Indicator value for the half-year from the date of the request.
year_value	Decimal	Indicator value for the year from the date of the request.

4.17.2. IndChangeRequest

Request to receive information about the change in the value of the selected indicator for the year before the specified date.

Table 221. Fields of the message `IndChangeRequest`

Name	Type	Description
type_id	int32	Primary key for recording the indicator type in the IRIS IS (see Table 7, "Indicator type codes").
request_date	Date	The date for which information is requested. If the parameter is not specified, information for the current date will be returned.

4.17.3. IndGraphReply

Response with information for building charts for indicators.

Table 222. Fields of the message `IndGraphReply`

Name	Type	Description
type_id	int32	Primary key for recording the indicator type in the IRIS IS (see Table 7, "Indicator type codes").
period	TotalsPeriod	Period for which data were provided.
interval	GraphIntervalType	The type of interval between countdowns in a series
ohlc	GraphOhlc (array)	List of OHLC values.

4.17.4. IndGraphRequest

Request for information to build charts for indicators.

Table 223. Fields of the message `IndGraphRequest`

Name	Type	Description
type_id	int32	Primary key for recording the indicator type in the IRIS IS (see Table 7, "Indicator type codes").

Name	Type	Description
		This field is required.
period	TotalsPeriod	The period for which data is requested . If the period is not specified, then the response to the request will be a chart for the entire period of indicator calculation (starting from November 1993).
need_empty_intervals	bool	Determines whether to include in the result empty intervals, for example, intervals on throughout which not a single indicator value was calculated .

4.17.5. IndQuotesReply

Answer with a list of the latest values of indicators.

Table 224. Fields of the message `IndQuotesReply`

Name	Type	Description
indicators	Indicator (array)	List of the latest values of indicators.

4.17.6. IndQuotesRequest

Request on receiving the list of latest values of indicators.

Table 225. Fields of the message `IndQuotesRequest`

Name	Type	Description
type_ids	int32 (array)	List of indicator type codes required for loading (see Table 7, "Indicator Type Codes"). If the list is empty, an error message will be received in response.

4.17.7. Indicator

Information about the value of the exchange market indicator.

Table 226. Fields of the message `Indicator`

Name	Type	Description
indicator_id	int32	Primary key for recording the indicator value in the IRIS IS.
value_time	DateTime	Calculation time of the indicator value.
type_id	int32	Primary key for recording the indicator type in the IRIS IS (see Table 7, "Indicator type codes").
value	Decimal	The indicator value. For an IndQuotesRequest, this is the last indicator value.

Name	Type	Description
version	int64	Internal version of the record in IRIS.
trend_value	Decimal	Previous value of the indicator.
trend_time	DateTime	Time to calculate the indicator value for the trend.
day_open	Decimal	The indicator value at the beginning of the last calculation day. Makes sense for real-time indicators.
day_min	Decimal	The minimum value of the indicator during the last calculation day. Makes sense for real-time indicators.
day_max	Decimal	The maximum value of the indicator during the last calculation day. Makes sense for real-time indicators.
year_min	Decimal	The minimum value of the indicator for the last 52 weeks (including the current settlement day).
year_max	Decimal	The maximum value of the indicator for the last 52 weeks (including the current settlement day).
min	Decimal	Historical minimum of the indicator value (including the current settlement day).
max	Decimal	Historical maximum of the indicator value (including the current settlement day).

4.17.8. IndicatorInGroup

Minimum information about the indicator.

Table 227. Fields of the message `IndicatorInGroup`

Name	Type	Description
type_id	int32	Primary key for recording the indicator type in the IRIS IS (see Table 7, "Indicator type codes").
name	string	Indicator name. The field contains the name of the indicators that is current at the time of the request. The names in the reference table (see Table 7, "Indicator Type Codes") are provided for reference only.
real time	bool	Frequency of indicator calculation. If true, the indicator is calculated in real time. If false, the calculation occurs once a day.

4.17.9. IndicatorsCountReply

Response with information about the number of records of indicator values that match the filtering condition.

<div align="center">

Table 228. Fields of the message `IndicatorsCountReply`

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Name	Type	Description
count	int32	The number of records that match the filter condition. The returned number takes into account not only the restrictions specified in the filter, but also the restrictions imposed on the user executing the request.

4.17.10. IndicatorsCountRequest

Request to obtain information about the number of records of indicator values that match the filtering condition.

Note: The returned quantity takes into account not only the restrictions specified in the filter, but also the restrictions imposed on the user executing the request.

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Table 229. Fields of the message `IndicatorsCountRequest`

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Name	Type	Description
filter	IndicatorsFilter	Filter for the requested list of indicator values.

4.17.11. IndicatorsExportReply

Response with information about the generated export file.

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Table 230. Fields of the message `IndicatorsExportReply`

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Name	Type	Description
url	string	URL For downloads generated export file.

4.17.12. IndicatorsExportRequest

Request to obtain information about the list of indicators as a file in the specified format.

<div align="center">

Table 231. Fields of the message `IndicatorsExportRequest`

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Name	Type	Description
filter	IndicatorsFilter	Filter for the requested list of indicators .
sorting	IndicatorsSortRecord (array)	List of fields that require sorting the requested list of indicators.
format	ExportFileFormat	Required format of the exported file.
lang	Language	Required language.

4.17.13. IndicatorsFilter

Information for filtering the list of stock market indicator values, including the requested time period.

Table 232. Fields of the message `IndicatorsFilter`

Name	Type	Description
period	DatePeriod	Period for which the list of indicator values is requested.
type_ids	int32 (array)	List of indicator type codes required for downloading (see Table 7, "Indicator Type Codes").
version_from	int64	Internal version of the record in the IRIS system starting from which the result should be issued. It is assumed that this limitation will be used together with the packet size indication (see the "bandle" field in the IndicatorsRequest message, Section 4.17.16, "IndicatorsRequest").
indicator_ids	int32 (array)	List of transaction codes for which information is required. Intended for use with `IndicatorsUpdate` (see Section 4.17.18, "IndicatorsUpdate").

4.17.14. IndicatorsGroup

Information about the indicator group.

Table 233. Fields of the message `IndicatorsGroup`

Name	Type	Description
name	string	Name of the indicator group.
indicators	IndicatorInGroup (array)	List of indicators included in the group. The division of indicators into groups in the reference table is provided for information only.

4.17.15. IndicatorsReply

Response with a list of indicator values that match the filtering condition.

The following fields are not filled in the response received for the IndicatorsRequest request: day_open, day_min, day_max, year_min, year_max, min and max.

Table 234. Fields of the message `IndicatorsReply`

Name	Type	Description
range	Range	The range of records in the response.
indicators	Indicator (array)	List of indicator values.

4.17.16. IndicatorsRequest

Request to obtain a list of indicator values that match the filtering condition.

Table 235. Fields of the message `IndicatorsRequest`

Name	Type	Description
filter	IndicatorsFilter	Filter for the requested list of indicator values.

Name	Type	Description
range	Range	Specifying the required range of records. The request will be answered with records that match the specified filter and are included in the range specified in the parameter. Mutually exclusive with bandle.
bandle	int32	Specifying the size of the transmitted record packets. In response to the request, all records matching the specified filter will be transmitted in packets of the size specified in the parameter. Mutually exclusive with range.
sorting	IndicatorsSortRecord (array)	List of fields by which the requested list of transactions must be sorted.

4.17.17. IndicatorsSortRecord

Information for sorting the list of stock market indicator values.

Table 236. Fields of the message `IndicatorsSortRecord`

Name	Type	Description
field	IndicatorsSortField	The field by which sorting is required.
desc	bool	Sorting direction. If true, reverse sorting is required.

4.17.18. IndicatorsUpdate

Notification about new indicator values or changes.

Table 237. Fields of the message `IndicatorsUpdate`

Name	Type	Description
indicators	ShortIndicatorInfo (array)	Brief information about the meanings of the indicators .

4.17.19. ShortIndicatorInfo

Brief information about the meaning of the stock market indicator.

Table 238. Fields of the message `ShortIndicatorInfo`

Name	Type	Description
indicator_id	int32	Primary key for recording the indicator value in the IRIS IS.
value_time	DateTime	Calculation time of the indicator value.
type_id	int32	Primary key for recording the indicator type in the IRIS IS (see Table 7, "Indicator type codes").
event_type	EventType	Event type (new, update , delete).

4.17.20. IndicatorsSortField

Fields by which it is possible to sort the list of indicator values.

Table 239. `Acceptable meanings IndicatorsSortField`

Name	Description
ISF_VALUE_TIME	Calculation time of the indicator value.
ISF_TYPE	Primary key of the indicator type record in the IRIS IS.
ISF_VALUE	Indicator value.
ISF_VERSION	Record version.
ISF_ID	IRIS record code.

4.18. Deals on the repo market transactions

4.18.1. Repo

Information about a transaction in the repo market.

It should be noted that the `auto_id` and `auto_code` fields are filled only for historical data. In the new MOEX trading system, the concept of an automatic repo instrument is absent and the `auto_code` field will always be filled with the value "MOEX".

Field `prolong_date` is filled in only if the repo operation was extended.

Fields `close_vol_kzt` and `close_vol_usd` are filled only after the repo transaction is closed.

Table 240. Fields of the message `Repo`

Name	Type	Description
repo_id	int32	Primary key for recording a repo transaction in the IRIS IS.
open_time	DateTime	Repo transaction opening time.
close_time	DateTime	Repo transaction closing time.
prolong_date	Date	Repo transaction extension date.
credit_days	int32	Repo term in days.
sec_id	int32	Primary key for recording a security in the IRIS information system.
sec_code	string	Auto repo transaction indicator.
autorepo	bool	Sign transactions automatic repo .
auto_id	int32	Primary key for recording the automatic repo instrument in the IRIS IS.
auto_code	string	Security code
open_price	Decimal	Opening price of a repo transaction.
close_price	Decimal	Closing price of a repo transaction.
volume	int64	Repo transaction volume .
open_vol_kzt	Decimal	Repo transaction opening volume in tenge.
open_vol_usd	Decimal	Repo transaction opening volume in USD at the rate accepted in KASE on the transaction opening day.