BISTECH PTRM API

Technical Information Document

July 2022

1. General

1.1 Scope

BISTECH PTRM offers the Exchange and its members the ability to control the risk arising from both orders and trades. Currently, members connect to the GUI (Graphical User Interface) of PTRM application via their users allocated by the Exchange through distant remote access. In order to provide connection between member software and PTRM application, PTRM system improved with API communication enrichment.

1.2 Business Rationale

Over the PTRM application, parameters related to the risk controls are updated statically via PTRM GUI. By adopting API communication development members may be able to update risk control parameters dynamically to respond intraday market conditions being independent of GUIs' static adjustments and customize PTRM according to their own software needs.

2. Technical Information

2.1 Developments

PTRM API is a REST API (HTTP) service containing the required endpoints to be used in PTRM risk controls. The main groups of developed endpoints are listed below. Information regarding the details of the requests is available in PTRM API Technical Specification document.

Login Services

This group contains the endpoints that PTRM API users should use to login to the system. After logging into the system through the relevant services, token production will be made to be used in all transactions (GET, POST). When the generated token expires, it will need to be renewed through the services in this group.

Login Services	
login	It is a service that sends a request with the user's username and password information and generates tokens after checking the information. The relevant token is sent to the user, and in subsequent requests the token is sent as part of the request to check the validity of the request. A long-term valid token is also sent in the reply for use in the refresh-token service
refresh-token	It is the service that generates new tokens when the validity period of the token generated after successful login has expired.

	A user can also generate new tokens with the login operation. Refresh-token service is an alternative service for token renewal without having to send username and password information again.

Risk Group (User Limit) Services

This group contains the endpoints that PTRM API users should use for the risk controls at risk group level. Through the services in this group, all risk parameters related to risk groups will be requested and updated dynamically in line with changing market conditions.

Over the PTRM application, risk controls are done at different stages using different risk check types (Pre-Order Controls: Maximum Order Size, Restricted Contracts, Price Tolerance Limit; Post-Order and At Trade Controls: Order rate limitations, Intraday position limits, Duplicate order limit; mass cancellation of orders, blocking and unblocking of user groups). Details of the risk check types is included in PTRM API Technical Specification document.

Risk Group (User Limit) Services	
active-group-details (GET)	It is the service used to request the detailed list of all active risk groups. Filtering on the basis of risk group is possible.
active-group-names (GET)	It is the service used to request the names of all active risk groups.
active-risk-check-details (GET)	It is the service used to request the details of risk parameters of active risk groups set on instrument type and instrument class[*] level. Filtering on the basis of risk group and taradable level is possible.
active-exchange-group-details (GET)	It is the service used to request the detailed list of all active risk groups set by the Exchange. Filtering on the basis of risk group is possible.
active-exchange-group-names (GET)	It is the service used to request the names of all active risk groups set by the Exchange.
pending-group-names (GET)	It is the service used to request the names of all risk groups that will be active at the beginning of the next day.
pending-group-details (GET)	It is the service used to request the detailed list of all risk groups that will be active at the beginning of the next day. Filtering on the basis of risk group is possible.

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[*] *"Intrument type and instrument class" will be named as tradable in subsequent sections.*

pending-risk-check-details (GET)	It is the service used to request the details of risk parameters of risk groups set on tradable level groups that will be active at the beginning of the next day. Filtering on the basis of risk group and taradable level is possible.
pending-exchange-group-names (GET)	It is the service used to request the names of all risk groups set by the Exchange that will be active at the beginning of the next day.
pending-exchange-group-details (GET)	It is the service used to request the detailed list of all risk groups set by the Exchange that will be active at the beginning of the next day. Filtering on the basis of risk group is possible.
tradable-details (GET)	It is the service used to request the detailed list of tradables in Exchange system.
tradable-details-by-filter (GET)	It is the service used to request the detailed and filtered list of tradables in Exchange system. Filtering on the basis of Name, Market, Underlying and Instrument Group is possible.
risk-check-consumptions (GET)	It is the service used to request both the limits and current consumptions of risk groups. Filtering on the basis of risk group and taradable level is possible.
save-active-group (POST)	It is the service used to update risk parameters of active risk groups on tradable level. Read-only PTRM API users are not allowed for this transaction. The risk parameters to be updated at tradable level must belong to an active risk group. No changes can be made to the e-mail information and user list. Risk limits can only be updated as an intraday change. It is sufficient to send only the risk parameters to be updated in the request. Risk parameters that are not sent in the request are saved with their old values. If an active risk group is updated when there exist a pending risk parameter update that will be activated at the beginning of the next day, pending update will be deleted.
save-pending-group (POST)	It is the service used to update risk parameters of risk groups that will be active at the beginning of the next day on tradable level. Read-only PTRM API users are not allowed for this transaction. For a tradable to be deleted, the "deleted" field must be set to true. If a new tradable is to be added to a risk group, all risk values for that tradable must be included in the request.

	Except for deleting and adding tradable, for updating the risk parameters of existing tradable it is sufficient to include only the risk parameter to be updated.
	If a new risk group is added, the group name should be given in accordance with the standards. If the saved group is a new group, the entered group name is considered as a suffix and "BIUYE_BIUYE_" part is added automatically. The suffix can contain lowercase letters, uppercase letters, numbers, and "_". The maximum number of characters for the suffix is 16.
mass-cancel (POST)	It is the service used for mass cancellation of a risk group.
mass-cancel-for-user (POST)	It is the service used for mass cancellation of a risk group on the basis of a user.
unblock-order-rate (POST)	It is the service used to unblock a risk group that is blocked because of an order rate limit breach.
block-group (POST)	It is the service used to block risk groups.
unblock-group (POST)	It is the service used to unblock a blocked risk group.
unblock-tradable (POST)	It is the service used to unblock a risk group that is blocked because of duplicate order limit breach. Tradable must be set under the risk group.

2.2 Limitations

PTRM API users' requests to the provided services will be limited to a certain capacity (Throttling Quota). A user will be able to send a certain number of requests for each service in a certain time interval and will receive a message when the capacity is exceeded. Detailed limit information will be announced later.