SUNGARD 金仕达

Futures Trading

API Detail Analysis

Document Description

Document Name	Kingstar Futures Trading API Detail Analysis
Version	<V1.8>

Document Revision History

version	date of change	memo	owner
V1.0	<2012-01-12>	1. Detail analysis for difference between KSFT API and CTP API	Mingming.shen
V1.0	<2012-04-27>	1. Add chapers for usage difference description of API	Zhichun.xia
V1.1	<2012-05-03>	1. Fill in the usage difference description of API in detail	Mingming.shen
V1.2	<2012-05-18>	1. Standardization for document	Mingming.shen
V1.3	<2012-07-25>	1. UDP Quotation subscription interface calling convention	Mingming.shen
V1.4	<2012-09-04>	1. Record local file path for API	Mingming.shen
V1.5	<2012-09-12>.	1. Support combination order for V8T	Mingming.shen
V1.6	<2012-12-03>	1,Support gold night market、warehouse receipt reduce 2, linux API, support 32 bit and 64 bit environment	Xudong.hu
V1.7	<2012-01-14>	Support RegisterNameServer interface Optimize rate and margin query interface[total query]	Xudong.hu
V1.8	<2013-03-08>	Add kingstar conditional order interface, and abandon pre-pay interface of CTP Add this English version document	Xudong.hu

This version of the document formally approved

Name	Sign	Date

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Document Description

This document is handled through the records discussed by terminal manufacturers and program trading technology experts in Kingstar third-party standard interface QQ group (86719207) (especially thanks to the Kuaiqi,Jinniu, Yingjia, Huili such terminal manufacturers), the follow-up will continue to updatethis document, please get the latest version.

Simulation environment

1. The Kingstar simulation trading platform provides commodity futures simulated trading system for all development, testing and trading trial.

   Name server address：tcp:// 210.5.154.195:38001(V8T);   tcp:// 210.5.154.195:37001(V6)

   Front-end address：tcp://210.5.154.195:13163(V8T);   tcp://210.5.154.195:13153(V6)

   BrokerID：6A89B428

   KSFT_API Technology Forum Link：http://www.oceantribe.org/vb/forumdisplay.php?f=55；

   This is network address on No.3 district of ocean tribe, participants need to register this forum in advance. At present the members of ocean tribe from Sungard development are as follows:

   Peterxia（zhichuan.xia），Kevin&Winnie(mingming.shen)，xdhu2013（xudong.hu）

2. Apply test account for simulation environment.

   Those who want to develop trading terminal for Kingstar simulated trading platform, both software vendors and personal could send email with the company profile, the developer resume and end products planning to mingming.shen@sungard.com for application . After the approval of Kingstar leadership, participants can get the accounts for testing. Futures investors can apply for simulation environment by futures companies through domestic to Kingstar market personnel

3. Simulation environment Trading Hours

   The normal trading hours of the domestic futures market can be trading, transactions can be carried out until late every trading day 12:00, the holidays can be traded in the normal case.

4. Simulated Exchange

   Support Shanghai Futures Exchange、Dalian Commodity Exchange、Zhengzhou Commodity Exchange and China Financial Futures Exchange.

5. Bank-Futures Transfer

   Support for Bank-Futures transfer operate

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API Usage Difference Description

1. Difference：Market Data API loginning needs Cryptographic checksum
   Initial version of the API：2.0.20413.1
   Initial version of contrast：CTP-API.v5.5.1
   Interface method：ReqUserLogin
   Type of difference：Function
   Content of difference:：request struct need be filled in client password
   Difference explain: Kingstar market data API verify the password throuth login process, while CTP marketdata interface doesn't

2. Difference：Field "AveragePrice","Turnover", "PreOpenInterest " in Struct of Market data push and market data query response
   Initial version of the API：2.0.20413.1
   Initial version of contrast：CTP-API.v5.5.1
   Interface method：OnRspQryDepthMarketData、OnRtnDepthMarketData
   Type of difference：Field sementics|value
   Content of difference:：AveragePrice in Kingstar is average price of day instrument, and it is needn't by client computing. Turnover in Kingstar Zhengzhou market data is not provided, because exchange doesn't provide, while Turnover in CTP is computed by market data server, and this method is not appropriate.[exists error]；PreOpenInterest in Kingstar is not provided,and later on kingstar would compare with exchange interface. If exchange interface has, then kingstar provides ,otherwise kingstar doesn't provide . PreOpenInterest in Kingstar Dalian market data is not provided because exchange doesn't provide too.
   Difference explain：AveragePrice in CTP need client process through different exchanges .

3. Difference：Query pre-market positions data and pre-market combination positions data
   Initial version of the API：2.0.20413.1
   Initial version of contrast：CTP-API.v5.5.1
   Interface method：ReqQueryInvestorOpenPosition、ReqQueryInvestorOpenCombinePosition
   Type of difference：Function
   Content of difference：This interface is used to query the the initial positions data after the date of initialization, then a private stream RESTART mode Subscribe foreground positions capital calculation without intraday longer queries positions. Kingstar did not provide the latest the breakdown positions data query interface , positions interfaces are aggregated query.
   Difference explain：new added API interface, kingstar client can query pre-market position [pre-position]，

4. Difference：Proxy mode of registering front-end server.

Initial version of the API：2.0.20413.1

Initial version of contrast：CTP-API.v5.5.1

Interface method：RegisterFront

Type of difference：Field sementics|Function

Content of difference：Kingstar supports http proxy

Difference explain：CTP doesn't support http proxy

5. Difference：Closetoday-freezeRatioByMoney, Closetoday-freezeRatioByVolume

   Initial version of the API：2.0.20413.1

   Initial version of contrast：CTP-API.v5.5.1

   Interface method：OnRspQryTradingAccount

   Type of difference：Field sementics|Function

   Content of difference：Compute method with Closetoday-freezeRatioByMoney, Closetoday-freezeRatioByVolume is different.

   Difference explain：Kingstar computes Closetoday-freezeRatioByMoney, Closetoday-freezeRatioByVolume with ClosetodayRatioByMoney and ClosetodayRatioByVolume, while CTP computes Closetoday-freezeRatioByMoney with open position ratio.

6. Difference：Reconnection

   Initial version of the API：2.0.20413.1

   Initial version of contrast：CTP-API.v5.5.1

   Interface method：CreateFtdcTraderApi、CreateFtdcMdApi

   Type of difference：Process|System

   Content of difference：Mechanism on Reconnection is different

   Difference explain：Client with Kingstar implement reconnection by calling Create, RegisterSpi, RegisterFront, Init again.

7. Difference：Follow-up functions to be developed

   Initial version of the API：2.0.20413.1

   Initial version of contrast：CTP-API.v5.5.1

   Interface method：

   Type of difference：Process|System

   Content of difference：Follow-up should be improved

   Difference explain：Kingstar API has not supported multi-Front IP, multi-connection, embedded order, combination order, Udp market data, Linux platform

8. Difference：The freezing of funds algorithm

   Initial version of the API：2.0.20413.1

   Initial version of contrast：CTP-API.v5.5.1

   Interface method：

Type of difference：Process|System

Content of difference：The freezing of funds algorithm is different with CTP

Difference explain：The Kingstar freeze prices emulated as follows: If the market price, and then take the reverse Price Limits; fail to take yesterday settled; longer get any error refused. Sell to open, commissioned by the price and the purchase price, whichever is greater (If you take less than the purchase price, take yesterday settled; take less than yesterday settled an error refused)

9. Difference：Set parameters of UDP quotes subscribe

   Initial version of the API：2.0.20725.1

   Initial version of contrast：CTP-API.v5.5.1

   Interface method：RegisterFront

   Type of difference：Field sementics|Function

   Content of difference：Kingstar UDP market mode is different with CTP

   Difference explain：When market Data Front-machine calls RegisterFront to register UDP Quotes, it needs call RegisterFront twice, once incoming market pre-address tcp:// xxx.xxx.xxx.xxx: yyyy, once incoming udp : // xxx.xxx.xxx. xxx: yyyy.

10. Difference：Local file specified directory store

    Initial version of the API：2.0.20725.3

    Initial version of contrast：CTP-API.v5.5.1

    Interface method：SetWritablePath

    Type of difference：Field sementics|Function

    Content of difference：New added interface in Kingstar API

    Difference explain：If the client installation directory is read-only (for example, c :/ Program Files / *** Trader), you must call this interface to set data file storage directory. If you don't call this interface, the default directory is installed.

11. Difference：Support conditional order

    Initial version of the API：2.0.20912.1

    Initial version of contrast：CTP-API.v5.5.1

    Interface method：ReqOrderInsert

    Type of difference：Field sementics|Function

    Content of difference：Margin algorithm taken inconsistent prices between Kingstar and CTP

    Difference explain：The Kingstar API currently supports only V8T combination of single, V6 \ V6T not yet support a combination of single. The Kingstar take one leg contract price as calculated price, If you do not have the latest price taken the previous day settlement price as calculated to freeze the cost of computing price.

    Margin computing Formula：The opening hand * contract multiplier * commissioned Price * charged according to the amount of the margin rate + Open Lot * receive margin according to the number of

lots. The CTP calculate margin the algorithm directly take on one leg contract yesterday settled calculated. The Dalian Exchange: the legs are to receive the deposit. Zhengzhou Exchange: charge only the legs of the margin.

12. Difference：API supports gold night market, warehouse receipts off against,linux environment development

Initial version of the API：2.1.21203.2（relevant windows version is 2.1.21203.1）

Initial version of contrast：CTP-API.v5.5.1

Interface method：No new-added interface, mainly adopt the old interface to make linux-API development compatiblely

Type of difference：Platform|compile and develop|function

Content of difference：

1）Platform difference：linux-based program needs Redhat 5.3(x86_64) or above operating system

2）Compile and develop difference：View of the dynamic library file API provided is compiled with gcc 4.1.2, developers in linux platform development requires at least gcc 4.1.2 and above. With low version of gcc may cause compile or links errors. Developers use the API only the two libkstradeapi.so and libksmaketdataapi.so dynamic library file and header files (no need to install windows environment cpack.dll and lkcdll.dll under linux counterpart)

3）Function: supports gold night market, warehouse receipts off against。

13. Difference：API supports portal integration、ratio and margin total-query interface

Initial version of the API：2.1.30114.1（relevant linux version is 2.1.30114.2）

Initial version of contrast：CTP-API.v5.5.1

Interface method：RegisterNameServer

Type of difference：Field sementics|Function

Content of difference：After client register server address, it would obtain the optimal Front-end machine to connect SunGard server, and the client no longer to need to call RegisterFront interface.

Difference explain：Currently only windows based version supports RegisterNameServer interface (required call ksPortalAPI.dll). Commission rates, margin rate query interface supports to query the rates of all contracts without filling out the contract field

14. Difference：API supports Bulk withdrawals interface

Initial version of the API：2.1.30308.1（relevant linux version is 2.1.30308.2）

Initial version of contrast：CTP-API.v5.5.1

Interface method：ReqBulkCancelOrder

Type of difference：Field sementics|Function

Content of difference：Kingstar client can call this interface to implement bulk withdrawals

Difference explain：Client need to fill out form keyword fully, and then can cancel orders up to 20 in one instruction. If withdrawals are failed, then OnRspBulkCancelOrder callbacks would be called, otherwise OnRtnOrder callback would be called.

15. Difference：Conditional order, profit and loss order
    Initial version of the API：2.1.30308.1（relevant linux version is 2.1.30308.2）
    Initial version of contrast：CTP-API.v5.5.1
    Interface method：LoadExtApi、ReqInitInsertConditionalOrder、ReqInsertProfitAndLossOrder and so on.
    Type of difference：Field sementics|Function
    Content of difference：The client first calls LoadExtApi interface to load conditional order instance, then it can call conditional order and profit-loss orders interface calls and conditional orders, profit-loss orders state callback.
    Difference explain：Pre-embedded order interface of CTP is not adopted.Kingstar directly load conditional order instance to use newly added conditional order and profit-loss order interface.The specific use of conditional order interface is referenced to "KSFT_API Conditional Order Operation Manual".
    Initial version of conditional order server: cossvr6.8.20130314