



CBOE Application Programming Interface

CBOE API Version 4.2.3 - Release Notes

Provides an overview of upcoming changes in the next production release of the
CMI

CBOE PROPRIETARY INFORMATION

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Front Matter

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Support and Questions Regarding This Document

Questions regarding this document can be directed to The Chicago Board Options Exchange at 312.786.7300 or via e-mail: api@cboe.com.

The latest version of this document can be found at the CBOE web site: <http://systems.cboe.com/webAPI>.

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Overview

This document highlights upcoming changes in the new release of the CMi API, Version 4.2.3. This release supports new IDL constants and documentation changes. There are no Simulator changes. Users can continue to use the CMi V4.2 simulator. The sections below detail the changes in this release. Your feedback or questions regarding this document should be sent to api@cboe.com.

CMi V4.2.3 Highlights

Pending SEC approval, CMi users will have the ability to submit spread orders (buywrites) between products on different underlyings. In addition, CBSX Firm Display users will begin to receive unacknowledged and real-time drop copies for their clearing firm and exchange.

Cross-Product Spread Orders

CMi users will have the ability to submit spread orders between products on different underlying securities, different business clusters, and different sessions. A cross-product spread order is an order to Buy or Sell a stated number of Option contracts, and also Buy or Sell the same underlying Stock or Exchange-Traded Fund (ETF) share (Equity contracts), generally, in an amount that would offset (on a one-for-one basis) the option position. Users would use one of the Order Entry methods currently available in the OrderEntry interface in the `cmi.idl`.

Creating and submitting a Cross-Product Spread Order using Existing OrderEntryInterface

A cross-product spread order needs leg-specific fields set, and so would need to use one of the OrderEntry methods that has `cmiOrder::LegOrderEntryStructSequence` parameters.

Leg specific fields are in `cmiOrder::LegOrderEntryStructSequence` `legEntryDetails`

(For documentation clarity, the Option Leg will be referred to as `legEntryDetails[0]`, and the Equity Leg will be referred to as `legEntryDetails[1]`).

`LegEntryDetails[0].clearingFirm` = this must be the clearing firm used for the option product.

`LegEntryDetails[1].clearingFirm` = this must be the clearing firm used for the equity product.

Drop Copies functionality

A CMi Firm that logs in as a Firm Display user (`const cmiUser::UserRole FIRM_DISPLAY = 'R'`) will receive drop copies (order/quote fills, busted order/quote fills) for its clearing firm and exchange. This functionality is available on exchange basis. For example, clearing firms that login for CBSX drop copies will not get drop copies from other exchanges.

Upon logging into a single CAS, the Firm Display user will receive all unacknowledged and real-time drop copies for his/her clearing firm and exchange. If the Firm Display user is not logged in during an occurrence of fill/bust or bust re-instate events, the missing events will be delivered after the users next login. Those reports will be delivered as Poss Resends. Missed events up to one day old will be delivered to the user.

OrderStatus NEW messages

Currently, CMi users receive order status messages as guaranteed message delivery (GMD). Beginning in late October, order status NEW messages will not be GMD. If a CMi user is disconnected for any reason, at re-login the user will not receive the undelivered order status NEW messages. No IDL update is required for this change.

IDL Interfaces

New and modified IDL is reflected in **bold** face.

module cmiConstants

interface AuctionTypes // Auction type codes

```
{
    const cmiOrder::AuctionType AUCTION_INTERNALIZATION = 1;
    const cmiOrder::AuctionType AUCTION_STRATEGY = 2;
    const cmiOrder::AuctionType AUCTION_REGULAR_SINGLE = 3;
    const cmiOrder::AuctionType AUCTION_HAL = 4;
    const cmiOrder::AuctionType AUCTION_SAL = 5;
    const cmiOrder::AuctionType AUCTION_UNSPECIFIED = 0;
    // sharing the Auction channel
    const cmiOrder::AuctionType STOCK_NBBO_FLASH = 6;
    const cmiOrder::AuctionType STOCK_ODD_LOT = 7;
    This new message type is used to indicate the side and size of the odd lot order, as well as the NBBO price to all interested parties.
}
```

interface ContingencyTypes

```
{
    interface ContingencyTypes
    {
        const cmiOrder::ContingencyType NONE = 1; // no contingency
        const cmiOrder::ContingencyType AON = 2; // All or None
        const cmiOrder::ContingencyType FOK = 3; // Fill or Kill
        const cmiOrder::ContingencyType IOC = 4; // Immediate or Cancel
        const cmiOrder::ContingencyType OPG = 5; // Opening only
        const cmiOrder::ContingencyType MIN = 6; // Minimum
        const cmiOrder::ContingencyType NOTHELD = 7; // Not held
        const cmiOrder::ContingencyType WD = 8; // With discretion
    }
}
```

```

const cmiOrder::ContingencyType MIT = 9; // Market if touched
const cmiOrder::ContingencyType STP = 10; // Stop order
const cmiOrder::ContingencyType STP_LOSS = 11; // Stop loss
const cmiOrder::ContingencyType CLOSE = 12; // On close
const cmiOrder::ContingencyType STP_LIMIT = 13; // Stop limit
const cmiOrder::ContingencyType AUCTION_RESPONSE = 14; // Auction response order
const cmiOrder::ContingencyType INTERMARKET_SWEEP = 15; // Intermarket sweep
const cmiOrder::ContingencyType RESERVE = 16; // Reserve order
const cmiOrder::ContingencyType MIDPOINT_CROSS = 17; // Mid Point Cross
const cmiOrder::ContingencyType CROSS = 18; // Cross
const cmiOrder::ContingencyType TIED_CROSS = 19; // Tied cross
const cmiOrder::ContingencyType AUTOLINK_CROSS = 20; // Auto link cross
const cmiOrder::ContingencyType AUTOLINK_CROSS_MATCH = 21; // Auto link cross
const cmiOrder::ContingencyType CROSS_WITHIN = 22;
const cmiOrder::ContingencyType TIED_CROSS_WITHIN = 23;
const cmiOrder::ContingencyType STOCK_ODD_LOT_NBBO_ONLY = 24;
    Odd lot stock order that should be cancelled if it cannot trade at the NBBO
};

```

Document Changes

API-01

- No changes

API-02

- Updated the Guaranteed Message Delivery (GMD) section to include the GMD usage below.
 - The order status NEW message will no longer be by GMD. If a CMi user is disconnected for any reason, at re-login the user will not receive the undelivered NEW order status messages
- Added a “Spread Order Functionality” section that includes creating cross-product spreads and delta neutrals.

Creating and submitting a Cross-Product Spread Order using Existing OrderEntryInterface

A cross-product spread order needs leg-specific fields set, and so would need to use one of the OrderEntry methods that has cmiOrder::LegOrderEntryStructSequence parameters.

Leg specific fields are in cmiOrder::LegOrderEntryStructSequence legEntryDetails

(For documentation clarity, the Option Leg will be referred to as legEntryDetails[0], and the Equity Leg will be referred to as legEntryDetails[1]).

LegEntryDetails[0].clearingFirm = this must be the clearing firm used for the option product.

LegEntryDetails[1].clearingFirm = this must be the clearing firm used for the equity product.

Creating and submitting a “Delta Neutral” Spread Order using Existing OrderEntryInterface

A “Delta Neutral” Spread order needs leg-specific fields set, and so would need to use one of the OrderEntry methods that has cmiOrder::LegOrderEntryStructSequence parameters.

Order specific fields are in cmiOrder::OrderEntryStruct anOrder:

anOrder.price.whole = 0

anOrder.price.fracion = 0

anOrder.price.type = PriceTypes.NO_PRICE

LegEntryDetails[0].mustUsePrice.type = must be of PriceTypes.VALUED

LegEntryDetails[1].mustUsePrice.type = must be of PriceTypes.VALUED

- Changed the section “CBSX Trade Type Indicators” to read “CBOE Trade Type Indicators.” Trade type indicators are available for all sessions and are not specific to CBSX.
- Updated the “Market Data Types” table for Book Depth to read: “Snapshot query or subscription (*Hybrid: 1 Snapshot once every 1second & no subscriptions*)” instead of reading “Snapshot query or subscription (*Hybrid: 1 Snapshot once every 10 minutes & no subscriptions*)”
- Added a new section “Drop Copies for CBSX” that includes:

CMi users that login as a Firm Display user (const cmiUser::UserRole FIRM_DISPLAY = ‘R’) will receive drop copies (order/quote fills, busted order/quote fills) for his/her clearing firm and exchange. This functionality is available on exchange basis. For example, clearing firms that login for CBSX drop copies will not get drop copies from other exchanges.

Upon logging into a single CAS, the Firm Display user will receive all unacknowledged and real-time drop copies for his/her clearing firm and exchange. If the Firm Display user is not logged in during an occurrence of fill/bust or bust re-instate events, the missing events will be delivered after the users next login. Those reports will be delivered as Poss Resends. Missed events up to one day old will be delivered to the user.

API-03

- Added values for new constants based on this release.
- Removed the W_STOCK reference in the descriptions of the Billing Indicator Types. Billing type indicators are available for all sessions and are not specific to CBSX.

API-04

- Added values for new constants based on this release.
- Removed the W_STOCK reference in the descriptions of the Billing Indicator Types. Billing type indicators are available for all sessions and are not specific to CBSX.

API-05

- No changes

API-06

- No changes

API-07

- No changes

API-08

- No changes

CAS-01

- No changes

CAS-02

- No changes

Simulator

- No changes. Users can continue to use the CMi V4.2 simulator.

Test Plan Changes

- No changes