

# **POSIT MTF**

## Periodic Auction Feed Specification

**VERSION 1.0**  
FEBRUARY 2022



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## 1 Changes

Version	Date	Description
1.0	May 2022	Initial version

## 2 Overview

This document provides market data specification for Virtu POSIT Periodic auction data.

### 2.1 Session Information

The session allows clients to receive indicative and trade messages for Virtu's POSIT periodic auction universe. The application messages are delivered over a SoupBIN session.

The SoupBIN session replays old messages when a client sends in a login request with sequence number "1". The sequence number in the login response shall be used to differentiate real-time messages with replayed data.

As part of the replay messages, the server will send a InstrumentDefinition message.

### 2.2 Certification Process

The certification process involves performing conformance tests designed to show that the client's implementation conforms to the specifications from this document. Virtu provides a UAT environment to allow the client to test and debug their application. Production credentials are provided when the certification testing has completed. Test trades will need to successfully flow through all production trading and clearing systems before full production order flow is permitted.

### 2.3 Connectivity

Market Data traffic will be TCP based with server (IP:port) for each binary session.

Clients are required to initiate the Logon sequence. Clients will be logged out at the end of the hours of operation.

### 2.4 Schedules

#### 2.4.1 Trading Hours

Europe Equity: 08:00 to 16:30 London time Monday to Friday

#### 2.4.2 Operating Hours



The platform (Production and UAT) is available for connection from 08:00 GMT until 17:00 GMT Monday – Friday.

UAT trading hours match production-trading hours.

## 3 Supported Messages

### 3.1 Session Level Messages

The following SoupBIN Session messages are supported.

For client to server:

- Login Request
- Client Heartbeat
- Logout Request

From server to client:

- Login Accepted
- Login Rejected
- Sequenced Data
- Server Heartbeat
- End of Session

For the complete specification of the messages and their workflow, please refer to:

<https://www.nasdaqtrader.com/content/technicalsupport/specifications/dataproducts/soupbintcp.pdf>

Please note that **the SoupBIN protocol employed does allow for retransmission of past packets upon connection**. The server effectively ignores the value of the “Requested Sequence Number” in the Client Login Request message and the server will send a snapshot of all the available instruments once connected.

## 4 Application Messages

### 4.1 Data Types

All integer fields are **big-endian** binary encoded numbers. Unless otherwise noted, they are unsigned.

All alpha fields are ASCII fields, which are left justified and padded on the right with spaces.

Prices are integer fields, supplied with an associated precision. When converted to a decimal format, prices are in fixed-point format, where the precision defines the number of decimal places. For example, a field flagged as Price (4) has an implied four decimal places.

### 4.2 Application Messages

The Virtu POSIT Periodic auction server uses the following messages:

- Instrument Definition(‘R’)
- Indicative (‘i’)
- Cross Trade(‘Q’)



These messages are published when indicatives are received, updated, crossed or cleared.

### 4.3 Instrument Definition ('R')

After successful client connection, the server sends instrument definition messages for all active stocks traded on system.

Name	Offset	Length	Value	Notes
Message Length	0	2	Unsigned Integer	Message Length
Message Type	2	1	"R"	Instrument Definition
Timestamp	3	8	Unsigned Integer	Nanoseconds since epoch
StockId	11	4	Integer	Stock Id
symbol	15	16	Alphanumeric	SEDOL

### 4.4 Indicative ('i')

This message is sent from Virtu to the client to communicate the indicatives price and size for stock.

Name	Offset	Length	Value	Notes
Message Length	0	2	Unsigned Integer	Message Length
Message Type	2	1	"i"	Indicative
Timestamp	3	8	Unsigned Integer	Nanoseconds since epoch
Group id	11	1	Integer	Group Id*



Venue id	12	1	Integer	Venue Id*
StockId	13	4	Integer	Stock Id
Indicative price	17	8	Price (4)	The auction-clearing price as integer with fixed point precision of 4 decimal places.
Indicative shares	25	4	Integer	The total number of shares that are eligible to match at current indicative price.

#### 4.5 Cross Trade ('Q')

Cross Trade message indicates that Virtu has completed its cross process for specific security.

Name	Offset	Length	Value	Notes
Message Length	0	2	Unsigned Integer	Message Length
Message Type	2	1	"Q"	Cross Trade
Timestamp	3	8	Unsigned Integer	Nanoseconds since epoch
Group Id	11	1	Integer	Group Id*
Venue Id	12	1	Integer	Venue Id*
StockId	13	4	Integer	Stock Id
Price	17	8	Integer	The trade price as integer with fixed point precision of 4 decimal places.
Execution quantity	25	4	Unsigned Integer	The number of shares matched in the cross



MatchId	29	8	Integer	Match Id** ( Not used)
Reserved	37	1	Integer	Reserved**

**Note:**

- '\*' - Group and Venue id's shall be ignored
- '\*\*' - Not in use

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