

Connecting to
NASDAQ OMX Commodities
trading and clearing platform

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1 Introduction

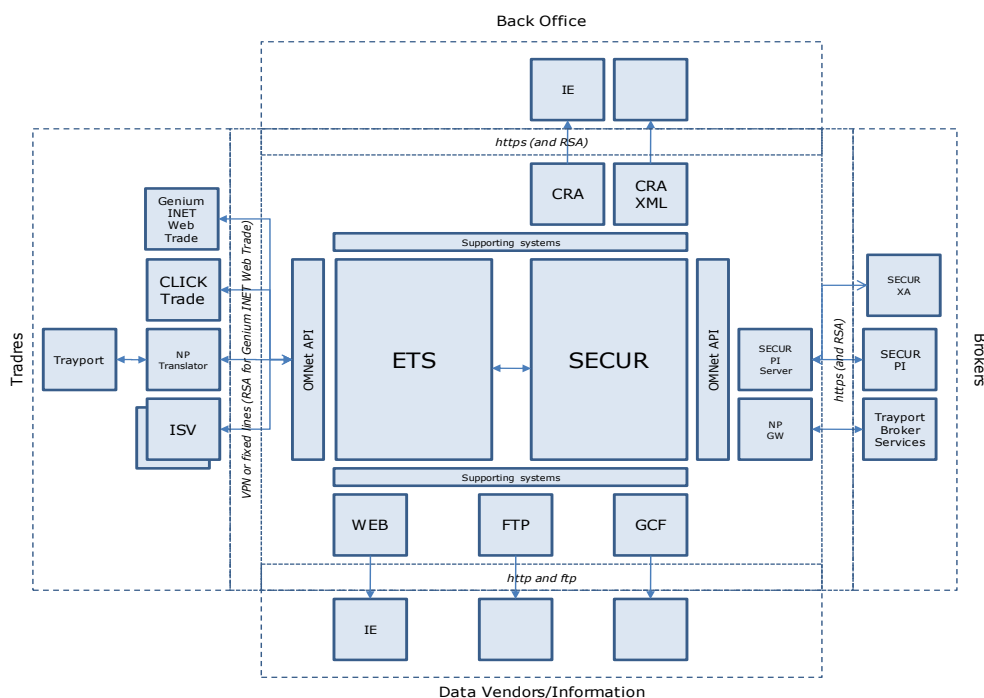
NASDAQ OMX Commodities provides trading and clearing of Nordic, international and UK power derivatives, European Union allowance (EUAs) and certified emission reductions (CERs). Trading is available through NASDAQ OMX application CLICK Trade, Trayport GlobalVision or via API. For trading via API OMNet must be used. Clearing is available through NASDAQ OMX application Secur PI, Trayport Broker Solution or through API. Available clearing APIs are OMNet API and Secur XA (XML based).

Post trade reporting is available through Clearing Report Application (web based report application). This report application also has a web service based interface for B2B reporting.

Real-time market data are available in NASDAQ OMX standardized feed (Genium Consolidated Feed – GCF). Delayed market data are available on ftp.

This document contains an overview of systems, deal flow and system references for further information.

2 System Overview



IE	Internet Explorer
CLICK Trade	Trading application provided by NASDAQ OMX
Genium INET Web Trade	Web based trading application for exchange trading
ISV	Independent Software Vendor
NP Translator	Translator Click – Trayport GlobalVision
NP GW	Gateway for clearing OTC via Trayport Broker Services
ETS	Electronic Trading System
SECUR PI	NASDAQ OMX clearing system
FTP	FTP server for downloading files (market info, SPAN, IBAN codes, +++)
GCF	Genium Consolidated Feed
NP GW	Gateway Trayport - CLICK Trade or Trayport – SECUR PI
CRA	Clearing Report Application
CRA XML	Clearing Report Application - XML interface (web service)
SECUR PI	NASDAQ OMX OTC registration application
SECUR XA	NASDAQ OMX OTC registration application – XML interface
<blank>	Own systems/integration

3 Deal structure and deal flow

3.1 Deal structure

A deal in CLICK Trade may consist of 2 or more trades. One offer may hit several bids if price and volume match (1- many relations). This is important to be aware of, as other systems may have a simpler deal structure where buy and sell has a 1-1 relation.

3.2 Deal flow – exchange deal

Systems are marked in *italic*

Matching order:

1. Order is entered in *CLICK Trade* or *Trayport*
2. If order is entered in *Trayport* order is translated to *CLICK Trade* order in *NP Translator*
3. Order information is sent to *ETS* via *OMNet API*
4. Orders are matched in *ETS*. 2 or more trades are generated.
5. Trades are sent to *SECUR PI* for clearing
6. Trade information are returned via *OMNet API (broadcast BD4)*
7. If order is entered in *Trayport*, trade info is sent back to *Trayport* via *NP Translator*
8. Deal info is distributed to market feed (*GCF*)
9. Quotation information is updated on *web* and *ftp* (delayed)
10. *CRA* report 01 – Intraday trade list – is updated. Available on web user interface or via web service as XML report

3.3 Deal flow – OTC deal

Enter OTC for clearing:

1. Deal is entered in *SECUR PI*, *SECUR PI XML* or *Trayport*
2. If deal is entered in *Trayport* deal is translated to orders in *NP Translator*
3. Order information is sent to *ETS* via *OMNet API (with deal source "OTC")*
4. Match is done in *ETS*. 2 trades are generated
5. Trades are sent to *SECUR PI* for clearing
6. Trades info are returned via *OMNet API(broadcast BD4)*
7. Deal info is distributed to market feed (*GCF*)
8. Information is updated on *web* (delayed) on Market Summary (OTC)
9. *CRA* report 01 – Intraday trade list – is updated. Available on web user interface or via web service as XML report

3.4 During After Business process

During After Business process:

1. Settlement is calculated in *SECUR*
2. Margin requirements are calculated in *SECUR*
3. *CRA* reports are updated
4. SPAN file is updated on *ftp*

4 Trading Interfaces

For additional information regarding tradable products see product specification and trading calendar.

Product specification (including information regarding cascading) is available at:
<http://www.nasdaqomxcommodities.com/trading/productspecification/>

Product calendar (incl. UK derivatives) is available at:
<http://www.nasdaqomxcommodities.com/trading/practicaltradinginformation/productcalendar/>

4.1 CLICK Trade

CLICK Trade is the client application used for trading. For software download, user manual, connect information, order forms see:

<http://www.nasdaqomxcommodities.com/trading/electronictradingsystems/>

4.1.1 Test systems

CLICK Trade and NP Translator test environments are available.

For connection information regarding test systems see:

<http://www.nasdaqomxcommodities.com/trading/electronictradingsystems/vpnfixedlines/>

4.1.2 OMNet API

A Click API (OMNet API) is available. This is a bidirectional low level real time API implemented in C++. Connection through OMNet API requires a conformance test. Libraries, API documentation and conformance test documentation are available at:
<ftp://ftp.nordpool.com/MarketReadiness/OMnet%20API/>

System Programmer's Manual documents:

- Introduction: OMexIntroduction_API_NPCH_v(X*).pdf
- Manual: OMN_API_NPCH_v(X*).pdf
- Message Reference: OMexExternal_API_NPCH_v(X*).pdf
- Error Messages Reference. OMexErrorMessages_R_NPCH_v(X*).pdf

Conformance test document:

- OMnet_API_(X*)_Conformance_NP.doc

*: version number(s)

4.2 Genium INET Web Trade

Genium INET Web Trade is a web based trading application which not requires connection through VPN or Connectivity provider.

4.3 Trayport – Click translator (NP Translator)

NP Translator installation kit and documentation are available at <ftp://ftp.nordpool.com/>. FTP login is required to access folder for NP Translator.

Please contact Financial Market for login information:

<http://www.nasdaqomxcommodities.com/contact/financialmarketcontacts/>

5 Clearing Interfaces

Margin and settlement are executed in SECUR. Detailed information and examples of margin and settlement calculations are available at:

<http://www.nasdaqomxcommodities.com/clearing/riskmanagement/margining/>

5.1 OTC registration Application – SECUR PI

Registration of OTC deals for clearing is done through SECUR PI.

5.1.1 Client

SECUR PI is a web application based on Microsoft ClickOnce technology. This deployment technology permits access to the systems through an ordinary applications user interface. By accessing only one link, all necessary software will automatically be downloaded. For companies with restricted permission rights an ordinary installation kit is available.

User Guide and link to login are available at:

<http://www.nasdaqomxcommodities.com/clearing/clearingsystems/securpi/>

5.1.2 XML interface (Secur XA)

A SECUR PI XML interface client is available. This adds an API to SECUR PI which makes it possible to connect other/internal applications to SECUR PI. For software download and user guide see: <ftp://ftp.nordpool.com/MarketReadiness/SECUR%20PI/SECUR%20PI%20XML/>

5.1.3 Test system

SECUR PI and SECUR PI XML test systems are available for testing OTC deal registration. Information about how to connect to the testing platform is available at:

<http://www.nasdaqomxcommodities.com/trading/electronictradingsystems/vpnfixedlines/>

5.2 Clearing through Trayport Broker Services

A gateway for clearing OTC deals registered in Trayport Broker Services at NASDAQ OMX Commodities is available. The gateway is hosted and maintained by NASDAQ OMX Commodities.

5.3 Clearing Report Application

All clearing information is available in Clearing Report Application (CRA). Reports are available either via web user interface or via XML reports via a web service interface.

5.3.1 Web interface

The web user interface requires a valid login and a token (RSA).

For additional information and login see:

<http://www.nasdaqomxcommodities.com/clearing/clearingsystems/cra/>

To order tokens see:

<http://www.nasdaqomxcommodities.com/clearing/clearingsystems/ordertoken/>

Examples of available reports (exported to Excel) are available at:

<ftp://ftp.nordpool.com/MarketReadiness/CRA/Export/Excel/>

5.3.2 Web Service Interface

To integrate CRA reports directly into back office systems, a B2B interface has been made available. For Integration Guide and XSDs see:

ftp://ftp.nordpool.com/MarketReadiness/CRA/XML/XMLReports_UserDoc/

5.3.3 Test system

A CRA test system is available at: <https://cratest.nasdaqomxcommodities.com>

5.4 SPAN file

SPAN parameters are distributed in a SPAN file. More information is available at:

<http://www.nasdaqomxcommodities.com/clearing/riskmanagement/spanparameterfiles/>

5.4.1 SPAN file on ftp server

SPAN file production: <ftp://ftp.nordpool.com/NECH/SPAN/>

SPAN file from test system: ftp://ftp.nordpool.com/NECH/SPAN_test/

6 Market Data

6.1 WEB

Market data are available at

<http://www.nasdaqomxcommodities.com/trading/marketprices/>

This information is delayed by approximately 10 minutes.

6.2 Feed

Market data feed is distributed using Genium Consolidated Feed (GCF). Additional information is available at:

<http://nordic.nasdaqomxtrader.com/marketdata/datafeeds/geniumconsolidatedfeed/>

6.3 FTP

Files with market data are available at:

ftp://ftp.nordpool.com/Market/Overview_files/.

For intraday data use: `overview_current.sdv`

For data current year use: `overview_year.sdv`

For data previous year use: `overview_previous_year.sdv`

Clearing information is available at ftp://ftp.nordpool.com/Market/Cleared_volume/

For data current year use: `cleared_volume_year.sdv`

For data previous year use: `cleared_volume_previous_year.sdv`

Additional information (format, etc.) see:

ftp://ftp.nordpool.com/Information/Changes_to_FTP_files_December_2009.pdf

7 Contact Details

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