



CTS++ Trader User Guide

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Summary

Related process	
Objective of the procedure	Describe actions to be taken by CTS++ user to participate the Frequency response Auction
Concerned persons	Frequency response auction Participants

Historical of the document (Update must be performed after any modification of the process)

Evolution	Date	Version	Author	Comments
Creation	31/07/2019	1.0	EPEX SPOT	
Update	10/12/2019	2.0	EPEX SPOT	Include description of quantity limits and updated with screenshots
Update	24/02/2020	3.0	EPEX SPOT	Include description of Trade Report and Market Results Screen
Update	09/06/2020	4.0	EPEX SPOT	Include user account lockout policy and update the screenshots of various screens
Update	30/09/2020	5.0	EPEX SPOT	Include the adjusted Disconnect behaviour Update the screen layout of several screens due to change in screen name display Include the additional column "User" in the Log panel of the Trader Global View Include the pagination feature for Trader Global View and Quantity Limit screen Include the information about availability of Quantity Limit data for the upcoming auctions
Update	03/11/2020	6.0	EPEX SPOT	Removed the references about unavailable features which were in disabled buttons and the update on corresponding layout Include the overview about user read/write permissions
Update	03/05/2021	7.0	EPEX SPOT	Adjust the introduction to indicate about the operation about Weekly and Daily frequency response auction Update the screen layout and screen description for Quantity Limit Screen
Update	03/06/2021	8.0	EPEX SPOT	Update the market result screen disclaimer message by making it generic enough to cover both weekly and daily auction

Update	03/06/2021	9.0	EPEX SPOT	Include Loop Block Order (C88) details
Update	11/10/2021	10.0	EPEX SPOT	Include Day light saving time specifies for Frequency Response Daily auction
Update	19/11/2021	11.0	EPEX SPOT	Remove FRA Weekly auction references as per FRA Weekly phase out - including the removal of the disclaimer message in the market results screen
Update	19/04/2022	12.0	EPEX SPOT	Elaborate block and linear orders functionalities

Current version must be designated with grey background

Introduction

The operations of the Frequency Response auction market mainly consist of the management of daily auctions relying on the CTS++ trading system.

The aim of this document is to describe the CTS++ principles for its users.

1. Best practice

We recommend clearing the cache of the web browser's before login to CTS++ Trading Platform after each update of the platform. This is to avoid any login issues that might cause due to web browser's cache or display issues.

Please find below the steps to clear cache in several web browsers.

Google Chrome Web Browser (version 75.0.3770.100 was used to compile this checklist):

- 1. Open Chrome
- 2. At the top right, click More
- 3. Click More tools > Clear browsing data.
- 4. At the top, choose a time range. To delete everything, select **All time**.
- 5. Next to "Cookies and other site data" and "Cached images and files," check the boxes.
- 6. Click Clear data.

Mozilla Firefox Web Browser (version 67.0.4 was used to compile this checklist):

- Open Firefox
- 2. Click the menu button and select **Options**
- 3. Select the Privacy & Security panel
- 4. In the Cookies and Site Data section, click Clear Data...
- 5. Remove the check mark in front of **Cookies and Site Data**.
- 6. With Cached Web Content check marked, click the Clear button
- 7. Close the about:preferences page. Any changes you've made will automatically be saved.

Microsoft Edge web browser (version 44.18362.449.0 was used to compile this checklist)

- 1. Open Microsoft Edge
- 2. Click on the menu button and select **Settings**
- 3. Select Privacy & security panel
- 4. In section "Clear browsing data", click on "Choose what to clear"
- 5. Ensure that "Cookies and saved website data" and "Cached data and files" are ticked
- 6. Click on "Clear"

2. User account lockout policy

Please note the below user account lockout policies

- After 3 failed connection attempts due to invalid credentials, user will be temporarily banned for 5 minutes.
- After the temporary ban is removed and if user failed to connect to CTS++ due to invalid credentials in next 2 attempts, then user account is permanently locked out.
 In this case, please contact Market Operations Team [see Appendix A] to unlock the user account.

3. Connection

3.1 Rules

3.1.1 Password rules

S.No	Rule Description
1	Password must have: a minimum of 8 characters a maximum of 128 characters a minimum of one capital letter a minimum of one small letter a minimum of 1 digit a minimum of 1 special sign (space,!#\$%&'()*+,;=?@[]^_`{}~\ / " :<>) First character and last character must not be space
2	Last 5 passwords cannot be reused
3	Maximum password age = 90 days

3.2 Connection

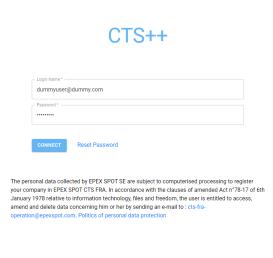
The "Connect" screen contains the below listed fields which allows the authorized user to access the CTS++ Trading Platform to do their trading activities for an auction day if the credentials provided are valid

- Login Name: User must enter their email address in this field (ex: dummyuser@dummy.com)
- Password: User must enter their password. Password will not visible as a plain text in this field. It will be
 displayed in the format •••••••

Once the Login Name and Password are provided in the respective fields, user must click on "CONNECT" button available in the screen

- CTS++ will authenticate the user credentials provided. If the authentication is successful, then user will be navigated to the CTS++ Trading Platform Main Screen
- Else if the authentication is unsuccessful, then CTS++ will displayed the respective error message screen (see below example)





At any given point of time, an authorized user can request for new password from CTS++ which will then allow the user to set a new password by clicking on the option Reset Password [Please refer to 1.3 for more details about this screen]. This feature is available in CTS++ to allow the user to change his/her password in case if they forgot the current password or if they have any security concerns with the current password.

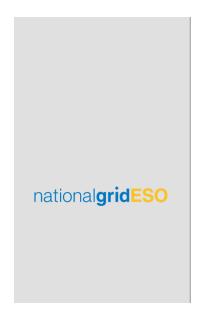
In the bottom level, there is a disclaimer displayed. This disclaimer is notifying the user who is using the CTS++ about the mandatory policies on Personal Data Protection as per the law. By connecting to CTS++ Trading Platform means user has agreed with this policy conditions. In order to read the detailed conditions please click on link <u>Politics of personal data protection</u> available in the screen.

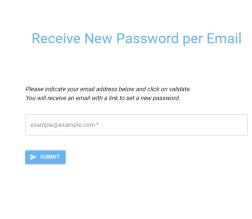
3.3 Password initialization

When a user clicks on the option <u>Reset Password</u> in the Connection screen, CTS prompts a screen to enter user login for which password reset is desired.

Once user's email address is provided in the respective field, user must click on "Submit button" available in the screen. CTS++ will send an email to the user, which contains a hyperlink to a screen where a new password can be set.

In this screen, the user must key in the new password twice to prevent typo and click on "SUBMIT" button. Next connection to CTS++ must be done with the new password. Please see Password rules described part 3.1.1.



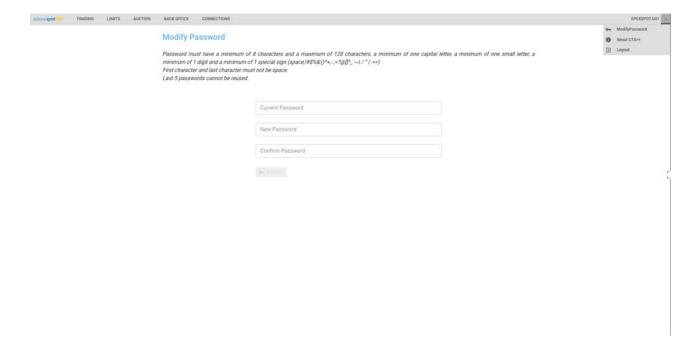


3.4 Password modification

User can modify its password once the user is connected to CTS++.

In order to modify the password, please click on the arrow mark available next to the username and click on the option "ModifyPassword".

User must fill in the current password, and new password twice to prevent typo; user must click then on "SUBMIT" button. Next connection to CTS++ must be done with the new password. Please see Password rules described part 3.1.1.



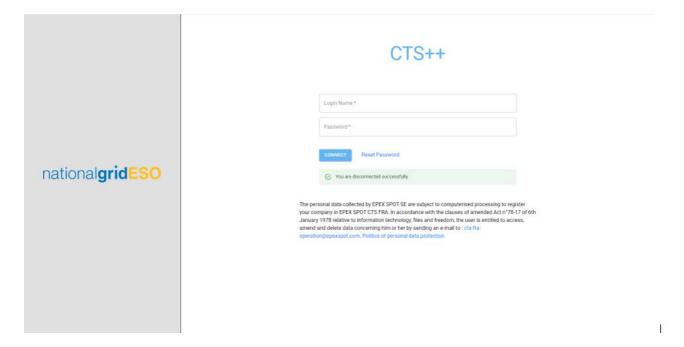
3.5 Disconnect

Once user is connected to CTS++ trading platform, user can be disconnected by clicking on "Logout" which is available



in the top right corner web page

On a successful disconnection, user will be redirected to the "Connect" screen with the message "You are disconnected successfully".



4. Trading session

4.1 Trader global view

4.1.1 Overview

Screen Name	Trading > Trader Global View							
Purpose	View the auction status by the trader							
	View market results							
	 View linear or block order(s) 							
	View Logs							
Accessible by	TRADER							
Accessible from	By default, Trader Global View screen is displayed after the TRADER user is connected							
	to CTS++							

4.1.2 Screen layout

The screen layout consists of four sections:

(1) : <Header> Panel(2) : <Grid> Panel(3) : <Action> Panel(4) : <Log> Panel



4.1.2.1 Header panel

This panel consists of below fields where user can select the auction date range to view the auction session(s)

- From Auction Date: Auction date starting from when user wants to view the list of auction session(s)
- To Auction Date: Auction date until when user wants to view the list of auction session(s)

4.1.2.2 Grid panel

This panel contains the list of all auction sessions based on the filter criteria selected in the **Header** panel. The below describes each field in the Grid panel.

Field Name	Description	Evample
Field Name	Description	Example

Auction Date Time	Auction date and time of the corresponding	FRA-Daily 2019-04-19 10:00
	auction session in GMT/BST time zone	(GMT/BST)
Participant	Name of the participant	MEMBER
Auction Status	Status of the corresponding auction session	OBK Open
	OBK Open: Order book is open, and user	
	can submit/delete/modify the orders	
	OBK Closed: Order book is closed, and user	
	can no longer submit/delete/modify the	
	orders	
Portfolio	Display number of portfolios with at least	4/5
	one active order / Total number of active	
	portfolios of the corresponding user	
Linear Order	Display the total number of active linear	4
	orders of the corresponding auction session	
Block Order	Display the total number of active block	0
	orders of the corresponding auction session	
Market Results	Display the market result publication status	None
	None: Market results are not published	
	Available: Market results are published, and	
	user can view the results in the trading	
	system	

4.1.2.3 Action panel

This panel consists of several buttons as listed below

- Show Linear Order: Allows the user to open the Linear Order Management screen. If user does not have permission to submit linear order, then the user is not allowed to open the Linear Order Management screen
- Show Block Order: Allows the user to open the Block Order Management screen. If user does not have permission to submit block order, then the user is not allowed to open the Block Order Management screen
- Show Market Results: Allows the user to open the Market Results screen

4.1.2.4 Log panel

This panel displays the notifications related to order submission, order deletion, order modification

- **Date Time (UTC):** Displays server date and time for each log message in the format yyyy-mm-ddThh:mm:ss.sssZ and in the time zone UTC
- User: Display the username who triggered the action
- **Message Log:** Displays the log messages. CTS display the logs in the descending order of Date Time (UTC) from top to bottom

If there are more than 15 rows displayed, the user can navigate to different pages by using the pagination feature as displayed below to view next set of data:



4.2 Order entry and portfolio set up

In order to submit any type of orders (linear or block orders) via the CTS++ platform, an authorized CTS++ user must have:

- at least one active portfolio with:
 - o The general read/write permission
 - The permission to submit an order on the corresponding bidding level
 - o If relevant for the traded bidding level (*1):
 - Permission to submit block order (Classic Block Order (C01), Linked Family (C02), Loop Block Order (C88))

Please contact our **Market Operations Team [see Appendix A]** to double check your user and portfolio settings if required.

4.2.1 User read/write permission

Please find below the details on user permissions management within CTS++

If the user is having WRITE permission for the corresponding (Portfolio, Bidding Level) combination, then

- Users can submit, modify or delete orders
- Users can view the submitted orders, quantity limits, and the market results
- Users can view the auction session information displayed in the Trader Global View screen

If the user is having READ permission for the corresponding (Portfolio, Bidding Level) combination, then

- Users can view the submitted orders, quantity limits, and the market results
- Users can view the auction session information displayed in the Trader Global View screen

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¹ (*) the corresponding bidding level must be configured to allow the user to submit a specific order type (ex: Classic Block Order (C01), Linked Family (C02), Loop Block Order (C88)).

4.3 Linear order

4.3.1 Stepwise linear order characteristics

A linear order is related to a bidding level, a portfolio and a set of periods. For each of these periods, the linear order is related to a curve which defines for each price between the minimum and maximum prices of the market the willingness to buy or sell a certain amount. The characteristics of a stepwise curve are following:

- A stepwise order is defined by n (price, quantity) couples between the minimum price (P_{min}) and the maximum price (P_{max}): [(P_{min} , Q_1), ..., (P_{max} , Q_n)]
- For any couple (P_i,Q_i), (P_{i+1},Q_{i+1}) within this list we have either:
 - o $P_i < P_{i+1}$ and $Q_i = Q_{i+1}$

or

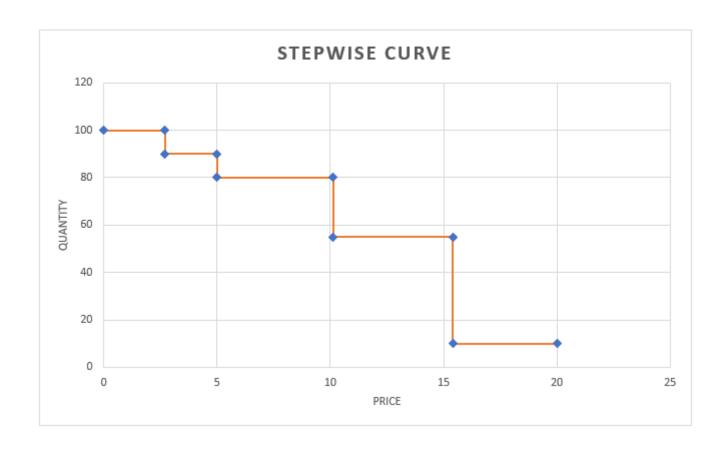
 $\bigcirc \quad P_i = P_{i+1} \text{ and } Q_i > Q_{i+1} \quad \text{excluding P_{min}, P_{max}}$

Purchase quantities are indicated with positive values (Q>0). Sale quantities are indicated with negative values (Q<0).

4.3.1.1 Example: Stepwise Curve

Please see below for a stepwise curve construction for the combination of (Portfolio, Bidding Level, Period)

Por	tfolio	Bidding Level	Period 1	1P	1V	2P	2V	3P	3V	4P	4V	5P	5V	6P	6V	7P	7V	8P	8V	9P	9V	10P	10V	
P1		LFS	1	0	10	0 2.71		2.71	90	5.00	90	5.00	80	10.12	80	10.12	55	15.41	55	15.41	10	20	10]



4.3.2 Linear order management screen

4.3.2.1 Overview

Screen Name	Trading > Linear Order Management					
Purpose	 Submit linear orders Delete All linear orders Modify linear orders View linear orders 					
Accessible by	TRADER					
Accessible from	Trader Global View					

4.3.2.2 Screen layout

The screen layout consists of three sections:

(1) : <Header> Panel(2) : <Grid> Panel(3) : <Action> Panel



4.3.2.3 Header panel

This panel contains the below listed information which gives an overview on the current auction session information

Element	Description	Example			
Auction	Unique name of the auction	FRA-Daily			
Auction Session	Date and time of the auction session	2019-01-11 10:00 GMT/BST			
Currency	Currency of the auction	GBP			
Period Duration	Duration of the delivery period of	240 min			
	the auction				
First Delivery Period	First delivery period of the auction	2019-01-11 23:00 GMT/BST			
	session				
Last Delivery Period	Last delivery period of the auction	2019-01-18 23:00 GMT/BST			
	session				

4.3.2.4 Grid panel

This panel displays the information of all active linear orders. The structure of the panel is same as the linear order file import.

Col No	Element	Description	Example
1	Portfolio	Portfolio of the active linear order	MEMBER-T01
2	BiddingLevel	Bidding level of the active linear order	DCL
3	Orderld	Order id of the active linear order generated by CTS++ during the submission of linear order	1000000001447
4	Version	Version of active linear order	1
5	User ID	Username of the user who submitted the linear order	USER-U01
6	Period	Period number	1,2,3 42
7N	1P, 1V NP, NV (as many as the curve points)	(Price, Volume) of a linear order curve for a given period	1P = -10, 1V = 10, 2P = -5, 2V = 10 NP = 9999, NV = 10

4.3.2.5 Action panel

This panel consists of several buttons as listed below

- Delete All: Allows the user to delete all active linear orders displayed in the screen
- Upload: Allows the user to submit or modify a linear order by importing a CSV file for the auction session

4.3.3 Linear order file import

A user submits the linear order(s) via importing CSV file from the Linear Order Management screen. One must respect the described file format and content while uploading the csv file within the trading system. If not respected, the system will reject the submission of the order.

4.3.3.1 File name / format

Import file

Name	<any as="" be="" by="" can="" desired="" file="" for="" import="" name="" the="" used="" user=""></any>
File Format	CSV (value separator: semi colon (;); decimal separator: point (.)). There must be no thousand
	separator.

4.3.3.2 File content

ALL COLUMNS DESCRIBED BELOW ARE MANDATORY AND MUST BE IN THE SAME ORDER AS INDICATED BELOW

Line 1			
Col.	Column Name	Mandatory or Optional	Can be Empty?
Number		content for import file	
1	"Portfolio"	Mandatory	Value in the column must not be
			Empty

2	"BiddingLevel"	Mandatory	Value in the column must not be Empty
3	"OrderId"	Mandatory	For new order creation: Value in the column can be empty For order modification: Value in the column must not be empty
4	"Version"	Optional (value not considered by CTS)	Value in the column can be empty
5	"User ID"	Optional (value not considered by CTS)	Value in the column can be empty
6	"Period"	Mandatory	Value in the column must not be Empty
7p	"1P", "1V", "2P", "2V", so on	Mandatory	Value in the column can be Empty

Line 2n (as many lines as	there are linear or	ders)		
Col. Numbe r	Column Name	Format	Description	Rules (for import)	Example (for import)
1	"Portfolio"	CHAR(32)	Portfolio name		MEMBER-T01
2	"BiddingLevel"	CHAR(40)	BiddingLevel name		DCL
3	"Orderld"	Number(15,0)	Order id		Blank
4	"Version"	Number(3,0)	version		Blank
5	"User ID	CHAR(30)	User name of the user who submitted the order		Blank
6	"Period"	Number(3,0)	Curve period	1, 2, N As many rows as there are periods for the auction session. Maximum value of N = 42	1
7p	"1P", "1V", "2P", "2V", so on	CHAR(7)	1P: Price of Point 1 of Curve 1 1V: Volume of Point 1 of Curve 1 So on	1P,1V 2P, 2V So on	1P: -10,1V: 10 2P: -5, 2V: 10 So on

4.3.4 Examples

4.3.4.1 Submit a linear order

The below example depicts how the user submits a linear order corresponding to a (Portfolio, Bidding Level, Period)

Portfolio	BiddingLevel	OrderId	Version	User ID	Period	1P	1V	2P	2V	3P	3V	4P	4V
PORT-T02	DCL				1	C	193	7.13	193	7.13	0	999.99	0
PORT-T02	DCL				2	C	193	6.8	193	6.8	0	999.99	0
PORT-T02	DCL				3	C	227	8.51	227	8.51	0	999.99	0
PORT-T02	DCL				4		228	6.84	228	6.84	0	999.99	0
PORT-T02	DCL				5	C	349	8.09	349	8.09	0	999.99	0
PORT-T02	DCL				6	C	321	9.39	321	9.39	0	999.99	0

The above linear order import via CSV file is successfully processed by the system and displayed in the "Linear Order Management" screen as shown below.



4.3.4.2 Modify a linear order

The below example depicts how the user can modify the above linear curve **by submitting** a CSV file via the **Upload button** in the Linear Order Management screen:

- The field "OrderId" in the CSV import file, must have the order id which is generated by the trading system.
- The highlighted values are modified/changed in the import file
- On successful submission, the modified linear orders is displayed in the "Linear Order Management" screen

Portfolio	BiddingLevel	OrderId	Version	User ID	Period	1P	1V	2P	2V	3P	3V	4P	4V	
PORT-T02	DCL	100000000000024			1	C	193	7.15	193	7.15	0	999.99	0	
PORT-T02	DCL	100000000000024			2	C	193	6.8	193	6.8	0	999.99	0	
PORT-T02	DCL	100000000000024			3	C	227	8.51	227	8.51	0	999.99	0	
PORT-T02	DCL	100000000000024			4	C	228	6.84	228	6.84	0	999.99	0	
PORT-T02	DCL	100000000000024			5	C	349	8.09	349	8.09	0	999.99	0	
PORT-T02	DCL	100000000000024			6	C	321	9.39	321	9.39	0	999.99	0	

4.4 Block order

4.4.1 Block order characteristics

4.4.1.1 Block Order Global Description

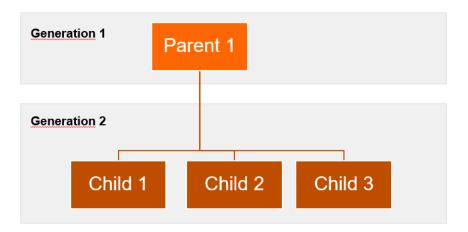
A block order is a combined interest to buy or sell an amount of quantity; either all the block order conditions are fulfilled, and the order is accepted, or one (or several) condition of the block order is not filled and the block is rejected.

4.4.1.2 Linked Family Block Order Description

A linked block orders family is a set of block orders which have together a linked execution constraint.

A linked block order family is constructed with two types of blocks: C01 and C02. The execution of a C01 block order does not depend on the execution of another block order; the execution of a C02 block order depends on the execution of all its parent block orders.

It is possible to design a "linked family", with several "generations". An example of such "family" is illustrated in the below picture:



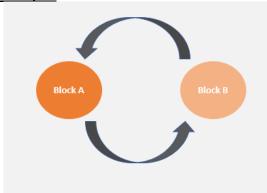
In this example the number of generations is 2; the children for Parent 1 are: Child 1, Child 2 and Child 3; the size of the family is 4. The generation 1 block orders have block type C01; the other generations block orders have block type C02.

4.4.1.3 Loop Block Order description

A loop block is a block order which is part of a loop family and where there is no parent-child relation between the loop block orders. In such group, either all block orders included in the loop family are executed or all block orders included in the loop family are rejected.

Loop block order has block type C88.

Example:



Block A and **Block B** belong to the same loop family. The loop family has a size of 2 block orders.

4.4.1.4 Curtailable Block Order description

A curtailable block order is defined by the value of MAR (Minimum Acceptance Ratio).

The Minimum Acceptance Ratio (MAR) is the minimum fraction of the block order which should be accepted. The execution of the block order is equal or greater to the MAR value. By relaxing the execution constraint for a block order, it is more likely that a block order will be executed.

MAR is applicable for each block order (standard (C01), linked family (C02) and loop family (C88)).

The MAR value for Block orders with type (C01) is 1 and for (C02) is always 0. These values are applied by the system by default.

For loop block order (C88), MAR value is defined by the user during the order submission. This MAR value is defined per block order and may have two digits after the decimal point. For instance: 0.23, 0.98...etc.

The system will apply a default value (MAR=1) if the user enters an empty value during the submission of the order.

Example:

Period	1	2	3	4
Volume	50MW	50MW	50MW	50MW
MAR	0.7	0.7	0.7	0.7

Limit Price of the Block = 200 GBP

In the above example, the trader allows the block order to be curtailed down to 35MW (70%) and still be accepted. This will apply for all hours. The same MAR value of 0.7 is applicable for each period of the block.

4.4.2 Block order management screen

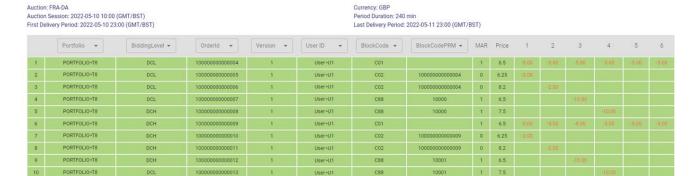
4.4.2.1 Overview

Screen Name	rading > Block Order Management					
Purpose	 View block orders Submit block orders Delete All block orders Modify block orders 					
Accessible by	TRADER					
Accessible from	Trader Global View					

4.4.2.2 Screen layout

The screen layout consists of three sections:

(1) : <Header> Panel(2) : <Grid> Panel(3) : <Action> Panel



■ DELETE ALL

4.4.2.3 Header panel

This panel contains the below listed information which gives an overview on the current auction session information

Element	Description	Example
Auction	Unique name of the auction	FRA-Daily
Auction Session	Date and time of the auction session	2019-01-11 10:00 GMT/BST
Currency	Currency of the auction	GBP
Period Duration	Duration of the delivery period of the auction	240 min
First Delivery Period	First delivery period of the auction session	2019-01-11 23:00 GMT/BST
Last Delivery Period	Last delivery period of the auction session	2019-01-18 23:00 GMT/BST



4.4.2.4 Grid panel

This panel displays the information of all active block orders accessible by the user according to its permissions.

The structure of the panel is same as the block order file import.

Col No	Element	Description	Example
1	Portfolio	Portfolio of the block linear order	MEMBER-T01
2	BiddingLevel	Bidding level of the active block order	DCL
3	Orderld	Order id of the active block order generated by the system during the submission of block order	1000000001447
4	Version	Version of active block order	1
5	User ID	Username of the user who submitted the linear order	USER-U01
6	BlockCode	Block code of the block order; C01 [Classic Block Order] or C02 [Linked Family Block Order] or C88 [Loop Block order]	C01 or C02 or C88
7	BlockCodePRM	Block Parameter; In case of CO1 block: the field is not filled In case of CO2 block it contains the OrderId of the parent In case of C88 block, it contains the loop family id of the loop block orders	For C02: 10000000001448 For C88: 10200
8	MAR	Minimum Acceptance Ratio of the block order For CO1, MAR = 1 always For CO2, MAR = 0 always For C88, $0 \le MAR \le 1$; where MAR is the value entered by the user or the default value which equals to 1 if the user provided an empty MAR value during the order submission	For C01: 1 For C02: 0 For C88: 0.62
9	Price	Limit price of the block order	15.62
10N	1, 2, 3 N (as many as number of periods)	Volume defined against each period from 1, 2, N	-10

4.4.2.5 Action panel

This panel consists of several buttons as listed below

- Delete All: Allows the user to delete all block orders displayed in the screen
- **Upload:** Allows the user to submit or modify one or several block orders by importing a CSV file for the auction session, according to its permissions

4.4.3 Block order file import

A user can submit the block order(s) via importing CSV file via the Block Order Management screen. One must respect the described file format and content while uploading the csv file within the trading system. If not respected, the system will reject the submission of the order.

4.4.3.1 File name / format

Import file

Name	<any as="" be="" by="" can="" desired="" file="" for="" import="" name="" the="" used="" user=""></any>
File Format	CSV (value separator: semi colon (;); decimal separator: point (.)). There must be no thousand
	separator.

4.4.3.2 File content

ALL COLUMNS DESCRIBED BELOW ARE MANDATORY AND MUST BE IN THE SAME ORDER AS INDICATED BELOW

Line 1			
Col. Number	Column Name	Mandatory or Optional content for import file	Can be Empty?
1	"Portfolio"	Mandatory	Value in the column must not be Empty
2	"BiddingLevel"	Mandatory	Value in the column must not be Empty
3	"Orderld"	Mandatory	For new order creation: Value in the column can be empty for all types block orders except Linked family (C01-C02) For order modification: Value in the column must not be empty
4	"Version"	Optional (value not considered by the system)	Value in the column can be empty
5	"User ID"	Optional (value not considered by system)	Value in the column can be empty
6	"BlockCode"	Mandatory	Value in the column must not be Empty
7	"BlockCodePRM"	Optional (for C01 block); Mandatory for C02 block and C88	For C01: value in the column must be empty For C02: Value in the column must not be Empty For C88: Value in the column must not be Empty
8	"MAR"	Optional For C01 and C02: The value is not considered by the system. For C88: The value can be empty or 0 ≤ MAR ≤ 1;	Value in the column can be empty
9	"Price"	Mandatory	Value in the column must not be Empty
10p	Identifier of the period As many columns as there are periods for the auction session	Mandatory	Value in the column can be Empty or can contain 0 values

Line 2...n (as many lines as there are block orders)

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Col.	Column Name	Format	Description	Rules	Example value
Number				(for import)	(for import)
1	"Portfolio"	CHAR (32)	Portfolio name		MEMBER-T01
2	"BiddingLevel"	CHAR (40)	BiddingLevel name		DCL
3	"Orderld"	Number (15,0)	Order Id	For new order creation: Virtual order id ranging from 0 < Orderld < 10000	300
				For order modification: Order Id generated by the trading system during the order creation	
4	"Version"	Number (3,0)	Version of the block order		Blank
5	"User ID"	CHAR (30)	Username of the user who submitted the order		Blank
6	"BlockCode"	C01 C02 C88	Block code: For C01: classic block order, or root block for a linked family For C02: linked block order For C88: loop family block order		C01
7	"BlockCodePRM"	Number (15,0)	Block Parameter: For C01 block: the field is not filled For C02 block: the identification of the parent block order. BlockCodePRM must correspond either to Block ID of an already submitted block orders for the considered (auction session, portfolio) or to a value included in ID column of the submitted batch of block orders. This field cannot be empty since a parent for C02 block must be defined. For C88 block: the identification of the loop family id. This field cannot be empty since it is the (virtual) family id of all loop block orders within the	For new order creation: For C01: Blank For C02: virtual Orderld of the parent block order For C88: virtual loop family id ranging from 0 < BlockCodePRM < 10000 For order modification: For C01: Blank For C02: Orderld of the parent generated by the trading system during new order creation For C88: loop family id generated by the trading system during new order creation	For C01: Blank For C02: 1 For C88: 10

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8	"MAR"	Number (3,2)	Minimum Acceptance Ratio Decimal number which defines the minimum executed volume ratio for an executed block order. For C88, if MAR value is empty in the import file, then the system will set the MAR to its default value, which is 1.	For C01 and C02: Blank. For C88: Empty or MAR = 0 ≤ MAR ≤ 1; where MAR is provided by the user in the import file	For C01 and C02: Blank For C88: 0.6
9	"Price"	Number (15,4)	Block order Price limit	Only multiples of price tick	15.12
10p	Identifier of the period As many columns as there are periods for the auction session	Number (15,4)	Block order submitted volume	Against each period column, volume is given (from line 2 onwards) Only multiples of volume tick	10.00

4.4.4 Examples

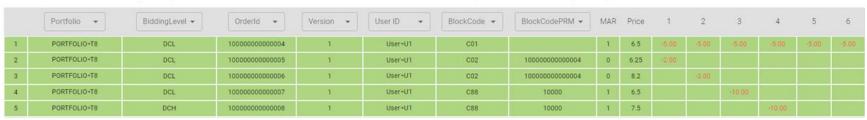
4.4.4.1 Submit block order (s)

The below example depicts how the block orders (C01, C02) can be submitted with virtual <OrderId> and the block order (C88) can be submitted with a virtual loop family id in <BlockCodePRM> field:

Portfolio	BiddingLevel	OrderId	Version	User ID	BlockCode	BlockCodePRM	MAR	Price	1	2	3	3	4	5	(6
PORTFOLIO-T8	DCL	1			C01			6.5	-5	-5	-5	-	-5	-5	-5	5 Creation of block order with virtual Id=1
PORTFOLIO-T8	DCL	2			C02	1		6.25	-2							Creation of block order with virtual Id=2; the parent has virtual Id=1
PORTFOLIO-T8	DCL	3			C02	1		8.2		-2						Creation of block order with virtual Id=3; the parent has virtual Id=1
PORTFOLIO-T8	DCL	4			C88	26		6.5			-10)				creation of block order with virtual Id=4; the order belongs to the loop family with virtual loop family id = 26
PORTFOLIO-T8	DCH	5			C88	26		7.5				-1	LO			creation of block order with virtual Id=5; the order belongs to the loop family with virtual loop family id = 26

The submitted orders are displayed in the Block Order Management screen:

Auction: FRA-DA Auction Session: 2022-05-10 10:00 (GMT/BST) First Delivery Period: 2022-05-10 23:00 (GMT/BST) Currency: GBP
Period Duration: 240 min
Last Delivery Period: 2022-05-11 23:00 (GMT/BST)



4.4.4.2 Modify block order (s)

The below example depicts how the user can modify the above block orders by submitting a CSV file via the Upload button in the Blok Order Management screen:

- The field "Orderld" in the CSV import file must have the order id which is generated by the trading system.
- The highlighted values are modified/changed in the import file
- · On successful submission, the modified linear orders is displayed in the "Linear Order Management" screen

Portfolio	BiddingLevel	OrderId	Version	User ID	BlockCode	BlockCodePRM	MAR	Price	1	2	3	4	5	6
PORTFOLIO-T8	DCL	1000000000000004			C01			7	-5	-5	-5	-5	-5	-5
PORTFOLIO-T8	DCL	1000000000000005			C02	1000000000000004		7	-2					
PORTFOLIO-T8	DCL	1000000000000006			C02	1000000000000004		9		-2				
PORTFOLIO-T8	DCL	1000000000000007			C88	10000		6.5			-50			
PORTFOLIO-T8	DCH	1000000000000008			C88	10000		7.5				-50		

4.4.5 Modify Block Order Rule

The modification of a block order which belongs to linked family (C02) or a loop family (C88) requires the submission of the complete family.

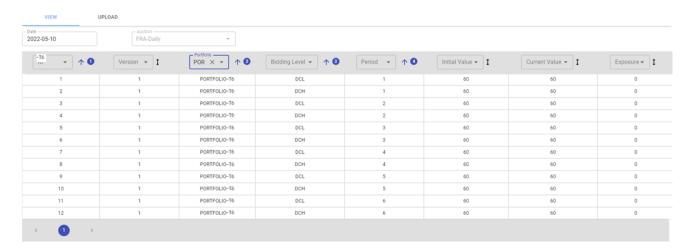
5. Quantity limits

5.1.1 Overview

Screen Name	Limits > Quantity Limits					
Purpose	View the quantity limit consumption for the corresponding auction session					
Accessible by	TRADER					
Accessible from	From the main screen (the menu available in the top horizontal bar) click on "Limits" option					
	national grid ESO TRADING LIMITS					

5.1.2 Screen layout

The below picture shows the Quantity Limits screen layout:



The Quantity Limits Screen consists the filters as mentioned below:

- Date: User selects an auction date of which he/she wants to view the Quantity Limit Consumption. User will be able to see the quantity limits on or after Order Book Open Date Time
- Auction: User selects the auction from the drop-down list for the corresponding auction date selected.

If there are more than 15 rows displayed, the user can navigate to different pages by using the pagination feature as displayed below to view next set of data:



Based on the filter criteria selected (see above point), the quantity limits are displayed in the table as described below:

Col No	Element	Description	Example
1	ID	Quantity limit id	45654
2	Portfolio	Name of the portfolio	COMPANY-T01
3	Bidding Level	Name of the bidding level	DCL
4	Period	Period number	1
5	Initial Value	Initial value of the quantity limit	20
6	Current Value	Current quantity limit value for the combination of (portfolio, bidding level, period) is defined as: Current Value = Initial Value - Exposure	10
7	Exposure	Current exposure for the combination of (portfolio, bidding level, period) is defined as: Exposure = Sum of the submitted volume (in absolute value)	10

5.1.3 Accessibility of data

For the upcoming auction sessions, the quantity limit data displayed in the "Quantity Limit" screen on or after Order Book Open Date Time

6. Market results

6.1.1 Overview

Screen Name	Trading > Market Results
Purpose	View the market results for the corresponding auction session and for the selected (Bidding Level, Participant, Portfolio) combination
Accessible by	TRADER
Accessible from	Trader Global View→"Show Market Results" Button

6.1.2 Screen layout

The screen layout consists of two sections:

(1) : <Header> Panel(2) : <Grid> Panel

6.1.2.1 Header panel

 By default, when user opens the Market Results screen, CTS fill in values in the mandatory fields Date, Auction, and Auction Name based on the auction session that has been selected by the user from the Trader Global View screen.

o Date: Auction Date

o Auction: Name of the auction

Auction Name: Identifier of the auction

- SHOW RESULTS: After the criteria are selected (as mentioned above), user clicks on "SHOW RESULTS" button
 which will then allow the user to select further criteria (as listed below) combination to view the market results of
 the corresponding auction session.
 - Bidding Level: Name of the bidding level. By default, bidding level name based on the alphabetical order A to Z is selected in this field. User can select other available bidding levels from the drop-down list.
 - o **Participant**: Name of participant
 - Portfolio: Value "AII" is selected always and by default. That is CTS consider all portfolio(s) which user is having the read/write access to display results.



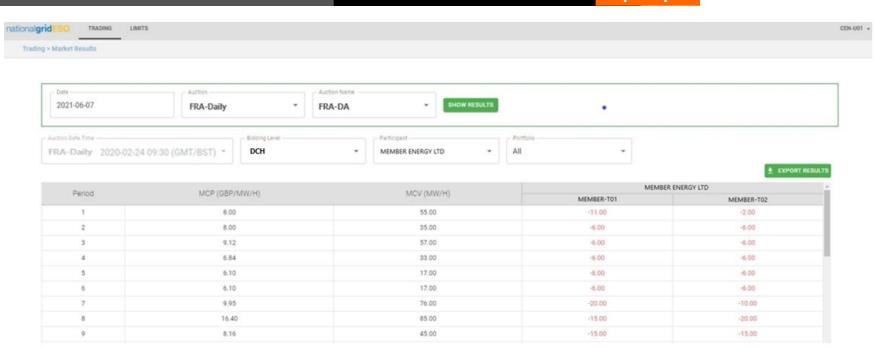
• **EXPORT RESULTS**: This button allows the user to **export Trade Report** in their local machine for the selected auction session in **XML** format. Please refer to **7.1** for detailed description about Trade Report

6.1.2.2 Grid panel

This panel displays the market results for the corresponding auction session and for the selected (Bidding Level, Participant, Portfolio) combination.

Col No.	Column Name	Description	Example
1	Period	Period number	1,2,3 42
2	MCP	Market clearing price; the last line contains the average of MCP over periods 1,2, N	5.48
3	MCV	Market clearing volume; the last line contains the sum of MCV over periods 1,2, N	25
4P	Portfolio: <name 1="" of="" portfolio=""> Portfolio: <name of="" p="" portfolio=""></name></name>	Sum of executed volume of all orders for a given (Portfolio, Bidding Level, Period) combination; the last line contains the sum over periods 1,2, N	25
		Purchase volume is displayed in positive (ex: 15) and Sale volume is displayed in negative (ex: -10)	

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7. Reports

7.1 Trade report

7.1.1 File name/format

Name	[Auction Session Date Time]_TradeReport_[Participant ShortName]_[Auction]_[Auction Name]_[CreationDateTime]
	 Where: [Auction Session Date Time]: Auction session date time in the format yyyymmddhhmmss [Participant ShortName]: Name of participant [Auction]: Name of auction [Auction Name]: Unique identifier of auction [CreationDateTime]: Server Date and Time at which the system generated the report. Format in yyyymmddhhmmss
File Format	XML Encoding for the xml file = xml version="1.0" encoding="UTF-8"?
Example	20190405100000 TradeReport_ABC-T01 FRA-Daily FRA-DA _20210405161245.xml

7.1.2 File content

Element	Description	Example	Format
Results	Group with report content		
+Exchange	Name of the exchange	NGESO	CHAR (40)
			Mandatory
+Auction	Name of the auction	FRA-Daily	CHAR (40) mandatory
			mandatory
+AuctionName	Identifier of the auction	FRA-DA	CHAR (40)
			mandatory
+AuctionSessionDateTime	Auction date time to identify the auction session	2019-01-03T12:00:00.000Z	dateTime (UTC) mandatory
			mandatory
+Market	List of markets	List of markets of the auction	
++MarketName	Name of the market	DCL	CHAR (40)
			mandatory
++MarketIndex	List of market indexes		
+++DeliveryStart	Delivery start date time	2019-03-22T23:00:00.000Z	dateTime (UTC)
			mandatory
+++DeliveryEnd	Delivery end date time	2019-03-23T03:00:00.000Z	dateTime (UTC)
			mandatory
+++PriceIndex	List of price indexes		

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++++Price	MarketPrice Result price has the same number of decimal places as the price tick	14.5	Number (16,5) mandatory
++++Currency	Currency used for the order submission, and for the price calculation	GBP	CHAR (3) mandatory
+++VolumeIndex	MarketVolume index (max between total buy and sell in absolute value)	145	Number (15,4) mandatory
++BiddingLevel	List of bidding levels of considered market	Tag is present only if member(s) have any active order(s) for the considered auction session	
+++BiddingLevelName	Name of the BiddingLevel	DCL	CHAR (40) mandatory
+++MemberDetail	List of members	Data in this group is sorted as per alphabetical order from A to Z of MemberName	
++++MemberName	Legal entity name ; name must be unique	COMPANY A Ltd	CHAR (60) mandatory
+++++OrderId	ID of the order. Is globally unique (cross exchange, cross order type: linear, block)	10000000010012	Number (15,0) mandatory
++++Portfolio	Name of the portfolio	COMPANY1-T01	CHAR (32) mandatory
+++++OrderType	Linear Block	Linear	Enum mandatory
++++BlockOrderDetail	Filled only in case of block order		
+++++Status	Executed Rejected	Executed	CHAR (40) Mandatory

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+++++Period	Linear order: the list contains all periods except those for which no quantity has been submitted (periods with only 0 submitted quantities are reported) Block order: the list contains all periods except those for which no quantity has been submitted or the submitted quantity is 0	Data in this group is sorted per ascending periodSeqNb	
++++++OrderPeriodId	ID of a period of the linear order or block order Is globally unique (cross exchange, cross order type: linear, block) is used also as a trade identification	10000000010012	Number (15,0) mandatory
++++++Tradeld	In case the executed volume is different from 0, a trade is done. In this case the TradeID will be the same as the OrderPeriodID	10000000010012	Number (15,0) mandatory
+++++DeliveryStart	Delivery start date time	2019-03-22T23:00:00.000Z	dateTime (UTC) mandatory
+++++DeliveryEnd	Delivery end date time	2019-03-23T03:00:00.000Z	dateTime (UTC) mandatory
+++++ExecutedVolume	Executed volume Purchase volume is displayed in positive (ex: 15) and Sale volume is displayed in negative (ex: -10)	-10	Number (15,4) mandatory

8. Daylight saving time

8.1 March short day (Summer)

8.1.1 For DAILY Auction

Last Sunday of March lasts 23 hours instead of 24 hours. The auction session which contains this day has still 6 periods. However, the 1st period of the auction session will last 3 hours instead of 4 hours

8.2 October long day (Winter)

8.2.1 For DAILY Auction

Last Sunday of October lasts 25 hours instead of 24 hours. The auction session which contains this day has still 6 periods. However, the 1st period of the auction session will last 5 hours instead of 4 hours

9. Appendix A: Help desk

Market Operations Team Contact: cts-fra-operation@epexspot.com