WARSAW STOCK EXCHANGE

CCG Auto-Mass Cancel on Client Server Disconnection

Technical Specifications

version: 1.0

date: 2013.08.05

OVERVIEW

Purpose

This document provides a technical overview of the CCG auto-mass cancel on disconnect function. It describes message kinematics for customer applications.
This document covers CCG target protocols: UTP-Direct and UTP-FIX 4.2 for order entry services.

Scope

The auto-mass cancel on disconnect function can be activated on CCG for any client server on Client request. As a default it is deactivated for all defined on CCG client servers.
Functionality is dedicated for client servers used for market making or HFT.

Orders entered during a previous business day are out of auto-mass cancel on disconnect function. Therefore, only all live orders entered by a client application on the current business day will be cancelled when auto-mass cancel on disconnect kicks in.

Please note that cancelation is performed regardless of order's validity type.

The auto-mass cancel on disconnect will cover disconnection (and also normal logoff for UTP-FIX 4.2) between client application and CCG as well as in the event of internal disconnection at the Exchange.

DOCUMENT HISTORY

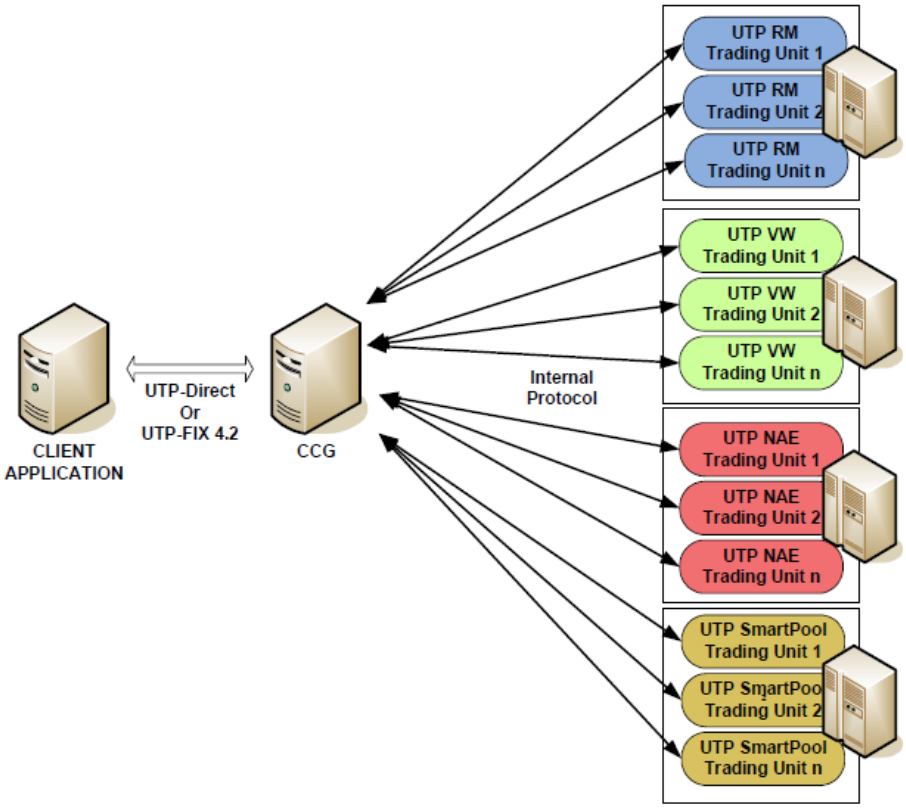
version	date	author	description	status
1.0	2013.08.05		CCG Auto – Mass Cancel on Disconnection	initial

CONTENTS

1. ARCHITECTURE OVERVIEW

1.1. Architecture overview

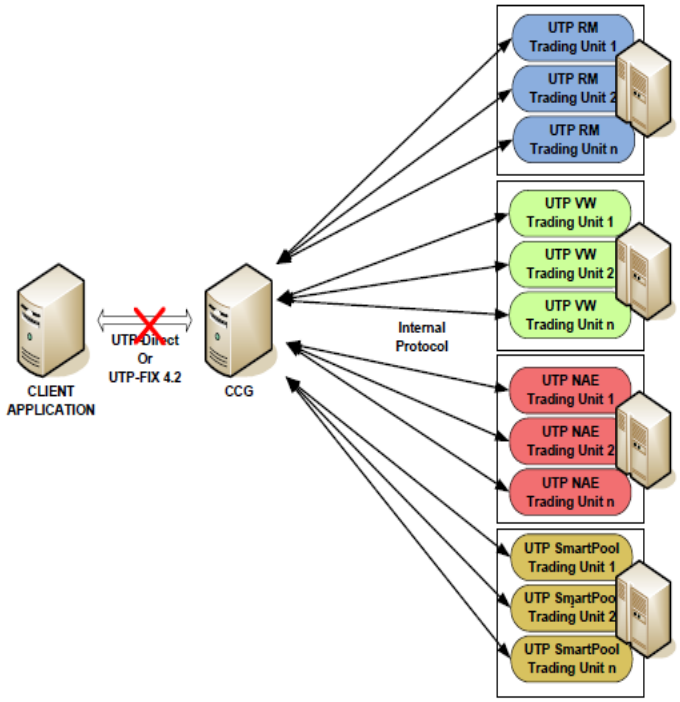
CCG – which stands for Common Customer Gateway – is the equipment hosting the customer UTP-Direct or UTP-FIX 4.2 interface.
UTP-Direct and UTP-FIX 4.2 interfaces use TCP/IP sockets. Each client connection sends messages to its assigned IP and port. The CCG then routes the messages to the appropriate UTP trading engine unit.



2. AUTO-MASS CANCEL ON DISCONNECT DESCRIPTION

Auto-mass cancel on disconnect can only be enabled on client's request. Once this function is activated, all live orders would be cancelled automatically upon disconnection.

2.1. Client application disconnected from CCG



If the client application is disconnected from the CCG, then all live orders entered during the current business day are cancelled regardless order's validity type. Orders entered during a previous business day are not impacted.

When a client application disconnection is detected by the CCG, the auto-mass cancel on disconnect service kicks in and the CCG sends a message to the UTP trading engine **to request the cancellation of all live orders entered on the current business day by customer application. Live orders entered during a previous business day are not affected.**

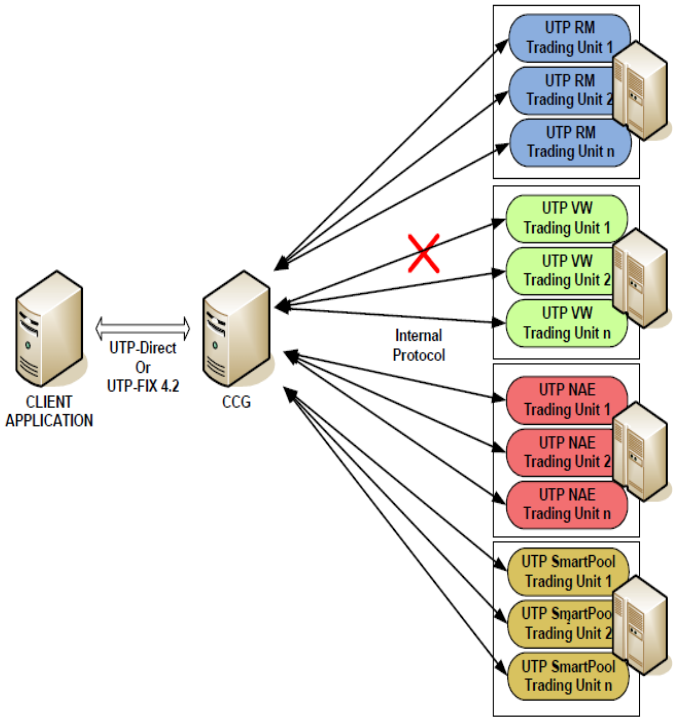
- As a result of the auto-mass cancel service, a message 'K' ('r' in FIX 4.2) (Ack. and Summary) pair is sent by each trading engine unit to the customer application , regardless of whether there are orders currently live on the trading engine unit. As such, customers will receive as many message 'K' pairs as number of trading engine units. At the moment of implementation of auto-mass cancel service WSE uses 2 UTP trading engine units.

- If there are orders currently live, a message 4 (8 in FIX 4.2) (Order Killed) is returned for each order eliminated. These messages are encapsulated within the message 'K' ('r' in FIX 4.2) pair for each trading engine unit.

2.2. Internal disconnection at the exchange

'Internal disconnection at the Exchange' refers to the scenario where a disconnection occurs between CCG and one or several UTP trading engine unit(s).

Note: In such a scenario, client application connection may not be affected.



Orders entered within the affected UTP trading engine unit(s) that is/are affected during the current trading day are cancelled regardless of order validity type. Live orders entered during a previous business day are not affected.

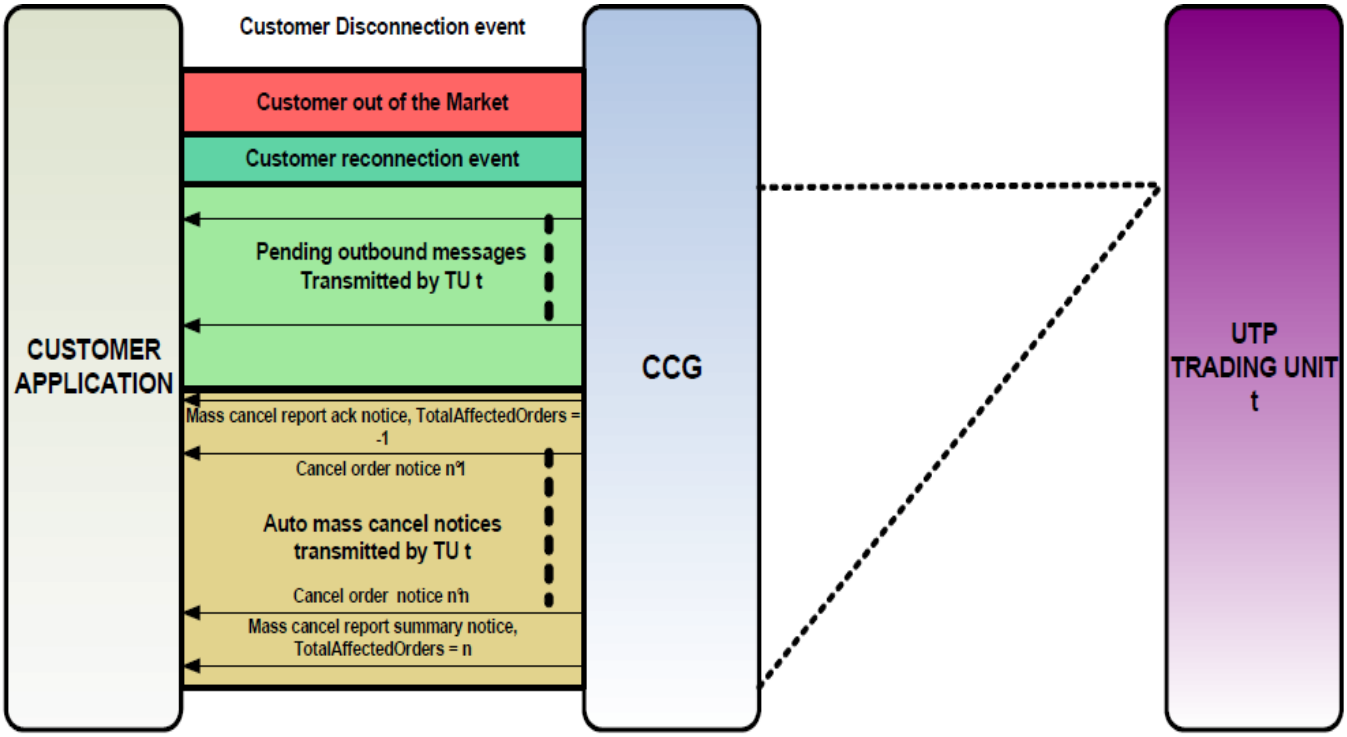
When one or several trading engine unit(s) detect a disconnection with a CCG, the auto-mass cancel on disconnect service kicks in **and live orders entered within the UTP trading engine unit(s) that is/are affected during the current trading day are cancelled regardless of order's validity type. Live orders entered during a previous business day are not affected.**

- If there are orders currently live, a message 4 (8 in FIX 4.2) (Order Killed) is returned for each order eliminated. These messages are encapsulated within the message 'K' ('r' in FIX 4.2) pair for each trading engine unit.

3. AUTO-MASS CANCEL ON DISCONNECT KINEMATICS

The paragraph below provides an illustrative diagram of protocol and data flow kinematics following a disconnection:

3.1. Auto-mass cancel messages kinematics – Customer Application Disconnection



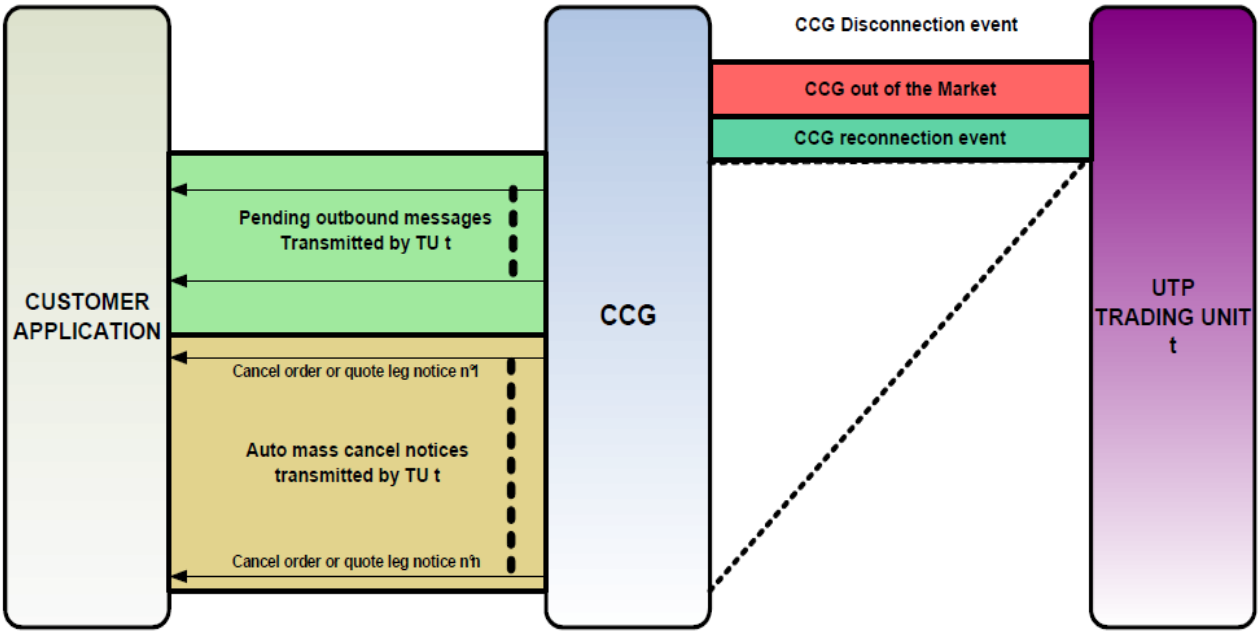
The triggering event is the disconnection of the client session from CCG, upon socket loss or lack of heartbeat.

When the customer reconnects later, this same day, the client session will receive from each trading engine unit the following sequence:

- Any pending outbound messages generated prior to the CCG auto-mass cancel on disconnect event: ack, fill … notice.
- One acknowledge message K (r in FIX 4.2) (with the field OrderId = -777 and the field TotalAffectedOrders=-1) from each trading engine unit.
- A message 4 (8 in FIX 4.2) « Order killed » notice for each order eliminated
- One summarizing message 'K' ('r' in FIX 4.2) (with the field OrderId = -777 and the field TotalAffectedOrders= number of orders eliminated).

Note: even though each trading engine unit transmits messages in the sequence described above, the overall message flow transmission among trading engine units is parallelized. As a result, customers may receive simultaneously messages out of sequence as they are coming from different trading engine units.

3.2. Auto-mass cancel messages kinematics – Internal disconnection at the Exchange



The triggering event is the disconnection of the CCG from a given trading unit upon socket loss or lack of heartbeat.

When the CCG reconnects, the client session will receive from each trading engine unit the following sequence:

- Any pending outbound messages generated prior to the CCG auto-mass cancel on disconnect event: ack, fill … notice.
- A message '4' ('8' in FIX 4.2) « Order killed » notice for each order eliminated.

4. AUTO-MASS CANCEL ON DISCONNECT LIMITATIONS

- This function does not guarantee that all orders will be successfully cancelled. It is possible that the automatic cancellation request may fail due to Exchange system problems, resulting in some (or all) orders remaining live and subject to execution.
- It is also possible that trades may happen near the time the customer session disconnects, and such trades will not be reported to the customer until he reconnects or until he liaises with the Market Operations Desks.
- This function aims to help clients in emergency situations. **Therefore, clients must not rely upon this automatic cancellation as normal business practice or to prevent liability of execution. This function is also not a substitute for contacting Market Operations Desks (to verify that all orders are indeed cancelled and that the firm has received all trades.**