Eurex Group Technology Roadshow

Eurex Exchange's T7 release 3.0

Spring 2015



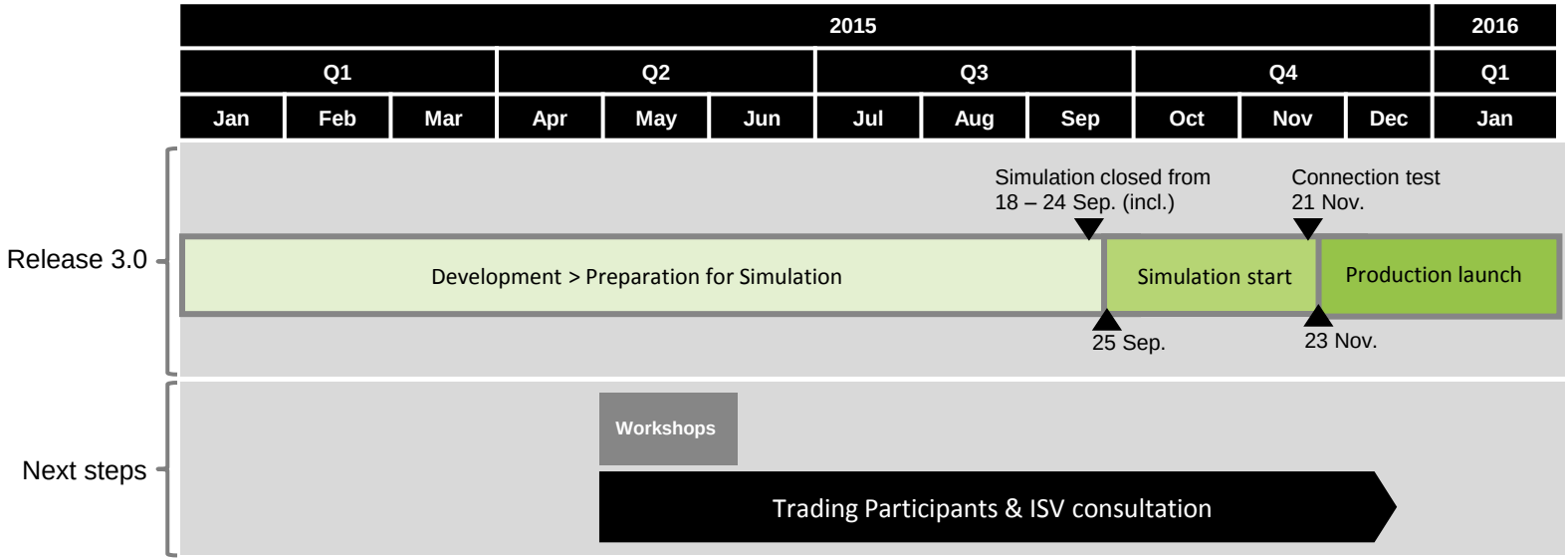
Eurex Exchange / International Securities Exchange / European Energy Exchange / Eurex Clearing / Eurex Bonds / Eurex Repo

Agenda

- Rollout and implementation planning
- Self-match prevention (SMP)
- Change for distribution of reference data for weekends and Exchange holidays
- Communication schedule
- Outlook
- Contacts

Rollout and implementation planning

Initial draft



Release contacts for the T7 release 3.0 can already be registered in the Member Section of our website eurexchange.com.

Self-match prevention (SMP)

What is SMP and what benefits does it provide?

- The Self-match prevention (SMP) functionality will help Participants to prevent an unintended execution of an incoming order or quote against a resting order or quote on the opposite side of the order book in the same instrument from the same business unit.

- The new functionality is regarded by Eurex Exchange to prevent unintended cross matches in T7 in order to be compliant with regulatory requirements, but it does not release a Participant from its own responsibility to take appropriate actions for reasons of regulatory compliance.

- The usage of SMP is optional.

Self-match prevention (SMP)

Impact on trading interfaces

The self-match prevention functionality will be offered via all trading interfaces (Eurex ETI, Eurex FIX and the T7 Trader GUI) and is supported for all order types (limit order, market order, stop order and OCO order) and on (mass) quote level. It can be applied to simple and complex instruments in the same manner. Self-match prevention will be supported for all allocation schemes during continuous trading but will not be applied for any matches resulting from auctions. Self-match prevention will also not be supported for synthetic matching.

A new optional field denoted as CrossID (numeric, 4-byte) is planned to be included in the layout of the order add or modify request and to the layout of the mass quote request. With the help of the CrossID, a business unit will have the flexibility to consider its individual setup (e.g. with respect to traders, trader groups and/or sessions) implying that the setting of the CrossID lies solely within a business unit's responsibility.

Eurex Enhanced Trading Interface (ETI) and FIX Gateway (FIX)

- Backward compatibility to version 2.5 ETI message layouts will be provided for the self-match prevention functionality. FIX backwards compatibility is given if the client application does not use the new optional field and is able to ignore the other new fields.

T7 Trader GUI

- An additional field will be added to the Order Entry/Maintenance window and will also be visible in the order and in the Order History view.

Self-match prevention (SMP)

Impact on market & reference data interfaces

Eurex Exchange plans to publish the SMP events via Eurex EMDI and Eurex EOBI. Participants are therefore required to adapt their applications to the mandatory changes accordingly.

Eurex Enhanced Order Book Interface (EOBI)

- A new field *RestingCxlQty* will be added to show the deleted quantity due to SMP within a match step. The Execution Summary will also be sent out in case that no quantity was traded since all orders/quote sides participating in the matching event have been deleted due to SMP.
- Not backward compatible.

Eurex Enhanced Market Data Interface (EMDI)

- A new field *CxlQty* will be added to the *MDIncGrp/TradeEntryGrp* for trade entries in depth incremental messages which belongs to the price level where SMP has been triggered.
- Not backward compatible.

Eurex Market Data Interface (MDI)

- No changes required for SMP.

Self-match prevention (SMP)

Report changes

- The reports **TE540 Daily Order Maintenance** and **TE550 Open Order Detail** will be enhanced with the CrossID.
- Furthermore a new report containing the prevented cross trades during a trading day will be provided. More details regarding the changes to the reports will be provided in due course.
- The SMP orders/quotes are not included in the report **TE810 T7 Daily Trade Confirmation**.

Self-match prevention (SMP)

Trading interfaces – SMP actions

In a nutshell

- A SMP condition is fulfilled in case the incoming order (or a triggered order or a (re-activated) quote) is facing for execution to a sitting order (or quote) having the **same CrossID / SMP-ID value** and the **same business unit ID**.
- When the SMP conditions are fulfilled, both the quantity of the incoming order and the quantity of the SMP sitting order which would have matched will be deleted.
  - SMP sitting order*:* If only one part of its quantity would have matched against the incoming order, the remaining part stays in the book. If its whole quantity would have matched, it will be deleted.
  - Incoming order: Only the part of the quantity which would have matched against the sitting order will be deleted. The incoming order can match the whole price level containing the SMP sitting order(s) in case of sufficient quantity. Any quantity left after matching on this price level (including synthetic matching) will be deleted.

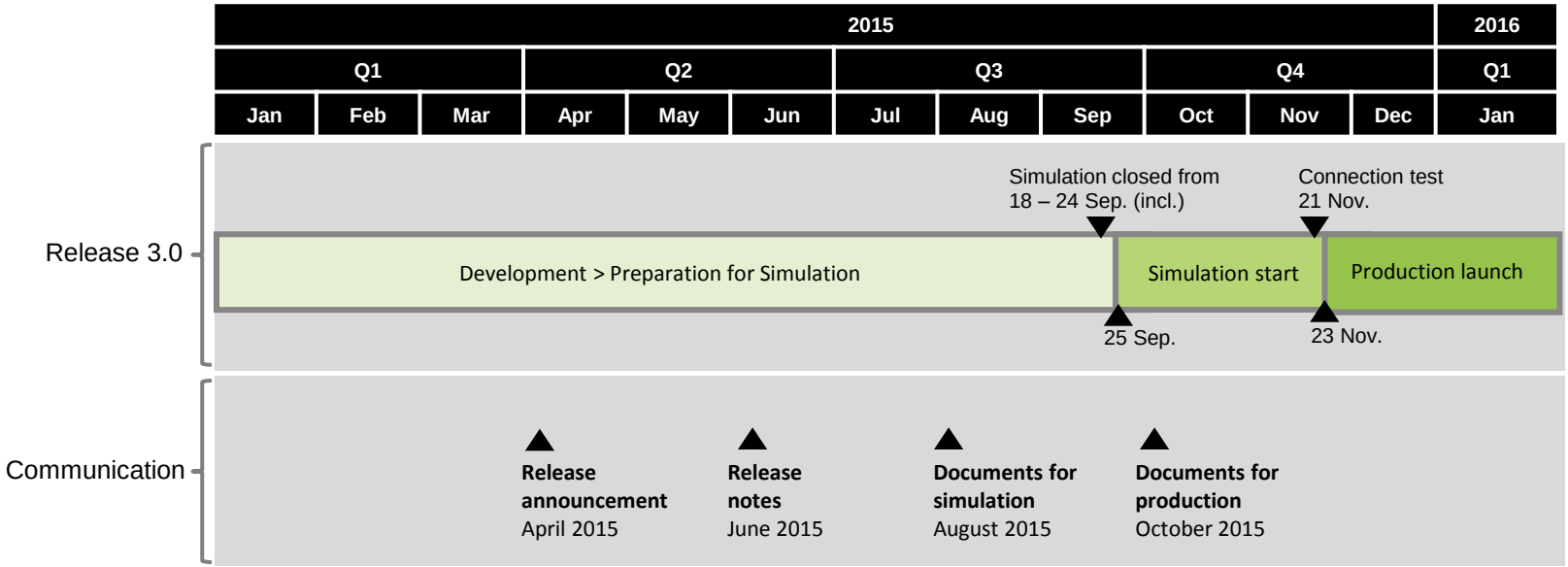
Event	CrossID/ business unit ID	SMP action
$\mathbf{Q^{book} \geq Q^{inc}}$: Whole/ part of quantity of sitting order Q^{book} would match against incoming order Q^{inc}.	different	Match.
$\mathbf{Q^{book} > Q^{inc}}$: Quantity of incoming order Q^{inc} smaller than quantity of sitting order Q^{book}.	equal	No match. Quantity of sitting order Q^{book} is reduced by the amount of the quantity of incoming order Q^{inc}.
$\mathbf{Q^{book} \leq Q^{inc}}$: Quantity of incoming order Q^{inc} is equal to or larger than quantity of sitting order Q^{book}.	equal	Partial match. Sitting order Q^{book} completely deleted. Quantity of incoming order Q^{inc} is reduced by the amount of the quantity of sitting order Q^{book}. Remaining part of incoming order Q^{inc} continues to match.
$\mathbf{\sum Q^{book} < Q^{inc}}$: Quantity of incoming order Q^{inc} exceeds accumulated sitting quantity of price level $\sum Q^{book}$.	equal	Match. Sitting order Q^{book} completely deleted. Quantity of incoming order Q^{inc} reduced by the amount of sitting order Q^{book}. Remaining part of incoming order completely matches all other book orders of the same price level. Still remaining part of incoming order cancelled.

Change for distribution of reference data for weekends and Exchange holidays

The distribution of reference data will be harmonized

- Prior to release 3.0, reference data is delivered directly after a business day rollover, therefore reference data for a business day on Monday is usually delivered on a Saturday. Following the introduction of release 3.0, reference data will only be distributed in the morning of each new business day and no longer during weekends or Exchange holidays.

Communication schedule



For further details please visit our website eurexchange.com.

Outlook I

Future T7 releases - Implementation of Trade Entry Services in T7 (early preview)

- It is planned to implement Eurex Trade Entry Services (TES) - formerly known as OTC - in a future T7 release. Eurex Trade Entry Services enable Participants to enter off-book trades in the T7 system. The Multilateral Trade Registration facility supports pre-negotiated off-book trades with multiple counterparties.

- To provide a convenient solution to the market, to get to know the opinion of Eurex customers and to take their needs into account, a Market Intelligence Survey has been performed. The most active Eurex TES users and their ISVs have been approached. The principal assumption was, that many front office software providers would appreciate the availability in the trading interface as they could concentrate on one interface for all trading relevant functionality. As a result, they could decommission FIXML – if not used for clearing functionality.

- A number of customers provided their feedback with a clear tendency towards Eurex ETI. This will be considered in our further planning.

- Since customers may continue to use FIXML (e.g. for clearing functionality) Eurex is planning to support FIXML further on.

Outlook II

Launch of T7 Cloud Simulation

- Eurex T7 Cloud Simulation is a cloud-based, on-demand simulation environment providing private access to dedicated, virtual instances of Eurex Exchange's T7 trading architecture for testing and development purposes. The environment allows Trading Participants and ISVs to continually develop and evaluate their own software, initiate pre-defined market scenarios and test specific strategies not possible in a shared environment, being completely independent of other T7 environments. The simulation covers T7 in the current production version as well as the current release version. Eurex T7 Cloud Simulation is ready to be launched.

	Scoping of T7 simulation environment	Effect on customers
	The standard simulation environment…	
+	Allows for front-to-back testing (ex-Clearstream; the clearing and settlement division of Deutsche Börse).	• Early identification of system dependencies and issues. • Ensure that system integration functions without glitches.
+	Mirrors the production environment from a technical and functional perspective.	• Confidence in the workings of the production environment.
+	Permits Deutsche Börse to conduct its own internal tests before delivering software into production.	• Introduction of stable software into the production environment.
+	Leverages production environment infrastructure costs.	• Cost savings are passed on to our customers (no fee for simulation).
+	Allows for functional scenario and technical failure tests.	• A more secure and stable production environment.
	Complemented by features of the T7 Cloud Simulation environment:	
+	T7 Cloud Simulation is always available. There are no limitations due to batch runs in the standard simulation (3x per week from16.00 to 10.00 h CET).	• Customers are able to access this simulation environment in their core working time (important for customers based in Asia and America).
+	Allows customers to select on which version they want to test their trading activity.	• Customers can test in the T7 version that they want to test. This is very effective during release rollouts, when the standard simulation is already upgraded to the upcoming production version.
+	Allows customers to build up their own order book scenarios without the risk that other trading participants clear them away.	• Customers can test their individual order book scenarios and trading strategies without the risk of interference by others.

Further information

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