T7 Release 6.1

Final Release Notes

Date   24 May 2018

Content

1. Introduction

Deutsche Börse AG is planning to launch Release 6.1 of its T7 trading platform on 18 June 2018.

The following diagram gives an overview of the introduction schedule:
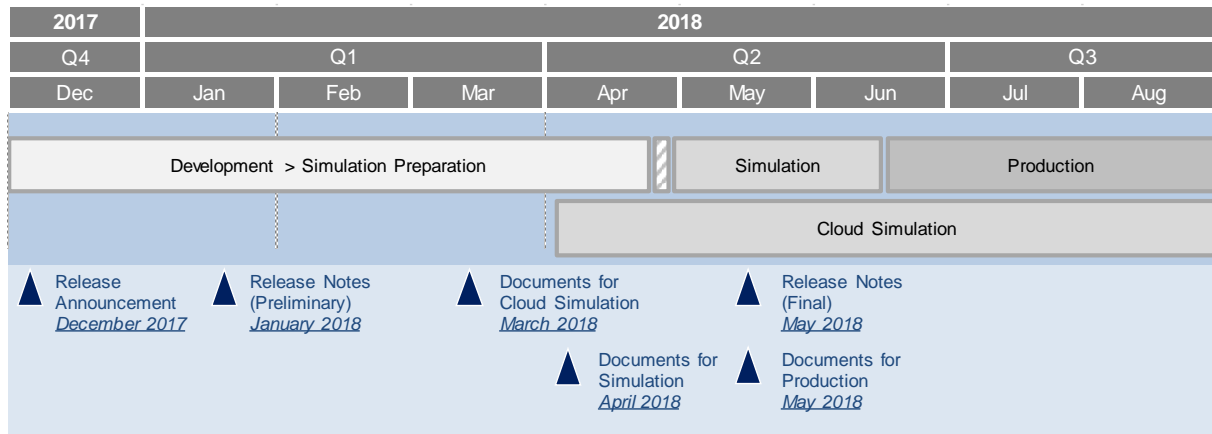
Deutsche Börse AG provides a dedicated release simulation environment in order to give trading participants the opportunity to perform comprehensive testing of their trading applications, independent from the T7 production environment. The simulation period for T7 Release 6.1 started on 30 April 2018.

In addition to the T7 release simulation, Deutsche Börse AG offers T7 Cloud Simulation in Release 6.1 to allow trading participants and Independent Software Vendors to test against the current T7 production and simulation software versions. In this environment, participants can initiate predefined market scenarios and test specific strategies more easily than in a shared environment. The environment is available around the clock for a fixed price per hour. The T7 Cloud Simulation for T7 Release 6.1 started on 06 April 2018. For more information on the T7 Cloud Simulation, please refer to http://www.xetra.com/xetra-en/technology/t7/cloud-simulation.

1.1 New Features and Enhancements Overview

The following new features and enhancements will be introduced with T7 Release 6.1:

- Enhancements to the Post-Trade model to connect additional central counterparties (CCPs)
- Enhancements to the Trading and Reference Data Interfaces:
    - Enhanced Trading Interface:
        - Extension of the short message to standard orders.
        - Standard orders will be supported via high frequency (HF) sessions.
    - FIX Interface:
        - Introduction of a new FIX message to identify the input interface of the order related messages.
    - Enhancements to the T7 Reference Data Interface (RDI) to be more FIX compliant.

1.2 Further Reading

The existing documents have been or will be revised for T7 Release 6.1 The following table provides an overview of the final schedule for the publication:

T7 Release 6.1	Eurex	Xetra	Combined	Q4 2017			Q1 2018			Q2 2018			Q3 2018		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Release Notes															
T7 Release 6.1, Release Notes	X	X					◆				●				
Simulation															
Participant Simulation Guide	X	X								●					
Overview and Functionality															
T7 Functional and Interface Overview			X							●					
T7 Cross System Traceability			X							●					
T7 Functional Reference			X							●					
Participant and User Maintenance Manual	X	X								●					
Contract Notes Description		X								●					
GUI Solutions															
T7 Trader, Admin and Clearer GUI – User Manual	X	X								■	●				
T7 Trader, Admin and Clearer GUI - Installation Manual			X							■	●				
Trading Interfaces															
T7 Enhanced Trading Interface – Manual incl. Repository and Header files	X	X							◆	■	●				
T7 Enhanced Trading Interface – XML Representation	X	X							◆	■	●				
T7 FIX Gateway - FIX 4.2 and 4.4 Manual incl. Fiximate and Repository			X						◆	■	●				
Market and Reference Data Interfaces															
T7 Market-, Enhanced Order Book- and Reference Data Interfaces, Manual incl. Fast Message Template and Repository			X						◆	■	●				
Xetra Instrument Reference Data Guide		X								●					
T7 Extended Market Data Services – Manual incl. Fast Message Template and Underlying Ticker Data			X							■	●				
Reports															
XML Reports - Reference Manual	X	X								■	●				
Common Report Engine User Guide			X							●					
Network Access															
N7 Network Access Guide			X							●					

◆ - cloud-simulation / preliminary version

■ - simulation / preliminary version

● - production / final version

The documents will be available on the Xetra website www.xetra.com under the link:
> Technology > T7 trading architecture > System documentation > Release 6.1

Please note that the outlined schedule is preliminary and subject to change.

1.3 Contacts

If you have any questions or require further information, please contact your Global Key Account Manager Trading. Alternatively, please contact your Technical Key Account Manager using your VIP number or via e-mail to: cts@deutsche-boerse.com.

1.4   Definitions and Abbreviations

Term/ Abbreviation	Description
BOC	Book-Or-Cancel
CBF	Clearstream Banking Frankfurt
CBF(I)	Clearstream Banking Frankfurt (International)
CCP	Central Counterparty
DBAG	Deutsche Börse AG
ECAG	Eurex Clearing AG
EMDI	T7 Enhanced Market Data Interface
EMDS	T7 Extended Market Data Service
EOBI	T7 Enhanced Order Book Interface
ETI	T7 Enhanced Trading Interface
FIX	Financial Information eXchange (portal)
GUI	Graphical User Interface
HF	High Frequency
MDI	T7 Market Data Interface
MiFID	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
RDF	T7 Reference Data File
RDI	T7 Reference Data Interface
SMC	Stressed Market Conditions
T7	DBAG Trading System
VDO	Volume Discovery Order

2. Functional Enhancements

2.1 Enhancements to the Post-Trade Model

With T7 Release 6.1, Deutsche Börse will enable its T7 trading architecture to connect additional central counterparties (CCPs) to Xetra® using a new dedicated T7 interface. As soon as further CCPs have been connected to T7, trading participants will be able to choose an additional CCP next to Eurex Clearing AG (ECAG). Along with the choice of an additional CCP, trading participants will also have the possibility to define a clearing member as well as a settlement institute (CCP clearing member) which can be different from the ones at ECAG.

For the enhanced post-trade model, only a common set of CCP-eligible instruments per market will be available. The selected instruments will be marked by the new "Multiple CCP-eligibility" attribute. There will be no restriction to any match type, i.e. it will be possible to forward all Xetra trades including Xetra BEST and Volume Discovery Orders (VDOs) to additional CCPs. However, T7 will only forward the full/ partial trade if all participants involved in the trade have selected the same CCP. Otherwise, the full/ partial trade will be processed by ECAG. After receiving the trade, all CCPs incl. ECAG will have to send settlement instructions to the respective settlement location of the instrument depending on the depository type. For example, for the instruments on the market "XETR", the settlement locations can be either CBF or CBF(I) depending on the depository type.

For traceability, the trade notifications as well the participants' reports will be enhanced providing information to which CCP the trade has been forwarded. The enhancements refer to the fields belonging to the context of the CCP, clearing member and the settlement institute such as the Counterparty ID, KV-Number or the Settlement Account.

The clearing members as well as the settlement institutes at the additional CCPs will also receive trade notifications and reports in the same way as existing clearing members and settlement institutes at ECAG. Correspondingly, the clearing members and settlement institutes at the additional CCPs will have access to the T7 Admin and Clearer GUIs. Information about connection alternatives will be provided in the Network Access Manual.

2.2 Enhancement regarding Maximum Order Value

With the production launch, the Maximum Order Value will be denoted as an integer. Currently, it is implemented with eight decimal places after the value.

2.3 Peak Quantity of Iceberg Orders during Auctions

Normally, only the peak quantity of an Iceberg order is visible to the market. However, during auction phases, Iceberg orders participate and are visible with their total order quantity. Currently, the field *displayQty* in private ETI order messages contains the visible order quantity, i.e. the total order quantity during auction phases, but the peak quantity in other phases. With release 6.1, the field *displayQty* in private ETI order messages will always contain the peak quantity, even during auction phases, when the total order quantity of the Iceberg order is visible to the market. Therefore, there will no longer be the need any more to send order confirmation messages for iceberg orders that reflect only the difference in the visibility of iceberg orders during auction phases in the ETI interface.

2.4 Trades resulting from Quotes

Currently, for trades resulting from quotes *(ETI/FIX: OrderCategory (1115) = 2 (Quote)),* no exchange order ID *(ETI/ FIX: OrderID (37))* nor system order version number *(ETI/FIX: OrderIdSfx (25108))* are delivered within the trade messages. With the release introduction, this behavior will change and the aforementioned tags will be populated in the ETI Trade Notifications, FIX Trade Capture reports, and in the participants' reports *(exchangeOrderId, versionNo)*.

2.5 Broadcast of Indices

With the release introduction, indices (e.g. DAX, HDAX) will be part of the external price information and therefore, they will be distributed via the External Ticker Line and via the External Ticker Board in the T7 Trader GUI. No special entitlement will be necessary.

2.6 New Instrument State DEL

A new instrument state "DEL" will be introduced with the production launch indicating that the instrument has exceeded its last trading date and is therefore scheduled for deletion.

2.7 Enhancement regarding Liquidity Indicator in Auctions

A new valid value 4 ("Auction") will be introduced for the tag *FillLiquidityInd* in the *Book Order Execution* reports in case of executions in Auctions/ Uncrossing trades. This tag will be synchronized with the tag *SideLiquidityInd* in the Trade Notifications. Please note that the new valid value will also cover VDOs but only in cases where the VDOs match at midpoint against other VDOs in the order book.

2.8 Enhancement regarding Stop Button Legal Text Messages

With the release introduction, the individual STOP button legal text messages will provide the member ID for which the stop button was activated. The enhancement will provide traders trading for more than one member ID (i.e. multiple clearing relationships) with additional information. Additionally, the messages will be sent to the clearing member as well.

3. Technical Enhancements

3.1 T7 Enhanced Trading Interface and FIX Interface

With T7 Release 6.1, the T7 Enhanced Trading Interface (ETI) will change to version "6.1". T7 Release 6.1 will provide backwards compatibility for the T7 ETI and FIX interface version 6.0, i.e. participants using the interface layout version 6.0 will still be able to connect to T7 even after production launch of T7 Release 6.1.

Detailed information about the ETI changes and enhancements for T7 Release 6.1 will be provided in the Trading Interfaces documentation on the Xetra webpage.

3.1.1 Enhancements of the T7 ETI Interface

The following enhancements will be introduced for the T7 ETI interface:

- ETI high frequency (HF) sessions currently allow lean orders and quotes whereby only the executions and foreign events may be recovered. With T7 release 6.1, the scope of the HF sessions will be extended to support standard orders that are currently only available via low frequency (LF) sessions for regular trading.
- ETI short order message layouts (New Order Single (Short Layout), Replace Order Single (Short Layout)) are currently supported for simple instruments and lean orders only. Thereby, lean orders are always non-persistent. With the release introduction, the aforementioned short order message layouts will be extended to support standard orders, therefore a new field *ApplSeqIndicator (28703)* will be added to identify whether an order is lean or a standard order. Given that standard orders can be either persistent or non-persistent, new valid values for the attribute *ExecInst (18)* will also be introduced.

3.1.2 Enhancements of the T7 FIX Interface

The following enhancements refer to the T7 FIX interface:

- To help identify which input interface submitted the orders, a new FIX message will be introduced via the T7 FIX Backoffice sessions. This new FIX message will contain the list of all sessions IDs of the business unit with their attributes. Based on this data and on the session IDs provided in each order and trade message sent via the corresponding T7 FIX Backoffice session, participants will be able to map each message to the corresponding input interface.

3.2 Market Data and Reference Data Interface Changes

Detailed information on the enhancements and changes in the T7 Market and Reference Data Interfaces with T7 Release 6.1 will be provided in the respective interface documentation on the Xetra webpage.

Please note that the T7 6.1 market and reference data interfaces will not provide backward compatibility to previous the releases.

3.2.1 Enhancements regarding RDI/ RDF

The following enhancements will be provided for RDI/ RDF:

- The security description will be extended to include the instrument mnemonic for simple instruments.
- To be more FIX compliant, the values for the *SecurityType (167)* will be aligned across all RDI messages, i.e. in the Product Snapshot, Instrument Snapshot and in the Security Status.
- To indicate which instruments are currently activated for the new post-trade functionality, the RDI/ RDF and the public instrument data file will be enhanced to include the instruments' new attribute of *"Multiple CCP-eligibility" (117)*.
- For instruments that have exceeded their last trading date, a new *SecurityStatus ("Pending Deletion")* will be introduced. This new *SecurityStatus* indicates that the instrument will be deleted soon which is

more accurate than the current "*Active*". Please note that RDI/ RDF do not reflect any intraday update on the instruments' last trading and therefore, there can be discrepancies to MDI/ EOBI.

3.2.2 Enhancements regarding MDI/ EMDI/ EOBI

Similar to RDI/ RDF, there will be a new *SecurityStatus* (*"Pending Deletion"*) introduced for instruments that have exceeded their last trading date. Please note, intraday updates on the last trading date are supported by MDI/ EMDI/ EOBI and therefore, differences between RDI/ RDF can occur.

4. T7 Trader and Admin GUI Enhancements

The T7 Trader and Admin GUI will be enhanced to support the following with T7 Release 6.1:

- Indices:
    - The External Ticker Line and the External Ticker Board will include external price information of indices (e.g. DAX).
- Trades:
    - Trade notifications can reflect all connected CCPs, along with clearing member and settlement member settings (i.e. *CCPCM*, *CCP clearing member, KVNo, StlLoc, StlAct, Cpty, CptyKVNo, CptyStlLoc, CptyStlAct, CptyCM*).
- User Maintenance:
    - There will be the possibility to define individual settlement accounts and locations for the CCPs. This setup will be reflected in the respective reports as well.

5. Reports

The following reports will be enhanced with T7 Release 6.1:

- TC810 – T7 Daily Trade Confirmation:
    - o With regard to the participants' settings on clearing and settlement, the existing fields *membClgIDCod*, *membCcpClgIdCod, settlAcct, settlLocat, ctpyStlIdLoc, ctrPtyId, ctpyStlIdAct* will be used to reflect the respective data, depending on the recipient of the trade.
    - o The clearing members and settlement institutes at all connected CCPs will receive their own TC810 – Daily Trade Confirmation for their non-clearing members.
    - o For trades resulting from quotes, the fields *exchangeOrderId* and the *versionNo* will be delivered.
- TD930 – Daily Trade Statistics
    - o Currently, both fields *lstTrdPrct* and *lstValPrc* contain the last traded price. With release introduction, the *lstTrdPrc* will be removed and the field *lstValPrc* will be renamed to *lstExchPrc*.
- TR160 – Identifier Mapping Error and TR162 – Algo HFT Error:
    - o To ease the participants' automated processing on errors, three new fields will be introduced containing the name of the upload file (*uploadfile*), the number of the upload file (*rowNumber*) and the name of the trading system in which the error occurred (*tsField*). In addition, the format of the existing field *errDescription/errorDesc* will be changed from one digit to two digits (please refer to circular 040/18 for more information).
- RD115 – User Profile Status
    - o Two fields will be added into the rd115Rec1 group (*prefSettlAcct and prefSettlLocat)* reflecting the user settlement accounts and locations for all connected CCPs.
- RD110 – User Profile Maintenance
    - o There will be no structural change, but changes to the new fields described for RD115 will be reflected here as well.

For a detailed description, please refer to the "T7 XML Report Reference Manual" on the Xetra webpage. Please note that the manual describes also all other reports generated on the basis of existing trading data from T7.