

T7 Release 8.1

Final Release Notes for the Trading Venues Xetra and Börse Frankfurt

© 2020 by Deutsche Börse AG (“DBAG”). All rights reserved.

All intellectual property, proprietary and other rights and interests in this publication and the subject matter of this publication are owned by DBAG, other entities of Deutsche Börse Group or used under license from their respective owner. This includes, but is not limited to, registered designs and copyrights as well as trademark and service mark rights. Methods and devices described in this publication may be subject to patents or patent applications by entities of Deutsche Börse Group.

Specifically, the following trademarks and service marks are owned by entities of Deutsche Börse Group: Buxl[®], DAX[®], DivDAX[®], eb.rexx[®], Eurex[®], Eurex Repo[®], Eurex Strategy WizardSM, Euro GC Pooling[®], F7[®], FDAX[®], FWB[®], GC Pooling[®], GCPI[®], M7[®], MDAX[®], N7[®], ODAX[®], SDAX[®], T7[®], TecDAX[®], USD GC Pooling[®], VDAX[®], VDAX-NEW[®] and Xetra[®].

The following trademarks and service marks are used under license and are property of their respective owners:

- All MSCI indexes are service marks and the exclusive property of MSCI Barra.
- ATX[®], ATX[®] five, CECE[®] and RDX[®] are registered trademarks of Vienna Stock Exchange AG.
- IPD[®] UK Annual All Property Index is a registered trademark of Investment Property Databank Ltd. IPD and has been licensed for the use by Eurex for derivatives.
- SLI[®], SMI[®] and SMIM[®] are registered trademarks of SIX Swiss Exchange AG.
- The STOXX[®] indexes, the data included therein and the trademarks used in the index names are the intellectual property of STOXX Limited and/or its licensors Eurex derivatives based on the STOXX[®] indexes are in no way sponsored, endorsed, sold or promoted by STOXX and its licensors and neither STOXX nor its licensors shall have any liability with respect thereto.
- Bloomberg Commodity IndexSM and any related sub-indexes are service marks of Bloomberg L.P.
- PCS[®] and Property Claim Services[®] are registered trademarks of ISO Services, Inc.
- Korea Exchange, KRX, KOSPI and KOSPI 200 are registered trademarks of Korea Exchange Inc.
- BSE and SENSEX are trademarks/service marks of Bombay Stock Exchange (“BSE”) and all rights accruing from the same, statutory or otherwise, wholly vest with BSE. Any violation of the above would constitute an offence under the law of India and international treaties governing the same.

Information contained in this publication may be erroneous and/or untimely. All descriptions, examples and calculations contained in this publication are for illustrative purposes only, and may be changed without further notice. Neither DBAG nor any entity of Deutsche Börse Group makes any express or implied representations or warranties regarding the information contained herein. This includes without limitation any implied warranty of the information’s merchantability or fitness for any particular purpose and any warranty with respect to the accuracy, correctness, quality, completeness or timeliness of the information.

Neither DBAG nor any entity of Deutsche Börse Group shall be responsible or liable for any third party’s use of any information contained in this publication under any circumstances. The information contained in this publication is not offered as and does not constitute investment advice, legal or tax advice, an offer or solicitation to sell or purchase any type of financial instrument.

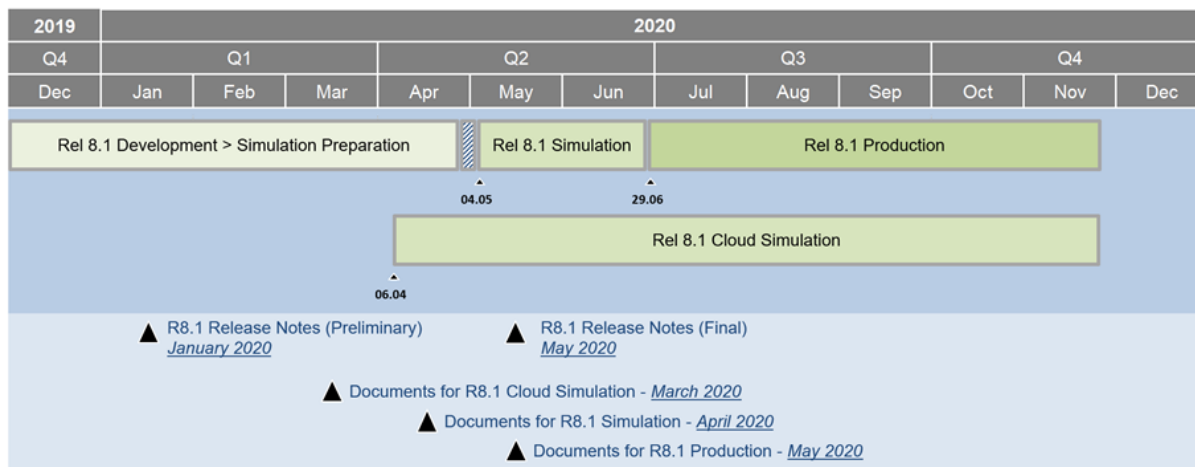
Content

1. Overview of T7 Release 8.1	4
1.1 New Features and Enhancements Overview	4
1.2 Further Reading	4
1.3 Contacts	5
1.4 Definitions and Abbreviations	5
2. Xetra EnLight below Large-in-Scale	7
2.1 Functional Description	7
2.1.1 ETI	7
2.1.2 Reference Data	7
2.1.3 Trader GUI	7
2.1.4 XML Reports	7
3. TES Auto Approval Rules for Clients	8
3.1 Functional Description	8
3.1.1 The TES Auto Approval Rules	8
3.1.2 Application of TES Auto Approval Rules	9
3.1.3 Approval Result messaging	10
3.2 Impact on Interfaces	10
3.2.1 ETI	10
3.2.2 FIX	10
3.2.3 Reference Data	10
3.2.4 GUI	10
3.2.5 XML Reports	11
4. Further GUI Enhancements	12
4.1 Change in Display of Previous Closing Price	12
4.2 Additional Columns in <i>Market</i> view	12
5. Other changes	13
5.1 Clean-up of historical <i>News</i> messages	13
5.2 DMA Flag for TES and Xetra EnLight	13
5.3 Change in Behaviour of Delete All Order Request	13
5.4 Change in EOBI Instrument Summary Message	13
5.5 New XML Report: TR166 Identifier Mapping Final Error Report	13
5.6 Changed Behaviour of Delete All Orders Request	13

1. Overview of T7 Release 8.1

Deutsche Börse AG is planning to launch T7 Release 8.1 on 29 June 2020.

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 Xetra (XETR) of the T7 Release 8.1 is planned to start on 4 May 2020.

In addition and prior to the T7 release simulation, Deutsche Börse AG offers a T7 Release 8.1 Cloud Simulation to allow trading participants and Independent Software Vendors (ISVs) to test against the current T7 production and simulation software versions. In the Cloud Simulation, participants can initiate predefined market scenarios and test specific strategies more easily than in a shared environment. The Cloud Simulation is available around the clock for a fixed price per hour. Please note that the T7 Cloud Simulation will include both trading venues T7 Xetra (XETR) and T7 Börse Frankfurt (XFRA).

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 8.1:

- Xetra EnLight below LIS
- TES Auto Approval Rules for Clients
- Other changes

Note on Interfaces

T7 Release 8.1 will provide backwards compatibility for the T7 ETI/FIX interface versions 8.0 and 8.0.1, i.e. participants who do not want to use the new functionality will still be able to connect to T7 with the interface layout version 8.0, or 8.0.1, even after the production launch of T7 Release 8.1.

Market Data interfaces, RDI, reports and data files will not provide backwards compatibility.

1.2 Further Reading

The existing documents have been or will be revised for T7 Release 8.1 The following table provides an overview of the final schedule for the publication:

T7 Release 8.1	Derivatives	Cash Markets	Combined	Q1 / 2020			Q2 / 2020		
				Jan	Feb	Mar	Apr	May	Jun
T7 Release Note 8.1 - Release Notes	X	X		◆				●	
T7 Functional Reference			X				●		
T7 Functional and Interface Overview			X				●		
T7 Participant Simulation Guide			X				●		
T7 Cross System Traceability			X				●		
T7 Incident Handling Guide			X				●		
T7 Participant and User Maintenance Manual	X	X					●		
Contract Notes Description		X					●		
T7 Known Limitations			X				■	●	
T7 Trader, Admin and Clearer GUI – User Manual	X	X					■	●	
T7 Trader, Admin and Clearer GUI – Installation Manual			X				■	●	
T7 Enhanced Trading Interface – Manual incl. Repository and Header files			X			◆	■	●	
T7 Enhanced Trading Interface – XML Representation			X			◆	■	●	
T7 FIX Gateway – FIX 4.2 and 4.4 Manual incl. Fiximate and Repository			X			◆	■	●	
T7 Market, - Enhanced Order Book- and Reference Data Interfaces Manual incl. Fast Message Template, Repository & FIXML Schema Files			X			◆	■	●	
T7 Extended Market Data Services – Manual incl. Fast Message Template and Underlying Ticker Data			X				■	●	
Cash Market Instrument Reference Data Guide		X					●		
T7 XML Report Reference Manual			X				■	●	
Common Report Engine User Guide			X				●		
N7 Network Access Guide			X				●		
Exchange Rules & Regulations		X							●
Market Model Continuous Trading in connection with Auctions		X					●		

Release 8.1: ◆ Cloud Simulation Version ■ Simulation Version ● Production / Final Version

Please note that the outlined schedule is subject to change.

The documents will be available on the Xetra website www.xetra.com/technology under the ink:

> **Technology** > **T7 Trading Architecture** > **System documentation** > **Release 8.1**

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
BU	Business Unit
CEF	Consolidated Exchange Feed

CRE	Common Report Engine
DBAG	Deutsche Börse 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)
GFD	Good-For-Day
GTC	Good-Till-Cancelled
GUI	Graphical User Interface
HF	High Frequency
ISV	Independent Software Vendor
LF	Low Frequency
LIS	Large in Scale (TES Type for on-exchange off-book trading)
MDI	T7 Market Data Interface
OCO	One-Cancels-the-Other Order
PAG	Product Assignment Group
PWT	Price-Without-Turnover
RfQ	Request for Quote
RDF	T7 Reference Data File
RDI	T7 Reference Data Interface
STP	Stop Order
T7	T7 is the trading architecture developed by Deutsche Börse Group
TES	T7 Entry Service
TSO	Trailing Stop Order
XETR	Market Identifier Code (MIC) of trading venue T7 Xetra
XFRA	Market Identifier Code (MIC) of T7 Börse Frankfurt including Börse Frankfurt Zertifikate

2. Xetra EnLight below Large-in-Scale

After introduction of T7 Release 8.1, T7 Xetra will offer the possibility to enter Xetra EnLight Request for Quotes (RfQ) below the ESMA defined Large-in-Scale (LIS) value. Xetra EnLight quotes below LIS will be published to ensure pre-trade transparency in accordance with the MiFID II regulation.

2.1 Functional Description

Until now, Xetra EnLight requires a minimum volume given by the LIS threshold. In future, it will be possible to enter Xetra EnLight Request for Quotes (RfQ) below LIS, down to an instrument-specific, exchange-defined threshold called SRQS minimum size. Accordingly, the respondents' quotes may be below LIS.

In accordance with MiFID II requirements, quotes with a volume below LIS will be published in market data. There will be no publication via EMDS.

2.1.1 ETI

No impact.

2.1.2 Reference Data

There will be a new field *SRQS minimum size*.

The field will be published in the static instrument reference data files in the public section of the CRE, on the Xetra Web site and in the Xetra Member Section (SRQSparameters.csv) but not via RDI.

2.1.3 Trader GUI

Xetra EnLight Quote Entry view:

- A new field will display the notional value, i.e. quantity * reference price.
- The field BuySide will be moved up next to the new field with the notional value.

Xetra EnLight Response History view:

Here, the last status of an RfQ will be displayed.

There are four valid values for the status:

- "Quoted": The responder quoted but has not been selected
- "Traded": The responder quoted and has been matched
- "Declined": The responder declined the RfQ
- "Expired": The responder did not react on the RfQ or did just send "working".

2.1.4 XML Reports

No impact.

3. TES Auto Approval Rules for Clients

With the introduction of T7 Release 8.1, the existing TES Auto Approval Rules will be enhanced to provide the additional possibility to automate TES approval and the trade's enrichment with information based on the following attributes:

- Product
- TES Type
- Instrument Type
- Enrichment Key

The new Enrichment Key can be chosen to be client specific enabling trading participants to perform straight through processing of their client off-book business.

3.1 Functional Description

Instead of manually approving a TES trade and manually filling the clearing as well as the MiFID fields on the TES trade side, the approving user will be able to specify criteria for an automatic approval in a TES Auto Approval Rule and to provide the contents of the clearing and MiFID fields as part of the TES Auto Approval Rule.

Once a TES trade side is received which matches the criteria defined in the TES Auto Approval Rules, these prefilled values will automatically be applied. Fields which are prefilled by the initiating user for the approving user will not be overwritten with the values provided by the TES Auto Approval Rule. In contrast to the existing Auto Approval functionality, it will now be possible to apply selected rules for TES trades involving certain clients by providing a client key in the TES Auto Approval Rule.

After a successful application of an Automatic Approval Rule, the TES trade will be automatically submitted for approval, for which the usual validations will be applied.

3.1.1 The TES Auto Approval Rules

The TES Auto Approval Rules are defined and maintained by the Admin user in the T7 Admin GUI for the (approving) users in his business unit. The TES Auto Approval Rules can be maintained intra-day and become effective immediately. An Approval Rule consists of three parts:

- Unique name of the rule
- Selection key
- Pre-filled Approval fields

The selection key has the following fields:

- Initiating User: The initiating user of the TES trade.
- User: The approving user for which this rule is specified.
- Market Group: Either Product assignment group, or the whole market identifier.
- Product (optional): If provided, the rule has a higher priority than a rule without a product identifier.
- TES type (optional): If provided, the rule has a higher priority than a rule without a TES type.
- Instrument type (optional): If provided, the rule has a higher priority than a rule without an instrument type.
- Enrichment Rule ID (optional): If provided and matching the Enrichment Key provided by the TES trade initiator, the rule has a higher priority than other rules. It will be possible to apply certain rules for certain clients by filling the Enrichment Key with a client key.

The approval fields are as follows:

- Clearing & MiFID fields: These reflect the predefined fillings of clearing and MiFID fields as part of the TES Approval request. There are mandatory and optional fields. On setting up an Approval Rule, certain validations are performed such as validating that the Client Identifier must be provided if the Trading Capacity is Agency.
 - Clearing Fields: Trading Capacity, Value Check Type Value, Value Check Type Quantity, Text1, Text2, Text4.
 - MiFID fields: Client Identifier, Exec Identifier, Exec Qualifier, Investment Identifier, Investment Qualifier, Liquidity Provision Activity.

- Additional Criteria: New is Maximum Trade Quantity as an upper limit above which no automatic approval takes place.

3.1.2 Application of TES Auto Approval Rules

If the TES profile allows auto approval, then on each TES trade entry/modification/upload request, for each trade side, the following algorithm will be executed step-by-step to find the applicable TES Auto Approval Rule:

Step 1: Check whether the approving user has TES Auto Approval Rules defined for the Initiating User:

- a. If no rules are found, then no TES Auto Approval Rule can be applied and the request will be processed further for manual approval.
- b. If one or multiple rules are found, then continue with Step 2 using these rules.

Step 2: Product Assignment ID will be used to further restrict the selection criteria. The rules with Product Assignment group of the product will have priority over the market wide group.

- a. If no rules are found with the Product Assignment ID for the product provided in the TES trade entry/modification/upload request, then take all the rules with market wide group and continue with the Step 3.
- b. If one or multiple rules are found, then continue with Step 3 using these rules.
- c. If no rules are found with market wide group, then no TES Auto Approval Rule can be applied, and the request will be processed further for manual approval.

Step 3: Product ID will be used further to restrict the selection criteria:

- a. If no rules are found with the Product ID provided in the TES trade entry/modification/upload request, then take all the rules without Product ID and continue with the Step 4.
- b. If one or multiple rules are found, then continue with Step 4 using these rules.
- c. If no rules are found without Product ID, then no TES Auto Approval Rule can be applied, and the request will be processed further for manual approval.

Step 4: TES Type will be used further to restrict the selection criteria:

- a. If no rules are found with the TES Type provided in the TES trade entry/modification/upload request, then take all the rules without TES Type and continue with the Step 5.
- b. If one or multiple rules are found, then continue with Step 5 using these rules.
- c. If no rules are found without TES Type, then no TES Auto Approval Rule can be applied, and the request will be processed further for manual approval.

Step 5: Instrument Type will be used further to restrict the selection criteria:

- a. If no rules are found with the Instrument Type provided in the TES trade entry/modification/upload request, then take all the rules without Instrument Type and continue with the Step 6.
- b. If one or multiple rules are found, then continue with Step 6 using these rules.
- c. If no rules are found without Instrument Type, then no TES Auto Approval Rule can be applied, and the request will be processed further for manual approval.

Step 6: Enrichment Rule ID will be used further to restrict the selection criteria:

- a. If the Enrichment Rule ID is not filled in the TES trade entry/modification/upload request, or no matching rules are found with the provided value, then the rule without Enrichment Rule ID will be used for further processing of auto approval.
- b. If there is no such rule with the Enrichment Rule ID not filled, then no TES Auto Approval Rule can be applied and the request will be processed further for manual approval.

- c. If one rule is found with the Enrichment Rule ID provided in the TES trade entry/modification/upload request, then that rule will be used for the further processing of auto approval.

3.1.3 Approval Result messaging

In case of a successful TES trade side approval performed on the basis of a TES Auto Approval Rule, the approver will be informed about the Approval Rule and its successful application via broadcast.

In case the TES trade side approval performed on the basis of a TES Auto Approval Rule fails due to a validation, the error message will be conveyed to the approving user via broadcast.

3.2 Impact on Interfaces

The following chapter outlines the changes to interfaces to support the functionality. The changes are described in a general fashion to provide an indication of the upcoming changes. For detailed changes, please refer to the upcoming simulation versions of the interface manuals once they have been published and to the *Online Help* in the GUIs.

3.2.1 ETI

The following fields will be added to various TES request and broadcast messages:

- New field *TESEnrichmentRuleID* (25180) will be added to: Enter TES Trade request (10600), Modify TES Trade request (10601), Approve TES Trade broadcast (10607), TES broadcast (10604), TES Trade Upload broadcast (10613), Upload TES Trade request (10612).
- New field *AutoApprovalRuleID* (25181) will be added to: Approve TES Trade broadcast (10607), TES broadcast (10604).
- *VarText* (30355) and *VarTextLen* (30354) will be added to: TES broadcast (10604), Approve TES Trade broadcast (10607). This field will display the reason for an erroneous Auto Approval processing.

3.2.2 FIX

Changes in the message *User/TradeCaptureReport* (UAE/AE):

The following fields will be added to the component *TrdAllocGrp* in *side1* of the component *TrdCapRptSideGrp* :

- New field *TESEnrichmentRuleID* (25180)
- New field *AutoApprovalRuleID* (25181)
- New field *TradeAllocStatusInformation* (25183).

3.2.3 Reference Data

No impact.

3.2.4 GUI

T7 Entry Service views will be enhanced with an optional field

- *EnrichmentRuleID*

The TES View view will be enhanced with the following optional fields:

- *EnrichmentRuleID*
- *AutoApprovalRuleID*
- *AutoApprovalError*

The *TES Auto Approval Rule* view will show all fields of an Auto Approval Rule.

3.2.5 XML Reports

A new daily report *RD185 Auto Approval Rule Status* will reflect all defined TES Auto Approval Rules for the users of a business unit.

A new daily report *RD180 Auto Approval Rule Maintenance* will reflect all additions, modifications and deletions of the TES Auto Approval Rules for the business unit.

4. Further GUI Enhancements

With T7 Release 8.1, the following changes and enhancements for GUIs will be introduced. See also the GUI Reference manuals.

4.1 Change in Display of Previous Closing Price

Currently, the previous closing price is kept for one business day. If there is no trade on business day t , then on day $t+1$ no previous closing price will be available in the *Market* view. Therefore, the calculation of NetChange in the *Market* view is not possible, either.

With T7 Release 8.1, the last trade price will be kept for more than one business day, so that the previous closing price will not necessarily be from the previous business day, but it will be the price of the last trade. Therefore, the calculation of NetChange will always be possible.

4.2 Additional Columns in *Market* view

With T7 Release 8.1, new columns *Quotation Unit* and *Cash Security Subtype* will be introduced. Furthermore, the column *Issuer* will be renamed to *Quote Provider*.

5. Other changes

5.1 Clean-up of historical News messages

With the introduction of T7 release 8.1, all historical *News* messages will be removed from the system. They cannot be accessed any more via ETI or via GUI. Only the Xetra Website will show historical *News*.

In order to avoid gaps or duplicate sequence numbers in the ETI *News* message stream and the corresponding *Retransmit* message stream on the release introduction day, the sequence numbers of *News* messages will be reset to 1. Member applications must therefore be able to handle the resetting of the sequence numbers. It is recommended to ensure the following:

- In case historical *News* messages are required, save the contents of the historical *News* messages in a place where duplicate sequence numbers are supported.
- Ensure that the application can deal with a reset of the *News* message sequence number to 1.

5.2 DMA Flag for TES and Xetra EnLight

The DMA flag, already known from ETI order entry requests, will now be introduced to ETI TES trade entry and approval requests and to the Xetra EnLight Hit Quote request. The GUI is out of scope. The DMA flag, with a false default value, will be available in Auto Approval Rules and in the XML Reports TC545, TC600, TC610, too. Default is false. The DMA flag is only allowed for Trading Capacity A and R.

5.3 Change in Behaviour of Delete All Order Request

Currently, on a Delete All Orders request, a deletion broadcast is sent to Listener data even if lean orders only are affected. Listener data is only meant for standard orders.

With T7 Release 8.1, no broadcast will be sent to Listener data anymore, if lean orders only are affected by a Delete All Orders request.

5.4 Change in EOBI Instrument Summary Message

In the EOBI *Instrument Summary* message, the field *ProductComplex* (1227) will be inserted. As a consequence, the field *NoMDEntries* (268) will be moved by 1 byte.

5.5 New XML Report: TR166 Identifier Mapping Final Error Report

This report will provide the final missing short code decryptions for a trading day *t* after the deadline *t+1* has passed. In addition, the counts of all used and missing short codes for the trading day *t*, the percentage of the missing decryptions of short codes to the used short codes, and a month-to-date sum of missing short codes will be provided.

5.6 Changed Behaviour of Delete All Orders Request

Currently, on a *Delete All Orders* request a deletion broadcast is sent to Listener data even if only lean orders are affected while the Listener data is meant only for standard orders.

With T7 Release 8.1, no broadcast will be sent to Listener data anymore, if only lean orders are affected by a *Delete All Orders* request.