T7 Release 7.1

Derivatives and Cash Markets

Participant Simulation Guide

| Version | 1.0 |
| Date | 10.04.2019 |

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Abstract

This document describes the timeline, new and changed features as well as Simulation focus days for the T7 Release 7.1 Simulation. Trading participants should use this document to plan and prepare their T7 Release 7.1 Simulation participation. This document should be read alongside the T7 RELEASE 7.1 PRELIMINARY RELEASE NOTES, all required technical interface descriptions, the regular SIMULATION CALENDAR and the regularly updated IMPLEMENTATION NEWS either on www.eurexchange.com > Technology for the derivatives market or on www.xetra.com > Technology for the cash market.

Keywords

7 Market Technology

Today's global markets demand new standards of flexibility and performance. 7 Market Technology series from Deutsche Börse Group offers a range of innovations in trading, clearing, risk management and connectivity – advanced infrastructure that lets you adapt to whatever the future brings.

1. Definitions and Abbreviations

Term	Explanation
BTRF	Basket Total Return Futures
CCP	Central Counter Party
CEF®	Deutsche Börse Group Real Time Data Feed
CRE	Common Report Engine
EEX	European Energy Exchange
EMDI	T7 Enhanced Market Data Interface (non-netted)
EMDS	T7 Extended Market Data Service
EOBI	T7 Enhanced Order Book Interface
ETI	T7 Enhanced Trading Interface
ETRF	Equity Total Return Futures
Eurex EnLight	The selective RFQ platform
FIX	Financial Information eXchange protocol
FIXML	Financial Information Exchange Mark-up Language
FWB	Frankfurter Wertpapierbörse
IPS	Iner-Product Spreads
ISV	Independent Software Vendor
GMC	GUI Middleware Cluster for T7 Trader GUI & T7 Admin GUI, T7 Clearer GUI
GTC	Good-Till-Cancel
MDI	T7 Market Data Interface (netted)
MiFID II	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
TES	T7 Entry Services
T7	T7 trading system developed by Deutsche Börse Group
RDF	Reference Data File
RDI	Reference Data Interface
RfQ	Request for Quotes
Xetra Enlight	The selective RFQ platform
XML	eXtensible Mark-up Language

2. Simulation Overview

2.1 Introduction

The purpose of T7 Release 7.1 Simulation is to provide an opportunity for participants and ISVs to become familiar with the new and enhanced functional and technical setup and features of T7 Release 7.1 and to prepare for production.

The key objectives of the T7 Release 7.1 Simulation:

- Provide high quality information and Simulation to support participant and ISV readiness.
- Familiarize participants with the new trading services functionality.
- Early identification of issues both from the Exchange and from the participants' side to minimize risk of T7 Release 7.1 launch and production operation.

The simulation period for T7 Release 7.1 is planned to start on 15 April 2019.

In addition to the T7 Release Simulation, Deutsche Börse AG offers a T7 Release 7.1 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 and started on 18 March 2019.

The production launch date for T7 Release 7.1 is planned for 27 May 2019.

The exchange offers several dedicated focus days during the Simulation phase to help participants become accustomed to new or changed features of T7. On those days, which are marked in the Simulation calendar, special testing scenarios will be provided. This document describes the different test scenarios for the T7 Simulation.

A description of the new/changed functionality and technical enhancements has been communicated in the form of the document "T7 7.1 RELEASE NOTES" (one single document for functional and technical aspects in both, preliminary and final version) and with the provision of Interface Specifications and User Manuals:

Derivatives market:

www.eurexchange.com

 -> Technology -> T7 trading architecture -> System documentation -> Release 7.1

Cash market:

www.xetra.com

 -> Technology -> T7 trading architecture -> System documentation -> Release 7.1

2.1.1 Further Notes and Information

Please note and be aware of the following T7 Release 7.1 simulation conditions:

1. The T7 Release Simulation is a shared Simulation environment with the purpose of providing participants the opportunity to test functional enhancements for the forthcoming T7 Release. Following a release the environment will be available with the current software for further testing of all T7 related functionality. The T7 Simulation is not designed for very extensive or even performance testing. Participants who would like to test scenarios involving an unusually large amount of order and quote transactions and/or trades shall contact their TKAM. The TKAM will ask for the purpose of the test and a detailed description of the participants test scenario (including number of expected orders, quotes and trades). The TKAM together with the participant will evaluate the request and attempt to find a solution which can realistically be provided together with a potential date and time for the execution.

2. The Connection Gateways for cash and derivatives markets will be finally removed with Release 7.1.

2.2 Intended audience

This document serves as the guide for all Simulation participants, i.e. current and future users of the T7 system. In particular, the following participants will be involved in the Simulation:

*   Exchange trading participants
*   ISVs (Front, Middle and Back office)

In order to achieve a common understanding of the responsibilities and tasks, the distribution of this Simulation Guide to the appropriate project teams and line organizations is recommended as soon as possible. All parties involved, e.g. central coordinators, system administrators, traders and ISV representatives, should be aware of their tasks before the start of the Simulation.

2.3 Timeline

Deutsche Börse AG is planning to launch Release 7.1 of T7 on 27 May 2019.

The following timeline gives an overview of the introduction schedule:

T7 7.1 Release Cloud Simulation Start	18 March 2019
T7 7.0 Release last batch	03 April 2019
T7 7.1 Software installation and conversion	04 April to 14 April 2019
T7 7.1 Release Simulation execution	15 April 2019 to 26 May 2019
T7/FX 7.1 Release Simulation execution	15 April 2019 to 26 May 2019
T7 7.1 Release Connection Test	25 May 2019
T7 7.1 Release Production Launch	27 May 2019
T7/FX 7.1 Release Production Launch	27 May 2019
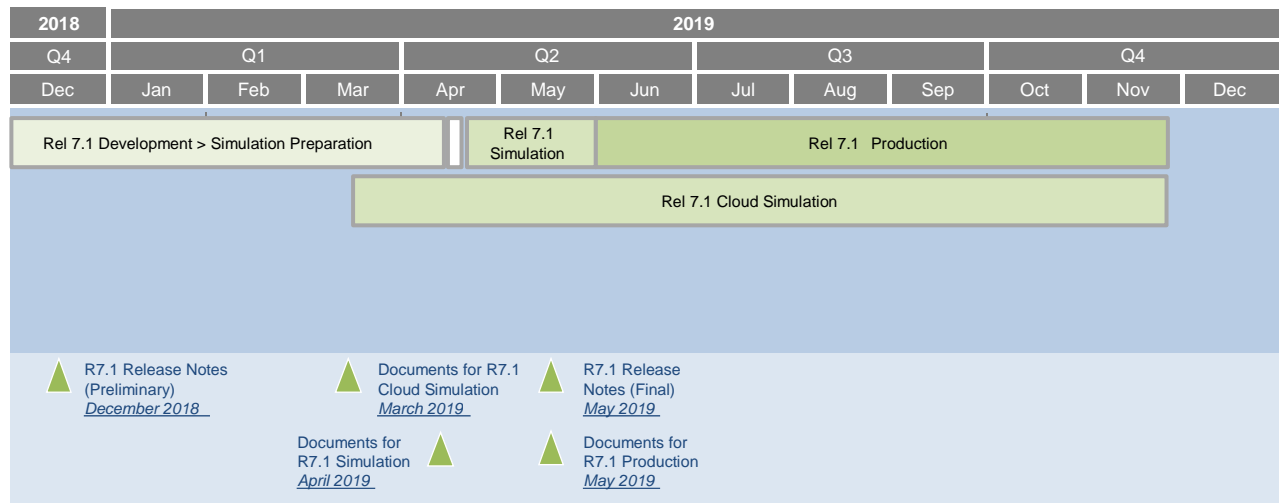
Figure 1: T7 Release 7.1 document publication and introduction timeline

2.4 T7 Cloud Simulation

In addition to T7's Release Simulation participants can also use the T7 Cloud Simulation which allows trading participants and ISVs to test against the current T7 production and Simulation software version. In this environment participants can initiate predefined market scenarios and test specific strategies more easily than in a shared environment. The T7 Cloud Simulation is available 24/7 for a fixed price per hour and is accessible using an SSL-encrypted internet connection. The T7 Cloud Simulation will make a pre-Simulation available for early adopters from 03 April 2019. For more information on the T7 Cloud Simulation please refer to:

www.eurexchange.com -> Technology -> Eurex T7 Cloud Simulation

www.xetra.com -> Technology -> T7 Trading Architecture -> Cloud Simulation

2.5 Simulation Calender

The Simulation Calendar for the derivatives market is available under the following path:

www.eurexchange.com -> Technology -> Simulation Calendar

Whereas the Simulation Calendar for the cash market can be found on the following link:

www.xetra.com -> Trading -> Trading calendar and trading hours

2.5.1 Guiding principles for Simulation calendar

- The Simulation will be set up and run from both a functional and technical perspective as production-like as possible to help simulate business processes under realistic conditions. In order to provide a production-like system environment, the different T7 components will be set up as an integrated Simulation environment. Nevertheless, system availability and technical performance will be scaled to Simulation requirements and will differ from production.
- T7 Release 7.0 permanent Simulation will terminate with the end of day processing on 03 April 2019. The T7 Simulation will not be available for participants and ISVs from 04 April 2019 to 14 April 2019 in order to prepare the T7 Release 7.1 Simulation. Participants are encouraged to use the T7 Cloud Simulation for testing purposes during this period.
- The T7 Release 7.1 Simulation is planned to start on 15 April 2019 and will last until 25 May 2019. All functional and technical preparations should be completed before the start of the Simulation.
- On roll over days, calendar days correspond to actual business days. The following days until the next roll over day have the business date of this forthcoming roll over day. Here several calendar days (with 24 hours trading availability) constitute one business day.
- Weekends are generally open for Simulation, but no technical and functional support will be available.
- In order to provide those participants and ISVs not located in a European time zone with the maximum possible access to the Simulation environment, it is envisaged that the T7 Release 7.1 Simulation back-end systems and network will be re-opened as soon as the roll over has been successfully completed.
- Quarterly and monthly last trading/maturity & expiration dates for standard products are planned throughout the T7 Release 7.1 Simulation. Details are listed in the Simulation Calendar.

2.6 Liquidity for selected products in the Simulation environment

2.6.1 Derivatives Market: Liquidity (bid/ask prices)

Liquidity (bid/ask prices) will be provided on each trading day throughout T7 Release 7.1 Simulation in the following products:

Options
- **OESX** and **ALV**: only best bid, best ask
- **ODAX, OGBL, OGBM** and **DB1**: only best bid and best ask
- **OKS2**: only best bid, best ask

Futures

- **FGBL**: Bid and ask prices with an order book depth up to 20
- **FESX:** Bid and ask prices with an order book depth up to 20
- **EVAR:** only best bid, best ask

Futures Calendar Spread Orders

- **FESX**: Bid and ask prices with an order book depth up to 20
- **FGBL**: Bid and ask prices with an order book depth up to 20

2.6.2 Cash Market: Liquidity (bid/ask prices)

For the duration of the member Release Simulation, the liquidity (bid / ask quantities in the order book) will be provided via automated scripts for the following instruments.

Instruments in XETR with liquidity providing scripts:
- LU0937835576 (Bid and ask prices with an order book depth level up to 3)
- LU1306625283 (Bid and ask prices with an order book depth level up to 3)
- DE000A1E0HR8 (Bid and ask prices with an order book depth level up to 3)
- DE0005140008 (Bid and ask prices with an order book depth level up to 3)
- DE0005557508 (Bid and ask prices with an order book depth level up to 3)

ICEBERG:
- AT0000730007 (Bid and ask prices with an order book depth level upto 3)
- DE0005200000 (Bid and ask prices with an order book depth level upto 3)

VDO :
- AT0000730007 (Single bid VDO order)
- DE0005200000 (Single ask VDO order)

2.7 Instruments for settlement End-To-End Test

Clearing and settlement functionality can be tested with following instruments from 14. April until 15. May 2019 and from 20. May until 26. May 2019 in the T7 7.1 Release Simulation:

Name	ISIN
ADVA AG OPT.NETW.O.N.	DE0005103006
TELEGATE AG O.N.	DE0005118806
BEIERSDORF AG O.N.	DE0005200000
CONTINENTAL AG O.N.	DE0005439004
DRILLISCH AB	DE0005545503
DT.TELEKOM AG NA	DE0005557508
FRESEN.MED.CARE AG O.N.	DE0005785802
BILFINGER BERGER AG	DE0005909006
LYXOR G.BUL.SEC.04/UND DZ	DE000A0LP781
ETFS MET.SEC.DZ07/UN.XAU	DE000A0N62G0
DT.BOERSE COM. XETRA-GOLD	DE000A0S9GB0
DB ETC PLC P GOLD EUR 60	DE000A1E0HR8

3. Functional Enhancements – Derivatives Markets

The following new features and enhancements will be introduced with T7 Release 7.1:

- Introduction of Baskets for Total Return Futures
- Enhancements to Eurex EnLight
- Addition of the leg price field for Vola Strategies in Eurex EOBI
- Inter Product Spreads
- Strategies enhancements

3.1 Introduction of Baskets for Total Return Futures (BTRF)

After the introduction of Equity Total Return Futures (ETRF) and the preparations of Basket Total Return Futures (BTRF) with T7 Release 7.0, Eurex plans to activate BTRF trading with T7 Release 7.1 in 2019. T7 will support the off-book trading of baskets of ETRF instruments, or Basket Total Return Futures.

3.1.1 Impact on interfaces

The following interfaces are affected. For detailed changes, please refer to the interface manuals and to the *Online Help* in the GUIs.

- Trading interfaces ETI, FIX

- Market Data Interfaces MDI, EMDI, EOBI

- Reference Data Interfaces RDF

- GUI

- Reports (new daily Reports TE546 – TES Basket Maintenance)

3.2 Enhancements to Eurex Enlight

With the production launch of T7 Release 7.1, the following enhancements will be introduced for Eurex EnLight in T7:

- Support of complex instruments in the T7 Trader GUI

- Two new feedback alternatives for Market Maker

- Introduction of Free Text Field for Eurex EnLight

- Enhancement in the T7 Trader GUI Order Entry Mask

- Display of Minimum Block Trade Size

- New trade type EnLight - TES type EnLight

- Replaced field SRQSRelatedTradeID by List SRQSRelatedTradeIDGrp

Further information regarding the above mentioned topics can be found in *T7's Enhanced Trading Interface - Manual* :

www.eurexchange.com → Technology → T7 architecture → System documentation → Release 7.1 → Trading Interfaces

3.2.1 Impact on interfaces

The following interfaces are affected. For detailed changes, please refer to the interface manuals and to the *Online Help* in the GUIs.

- Trading interfaces ETI
- GUI
- Reports[1]

3.3 Addition of the leg price field for Vola Strategies in Eurex EOBI

Currently, EOBI supports options products including option volatility strategies. With Release 7.1 the option volatility strategies the <InstrmtLegGrp> of Add Complex Instrument message will be enhanced with the leg price field.

3.4 Inter-Product Spreads

Inter-Product Spreads (IPS) are 2-legged products and ensures DV01 neutrality of the spread. The proposed range of Inter-Product Spreads will provide investors with:
- A capital efficient hedge against a parallel shift of the yield curve.
- Direct exposure to changes in the flatness and steepness of the yield curve.
- The ability to trade the spread between different government bond futures without legging risk.

IPS will be quoted and traded in price terms in a separate order book, excluding implied-in and out quotes.

With T7 7.1., Eurex will be able to launch IPS in combinations of futures that are technically grouped on the same partition. The initial IPS product offering will include FGBL / FGBX, FGBL / FBTP and FGBS / FBTS.

3.5 Strategies enhancements

With Release 7.1 Eurex will enhance the strategy portfolio with new Standard Option and Option Volatility Strategies.

Standard Option Strategies

- Put (Call) Spread versus Put (Call), also versus Spread

- Add further ratios to Spreads and Calendars

- Calendar and Straddle Flys

- Iron Condor

- Strangle Spread

- Straddle versus Strangle

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[1] Incorporation of the *FreeText5* field in Eurex EnLight reports TE600/TE610 (Maintenance/Best Execution Summary)

- Swap strategies will follow up

Option Volatility Strategies

- Respective Volatility Strategies (+/- U) are added

- Align setup for currently missing Volatility Strategies

4. Functional Enhancements – Cash Markets

The following new features and enhancements will be introduced with T7 Release 7.1:

- Xetra EnLight with Straight-Through-Processing
- Xetra EnLight Smart RfQ

4.1 Xetra Enlight

Xetra EnLight will provide a Request for Quote Service to negotiate on-exchange off-book transactions electronically with innovative new technologies. After the negotiation with a particular counterparty or several ones, the resulting deal is directly sent to the clearing and settlement systems without any further interaction from the participants, hence providing straight-through-processing (STP) via the T7 system. The new service will help to provide all necessary data to meet MiFID II requirements to prove Best Execution.

Detailed information regarding Xetra Enlight and the new TES type *"EnLight"* can be found in *T7's Enhanced Trading Interface - Manual* or in *XETRA Functional/Technical Release Notes*:

www.xetra.com → Technology → T7 architecture → System documentation → Release 7.1 → Trading Interfaces

www.xetra.com → Technology → T7 architecture → System documentation → Release 7.1 → Overview and Functionality

Impact on interfaces

The following interfaces are affected. For detailed changes, please refer to the interface manuals and to the *Online Help* in the GUIs.

- Trading interfaces ETI[2]
- Market Data Interfaces EMDS
- Reference Data Interfaces RDF
- GUI
- Reports (new daily Reports)

4.2 Xetra Enlight Smart RfQ

The Smart RfQ functionality in Xetra EnLight will provide the possibility to send an anonymous RfQ to registered participants for this functionality. Based on the requested instrument, Smart RfQ uses innovative new technologies to find a counterparty for a trade. The functionality whether Smart RfQ is available for an instrument is configurable and decided by Frankfurt Stock Exchange. Participants who want to take part in the Smart RfQ program have to apply individually for it.

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[2] Xetra EnLight is not offered via the T7 FIX interface, but TES trade notifications, which result from the negotiations out of the Xetra EnLight service will be distributed as usual.

The Smart RfQ functionality will be activated after the technical start of T7 Release 7.1.

www.xetra.com → Technology → T7 architecture → System documentation → Release 7.1 → Overview and Functionality

5. Further functional Enhancement

5.1 TES Price Step Tables in RDI/RDF (Derivatives and Cash Markets)

Currently, price step tables in RDI/RDF refer to on-book trading only. With T7 Release 7.1, the RDI/RDF will be enhanced by a new field in the instrument snapshot to include the price step table for TES as well.

5.2 Lean Orders with Good-Till-Cancel (Derivatives and Cash Markets)

With the production launch, T7 will no longer support lean orders with the validity of Good-Till-Cancel (GTC). Lean orders with validity GTC entered before production launch, will remain and not removed by the T7 Release 7.1 introduction.

5.3 T7 GUI Launcher Mechanism (Derivatives and Cash Markets)

In response to Oracle's Java SE Support Roadmap, Deutsche Börse will continue to provide a seamless update mechanism of the T7 GUIs by implementing a customized solution named "T7 GUI Launcher" as a Java Web Start replacement. Additional information will be provided in the near future on the Xetra and eurexchange website

- www.xetra.com → https://www.xetra.com/xetra-en/technology/t7/t7-gui-launcher
- www.eurexchange.com → https://www.eurexchange.com/exchange-en/resources/initiatives/New-GUI-Access-via-T7-GUI-Launcher--1462632

5.4 Sequence of Messages in EOBI (Derivatives and Cash Markets)

The Enhanced Order Book Interface (EOBI) provides order book information without any depth limitation. To support latency sensitive EOBI users in faster decision making, the EOBI feed will be enhanced to report aggressive side changes first, i.e. before matching information.

6. Technical Enhancements

6.1 Removal of Connection Gateways (Derivatives and Cash Markets)

As announced in the Release Notes for T7 Release 7.0, to simplify the ETI session logon process, the connection to the T7 trading system via the primary and secondary Connection Gateways (CWGs) will no longer be possible at all with the production launch of T7 Release 7.1.

Participants can either directly logon to the active (Partition-Specific) PS gateway for High Frequency (HF) sessions or to any of the Low Frequency (LF) and HF trading gateways for LF sessions. The IP addresses of the active/standby PS gateways and the LF trading gateways are provided in the N7 Network Access Guide available via the Xetra website.

In an attempt to maintain a uniform distribution of sessions across gateways, recommended trading gateways will continue to be assigned to a session. The recommended trading gateways for a session can be seen via the member portal in the fields "Connection Gateway 1" and "Connection Gateway 2".

Participants currently using ETI 6.1 backward compatibility for T7 Release 7.0 must upgrade their applications to use the ETI 7.0 respectively ETI 7.1 interface layouts.

6.2 Introduction FIX Gateway for T7/FX

In February 2017, Eurex rolled out a dedicated T7-based trading platform for Listed FX products – "T7/FX". This operates as a second, distinct instance of the Eurex T7 system. All of the Eurex FX Futures and Listed FX Options are traded on the T7/FX platform. With Release 7.1 the FIX Gateway for T7/FX will be introduced. Participants are requested to order separate FIX sessions for Eurex T7/FX.

7. Reports

The following reports will be enhanced or introduced with T7 Release 7.1:

New reports:

TC600 Xetra Enlight Maintenance
TC610 Xetra EnLight Best Execution Summary
TD963 Daily Eurex EnLight RFQ Fulfilment – detailed
TD964 MTD Eurex EnLight Performance
TE 546 Daily TES Basket Maintenance

Changed Reports:

CB062 Designated Sponsor Refund
CB069 Transaction Report
CB080 Monthly Fee and Rebate Statement
TA115 Total Return Futures Parameters
TC545 Daily TES Maintenance
TC810 T7 Daily Trade Confirmation
TD961 Daily Eurex EnLight LP Performance
TD962 MTD Eurex EnLight LP Performance
TE545 Daily TES Maintenance
TE600 Eurex EnLight Maintenance
TE610 Eurex EnLight Best Execution Summary
TE810 Daily Trade Confirmation

8. Simulation preparation

Preparation activities should be completed prior to the start of T7 Release 7.1 Simulation.

8.1 Organisational preparation

Prior to the start of T7 Release 7.1 Simulation, the following organisational preparatory activities need to be completed by all participants to ensure readiness for the Simulation phase:

- All participants and ISVs will be asked to name a person acting as a single point of contact (SPoC) during the Simulation. This person shall coordinate all internal activities, functional as well as technical, and shall communicate with affiliated participants during Simulation, when collaboration is required. The SPoC maintenance is available to the participant via the web application under the following path:

   www.eurexchange.com *-> Member Section -> Contacts -> Release Contacts (-> New Entry -> Category "Simulation SPOC" -> Release "Eurex T7")*

   www.xetra.com *-> Member Section -> Technical Service -> Release Contacts*

- Documents will be made available in order to facilitate and support general Simulation needs. However, in order to simulate the individual requirements participants are encouraged to define specific Simulation objectives and scenarios on their own.
- Personnel for participation in Simulation on the focus days (specified in the Simulation calendar) should be identified and confirmed.
- Participants are encouraged to set up an internal issue management processes.

8.2 Functional preparation

Participants and ISVs planning to participate in the Simulation should verify their individual setup/clearing-relationship and inform the exchange of any changes that may be required prior to the start of their Simulation testing activity.

The completion of functional preparations prior to production start is mandatory.

8.3 Technical preparation

In order to ensure technical readiness for Simulation, members/ISVs should consider the following topics:

- The changes for the following interfaces have to be implemented
    - o   T7 Enhanced Trading Interface ETI
    - o   T7 FIX Gateway
    - o   T7 Market and Reference Data Interfaces
    - o   Common Report Engine (new and changed reports)

T7 Release 7.1 will provide backwards compatibility for the T7 ETI/FIX interface version 7.0, 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 7.0 even after production launch of T7 Release 7.1.

Please note that due to the final decommissioning of the connection gateways (CGWs), all participants have to migrate at least to the ETI/FIX interface version 7.0.

The market and reference data interfaces will not provide backward compatibility to the previous releases.

- A technical connection to T7 systems needs to be established (if not existing).
- Internal resources for timely installation of Simulation software should be identified and confirmed.
- Related in-house systems should be set up to simulate subsequent processing.

9. Focus Day Overview

This chapter outlines which focus days will be offered. Focus days are planned and triggered by the Exchange. Specific actions have to be done by the Exchange to enable the scenario of the focus days. Focus days can be of technical nature (i.g. Market Data Service Failure), or of functional nature (i.g. Corporate Action). In either case participants cannot test without the Exchange taking action first.

Recommended test scenarios on the other hand can be done by the participants without any particular initiating action by the Exchange. Particpants can run through these scenarios at their own discretion. These scenarios usually highlight new or changed features of the current release and participants are highly advised to perform these scenarios and verify their procedures and software used to be fit for these scenarios.

In the overview below, all focus days offered and recommended test scenarios for this release Simulation are listed and described:

Technical Focus Days – Triggered by the Exchange (Derivatives and Cash):

- Partition specific Gateway Failover
- FIX Gateway Failover
- Matching Engine Failover and Failure, EOBI Failure
    - Matching Engine Failover
    - Matching Engine Failure
    - T7 Enhanced Order Book Interface (EOBI) Failure
- Market Data Services Failure
- T7 RDI Failure *(derivatives markets only)*
- Matching Engine Processing Delay
- GUI (forced user log out)
- Move products from one partition to another (emergency procedure)

Functional Focus Days – Triggered by the Exchange (Derivatives and Cash):

- Xetra Enlight
- Eurex Enlight
- Stressed market conditions / exceptional circumstances **(on request only)**
- Corporate Actions
- Market Halt **(on request only)**
- Product Halt **(on request only)**
- Instrument Suspend *(cash market only; on request only)*

Recommended Test Scenarios to be executed by participants – Derivatives:

- Full Spread Matrix
- New Strategy Setup – complex instruments
- Trade Traceability
- Risk Events

9.1 Technical Focus Days – Triggered by the Exchange

Technical focus days will be offered on several occasions during the Simulation and will be triggered by the Exchange. Participants should use this opportunity to test the behaviour of the T7 trading and market data interfaces in conjunction with their own front office applications as well as their order book- and session management systems. Technical focus days will be provided simultaneously across multiple partitions (Cash & Derivatives).

9.1.1 Matching Engine Failover and Failure, EOBI Failure

The T7 Simulation system runs on separate partitions. Every process in the partition has a standby partner process that can take over in case the primary process fails. During Simulation, a failover and a failure of a matching engine will be simulated.

9.1.1.1 Matching Engine Failover

As a precondition, participants are advised to enter non-persistent orders and quotes in the Simulation environment before the matching engine failover takes place.

In this test scenario, the existing matcher processes in the partition will be terminated and the standby partner process will take over. Shortly after the takeover, participants will receive a 'Market Reset Event' message, stating the technical problem and including the message key which is the last reproducible order message.

Because of the failover, the products from the failed partition will still be tradable. A Market Reset Event message will be triggered. Non-persistent orders and quotes which were inserted earlier will be deleted after the restore of the order book.

There is a "failover time parameter" defined per product. If the failover happens in between that timeframe or the product did NOT have a continuous trading status prior to the corruption, the product will change to product state "halt", after the failover is finished.

Afterwards an order book replay will be sent including the persistent orders, which were recoverable. Participants with low frequency sessions will receive an extra end of replay message on a product level. Participants with high frequency sessions will only receive the previously mentioned Market Reset Event Message. Hence, there are no extra deletion messages.

The Matching Engine failover triggers automatically an EOBI failover.

9.1.1.2 Matching Engine Failure

For the execution of a matching engine failure both matcher processes will be crashed for a partition in Simulation. The test case will have an impact on all products available on this partition in permanent Simulation. As long as the partition is not available, i.e. not restarted by the exchange, participants will neither be able to receive public market data for products linked to that partition, nor will they be able to enter orders.

A Market Reset Event message will be sent out to participants, when the matching engine has been restarted. Additionally the market data service will still be available but will send only unchanged data to participants.

The Matching Engine failure triggers automatically an EOBI failure as well.

9.1.1.3   T7 Enhanced Order Book Interface (EOBI) Failure

Prior to the focus day, participants should check whether they are able to receive market data from the T7 Enhanced Order Book Interface (EOBI), i.e. they should try to send some orders on benchmark futures products and equities which are available in the T7 permanent Simulation. Public market data information from T7 EOBI will be provided in packages/UDP datagrams marked with a MarketSegmentID, i.e., product identifier; PartitionID; ApplSeqNum (continuous numbering format); Packages are sent over redundant multicast address and port combinations. Each package is uniquely identified by its MarketSegmentID and ApplSeqNum combination. In addition to the packet sequence numbering, individual messages are sequenced by MsgSeqNum, which is contiguous per MarketSegmentID.

In case of an EOBI Failure, both the ApplSeqNum and the MsgSeqNum for a specific MarketSegmentID will restart from 1.

An EOBI Failure is triggered together with a matching engine failure. Participant applications should notice this, whenever an ApplSeqNum is received which is smaller than one which has already been received for a specific MarketSegmentID and multicast address:port combination. Whenever a participant application detects a restart of the MsgSeqNum as well, it must rebuild all order books for this MarketSegmentID again from the T7 EOBI snapshot channel.

All non-persistent orders entered prior to the failover will be deleted. The receiving application needs to invalidate its view of the order book and refresh once an explicit message has been received containing new information.

➔   The Matching Engine and EOBI Failover / Failure scenario will be offered between 15:00-16:00 CET.

9.1.2   FIX Gateway Failover

In case of a FIX Gateway Application Failover, all FIX sessions connected to this FIX Gateway will be disconnected and the corresponding port will be closed.

Customers should then activate the connection to the secondary FIX Gateway. The first FIX session logon to the secondary FIX Gateway may take some seconds. So if a connection or a session logon fails or is not responded to immediately, a second attempt should only be made after a few seconds (30 seconds recommended).

Schedule :

•   15:00 CEST: Application Failover FIX Gateway
                        (IP address: 90.150.253.32 becomes unavailable for Derivatives
                        IP address: 90.152.253.42 becomes unavailable for Cash)

•   15:15 CEST: Restart of FIX Gateway
                        (IP address: 90.150.253.32 available again for Derivatives
                        IP address: 90.152.253.42 available again for Cash)

•   15:30 CEST: Application Failover FIX Gateway
                        (IP address: 90.151.253.32 becomes unavailable for Derivatives
                        IP address: 90.153.253.42becomes unavailable for Cash)

•   15:45 CEST: Restart of FIX Gateway
                        (IP address: 90.151.253.32 available again for Derivatives
                        IP address: 90.153.253.42 available again for Cash)

These tests are recommended for all T7 participants (Members/Vendors) using the T7 FIX Interface.

In the event of a FIX Gateway failure, active FIX sessions will be disconnected. FIX sessions may be resumed for the same SenderCompID (49) on the secondary FIX Gateway, using the secondary IP address and port number.

Recovery notes:

In the event that the disconnection was due to an outage on the FIX Gateway side, members should consider the following recovery mechanisms:

After reconnection of the FIX session, the FIX Gateway may receive a sequence number higher than the one expected and sends a Resend Request (2) message to the member.

The member should resend all potentially missing messages with PossDupFlag (43) ="Y", to indicate that a message may have been previously transmitted with the same MsgSeqNum (34).

Please note: No Gap Fill messages should be sent by the member during the resend series for application messages. Application messages should always be re-transmitted since the T7 FIX Gateway requires all missing application messages for the purpose of reconciliation with T7 Exchange's T7 trading system fallback.

If a participant sends Gap Fill messages during the resend series for application messages the related orders might not be accessible any more via the FIX Gateway and related order specific information will not be forwarded to the FIX session.

➔ The FIX Failover / Failure scenario will be offered between 15:00-16:00 CET

9.1.3   Partition specific Gateway Failover

The concept with two partition specific gateways per partition requires participant applications to be able to fail-over from one to the other gateway in case of a gateway failure. This focus day will shut down both partition specific gateways belonging to one partition consecutively allowing participants to verify the failover mechanisms in their applications. Prior to the gateway failure participants are advised to insert several non-persistent vs. persistent and standard vs. lean orders and quotes in the simulation environment. The exchange will cut gateway connections twice. Participants affected will therefore be able to check their internal failover processes.

Please note: The application must establish a TCP/IP connection to an available Trading Gateway in case the connection gets lost. There will be no automatic Gateway Failover if a connection is lost due to the decommissioning of the Connection Gateways with Release 7.0. All previously inserted nonpersistent orders and quotes will be deleted and users are logged out. There will be no (active) subscription to broadcast streams any longer. Participants will receive messages for all products where the matching engine deleted non-persistent orders (either lean or standard orders) and/or quotes of the lost session.

Please note: In case of a session loss / session logout the following (re-transmittable) messages will be generated for all products where the matching engine deleted non-persistent standard orders of the lost session:

• 10122 – (via listener and session data) for deleted orders:

follow-up information will be provided with 10112 for each element (order) of

<NotAffectedOrdersGrp> of 1012

➔ The Partition specific Gateway Failover scenario will be offered between 15:00-16:00 CET.

9.1.4   Market Data Services Failure

Prior to the focus day participants should check whether they receive market data from T7, i.e. they should try to send some orders on products which are available in permanent Simulation. Market data information will be provided in

packages marked with a SenderCompID; PartitionID; PacketSeqNum (continuous numbering format); the MessageSeqNum (continuous per SenderCompID multicast address and port combination) and a MarketSegmentID. The SenderCompID always remains constant for a product during the whole business day, if there is no failover.

When the market data failure is initiated by DBAG, a crash will be simulated within the partition for market data services. During this time participants can try to insert new orders and quotes for that product. As a result, they will receive a message that the associated partition is not available. As long as the partition is not available, i.e. not restarted by the exchange, participants will neither be able to receive market data for products linked to that partition, nor be able to enter orders. In this test scenario, all partitions in Simulation will be affected and therefore the test will refer to all products, which are available at that time in the permanent Simulation.

Participants can identify this failover scenario by comparing the SenderCompID value with the previous value. A new SenderCompID, which is available in the packet header and in each data message for incremental and snapshots, indicates the partition failure. Additionally the PacketSeqNum will be reset to 1.

Once this condition is observed, it can be assumed that a fail-over scenario took place and the rebuild of the order book can be started. All non-persistent orders entered prior to the failover will be deleted. The receiving application needs to invalidate its view of the order book until an explicit message has been received containing new information.

➔ The Market Data Services Failure scenario will be offered between 15:00-16:00 CET.

9.1.5 T7 RDI Failure (Only for derivatives market)

In this test scenario both the failover and the restart of the T7 RDI will be simulated (EEX RDI ist independent of T7 RDI and will not be affected by the T7 RDI Failure). As a precondition for the tests, participants are advised to create some complex instruments in the Simulation environment before the failover and restart of the RDI are performed.

In the first part of the test scenario when the T7 RDI fails over, a new initial reference file will be generated with a new file set identifier. This file will contain any complex instruments, already created and deleted during the day, i.e. the entire history.

In the second part of the test scenario, when the T7 RDI is restarted, a new initial reference file will be generated with a new file set identifier. This file contains the existing complex instruments but not the entire history of creations and deletions.

➔ The RDI Failure scenario will be offered between 15:00-16:00 CET.

9.1.6 Matching Engine Processing Delay

This focus day scenario is provided to assist participants in testing the very rare event where massive processing delays occur on a partition. In this scenario the following events will be triggered:

All non-persistent Orders and Quotes will be deleted for the affected product(s).

Product-specific DeleteAllOrderQuoteEventBroadcast messages will be sent to all ETI and FIX sessions with MassActionReason set to (111) Product_temporarily_not_tradable.

For a minimum time period of 10 seconds or until the slow processing is resolved, all transactions except order deletions will be rejected with SessionRejectReason set to (102) Service_Temporarily_Not_Available and VarText 'TRANSACTION REJECTED DUE TO SLOW PARTITION'

In the event that a product is temporarily not tradable, participants will be informed when the matching engine will accept transactions again by a TradingSessionStatus message (MsgType (tag 35) = "h") specifying TradSesEvent (tag 1368) = 105 ("Service Resumed").

Please Note: Participants will still be able to send deletion requests for any persistent orders which they would like to remove.

This focus day scenario is performed for the following markets and products:

- XEUR: AFR
- XETR: DE0006599905
- XVIE: AT0000764626

Participants are requested to check that their applications can correctly handle order / quote deletions and transaction rejections due to the slow partition state.

➔ The Matching Engine Processing Delay scenario will be offered between 15:00-16:00 CET.

9.1.7 GUI (forced user log out)

The GUI Focus Day scenario is provided primarily to make participants aware of a function within T7 whereby in an emergency/exceptional situation T7 Operations can not only send messages directly to the users screen but also force the termination of the GUI itself. In addition, the focus day is also provided to make participants aware of the effects of a full GUI environment restart. The GUI (forced user log out) focus day will be sub-divided into three parts:

- Send Admin Message only
- Admin Message + Forced Trader GUI Shutdown
- Full GUI environment restart

9.1.7.1 Send Admin Message only

All GUI instances (both Admin and Trading) logged in at the point when the focus day is initiated will receive a message "T7 Focus Day: Focus day "GUI (forced user log out)" started". This message will appear in a new popup window.
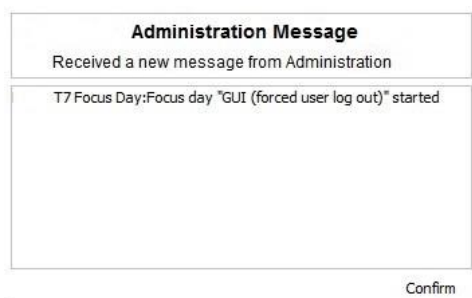
This window can be closed by pressing the Confirm button.

9.1.7.2 Admin Message + Forced Trader GUI Shutdown

After this first message the following message will be send 10 minutes prior to the GUI environment shutdown: *"T7 GUI Focus Day: Automatic GUI shutdown has been triggered and the GUI environment will be restarted"*. On the Trader and Admin GUI the following pop-up windows will be displayed:

The colour of this popup window will turn to yellow 15 seconds prior to the forced shutdown and turns red for the last 5 seconds.

9.1.7.3 Full GUI environment restart

Following a full restart of the GUI environment in Simulation will be performed. On the day where the focus day is scheduled, participants will be encouraged to suspend orders so that the effect on suspended orders caused by a GUI restart can be observed. Suspended orders will all be deleted, the rest of the order book will be unchanged after a restart.

➔ The GUI (forced user log out) focus day scenario will be offered between 15:00-15:30 CET.

9.1.8 Move products from one partition to another (emergency procedure)

This focus day scenario is intended to simulate the unlikely event that products need to be moved from one partition to another before the start of trading.

Under normal circumstances, the assignment of products to a partition will not change on a day-to-day basis but either as a result of hardware failure or due to a re-configuration, the assignment of products can and will change.

In this focus day scenario all products / Product assignment groups outlined below will be moved from one partition to another prior to the start of the trading phase (closed & pre-trading) in the T7 Simulation environment.

As a consequence of the product move from one to another partition the entire T7 system will be restarted. All non-persistent orders, quotes entered and recoverable broadcast streams disseminated before restart will be deleted. Please be aware that persistent orders will be moved to the other partition too and are part of the orderbook restatement. The PartitionID in the reference data, product snapshot and packet header for EMDI and EOBI for the affected product(s) will change. When the T7 RDI is restarted, a new initial reference file will be generated with a new file set identifier. Reference Data via RDI and RDF must be reprocessed by client applications following the restart. The SenderCompID in the Market Data for the product will change following the restart. The service on which the market data is published first for EMDI / EOBI may change (even to odd or vice versa). The multicast addresses on which the market data is disseminated will not change.

Participants must ensure that their applications support the automatic reassignment of products. Hardcoding of product to partition assignments may lead to the inability to identify or trade these products.

This focus day scenario is performed for the following markets and products:

XEUR products: CONF, FBON, FBTM, FBTP, FBTS, FGBL, FGBM, FGBS, FGBX, FOAM, FOAT, FSWL, GE02, GE05 & GE30

XETR product assignment groups: GER1, MDX1, SDX1, STX6 &TDX1.

The Move products from one partition to another one (emergency procedure) focus day scenario will be performed in the morning after a roll over run and should be completed before 11am (CET/CEST). Please note: The products which have been moved from one partition to another, will remain on the "new" partition until this focus day scenario is repeated.

9.2   Functional Focus Days – Triggered by the Exchange

The exact dates for the functional focus days triggered by the exchange are displayed in the Simulation calendar available on the websites

www.eurexchange.com -> Technology -> Simulation Calendar

www.xetra.com -> Trading -> Trading calendar and trading hours

9.2.1   Xetra EnLight

As a possibility to test the selective RFQ platform Xetra EnLight, DBAG offers Xetra EnLight Simulation Days (please refer to the simulation calender for the exact dates).

The following products will be available in Simulation for negotiation via Xetra EnLight:

LU0378435803
NL0000009165
DE0007231326
FR0000120503
DE0007472060

On EnLight Simulation Days, market participants can simulate the work-flow of sending out or responding to an RFQ via the Xetra GUI or ETI.

Market participants have to include Trader IDs in their RFQs to receive responses. The Trader ID can be stored in the GUI preferences. On Xetra EnLight Simulation Days, Xetra offers market participants the possibility to include the Trader IDs SIM01TRD001, SIM02TRD001, SIM03TRD001 and SIM04TRD001 (Xetra internal Trader IDs) in their RFQs to receive responses.

To simulate the work-flow of Xetra EnLight Smart RfQ, participants are requested to enable Smart RfQ via a dedicated flag in the RfQ.

In addition, members can contact Xetra via e-mail to xetrahelpdesk@deutsche-boerse.com to be setup as a Xetra EnLight or Xetra EnLight Smart RfQ respondent in T7 7.1 Release Simulation and to indicate that they are interested to receive RFQs from the above Xetra trader IDs on these focus days.

9.2.2 Eurex EnLight

Trading participants will be able to go through the Eurex EnLight workflows and test all different trade types such as risk, working delta or delta exchange (outside Eurex for Single Stock Options). For index options all strategies are available including volatility-strategies.

Eurex will be active as a responder with the IDs MNOHBTOM001 and MNOHBTOM002. We are also happy to send requests to specific member IDs. If you wish to act as responder in a certain segment, please inform your Key Account Manager Trading in advance.

9.2.3 Corporate Actions

Derivatives Market:

Participants will have the opportunity to test Corporate Action processing. On the first focus day, i.e. before end-of-day processing starts, participants are requested to generate positions in T7 in the defined products to check the system behaviour on the effective focus day (second business day).

Cash Market:

Simulation Business Day 1:

DBAG maintains the Cum-Indicator, Ex date and the dividend amount of the instruments.

Simulation Business Day 2:

The Cum-Indicator is set and visible for participants. The participants should now have open orders in POSTR. These orders will be deleted during the following roll over run. Furthermore, the deletion messages including the order deletion reasons will be sent.

Simulation Business Day 3 (Ex-day): The participants see the Ex indicator and the reference price is reduced accordingly by the dividend amount.

The exact dates and products of the Corporate Actions scenario are displayed in the current Simulation calendar available on either www.eurexchange.com or www.xetra.com.

9.2.4 Stressed market conditions / exceptional circumstances (On request only)

The regulatory relevant states of market conditions for market making will be normal market conditions, stressed market conditions and exceptional circumstances. Stressed market conditions will be established on product level for the derivatives market and instrument level for the cash market, whereas exceptional circumstances will typically affect the whole market. The product will be in normal market conditions, when neither stressed nor exceptional market conditions apply. There are no market making obligations during exceptional circumstances.

Automatically triggered stressed market conditions will have a fixed duration (e.g. 10 minutes). Ongoing automatically set stressed market conditions will be prolonged by this time period, when the trigger conditions are detected again. The following trigger events for automatically set stressed market conditions will be supported, depending on the type of the affected product:

- Derivatives Market:

- o Simultaneous significant change of price and volume – applies to equity index futures, single stock futures and ETF futures.
- o End of a volatility interruption – applies to equity index futures, single stock futures and ETF futures.
- o Stressed Market Signals in a related futures product – in case a futures product is in stressed market conditions and there is a corresponding options product with the same underlying, the options product will be automatically set in stressed market conditions. Note that a volatility interruption in such a futures product is considered as a stressed market signal. Corresponding options products are ETF options, equity options and equity index options.

During stressed market conditions, the maximum quote spread for quotes and Request for Quote requests is widened and the minimum quote quantity for quotes can be changed.

- **Cash Market:**

  - o significant short-term change in price, i.e. the cash market instrument is in an extended volatility interruption on T7,
  - o significant short-term change in volume, i.e. significantly above-average traded volume in the price determination after an extended volatility interruption.

According to the regulatory technical requirements, T7 has to support the state of exceptional circumstances under the following triggering conditions:

- Extreme volatility – a state of extreme volatility is established when the majority of products, which are subject to market making regulation is in stressed market conditions or in a volatility interruption. The state of extreme volatility is set for the whole market.
- War, industrial action, civil unrest or cyber sabotage – this state is declared by the Exchange Management Board with simultaneous effect for the whole market.
- Disorderly trading conditions at the exchange – this state is declared when there is either a significant increase of processing times, or multiple erroneous executions of transactions, or loss of connectivity for many Participants. The state of disorderly trading conditions is declared by the Exchange Management Board with simultaneous effect for the whole market.
- Suspension of pre-trade transparency obligation – the declaration of this state rests upon the decision of the responsible regulator. This condition applies per product.

Exceptional circumstances will be declared for a period of one hour and will end as soon as the triggering conditions are no longer met. The state of exceptional circumstances may be extended until the end of the business day, if the criteria are repeatedly breached. Exceptional circumstances will end automatically at the end of the business day. In case the triggering conditions remain in effect, they will be declared again on the next business day.

T7 will publish exceptional circumstances only via news messages (Eurex webpage, Xetra webpage, T7 GUI and ETI). Exceptional circumstances will not be communicated via the T7 market data interfaces. Thus, there might be situations where stressed market conditions in a product are set during a state of exceptional circumstances. In this case, exceptional circumstances always trump stressed market conditions, regardless of the sequence of setting the regulatory trading conditions.

On the Focus Day "Stressed market conditions / exceptional circumstances" first "Stressed market conditions" will be triggered by the exchange for 3 products for a defined time period of 10 minutes.

Afterwards Exceptional circumstances will be declared for the period of one hour for the whole market.

9.2.5 Market Halt (On request only)

As a possibility to reflect a market halt in T7, DBAG offers to schedule the Simulation of the market halt scenario on request.

Test scenario and expected result:

Prior to the planned Market Halt participants are recommended to enter non persistent orders and quotes and persistent orders in any products in the affected market. As a result of the market halt, products will not be tradable between the given times. In this scenario all non-persistent orders and quotes will be deleted after the market reset and participants must re-enter those orders and quotes. Persistent orders will stay in the system.

Additionally the following message will be sent:

    10308 - (ETI: Mass Cancellation Event)

The exact dates of the Market Halt scenario are displayed in the current Simulation calendar available on the websites :

        www.eurexchange.com -> Technology -> Simulation Calendar

        www.xetra.com -> Trading -> Trading calendar and trading hours

9.2.6 Product Halt (On request only)

As a possibility to reflect a product halt in T7, DBAG offers to schedule the Simulation of the product halt scenario on request.

Test scenario and expected result:

Prior to the planned Product Halt participants are recommended to enter non persistent- and persistent orders and quotes in the affected products. With the transition of the trading phase to HALT, this product will not be tradable between the given times in T7. In this scenario, all non-persistent orders and quotes will be deleted after the market reset and participants must re-enter them. Persistent orders for the affected product will stay in the system. Additionally the following message occurs:

10308 - (ETI: Mass Cancellation Event aka DeleteAllOrderQuoteEventBroadcast aka BC CleanupOQ)

OrderMassActionReport (UBZ) messages will be sent to all FIX sessions.

9.2.7 Instrument Suspend (Cash Market; On request only)

As a possibility to reflect an instrument suspend in T7, DBAG has offers the Simulation of the following focus day on request.

Test scenario and expected result:

Prior to the planned Instrument Suspend participants are recommended to enter non persistent- and persistent orders and quotes in the affected instrument. As a result this instrument will not be tradable between the given times in T7. In this scenario all orders (persistent and all non-persistent) and all quotes will be deleted after the market reset and participants must re-enter them. Additionally the following message occurs:

10308 - (ETI: Mass Cancellation Event aka DeleteAllOrderQuoteEventBroadcast aka BC CleanupOQ)

9.3 Recommended test scenarios executed by participants – Derivatives

The following test scenarios should be executed anytime by participants in Simulation. There are no special tasks to be performed by the exchange.

9.3.1 Full Spread Matrix

In T7 it is possible to set up and trade products with up to 20 different calendars spreads.

The exchange can configure which calendar spreads of a futures product are considered for synthetic matching; a synthetically linked full spread matrix is achieved by considering all calendar spreads of a futures product.

The following products are configured with a synthetically linked full spread matrix in the permanent Simulation:

Group	Product	Currency	Product Name
FINT	FEU3	EUR	THREE-MONTH-EURIBOR FUT. (ACI)
FINX	FEXD	EUR	FUT ON EURO STOXX 50 INDEX DIV
FVOL	FVS	EUR	FUT ON MINI VSTOXX

9.3.2 New Strategy Setup – complex instruments

Typically, complex instruments are requested by traders, however, some futures spreads are created by the exchange by default. Complex instruments requested by traders with open orders valid beyond the current trading day will be available the next day.

It is possible to have different trading parameters per instrument type, for example allocation schemes and price validations. Therefore, different instruments of the same product can vary in their trading behaviour.

Please note: Strategies are always created on a temporary basis and are cancelled during the end of day processing if their order book is empty.

Traders may request complex instruments from T7 at any time during the Simulation. If the requested complex instrument matches a predefined standard option strategy, then the matching engine will create a standard option strategy.

9.3.3 Trade Traceability

T7 provides improved trade traceability, allowing orders to be linked to executions, trade confirmations, and trades in clearing for simple and complex instruments.

While sending a new order participants can provide a client order ID and up to three free text fields, which are optional for Eurex ETI. For each new order received by Eurex Exchange a separate order ID by the exchange is assigned which is unique and returned to the participant on all private messages.

For every match event T7 assigns identifiers unique within product and business day, to each aggregated price level, every order execution and every trade.

For the matching of a complex order in addition to the order leg, the execution ID and order leg execution ID is provided for each leg of the complex instrument match.

9.3.4 Risk Events

Risk parameters will be triggered due to defined trading volume or quantity limits. Limits can be set by Clearing Members for their Non-Clearing Members (Exchange Participants) or by Non Clearing Members themselves on an intraday basis. There are three levels of limitation which can be defined by participants and is the same for all business units.

1. *Alert message*

    The user receives a popup message which informs him that he has exceeded a predefined limit, no further actions happen.

2. *Threshold message*

    The user is informed that he has exceeded the second limit and therefore a throttle mechanism is implemented for trading. For traders it is not possible to trade in a general way and volume as the trade volume is limited as per the threshold limitation given by the clearing members.

3. *Blocking message*

    With this scenario, trading is disabled for the respective trading user if he exceeds his trading limits or any other given quantity limits for trading. User entitlements are independent of those extra limitations.

10. Documentation

T7 Release 7.1	Eurex	Xetra	Combined	Dec 2018	Q1 2019			Q2 2019	
					Jan	Feb	Mar	Apr	May
T7 Release 7.1 – 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				◆	■	●
Xetra Instrument Reference Data Guide		X						●	
T7 Extended Market Data Services – Manual incl.			X					■	●
T7 XML Reports – Reference Manual	X	X						■	●
Common Report Engine User Guide			X					●	
N7 Network Access Guide			X					●	
Xetra Rules & Regulations		X							●
Market Model for the Trading Venue Xetra		X						●	

◆ Preliminary Version   ■ Simulation Version   ● Final Version

The documents will be available on the websites

 www.eurexchange.com > Technology > Eurex Exchange's T7 > System Documentation > Release 7.1

 www.xetra.com > Technology > T7 trading architecture > System Documentation > Release 7.1

11. Support

The standard support times of the Exchange will be in effect during the Simulation phases. The helpdesk departments and further information sources are provided in the following section.

11.1 Contacts and support hours

The following helpdesks provide first level support for specific topics from Monday till Friday:

11.1.1 Group Client Key Account Management

Phone: individual number to your Group Client Key Account Manager   (09:00 - 18:00 CET)

- Participants readiness activities
- Participant preparation requirements
- Participant setup questions for Simulation and production
- Participant data changes for Simulation and production
- ISV related queries

11.1.2 Functional Helpdesk Eurex

Phone: +49-69-211-1 12 10   (07:00 - 22:30 CET)

- Functional trading related issues for trading
- Functional focus days
- Product data management
- Market Control
- Simulation participation and execution

11.1.3 Functional Helpdesk Xetra

Phone: +49-69-211-1 14 00   (09:00 – 18:00CET)

- Functional trading related issues
- Functional focus days
- Product data management
- Market Control
- Simulation participation and execution

11.1.4 Helpdesk Clearing Data Control

Phone: +49-69-211-1 24 53   (08:00 - 20:00 CET)

- Clearing functionality
- Entitlement Management
- Participant- and user data management

11.1.5 Customer Technical Support

Phone: individual VIP number   (24 hours, Monday - Friday)

- All Technical issues related to the Simulation environment (e.g. connectivity issues)
- Technical focus days

11.2 Further sources of information

Changes and further information regarding the T7 Simulation will be provided via the following channels:

- Circulars
- Info-Mail
- Implementation News on Eurex Exchange's and Xetra website for T7 under following path:

  www.eurexchange.com -> Technology -> Eurex Exchange's T7 -> Implementation News
  www.xetra.com -> Technology -> Implementation News