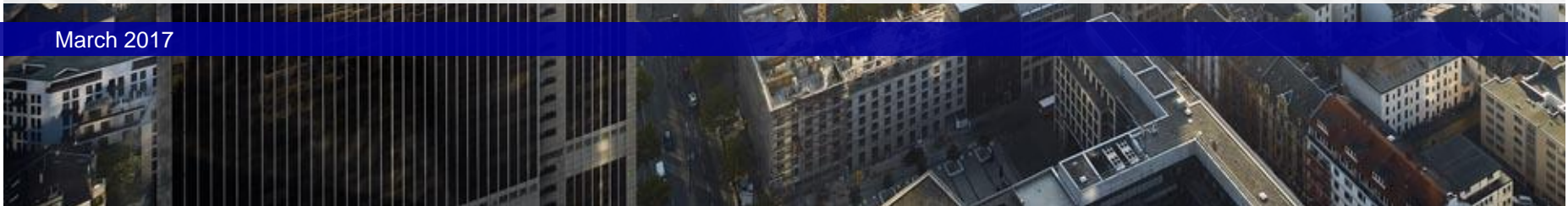




Deutsche Börse Cash Market

T7 Member and Instrument Migration Strategy

March 2017



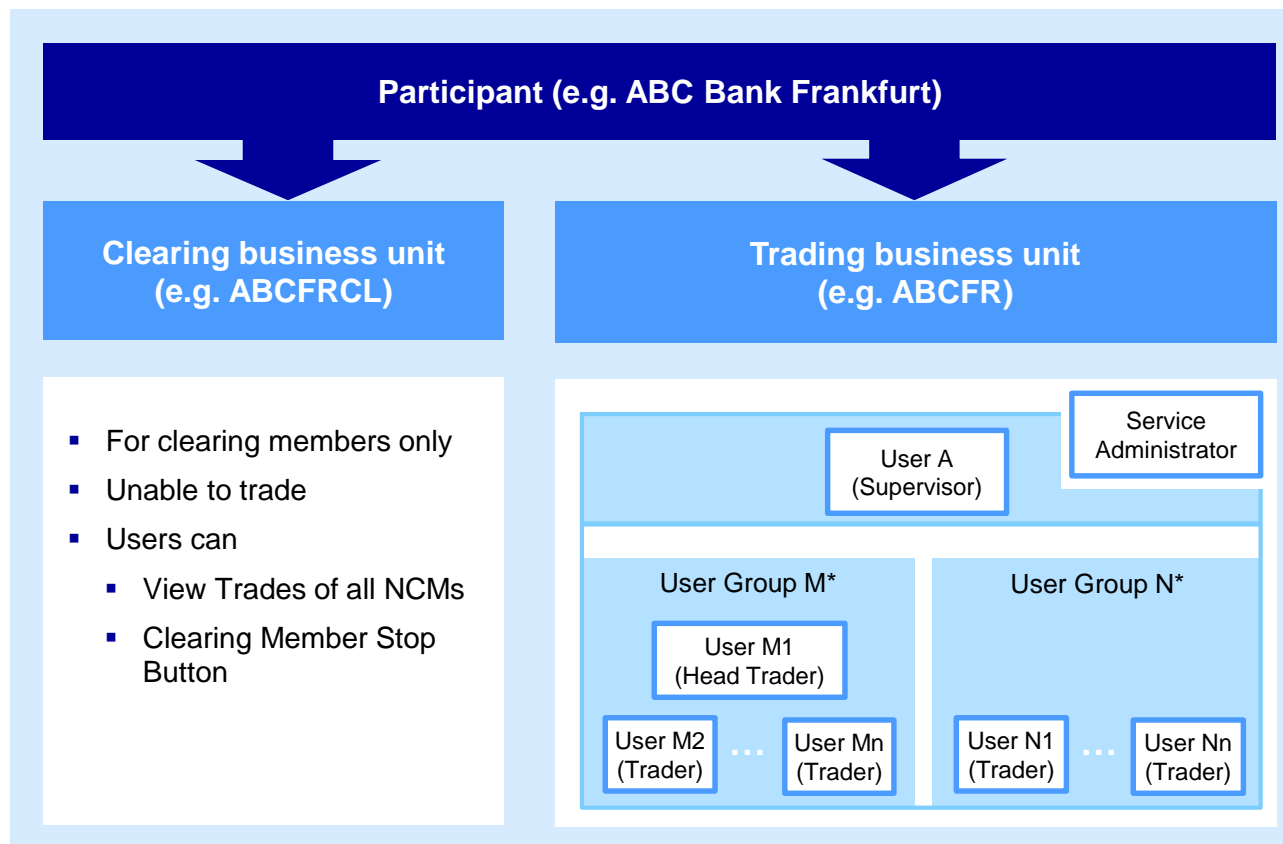
Member Concept T7

New participant structure and migration approach (1/3)

T7 supports different business units per member firm (participant).

Trading business units are needed for trading while clearing business units only support back office activities.

There is no interaction between a trading and a clearing BU.



Member Concept T7

New participant structure and migration approach (2/3)

Migration Strategy:

Every active memberID of a member firm in Xetra will be migrated into at least one business unit in T7.

- For trading members a trading business unit is set up
- For members acting only as clearer or settlement institute the respective clearing business unit will be setup
- Members acting as trading member and as clearing member or settlement institute will receive business units of both kinds

Trading business unit (BU)

The trading BU in T7 will have the same ID as the member in Xetra.

ABCFR = ABCFR

Clearing business unit (BU)

The clearing BU ID is determined by adding a “CL” (for Clearing) to the Xetra ID. ABCFR + CL = ABCFRCL

Clearing relations will be migrated as existing in Xetra. This also applies to the assignment of Instrument Groups.

Sessions for connection to T7 will not be ported but have to be ordered by each member. The member portal will be open for ordering 08.03.2017 for simulation and 03.04.2017 for production. Each BU needs to have its own sessions.

Member Concept T7

New participant structure and migration approach (3/3)

The following roles are assigned to Trading BUs (roles marked with “*” depend on RAL setting)

* Cash Trader	used for trading
** Cash Market Maker	used for market making
Trading View	used for market view (no trading, view only)
Cash Service Administrator	for user maintenance
Cash User Data View	for user maintenance (but view only)
Emergency Mass Deletion	used for emergency cancellation of orders/quotes
Emergency Trading Stop	used for stopping BU or user(s), incl. order/quote deletion
Trade Enrichment Rule	for maintenance of Trade Enrichment Rules
Trade Enrichment Rule View	for view of Trade Enrichment Rules

The following roles are assigned to Clearing BUs (roles marked with “*” depend on RAL setting)

Cash Service Administrator	for user maintenance
Cash User Data View	for user maintenance (but view only)
CM Backoffice View	allows view access to trades of related NCMs
*** Clearing Member Stop	used for stopping a trading BU of a related NCM

* Role is assigned automatically, if Xetra RAL 7 (Enter Order) has a value > 0

** Role is assigned automatically, if Xetra RAL 11 (Enter Quote) has a value > 0

*** Role is assigned automatically, if Xetra RAL 102 (Modify CM Stop/Release) has a value > 0

User Concept

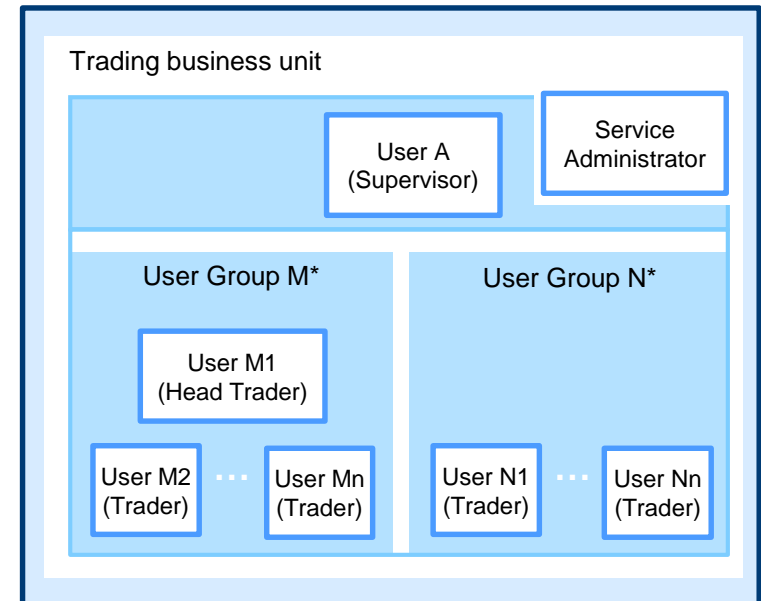
New user structure and migration approach (1/4)

Trading BUs can have users of different kinds and with different entitlement.

Within T7 users of a Trading BU can be grouped into user groups. This user group replaces the subgroup existing in Xetra.

Users can be setup in a hierarchy of three levels on T7 which defines a clear context for order maintenance:

- Trader: users maintain own orders only
- Head Trader: users maintain own orders and can delete the orders of traders in their user group
- Supervisor: users maintain own orders and can delete orders of all traders / trader groups



A Clearing BU could consist of different users as well. Since Clearing BU users can't trade, the grouping of users and the user level setting has no effect here (user can have any level or user group).

User Concept

New user structure and migration approach (2/4)

User Migration Strategy:

Users having logged into the Xetra system at least once since release 12.0 in 2011 will be automatically migrated to T7.

Basic rule for user migration to T7:

- If a member has only a Trading BU, all users will be migrated to this Trading BU
- If a member has only a Clearing BU, all users will be mapped to this Clearing BU
- If a member has a Trading BU and a Clearing BU, all users will be migrated to the Trading BU.
The Clearing BU will then get only the new user “CLGSPV” in order to do further user maintenance

User Group:

During the migration, the first three digits of the user ID (known as Subgroup), will be used to create user groups in T7.

The assignment can be changed, later by the Service Administrator of the business unit. By him users can even be grouped into the same user group if their ID does not start with the same three characters then.

User Level:

- Non-Senior Traders in Xetra will be migrated as “Traders” to T7
- Senior traders will become “Head Traders” with the migration
- The “Supervisor” level is not assigned automatically with the migration but can be assigned by the Service Administrator
- All users migrated to a Clearing BU will get the user level “Supervisor”

} Trading Business Unit

} Clearing Business Unit

User Concept

New user structure and migration approach (3/4)

User Migration Strategy:

Agency/Proprietary/

Market Making Account: These attributes will be migrated from Xetra as they are.

Maximum Order Value: The Maximum Order Value per user will be migrated as they are. Maximum Order Values in Xetra higher than 9,999,999,999.99999999 will be capped to this value.

Category: If a user ID starts with "OR" the category "Order_Routing_System" will be assigned to that user.

Password: The passwords will be migrated as well. But since the password rules in T7 are more strict than the ones in Xetra, every user is forced to change his password after the first login.

User Concept

New user structure and migration approach (4/4)

Xetra RAL (Xetra) to Role (T7) migration logic for Trading BU and Clearing BU users

The following roles are automatically assigned to users of a Trading BU

Cash Trader	if Xetra RAL 7 (Enter Order) has a value > 0
Cash Market Maker	if Xetra RAL 11 (Enter Quote) has a value > 0
Trading View	if Xetra RAL 20 (Inquire Trade) has a value > 0 and if Xetra RAL 7 (Enter Order) has a value = 0
Cash Service Administrator	if Xetra RAL 3 (Add User) has a value > 0
Cash User Data View	if Xetra RAL 3 (Add User) has a value = 0 and Xetra RAL 1 (Inquire User List) has a value > 0
Emergency Mass Deletion	if Xetra RAL 29 (Delete All Orders And Quotes) has a value > 0

The “Emergency Trading Stop”, “Trade Enrichment Rule” and “Trade Enrichment Rule View” roles are not assigned automatically to users, since this functionality does not exist in Xetra. Assignment has to be done by Service Administrator of the member.

User Concept

New user structure and migration approach (4/4)

Xetra RAL (Xetra) to Role (T7) migration logic for Trading BU and Clearing BU users

The following roles are automatically assigned to users of a Clearing BUs (only if member has no Trading BU)

Cash Service Administrator	if Xetra RAL 3 (Add User) has a value > 0
Cash User Data View	if Xetra RAL 3 (Add User) has a value = 0 and Xetra RAL 1 (Inquire User List) has a value > 0
CM Backoffice View	all users automatically
Clearing Member Stop	if Xetra RAL 102 (Modify Member Stop) has a value > 0

Every Clearing BU automatically gets a new user “CLGSPV”, who has the roles “Cash Service Administrator” and “CM Back-Office View” assigned. The password for this user will be provided by the exchange.

For Clearing Member Stop functionality, at least two users need to have this role assigned since a stop of a related BU requires the approval of a second user.

In the Xetra environment RALs are assigned independent of Instrument Groups in which a user should be active.

In T7 roles need to be assigned together with a Product Assignment Group for which the user should be able to act respectively.

Member / User Migration

Production and Simulation timeline

Production Timeline:

Basis for the member and user migration to T7 will be the actual member and user status in Xetra from **Friday, 02. June 2017**, end-of-business-day.

All settings on member and user level will be taken and used as input for the migration which takes place Saturday, 17. June 2017.

Members will have access to the T7 system as of Monday, 19. June 2017. They can then view the migration results and potentially adjust to their needs before trading is activated on 26. June 2017 and 03. July 2017 respectively.

Simulation Timeline:

The logical sequence and the rules for the simulation environment are the same, but the timelines differ.

Basis for the member and user migration to T7 will be the actual member and user status in the Xetra simulation environment from **Thursday, 23. March 2017**, end-of-business-day.

Members will have access to the T7 simulation system as of Tuesday, 18. April 2017.

Important:

All additions/deletions/changes of users done after respective cut off date will not be taken into account by the exchange. They have to be done again by the members in the T7 system after the migration took place!

Instrument Migration Strategy (1/3)

Instrument scope:

- All CCP-eligible instruments of the trading venue XETR which are traded in trading model Continuous Trading with Auctions
- This includes instrument types Equities, ETFs, ETCs and ETNs

Products:

- Similar instruments can be grouped into Products in T7 which in turn allows Mass Quotation. This will be the case for DAX and STOXX ETFs as well as for ETCs based on Precious Metals or Gas & Oil where one Product is planned per category
- Each of the remaining instruments will get its own Product, i.e. a 1:1 relation

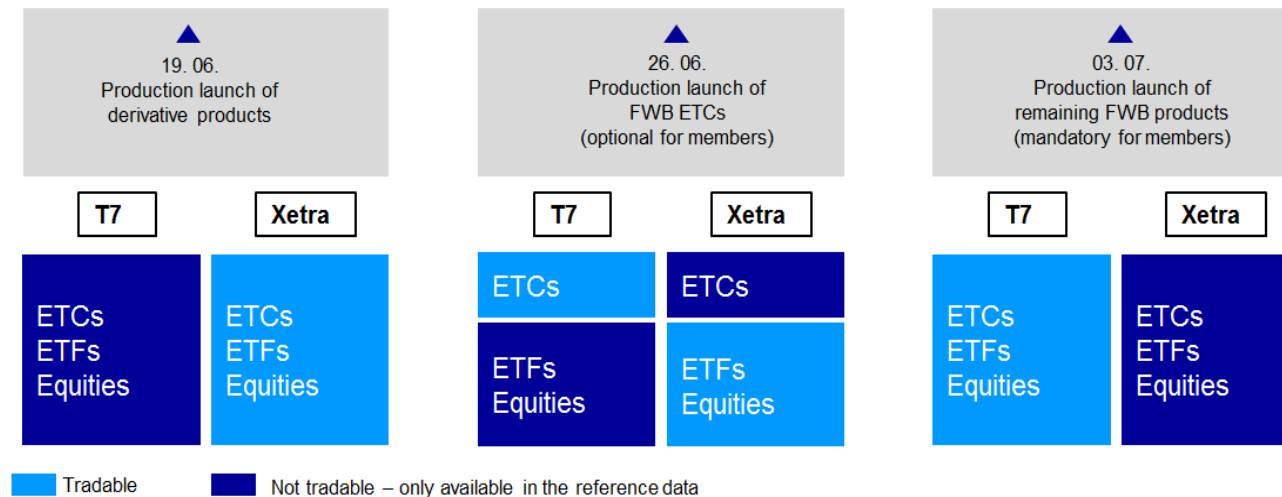
Product Assignment Groups:

- Products are grouped for entitlement purposes in Product Assignment Groups (PAGs) in T7
- PAGs are created analogously to the Instrument Groups in the Xetra system today
- With the migration business units get all PAGs
- Users get those PAGs assigned automatically where the respective Instrument Group in the Xetra system was assigned. They get all roles as derived from their RALs (as explained before) in all their PAGs identically

Instrument Migration Strategy (2/3)

Migration and activation of trading:

- Launch of T7 Release 5.0 and derivatives products on 19. June 2017
- Members can check and maintain their user setup and test their connection until 23. June 2017
- Products/Instruments are not tradable in T7 but reference data is already distributed from 20. June 2017
- Activation of trading in ETCs on 26. June 2017 in T7. Trading in ETCs on the Xetra is discontinued
- Activation of trading in Equities and ETFs on 03. July 2017 in T7. Trading in all instruments in the Xetra system for the market XETR is discontinued



Instrument Migration Strategy (3/3)

Identifying tradable instruments during the migration period:

Launch of Release 5.0 on 19. June 2016

- All instruments in scope loaded to the T7 system
- Reference data available from 20. June 2017
- No trading for these instruments on T7
- Tag 2542 and MktSegStat in RDI, RDF and Member Section file show value “10 (Published)”

Activating ETCs on 26. June 2017:

- ETCs are marked as traded on T7 in RDI, RDF and the Member Section file.
- Tag 2542 and MktSegStat in RDI, RDF and Member Section file is “1 (Active)”
- All other cash market instruments are still marked as “Published”
- In the Xetra system ETCs (Market Segment Supplement = “ETC” or “DEZ” depending on the reference data channel) are set to “HALT”

Activating Equities and ETFs on 03. July 2017

- All migrated instruments have Tag 2542 and MktSegStat “1 (Active)”
- In the Xetra system trading phase for all instruments is “HALT”

Order deletion in the Xetra system when activating instruments for trading in T7:

All valid orders valid the next day for instruments to be migrated will be deleted in Xetra after normal deletion processing (i.e. after deletion due to e.g. expiry or corporate actions).

Orders deleted in the Xetra system because of the migration can be identified by the timestamp 23:59:58 and the deletion reason “suspend” via FIX, ETS and in Report TC540.



Thank you for your attention

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