

T7 Cash Markets

Participant and User Maintenance Manual

Version 1.0

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| Participant and User Maintenance Manual | Version 1.0 | |

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T7 Cash Market Deutsche Börse Group Participant and User Maintenance Manual Version 1.0

Table of Content

| 1. De | 1. Definitions and Abbreviations | |
|-------|----------------------------------|----|
| 2. In | troduction | 6 |
| 2.1 | Purpose of this Manual | 6 |
| 2.2 | Maintenance Summary | 6 |
| 2.3 | Further Reading | 6 |
| 3. C | oncepts | 7 |
| 3.1 | Products | 7 |
| 3.2 | Participant Structure | 7 |
| 3.3 | Users | 8 |
| 3.4 | User Roles | 9 |
| 3.5 | Entitlements | 10 |
| 3.6 | Maximum Order Value | 11 |
| 3.7 | Maximum Order Quantity | 11 |
| 3.8 | Trading Capacities | 11 |
| 3.9 | User Levels (Scope of Orders) | 12 |
| 4. Pr | re-defined User Roles | 13 |
| 4.1 | Cash Service Administrator | 14 |
| 4.2 | Cash User Data View | 15 |
| 4.3 | Cash Trader | 16 |
| 4.4 | Cash Market Maker | 16 |
| 4.5 | Trading View | 17 |
| 4.6 | Emergency Trading Stop | 17 |
| 4.7 | Emergency Mass Deletion | 18 |
| 4.8 | Trade Enrichment Rule | 19 |
| 4.9 | Trade Enrichment Rule View | 20 |
| 4.10 | 0 Clearing Member Stop | 21 |
| 4.11 | 1 CM Backoffice View | 22 |

| T7 Cash Market | Deutsche Börse Group |
|--|----------------------|
| Participant and User Maintenance Manual | Version 1.0 |
| 5. Maintenance | 23 |
| 5.1 Product Assignment Groups | 23 |
| 5.2 Participant and Business Unit | 23 |
| 5.3 Users | 23 |
| 5.3.1 Adding a user | 24 |
| 5.3.2 Modifying a user | 25 |
| 5.3.3 Password Rules | 25 |
| 5.3.4 Deleting a user | 26 |
| 5.4 Risk Controls | 26 |
| 5.4.1 Stopping Trading for User | 26 |
| 5.4.2 Stopping Trading for a Business Unit | 27 |
| 5.4.3 Clearing member stopping a trading member | 28 |
| 6. Participant migration of Cash Market | 29 |
| 7. Appendix | 31 |
| 7.1 Administrative roles | 31 |
| 7.2 On-exchange roles | 32 |
| 7.3 T7 Admin GUI Windows | 33 |
| 7.3.1 Welcome View | 33 |
| 7.3.2 User Maintenance Wizard – General Attributes | 34 |
| 7.3.3 User Maintenance Wizard – On-Exch Attributes | 35 |
| 7.3.4 User Maintenance Wizard – On-Exch Roles | 36 |

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Bertition of the Matter of the Color | V | |
| Participant and User Maintenance Manual | Version 1.0 | |

1. Definitions and Abbreviations

BU Business Unit

CCP Central counterparty

ETI Enhanced Trading Interface

eXAS Electronic Exchange Admission Service

FIX Financial Information eXchange (Protocol)

GUI Graphical User Interface

MOV Maximum Order Value

T7 Cash and Derivatives trading system developed by Deutsche Börse Group

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| | | |
| Participant and User Maintenance Manual | Version 1.0 | |

2. Introduction

T7 operates the on-exchange trading functionality of the Cash Market exchange. Service Administrators in participant offices are able to add and maintain users via the Graphical User Interface (GUI).

This includes the maintenance and restriction of access to products, functions and entitlement, the order and quote volumes as well as the scope of orders, i.e. which orders can be acted upon.

2.1 Purpose of this Manual

This manual is intended to assist service administrators with maintaining participant and user related data in the T7 system.

The following areas are covered:

- Explanation of fundamental concepts.
- Pre-defined user roles (e.g. Cash Trader).
- Maintenance processes by service administrators.

2.2 Maintenance Summary

The Cash Market related member reference data is fully incorporated in the T7 system. The participant information, business units, user structure as well as entitlement will be maintained in T7 only.

2.3 Further Reading

The following documents provide additional information to complement this manual:

- T7 Functional and Interface Overview
- T7 Functional Reference
- Trader, Admin and Clearer GUI Manual

These documents are available on the Xetra website www.xetra.com under:

Xetra > Technology > T7 trading architecture > System documentation.

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

3. Concepts

This chapter describes the fundamental concepts in T7 regarding products, participants, users, entitlements and risk limits.

3.1 Products

T7 includes a hierarchy containing product assignment groups, products and instruments. Instruments are the tradable entities, i.e. an order always refers to buying or selling a specified quantity of a certain instrument. Instruments of the same type can be grouped together to form products. However, every tradable instrument must belong to a product. Instruments of the same product are traded in the same way, i.e. trading parameters and trading schedules are defined for products rather than for individual instruments. A product is always associated with a product assignment group, which is used for entitlement and can be assigned to multiple product assignment groups simultaneously.

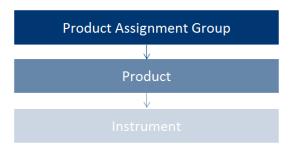


Image 1: Product structure

3.2 Participant Structure

The participant is an entity in T7 representing the member legal firm. Within a participant different units may exist that act independently from each other. These are so called Business Units (BU). There are two different types of BUs:

- Trading Business Unit
 A trading BU is necessary in order to participate in trading.
- Clearing Business Unit
 A Clearing BU receives trade notifications for the trades of the own trading BUs, as well as for
 the trades of the trading BUs of related NCMs. Additionally, the Clearing Member Stop
 functionality can be granted by the exchange to the Clearing BU.

A BU is represented by a business unit name, e.g. ABCFR in case of a trading business unit. For clearing business units "CL" is appended to this ID, i.e. to ABCFRCL to be able to distinguish both IDs easily.

T7 Cash Market

Deutsche Börse Group

Participant and User Maintenance Manual

Version 1.0



Image 2: Participant structure

Participant data is set up and maintained by Deutsche Börse. The participant is authorized to a market (e.g. XETR). Currently in T7, a participant can have up to two pre-defined business units. Trading members have one business unit designated for trading. Clearing members have one business unit designated for clearing. Clearing business units can receive all on-exchange trade notifications from every trading member for whom they are the designated clearing member. If a member performs trading as well as clearing operations, he will have one trading and one clearing BU. Cash Market distinguishes between settlement institutes and central counterparty (CCP) clearing members. While CCP clearing members only receive on-exchange trade notifications in CCP-eligible instruments, settlement institutes receive all trade notifications, including trades in non-CCP-eligible instruments. Clearing members that also participate in trading activities will have both, a trading and a clearing business unit.

Every business unit has a business unit short name (e.g. clearing business unit "ABCFRCL"), as well as a unique numeric business unit ID.

3.3 Users

A user is a person, such as a trader or a service administrator that interacts with the T7 system. A user may also be a machine, for example an order routing or quoting system. Every user of T7 belongs to exactly one business unit. It is not possible to assign the same user to multiple business units. Since trading and clearing business units generally fulfil different tasks, the entitlement will deviate also.

Service administrators define a user short name (e.g. TRD001). The user short name is unique on participant level, i.e. a user cannot have the same short name as another user, even if they are assigned to different business units. For example, if there is a user with user short name "TRD001" under the trading BU, it will not be possible to create another "TRD001" neither under the trading BU nor under the clearing BU of the same participant. Combining the participant ID (e.g. "ABCFR") with the user short name (e.g. "TRD001"), a user login name (e.g. "ABCFRTRD001") is generated, for use in the new Admin, Trader and Clearer GUIs.

Users have to be assigned to a user group. At least one user group has to be defined. Multiple user groups within the same business unit are optional. For example, user "TRD001" can be put in user group

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

"ABC" (name of user group can be different to the first three digits of user ID). A user group is created automatically, when the first user is assigned to it.

T7 provides a PIN code functionality on user level. For each user an own PIN code can be entered in the system. It is not mandatory required, as this is an optional field. PIN codes can be used to authorize the appropriate user at Deutsche Börse via telephone in order to perform risk control operations, such as an emergency mass deletion. Users can view their own PIN in the login window of the GUIs. It is important to note that users, who are assigned the Service Administrator role or the User Data View role, are also able to see the PIN codes of all other users within the same business unit.

3.4 User Roles

The T7 system provides a set of pre-defined user roles, configured and maintained by Deutsche Börse. User roles offer participants a simplified approach to administration:

- Sets of resources (e.g. Add Order) are combined to define a logical user role (e.g. Cash Trader).
- A participant assigns roles to users, and multiple roles can be assigned to the same user (multiple user IDs are not needed).
- A user is granted entitlements for specific roles for specific product assignment groups (see 3.5).

Refer to section 4 for the complete set of pre-defined user roles available to participants.

The following diagram is an example of the user role concept, showing that a subset of all available resources (on the left) is selected to form a role (trader role on the right):

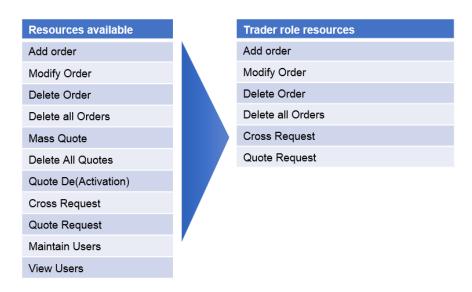


Image 3: Combination of resources to roles

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

3.5 Entitlements

Participants entitle users for specific user roles for specific product assignment groups.

The following diagram shows some example combinations of entitlements:

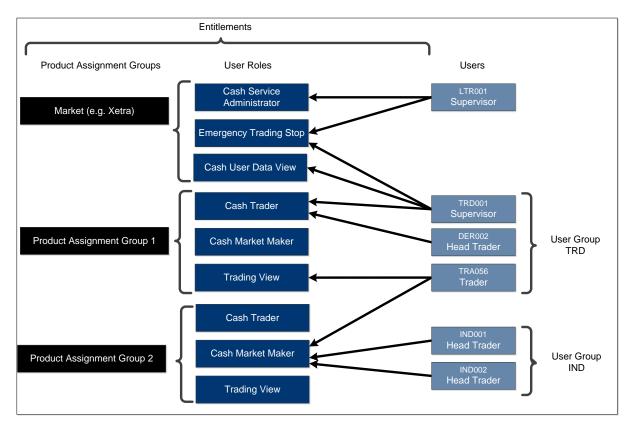


Image 4: Entitlement structure

For example, user TRD001 has a supervisor user level and has been entitled to the *Cash Trader* role for product assignment group 1 as well as *Emergency Trading Stop* and *User Data View* roles for the entire market. User TRA056 has been entitled to the *Cash Trading View* role in product assignment group 1 and the *Cash Trader* role in product assignment group 2.

Participants can assign users to more than one role, however certain restrictions apply that are described further in section 4.

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

3.6 Maximum Order Value

The Maximum Order Value (MOV) is an optional parameter determining the maximum value of an order that a trader is allowed to enter. The value of the order is calculated as quantity times price for buy limit orders and as quantity times last traded price for market orders and sell limit orders. The MOV is stored in exchange currency, i.e. in case of orders in a foreign currency instrument, the respective exchange rate needs to be taken into account.

Maximum Order Value = Quantity X Price

MOV for a specific user and product are maintained by the participants themselves, using the Admin GUI. Since this is an optional field, it is not required to enter a value. In this case, the user will not be able to enter orders and quotes.

3.7 Maximum Order Quantity

The Maximum Order Quantity is also a restriction, which can be set on user level. The size of the order on order entry or modification is limited to this value. This parameter is not in use for Cash Market yet. It is planned to introduce this field to Cash Market with T7 release 6.0.

3.8 Trading Capacities

Whenever a user enters an order, the order will have to be entered for a certain trading capacity. Three different trading capacities will be supported on T7:

- A Agent Account
- P Proprietary Account
- M Market Maker

The different trading capacities can be granted or revoked from a user independently of each other.

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| | | |
| Participant and User Maintenance Manual | Version 1.0 | |

3.9 User Levels (Scope of Orders)

Every user is designated to have one (and only one) user level: trader, head trader or supervisor. The user level defines which orders they are authorized to act upon (scope of orders):

| User Level | Scope of Orders |
|-----------------|---|
| 1 - Trader | View, modify and delete own orders only. |
| 2 - Head Trader | View, modify and delete own orders, as well as orders entered by other users of the same user group. |
| 3 - Supervisor | View, modify and delete own orders, as well as orders entered by other users of the same business unit. |

An order entered into T7 belongs to the entering user. If a second user changes this order, the ownership of this order will transfer to the second user. Only exchange Market Supervision can enter an order on behalf of another user.

Contrary to the ownership and scope of orders, a quote is owned by the session instead of the user. A session may enter only one quote per instrument. Sessions belonging to the same business unit may have different quotes in the same instrument, but only one quote per instrument per session is allowed. When a new quote is entered by the same session for the same instrument, the old quote will be overwritten. Based on the entitlement, a user may overwrite, modify or cancel any quote of another user that is owned by the same session.

In context of orders, the order attribute defines the order visibility. While standard orders can be viewed, modified and deleted by other sessions within the same business unit, lean orders cannot. For further information, please refer to the document "T7 Enhanced Trading Interface – Manual incl. Repository and Header files".

Participants define the user structure themselves, reflecting their business operations and practices. One or more supervisors can be defined, who are entitled to perform actions for the entire trading business unit.

Please note that users can only act upon orders in product assignment groups for which they are entitled, regardless of their user level (entitlement overrides user level), see 3.5.

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| | | |
| Participant and User Maintenance Manual | Version 1.0 | |

4. Pre-defined User Roles

This chapter describes the pre-defined user roles available to participants in the T7 system:

- Cash Service Administrator
- Cash User Data View
- Cash Trader
- Cash Market Maker
- Trading View
- Emergency Trading Stop
- Emergency Mass Deletion
- Trade Enrichment Rule
- Trade Enrichment Rule View
- Clearing Member Stop
- CM Backoffice View

A summary of user roles and their according resource assignments can be found in the appendix (see 7).

While certain roles are granted only in context of specific product assignment groups, there are other roles, which are valid market wide. The market wide roles can be found below:

| Product Assignment Group | Cash Service Admin. | Cash User Data View | | | Trade Enrichment Rule / View |
|--------------------------------|---------------------------|---------------------------|---|---|------------------------------------|
| Market wide | ✓ | ✓ | ✓ | ✓ | ✓ |

The following are examples of role assignments in context of product assignment groups. In the T7 GUI, these roles are referred to as on-exchange attributes:

| Product Assignment Group | Cash Trader | Cash Market Maker | Trading View |
|--------------------------------|-------------|-------------------|--------------|
| AUS0 | ✓ | | |
| DAX1 | ✓ | ✓ | |
| ETC1 | | ✓ | |
| AFR0 | | | ✓ |

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| | |
| Participant and User Maintenance Manual | Version 1.0 |

4.1 Cash Service Administrator

Participants appoint one or more service administrators to create and maintain their user structure and entitlement. This includes several operations such as:

- · Creation of new users
- Password resets
- Role assignments
- Setting the trading capacities
- · Setting the maximum order value
- Maintaining the PIN codes for each user

This role is relevant for the trading as well as for the clearing business unit.

Please note that new trading users have to be activated by the exchange before they are allowed to enter orders or quotes. The User must have been applied for via eXAS tool with an admitted trader linked.

The following table shows the specific resources assigned to the cash service administrator role:

| Resource | Role |
|---------------------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |
| Maintain Users | ✓ |
| View Users | ✓ |
| Delete All for STOP Trading | |
| Maintain Trade Enrichment Rules | |

A service administrator user is not restricted to that single role. He may also be assigned one more of more additional roles.

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

The service administrator role is assigned to an entire market and thus is not specific to a product assignment group. For new participants, the first service administrator user is initially created by Deutsche Börse.

4.2 Cash User Data View

A user data view role is available to enable a user to view all users, entitlements and maximum order values, without update capability. The cash user data view role is valid market wide. This role is relevant for the trading as well as clearing business unit.

The following table shows the specific resources assigned to the cash user data view role:

| Resource | Role |
|---------------------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |
| Maintain Users | |
| View Users | ✓ |
| Delete All for STOP Trading | |
| Maintain Trade Enrichment Rules | |

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| Participant and User Maintenance Manual | Version 1.0 |

4.3 Cash Trader

The trader role enables order-handling functions, cross requests as well as quote requests. This role is relevant for the trading business unit only and is assigned to specific product assignment groups.

The following table shows the specific resources assigned to the trader role:

| Resource | Role |
|----------------------|------|
| Add Order | ✓ |
| Modify Order | ✓ |
| Delete Order | ✓ |
| Delete all Orders | ✓ |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | ✓ |
| Quote Request | ✓ |

| Resource | Role |
|-----------------------------------|------|
| Maintain Users | |
| View Users | |
| Delete All for STOP Trading | |
| Maintain Trade Enrichment Rules | |
| View Trade Enrichment Rules | |
| Stop trading for Business Unit | |
| Release trading for Business Unit | |
| Stop Trading for User | |
| Release Trading for User | |

4.4 Cash Market Maker

The cash market maker role enables all quote handling functions, such as adding and maintaining quotes, updating quotes as well as quote activation and deactivation. This role is relevant for the trading business unit only.

The market maker role is assigned to specific product assignment groups.

The following table shows the specific resources assigned to the market maker role:

| Resource | Role |
|----------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | ✓ |
| Delete All Quotes | ✓ |
| Quote De(Activation) | ✓ |
| Cross Request | ✓ |
| Quote Request | |
| Maintain Users | |

| Resource | Role |
|--|------|
| View Users | |
| Delete All for STOP Trading | |
| Maintain Trade Enrichment Rules | |
| View Trade Enrichment Rules | |
| Stop trading for Business Unit | |
| Release trading for Business Unit | |
| Stop Trading for User | |
| Release Trading for User | |
| Delete All Orders / Quotes for All Products | |

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| Participant and User Maintenance Manual | Version 1.0 |

4.5 Trading View

The trading view role only applies to users of the Trader GUI and provides restricted display access to trading data in the Market View, Order View, Trade View, Time & Sales View and Ticker View windows. The trading view role is assigned to specific product assignment groups, and is not required if a user is already assigned a trader or market marker role. This role is relevant for the trading business unit only.

The Trader GUI displays market information only for products that the user is assigned a trading view, trader or market maker role for the corresponding product assignment group.

4.6 Emergency Trading Stop

The emergency trading stop role enables risk control functions to stop trading for a user or the entire business unit, and automatically delete orders and quotes. In order to give this role to a user it is required that this user has his level set to 'Supervisor'. Without the Supervisor level, it will not be possible to grant this role. This role is relevant for the trading business unit only.

In case a business unit is stopped, this stop applies to all users of the business unit.

The emergency trading stop role can be added to supplement any other role, as long as the user level is set to supervisor. The emergency trading stop role is assigned to an entire market, not a product assignment group.

Participants must have at least two users with the emergency trading stop role in order to stop a user or business unit from trading; stop trading functions use the four-eye principle as a safeguard, see 5.4.

The following table shows the specific resources assigned to the emergency trading stop role:

| Resource | Role |
|----------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |

| Resource | Role |
|-----------------------------------|------|
| Maintain Users | |
| View Users | |
| Delete All for STOP Trading | ✓ |
| Maintain Trade Enrichment Rules | |
| View Trade Enrichment Rules | |
| Stop trading for Business Unit | ✓ |
| Release trading for Business Unit | ✓ |
| Stop Trading for User | ✓ |
| Release Trading for User | ✓ |

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| | |
| Participant and User Maintenance Manual | Version 1.0 |

4.7 Emergency Mass Deletion

The emergency mass deletion role enables the market wide deletion of all orders and quotes for all products via the Trader GUI or the Admin GUI. This role is relevant for the trading business unit only.

Deletion of orders can be performed for a specific user or for the entire business unit. The scope of orders allowed to be selected for deletion is controlled by the assigned user level, see 3.9. For example, trader level can mass delete own orders only, and supervisor level can mass delete all orders for an entire business unit.

The scope of quotes allowed to be selected for mass deletion does not depend on the user level. With this role assigned, any user level can delete all quotes for the entire business unit.

The emergency mass deletion role can be added to supplement any other role, and is assigned to an entire market, not a product assignment group.

The following table shows the specific resources assigned to the emergency mass deletion role:

| Resource | Role |
|----------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |

| Resource | Role |
|--|----------|
| Maintain Users | |
| View Users | |
| Maintain Trade Enrichment Rules | |
| View Trade Enrichment Rules | |
| Stop trading for Business Unit | |
| Release trading for Business Unit | |
| Stop Trading for User | |
| Release Trading for User | |
| Delete All Orders / Quotes for All Products | √ |

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| | |
| Participant and User Maintenance Manual | Version 1.0 |

4.8 Trade Enrichment Rule

A trade enrichment rule role is available to enable a user to view and maintain trade enrichment rules for the entire business unit, using the Admin GUI. This role is relevant for the trading business unit only.

Trade enrichment rules are a new feature of T7, and are used for automatic enrichment of executed orders and quotes that use the short order message layout. The trade enrichment rule role is assigned to an entire market, not a product assignment group.

The trade enrichment rule role can be added to supplement any other role. Without this role, users are unable to maintain trade enrichment rules. For more information about trade enrichment rule functionality, please refer to the document "T7 Functional and Interface Overview".

The following table shows the specific resources assigned to the trade enrichment rule role:

| Resource | Role |
|----------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |

| Resource | Role |
|---|------|
| Maintain Users | |
| View Users | |
| Maintain Trade Enrichment Rules | ✓ |
| View Trade Enrichment Rules | ✓ |
| Stop trading for Business Unit | |
| Release trading for Business Unit | |
| Stop Trading for User | |
| Release Trading for User | |
| Delete All Orders / Quotes for All Products | |

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| | |
| Participant and User Maintenance Manual | Version 1.0 |

4.9 Trade Enrichment Rule View

A trade enrichment rule view role is available to enable a user to view all trade enrichment rules without update capability. This role is relevant for the trading business unit only.

The trade enrichment rule view role is assigned to an entire market, not a product assignment group.

The following table shows the specific resources assigned to the trade enrichment rule view role:

| Resource | Role |
|----------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |

| Resource | Role |
|--|------|
| Maintain Users | |
| View Users | |
| Maintain Trade Enrichment Rules | |
| View Trade Enrichment Rules | ✓ |
| Stop trading for Business Unit | |
| Release trading for Business Unit | |
| Stop Trading for User | |
| Release Trading for User | |
| Delete All Orders / Quotes for All Products | |

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| | |
| Participant and User Maintenance Manual | Version 1.0 |

4.10 Clearing Member Stop

The Clearing Member Stop role allows a user of a clearing member to stop one or many of his related trading participants. This role is relevant for the clearing business unit only. In case a trading BU is stopped by its clearing member, this stop applies to all users of the trading BU. The clearing member stop role is assigned to an entire market, not a product assignment group.

Participants must have at least two users with this role in order to stop a related trading BU as this functionality underlies a four-eye principle.

This functionality is only available to clearing members who have specifically applied for it. If participants are interested in making use of this functionality, they will have the possibility to contact their according Key Account Managers from Deutsche Börse Group.

The following table shows the specific resources assigned to the emergency trading stop role:

| Resource | Role |
|----------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |

| Resource | Role |
|---------------------------------|------|
| Maintain Users | |
| View Users | |
| Delete All for STOP Trading | |
| Maintain Trade Enrichment Rules | |
| View Trade Enrichment Rules | |
| Stop trading BU by CM | ✓ |
| Release trading BU by CM | ✓ |
| Stop Trading for User | |
| Release Trading for User | |

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| | | |
| Participant and User Maintenance Manual | Version 1.0 | |

4.11 CM Backoffice View

The CM Backoffice View role allows a user of a clearing member to inquire all trades of his related trading participants. This role is relevant for the clearing business unit only.

The following table shows the specific resources assigned to the emergency trading stop role:

| Resource | Role |
|----------------------|------|
| Add Order | |
| Modify Order | |
| Delete Order | |
| Delete all Orders | |
| Mass Quote | |
| Delete All Quotes | |
| Quote De(Activation) | |
| Cross Request | |
| Quote Request | |

| Resource | Role |
|---------------------------------|------|
| Maintain Users | |
| View Users | |
| CM Trade View | ✓ |
| Maintain Trade Enrichment Rules | |
| View Trade Enrichment Rules | |
| Stop trading BU by CM | |
| Release trading BU by CM | |
| Stop Trading for User | |
| Release Trading for User | |

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| Participant and User Maintenance Manual | Version 1.0 |

5. Maintenance

This chapter describes the maintenance functions that will be performed by service administrators.

Data related to product assignment groups, participants, business units, users and risk controls will be made available to service administrators, including all identifiers needed for all interfaces.

5.1 Product Assignment Groups

Product assignment groups are created and maintained by Deutsche Börse.

5.2 Participant and Business Unit

The participant and business unit structure is created and maintained by Deutsche Börse.

5.3 Users

This section describes the steps necessary to maintain users of T7.

Authorization can be configured by service administrators, as follows:

| Type of restriction | Achieved by |
|--------------------------|---|
| Restrict products | Product assignment groups, see Error! Reference source not found. (also transaction size limits for product level) |
| Restrict functions | User roles (e.g. market maker or trading view), see 3.4 |
| Restrict volumes traded | Maximum order value limit, see 3.6 |
| Restrict scope of orders | User levels (trader, head trader, supervisor), see 3.9 |

Viewing restrictions apply to users of the Trader GUI. These restrictions may not be implemented in alternative applications that access T7 via the electronic interfaces.

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|---|----------------------|--|
| | | |
| Participant and User Maintenance Manual | Version 1.0 | |

5.3.1 Adding a user

Service administrators are able to add users themselves, according to the following steps:

| # | Task | Description |
|---|----------------------------|---|
| 1 | Apply for Trader Admission | Participants must apply for admission for all trading users (trader role or market maker role). This is done using the Electronic Exchange Admission Service (eXAS) tool available in the T7 member section. This step can be skipped if the user is a non-trading user or a simulation user. |
| 2 | Apply for user | This is mandatory for all trading users and highly recommended for non-trading users. This is done using the eXAS tool available in the T7 member section. This step is not applicable to simulation users. |
| 3 | Create user in T7 | Using the Admin GUI, a User Setup Wizard will guide service administrators through the necessary steps, to add: • User attributes (e.g. name, user level, user group, etc.) • Entitlements (roles per product assignment groups) • MOV • PIN • Initial password, either entered manually, or automatically generated (for password rules, see 5.3.3) • (Default) Settlement Account For more information regarding the User Setup Wizard and the T7 Admin GUI for Cash Market, please see chapter 7.3). Trading users must be activated by Deutsche Börse before they can trade using T7. A unique numeric user ID will be generated for each user and is available for display and export on the Admin GUI, as well as on reports RD110, RD115, RD130 and RD135 available in the Common Report Engine. These numeric identifiers are used in all of the electronic interfaces to T7 (ETI and FIX Gateway). |

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

| Task | Description |
|--------------------|---|
| Activate user | Prior to activation, new trading users will be assigned a negative |
| (done by exchange) | entitlement "Trader Examination Role" that will prevent any trading |
| | activity. |
| | Deutsche Börse will activate trading users when the admission |
| | process and all above steps are completed. |
| | Simulation users are activated upon request, by emailing |
| | clearingdata@deutsche-boerse.com. |
| | Non-trading users can immediately begin using T7 after the user |
| | is created (step #3 above). |
| | |

5.3.2 Modifying a user

Using the Admin GUI, service administrators may modify user information. If a non-trading user is updated to become a trading user, there must be a trader admission, see 5.3.1, step #1.

Modifications to the user attributes (MOV, entitlement, user group, user level and password resets) are effective immediately. Users must log out and then log back in for these changes to take effect.

5.3.3 Password Rules

User password requirements for T7 are:

- minimum of 8 and a maximum of 16 characters
- valid characters: [a-z, A-Z, 0-9] and special characters: ['+', '-', '@', '!', '_', '\$', '%', '&', '/', '=', '*', #']
- minimum 1 uppercase letter and minimum 1 lowercase letter
- minimum 1 special character
- maximum number of repeated characters allowed is 6
- a password history is maintained to prevent the last 10 passwords from being re-used.

User passwords do not automatically expire. Users are able to change their passwords themselves. Passwords can only be changed using the GUI. Passwords generated during setup of new users and passwords generated during password reset by Service Administrator will automatically expire after first login. The user is then forced to create a new password. Participants are responsible for the regular refresh of user passwords, according to their own security guidelines.

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

5.3.4 Deleting a user

Service administrators may delete users, according to the following steps:

| # | Task | Description |
|---|-----------------|---|
| 1 | Notify Exchange | Deutsche Börse should be notified of all user deletions. This is required for all trading and non-trading users, using the eXAS tool. This step is not applicable for simulation users. |
| 2 | Delete user | User deletions are done using the Admin GUI and are effective on the next day (but user login is prevented immediately). |

Before deleting a user, participants should ensure that there are no open orders remaining in the system that were entered by this user. Any open orders for deleted users are automatically removed at the end of the trading day.

Participants are responsible for immediate deletion of a user account, when the associated person is no longer with the organization.

5.4 Risk Controls

T7 provides several risk control functions for participants, which allows them to stop a user or an entire business unit from trading. In addition, clearing members are also able to stop one or more of their related trading members. Stopped users can continue to view trading activity, but are not able to enter new orders or quotes.

5.4.1 Stopping Trading for User

Users entitled to the emergency trading stop role may stop and release any user as follows:

| # | Task | Description |
|---|-----------------------|--|
| 1 | Stop Trading for user | When a user is stopped (and confirmed), using the Admin GUI, any |
| | | orders belonging to the user are immediately deleted. |
| | | Note that quotes will not be deleted – quotes belong to the entering |
| | | session, not a specific user. |
| | | If a stopped user is subsequently released, the user may resume |
| | | trading activities. Previously deleted orders are not restored. |
| | | |

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

| # | Task | Description |
|---|------------------------|--|
| 2 | Confirm Stop / Release | The stop and release functions require that two users, both with |
| | (four-eyes principle) | emergency trading stop role, execute the function. |
| | | If a stopped user is subsequently released, the user may resume |
| | | trading activities. Previously deleted orders are not restored. |
| | | |

5.4.2 Stopping Trading for a Business Unit

Users entitled to the emergency trading stop role may stop and release an entire business unit as follows:

| # | Task | Description |
|---|---|---|
| 1 | Stop Trading for business unit | When a business unit is stopped (and confirmed), using the Admin GUI, all open orders and quotes of the entire Business Unit are deleted. |
| 2 | Confirm Stop / Release (four-eyes principle) | The stop and release functions require that two users, both with Emergency Trading Stop role, execute the function. If the stopped business unit is subsequently released, all users may resume trading activities, except for any users previously stopped individually. Previously deleted orders and quotes are not restored. |

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| | | |
| Participant and User Maintenance Manual | Version 1.0 | |

5.4.3 Clearing member stopping a trading member

Clearing members may stop a trading member, for whom they are a designated clearing member, in T7 as follows:

| # | Task | Description |
|---|------------------------|---|
| 1 | Stop Trading Member | This operation can be performed using the T7 Clearer GUI. |
| | | When a trading member is selected he can be stopped. As soon |
| | | as the trading member is stopped, all open orders and quotes will |
| | | be deleted and the participant will not be able to enter new orders |
| | | and quotes. |
| | | If the stopped business unit is subsequently released, all users |
| | | may resume trading activities. Previously deleted orders and |
| | | quotes are not restored. |
| _ | | |
| 2 | Confirm Stop / Release | The stop as well as the release functions require that two users, |
| | (four-eyes principle) | both with the Clearing Member Stop role, execute the function. |

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

6. Participant migration of Cash Market

Member and user IDs will be migrated with analogous access rights, settings and instrument assignments, as they are setup in the Xetra system at end of day on June 2nd 2017.

For every active member ID at least one business unit will be generated in T7 depending on their activity in the Xetra system. For every Non-Clearing Member a trading business unit will be setup with a business unit ID that will be the same as their member ID in Xetra today. For members which are only offering clearing and/or settlement services a clearing business unit will be setup with an ID created from their Xetra member ID and adding "CL" as additional characters at the end. Members acting as trading member and as clearing member or settlement institute will receive both types of business units. For more details on the concept of participants, business units and users, please refer to chapter 3.2. The T7 business unit and user roles as well as settings are derived from the RALs and settings of the members and users in the trading system Xetra within the migration according to the following rules:

| Business Unit | | |
|-----------------------------|--|--|
| T7 Role/Setting | Xetra RAL/Setting | |
| Cash Service Administrator | -none- (always assign) | |
| Emergency Trading Stop | -none- (always assign to Trading Business Unit) | |
| Trade Enrichment Rule | -none- (always assign to Trading Business Unit) | |
| Trade Enrichment Rule View | -none- (always assign to Trading Business Unit) | |
| CM Backoffice View | -none- (always assign to Clearing Business Unit) | |
| Cash Trader | RAL (7) Enter Order | |
| Cash Market Maker | RAL (11) Enter Quote | |
| Trading View | -none- (always assign to Trading Business Unit) | |
| Cash User Data View | -none- (always assign) | |
| Emergency Mass Deletion | -none- (always assign to Trading Business Unit) | |
| SMP Prevention ¹ | Self Match Prevention not enabled | |
| Clearing Member Stop | RAL (102) Modify CM Stop/Release | |

The role "SMP Prevention" disables the possibility to use Self Match Prevention, which is usually enabled for all business units. The role can be assigned and hence SMP switched off for members on request.

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| | |
| Participant and User Maintenance Manual | Version 1.0 |

| User | | |
|---|--|--|
| T7 Role/Setting | Xetra RAL/Setting | |
| Cash Service Administrator | RAL (3) Add User | |
| Cash Trader | RAL (7) Enter Order | |
| Cash Market Maker | RAL (11) Enter Quote | |
| Trading View | RAL (20) Inquire Trade and | |
| | without RAL (7) Enter Order | |
| Cash User Data View | RAL (1) Inquire User List and | |
| | without RAL (3) Add User | |
| Emergency Mass Deletion RAL (29) Delete All Orders and Quotes | | |
| Clearing Member Stop | RAL (102) Modify CM Stop/Release | |
| CM Backoffice View | -none- (always assign to user of Clearing Business Unit) | |

Users which have not logged in and have not changed their password after the introduction of Xetra Release 12.0 in 2011 are assumed to be not production-relevant and are not migrated at all.

For users which will be migrated from Xetra to T7, their passwords will be migrated for the first login but set to be expired. Therefore, the users need to change their password during the first login. In this context, it is highly recommended that for all users, including technical users and order routing machines, the change of the initial password should be done prior to the first trading day. The change of passwords can only be performed via the GUI.

Senior traders will be migrated to be "Head Traders" in T7 while Non-Senior traders will be setup as "Traders" in T7. Trading accounts "Agent", "Proprietary" and "Designated Sponsor" will be migrated as well and assigned as Trading Capacities "Agent", "Proprietary" and "Market Maker". The Maximum Order Value and the Default Settlement Information setup for a user will be migrated to T7 analogously while Maximum Order Values higher than 9,999,999,999.9999999999999 will be capped to this value.

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| | | |
| Participant and User Maintenance Manual | Version 1.0 | |

7. Appendix

The following tables show the specific resources assigned to the various roles, separated by context.

7.1 Administrative roles

| Resource / Role | Cash Service Administrator | Cash User Data View | Emergency Trading Stop | CM Backoffice View | Clearing Member Stop |
|---|-------------------------------|------------------------|---------------------------|--------------------|-------------------------|
| Add Order | | | | | |
| Modify Order | | | | | |
| Delete Order | | | | | |
| Delete all Orders | | | | | |
| Mass Quote | | | | | |
| Delete all Quotes | | | | | |
| Quote De(Activation) | | | | | |
| Cross Request | | | | | |
| Quote Request | | | | | |
| Maintain Users | ✓ | | | | |
| View Users | ✓ | ✓ | | | |
| Delete All for STOP Trading | | | ✓ | | |
| Maintain Trade Enrichment Rules | | | | | |
| View Trade Enrichment Rules | | | | | |
| Stop Trading for BU | | | ✓ | | |
| Release Trading for BU | | | ✓ | | |
| Stop Trading for User | | | ✓ | | |
| Release Trading for User | | | ✓ | | |
| Delete all Orders/Quotes for all Products | | | | | |
| CM Trade View | | | | ✓ | |
| Stop trading BU by CM | | | | | ✓ |
| Release trading BU by CM | | | | | ✓ |
| | | | Supervisor Level | | |

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|---|----------------------|
| | |
| Participant and User Maintenance Manual | Version 1.0 |

7.2 On-exchange roles

| Resource / Role | Cash Trader | Cash Market Maker | Trading View | Emergency Mass Deletion | Trade Enrichment Rule | Trade Enrichment View |
|---|-------------|----------------------|-----------------|----------------------------|--------------------------|--------------------------|
| Add Order | ✓ | | | | | |
| Modify Order | ✓ | | | | | |
| Delete Order | ✓ | | | | | |
| Delete all Orders | ✓ | | | | | |
| Mass Quote | | ✓ | | | | |
| Delete all Quotes | | ✓ | | | | |
| Quote De(Activation) | | ✓ | | | | |
| Cross Request | ✓ | ✓ | | | | |
| Quote Request | ✓ | | | | | |
| Maintain Users | | | | | | |
| View Users | | | | | | |
| Delete All for STOP Trading | | | | | | |
| Maintain Trade Enrichment Rules | | | | | ✓ | |
| View Trade Enrichment Rules | | | | | ✓ | ✓ |
| Stop Trading for BU | | | | | | |
| Release Trading for BU | | | | | | |
| Stop Trading for User | | | | | | |
| Release Trading for User | | | | | | |
| Delete all Orders/Quotes for all Products | | | | ✓ | | |

| T7 Cash Market | Deutsche Börse Group | | |
|---|----------------------|--|--|
| Participant and User Maintenance Manual | Version 1.0 | | |

7.3 T7 Admin GUI Windows

7.3.1 Welcome View

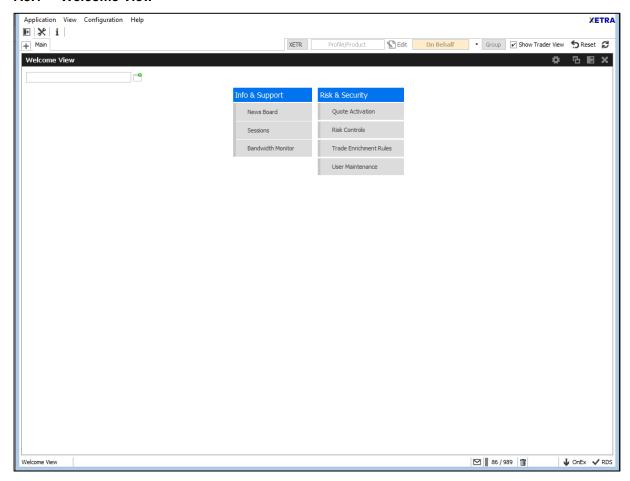


Image 5: T7 Admin GUI Welcome View

| T7 Cash Market | Deutsche Börse Group | |
|---|----------------------|--|
| Participant and User Maintenance Manual | Version 1.0 | |

7.3.2 User Maintenance Wizard – General Attributes

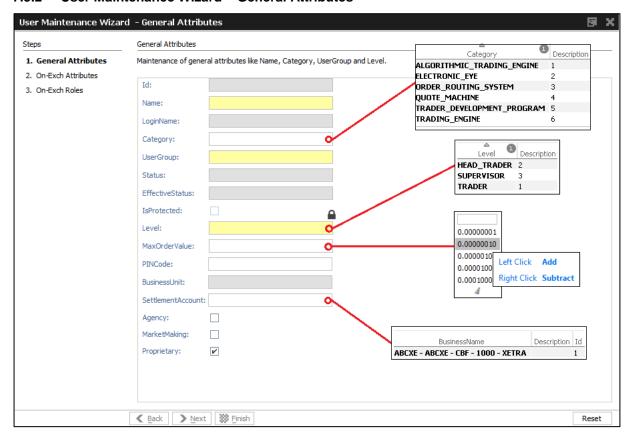


Image 6: T7 Admin GUI User Maintenance Wizard - General Attributes

| T7 Cash Market | Deutsche Börse Group |
|---|----------------------|
| Participant and User Maintenance Manual | Version 1.0 |

7.3.3 User Maintenance Wizard – On-Exch Attributes

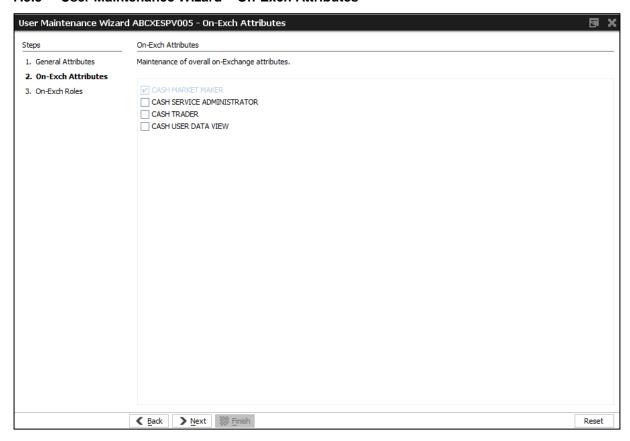


Image 7: T7 Admin GUI User Maintenance Wizard – On-Exch Attributes

| T7 Cash Market | Deutsche Börse Group | | |
|---|----------------------|--|--|
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| Participant and User Maintenance Manual | Version 1.0 | | |

7.3.4 User Maintenance Wizard - On-Exch Roles

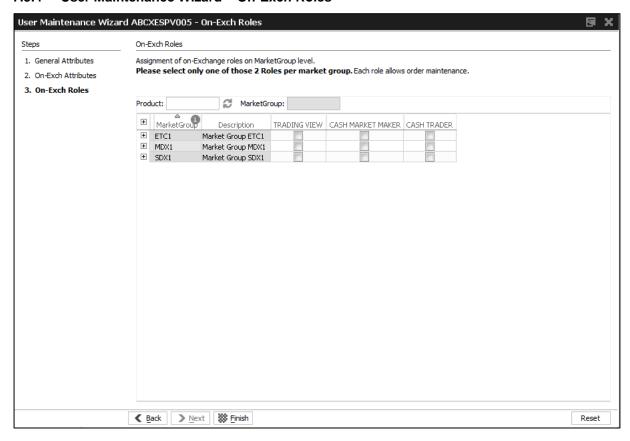


Image 8: T7 Admin GUI User Maintenance Wizard - On-Exch Roles