Eurex Clearing C7

C7 – Advanced Risk Protection Functional Reference Guide

Document version C7 Release 12.1 - Version 1.0

- Simulation valid from 23 March 2026
- Production valid from 18 May 2026

Eurex® 2025

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Change history

Date	Release	Change
7 Sep 2018		Initial Version
2020	7.0	No update for C7 Release 7.0
Feb 2021	7.0.1	No update for C7 Release 7.0.1
9 Mar 2021	7.1	No update for C7 Release 7.1; Updated Eurex brand design
28 June 2021	8.0	No update for C7 Release 8.0
7 Sep 2021	8.1	No change for C7 Release 8.1
18 Feb 2022	8.1	No change for C7 Release 8.1; Update Trademarks, Typos correction
10 Aug 2022	9.0	Added details about a change related to possibility of selecting Delete Orders/Quotes flag as FALSE (Soft Breach) or TRUE (Hard Breach) in case of level 3 limits and automatic release of risk limits.
1 Dec 2022	9.1	No change for C7 Release 9.1
5 June 2023	10.0	No changes for C7 Release 10.0
30 Nov 2023	10.1	No changes for C7 Release 10.1
5 June 2024	11.0	Added details related to email notification service in case of Level 3 breach.
2 Dec 2024	11.1	No changes for C7 Release 11.1
26 May 2025	12.0	No changes for C7 Release 12.0
1 Dec 2025	12.1	Added details related to email notification service in case of Level 1 breach and Level 2 breach

Abbreviations and definitions

Following table contains the list of abbreviations and definitions used in this document.

Term	Description
CM	Clearing Member
CRE	Common Report Engine
C7 ARP	Advanced Risk Protection Component of C7
FIXML	FIXML is the XML encoding used within FIX. It is widely adopted for derivatives post trade clearing and settlement globally.
GUI	Graphical User interface
NCM	DC Market Participant or Indirect Client Market Participant (Non-Clearing Member)
OWASP	Open Worldwide Application Security Project
4EP	Four Eye (2nd Level) Review and Approval

1 Introduction

This document provides an overview of the functionality related to Advanced Risk Protection within C7 i.e. C7 ARP.

Please note that since the Advanced Risk Protection functionalities are largely distinct from other C7 functionalities, this functional reference has been created as a stand-alone document dedicated to Advanced Risk Protection functionalities only.

For detailed information on the C7 Advanced Risk Protection GUI (C7 ARP GUI), please refer to the C7 Advanced Risk Protection GUI - User Manual, which is available for download on the Eurex Clearing website:

www.eurex.com/ec-en/ > Support > Initiatives & Releases > C7 Releases > related release > System documentation

⚠	Caution: The Advanced Risk Protection defines 3 action levels. Level 1 and Level 2 limits represent early lines of defense. Level 3 (Hard Breach) is designed as a measure of last resort in order to prevent or limit damage to Clearing Member's and Trading Member's liquidity. Consequently, resulting measures are severe. All open orders, quotes and pending TES trades will be deleted. Deleted orders, quotes and pending TES trades cannot be restored; therefore, any order book priority will be lost. In addition the respective member will be set to HALT in ETD Trading and Clearing.
	Alternatively to Level 3 Hard Breach, it is possible to set up a Level 3 Soft Breach wherein pending TES trades will be deleted but open orders and quotes will not be deleted. The respective member will be set to HALT in ETD Trading and Clearing provided certain restricted ETD trading maintenance remains available.

1.1 Audience

This document is intended for all the Members and Vendors intending to use the C7 Advanced Risk Protection services. It serves as a functional overview of how to use the service. It assumes that the reader has a basic understanding of the clearing and risk management functionalities and the systems offered by Eurex Clearing.

1.2 Conventions used in this document

Cross-references to other chapters within this document are always clickable but not marked separately.

Hyperlinks to websites are underlined.

Changes applied to this document after the last version has been published (other than grammar/ spelling corrections) are marked with a change bar in the left margin as demonstrated in this paragraph. Old change bars will be removed from version to version.

2 Interfaces

This Chapter explains the system overview from the Advanced Risk Protection functionality point of view.

2.1 System overview

The main responsibility of C7 ARP application is to maintain the member risks limits and manage member status for ETD members. The risk limits that are maintained in C7 ARP are sent to the Risk Management system (Prisma). Prisma detects and sends the risk limit breaches and releases to C7 ARP. C7 GUI users can update the risk limits, release the active breaches, change the member status and inquire about the limit breaches/releases. The messages corresponding to the breaches/ releases and change in member status are sent to T7 Trading platform and members using FIXML interface as explained in Section 5.
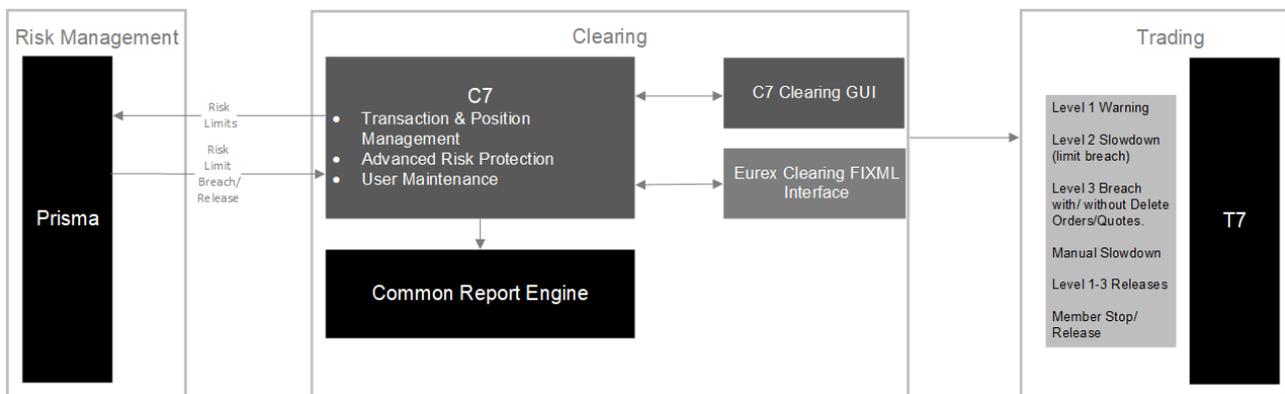
Figure 1 : C7 ARP context diagram

2.2 C7 Clearing GUI for Advanced Risk Protection services

There is a designated section of the C7 Clearing GUI for Advanced Risk Protection services. Members can use the designated section i.e. C7 Advanced Risk Protection Clearing GUI (C7 ARP GUI) for all Advanced Risk Protection services such as maintaining member risk limits, member Stop/Release and member Slowdown.

For detailed information on the C7 ARP GUI, please refer to the C7 Advanced Risk Protection GUI - User Manual, which is available for download on the Eurex Clearing website:

www.eurex.com/ec-en/ > Support > Initiatives & Releases > C7 Releases > related release > System documentation

2.3 Reports

Reports are solely distributed via the Common Report Engine and are available in XML and CSV file formats. Full details on report structures and XSD schema files are available on the Eurex Clearing website in the Eurex XML Report Reference Manual.

www.eurex.com/ec-en/ > Support > Initiatives & Releases > C7 Releases > related release > System documentation

For further information on the Common Report Engine, please refer to the Common Report Engine (CRE), User Guide. All the documents are available at:

www.eurex.com/ec-en/ > Support > Technology > Common Report Engine

3   Member Risk Limit maintenance

3.1   Different types of risk and action levels

<u>Risk Types:</u> The following are the predefined risk limit types in C7 ARP

Risk type	Abbreviation	Description
1	TMR	Premium Margin + Initial Margin + Current Liquidating Margin
2	CULI	Premium Margin + Current Liquidating Margin + Variation Margin + Option Premium
3	CASH	Variation Margin + Option Premium
4	NDM	Initial Margin

The mentioned risk types contain risk and cash elements from all the markets (including OTC-IRS and Repo for Eurex Clearing AG) for which Eurex Clearing AG/European Commodity Clearing AG acts as central counterpart and therefore calculates margin requirements.

<u>Risk Limit:</u> Threshold amount set by Eurex Clearing AG/European Commodity Clearing AG (for Clearing Member) or Clearing Member or NCM within C7 ARP for one or more risk types triggering a defined Action Level.

<u>Action Levels:</u> Action Levels determines the consequences following an event constituting a Risk Limit Breach. Different Action Levels are: Level 1, Level 2, Level 3. For further details regarding the consequences of different levels refer to Chapter 3.3.

3.2   Maintenance of risk limits

The risk limit amount will be defined in multiples of 1,000 in the Clearing Member currency. CMs cannot set limit for themselves. Only Eurex Clearing AG/European Commodity Clearing AG is allowed to set limit for CM. NCMs can set limit for themselves. CM of NCM can also set limits for NCMs. Level 1 and Level 3 limits are applicable for CM. Level 1, 2 and 3 limits are applicable for NCM.

3.2.1   Key terms used in C7 ARP

Maintenance Participant: Participant who sets the risk limit. Only the Maintenance Participant can change the risk limit. The Maintenance Participant can be CM for NCM or NCM for itself. When the Operator (Eurex Clearing AG/European Commodity Clearing AG) sets limit for CM/NCM, the Maintenance Participant is displayed as the CM/NCM.

Affected Participant: Participant ID for whom the risk limits apply (CM or NCM).

Delay/Time Lag: This value specifies minimum time between two add/modify Orders and Quotes for the Participant in all the products. This parameter is disabled for action Levels 1 and 3 and for Level 2 it can be either 0 or value in range 250-5000 milliseconds. The most restrictive value of the Delay/Time Lag (i.e. the highest value of the Delay/Time Lag) is calculated amongst all risk types of breached Level

2 limits by C7 ARP (manual slowdown is treated same like Level 2 limit breach). The value can change with every Level 2 breach, release or slowdown action. The most up-to-date value is transferred to T7.

Delete Orders/Quotes flag: This flag is always set to FALSE for action levels 1 and 2 and can be set to TRUE or FALSE for action level 3. The default value for Level 3 however will be FALSE. For further details regarding the effect of this flag refer to Section 3.3.

Limit breached: It indicates the occurrence of an event constituting a Risk Limit Breach.

3.3 Risk limit breach and release

The risk limits set up at C7 ARP will be evaluated by Prisma for corresponding risk types. In case of breach following action will be performed by C7 ARP, depending on breach level.

3.3.1 Level 1 breach

- All open orders, quotes and pending TES trades remain untouched with the occurrence of Level 1 breach as Level 1 limits can only have the Delete Order/Quotes flag set to FALSE.

- C7 ARP informs the Maintenance Participant and Affected Participant via C7 ARP GUI and via email service.

3.3.2 Level 2 breach

- All open orders, quotes and pending TES trades remain untouched with the occurrence of Level 2 breach as Level 2 limits can only have the Delete Order/Quotes flag set to FALSE.

- The new orders/quotes will be delayed by the 'delay time' of the most restrictive amongst all risk types of the breached Level 2 limits.

- C7 ARP informs the Maintenance Participant and Affected Participant via C7 ARP GUI and via email service.

3.3.3 Level 3 breach

- All open orders, quotes and pending TES trades will be deleted in case the Delete Orders/Quotes flag's value is TRUE (Hard Breach). The open orders and quotes will remain untouched in case the Delete Orders/Quotes flag's value is FALSE but pending TES trades will be deleted (Soft Breach).

  Please note that ECC does not use the term Soft and Hard Breach. For understanding the specific usage of the ARP functionality according to the rules of ECC, please refer to ECC Clearing Conditions.

- The concerned CM/NCM will be set to Halt, that is, the ETD trading and clearing will be halted for the concerned CM/NCM, however, in case the Delete Orders/Quotes flag's value is FALSE, the clearing functions of derivative market will be halted for the concerned CM/NCM but the member will be able to perform some restricted ETD trading maintenance for orders and quotes (Soft Breach).

  For further trading details regarding the Hard and Soft Breach please refer to the T7 Functional Reference document at the following link

  www.eurex.com/ex-en/ > Support > Initiatives & Releases > T7 Release X.X > System documentation

- If a CM Level 3 limit is breached, all NCMs of the respective CM will be set to HALT.

- C7 ARP informs CM/NCM by a legal message on the C7 ARP GUI and the Eurex Clearing FIXML interface. Additionally, C7 ARP informs CM/NCM via email service. Please refer to Section 5 and Section 6 for further details regarding legal message text and email text respectively.

<table>
<tr>
<td>⚠️</td>
<td>Caution: The Advanced Risk Protection defines 3 action levels. Level 1 and Level 2 limits represent early lines of defense. Level 3 (Hard Breach) is designed as a measure of last resort in order to prevent or limit damage to Clearing Member's and Trading Member's liquidity. Consequently, resulting measures are severe. All open orders, quotes and pending TES trades will be deleted. Deleted orders, quotes and pending TES trades cannot be restored; therefore, any order book priority will be lost. In addition the respective member will be set to HALT in ETD Trading and Clearing.

Alternatively to Level 3 Hard Breach, it is possible to set up a Level 3 Soft Breach wherein pending TES trades will be deleted but open orders and quotes will not be deleted. The respective member will be set to HALT in ETD Trading and Clearing provided certain restricted ETD trading maintenance remains available.</td>
</tr>
</table>

3.3.4 Manual slowdown

NCM can be manually slowed down by a CM or NCM can slow himself down using the C7 ARP GUI. In this case, the following actions will be performed:

- Manual slowdown action will choose the Level 2 limit with highest 'delay time' amongst all risk types for that Maintenance Participant and Affected Participant even if not selected. But in case there exists already a Level 2 limit breach (due to manual slowdown or Level 2 limit breach maintained by a different Maintenance Participant) with even higher 'delay time' for the Affected Participant, this 'delay time' will be used.
- The new orders/quotes will be delayed by the 'delay time' of most restrictive amongst all risk types of breached Level 2 limits.
- C7 ARP informs the Maintenance Participant and Affected Participant via C7 ARP GUI.

3.3.5 Release limit and manual slowdown

There are 2 ways in which the active breaches can be released viz. automatic and manual.

- As soon as the risk requirements fall below the specified limit amount of the active breach, Risk Management System (Prisma) triggers an automatic limit release. Level 1 and Level 2 limits are released daily automatically before the start of each clearing day.
- The manual release of a limit can be performed only by the Maintenance Participant or by the Eurex Clearing AG/European Commodity Clearing AG from the C7 ARP GUI. In case the risk amount is still above the limit, a new breach is triggered immediately.

If several action levels of the same risk limit type are breached, then only the most severe action level of the risk limit can be released via GUI. Also the automatic release will only be triggered when the risk requirement falls below the limit amount for the most severe breached action level.

When the most severe risk limit is released, it automatically releases all action level risk limits of the same risk type. Please note:

- Manual slowdown will not be released due to automatic release and need to be released manually. Manual release, however, will release all breaches including manual slowdown.
- If any lower action level risk limit is still breached, Prisma will instruct about the same again.
- An automatic release will cancel any pending 4EP for the manual release for the same Maintenance Participant, Affected Participant, risk type combination except the 4EP for manual slowdown.

3.4 Impact of Clearing Member breach and Delete Orders/Quotes flag

In case the CM Level 3 limit set by the Clearing House is breached, then the value of the Delete Orders/Quotes flag, sent to T7 for this breach will be cascaded down to his NCMs. Exception to this is: The cases where the NCM has a more restrictive value because of another breach active due to his own set limits (NCM-NCM) or due to the limits set by his CM (CM-NCM). In such cases, the more restrictive value will be sent to T7 in the "Del. Orders/Quotes" flag for CM-NCM relationship.

3.5 Impact of Clearing Currency change

The CM/NCM sets the risk limit amount in the Clearing Currency. If the Clearing Currency is changed in C7 system, then it is effective on the next business day.

C7 ARP will reset all the risk limits (risk limits where affected participant is CM or NCM/RC) setup using old currency. The CM/NCM will have to setup the new risk limits again with new currency using the C7 ARP GUI. However, the active breaches will stay and will not be released automatically.

4   Member Stop/Release

Stop button enables Eurex Clearing AG and Clearing Member users to halt the ETD trading and clearing activities of the participants. For European Commodity Clearing AG please check relevant information on the website at www.ecc.de. The Stop/Release window provides Clearing Members and Eurex Clearing AG/European Commodity Clearing AG with the facility to perform a 'Stop' or 'Release' action. Clearing Members can trigger a 'Stop/Release' action on their Non-Clearing Members. Eurex Clearing AG/European Commodity Clearing AG can trigger a 'Stop-Release' action on Clearing Members and Non Clearing Members. Eurex Clearing AG/European Commodity Clearing AG can also trigger a 'Stop-Release' action on Non Clearing Members on behalf of the CM.

Members will be informed immediately about the stop or release action by a legal messages on the C7 ARP GUI and the Eurex Clearing FIXML interface.

Clearing Members and Non Clearing Members are not allowed to take 'Stop/Release' action on themselves.

4.1   Impact of Clearing Relationship change

In case of a change in the Clearing Relationship, the member status of the NCM may change depending on the following scenarios.

Let's assume that a NCM had a Clearing Relationship with CM1. Now, the NCM changes the Clearing Relationship to CM2. Consider that the NCM was on HALT before the Clearing Relationship change was processed. Now, the NCM member status will either switch to Active or remain in Halt, depending on the following scenarios.

Halt Reason	Performed by/ Level Set-up by	Action on	Status of NCM Under Old Clearer CM1	Status of NCM Under New Clearer CM2
Stop Button pressed	Clearing House Operator	CM1	HALT	ACTIVE
Stop Button pressed	CM1	NCM	HALT	ACTIVE
Stop Button pressed	Clearing House Operator on behalf of CM1	NCM	HALT	ACTIVE
Stop Button pressed	Clearing House Operator	NCM	HALT	HALT
Level 3 Limit Breach	CM1–CM1	CM1	HALT	ACTIVE
Level 3 Limit Breach	CM1–NCM	NCM	HALT	ACTIVE
Level 3 Limit Breach	NCM–NCM	NCM	HALT	HALT

5 Legal messages via Eurex Clearing FIXML interface and C7 GUI

C7 ARP will send Legal Messages to the CM and NCM for all activities leading to the member status Halt or Active. Following are the various scenarios in which CM/NCM will receive a legal message on the Eurex Clearing FIXML interface. The same legal message can also be viewed on the C7 ARP GUI.

Please note:

- Legal messages for breach are not sent for Level 1 and Level 2 limit breaches.
- Legal messages for breach are neither sent to the CM nor to the NCM when the NCM breaches any of his own set limits.
- Legal messages for release are sent only when the member status finally gets back to Active. This means if there are more than one Level 3 breaches active which is followed by a subsequent release of only one of the breaches then the legal message for release is not yet sent to the member as the member is still in status Halt and not Active yet.

5.1 Legal messages for Level 3 breaches

Action	Legal Message in English	Legal Message in German	TID in Legal Message
CM – CM Level 3 breach (Limit set by Eurex Clearing AG/ European Commodity Clearing AG for Clearing Member) Legal Message to CMs to be set to halt – Hard Breach	Advanced Risk Protection Alert – Level 3 Hard Breach! This message is to alert you (Clearing Member) of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit imposed on you (Clearing Member) by Eurex Clearing AG. Eurex Clearing AG is no longer willing to continue clearing new Eurex transactions for you (Clearing Member), including your clients, for as long as this Risk Limit Breach is continuing. Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly. Subject to and in accordance with the rules of Eurex Deutschland, your access to trading (on– and off book) at Eurex Deutschland and that of your clients, has been or will be immediately suspended and open orders and quotes will be deleted from the order book. Please take immediate steps to address this situation!	No German language version provided	TID = <CM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
CM – CM Level 3 breach (Limit set by Eurex Clearing AG/ European Commodity Clearing AG for Clearing Member – cascading effect of the Clearing Member breach) Legal Message to NCMs of the respective CM – Hard Breach	Advanced Risk Protection Alert – Level 3 Hard Breach! This message is to alert you (Market Participant) of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit imposed on your Clearing Member by Eurex Clearing AG. Eurex Clearing AG is no longer willing to continue clearing new Eurex transactions for you (Market Participant) as long as this Risk Limit Breach is continuing. Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly. Your access to trading (on– and off book) at Eurex Deutschland, will – subject to and in accordance with the rules of Eurex Deutschland – be immediately suspended and open orders and quotes will be deleted from the order book. Please take immediate steps to address this situation!	No German language version provided	TID = <NCM>
CM – CM Level 3 breach (Limit set by Eurex Clearing AG/ European Commodity Clearing AG for Clearing Member) Legal Message to CMs to be set to halt – Soft Breach	Advanced Risk Protection Alert – Level 3 Soft Breach! This message is to alert you (Clearing Member) of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit imposed on you (Clearing Member) by Eurex Clearing AG. Eurex Clearing AG is no longer willing to continue clearing new Eurex transactions for you (Clearing Member), including your clients, for as long as this Risk Limit Breach is continuing (other than transactions that result from orders or quotes that already existed in the order book). Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly.	No German language version provided	TID = <CM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
	Subject to and in accordance with the rules of Eurex Deutschland, your access to trading (on– and off book) at Eurex Deutschland and that of your clients, has been or will be immediately suspended, provided that open orders and quotes will not be deleted from the order book and may result in new transactions. Please take immediate steps to address this situation!		
CM – CM Level 3 breach (Limit set by Eurex Clearing AG/ European Commodity Clearing AG for Clearing Member – cascading effect of the Clearing Member breach) Legal Message to NCMs of the respective CM – Soft Breach	Advanced Risk Protection Alert – Level 3 Soft Breach! This message is to alert you (Market Participant) of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit imposed on your Clearing Member by Eurex Clearing AG. Eurex Clearing AG is no longer willing to continue clearing new Eurex transactions for you (Market Participant) as long as this Risk Limit Breach is continuing (other than transactions that result from orders or quotes that already existed in the order book). Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly. Your access to trading (on– and off book) at Eurex Deutschland, will – subject to and in accordance with the rules of Eurex Deutschland – be immediately suspended, provided that open orders and quotes will not be deleted from the order book and may result in new transactions. Please take immediate steps to address this situation!	No German language version provided	TID = <NCM>
CM – NCM Level 3 breach	Advanced Risk Protection Alert – Level 3 Hard Breach!	No German language version provided	TID = <NCM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
(Limit set by Clearing Member for NCM) Legal Message to NCM – Hard Breach	This message is to alert you (Market Participant) and your Clearing Member of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit that you agreed on with your Clearing Member. Your Clearing Member is no longer willing to continue clearing new Eurex transactions for you as long as this Risk Limit Breach is continuing. Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly. Subject to and in accordance with the rules of Eurex Deutschland, your access to trading (on– and off book) at Eurex Deutschland has been or will be immediately suspended and open orders and quotes will be deleted from the order book. Please take immediate steps to address this situation!		
CM – NCM Level 3 breach (Limit set by Clearing Member for NCM) Legal Message to respective CM (copy of NCM message) – Hard Breach	Advanced Risk Protection Alert – Level 3 Hard Breach! This message is to alert you (Market Participant) and your Clearing Member of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit that you agreed on with your Clearing Member. Your Clearing Member is no longer willing to continue clearing new Eurex transactions for you as long as this Risk Limit Breach is continuing. Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly. Subject to and in accordance with the rules of Eurex Deutschland, your access to trading (on– and off book) at Eurex Deutschland has been or will be immediately suspended and open orders	No German language version provided	TID = <NCM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
	and quotes will be deleted from the order book. Please take immediate steps to address this situation!		
CM – NCM Level 3 breach (Limit set by Clearing Member for NCM) Legal Message to NCM – Soft Breach	Advanced Risk Protection Alert – Level 3 Soft Breach! This message is to alert you (Market Participant) and your Clearing Member of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit that you agreed on with your Clearing Member. Your Clearing Member is no longer willing to continue clearing new Eurex transactions for you as long as this Risk Limit Breach is continuing (other than transactions that result from orders or quotes that already existed in the order book). Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly. Subject to and in accordance with the rules of Eurex Deutschland, your access to trading (on– and off book) at Eurex Deutschland has been or will be immediately suspended, provided that open orders and quotes will not be deleted from the order book and may result in new transactions. Please take immediate steps to address this situation!	No German language version provided	TID = <NCM>
CM – NCM Level 3 breach (Limit set by Clearing Member for NCM) Legal Message to respective CM (copy of NCM message) – Soft Breach	Advanced Risk Protection Alert – Level 3 Soft Breach! This message is to alert you (Market Participant) and your Clearing Member of the occurrence of an event constituting a Level 3 Risk Limit Breach with respect to a Risk Limit that you agreed on with your Clearing Member. Your Clearing Member is no longer willing to continue clearing new Eurex transactions for you as long as this Risk	No German language version provided	TID = <NCM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
	Limit Breach is continuing (other than transactions that result from orders or quotes that already existed in the order book). Additionally, access to post trade management functionality will be restricted. Eurex Deutschland has been informed accordingly. Subject to and in accordance with the rules of Eurex Deutschland, your access to trading (on– and off book) at Eurex Deutschland has been or will be immediately suspended, provided that open orders and quotes will not be deleted from the order book and may result in new transactions. Please take immediate steps to address this situation!		

5.2 Legal messages for release of breaches

Action	Legal Message in English	Legal Message in German	TID in Legal Message
Release CM – CM Level 3 breach (based on the limit set by the Clearing House) Legal Message to CM	Advanced Risk Protection Alert – Release Message! This message is to inform you that all Level 3 Risk Limit Breaches with respect to Risk Limits imposed on you and for which you previously received an Advanced Risk Protection Alert have ceased to exist. Eurex Deutschland has been informed accordingly, such that it may – subject to and in accordance with the rules Eurex Deutschland – restore trading access for you. To the extent orders and quotes have been deleted from the order book, they will remain deleted and will not be restored. Additionally, post trade functionality is restored.	No German language version provided	TID = <CM>
Release CM – CM Level 3 breach	Advanced Risk Protection Alert – Release Message!	No German language version provided	TID = <NCM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
(based on the limit set by the Clearing House) Legal Message to respective NCMs	This message is to inform you that all Level 3 Risk Limit Breaches with respect to Risk Limits imposed on you and for which you previously received an Advanced Risk Protection Alert have ceased to exist. Eurex Deutschland has been informed accordingly, such that it may – subject to and in accordance with the rules Eurex Deutschland – restore trading access for you. To the extent orders and quotes have been deleted from the order book, they will remain deleted and will not be restored. Additionally, post trade functionality is restored.		
Release CM – NCM Level 3 breach Legal Message to NCM	Advanced Risk Protection Alert – Release Message! This message is to inform you that all Level 3 Risk Limit Breaches with respect to Risk Limits imposed on you and for which you previously received an Advanced Risk Protection Alert have ceased to exist. Eurex Deutschland has been informed accordingly, such that it may – subject to and in accordance with the rules Eurex Deutschland – restore trading access for you. To the extent orders and quotes have been deleted from the order book, they will remain deleted and will not be restored. Additionally, post trade functionality is restored.	No German language version provided	TID = <NCM>
Release CM – NCM Level 3 breach Legal Message to respective CM	Advanced Risk Protection Alert – Release Message! This message is to inform you that all Level 3 Risk Limit Breaches with respect to Risk Limits imposed on you and for which you previously received an Advanced Risk Protection Alert have ceased to exist. Eurex Deutschland has been informed accordingly, such that it may – subject to and in accordance with the rules Eurex Deutschland – restore trading access for you. To the extent orders and quotes have been deleted	No German language version provided	TID = <NCM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
	from the order book, they will remain deleted and will not be restored. Additionally, post trade functionality is restored.		

5.3 Legal messages for Member Stop – Release

Action	Legal Message in English	Legal Message in German	TID in Legal Message
Stop CM Legal Message to CM	"The Eurex Management Boards order the suspension of your admission to trading, as the orderly settlement of your transactions is no longer ensured or a probable cause exists that it is no longer ensured."	"Die Geschaeftsfuehrungen der Eurex Boersen ordnen das Ruhen Ihrer Boersenzulassung an, da die ordnungsgemaesse Abwicklung Ihrer Geschaefte nicht mehr sichergestellt ist bzw. diesbezueglich ein begruendeter Verdacht besteht."	TID = <CM>
Stop CM Legal Message to respective NCMs	"The Eurex Management Boards order the suspension of your admission to trading, as the orderly settlement of your transactions is no longer ensured or a probable cause exists that it is no longer ensured."	"Die Geschaeftsfuehrungen der Eurex Boersen ordnen das Ruhen Ihrer Boersenzulassung an, da die ordnungsgemaesse Abwicklung Ihrer Geschaefte nicht mehr sichergestellt ist bzw. diesbezueglich ein begruendeter Verdacht besteht."	TID = <NCM>
Stop NCM Legal Message to NCM	"The Eurex Management Boards order the suspension of your admission to trading, as the orderly settlement of your transactions is no longer ensured or a probable cause exists that it is no longer ensured."	"Die Geschaeftsfuehrungen der Eurex Boersen ordnen das Ruhen Ihrer Boersenzulassung an, da die ordnungsgemaesse Abwicklung Ihrer Geschaefte nicht mehr sichergestellt ist bzw. diesbezueglich ein begruendeter Verdacht besteht."	TID = <NCM>
Stop NCM Legal Message to respective CM.	"The Eurex Management Boards order the suspension of your admission to trading, as the orderly settlement of your transactions is no longer ensured or a probable cause exists that it is no longer ensured."	"Die Geschaeftsfuehrungen der Eurex Boersen ordnen das Ruhen Ihrer Boersenzulassung an, da die ordnungsgemaesse Abwicklung Ihrer Geschaefte nicht mehr sichergestellt ist bzw. diesbezueglich ein begruendeter Verdacht besteht."	TID = <NCM>

Action	Legal Message in English	Legal Message in German	TID in Legal Message
Release CM Legal Message to CM	"The exchange admission criteria are fulfilled again. Therefore, the Management Boards of the Eurex–Exchanges herewith revoke the suspension of the admission to trading."	"Die Voraussetzungen der Boersenzulassung sind wieder erfuellt. Deshalb heben die Geschaeftsfuehrungen der Eurex–Boersen hiermit ihre Anordnung des Ruhens der Boersenzulassung auf."	TID = <CM>
Release CM Legal Message to respective NCMs	"The exchange admission criteria are fulfilled again. Therefore, the Management Boards of the Eurex–Exchanges herewith revoke the suspension of the admission to trading."	"Die Voraussetzungen der Boersenzulassung sind wieder erfuellt. Deshalb heben die Geschaeftsfuehrungen der Eurex–Boersen hiermit ihre Anordnung des Ruhens der Boersenzulassung auf."	TID = <NCM>
Release NCM Legal Message to NCM	"The exchange admission criteria are fulfilled again. Therefore, the Management Boards of the Eurex–Exchanges herewith revoke the suspension of the admission to trading."	"Die Voraussetzungen der Boersenzulassung sind wieder erfuellt. Deshalb heben die Geschaeftsfuehrungen der Eurex–Boersen hiermit ihre Anordnung des Ruhens der Boersenzulassung auf."	TID = <NCM>
Release NCM Legal Message to respective CM	"The exchange admission criteria are fulfilled again. Therefore, the Management Boards of the Eurex–Exchanges herewith revoke the suspension of the admission to trading."	"Die Voraussetzungen der Boersenzulassung sind wieder erfuellt. Deshalb heben die Geschaeftsfuehrungen der Eurex–Boersen hiermit ihre Anordnung des Ruhens der Boersenzulassung auf."	TID = <NCM>

6 Opt-in email service for Level 1, Level 2 and Level 3 breach

Members can avail an opt-in email service in case of Level 1, Level 2 and Level 3 breach. Once opted, the email will be sent out in case any of the three breaches occurs and members cannot select/ de-select the service for one of the three levels. However, tThe email service will not be legally binding and will not replace the information published via existing C7 ARP GUI window Event Log and via FIXML legal messages. Members can provide email addresses (up to maximum five email addresses) which must not be private email addresses but rather generic or group addresses. Email addresses should be unique per member, and the comparison of the email addresses will be case insensitive. The email address should only contain the supported characters which are explained in Section 8. Note: ECC will offer the email service to Clearing Members only i.e. the email address cannot be set for NCMs.

With every Level 1, Level 2 or Level 3 breach in any of the risk types (TMR, CULI, CASH, NDM), an email will be sent out. There will be no email generated when a member is released or also in case of other events like Stop/Release button action, manual slowdown etc.

Please note that there will not be any re-send functionality available e.g. if the email cannot be delivered due to some reason (e.g. invalid email address, SPAM, email server issues etc.).

Members will be able to inquire only their own email addresses using the C7 ARP GUI. CMs cannot inquire their NCMs' email addresses.

Section 6.1 and Section 6.2 explain different events when the email is sent and the corresponding email content for ECAG and ECC respectively.

The email subject will contain the information "Hard" or "Soft" depending on if hard or soft breach has occurred (applicable for ECAG and Level 3 breach only) and the information "SIMU" or "PROD" depending on in which environment the Level 3 breach has occurred. The email subject will also contain the actual NCM ID or CM ID wherever NCM ID, CM ID words are mentioned.

The email text will contain the actual NCM ID, CM ID, timestamp (applicable for ECAG only) wherever NCM ID, CM ID and timestamp words are mentioned in the email text in the tables below. Email text will also contain the hard or soft information depending on if hard or soft breach has occurred (applicable for ECAG and Level 3 breach only). Note: the email text will neither contain any links which the member must click to proceed nor any attachments.

The sender email address for ECAG will be risk@eurex.com and for ECC will be clearing@ecc.de.

6.1 Email details for ECAG

Following tables explain the ECAG email details:

6.1.1 Email for Level 1 breach

Limit set From-To	Email To	Email Subject	ECAG Email Text
NCM – NCM	NCM	SIMU/ PROD - Advanced Risk Protection Alert - Level 1 Breach - NCM ID	This message is to alert you NCM ID of the occurrence of an event constituting a Level 1 Risk Limit Breach at timestamp with respect to a Risk Limit set by NCM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – NCM	NCM	SIMU/ PROD - Advanced Risk Protection Alert - Level 1 Breach - NCM ID	This message is to alert you NCM ID and your Clearing Member CM ID of the occurrence of an event constituting a Level 1 Risk Limit Breach at timestamp with respect to a Risk

Limit set From-To	Email To	Email Subject	ECAG Email Text
			Limit that you agreed on with your Clearing Member CM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – NCM	CM (drop copy of the email sent to the NCM)	SIMU/ PROD - Advanced Risk Protection Alert - Level 1 Breach - NCM ID	This message is to alert you NCM ID and your Clearing Member CM ID of the occurrence of an event constituting a Level 1 Risk Limit Breach at timestamp with respect to a Risk Limit that you agreed on with your Clearing Member CM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – CM (limits set by CH)	CM	SIMU/ PROD - Advanced Risk Protection Alert - Level 1 Breach - CM ID	This message is to alert you CM ID of the occurrence of an event constituting a Level 1 Risk Limit Breach at timestamp with respect to a Risk Limit imposed on you CM ID by Eurex Clearing AG. Please log in to C7 ARP GUI for further information and necessary actions.

6.1.2 Email for Level 2 breach

Limit set From-To	Email To	Email Subject	ECAG Email Text
NCM – NCM	NCM	SIMU/PROD – Advanced Risk Protection Alert – Level 2 Breach – NCM ID	This message is to alert you NCM ID of the occurrence of an event constituting a Level 2 Risk Limit Breach at timestamp with respect to a Risk Limit set by NCM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – NCM	NCM	SIMU/PROD – Advanced Risk Protection Alert – Level 2 Breach – NCM ID	This message is to alert you NCM ID and your Clearing Member CM ID of the occurrence of an event constituting a Level 2 Risk Limit Breach at timestamp with respect to a Risk Limit that you agreed on with your Clearing Member CM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – NCM	CM (drop copy of the email sent to the NCM)	SIMU/PROD – Advanced Risk Protection Alert – Level 2 Breach– NCM ID	This message is to alert you NCM ID and your Clearing Member CM ID of the occurrence of an event constituting a Level 2 Risk Limit Breach at timestamp with respect to a Risk Limit that you agreed on with your Clearing Member CM ID. Please log in to C7 ARP GUI for further information and necessary actions.

6.1.1~~6.1.3~~   Email for Level 3 breach

Limit set From-To	Email To	Email Subject	ECAG Email Text
NCM – NCM	NCM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Hard/Soft Breach – NCM ID	This message is to alert you NCM ID of the occurrence of an event constituting a hard/ soft Level 3 Risk Limit Breach at timestamp with respect to a Risk Limit set by NCM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – NCM	NCM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Hard/Soft Breach – NCM ID	This message is to alert you NCM ID and your Clearing Member CM ID of the occurrence of an event constituting a hard/ soft Level 3 Risk Limit Breach at timestamp with respect to a Risk Limit that you agreed on with your Clearing Member CM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – NCM	CM (drop copy of the email sent to the NCM)	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Hard/Soft Breach– NCM ID	This message is to alert you NCM ID and your Clearing Member CM ID of the occurrence of an event constituting a hard/ soft Level 3 Risk Limit Breach at timestamp with respect to a Risk Limit that you agreed on with your Clearing Member CM ID. Please log in to C7 ARP GUI for further information and necessary actions.
CM – CM (limits set by CH)	NCM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Hard/Soft Breach– NCM ID	This message is to alert you NCM ID of the occurrence of an event constituting a hard/ soft Level 3 Risk Limit Breach at timestamp with respect to a Risk Limit imposed on your Clearing Member CM ID by Eurex Clearing AG. Please log in to C7 ARP GUI for further information and necessary actions.
CM – CM (limits set by CH)	CM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Hard/Soft Breach– CM ID	This message is to alert you CM ID of the occurrence of an event constituting a hard/ soft Level 3 Risk Limit Breach at timestamp with respect to a Risk Limit imposed on you CM ID by Eurex Clearing AG. Please log in to C7 ARP GUI for further information and necessary actions.

6.2   Email details for ECC

Following tables explain the ECC email details.

6.2.1   Email for Level 1 breach

Limit set From-To	Email To	Email Subject	ECAG Email Text
CM – NCM	CM	SIMU/ PROD - Advanced Risk Protection Alert - Level 1 Limit Breach - NCM ID	Please be informed that a Level 1 Risk Limit has been triggered that has been agreed between NCM ID and CM ID.

Limit set From-To	Email To	Email Subject	ECAG Email Text
			Please log in to C7 ARP GUI for further information and necessary actions.
CM – CM (limits set by CH)	CM	SIMU/ PROD - Advanced Risk Protection Alert - Level 1 Limit Breach - CM ID	Please be informed that a Level 1 Risk Limit has been triggered for the CM ID. Please log in to C7 ARP GUI for further information and necessary actions.

6.2.2 Email for Level 2 breach

Limit set From-To	Email To	Email Subject	ECAG Email Text
CM – NCM	CM	SIMU/PROD – Advanced Risk Protection Alert – Level 2 Limit Breach– NCM ID	Please be informed that a Level 2 Risk Limit has been triggered that has been agreed between NCM ID and CM ID. Please log in to C7 ARP GUI for further information and necessary actions.

6.2.16.2.3   Email for Level 3 breach

Limit set From–To	Email To	Email Subject	ECC Email Text
NCM – NCM	NCM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Limit Breach – NCM ID	Please be informed that a Level 3 Risk Limit has been triggered that has been created by NCM ID. ECC forwarded specific requests for a Trading Halt to all ECC Partner Exchanges for derivative markets and EEX T7 trading system. NCMs active on EEX T7 trading system are excluded from trading with immediate effect. If the NCM is also admitted on other ECC partner exchanges for derivatives, the exchange has initiated the procedure for Trading Halt.
CM – NCM	NCM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Limit Breach – NCM ID	Please be informed that a Level 3 Risk Limit has been triggered that has been agreed between NCM ID and CM ID. ECC forwarded specific requests for a Trading Halt to all ECC Partner Exchanges for derivative markets and EEX T7 trading system. NCMs active on EEX T7 trading system are excluded from trading with immediate effect. If the NCM is also admitted on other ECC partner exchanges for derivatives, the exchange has initiated the procedure for Trading Halt.

Limit set From–To	Email To	Email Subject	ECC Email Text
CM – NCM	CM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Limit Breach – NCM ID	Please be informed that a Level 3 Risk Limit has been triggered that has been agreed between NCM ID and CM ID. ECC forwarded specific requests for a Trading Halt to all ECC Partner Exchanges for derivative markets and EEX T7 trading system. NCMs active on EEX T7 trading system are excluded from trading with immediate effect. If the NCM is also admitted on other ECC partner exchanges for derivatives, an additional information will be sent, once the Trading Halt has been confirmed by all exchanges.
~~CM – CM (limits set by CH)~~	~~NCM~~	~~SIMU/PROD – Advanced Risk Protection Alert – Level 3 Limit Breach – NCM ID~~	~~Please be informed that a Level 3 Risk Limit has been triggered. ECC forwarded specific requests for a Trading Halt to all ECC Partner Exchanges for derivative markets and EEX T7 trading system.~~ ~~NCMs active on EEX T7 trading system are excluded from trading with immediate effect. If the NCM is also admitted on other ECC partner exchanges for derivatives, the exchange has initiated the procedure for Trading Halt.~~
CM – CM (limits set by CH)	CM	SIMU/PROD – Advanced Risk Protection Alert – Level 3 Limit Breach – CM ID	Please be informed that a Level 3 Risk Limit has been triggered. ECC forwarded specific requests for a Trading Halt to all ECC Partner Exchanges for derivative markets and EEX T7 trading system. NCMs active on EEX T7 trading system are excluded from trading with immediate effect. If the NCM is also admitted on other ECC partner exchanges for derivatives, an additional information will be sent, once the Trading Halt has been confirmed by all exchanges.

7 Entitlement

7.1 Overview

The entitlement mechanism used in C7 to grant members and users access to functionality also applies to Advanced Risk Protection. This chapter gives an overview of the main principles of the entitlement model for C7 Advanced Risk Protection and describes the set-up and configuration options.

7.2 Roles and privileges

The C7 entitlement model uses roles as a basis. The roles are assigned to a member and the member's service administrator can assign the roles to the other users.

The roles themselves contain privileges. Every privilege defines access to a specific activity. For example, a member could have the privilege to "Maintain Risk Limits". A request entered by a user can only be processed, if the corresponding privilege is assigned to the user/member.

The following roles are supported:

- Risk Manager – This role represents the rights to use stop/release button, to perform mainteinance of risk limits and to inquire own email addresses which are set up for Level 3 breach email notifcations. The role is meant to be assigned to Clearing Members.
- Risk Limit Manager - This role represents the rights to perform mainteinance of risk limits and to inquire own email addresses which are set up for Level 3 breach email notifcations. The role is meant to be assigned to both Non Clearing Members and Clearing Members.
- Risk Manager View - This role represents the rights to view risk limits and to inquire own email addresses which are set up for Level 3 breach email notifcations. The role is meant to be assigned to both Clearing Members and Non Clearing Members.

7.3 General set-up and maintenance

The C7 entitlement model follows a hierarchical approach. This approach uses a top-down logic for the allocation of access rights.
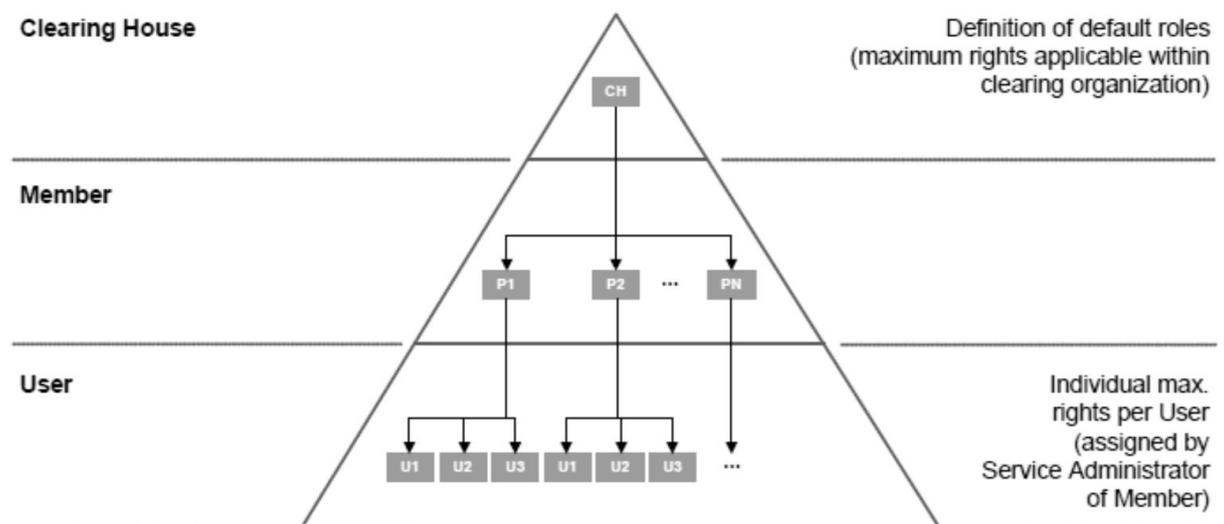
To provide a user with a right, this right must be initially assigned to the member to which the user belongs. Eurex Clearing AG/European Commodity Clearing AG defines the maximum entitlements of a

member (e.g. based on the member type) and assigns the roles to the members accordingly. The member (service administrator) can define and maintain the entitlements for the other users. While assigning roles to users, the member can modify the entitlement levels for privileges contained in the roles.

The following four entitlement levels are available in the system:
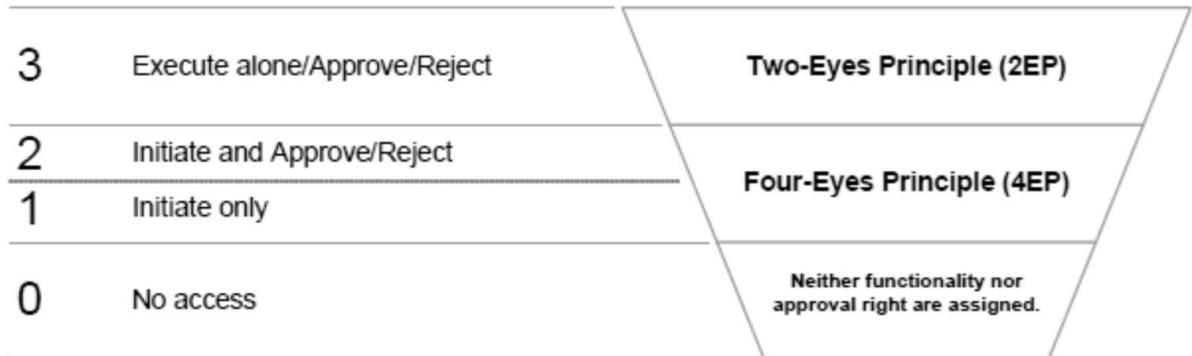
- **Entitlement Level 3** indicates that the user is allowed to initiate an action alone and no second user is required for approval. The user can additionally approve or reject actions entered by another user.
- **Entitlement Level 2** indicates that the user is allowed to initiate an action while requesting a four-eyes approval and approve or reject actions entered by another user.
- **Entitlement Level 1** indicates that the user is allowed to initiate an action requesting a four-eyes approval.
- **Entitlement Level 0** indicates that the user has no access to any privilege at all. This means that the user can neither initiate nor approve or reject.

As the entitlement concept follows a hierarchical approach, the entitlement of a user can never exceed the maximum entitlements of the member. Consequently, reductions in these maximum entitlements of a member are automatically applied to the entitlement settings of the affected users.

For detailed information on the entitlement mechanism, please refer to the C7 – User Entitlement Guide, available for download on the Eurex Clearing website:

www.eurex.com/ec-en/ > Support > Initiatives & Releases > C7 Releases > related release > System documentation

7.4 Four-eyes principle processing

Entitlement levels define how a certain activity can be performed by a user and to which extent. If the four-eyes principle is required for a certain activity, a user cannot perform the action on his own, but needs a second user to approve the action. The user initiating the action for which the four-eyes principle is required needs to have at least the entitlement level 1. For the approval of any four-eyes principle request, the user requires an entitlement level of at least 2. Four-eyes principles can be applied to a range of activities as listed in the C7 – User Entitlement Guide available for download on the Eurex Clearing website under the following path:

www.eurex.com/ec-en/ > Support > Initiatives & Releases > C7 Releases > related release > System documentation

For further detail on particular four-eyes logic per functionality, please refer to the respective chapters below.

7.4.1 Four-eyes principle processing for C7 Advanced Risk Protection features

Members may optionally specify that activities related to Advanced Risk Protection are subject to the four eyes principle process.

8 Supported characters for email address

Following characters will be allowed for an email address **a-zA-Z0-9_+&*-.@** wherein a-z means all lower-case letters, A-Z means all upper-case letters and 0-9 means all digits.

The email address validations recommended by OWASP foundation will be followed. The details can be found at: https://owasp.org/www-community/OWASP_Validation_Regex_Repository.

Concisely following are the validations:

- First character must be from group a-zA-Z0-9_+&*-
- Until @, zero or multiple characters from group .a-zA-Z0-9_+&*- will be allowed
- Until @, after each dot there must be one of the characters from group a-zA-Z0-9_+&*-
- After @, one or multiple characters must be from group a-zA-Z0-9-.
- After @, there must be one character from group a-zA-Z0-9- before each dot
- The email address must end with 2 or more characters from group a-zA-Z