>eex group

EEX Group Workshop European Commodity Clearing AG Migration of Clearing Functionality to C7®

Speaker: Pieter Hauffe | ECC | Head of Business Analysis & Projects 27 June 2019

>eex >ecc >epexspot >powernext >pegas >pxe >nodal >nodalclear >eexasia >grexel

EEX Group clearing services

Secured clearing and settlement of all transactions is provided by our clearing houses ECC and Nodal Clear in the US.

> ecc > nodalclear

- Our clearing houses assume clearing as well as physical and financial settlement of transactions concluded and registered for clearing on all partner exchanges.
- ECC is licensed as central counterparty under EMIR.
- Nodal Clear is licensed as Derivatives Clearing Organisation (DCO) pursuent to the Commodities Exchange Act.
- ECC has the status of a recognised Clearing House in Singapore by the Monetary Authority of Singapore (MAS).
- Cross-margining is possible across all partner exchanges and commodities.

Clearing & Settlement services

| Physical settlement (delivery) | Financial Settlement (payment) | Risk management services | Reporting services |
|--------------------------------------|--------------------------------------|--------------------------------|-----------------------|
|--------------------------------------|--------------------------------------|--------------------------------|-----------------------|

Who we are



Pieter Hauffe

Head of Business Analysis & Projects +49 341 24680 – 545 / pieter.hauffe@ecc.de



Onno Henze

Expert Clearing Operations +49 341 24680 – 544 / onno-christoph.henze@ecc.de

Background: EEX Group goes T7 and C7

Areas of Impact

Member Simulation

Migration Timeline

EEX Group migration to T7[®] and C7[®], the state of the art Trading and Clearing platforms of Deutsche Börse Group

| Before After | | After | Miles | tones for EEX Group |
|------------------|----|--|---------------------------------|--|
| EUREX Classic | /* | T7® Trading Architecture >eex >pxe >pegas >nodal | 2013 2017 2018 04/2019 | EEX order-book PEGAS and PXE order-book NODAL Exchange EEX/PEGAS Trade Registration & Straight-Through Process (STP) |
| | | C7 [®] Clearing Architecture | 12/2017 06/2018 12/2018 | ECC Payment Services ECC Advanced Risk Protection |
| | | > ecc | 08/2019 | ECC Position & Transaction Management |

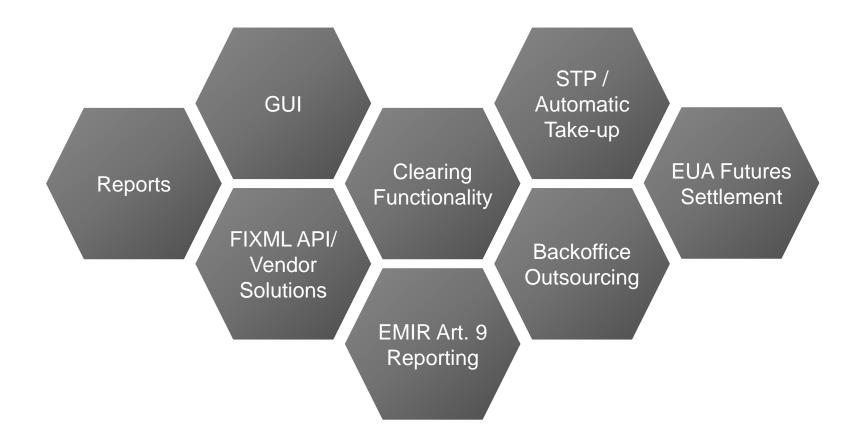
Background: EEX Group goes T7 and C7

Areas of Impact

Member Simulation

Migration Timeline

ECC C7 Migration Position & Transaction Management – Impacted Areas



Clearing Functionality



- No significant impact to existing functionality!
- Clearing service for cascading energy futures is ported to C7
- Simplified, more flexible usage of clearing accounts and workflows
- Possibility of automatic close-out rules for any account
- Common transaction duration (number of business days to adjust the trade after trading) of 2 days across all transaction management functions

Clearing Operations: More information: c7@ecc.de www.eurexclearing.com > Technology > EUREX C7 > System Documentation > Overview & Functionality

C7 Clearing GUI

- Access via Internet or Leased Line
- Two factor authentication
 - MemberID level security certificate
 - UserID level username and password
- Users have to be explicitly ported to C7
 - Service Administrator: can be used for any self-service user management
 - Clearing Users: with permissions to read or read/write the business information within C7

ECC Member Readiness:memberreadiness@ecc.de / +49 341 24680 - 261Relevant forms:T01 (Connectivity), T10 (Users)More information:www.eurexclearing.com > Technology > EUREX C7 >System Documentation > EUREX Clearing GUI



FIXML API / Vendor Solutions



- No changes to connectivity! Same message broker and access credentials
- FIXML message layout has to be adopted to C7 variant instead of legacy EUREX Classic
- Full compatibility with the ECAG variant of FIXML, with the following exceptions
 - The message routing keys "SenderCompId" and "TargetCompId" will/must contain the value "ECC" instead of "ECAG" as the case today
 - The field "lastMkt" in Trade Capture Reports and Allocation Reports will contain the specific MIC of ECCs Partner Exchange as the case today in ECCs EUREX Classic FIXML
 - For on behalf actions the Entering Firm will show "ECC" instead of "ECAG" in broadcast messages

ISV Sales: Connectivity Service Desk: Relevant forms: More information: alan.lun@eex.com / +44 207 862 7563 technology@eex.com / +49 341 2156 466 T01 (Technical Connectivity) www.eurexclearing.com > Technology > EUREX C7 > System Documentation > EUREX Clearing Interfaces

C7 Reporting



- Access via CRE Common Report Engine (as-is)
- New clearing reports only published in .csv and .xml formats
- Main functional changes
 - Identifiers
 - Flexible Contracts not relevant for ECC
 - Additional Agent Accounts technical introduction only
- New report CB013 introduced for ECC incl. Product MIC to identify Partner Exchange
- Several reports concerning transactions and position management consolidated into new CB012 and CB013

| ECC Member Readiness: | memberreadiness@ecc.de / +49 341 24680 - 261 |
|-----------------------|---|
| Relevant forms: | T06 (CRE Setup) |
| More information: | www.eurexclearing.com > Technology > EUREX C7 > |
| | System Documentation > EUREX Reports |
| | ECC Clearing Circular 56/2018 + upcoming circular |

EMIR Art. 9 Reporting (1/2)



- Construction of IDs under EMIR Art. 9 reporting is subject to change
- Changes become effective on reporting day 25 June 2019
- New UTI construction algorithm for positions and transactions based on new data source
- UTI for transactions included in reports CB012 and CB013
- New construction algorithm for Transaction-Reference Number
- Data source for components are CB012 and CB013 report + FIXML Messages
- For members that use the Emir Data Services changes are integrated automatically

Reporting Services Team: More information: reporting-services@eex.com / +49 341 2156-380 www.ecc.de > Risk Management > EMIR > Trade Reporting

EMIR Art. 9 Reporting (2/2)



Sample Trade UTI

| E01 | XEER | XECC | E | С | 000000123456789ABCD | 000000002 |
|-----------|-------------------|---------|-----------------------|---------------------------|---------------------|--------------------------|
| Method Id | MIC Trading venue | MIC ECC | UTI type indicator | Clearing Leg indicator | TransactionId | Transaction ID Suffix |

Sample Position UTI

| E01 | XEER | XECC | Ρ | С | 0000000003 | 000 |
|-----------|-------------------|---------|-----------------------|---------------------------|------------|-------------------|
| Method Id | MIC Trading venue | MIC ECC | UTI type indicator | Clearing Leg indicator | PositionId | Version Number |

All details will soon be published via ECC Circular and Website

Reporting Services Team: More information: reporting-services@eex.com / +49 341 2156-380 www.ecc.de > Risk Management > EMIR > Trade Reporting

STP / Automatic Take-up



- Going forward, C7 will offer middle-office automation for give-up / take-up
- Trades entered into by brokers and given-up to their clients will be subject to automatic take-up by default
- Only white-listed brokers (i.e. approved by member) will be considered for automatic take-ups
- Members can opt out of automatic take-ups using ECC form T08 generally or on a per-broker-basis

Clearing Operations: More information: c7@ecc.de www.eurexclearing.com > Technology > EUREX C7 > System Documentation > Overview & Functionality

Backoffice Outsourcing



- NCMs Backoffice functionality can be outsourced to the supporting Clearing Member, acting as the Service Provider
- Available via FIXML and C7 Clearing GUI
- Simplified setup
- NCM credentials no longer have to be provided to CM but CM user credentials can be used

| ECC Member Readiness: | memberreadiness@ecc.de / +49 341 24680 - 261 |
|-----------------------|---|
| Relevant forms: | T07 (Outsourcing) |
| More information: | www.eurexclearing.com > Technology > EUREX C7 > System Documentation > Overview & Functionality |

EUA Futures Settlement



- Payments concerning the settlement of physical EUA futures will be ported to SMSS, like done for Natural Gas Balance of Month (BOM) futures in 12/2018
- Clearing Members and Non-Clearing Members will be able to review the detailed payment instructions as created by the SMSS system and see the total payments effected within the EUREX payment infrastructure as before
- All physical deliveries concerning spot and derivatives products of ECC will thus be handled in SMSS going forward incl. the related payments processing, incl. full netting of payment obligations

Clearing Operations: More information: c7@ecc.de www.eurexclearing.com > Technology > EUREX C7 > System Documentation > Overview & Functionality

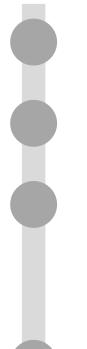
Background: EEX Group goes T7 and C7

Areas of Impact

Member Simulation

Migration Timeline

Member Simulation Timeline



March 2019 Simulation preparation

01 April 2019 Simulation announcement circular, incl. detailed simulation instructions

03 April 2019 Last business day in EUREX Classic simulation

04/05 April 2019 Position migration into C7 simulation

08 April 2019 Begin of member simulation in C7

Until 09 August 2019

Coordinated member simulation with focus on ECC-specific clearing services (Cascading, BOM, Automatic Take-up, Clearing Schedules)

Background: EEX Group goes T7 and C7

Areas of Impact

Member Simulation

Migration Timeline

Migration Timeline

29 May 2019 Availability of C7 GUI incl. entitlement self-service

19 June 2019 Go-Live schedule circular including detailed go-live instructions

07 August 2019 Go-Live confirmation circular

09 August 2019

Last business day in old EUREX Classic environment All necessary transaction adjustments for trades until 21st have to be completed!

10 August 2019

Migration of all open positions into C7 incl. reconciliation by ECC Comparison reports available via CRE at around 3pm CET

12 August 2019 First business day in C7 production environment

18 November 2019

Decommissioning EUREX Classic @X-tract GUI

Background: EEX Group goes T7 and C7

Areas of Impact

Member Simulation

Migration Timeline

- □ Access to C7 services via internet or leased-line working
- □ Member level certificate set up for GUI and/or FIXML usage
- □ Service Administrators and Clearing Users are set up, entitled, and usable
- □ FIXML/Vendor solutions: New message layouts + routing keys adopted
- □ CRE Access functional and changed reports adopted in systems and processes
- □ EMIR Art. 9 Reporting: UTI construction adapted
- □ Participation in SIMULATION phase and familiarized with new GUI / reports
- □ Readiness declaration signed
- □ If needed: availability on migration weekend to review comparison reports

>eex group

Thank you

>eex >ecc >epexspot >powernext >pegas >pxe >nodal >nodalclear >eexasia >grexel