



LSEG

Technical User Group

25 May 2022



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Agenda

Introduction

Data Centre Migration

- Market migration - LSE & Turquoise
- TRADEcho

TRADEcho

- New functional release 3.12

Turquoise Functional Release 1.22.3

- Turquoise® and Turquoise Europe™ – Pegged Bid/Offer New Order Type
- Turquoise Europe™ Retail Liquidity provider orders

Turquoise Global MTF

Q&A

Data Centre Migration – Market Migration for London Stock Exchange & Turquoise

Philippe Teillet

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Data Centre Migration – Market Migration for London Stock Exchange & Turquoise

New Timeline

New Data Centre IP addresses

New Customer Development Service (CDS)

New Production Environment (Quasi Production)

Customer Dress Rehearsals (CDRs)

Group Ticker Plant - Modularisation

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Data Centre Migration – New Timeline

Mid-June 2022	22 August 2022	17 Sept. 2022	1 Oct. 2022	15 Oct. 2022	17 Oct. 2022
CDS go-live	Quasi Production environment go-live	First Customer Dress Rehearsal	Second Customer Dress Rehearsal	Cutover to the new data centre	First day of trading at new data centre

New Data Centre IP Addresses

- New document **DCM001- LSEG New Data Centre – New IP Addresses for all Markets and Environments** in addition to each market Connectivity Guides
- IP details provided for all services (London Stock Exchange, Turquoise, TRADEcho and GTP), and all environments (Production, CDS, Legacy CDS)
- Two amendments were made since first release:
 - New IP addresses were allocated to TRADEcho CDS secondary FIX gateways
 - New port number for London Stock Exchange & Turquoise SFTP, removal FTP support and Internet access (Turquoise)
- **Different IP addresses have been allocated to our new Primary Data Centre & Secondary Data Centre**

New Data Centre - Customer Development Service (CDS)

- Go-live on expected **Mid-June 2022** for London Stock Exchange and Turquoise, including new modularised GTP
- Parallel run with existing CDS until cut over date
- Existing customers' CDS configurations will be migrated to the new data centre
- New CDS environment will follow the same trading schedule and match the current CDS environments' functionalities and protocol for each market/service
- Reference data available on the new SFTP
- Sponsored Access Risk Portal & Restricted Instrument Lists (RIL) only available at new Data Centre
- New Data Centre testing guide will be available in due course

New Data Centre - Customer Development Service (CDS)

- New network enablements are required
- Customers must have a valid CDS testing agreement for each Service Access Point (SAP) requiring CDS access
- If a valid testing agreement is in place:
 - Customer Managed Connectivity (CMC) and Hosting customers, current CDS unicast and multicast enablements will be replicated
 - Network Service Provider (NSP) clients, current unicast enablements will be replicated. For multicast data, please contact your NSP
- Customer without a valid testing agreement, or for any contractual queries, please contact CustomerTesting@lseg.com

New Data Centre - Quasi Production Environment

- Quasi Production is the new Production environment, at the new Data Centre, available for testing purposes until official cutover **Saturday 15 October 2022**
- Quasi Production will be available from **Monday 22 August 2022** for London Stock Exchange, Turquoise and new modularised GTP
- It will match the existing production environment market hours
- It will be aligned to the current production environment functionalities and protocol of each market/service
- New session IDs will be generated for Quasi Production to avoid trading risks
- All other customers technical configurations will be migrated from current production environment to Quasi Production

New Data Centre - Quasi Production Environment

- Quasi new session IDs will be generated following the rule:
- First character of the ID will be replaced by the next character available in alphabetical order
 - **A**BC123 will become **B**BC123
 - **Z**YX123 will become **A**YX123
- New network enablements are required
- Member Firms must use Member Portal for any production network enablement request
- Member Portal is being enhanced to give non-member firms the ability to request network enablements and GTP replay/recovery IDs
- After Market Close an extended 'connectivity only' testing period will be available
- Trading activity in the Quasi Production environment will be considered test trading activity. Trades will not be forwarded to CCPs. **The Quasi Production environment is for testing purposes only.**
- Reference data will match production
- Sponsored Access Risk Portal & Restricted Instrument Lists will remain available in existing production Data Centre until cutover date

New Data Centre – Customer Dress Rehearsals (CDRs)

- **Saturday 17 September 2022 & Saturday 1 October 2022**
- Customers should have successfully tested connectivity to Quasi Production before attending a CDR
- Attendance to the first CDR is mandatory
- Attendance to the second is optional if testing was successful during first CDR
- A testing guide will be published before first CDR to details the plan for the day and testing requirements
- **Customers will need to use their current Production IDs to test during CDRs**
- Quasi Production session IDs will not be valid during CDRs
- Reference data will be available

Group Ticker Plant - Modularisation

Current State

- GTP is managed as a single application
- One Instance disseminates London Stock Exchange, Turquoise, FTSE and TRADEcho market data
- Any protocol or hardware changes impacts all markets and scalability more of an issue

New Data Centre - Modularised State

- Market Data GTP modules integrated directly on to each Trading System / Data Source
- No Impact on existing protocol and gateways
- Protocol/Hardware changes can be rolled out independently and offers better scalability
- Multicast and Replay/Recovery IP's change due to Data Centre migration
- Post Modularisation, protocol changes are deployed in a staggered manner across the venues, therefore temporarily the protocol may differ between venues

Data Centre Migration – Market Migration for TRADEcho

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Capital Market Operations



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TRADEcho Data Centre Migration Update

- TRADEcho will not have a parallel run period of the existing Data Centre and the new Data Centre
- A big-bang approach has been decided for each TRADEcho environment (CDS, LCDS and Production) for the cutover from the existing Data Centre to the new Data Centre
- TCP Responders will be available for customers to test connectivity prior to the new data centre cutover dates
- TRADEcho Portal and TRADEcho SFTP (e.g. End of Day Files) accounts will be unaffected by Data Centre Migration
- TRADEcho enablements will follow the London Stock Exchange and Turquoise enablements process
- New Data Centre FIX Gateway IP addresses/ports are available on [London Stock Exchange Technical Library website](#), under the Data Centre Migration section for TRADEcho

TRADEcho Data Centre Migration Update

TRADEcho New Data Centre Go-live Dates.

Date	Event
Monday 1 August 2022	TRADEcho CDS cutover to the new data centre
Monday 12 September 2022	TRADEcho Legacy CDS cutover to the new data centre
Saturday 17 September 2022	First Customer Dress Rehearsal (CDR)
Saturday 1 October 2022	Second Customer Dress Rehearsal (CDR)
Monday 17 October 2022	Production go-live from new data centre

Data Centre Migration - Contacts

Hosting & Connectivity

DCMigration@lseg.com

Trading, Market Data Services and Customer Environments

londonTAM@lseg.com

CDS Testing Agreement

CustomerTesting@lseg.com

Key information regarding the data centre migration including FAQs and timelines can be found at

<https://www.lseg.com/areas-expertise/technology/group-technology>

Connectivity Guides

London Stock Exchange: [Technical library Trade - Resources | London Stock Exchange](#), section Data Centre Migration

- MIT1001 - Connectivity Guide
- MIT401 - Guide to Reference Data Service
- DCM001 - LSEG New Data Centre - New IP Addresses for all Markets and Environments

Turquoise: [Turquoise Document Library | LSEG](#), section Data Centre Migration

- TQ102 Connectivity Guide
- TQ501 Guide to Reference Data Services
- DCM001 - LSEG New Data Centre - New IP Addresses for all Markets and Environments

TRADEcho: [Technical library Trade - Resources | London Stock Exchange](#), section Data Centre Migration

- TRADEcho Connectivity Guide

Group Ticker Plant (GTP): [Group Ticker Plant | LSEG](#), section Data Centre Migration

- GTP004 - LSEG New Data Centre - GTP Market Data Parameters Guide

Customer Communications

To register for **London Stock Exchange and TRADEcho Service Announcements** please email msu@lseg.com

All previously sent London Stock Exchange, TRADEcho and GTP Service Announcements can be found at:

<https://www.londonstockexchange.com/resources/service-announcements?tab=2022>

To register for **Turquoise Technical Notice** please email turquoiseliveservice@tradeturquoise.com

All previously sent Turquoise and GTP, Turquoise Notices can be found at:

<https://www.lseg.com/markets-products-and-services/our-markets/turquoise/information-centre/turquoise-notices>

TRADEcho Release 3.12

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Capital Market Operations



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TRADEcho Release 3.12

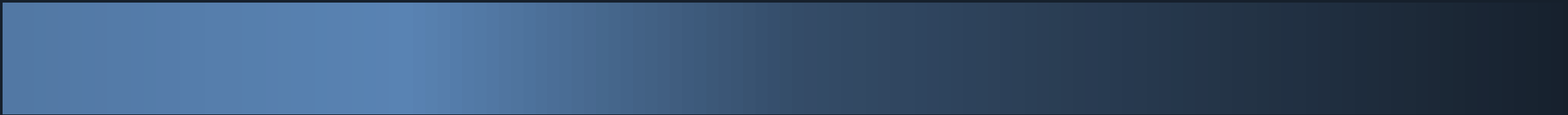
TRADEcho Q2 2022 release will include the following changes:

- Change in NCA Logic for Supplementary Deferrals in EU
- Addition of unvalidated Late Amend via Portal or CSV functionality
- Self-service password reset feature added for TRADEcho Portal users. Requires customers to update their email addresses associated with their TRADEcho GUI account.
- Turnover only populated for Equity, Equity-like and ETCs/ETNs in Portal
- No Mandatory changes, no certification required. Customers who do make changes will need to certify ahead of go-live.

Documentation of the release including release notes can be found [here](#), under 'TRADEcho- Next Functional Release'

Turquoise

Next Functional Release 1.22.3



Release 1.22.3 - New functionality description

- Pegged orders will be extended to include pegged to Primary Market bid and pegged to Primary Market offer order types.
- Within the scope of **Turquoise Europe™** new retail broker service:
 - New values are being added to the Owner type flag/field in order to identify incoming Retail orders and Retail Liquidity Provider orders, and
 - Retail Liquidity Provider Limit orders will be aggregated and displayed in our existing Level 1 Top of book market data feed in order to indicate to retail brokers when there is liquidity in the book. A new source venue value will be added to identify these orders.

Release 1.22.3 - Summary of changes

Turquoise Plato Lit Auctions™ Order Book

Extension of the Pegged order type

- Peg Price Type field

Introduction of retail flags on **Turquoise Europe™**

- Owner type field

Additional transparency on **Turquoise Europe™**

- GTP market data extension of Level 1 Top of book to TQEA

Change/Impact

Non mandatory changes.

Release 1.22.3 - Technical Changes

Purpose

Extension of the existing orders that peg to the Primary Market Mid-point to allow pegging to the Primary Market Bid and to the Primary Market Offer.

Change/Impact

- TQ201 – FIX and TQ301 – Native
- If Peg Type Price is NULL – Mid default (existing value '2')

FIX Trading Gateway (TQ201)	Tag
New Order	1094 - PegPriceType – new values '10' (Bid) '11' (Offer)

Native Trading Gateway (TQ301)	Field
New Order 97 1 UInt8	PegPriceType – new values '10' (Bid) '11' (Offer)
Execution Report 159 1 UInt8	

Release 1.22.3 - Technical Changes (2)

Purpose

- Market participants wanting to benefit from the retail broker service for their retail business (fee waiver and interaction with Retail liquidity Providers orders) must flag their orders as being Retail orders.
- Liquidity Providers that only want to interact with retail orders must flag their orders as being Retail Liquidity Provider orders.

Change/Impact

- TQ201 – FIX and TQ301 – Native on TQEA only
- If Owner Type is NULL – Non-retail

FIX Trading Gateway (TQ201)	Tag
New Order	522 - OwnerType - new values '1' (Retail) '2' (Retail Liquidity Provider)

Native Trading Gateway (TQ301)	Field
New Order 80 1 UInt8	OwnerType – new values '1' (Retail) '2' (Retail Liquidity Provider)
Execution Report 160 1 UInt8	

GTP top of book message (0x69) added to TQEA

Release 1.22.3 - Market Data Technical Changes

Purpose

Additional transparency in order for retail brokers to identify liquidity present in the order book.

Change/Impact

On **Turquoise Europe™** only (TQEA)

- This existing GTP message is currently supported for the **Turquoise Lit Order Book™**.
- As part of the functional changes, the existing Top of Book Level 1 market data service is being introduced for the **Turquoise Plato Lit Auctions Order Book™** and will be tagged with value '16' in the 'Source Venue' field.

GTP Message	Field name	Field Enum / Meaning
Top of Book (0x69)	Source Venue	16 – Turquoise Plato Lit Auctions Order Book™ (TQEA only)

Release 1.22.3 – Indicative Timelines

Release timeline is indicative and subject to internal testing and customer readiness. Further dates will be communicated through Turquoise Notices.

Release 1.22.3	Dates
Updated Technical Specifications	June 2022
CDS deployment	Q3 2022 (tbc)
Production go-live	Late Q4 2022 (tbc)

Turquoise Global MTF

Successful Launch of Turquoise® US Segment with fungible Settlement into DTC

Launch Recap

The Turquoise Lit Order Book™ now supports the trading of US financial instruments (US cash equities, US listed Exchange Traded Funds ‘ETFs’ and American Depositary Receipts ‘ADRs’) during UK trading hours (08:00 to 16:30), with an efficient, fully fungible, straight through settlement process into the Depositary Trust Company (DTC).

This service was launched into production in October 2021.

For a list of US instruments within this segment please refer to the below spreadsheet:

<https://www.lseg.com/documents/turquoise-trqx-us-financial-instruments-xlsx>

For further information on how to trade these US instruments, customers should contact their Business Development Managers as well as their General Clearing Member or LCH Ltd for clearing.

Thank you

Q&A

Slido: <https://app.sli.do/event/5089557>



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