



LSEG

Technical User Group

25 January 2024

Agenda

Introduction

London Stock Exchange – Release 1.23.3

- New Multicast Channels & LSE GTP Instrument Rebalancing
- LSE GTP Trade Summary Message
- Transaction Time Field
- Regulatory driven changes
- RFQ

Turquoise® - Release 1.23.3

- Turquoise GTP Instrument Rebalancing
- Turquoise GTP Trade Summary Message
- Transaction Time Field
- Regulatory driven changes
- Trade At Last enhancement

TRADEcho Re-platforming

- New GUI Login
- New Gateway Ports
- Project Plan

New Conformance Testing Tool

Alternative Site Recovery Test

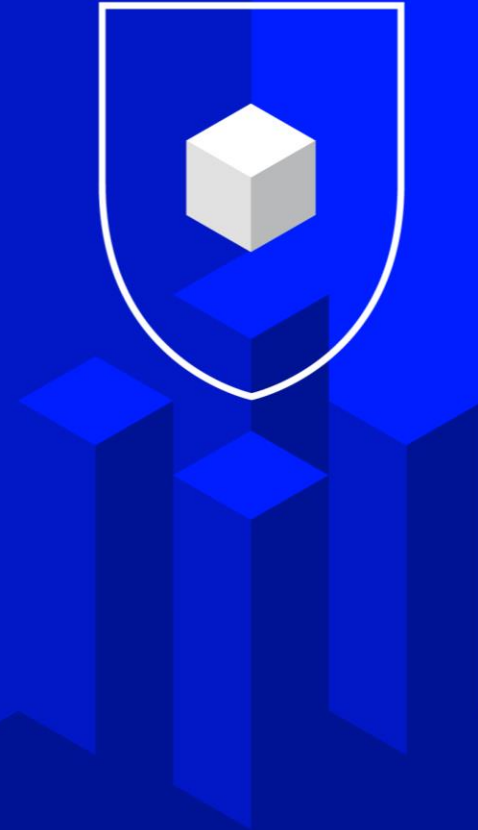
Q&A



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LONDON STOCK EXCHANGE - NEXT FUNCTIONAL RELEASE 1.23.3

Hasanthi Senanayake
Technical Account Manager



LSE GTP – New Multicast Channels & Rebalancing Instruments

Summary of Change

- Introduce two new Market Data Group Channels – H & J
- Split Exchange Traded Products across three Market Data Group Channels

Technical Changes

- Replay and Recovery IDs for the new channels H & J are required.
- New IPs & Ports allocated to the two channels.
- Additional whitelisting at the LSEG firewalls, not required.

Market Data Group	Source Venue	Channel Content
Channel A/a	London Stock Exchange	FTSE 100
Channel B/b	London Stock Exchange	ETFs / ETCs / ETNs - 1
Channel C/c	London Stock Exchange	Other Main Market Equity & Miscellaneous
Channel D/d	London Stock Exchange	ETFs / ETCs / ETNs - 2
Channel E/e	London Stock Exchange	AIM
Channel F/f	London Stock Exchange	European
Channel G/g	London Stock Exchange	International
Channel H/h	London Stock Exchange	Fixed Income and Securitised Derivatives
Channel J/j	London Stock Exchange	ETFs / ETCs / ETNs - 3

LSE GTP - Trade Summary Message – Best Bid/Offer

Summary of Change

- The BBO will be published in the Trade Summary message to provide the Top of Book picture immediately after an execution in the Level 2 Full Depth Incremental Service line.
- Four new fields to advertise the Best Bid & Offer will be added to the end of the GTP Trade Summary message.

Technical Changes

Gateway	Message	Fields
GTP FDI Market Data	Trade Summary (0x57)	Best Bid Price, Best Bid Size, Best Offer Price, Best Offer Size

LSE GTP – Introduction of Transaction Time

Summary of Change

- Transaction Time will be added to the order book update messages to provide the ability to map a corresponding order book update of an execution.
- Existing fields 'Yield' (Add Order) and 'Previous Yield' (Order Modify/Delete) renamed to 'Transaction Time'.
- Existing data type of the field will be changed to UDT.

Technical Changes

Gateway	Message	Field
GTP FDI Market Data	Add Order Incremental (0x51)	Transaction Time
	Order Modify (0x55)	Transaction Time
	Order Delete (0x46)	Transaction Time

Closing Price Trades (CLSE) Flag

Summary of Change

- Trades executing at the Closing Price will be flagged as Closing Price Trades (CLSE).
- Introduction of new tag, TradeType (828)
- Introduction of new value CLSE in Post Trade and Native Gateways
- Existing field 'PTDefferalReason2' repurposed in the MiFID II Trade Message (0x51) to 'Market Closing Price'

Technical Changes

Gateway	Message	Tag/Field
Trading	Execution Report	TradeType (828)
Drop Copy	Execution Report	TradeType (828)
Post Trade	Trade Capture Report	TradeType (828)
GTP MiFID II Post Trade	MiFID II Trade (0x51)	Market Closing Price
Native	Execution Report	Waiver Flag /Post Trade Flags

Converting Minor Currencies to Major Currencies

Summary of Change

- Minor currencies published in the 'MiFID II Post Trade' feeds will be converted to major currencies. The Level I and Level II service lines will continue to publish minor currencies.
- Cease publishing minor currencies through the MiFID II Post Trade feeds.
- Rename existing field Price Currency to Price Major Currency.
- Notional Currency and Notional Amount will be published using major currencies

Technical Changes

MiFID II Post Trade Messages	Field	Minor Currency	Major Currency
MiFID Trade (0x51)	Price Major Currency, Notional Currency	GBX	GBP
		USX	USD
		EUX	EUR
		ZAC	ZAR

‘Market Data Group’ Publication Change

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- The Market Data Group field will no longer be provided in the XLON Instrument file.
 - This will be blank going forward (effective on CDS from early March 2024).
 - The Market Data Group will be provided by Trading Sector/ Segment in the Millennium Exchange and TRADEcho Business Parameters in the tab Sector Breakdown.

RFQ Price to Peg to Far Touch

- RFQ price functionality will be amended to automatically peg to far touch where a limit price is not specified in Quote Request message.
- No change to the FIX or Native Gateways.

FIX/ Native Gateway – Limit Price

Limit price (optional)

Price (in the absence of a limit price or a 0 value will mean the limit price is automatically pegged to the far touch of the best bid offer)

LSE Release 1.23.3 Timeline

Event	Comment/ Timeline
Technical Specifications	Available on website
Conformance Testing	Mandatory for customers that make changes to software
CDS Environment Go-Live	29 January 2024
Customer Dress Rehearsal (CDR)	April 2024
Production Go-Live	29 April 2024



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TURQUOISE- NEXT FUNCTIONAL RELEASE 1.23.3

Hasanthi Senanayake
Technical Account Manager



Turquoise GTP – Rebalancing Instruments

Summary of Change

- Market Data published for Turquoise (TGHL) and Turquoise Europe (TGHE) will have exclusive Market Data Group channels allocated.
- No change to existing IPs and Ports of Turquoise multicast and TCP channels, including No change to customer replay & recovery IDs.
- Dedicated channels for Turquoise (THGL) market data.
- Dedicated channels for Turquoise Europe (TGHE) market data.

Current Turquoise Market Data Channels

Market Data Group	Source Venue	Channel Content
Channel T/t	Turquoise	XLON
Channel U/u	Turquoise	XPAR
Channel V/v	Turquoise	XETR
Channel W/w	Turquoise	XCSE, XHEL, XMAD, XSTO, XSWX, XVTX
Channel X/x	Turquoise	MTAA, XOSL, WBAH, XDUB, ARCX...
Channel Y/y	Turquoise	XAMS, XBRU, XLIS and XLUX

**Turquoise covers both TGHL & TGHE*

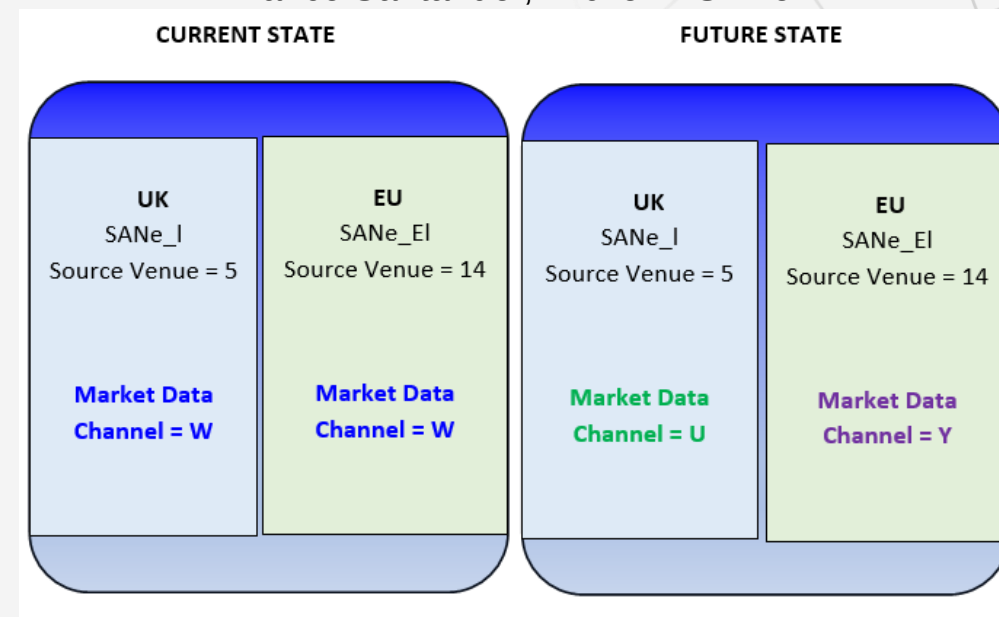
Turquoise GTP – Rebalancing Instruments (Continued)

Technical Changes

Venue	Current Distribution	Future Distribution
	Channels	Channels
Turquoise Global Holding Limited (TGHL)	T,U,V,W,X,Y	T,U
Turquoise Global Holdings Europe (TGHE)	U,V,W,X,Y	V,W,X,Y

Example

Banco Santander, Ticker = SANE



Previous Day's Closing Price

Summary of Change

- The Previous Day's Closing Price of the primary market presently available in the Turquoise Lit™ order book will be extended to Turquoise Plato Lit Auctions™ and Turquoise Plato™ order books.

Technical Changes

GTP Message	Source Venues	Field
Instrument Directory – Equities (0x52) (Recovery Channel)	6 - Turquoise Plato™ Order Book (TGHL)	Previous Day's Closing Price
	12 - Turquoise Plato Lit Auctions™ Order Book (TGHL)	
	15 - Turquoise Plato™ Order Book (TGHE)	
	16 - Turquoise Plato Lit Auctions™ Order Book (TGHE)	

Negotiated Trade Waiver Flag

Summary of Change

- A new value will be published for BTF trades that fall under the Negotiated Trade Waiver in Turquoise Global Holdings Limited.
- Existing fields to be used to publish NETW in the Native and FIX gateways.
- Existing flag PRIC to be replaced by NETW in Turquoise Global Holding Limited only.

Technical Changes

Gateway	Message	Field
Post Trade	Trade Capture Report	TrdRegPublicationReason (2670)
Trading	Execution Report	TrdRegPublicationReason (2670)
Drop Copy	Execution Report	TrdRegPublicationReason (2670)
Native	Execution Report	Waiver Flags 2

Negotiated Trade Waiver Flag (Continued)

Summary of Change

- Turquoise GTP will cease publishing the PRIC flag in Turquoise Global Holdings Limited only.
- Turquoise GTP, existing field 'PTDeferralReason2' to be renamed to 'NT Pre-Trade Waiver'.

Technical Changes

Gateway	Message	Field
MiFID II Post Trade	MiFID Cross Trade (0x56)	NT Pre-Trade Waiver Flag

Turquoise Plato Trade At Last™ (TAL) Trades Flagged as Closing Price Trades

Summary of Change

- Trades executing at the primary market's closing price (TAL Trades) will be flagged as Closing Price Trades (CLSE) in Turquoise Global Holdings Limited.
- Introduction of new tag on the FIX Gateways, TradeType (828)
- Reuse of an existing field, 'Market Closing Price' from the MiFID II Trade Message (0x51).
- Turquoise Global Holdings Europe will continue to flag these trades as Regular Trades.

Technical Changes

Gateway	Message	Tag/Field
Trading	Execution Report	TradeType (828)
Drop Copy	Execution Report	TradeType (828)
Post Trade	Trade Capture Report	TradeType (828)
GTP MiFID II Post Trade	MiFID II Trade (0x51)	Market Closing Price
Native	Execution Report	Waiver Flags/Post Trade Flags

Turquoise Plato Lit Auctions, On Demand Auction Trades

Summary of Change

- A new indicator will be stamped to identify 'On Demand Auction Trades' in the Turquoise Plato Lit Auctions™ order book for TGHL & TGHE
- Existing field Trade Mode will be used to populate the new indicator P = On Demand Auction Trades.

Technical Changes

Gateway	Message	Field
MiFID II Post Trade Gateway	MiFID Trade (0x51)	Trade Mode

Converting Minor Currencies to Major Currencies

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- Rename existing field Price Currency to Price Major Currency.
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Technical Changes

MiFID II Post Trade Messages	Field	Minor Currency	Major Currency
MiFID Trade (0x51)	Price Major Currency, Notional Currency	EUX	EUR
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MiFID Cross Trade (0x56)		USX	USD
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Turquoise GTP - Trade Summary Message – Best Bid/Offer

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Turquoise GTP – Transaction Time

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Technical Changes

Gateway	Message	Field
GTP FDI Market Data	Add Order Incremental (0x51)	Transaction Time
	Order Modify (0x55)	Transaction Time
	Order Delete (0x46)	Transaction Time

‘Multicast Channel ID’ Publication Change

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- The Multicast Channel ID field will no longer be provided in the Turquoise Instrument file and will be blank going forward.
 - Instead, these details will be made available in GTP001 – Group Ticker Plant Product Guide.

Turquoise Release 1.23.3 Timeline

Event	Comment/ Date
Technical Specifications	To be published on the website
Conformance Testing	Mandatory for customers that make changes to software
CDS Environment Go-Live	5 February 2023
Customer Dress Rehearsal	April 2024
Production Go-Live	29 April 2024

Additional Information

Group Ticker Plant – Modularization

Customers expected to maintain separate code bases for each venue.

Group Ticker Plant – GTP002 Technical Specification

A dedicated GTP002 – Technical Guide is maintained for each venue.

London Stock Exchange

The Block Trade Facility (BTF) / Cross Orders will be decommissioned with release 1.23.3

Turquoise Global Holdings Limited

Turquoise Nylon Cash Order Book decommissioned with 1.23.3

Release 1.23.3 – Documentation

Technical release 1.23.3.0 updated documents, are available on the website:

- **London Stock Exchange:** [Technical Library Equities Trading Resources | London Stock Exchange](#), section London Stock Exchange technical specifications / Next Functional Release
- **Turquoise:** [Turquoise Document Library | LSEG](#), section Next Functional Release
- **Group Ticker Plant (GTP):** [Group Ticker Plant | LSEG](#), section Next Functional Release

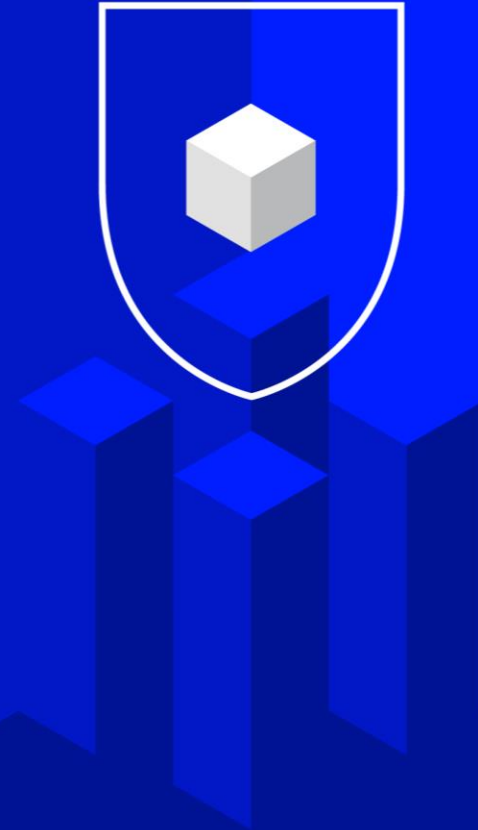


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TRADECHO – REPLATFORMING

Abaab Ahmed

Technical Account Manager



Introduction to TRADEcho Replatforming

-
- Migrating from the current TRADEcho on-premises to a Cloud based solution
 - Scaling on demand
 - FCA and ESMA FIRDS instruments will be available for trade reporting near **real time**

TRADEcho Replatformed GUI

- Functionality expected to broadly remain the same as the existing TRADEcho GUI platform.
- No Change to Member IDs and User IDs.
- Customer Source IPs to be ported over to the new cloud environment
- New Replatformed TRADEcho GUI Logon Page requires valid email address, instead of Member ID and Username.
- Introduction of Multi Factor Authentication (MFA). 'One Time Passcode' sent to registered email upon login.

Existing GUI Logon Page



Login

Member

Username

Password

If you are locked out or have forgotten your password please click [here](#) to reset it

Log in

New GUI Logon Page



Please Login

Email Address

Password

Sign In

Need help signing in?

Forgot password?

Help

TRADEcho Replatformed FIX Gateways

-
- No structure or protocol changes to the new cloud-based FIX application.
 - Existing FIX session IDs will be migrated to new Cloud Based FIX environment.
 - Passwords will not be migrated. Default Passwords to be provided by LSEG.
 - Replatformed TRADEcho environment will use the same gateway IPs as the existing environment, however customers will need to target new Ports for CDS and Production.

TRADEcho Replatforming - Project Plan

- CDS Parallel Run. Customers to target new CDS Ports.
- No Parallel Run for Production, Weekend Customer Dress Rehearsal (CDRs), will be available.
- Conformance Testing will not be required.
- No changes to existing LSEG Connectivity agreements.

Phase 1 – APA & SRR

Feb – June 2024

CDS – go-live

Oct – Dec 2024

Production go-live

Phase 2 – SI Quote

TBC

CDS – go-live

Q2 2025

Production go-live



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NEW CONFORMANCE TESTING TOOL

Abaab Ahmed

Technical Account Manager

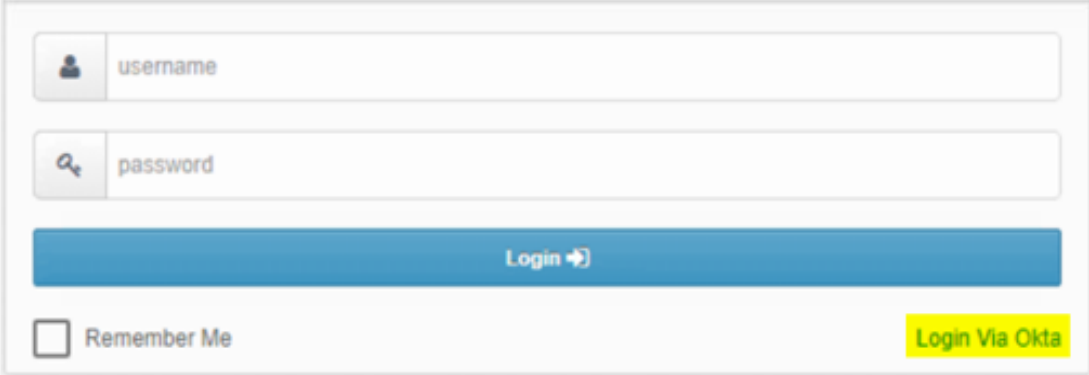


New Customer Conformance Testing Tool (CCT)

- Conformance Testing Tool is available for LSE, Turquoise, TRADEcho and GTP Market Data.
- Customers must target new, dedicated IP addresses and Ports for Conformance Testing purposes.
- Native and GTP Replay/Recovery Protocol Customers have been assigned unique ports for conformance testing, please contact the Technical Account Management Team (londontam@lseg.com) for Port details. FIX users can use the ports provided in the Connectivity Guide.
- Customers should only use Conformance Testing Gateways, during Conformance Testing. Existing CDS IP/Ports should be used for all development work.
- Customer enabled CDS SAPs have been enabled on the new LSEG Conformance Testing Gateways.
- Introduction of a web-based Interface to allow customers to test against pre-loaded test scenarios. Requires OKTA Multi Factor Authentication.

CCT OKTA Multi Factor Authentication

- Customers will need to be setup on OKTA MFA, to access the new Conformance Tool
- Customers to provide Conformance Testing Team (Conformancetest@lseg.com) with:
 - Name
 - Email address
 - Protocol (FIX, Native and GTP)
 - Company name
 - Services required (LSE, Turquoise, TRADEcho, GTP)
- Customers should expect to receive emails from OKTA to complete the setup noreply@identity.lseg.com.



username

password

Login ➔

☐ Remember Me

Login Via Okta

LSEG CCT – GUI

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Interfaces and Sessions								
Interface	Client	Specs	SenderComplID	TargetComplID	Host	Port	Hub Mode Expression	
TRD-FIX-GW	Darshan	LSEFXTrading5.0SP2	XXFC_T_A_3	FGW	10.137.158.155	21301	N/A	

[Enter Application Details](#) Please provide the name and version of the application you're using to certify

Showing: All Test Cases					
Test Suite	Test Case		Last Run	Required	Result
LSEFX_SessionLevelTests	MIT01_Logon_Pass_NewPass	▶ Run Test	(Never)	Required	🕒 untested
LSEFX_SessionLevelTests	MIT02_Heartbeat	▶ Run Test	(Never)	Required	🕒 untested
LSEFX_SessionLevelTests	MIT03_SequenceReset	▶ Run Test	(Never)	Required	🕒 untested
LSEFX_SessionLevelTests	MIT04_SequenceReset_Logon	▶ Run Test	(Never)	Required	🕒 untested
LSEFX_SessionLevelTests	MIT05_ResendRequest	▶ Run Test	(Never)	Required	🕒 untested

New Conformance Testing Documentation

Documentation updated to reflect the instructions and new destination IP address(es)/Ports

- Updated – Guide to testing services
- Updated – Guide to application certification
- Updated – Connectivity Guide
- New – CCT User Guide (TBR)

Once you have been setup, customers should expect to receive emails from OKTA to complete the setup [noreply@identity.lseg.com]. To perform Conformance Testing customers will need to target new IP address(es) and Ports.

Markets		IP address	CCT Ports (FIX Only)
LSE Conformance	FIX Trading	194.169.6.56	21001
	FIX Post Trade	194.169.6.56	21002
	FIX Drop Copy	194.169.6.56	21003
TQ Conformance	FIX Trading	194.169.6.56	21101
	FIX Post Trade	194.169.6.56	21102
	FIX Drop Copy	194.169.6.56	21103
TRADEcho Conformance	SI Quote	194.169.6.56	21201
	APA	194.169.6.56	21202
	SRR	194.169.6.56	21203

The target IP address will remain the same across Native and GTP, however the Ports are unique to each customer. Please contact the Technical Account Management team regarding your allocated Ports (londontam@lseg.com).

Note: Conformance Testing IPs/Ports should not be used for Software Development, customers should instead target the CDS IP/Ports.

[...](#)
[Market Data - GTP](#)
[Subnets](#)
[Sponsored Access](#)
[Conformance Testing](#)
[Document History](#)
[+](#)

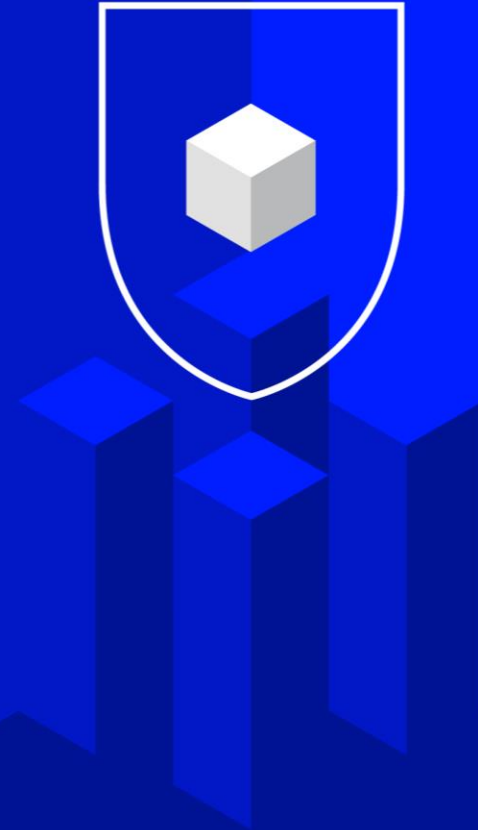


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LSEG ALTERNATIVE SITE RECOVERY (ASR) TEST

Abaab Ahmed

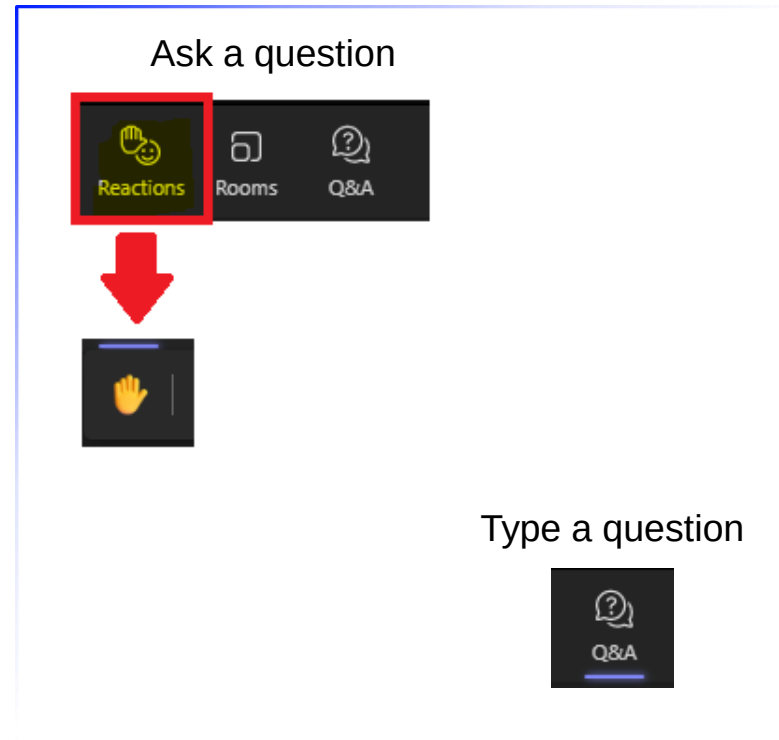
Technical Account Manager



Alternative Site Recovery Test

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- Alternative Site Recovery Tests are run once per year and provides customers the ability to test disaster recovery processes in a controlled setting.
 - Customer are expected to target the Secondary Data Centre (SDC) IP addresses, since the Data Centre Migration.
 - All connectivity customers welcome, including Hosting customers.
 - ASR Test Date: **Saturday 3 February 2024.**

Q & A



Thank you



LSEG