LONDON STOCK EXCHANGE GROUP

GROUP TICKER PLANT

GTP 004 -
PARAMETERS GUIDE

ISSUE 19.6
9 August 2019

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Contents

Guide Disclaimer

1. Documentation

1.1   This Guide

The purpose of this document is to provide an overview of the various product parameters required to enable customer connections to, and for interaction with, the Group Ticker Plant. This includes network topology information and replay and recovery parameters.

It will be updated and reissued when appropriate to do so.

1.2   Readership

This document is particularly relevant to technical teams within member firms, information vendors and other market participants who currently receive or are interested in receiving London Stock Exchange Group market data from the Group Ticker Plant.

When read in conjunction with other Group Ticker Plant documents it is intended to provide all required information to configure customer systems.

1.3   Document Series

This guide, **GTP004 – Parameters Guide**, forms part of the documentation library supporting those clients interacting with the Group Ticker Plant. For information, the full series of currently available documentation is outlined below:

- GTP001 – Product Guide;
- GTP002 – Technical Guide;
- GTP003 – Statistics Guide;
- GTP004 – Parameters Guide (this document);
- GTP005 – Testing Services Guide;
- GTP006 – External Sources Guide;
- GTP007 – GTP Lite Guide.
- GTP008 – Market Attributes Guide

Further documentation to support activities such as testing and displaying our data will be released in due course.

The full library of Group Ticker Plant documentation can be found at:

www.londonstockexchange.com/oneproductinfinitepossibilities

1.4   Document History

This document has been subject to the following iterations:

Issue	Date	Description
1.0	27 July 2012	First issue of this document

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2.0	31 August 2012	Second issue of this document with the following iterations: 2.3 - update to IP addressing (Level 2 MBP and Other Service Line secondary feed multicast addresses); 2.4 - inclusion of replay and recovery parameters.
3.0	30 November 2012	Inclusion of IP addressing and replay and recovery parameters for Production instances.
4.0	8 February 2013	Inclusion of IP addressing for FTSE Low Latency services.
5.0	14 February 2014	Inclusion of IP addressing for GTP Lite and EuroTLX and correction to London Production Level 2 IP range.
6.0	6 March 2014	Inclusion of full-depth GTP Lite IP details.
7.0	17 April 2014	Inclusion of Production details for EuroTLX and GTP Lite.
8.0	29 July 2014	Inclusion of FTSE and Borsa Admin channel GTP Lite IP details.
9.0	25 June 2015	Inclusion of Phase 2 IP address ranges to support CDS launch.
10.0	21 October 2015	Update to include correct IP details for multicast group Z on CDS.
11.0	30 October 2015	Updated to include Phase 2 Production IP ranges.
12.0	27 January 2016	Updated to reflect suspension of Channel Z from London-based Group Ticker Plant instance.
13.0	4 May 2016	Updated to include additional IP ranges to launched to support active/active PDC/SDC architecture in Milan.
14.0	6 May 2016	Updated to reflect corrections to IP ranges included as part of Issue 13.0.
14.1	19 May 2016	Minor correction to replay and recovery ports on page 25.
15.0	8 July 2016	Updated to reflect minor corrections.
16.0	30 September 2016	Updated to support the launch of TradEcho.
17.0	10 January 2017	Formally reissued to support launch of TradEcho.
18.0	5 April 2017	Updated to include TRADEcho and Turquoise production connectivity details.
18.1	20 July 2017	Minor correction 3.4 – TRADEcho channel 8 Recovery port corrected 2.6 – Updated replay cache size for CDS
19.0	26 June 2017	Updated Production and CDS MiFID

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		channel information:
		2.4 – TRADEcho Phase 1 'Trade' channels removed from 'non-MiFID' CDS ranges
		2.5 – new MiFID II post trade CDS channels
		3.1 – IDEM and EuroTLX channels greyed out to reflect their upcoming decommission under MiFID II
		3.2 – IDEM and EuroTLX channels greyed out to reflect their upcoming decommission under MiFID II
		3.3 – IDEM and EuroTLX channels greyed out to reflect their upcoming decommission under MiFID II
		3.4 – TRADEcho 'Trade' channels greyed out to reflect the decommission once the MiFID II compliant equivalents go live.
		3.5 – new London Production MiFID II post trade channels added.
		4.5 – new Milan Production MiFID II post trade channels added
19.1	20 July 2017	2.5 – Updated MIFID II post trade CDS channels
19.2	05 September 2017	Updates to MiFID II Feed Production I.Ps
		3 – text updated to reflect the permanent decommission of services
		3.5 – London production I.P addresses published
		4 - text updated to reflect the permanent decommission of services
		4 – Service availability times updated
		4.5 – Milan production I.P addresses published
19.3	13 December 2017	Decommission of FTSE Low Latency service in Production 19 Dec and CDS 18 Dec.

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		Removed from section 2.6 and 3.5
19.4	12 February 2018	Un-greyed out TRADEcho Trades channel to reflect re-purposing of channels for new SI Quote message 2.4 - CDS IP Address Ranges 3.4 - London Production IP Address Ranges
19.5	30 April 2018	Added Legacy CDS Connectivity Details (Section 3)
19.5.1	8 August 2018	2.6 – Corrected CDS IP Recovery Service Address
19.6	9 August 2019	2.6 – 3.6 – 5.6 Added EuroTLX Admin channel 5 and sub-sections – Removed Tertiary Feed in GTP Milan 3 and sub-sections – Corrected Primary and Secondary Multicast IPs

In subsequent issues of this document, where amendments have been made, these changes will be indicated through the use of red text.

1.5   Enquiries

For further information on Group Ticker Plant, please contact either your Technical Account Manager or the Client Technology Services (UK):

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- Telephone: (+39) 02 42 41 13 99
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- Email: clients-services@borsaitaliana.it

Further information can also be found on our project websites:

www.londonstockexchange.com/oneproductinfinitepossibilities

www.borsaitaliana.it/oneproductinfinitepossibilities

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2. Customer Development Service (CDS)

Location	London
Access	Extranex, BItNet (via. LSEG backbone), Customer-Managed Connectivity (CMC), Exchange Hosting - London, Exchange Hosting – Milan (via. LSEG backbone).
Description	To provide a functional environment for client testing. CDS is not a performant environment and in an effort to protect client and Group networks, outbound throttle rates are set low. Customers should not expect to performance test systems using this environment.
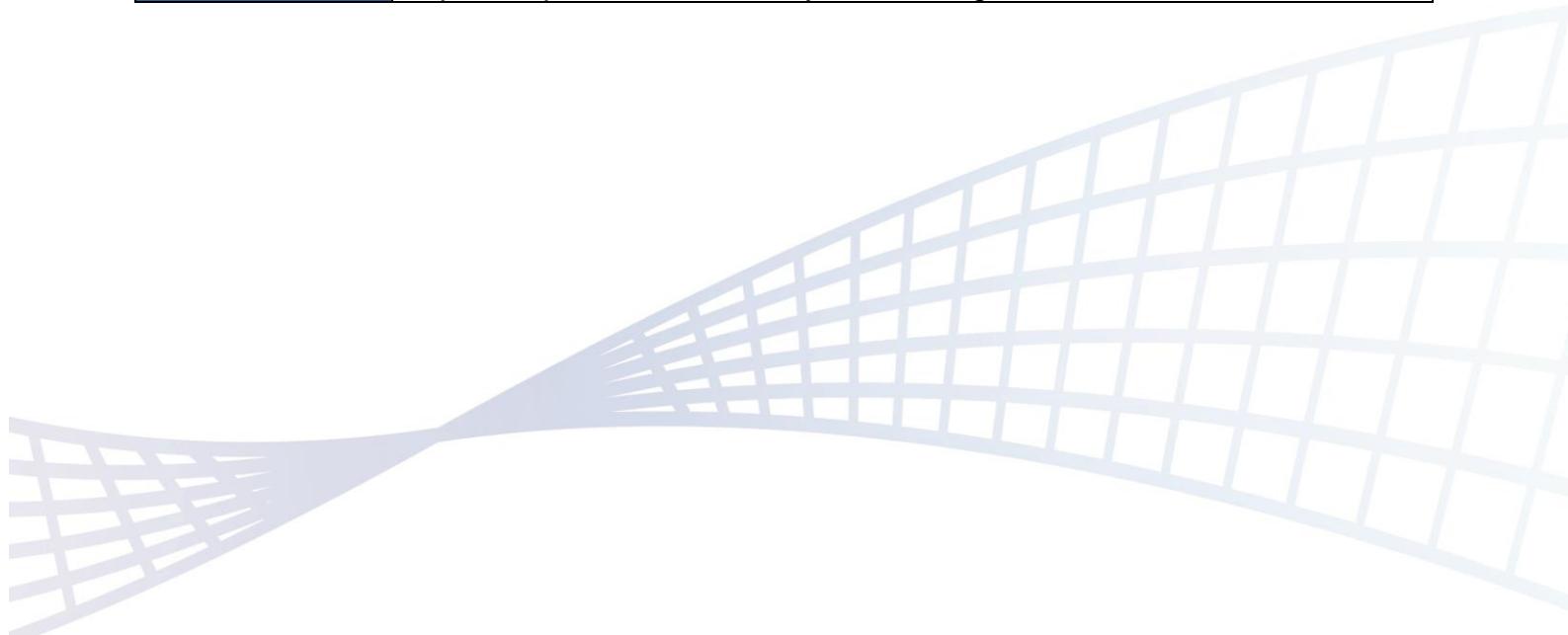
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2.1   CDS IP Address Ranges – Level 1

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100		224.4.12.64					53464		54464
B	FTSE 100		224.4.12.65					53465		54465
C	FTSE 250		224.4.12.66					53466		54466
D	Structured Products		224.4.12.67					53467		54467
E	Miscellaneous		224.4.12.68					53468		54468
F	European		224.4.12.69					53469		54469
G	International		224.4.12.70					53470		54470
H	MTA	194.169.8.205	224.4.12.71	61400	194.169.8.222	53671	194.169.8.220	53471	194.169.8.220	54471
I	MTA and SEDEX		224.4.12.72			53672		53472		54472
J	Structured Products		224.4.12.73			53673		53473		54473
K	Miscellaneous		224.4.12.74			53674		53474		54474
L	IDEM		224.4.12.75			53675		53475		54475
M	IDEM		224.4.12.76			53676		53476		54476
Q	EuroTLX		224.4.12.77			53677		53477		54477
R	EuroTLX		224.4.12.78			53678		53478		54478
S	EuroTLX		224.4.12.79			53679		53479		54479
Z	TAH and MiFID		224.4.12.86			53686		53486		54486
Secondary Feed										
a	FTSE 100		224.4.13.64					53464		54464
b	FTSE 100		224.4.13.65					53465		54465
c	FTSE 250		224.4.13.66					53466		54466
d	Structured Products		224.4.13.67					53467		54467
e	Miscellaneous		224.4.13.68					53468		54468
f	European		224.4.13.69					53469		54469
g	International		224.4.13.70					53470		54470
h	MTA	194.169.8.235	224.4.13.71	61450	194.169.8.252	53671	194.169.8.250	53471	194.169.8.250	54471
i	MTA and SEDEX		224.4.13.72			53672		53472		54472
j	Structured Products		224.4.13.73			53673		53473		54473
k	Miscellaneous		224.4.13.74			53674		53474		54474
l	IDEM		224.4.13.75			53675		53475		54475
m	IDEM		224.4.13.76			53676		53476		54476
q	EuroTLX		224.4.13.77			53677		53477		54477
r	EuroTLX		224.4.13.78			53678		53478		54478
s	EuroTLX		224.4.13.79			53679		53479		54479
z	TAH and MiFID		224.4.13.86			53686		53486		54486

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2.2 CDS IP Address Ranges – Level 2 MBO

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service		Replay Service		Recovery Service	
					Virtual-IP Address	Port	Virtual-IP Address	Port	Virtual-IP Address	Port
Primary Feed										
A	FTSE 100	194.169.8.205	224.4.12.1	61400	194.169.8.222		194.169.8.220	53401	194.169.8.220	54401
B	FTSE 100		224.4.12.2					53402		54402
C	FTSE 250		224.4.12.3					53403		54403
D	Structured Products		224.4.12.4					53404		54404
E	Miscellaneous		224.4.12.5					53405		54405
F	European		224.4.12.6					53406		54406
G	International		224.4.12.7					53407		54407
H	MTA		224.4.12.8			53608		53408		54408
I	MTA and SEDEX		224.4.12.9			53609		53409		54409
J	Structured Products		224.4.12.10			53610		53410		54410
K	Miscellaneous		224.4.12.11			53611		53411		54411
L	IDEM		224.4.12.12			53612		53412		54412
M	IDEM		224.4.12.13			53613		53413		54413
Q	EuroTLX		224.4.12.14			53614		53414		54414
R	EuroTLX		224.4.12.15			53615		53415		54415
S	EuroTLX		224.4.12.16			53616		53416		54416
Z	TAH and MiFID		224.4.12.23			53623		53423		54423
Secondary Feed										
a	FTSE 100	194.169.8.235	224.4.13.1	61450	194.169.8.252		194.169.8.250	53401	194.169.8.250	54401
b	FTSE 100		224.4.13.2					53402		54402
c	FTSE 250		224.4.13.3					53403		54403
d	Structured Products		224.4.13.4					53404		54404
e	Miscellaneous		224.4.13.5					53405		54405
f	European		224.4.13.6					53406		54406
g	International		224.4.13.7					53407		54407
h	MTA		224.4.13.8			53608		53408		54408
i	MTA and SEDEX		224.4.13.9			53609		53409		54409
j	Structured Products		224.4.13.10			53610		53410		54410
k	Miscellaneous		224.4.13.11			53611		53411		54411
l	IDEM		224.4.13.12			53612		53412		54412
m	IDEM		224.4.13.13			53613		53413		54413
q	EuroTLX		224.4.13.14			53614		53414		54414
r	EuroTLX		224.4.13.15			53615		53415		54415
s	EuroTLX		224.4.13.16			53616		53416		54416
z	TAH and MiFID		224.4.13.23			53623		53423		54423

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2.3   CDS IP Address Ranges – Level 2 MBP

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100	194.169.8.205	224.4.12.32	61400	194.169.8.222			53432	194.169.8.220	54432
B	FTSE 100		224.4.12.33					53433		54433
C	FTSE 250		224.4.12.34					53434		54434
D	Structured Products		224.4.12.35					53435		54435
E	Miscellaneous		224.4.12.36					53436		54436
G	International		224.4.12.37					53437		54437
H	MTA		224.4.12.38			53638		53438		54438
I	MTA and SEDEX		224.4.12.39			53639		53439		54439
J	Structured Products		224.4.12.40			53640		53440		54440
K	Miscellaneous		224.4.12.41			53641		53441		54441
L	IDEM		224.4.12.42			53642		53442		54442
M	IDEM		224.4.12.43			53643		53443		54443
Q	EuroTLX		224.4.12.44			53644		53444		54444
R	EuroTLX		224.4.12.45			53645		53445		54445
S	EuroTLX		224.4.12.46			53646		53446		54446
Z	TAH and MiFID		224.4.12.53			53653		53453		54453
Secondary Feed										
a	FTSE 100	194.169.8.235	224.4.13.32	61450	194.169.8.252			53432	194.169.8.250	54432
b	FTSE 100		224.4.13.33					53433		54433
c	FTSE 250		224.4.13.34					53434		54434
d	Structured Products		224.4.13.35					53435		54435
e	Miscellaneous		224.4.13.36					53436		54436
g	International		224.4.13.37					53437		54437
h	MTA		224.4.13.38			53638		53438		54438
i	MTA and SEDEX		224.4.13.39			53639		53439		54439
j	Structured Products		224.4.13.40			53640		53440		54440
k	Miscellaneous		224.4.13.41			53641		53441		54441
l	IDEM		224.4.13.42			53642		53442		54442
m	IDEM		224.4.13.43			53643		53443		54443
q	EuroTLX		224.4.13.44			53644		53444		54444
r	EuroTLX		224.4.13.45			53645		53445		54445
s	EuroTLX		224.4.13.46			53646		53446		54446
z	TAH and MiFID		224.4.13.53			53653		53453		54453

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2.4   CDS IP Address Ranges – Level 2 Incremental (Full-depth)

Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100	194.169.8.205	224.4.12.102	61400	194.169.8.222		194.169.8.220	53502	194.169.8.220	54502
B	FTSE 100		224.4.12.103					53503		54503
C	FTSE 250		224.4.12.104					53504		54504
D	Structured Products		224.4.12.105					53505		54505
E	Miscellaneous		224.4.12.106					53506		54506
F	European		224.4.12.107					53507		54507
G	International		224.4.12.108					53508		54508
H	MTA		224.4.12.109			53709		53509		54509
I	MTA and SEDEX		224.4.12.110			53710		53510		54510
J	Structured Products		224.4.12.111			53711		53511		54511
K	Miscellaneous		224.4.12.112			53712		53512		54512
L	IDEM		224.4.12.113			53713		53513		54513
M	IDEM		224.4.12.114			53714		53514		54514
Q	EuroTLX		224.4.12.115			53715		53515		54515
R	EuroTLX		224.4.12.116			53716		53516		54516
S	EuroTLX		224.4.12.117			53717		53517		54517
T	XLON		224.4.12.118					53518		54518
U	XPAR		224.4.12.119					53519		54519
V	XETR		224.4.12.120					53520		54520
W	XCSE, XHEL…		224.4.12.121					53521		54521
X	MTAA, XOSL…		224.4.12.122					53522		54522
Y	XAMS, XBRU…		224.4.12.123					53523		54523
Z	TAH and MiFID		224.4.12.124			53724		53524		54524
1	SI Quotes		224.4.12.92					53492		54492
3	SI Quotes		224.4.12.94					53494		54494
Secondary Feed										
a	FTSE 100	194.169.8.235	224.4.13.102	61450	194.169.8.252		194.169.8.250	53502	194.169.8.250	54502
b	FTSE 100		224.4.13.103					53503		54503
c	FTSE 250		224.4.13.104					53504		54504
d	Structured Products		224.4.13.105					53505		54505
e	Miscellaneous		224.4.13.106					53506		54506
f	European		224.4.13.107					53507		54507
g	International		224.4.13.108					53508		54508
h	MTA		224.4.13.109			53709		53509		54509
i	MTA and SEDEX		224.4.13.110			53710		53510		54510
j	Structured Products		224.4.13.111			53711		53511		54511
k	Miscellaneous		224.4.13.112			53712		53512		54512
l	IDEM		224.4.13.113			53713		53513		54513
m	IDEM		224.4.13.114			53714		53514		54514
q	EuroTLX		224.4.13.115			53715		53515		54515
r	EuroTLX		224.4.13.116			53716		53516		54516
s	EuroTLX		224.4.13.117			53717		53517		54517
t	XLON		224.4.13.118					53518		54518
u	XPAR		224.4.13.119					53519		54519
v	XETR		224.4.13.120					53520		54520
w	XCSE, XHEL…		224.4.13.121					53521		54521
x	MTAA, XOSL…		224.4.13.122					53522		54522

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y	XMAS, XBRU…		224.4.13.123					53523		54523
z	TAH and MiFID		224.4.13.124			53724		53524		54524
5	SI Quotes		224.4.13.92					53492		54492
7	SI Quotes		244.4.13.94					53494		54494

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2.5 CDS IP Address Ranges – MiFID II Post Trade Channels

Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	Port	Replay Service Virtual-IP Address	Port	Recovery Service Virtual-IP Address	Port
Primary Feed										
A	FTSE 100		224.4.0.64					53801		54801
B	FTSE 100		224.4.0.65					53802		54802
C	FTSE 250		224.4.0.66					53803		54803
D	Structured Products		224.4.0.67					53804		54804
E	Miscellaneous		224.4.0.68					53805		54805
F	European		224.4.0.69					53806		54806
G	International		224.4.0.70					53807		54807
H	MTA		224.4.0.71			53908		53808		54808
I	MTA and SEDEX		224.4.0.72			53909		53809		54809
J	Structured Products		224.4.0.73			53910		53810		54810
K	Miscellaneous		224.4.0.74			53911		53811		54811
L	IDEM		224.4.0.75			53912		53812		54812
M	IDEM	194.169.8.205	224.4.0.76	61400	194.169.8.222	53913	194.169.8.220	53813	194.169.8.220	54813
Q	EuroTLX		224.4.0.77			53914		53814		54814
R	EuroTLX		224.4.0.78			53915		53815		54815
S	EuroTLX		224.4.0.79			53916		53816		54816
T	XLON		224.4.0.80					53817		54817
U	XPAR		224.4.0.81					53818		54818
V	XETR		224.4.0.82					53819		54819
W	XCSE, XHEL…		224.4.0.83					53820		54820
X	MTAA, XOSL…		224.4.0.84					53821		54821
Y	XAMS, XBRU…		224.4.0.85					53822		54822
Z	TAH and MiFID		224.4.0.86			53923		53823		54823
2	TRADEcho Trades		224.4.0.87					53824		54824
4	TRADEcho Trades		224.4.0.88					53825		54825
Secondary Feed										
a	FTSE 100		224.4.1.64					53801		54801
b	FTSE 100		224.4.1.65					53802		54802
c	FTSE 250		224.4.1.66					53803		54803
d	Structured Products		224.4.1.67					53804		54804
e	Miscellaneous		224.4.1.68					53805		54805
f	European		224.4.1.69					53806		54806
g	International		224.4.1.70					53807		54807
h	MTA		224.4.1.71			53908		53808		54808
i	MTA and SEDEX		224.4.1.72			53909		53809		54809
j	Structured Products		224.4.1.73			53910		53810		54810
k	Miscellaneous	194.169.8.235	224.4.1.74	61450	194.169.8.252	53911	194.169.8.250	53811	194.169.8.250	54811
l	IDEM		224.4.1.75			53912		53812		54812
m	IDEM		224.4.1.76			53913		53813		54813
q	EuroTLX		224.4.1.77			53914		53814		54814
r	EuroTLX		224.4.1.78			53915		53815		54815
s	EuroTLX		224.4.1.79			53916		53816		54816
t	XLON		224.4.1.80					53817		54817
u	XPAR		224.4.1.81					53818		54818
v	XETR		224.4.1.82					53819		54819
w	XCSE, XHEL…		224.4.1.83					53820		54820
x	MTAA, XOSL…		224.4.1.84					53821		54821

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Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Virtual-IP Address	GTP Lite Port	Replay Virtual-IP Address	Replay Port	Recovery Virtual-IP Address	Recovery Port
y	XMAS, XBRU…		224.4.1.85					53822		54822
z	TAH and MiFID		224.4.1.86			53923		53823		54823
6	TRADEcho Trades		224.4.1.87					53824		54824
8	TRADEcho Trades		224.4.1.88					53825		54825

2.6   CDS IP Address Ranges – Other Service Lines

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
N	EuroTLX Admin	194.169.8.205	224.4.12.97	61400	194.169.8.222	53697	194.169.8.220	53497	194.169.8.220	54497
O	FTSE Indices		224.4.12.96			53696		53496		
P	Borsa Admin		224.4.12.98			53698		53498		54498
Secondary Feed										
n	EuroTLX Admin	194.169.8.235	224.4.13.97	61450	194.169.8.252	53697	194.169.8.250	53497	194.169.8.250	54497
o	FTSE Indices		224.4.13.96			53696		53496		
p	Borsa Admin		224.4.13.98			53698		53498		54498

One product, **infinite possibilities.**

2.7   CDS Replay and Recovery Service Parameters

	Description	Value
Replay Service	Maximum number of messages available to clients on replay services	65,000 messages
	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of replay requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests
Recovery Service	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of recovery requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests

One product, **infinite possibilities.**

3. Legacy Customer Development Service (LCDS)

Location	London
Access	Extranex, BltNet (via. LSEG backbone), Customer-Managed Connectivity (CMC), Exchange Hosting - London, Exchange Hosting – Milan (via. LSEG backbone).
Description	Legacy CDS is offered in addition to the standard CDS environment. The purpose of Legacy CDS is to allow client testing against the current production code. As with standard CDS, this is not a performant environment. Customers should not expect to performance test systems using this environment.
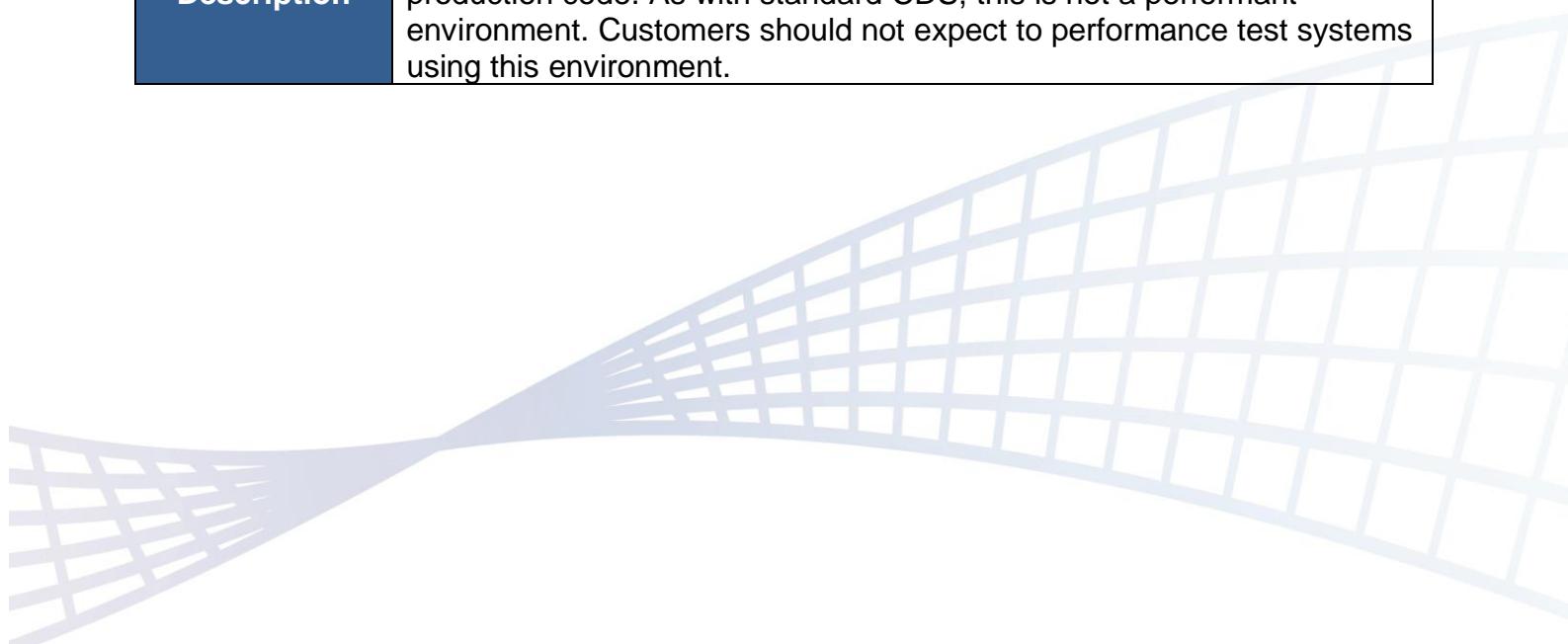
One product, **infinite possibilities.**

3.1 Legacy CDS IP Address Ranges – Level 1

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100		224.4.16.64					53464		54464
B	FTSE 100		224.4.16.65					53465		54465
C	FTSE 250		224.4.16.66					53466		54466
D	Structured Products		224.4.16.67					53467		54467
E	Miscellaneous		224.4.16.68					53468		54468
F	European		224.4.16.69					53469		54469
G	International		224.4.16.70					53470		54470
H	MTA	94.46.104.209	224.4.16.71	61400	94.46.104.195	53671	94.46.104.194	53471	94.46.104.194	54471
I	MTA and SEDEX		224.4.16.72			53672		53472		54472
J	Structured Products		224.4.16.73			53673		53473		54473
K	Miscellaneous		224.4.16.74			53674		53474		54474
L	IDEM		224.4.16.75			53675		53475		54475
M	IDEM		224.4.16.76			53676		53476		54476
Q	EuroTLX		224.4.16.77			53677		53477		54477
R	EuroTLX		224.4.16.78			53678		53478		54478
S	EuroTLX		224.4.16.79			53679		53479		54479
Z	TAH and MiFID		224.4.16.86			53686		53486		54486
Secondary Feed										
a	FTSE 100		224.4.17.64					53464		54464
b	FTSE 100		224.4.17.65					53465		54465
c	FTSE 250		224.4.17.66					53466		54466
d	Structured Products		224.4.17.67					53467		54467
e	Miscellaneous		224.4.17.68					53468		54468
f	European		224.4.17.69					53469		54469
g	International		224.4.17.70					53470		54470
h	MTA	94.46.104.217	224.4.17.71	61450	94.46.104.203	53671	94.46.104.202	53471	94.46.104.202	54471
i	MTA and SEDEX		224.4.17.72			53672		53472		54472
j	Structured Products		224.4.17.73			53673		53473		54473
k	Miscellaneous		224.4.17.74			53674		53474		54474
l	IDEM		224.4.17.75			53675		53475		54475
m	IDEM		224.4.17.76			53676		53476		54476
q	EuroTLX		224.4.17.77			53677		53477		54477
r	EuroTLX		224.4.17.78			53678		53478		54478
s	EuroTLX		224.4.17.79			53679		53479		54479
z	TAH and MiFID		224.4.17.86			53686		53486		54486

One product, **infinite possibilities.**

3.2   Legacy CDS IP Address Ranges – Level 2 MBO

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100	94.46.104.209	224.4.16.1	61400	94.46.104.195		94.46.104.194	53401	94.46.104.194	54401
B	FTSE 100		224.4.16.2					53402		54402
C	FTSE 250		224.4.16.3					53403		54403
D	Structured Products		224.4.16.4					53404		54404
E	Miscellaneous		224.4.16.5					53405		54405
F	European		224.4.16.6					53406		54406
G	International		224.4.16.7					53407		54407
H	MTA		224.4.16.8			53608		53408		54408
I	MTA and SEDEX		224.4.16.9			53609		53409		54409
J	Structured Products		224.4.16.10			53610		53410		54410
K	Miscellaneous		224.4.16.11			53611		53411		54411
L	IDEM		224.4.16.16			53612		53412		54412
M	IDEM		224.4.16.13			53613		53413		54413
Q	EuroTLX		224.4.16.14			53614		53414		54414
R	EuroTLX		224.4.16.15			53615		53415		54415
S	EuroTLX		224.4.16.16			53616		53416		54416
Z	TAH and MiFID		224.4.16.23			53623		53423		54423
Secondary Feed										
a	FTSE 100	94.46.104.217	224.4.17.1	61450	94.46.104.203		94.46.104.202	53401	94.46.104.202	54401
b	FTSE 100		224.4.17.2					53402		54402
c	FTSE 250		224.4.17.3					53403		54403
d	Structured Products		224.4.17.4					53404		54404
e	Miscellaneous		224.4.17.5					53405		54405
f	European		224.4.17.6					53406		54406
g	International		224.4.17.7					53407		54407
h	MTA		224.4.17.8			53608		53408		54408
i	MTA and SEDEX		224.4.17.9			53609		53409		54409
j	Structured Products		224.4.17.10			53610		53410		54410
k	Miscellaneous		224.4.17.11			53611		53411		54411
l	IDEM		224.4.17.12			53612		53412		54412
m	IDEM		224.4.17.13			53613		53413		54413
q	EuroTLX		224.4.17.14			53614		53414		54414
r	EuroTLX		224.4.17.15			53615		53415		54415
s	EuroTLX		224.4.17.16			53616		53416		54416
z	TAH and MiFID		224.4.17.23			53623		53423		54423

One product, **infinite possibilities.**

3.3 Legacy CDS IP Address Ranges – Level 2 MBP

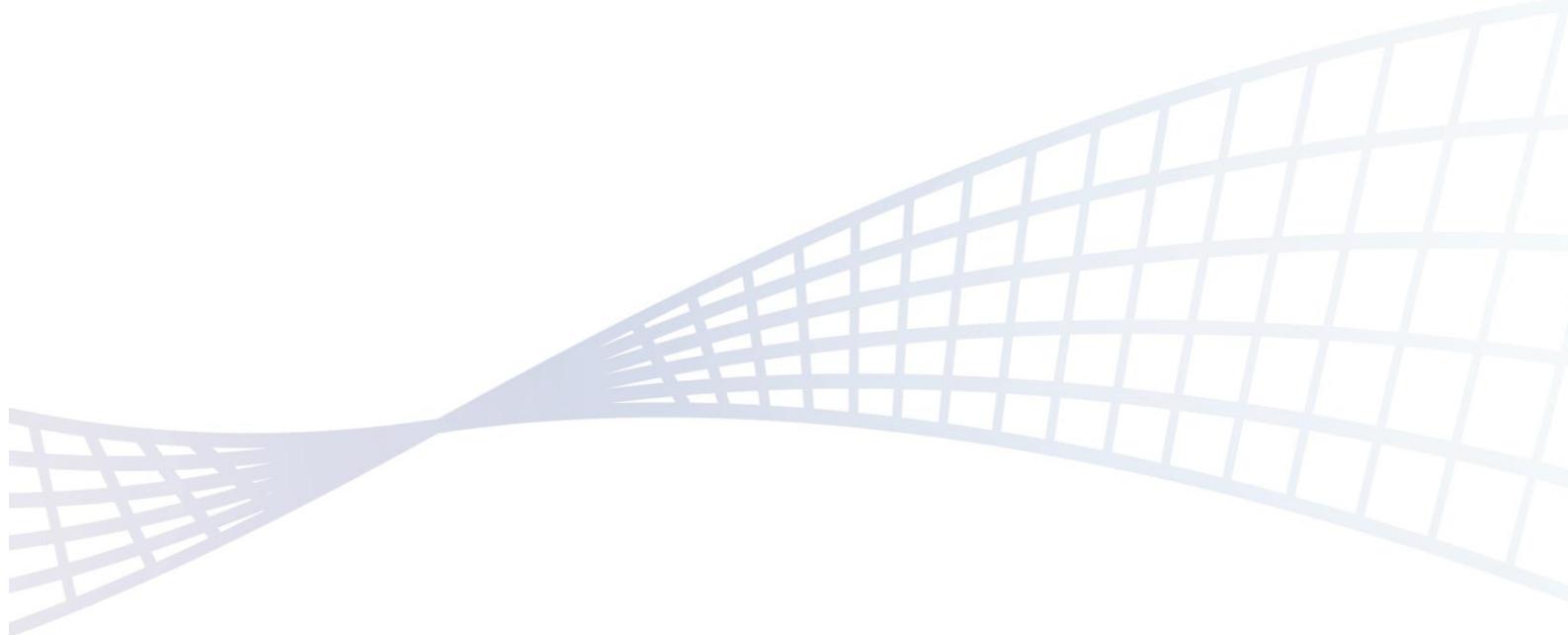| Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100		224.4.16.32					53432		54432
B	FTSE 100		224.4.16.33					53433		54433
C	FTSE 250		224.4.16.34					53434		54434
D	Structured Products		224.4.16.35					53435		54435
E	Miscellaneous		224.4.16.36					53436		54436
G	International		224.4.16.37					53437		54437
H	MTA	94.46.104.209	224.4.16.38	61400	94.46.104.195	53638	94.46.104.194	53438	94.46.104.194	54438
I	MTA and SEDEX		224.4.16.39			53639		53439		54439
J	Structured Products		224.4.16.40			53640		53440		54440
K	Miscellaneous		224.4.16.41			53641		53441		54441
L	IDEM		224.4.16.42			53642		53442		54442
M	IDEM		224.4.16.43			53643		53443		54443
Q	EuroTLX		224.4.16.44			53644		53444		54444
R	EuroTLX		224.4.16.45			53645		53445		54445
S	EuroTLX		224.4.16.46			53646		53446		54446
Z	TAH and MiFID		224.4.16.53			53653		53453		54453
Secondary Feed										
a	FTSE 100		224.4.17.32					53432		54432
b	FTSE 100		224.4.17.33					53433		54433
c	FTSE 250		224.4.17.34					53434		54434
d	Structured Products		224.4.17.35					53435		54435
e	Miscellaneous		224.4.17.36					53436		54436
g	International		224.4.17.37					53437		54437
h	MTA	94.46.104.217	224.4.17.38	61450	94.46.104.203	53638	94.46.104.202	53438	94.46.104.202	54438
i	MTA and SEDEX		224.4.17.39			53639		53439		54439
j	Structured Products		224.4.17.40			53640		53440		54440
k	Miscellaneous		224.4.17.41			53641		53441		54441
l	IDEM		224.4.17.42			53642		53442		54442
m	IDEM		224.4.17.43			53643		53443		54443
q	EuroTLX		224.4.17.44			53644		53444		54444
r	EuroTLX		224.4.17.45			53645		53445		54445
s	EuroTLX		224.4.17.46			53646		53446		54446
z	TAH and MiFID		224.4.17.53			53653		53453		54453

One product, **infinite possibilities.**

3.4   Legacy CDS IP Address Ranges – Level 2 Incremental (Full-depth)

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100		224.4.16.102					53502		54502
B	FTSE 100		224.4.16.103					53503		54503
C	FTSE 250		224.4.16.104					53504		54504
D	Structured Products		224.4.16.105					53505		54505
E	Miscellaneous		224.4.16.106					53506		54506
F	European		224.4.16.107					53507		54507
G	International		224.4.16.108					53508		54508
H	MTA		224.4.16.109			53709		53509		54509
I	MTA and SEDEX		224.4.16.110			53710		53510		54510
J	Structured Products		224.4.16.111			53711		53511		54511
K	Miscellaneous		224.4.16.112			53712		53512		54512
L	IDEM		224.4.16.113			53713		53513		54513
M	IDEM	94.46.104.209	224.4.16.114	61400	94.46.104.195	53714	94.46.104.194	53514	94.46.104.194	54514
Q	EuroTLX		224.4.16.115			53715		53515		54515
R	EuroTLX		224.4.16.116			53716		53516		54516
S	EuroTLX		224.4.16.117			53717		53517		54517
T	XLON		224.4.16.118					53518		54518
U	XPAR		224.4.16.119					53519		54519
V	XETR		224.4.16.120					53520		54520
W	XCSE, XHEL…		224.4.16.121					53521		54521
X	MTAA, XOSL…		224.4.16.122					53522		54522
Y	XAMS, XBRU…		224.4.16.123					53523		54523
Z	TAH and MiFID		224.4.16.124			53724		53524		54524
1	SI Quotes		224.4.16.92					53492		54492
3	SI Quotes		224.4.16.94					53494		54494
Secondary Feed										
a	FTSE 100		224.4.17.102					53502		54502
b	FTSE 100		224.4.17.103					53503		54503
c	FTSE 250		224.4.17.104					53504		54504
d	Structured Products		224.4.17.105					53505		54505
e	Miscellaneous		224.4.17.106					53506		54506
f	European		224.4.17.107					53507		54507
g	International		224.4.17.108					53508		54508
h	MTA		224.4.17.109			53709		53509		54509
i	MTA and SEDEX		224.4.17.110			53710		53510		54510
j	Structured Products		224.4.17.111			53711		53511		54511
k	Miscellaneous	94.46.104.217	224.4.17.112	61450	94.46.104.203	53712	94.46.104.202	53512	94.46.104.202	54512
l	IDEM		224.4.17.113			53713		53513		54513
m	IDEM		224.4.17.114			53714		53514		54514
q	EuroTLX		224.4.17.115			53715		53515		54515
r	EuroTLX		224.4.17.116			53716		53516		54516
s	EuroTLX		224.4.17.117			53717		53517		54517
t	XLON		224.4.17.118					53518		54518
u	XPAR		224.4.17.119					53519		54519
v	XETR		224.4.17.120					53520		54520
w	XCSE, XHEL…		224.4.17.121					53521		54521
x	MTAA, XOSL…		224.4.17.122					53522		54522

One product, **infinite possibilities.**

Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Virtual-IP Address	GTP Lite Port	Replay Virtual-IP Address	Replay Port	Recovery Virtual-IP Address	Recovery Port
y	XMAS, XBRU…		224.4.17.123					53523		54523
z	TAH and MiFID		224.4.17.124			53724		53524		54524
5	SI Quotes		224.4.17.92					53492		54492
7	SI Quotes		244.4.17.94					53494		54494

3.5 Legacy CDS IP Address Ranges – MiFID II Post Trade Channels

Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
A	FTSE 100		224.4.16.129					53801		54801
B	FTSE 100		224.4.16.130					53802		54802
C	FTSE 250		224.4.16.131					53803		54803
D	Structured Products		224.4.16.132					53804		54804
E	Miscellaneous		224.4.16.133					53805		54805
F	European		224.4.16.134					53806		54806
G	International		224.4.16.135					53807		54807
H	MTA		224.4.16.136			53908		53808		54808
I	MTA and SEDEX		224.4.16.137			53909		53809		54809
J	Structured Products		224.4.16.138			53910		53810		54810
K	Miscellaneous		224.4.16.139			53911		53811		54811
L	IDEM		224.4.16.140			53912		53812		54812
M	IDEM	94.46.104.209	224.4.16.141	61400	94.46.104.195	53913	94.46.104.194	53813	94.46.104.194	54813
Q	EuroTLX		224.4.16.142			53914		53814		54814
R	EuroTLX		224.4.16.143			53915		53815		54815
S	EuroTLX		224.4.16.144			53916		53816		54816
T	XLON		224.4.16.145					53817		54817
U	XPAR		224.4.16.146					53818		54818
V	XETR		224.4.16.147					53819		54819
W	XCSE, XHEL…		224.4.16.148					53820		54820
X	MTAA, XOSL…		224.4.16.149					53821		54821
Y	XAMS, XBRU…		224.4.16.150					53822		54822
Z	TAH and MiFID		224.4.16.151			53923		53823		54823
2	TRADEcho Trades		224.4.16.152					53824		54824
4	TRADEcho Trades		224.4.16.153					53825		54825
Secondary Feed										
a	FTSE 100		224.4.17.129					53801		54801
b	FTSE 100		224.4.17.130					53802		54802
c	FTSE 250		224.4.17.131					53803		54803
d	Structured Products		224.4.17.132					53804		54804
e	Miscellaneous		224.4.17.133					53805		54805
f	European		224.4.17.134					53806		54806
g	International		224.4.17.135					53807		54807
h	MTA	94.46.104.217	224.4.17.136	61450	94.46.104.203	53908	94.46.104.202	53808	94.46.104.202	54808
i	MTA and SEDEX		224.4.17.137			53909		53809		54809
j	Structured Products		224.4.17.138			53910		53810		54810
k	Miscellaneous		224.4.17.139			53911		53811		54811
l	IDEM		224.4.17.140			53912		53812		54812
m	IDEM		224.4.17.141			53913		53813		54813
q	EuroTLX		224.4.17.142			53914		53814		54814
r	EuroTLX		224.4.17.143			53915		53815		54815

One product, **infinite possibilities.**

s	EuroTLX		224.4.17.144			53916		53816		54816
t	XLON		224.4.17.145					53817		54817
u	XPAR		224.4.17.146					53818		54818
v	XETR		224.4.17.147					53819		54819
w	XCSE, XHEL…		224.4.17.148					53820		54820
x	MTAA, XOSL…		224.4.17.149					53821		54821
y	XMAS, XBRU…		224.4.17.150					53822		54822
z	TAH and MiFID		224.4.17.151			53923		53823		54823
6	TRADEcho Trades		224.4.17.152					53824		54824
8	TRADEcho Trades		224.4.17.153					53825		54825

One product, **infinite possibilities.**

3.6   Legacy CDS IP Address Ranges – Other Service Lines

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	Port	Replay Service Virtual-IP Address	Port	Recovery Service Virtual-IP Address	Port
Primary Feed										
N	EuroTLX Admin	94.46.104.193	224.4.16.97	61400	94.46.104.195	53697	94.46.104.194	53497	94.46.104.194	54497
O	FTSE Indices		224.4.16.96			53696		53496		
P	Borsa Admin		224.4.16.98			53698		53498		54498
Secondary Feed										
n	EuroTLX Admin	94.46.104.201	224.4.17.97	61450	94.46.104.203	53697	94.46.104.202	53497	94.46.104.202	54497
o	FTSE Indices		224.4.17.96			53696		53496		
p	Borsa Admin		224.4.17.98			53698		53498		54498

3.7   Legacy CDS Replay and Recovery Service Parameters

	Description	Value
Replay Service	Maximum number of messages available to clients on replay services	65,000 messages
	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of replay requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests
Recovery Service	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of recovery requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests

One product, **infinite possibilities.**

4. Production: London Instance

Location	London
Access	Extranex, NSP, Customer-Managed Connectivity (CMC), Exchange Hosting – London. BltNet, Exchange Hosting – Milan.
Description	The Production instance of Group Ticker Plant in London is available to clients from 0445 (Local London Time) and will broadcast messages from 0500 (Local London Time).
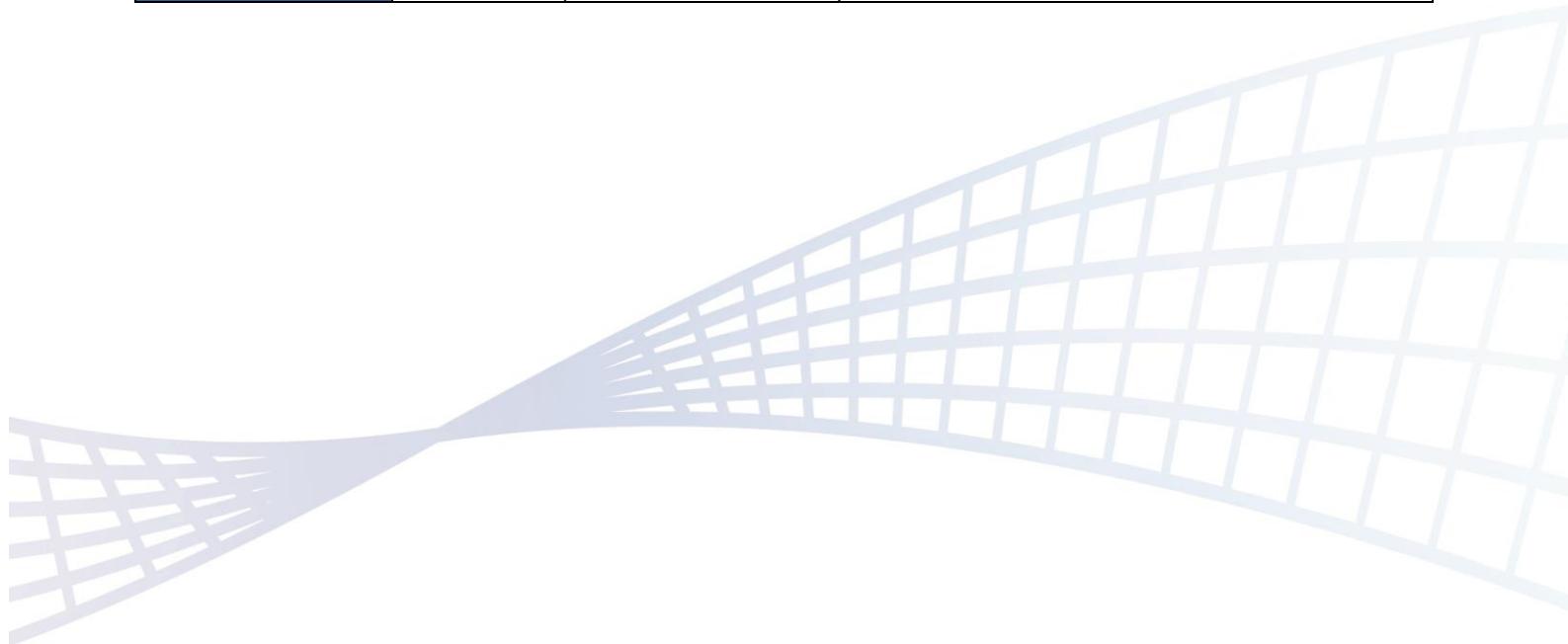
One product, **infinite possibilities.**

4.1 London Production IP Address Ranges – Level 1

Market Data Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed A	FTSE 100	194.169.4.55	224.4.10.64	60400	194.169.4.35	63864	194.169.4.35	64864
B	FTSE 100		224.4.10.65			63865		64865
C	FTSE 250		224.4.10.66			63866		64866
D	Structured Products		224.4.10.67			63867		64867
E	Miscellaneous		224.4.10.68			63868		64868
F	European		224.4.10.69			63869		64869
G	International		224.4.10.70			63870		64870
Secondary Feed a	FTSE 100	194.169.4.125	224.4.11.64	60400	194.169.4.100	63864	194.169.4.100	64864
b	FTSE 100		224.4.11.65			63865		64865
c	FTSE 250		224.4.11.66			63866		64866
d	Structured Products		224.4.11.67			63867		64867
e	Miscellaneous		224.4.11.68			63868		64868
f	European		224.4.11.69			63869		64869
g	International		224.4.11.70			63870		64870

4.2 London Production IP Address Ranges – Level 2 MBO

Market Data Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed A	FTSE 100	194.169.4.55	224.4.10.1	60400	194.169.4.35	63801	194.169.4.35	64801
B	FTSE 100		224.4.10.2			63802		64802
C	FTSE 250		224.4.10.3			63803		64803
D	Structured Products		224.4.10.4			63804		64804
E	Miscellaneous		224.4.10.5			63805		64805
F	European		224.4.10.6			63806		64806
G	International		224.4.10.7			63807		64807
Secondary Feed a	FTSE 100	194.169.4.125	224.4.11.1	60400	194.169.4.100	63801	194.169.4.100	64801
b	FTSE 100		224.4.11.2			63802		64802
c	FTSE 250		224.4.11.3			63803		64803
d	Structured Products		224.4.11.4			63804		64804
e	Miscellaneous		224.4.11.5			63805		64805
f	European		224.4.11.6			63806		64806
g	International		224.4.11.7			63807		64807

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4.3 London Production IP Address Ranges – Level 2 MBP

	Market Data Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed	A	FTSE 100	194.169.4.55	224.4.10.32	60400	194.169.4.35	63832	194.169.4.35	64832
	B	FTSE 100		224.4.10.33			63833		64833
	C	FTSE 250		224.4.10.34			63834		64834
	D	Structured Products		224.4.10.35			63835		64835
	E	Miscellaneous		224.4.10.36			63836		64836
	G	International		224.4.10.38			63838		64838
Secondary Feed	a	FTSE 100	194.169.4.125	224.4.11.32	60400	194.169.4.100	63832	194.169.4.100	64832
	b	FTSE 100		224.4.11.33			63833		64833
	c	FTSE 250		224.4.11.34			63834		64834
	d	Structured Products		224.4.11.35			63835		64835
	e	Miscellaneous		224.4.11.36			63836		64836
	g	International		224.4.11.38			63838		34838

4.6 London Production IP Address Ranges – Level 2 Incremental (Full-depth)

	Market Data Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed	A	FTSE 100	194.169.4.55	224.4.10.102	60400	194.169.4.35	63902	194.169.4.35	64902
	B	FTSE 100		224.4.10.103			63903		64903
	C	FTSE 250		224.4.10.104			63904		64904
	D	Structured Products		224.4.10.105			63905		64905
	E	Miscellaneous		224.4.10.106			63906		64906
	F	European		224.4.10.107			63907		64907
	G	International		224.4.10.108			63908		64908
	T	XLON		224.4.10.118			63918		64918
	U	XPAR		224.4.10.119			63919		64919
	V	XETR		224.4.10.120			63920		64920
	W	XCSE, XHEL…		224.4.10.121			63921		64921
	X	MTAA, XOSL…		224.4.10.122			63922		64922
	Y	XAMS, XBRU…		224.4.10.123			63923		64923
	~~1~~	~~TRADEcho SI Quoting~~		~~224.4.10.91~~			~~63891~~		~~64891~~
	1	New SI Quotes		224.4.10.92			63892		64892
	~~3~~	~~TRADEcho SI Quoting~~		~~224.4.10.93~~			~~63893~~		~~64893~~
	3	New SI Quotes		224.4.10.94			63894		64894
Secondary Feed	a	FTSE 100	194.169.4.125	224.4.11.102	60400	194.169.4.100	63902	194.169.4.100	64902
	b	FTSE 100		224.4.11.103			63903		64903
	c	FTSE 250		224.4.11.104			63904		64904
	d	Structured Products		224.4.11.105			63905		64905

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e	Miscellaneous		224.4.11.106			63906	64906
f	European		224.4.11.107			63907	64907
g	International		224.4.11.108			63908	64908
t	XLON		224.4.11.118			63918	64918
u	XPAR		224.4.11.119			63919	64919
v	XETR		224.4.11.120			63920	64920
w	XCSE, XHEL…		224.4.11.121			63921	64921
x	MTAA, XOSL…		224.4.11.122			63922	64922
y	XAMS, XBRU…		224.4.11.123			63923	64923
~~5~~	~~TRADEcho SI Quoting~~		~~224.4.11.91~~			~~63891~~	~~64891~~
5	New SI Quotes		224.4.11.92			63892	64892
~~7~~	~~TRADEcho SI Quoting~~		~~224.4.11.93~~			~~63893~~	~~64893~~
7	New SI Quotes		224.4.11.94			63894	64894

*For SI Quoting, either use 'New SI Quotes' **or** existing 'TRADEcho SI Quoting'. Refer to GTP 002 Technical Guide.

4.7 London Production IP Address Ranges – MiFID II Post Trade Channels

| | | | | | Replay Service | | Recovery Service | |
	Market Data Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	Virtual-IP Address	Port	Virtual-IP Address	Port
Primary Feed	A	FTSE 100	194.169.4.55	224.4.0.1	60400	194.169.4.35	63931	194.169.4.35	64931
	B	FTSE 100		224.4.0.2			63932		64932
	C	FTSE 250		224.4.0.3			63933		64933
	D	Structured Products		224.4.0.4			63934		64934
	E	Miscellaneous		224.4.0.5			63935		64935
	F	European		224.4.0.6			63936		64936
	G	International		224.4.0.7			63937		64937
	T	XLON		224.4.0.8			63938		64938
	U	XPAR		224.4.0.9			63939		64939
	V	XETR		224.4.0.10			63940		64940
	W	XCSE, XHEL…		224.4.0.11			63941		64941
	X	MTAA, XOSL…		224.4.0.12			63942		64942
	Y	XAMS, XBRU…		224.4.0.13			63943		64943
	2	TRADEcho Trades		224.4.0.14			63944		64944
	4	TRADEcho Trades		224.4.0.15			63945		64945
Secondary Feed	a	FTSE 100	194.169.4.125	224.4.1.1	60400	194.169.4.100	63931	194.169.4.100	64931
	b	FTSE 100		224.4.1.2			63932		64932
	c	FTSE 250		224.4.1.3			63933		64933
	d	Structured Products		224.4.1.4			63934		64934
	e	Miscellaneous		224.4.1.5			63935		64935
	f	European		224.4.1.6			63936		64936
	g	International		224.4.1.7			63937		64937
	t	XLON		224.4.1.8			63938		64938
	u	XPAR		224.4.1.9			63939		64939
	v	XETR		224.4.1.10			63940		64940
	w	XCSE, XHEL…		224.4.1.11			63941		64941
	x	MTAA, XOSL…		224.4.1.12			63942		64942
	y	XAMS, XBRU…		224.4.1.13			63943		64943

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						Replay Service		Recovery Service	
	Market Data Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	Virtual-IP Address	Port	Virtual-IP Address	Port
6		TRADEcho Trades		224.4.1.14			63944		64944
8		TRADEcho Trades		224.4.1.15			63945		64945

4.8 London Production IP Address Ranges – Other Service Lines

						Replay Service		Recovery Service	
	Market Data Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	Virtual-IP Address	Port	Virtual-IP Address	Port
Primary Feed	O	FTSE Indices	194.169. 4.55	224.4.10.96	60400	194.169 .4.35	63896	194.169 .4.35	
	P	Borsa Admin		224.4.10.98			63898		64898
Secondary Feed	o	FTSE Indices	194.169. 4.125	224.4.11.96	60400	194.169 .4.100	63896	194.169 .4.100	
	p	Borsa Admin		224.4.11.98			63898		64898

4.9 London Production Replay and Recovery Service Parameters

	Description	Value
Replay Service	Maximum number of messages available to clients on replay services	65,000 messages
	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of replay requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests
Recovery Service	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of recovery requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests

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5. Production: Milan Instance

Location	Milan
Access	Extranex, NSP, Customer-Managed Connectivity (CMC), Exchange Hosting – London. BltNet, Exchange Hosting – Milan.
Description	The Production instance of Group Ticker Plant in Milan is available to clients from 0545 (Local Milan Time) and will broadcast messages from 0500 (Local Milan Time).
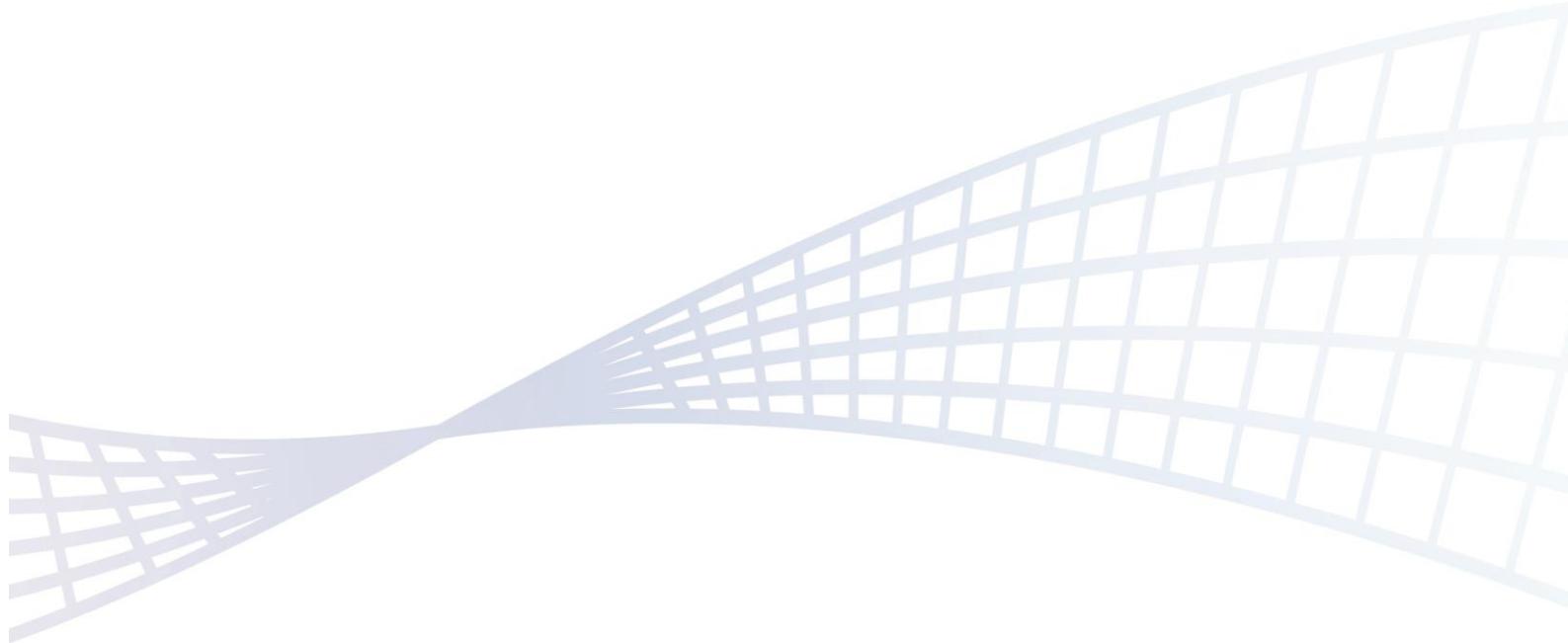
One product, **infinite possibilities.**

5.1 Milan Production IP Address Ranges – Level 1

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
H	MTA		224.4.10.199			62871		63871		64871
I	MTA and SEDEX		224.4.10.200			62872		63872		64872
J	Structured Products		224.4.10.201			62873		63873		64873
K	Miscellaneous		224.4.10.202			62874		63874		64874
L	IDEM	194.169.5.55	224.4.10.203	60400	194.169.5.37	62875	194.169.5.35	63875	194.169.5.35	64875
M	IDEM		224.4.10.204			62876		63876		64876
Q	EuroTLX		224.4.10.205			62877		63877		64877
R	EuroTLX		224.4.10.206			62878		63878		64878
S	EuroTLX		224.4.10.207			62879		63879		64879
Z	TAH and MiFID		224.4.10.214			62886		63886		64886
Secondary Feed										
h	MTA		224.4.11.199			62871		63871		64871
i	MTA and SEDEX		224.4.11.200			62872		63872		64872
j	Structured Products		224.4.11.201			62873		63873		64873
k	Miscellaneous		224.4.11.202			62874		63874		64874
l	IDEM	194.169.5.125	224.4.11.203	60400	194.169.5.102	62875	194.169.5.100	63875	194.169.5.100	64875
m	IDEM		224.4.11.204			62876		63876		64876
q	EuroTLX		224.4.11.205			62877		63877		64877
r	EuroTLX		224.4.11.206			62878		63878		64878
s	EuroTLX		224.4.11.207			62879		63879		64879
z	TAH and MiFID		224.4.11.214			62886		63886		64886
~~Tertiary Feed~~										
~~h~~	~~MTA~~		~~224.4.12.199~~			~~62871~~		~~63871~~		~~64871~~
~~i~~	~~MTA and SEDEX~~		~~224.4.12.200~~			~~62872~~		~~63872~~		~~64872~~
~~j~~	~~Structured Products~~		~~224.4.12.201~~			~~62873~~		~~63873~~		~~64873~~
~~k~~	~~Miscellaneous~~	~~194.169.5.120~~	~~224.4.12.202~~	~~60400~~	~~194.169.5.106~~	~~62874~~	~~194.169.5.104~~	~~63874~~	~~194.169.5.104~~	~~64874~~
~~q~~	~~EuroTLX~~		~~224.4.12.205~~			~~62877~~		~~63877~~		~~64877~~
~~r~~	~~EuroTLX~~		~~224.4.12.206~~			~~62878~~		~~63878~~		~~64878~~
~~s~~	~~EuroTLX~~		~~224.4.12.207~~			~~62879~~		~~63879~~		~~64879~~
~~z~~	~~TAH and MiFID~~		~~224.4.12.214~~			~~62886~~		~~63886~~		~~64886~~

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5.2   Milan Production IP Address Ranges – Level 2 MBO

Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
H	MTA		224.4.10.136			62808		63808		64808
I	MTA and SEDEX		224.4.10.137			62809		63809		64809
J	Structured Products		224.4.10.138			62810		63810		64810
K	Miscellaneous		224.4.10.139			62811		63811		64811
L	IDEM	194.169.5.55	224.4.10.140	60400	194.169.5.37	62812	194.169.5.35	63812	194.169.5.35	64812
M	IDEM		224.4.10.141			62813		63813		64813
Q	EuroTLX		224.4.10.142			62814		63814		64814
R	EuroTLX		224.4.10.143			62815		63815		64815
S	EuroTLX		224.4.10.144			62816		63816		64816
Z	TAH and MiFID		224.4.10.151			62823		63823		64823
Secondary Feed										
h	MTA		224.4.11.136			62808		63808		64808
i	MTA and SEDEX		224.4.11.137			62809		63809		64809
j	Structured Products		224.4.11.138			62810		63810		64810
k	Miscellaneous		224.4.11.139			62811		63811		64811
l	IDEM	194.169.5.125	224.4.11.140	60400	194.169.5.102	62812	194.169.5.100	63812	194.169.5.100	64812
m	IDEM		224.4.11.141			62813		63813		64813
q	EuroTLX		224.4.11.142			62814		63814		64814
r	EuroTLX		224.4.11.143			62815		63815		64815
s	EuroTLX		224.4.11.144			62816		63816		64816
z	TAH and MiFID		224.4.11.151			62823		63823		64823
~~**Tertiary Feed**~~										
~~h~~	~~MTA~~		~~224.4.12.136~~			~~62808~~		~~63808~~		~~64808~~
~~i~~	~~MTA and SEDEX~~		~~224.4.12.137~~			~~62809~~		~~63809~~		~~64809~~
~~j~~	~~Structured Products~~		~~224.4.12.138~~			~~62810~~		~~63810~~		~~64810~~
~~k~~	~~Miscellaneous~~	~~194.169.5.120~~	~~224.4.12.139~~	~~60400~~	~~194.169.5.106~~	~~62811~~	~~194.169.5.104~~	~~63811~~	~~194.169.5.104~~	~~64811~~
~~q~~	~~EuroTLX~~		~~224.4.12.142~~			~~62814~~		~~63814~~		~~64814~~
~~r~~	~~EuroTLX~~		~~224.4.12.143~~			~~62815~~		~~63815~~		~~64815~~
~~s~~	~~EuroTLX~~		~~224.4.12.144~~			~~62816~~		~~63816~~		~~64816~~
~~z~~	~~TAH and MiFID~~		~~224.4.12.151~~			~~62823~~		~~63823~~		~~64823~~

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5.3 Milan Production IP Address Ranges – Level 2 MBP

Group	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
H	MTA		224.4.10.167			62839		63839		64839
I	MTA and SEDEX		224.4.10.168			62840		63840		64840
J	Structured Products		224.4.10.169			62841		63841		64841
K	Miscellaneous		224.4.10.170			62842		63842		64842
L	IDEM	194.169.5.55	224.4.10.171	60400	194.169.5.37	62843	194.169.5.35	63843	194.169.5.35	64843
M	IDEM		224.4.10.172			62844		63844		64844
Q	EuroTLX		224.4.10.173			62845		63845		64845
R	EuroTLX		224.4.10.174			62846		63846		64846
S	EuroTLX		224.4.10.175			62847		63847		64847
Z	TAH and MiFID		224.4.10.182			62854		63854		64854
Secondary Feed										
h	MTA		224.4.11.167			62839		63839		64839
i	MTA and SEDEX		224.4.11.168			62840		63840		64840
j	Structured Products		224.4.11.169			62841		63841		64841
k	Miscellaneous		224.4.11.170			62842		63842		64842
l	IDEM	194.169.5.125	224.4.11.171	60400	194.169.5.102	62843	194.169.5.100	63843	194.169.5.100	64843
m	IDEM		224.4.11.172			62844		63844		64844
q	EuroTLX		224.4.11.173			62845		63845		64845
r	EuroTLX		224.4.11.174			62846		63846		64846
s	EuroTLX		224.4.11.175			62847		63847		64847
z	TAH and MiFID		224.4.11.182			62854		63854		64854
~~Tertiary Feed~~										
~~h~~	~~MTA~~		~~224.4.12.167~~			~~62839~~		~~63839~~		~~64839~~
~~i~~	~~MTA and SEDEX~~		~~224.4.12.168~~			~~62840~~		~~63840~~		~~64840~~
~~j~~	~~Structured Products~~		~~224.4.12.169~~			~~62841~~		~~63841~~		~~64841~~
~~k~~	~~Miscellaneous~~	~~194.169.5.120~~	~~224.4.12.170~~	~~60400~~	~~194.169.5.106~~	~~62842~~	~~194.169.5.104~~	~~63842~~	~~194.169.5.104~~	~~64842~~
~~q~~	~~EuroTLX~~		~~224.4.12.173~~			~~62845~~		~~63845~~		~~64845~~
~~r~~	~~EuroTLX~~		~~224.4.12.174~~			~~62846~~		~~63846~~		~~64846~~
~~s~~	~~EuroTLX~~		~~224.4.12.175~~			~~62847~~		~~63847~~		~~64847~~
~~z~~	~~TAH and MiFID~~		~~224.4.12.182~~			~~62854~~		~~63854~~		~~64854~~

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5.4 Milan Production IP Address Ranges – Level 2 Incremental (Full-depth)

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	Port	Replay Service Virtual-IP Address	Port	Recovery Service Virtual-IP Address	Port
Primary Feed										
H	MTA		224.4.10.237			62909		63909		64909
I	MTA and SEDEX		224.4.10.238			62910		63910		64910
J	Structured Products		224.4.10.239			62911		63911		64911
K	Miscellaneous	194.169.5.55	224.4.10.240	60400	194.169.5.37	62912	194.169.5.35	63912	194.169.5.35	64912
L	IDEM		224.4.10.241			62913		63913		64913
M	IDEM		224.4.10.242			62914		63914		64914
Q	EuroTLX		224.4.10.243			62915		63915		64915
R	EuroTLX		224.4.10.244			62916		63916		64916
S	EuroTLX		224.4.10.245			62917		63917		64917
Z	TAH and MiFID		224.4.10.252			62924		63924		64924
Secondary Feed										
h	MTA		224.4.11.237			62909		63909		64909
i	MTA and SEDEX		224.4.11.238			62910		63910		64910
j	Structured Products		224.4.11.239			62911		63911		64911
k	Miscellaneous	194.169.5.125	224.4.11.240	60400	194.169.5.102	62912	194.169.5.100	63912	194.169.5.100	64912
l	IDEM		224.4.11.241			62913		63913		64913
m	IDEM		224.4.11.242			62914		63914		64914
q	EuroTLX		224.4.11.243			62915		63915		64915
r	EuroTLX		224.4.11.244			62916		63916		64916
s	EuroTLX		224.4.11.245			62917		63917		64917
z	TAH and MiFID		224.4.11.252			62924		63924		64924
~~Tertiary Feed~~										
~~h~~	~~MTA~~		~~224.4.12.237~~			~~62909~~		~~63909~~		~~64909~~
~~i~~	~~MTA and SEDEX~~		~~224.4.12.238~~			~~62910~~		~~63910~~		~~64910~~
~~j~~	~~Structured Products~~		~~224.4.12.239~~			~~62911~~		~~63911~~		~~64911~~
~~k~~	~~Miscellaneous~~	~~194.169.5.120~~	~~224.4.12.240~~	~~60400~~	~~194.169.5.106~~	~~62912~~	~~194.169.5.104~~	~~63912~~	~~194.169.5.104~~	~~64912~~
~~q~~	~~EuroTLX~~		~~224.4.12.243~~			~~62915~~		~~63915~~		~~64915~~
~~r~~	~~EuroTLX~~		~~224.4.12.244~~			~~62916~~		~~63916~~		~~64916~~
~~s~~	~~EuroTLX~~		~~224.4.12.245~~			~~62917~~		~~63917~~		~~64917~~
~~z~~	~~TAH and MiFID~~		~~224.4.12.252~~			~~62924~~		~~63924~~		~~64924~~

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5.5   Milan Production IP Address Ranges – MiFID II Post Trade Channels

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service Virtual-IP Address	GTP Lite Service Port	Replay Service Virtual-IP Address	Replay Service Port	Recovery Service Virtual-IP Address	Recovery Service Port
Primary Feed										
H	MTA	194.169.5.55	224.4.0.129	60400	194.169.5.37	62929	194.169.5.35	63929	194.169.5.35	64929
I	MTA and SEDEX		224.4.0.130			62930		63930		64930
J	Structured Products		224.4.0.131			62931		63931		64931
K	Miscellaneous		224.4.0.132			62932		63932		64932
L	IDEM		224.4.0.133			62933		63933		64933
M	IDEM		224.4.0.134			62934		63934		64934
Q	EuroTLX		224.4.0.135			62935		63935		64935
R	EuroTLX		224.4.0.136			62936		63936		64936
S	EuroTLX		224.4.0.137			62937		63937		64937
Z	TAH and MiFID		224.4.0.138			62938		63938		64938
Secondary Feed										
h	MTA	194.169.5.125	224.4.1.129	60400	194.169.5.102	62929	194.169.5.100	63929	194.169.5.100	64929
i	MTA and SEDEX		224.4.1.130			62930		63930		64930
j	Structured Products		224.4.1.131			62931		63931		64931
k	Miscellaneous		224.4.1.132			62932		63932		64932
l	IDEM		224.4.1.133			62933		63933		64933
m	IDEM		224.4.1.134			62934		63934		64934
q	EuroTLX		224.4.1.135			62935		63935		64935
r	EuroTLX		224.4.1.136			62936		63936		64936
s	EuroTLX		224.4.1.137			62937		63937		64937
z	TAH and MiFID		224.4.1.138			62938		63938		64938
~~**Tertiary Feed**~~										
~~h~~	~~MTA~~	~~194.169.5.120~~	~~224.4.13.129~~	~~60400~~	~~194.169.5.106~~	~~62929~~	~~194.169.5.104~~	~~63929~~	~~194.169.5.104~~	~~64929~~
~~i~~	~~MTA and SEDEX~~		~~224.4.13.130~~			~~62930~~		~~63930~~		~~64930~~
~~j~~	~~Structured Products~~		~~224.4.13.131~~			~~62931~~		~~63931~~		~~64931~~
~~k~~	~~Miscellaneous~~		~~224.4.13.132~~			~~62932~~		~~63932~~		~~64932~~
~~q~~	~~EuroTLX~~		~~224.4.13.135~~			~~62935~~		~~63935~~		~~64935~~
~~r~~	~~EuroTLX~~		~~224.4.13.136~~			~~62936~~		~~63936~~		~~64936~~
~~s~~	~~EuroTLX~~		~~224.4.13.137~~			~~62937~~		~~63937~~		~~64937~~
~~z~~	~~TAH and MiFID~~		~~224.4.13.138~~			~~62938~~		~~63938~~		~~64938~~

One product, **infinite possibilities.**

5.6   Milan Production IP Address Ranges – Other Service Lines

Gro-up	Multicast Channel	Multicast Source IP Address	Multicast Address	Port	GTP Lite Service		Replay Service		Recovery Service	
					Virtual-IP Address	Port	Virtual-IP Address	Port	Virtual-IP Address	Port
Primary Feed										
N	EuroTLX Admin	194.169.5.55	224.4.10.225	60400	194.169.5.37	62897	194.169.5.35	63897	194.169.5.35	64897
O	FTSE Indices		224.4.10.224			62896		63896		
P	Borsa Admin		224.4.10.226			62898		63898		64898
Secondary Feed										
n	EuroTLX Admin	194.169.5.125	224.4.11.225	60400	194.169.5.102	62897	194.169.5.100	63897	194.169.5.100	64897
o	FTSE Indices		224.4.11.224			62896		63896		
p	Borsa Admin		224.4.11.226			62898		63898		64898
~~Tertiary Feed~~										
~~o~~	~~FTSE Indices~~	~~194.169.5.120~~	~~224.4.12.224~~	~~60400~~	~~194.169.5.106~~	~~62896~~	~~194.169.5.104~~	~~63896~~	~~194.169.5.104~~	
~~p~~	~~Borsa Admin~~		~~224.4.12.226~~			~~62898~~		~~63898~~		~~64898~~

5.5   Milan Production Replay and Recovery Service Parameters

	Description	Value
Replay Service	Maximum number of messages available to clients on replay services	65,000 messages
	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of replay requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests
Recovery Service	Maximum number of logins available to clients	3,000 logins/day
	Maximum number of recovery requests	5,000 requests/day
	Maximum number of concurrent outstanding requests queued	10 requests

One product, **infinite possibilities.**