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PREFACE

DOCUMENT HISTORY

The following table provides a description of all changes to this document.

| VERSION NO. | DATE | CHANGE DESCRIPTION |
|-------------|----------------|---|
| 1.0 | Sept 2016 | Optiq® Market Data Gateway External User Acceptance (EUA) – Virtual and Physical – Environment feed configuration details. |
| 1.1 | Nov 2016 | Optiq® Market Data Gateway External User Acceptance (EUA) – Virtual and Physical – File services access for the V-EUA |
| 1.2 | March 2017 | Retail Matching Facility renamed into Best of Book. BBBO changed into FBMU for Equities/Funds/Fixed Income and Bourse de Luxembourg. Change of the layout of the feed configuration. |
| 1.3 | April 2017 | Correct made to Multicast Group IP for the 1G channel - Index Options Netherlands |
| 1.4 | November 2017 | New Channels added for APA SI Quotes and APA Trade Publication to Optiq Segment – 10, Trade Reporting and Publication. |
| 1.5 | June 2018 | Removal of MDG Set Of Channels ID 12 – Trade Reporting And Publication |
| 1.6 | July 2018 | New Channels added for ETF Access to Optiq Segment – 2, Funds. Removal MDG Set Of Channels ID 10 - Societe Generale Systematic Internaliser (SI) |
| 1.7 | July 2018 | New Channels added for Best of Book (RMF) Funds. |
| 1.8 | July 2018 | MDG Set of Channels 9 and 15 renamed for Euronext Dublin Integration. |
| 1.9 | November 2018 | New Channel added for Euronext Block. |
| 2.0 | November 2018 | Changes made to Derivatives Feed Configuration for Optiq Step 3. MDG Set of Channels 18, 19 and 28 removed. Introduction of new Optiq Segments for Equity Derivatives, Index Derivatives and Financial Derivatives. MDG Set of Channels 20 to 26 renamed. |
| 2.1 | January 2019 | Changed the amount of Partitions for Equity Derivatives from 2 to 3 and For Index Derivatives from 2 to 1. |
| 2.2 | October 2019 | Removal of the Derivatives 100M FBMU channel IDs. |
| 2.3 | January 2020 | Addition of Optiq Segment 16 for the Irish Bonds and Funds |
| 2.4 | February 2020 | Addition of MDG Set of Channels 10 for Equities Norway and 12 for Fixed Income Nordic ABM |
| 2.5 | July 2021 | Addition of MDG Set of Channels 34 for Forex |
| 2.6 | September 2021 | Adding 1 Warrants partition configuration |

| VERSION NO. | DATE | CHANGE DESCRIPTION |
|----------------|---------------------|---|
| 2.7 | September 2021 | Document version alignment to Production document version |
| 3.0 | December 2021 | New target specifications of the new Euronext Data Centre in Aruba Bergamo ITALY |
| 5.16.0 | June 2022 | **change of version numbering logic** Addition of new cash markets EQUities and ETFs/Funds sets-of-channels for Borsa Italiana integration: “18” (Equities Italy), “45” (Italy GEM), “39” (Italy ETF plus), “19” (Italy TAH) |
| 5.18.0 | September 2022 | Adjustment of naming for MDG Set of Channels “19”, “39” and “45” Decommissioning of FBOU.100M Real Time for MDG Set of Channels “1” and “32” Decommissioning of FBMU.100M Real Time for MDG Set of Channels “4” |
| 5.23.0 | March 2023 | Addition of new set of channels for Borsa Italiana integration: “40” (Fixed Income Italy – MOT/ExtraMOT), “41” (Warrants and Certificates Italy (Sedex)) “42” (Fixed Income ETLX (Bond-X)), “43” (Warrants and Certificates ETLX (Cert-X)) and “44” (Equities ETLX) |
| 5.23.1 | March 2023 | Correction of the following Partition IDs: - MDG Set of Channels ID 43 – B Side IP |
| 5.23.2 | April 2023 | Correction of the following Partition IDs: - MDG Set of Channels ID 41 – FBMU Snapshot channel -> Missing 100M FBMU Snapshot channel - MDG Set of Channels ID 42 – FBOU Snapshot Channel – Correction of 1G Feed ID - MDG Set of Channels ID 43 – FBMU Snapshot channel -> Deletion of incorrect real-time 1G FBMU channel |
| 5.23.3 | May 2023 | - Correction on a typo for several IP addresses: in the last 3 digits of IP addresses it should not start with ‘0’. Example: ‘224.0.212.042’ is replaced by ‘224.0.212.42’ - Mention to ‘SFTI’ removed as it is replaced by ‘CMC’ since the migration |
| 5.23.4 | June 2023 | - MDG Set of Channels ID 44 – FBMU 1G Snapshot channel -> Correction of ID |
| 5.28.0 | July 2023 | - Addition of new MDG Set of Channels IDs: 28 (Index Futures Italy), 36 (Equity Derivatives Italy) and 37 (Index Options Italy) - Removal of section “Optiq Segment – 13. Financial Derivatives Real-Time and Snapshot Configuration” as the Optiq Segment is no longer active |
| 5.33.0 | February 2024 | - Removal of Optiq Segment 15 (Forex) and the corresponding MDG Set of Channel ID 34 (Forex) which is not in use - Removal of 100M FBMU in Real Time for MDG Set of Channels IDs 16, 20, 21, 22, 23, 24, 25, 26, 27, 28, 36 and 37 |
| <u>5.353.0</u> | <u>January 2025</u> | - <u>Addition of new MDG Set of Channels ID: 38 - Commodity Energies (Power)</u> |

REFERENCE MATERIAL

The following document, which either should be read in conjunction with this document or which provide other relevant information for the user:

- [Optiq MDG Client Specifications - Euronext Cash and Derivatives Markets](#)

SUPPORT

Please find below the contact details:

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FURTHER INFORMATION

- For additional information please visit: www.euronext.com/optiq

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1. INTRODUCTION

This document provides all multicast addresses required to access the Euronext Optiq® Market Data Gateway External User Acceptance (EUA). Only shaped data is provided in the test environment. In order to ensure a Production-like test environment, separate IP addresses and ports are used to replicate the Production 'shaped' and 'unshaped' configuration.

The Euronext Optiq® Market Data Gateway Next Release-EUA (P-EUA) and the Current Release-EUA (V-EUA) environment are located in Bergamo. The P-EUA and V-EUA Source IP Address ranges are provided in this document and for P-EUA the Source IP Address ranges are provided for the live and standby systems as part of the High Availability mechanism. EUA High Availability (HA) and failover testing will only be conducted on the Next Release test environment (P-EUA).

Customers are requested to allow the V-EUA and P-EUA Source IP Address ranges through their Firewalls.

With the XML Standing Data files for the different Optiq Segments, customers will be able to map which instruments are available in which channel. The Optiq MDG feed configuration can be found at the end of each Standing Data file available and these will be provided on a daily basis in XML format. It is required to use the feed configuration details as part of the standing data files to connect to the feed on a daily basis.

In case a new partition is added to an Optiq Segment, customers are required to adapt to this type of change using the Optiq MDG Standing Data files that include the feed configuration details.

1.1 OPTIQ SEGMENTS, PARTITIONS AND MDG SET OF CHANNELS

Below you will find an overview of the available Optiq Segments, the number of partitions per Optiq Segment and the MDG Set Of Channels ID and Name that are part of each Optiq Segment. The Optiq Segments listed in the below table are also available in the real-time Standing Data (1007) messages and Contract Standing Data (1013) messages and also available in Standing Data files.

| Optiq Segment | Number of Partitions | MDG Set Of Channels ID | MDG Set Of Channels Name |
|-----------------|----------------------|------------------------|-----------------------------------|
| 1. Equities | 4 | 6 | Equities Netherlands |
| | | 5 | Equities France |
| | | 7 | Equities Belgium |
| | | 8 | Equities Portugal |
| | | 9 | Equities Dublin |
| | | 10 | Equities Norway |
| | | 11 | Best of Book (RMF) |
| | | 18 | Equities Italy [MTAA, MIVX, EXGM] |
| | | 44 | Equities ETLX [ETLX] |
| | | 45 | Italy GEM [BGEM] |
| 2. Funds | 1 | 1 | Funds |
| | | 32 | ETF Access |
| | | 39 | Italy Funds [ETFP, ATFX] |
| | | 31 | Best of Book (RMF) Funds |
| 3. Fixed Income | 1 | 2 | Fixed Income |

| Optiq Segment | Number of Partitions | MDG Set Of Channels ID | MDG Set Of Channels Name |
|-------------------------------------|----------------------|------------------------|---|
| | | 12 | Fixed Income Nordic ABM |
| | | 40 | Fixed Income Italy (MOT/ExtraMOT) |
| | | 42 | Fixed Income ETLX (Bond-X) |
| | | | |
| 4. Warrants and Certificates | 2 | 4 | Warrants and Certificates |
| | | 41 | Warrants and Certificates Italy (SEDEX) |
| | | 43 | Warrants and Certificates ETLX (Cert-X) |
| | | | |
| 5. Bourse de Luxembourg | 1 | 3 | Bourse De Luxembourg |
| | | | |
| 9. Indices | 1 | 13 | Euronext Indices |
| | | 14 | Euronext iNAV's |
| | | 15 | Euronext Dublin Indices |
| | | | |
| 10. Trade Reporting and Publication | 1 | 29 | APA SI Quotes |
| | | 30 | APA Trade Publication |
| | | | |
| 14. Euronext Block | 1 | 33 | Euronext Block |
| | | 19 | Italy TAH [XTAH] ¹ |
| | | | |
| 16. Irish Bonds & Funds | 1 | 35 | Euronext Dublin Bonds and Funds |
| | | | |
| 8. Commodity Derivatives | 1 | 16 | Commodity Derivatives |
| | <u>1</u> | <u>38</u> | <u>Commodity Energies (Power)</u> |
| | | | |
| 11. Index Derivatives | 1 | 23 | Index Options France |
| | | 24 | Index Options Netherlands |
| | | 25 | Index Derivatives Other |
| | | 26 | Index Futures France |
| | | 27 | Index Futures Netherlands |
| | | | |
| 12. Equity Derivatives | 3 | 20 | Equity Derivatives France |
| | | 21 | Equity Derivatives Netherlands |
| | | 22 | Equity Derivatives Other |
| | | | |
| 13. Financial Derivatives | 1 | 17 | Currency Derivatives |

1.2 CHANNEL TYPES AND CHANNEL IDS

The Channel Types and Channel ID's that are available to each customer depend on the available bandwidth on customer connections to the CMC Network and the services that were selected in the connectivity order form. Depending on the Asset Class, the following Optiq MDG channel types are made available to customers:

1. Pre-trade
 - a. BBBO – Best Bid and Offer

¹ While TAH -trading after hours- concerns equities instruments, it is hosted for technical reasons in the BLK (Blocks) Optiq segment

- b. FBMU – Full Book by Price (using Market Update message) (includes Best Bid and Best Offer)
 - c. FBOU – Full Book by Order (using Order Update message) (includes Best Bid and Best Offer)
- 2. Post Trade – REFT – Reference Data and Full Trade Information
- 3. Indices – REFI – Index Reference Data and Index messages
- 4. Irish Bonds & Funds – IBFR - Irish Bonds & Funds Reference Data
- 5. APA Publication
 - a. APSI – (Pre-trade) APA Quotes and standing data
 - b. APTR – (Post-trade) APA trades
- 6. Euronext Blocks – EBLK – Blocks market segment data.

Please read chapter **2.1 TYPE OF MARKET DATA CHANNELS** of the Euronext Cash and Derivatives Markets. – Optiq MDG Client Specifications for more details.

1.3 ADDITION OF A NEW PARTITION

The Channel ID contains 5 numbers and is provided as a field in the Optiq MDG packet header.

1. The first number on the left is used to identify if the channel is a real-time channel (3 for V-EUA and 5 for P-EUA) or snapshot (4 for V-EUA and 6 for P-EUA)
2. The second number is n= the partition number -1, with n=0 for the first partition, n=1 for the second partition, etc.
3. The last three number xxx represent the last numbers on the right used for the Multicast Group IP.

Each partition as part of an Optiq Segment has a Feed A and a Feed B and uses a unique Source IP address from the ranges as specified below:

| Feed A/B | Feed A | Feed B |
|-------------------------------------|-------------------|-------------------|
| Rendez-vous Point on Colocation | 212.107.67.242 | 212.107.67.243 |
| Rendez-vous Point on CMC | 212.107.67.248/32 | 212.107.67.249/32 |
| Current EUA IP Address range | 212.107.91.0/25 | 212.107.91.128/25 |
| Next EUA Primary IP Address range | 212.107.90.0/25 | 212.107.90.128/25 |
| Next EUA Secondary IP Address range | 212.107.90.0/25 | 212.107.90.128/25 |

Customers are required to allow the whole range as specified above through their Firewalls to allow for the addition of a new partition within an Optiq Segment. In case of a new partition

1. A new Source IP will be used for the new partition, the Multicast Group IP Addresses for Feed A and B remain unchanged for the new partition
2. A new Channel ID is defined as 1(n)xxx and is equal to the ports used for the new partition.

The Multicast Group IP addresses for Real-time and Snapshot, for Feed A and B are:

| Environment | Channel ID | Real-Time/Snapshot | Multicast Group Feed A | Multicast Group Feed B |
|-------------|------------|--------------------|------------------------|------------------------|
| Current EUA | 3(n)xxx | Real-Time | 224.0.212.xxx | 224.0.213.xxx |
| | 4(n)xxx | Snapshot | | |
| Next EUA | 5(n)xxx | Real-Time | | |
| | 6(n)xxx | Snapshot | | |

2. OPTIQ SEGMENT – 1. EQUITIES REAL-TIME AND SNAPSHOT CONFIGURATION

2.1 MDG SET OF CHANNELS ID 6 – EQUITIES NETHERLANDS

| | | | |
|--------------------|---------------|----------------------|----------------------|
| Environment | VEUA and PEUA | MDGSetOfChannels ID | 6 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Equities Netherlands |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.120 | VEUA | VEUA 31120 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.120 | 30120 | PEUA 51120 | 32120 | 33120 |
| | | PEUA | | PEUA | PEUA |
| | | 50120 | | 52120 | 53120 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.120 | VEUA | VEUA 41120 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.120 | 40120 | PEUA 61120 | 42120 | 43120 |
| | | PEUA | | PEUA | PEUA |
| | | 60120 | | 62120 | 63120 |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|---------------|---------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.121 | VEUA | VEUA 31121 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.121 | 30121 | PEUA 51121 | 32121 | 33121 |
| | | PEUA 50121 | | PEUA 52121 | PEUA 53121 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.122 | VEUA | VEUA 31122 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.122 | 30122 | PEUA 51122 | 32122 | 33122 |
| | | PEUA 50122 | | PEUA 52122 | PEUA 53122 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.121 | VEUA | VEUA 41121 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.121 | 40121 | PEUA 61121 | 42121 | 43121 |
| | | PEUA 60121 | | PEUA 62121 | PEUA 63121 |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.123 | VEUA | VEUA 31123 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.123 | 30123 | PEUA 51123 | 32123 | 33123 |
| | | PEUA | | PEUA | PEUA |
| | | 50123 | | 52123 | 53123 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.124 | VEUA | VEUA 31124 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.124 | 30124 | PEUA 51124 | 32124 | 33124 |

| | | | | | |
|---------------------------|---------------|---------------|-------------|---------------|---------------|
| | | PEUA 50124 | | PEUA 52124 | PEUA 53124 |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.125 | VEUA 30125 | VEUA 31125 | VEUA 32125 | VEUA 33125 |
| Multicast Group IP Feed B | 224.0.213.125 | PEUA 50125 | PEUA 51125 | PEUA 52125 | PEUA 53125 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.123 | VEUA 40123 | VEUA 41123 | VEUA 42123 | VEUA 43123 |
| Multicast Group IP Feed B | 224.0.213.123 | PEUA 60123 | PEUA 61123 | PEUA 62123 | PEUA 63123 |

2.2 MDG SET OF CHANNELS ID 5 – EQUITIES FRANCE

| | | | |
|--------------------|-----------------|----------------------|-----------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 5 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Equities France |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.110 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.110 | 30110 | 31110 | 32110 | 33110 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50110 | 51110 | 52110 | 53110 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.110 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.110 | 40110 | 41110 | 42110 | 43110 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60110 | 61110 | 62110 | 63110 |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.111 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.111 | 30111 | 31111 | 32111 | 33111 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50111 | 51111 | 52111 | 53111 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.112 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.112 | 30112 | 31112 | 32112 | 33112 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50112 | 51112 | 52112 | 53112 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.111 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.111 | 40111 | 41111 | 42111 | 43111 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60111 | 61111 | 62111 | 63111 |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|---------------|------------------------|------------------------|------------------------|------------------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.113 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.113 | 30113 PEUA 50113 | 31113 PEUA 51113 | 32113 PEUA 52113 | 33113 PEUA 53113 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.114 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.114 | 30114 PEUA 50114 | 31114 PEUA 51114 | 32114 PEUA 52114 | 33114 PEUA 53114 |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.115 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.115 | 30115 PEUA 50115 | 31115 PEUA 51115 | 32115 PEUA 52115 | 33115 PEUA 53115 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.113 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.113 | 40113 PEUA 60113 | 41113 PEUA 61113 | 42113 PEUA 62113 | 43113 PEUA 63113 |

2.3 MDG SET OF CHANNELS ID 7 – EQUITIES BELGIUM (INCLUDING PUBLIC AUCTION MARKET)

| | | | |
|--------------------|-----------------|----------------------|--|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 7 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Equities Belgium (Including Public Auction Market) |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.100 | VEUA | VEUA 31100 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.100 | 30100 | PEUA 51100 | 32100 | 33100 |
| | | PEUA | | PEUA | PEUA |
| | | 50100 | | 52100 | 53100 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.100 | VEUA | VEUA 41100 | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.100 | 40100 | PEUA 61100 | 42100 | 43100 |
| | | PEUA | | PEUA | PEUA |
| | | 60100 | | 62100 | 63100 |

| Channel Type | | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|-------|------------------|-------------|-------------|-------------|
| Real-time | | | | | | |
| Channel Speed | | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.101 | VEUA | VEUA 31101 | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.101 | 30101 | PEUA 51101 | 32101 | 33101 | |
| | | PEUA | | PEUA | PEUA | |
| | | 50101 | | 52101 | 53101 | |
| Channel Speed | | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.102 | VEUA | VEUA 31102 | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.102 | 30102 | PEUA 51102 | 32102 | 33102 | |
| | | PEUA | | PEUA | PEUA | |
| | | 50102 | | 52102 | 53102 | |
| Snapshot | | | | | | |
| Channel Speed | | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.101 | VEUA | VEUA 41101 | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.101 | 40101 | PEUA 61101 | 42101 | 43101 | |
| | | PEUA | | PEUA | PEUA | |
| | | 60101 | | 62101 | 63101 | |

| Channel Type | | FBOU | Channel ID /Port | | | |
|---------------------------|--|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | | |
| Channel Speed | | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | | 224.0.212.103 | VEUA | VEUA 31103 | VEUA | VEUA |
| Multicast Group IP Feed B | | 224.0.213.103 | 30103 | PEUA 51103 | 32103 | 33103 |
| | | | PEUA | | PEUA | PEUA |
| | | | 50103 | | 52103 | 53103 |
| Channel Speed | | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | | 224.0.212.104 | VEUA | VEUA 31104 | VEUA | VEUA |
| Multicast Group IP Feed B | | 224.0.213.104 | 30104 | PEUA 51104 | 32104 | 33104 |
| | | | PEUA | | PEUA | PEUA |
| | | | 50104 | | 52104 | 53104 |
| Channel Speed | | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| | | | | | | |
| Snapshot | | | | | | |
| Channel Speed | | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | | 224.0.212.103 | VEUA | VEUA 41103 | VEUA | VEUA |
| Multicast Group IP Feed B | | 224.0.213.103 | 40103 | PEUA 61103 | 42103 | 43103 |
| | | | PEUA | | PEUA | PEUA |
| | | | 60103 | | 62103 | 63103 |

2.4 MDG SET OF CHANNELS ID 8 – EQUITIES PORTUGAL

| | | | |
|--------------------|-----------------|----------------------|-------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 8 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Equities Portugal |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------|------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |

| | | | | | |
|---------------------------|---------------|-------|-------|-------|-------|
| Multicast Group IP Feed A | 224.0.212.105 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.105 | 30105 | 31105 | 32105 | 33105 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50105 | 51105 | 52105 | 53105 |

Snapshot

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.105 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.105 | 40105 | 41105 | 42105 | 43105 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60105 | 61105 | 62105 | 63105 |

| Channel Type | FBMU | Channel ID /Port |
|--------------|------|------------------|
|--------------|------|------------------|

Real-time

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.106 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.106 | 30106 | 31106 | 32106 | 33106 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50106 | 51106 | 52106 | 53106 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.107 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.107 | 30107 | 31107 | 32107 | 33107 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50107 | 51107 | 52107 | 53107 |

Snapshot

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.106 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.106 | 40106 | 41106 | 42106 | 43106 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60106 | 61106 | 62106 | 63106 |

| Channel Type | FBOU | Channel ID /Port |
|--------------|------|------------------|
|--------------|------|------------------|

Real-time

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.108 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.108 | 30108 | 31108 | 32108 | 33108 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50108 | 51108 | 52108 | 53108 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.109 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.109 | 30109 | 31109 | 32109 | 33109 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50109 | 51109 | 52109 | 53109 |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |

Snapshot

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.108 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.108 | 40108 | 41108 | 42108 | 43108 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60108 | 61108 | 62108 | 63108 |

2.5 MDG SET OF CHANNELS ID 9 – EQUITIES DUBLIN

| | | | |
|--------------------|-----------------|----------------------|-----------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 9 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Equities Dublin |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.165 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.165 | 30165 | 31165 | 32165 | 33165 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50165 | 51165 | 52165 | 53165 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.165 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.165 | 40165 | 41165 | 42165 | 43165 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60165 | 61165 | 62165 | 63165 |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.166 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.166 | 30166 | 31166 | 32166 | 33166 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50166 | 51166 | 52166 | 53166 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.167 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.167 | 30167 | 31167 | 32167 | 33167 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50167 | 51167 | 52167 | 53167 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.166 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.166 | 40166 | 41166 | 42166 | 43166 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60166 | 61166 | 62166 | 63166 |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.168 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.168 | 30168 | 31168 | 32168 | 33168 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50168 | 51168 | 52168 | 53168 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.169 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.169 | 30169 | 31169 | 32169 | 33169 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50169 | 51169 | 52169 | 53169 |

| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.168 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.168 | 40168 | 41168 | 42168 | 43168 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60168 | 61168 | 62168 | 63168 |

2.6 MDG SET OF CHANNELS ID 10 – EQUITIES NORWAY

| | | | |
|--------------------|-----------------|----------------------|-----------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 10 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Equities Norway |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.85 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.85 | 30085 | 31085 | 32085 | 33085 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50085 | 51085 | 52085 | 53085 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.85 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.85 | 40085 | 41085 | 42085 | 43085 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60085 | 61085 | 62085 | 63085 |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.86 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.86 | 30086 | 31086 | 32086 | 33086 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50086 | 51086 | 52086 | 53086 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.87 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.87 | 30087 | 31087 | 32087 | 33087 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50087 | 51087 | 52087 | 53087 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.86 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.86 | 40086 | 41086 | 42086 | 43086 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60086 | 61086 | 62086 | 63086 |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.88 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.88 | 30088 | 31088 | 32088 | 33088 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50088 | 51088 | 52088 | 53088 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.89 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.89 | 30089 | 31089 | 32089 | 33089 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50089 | 51089 | 52089 | 53089 |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| | | | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.88 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.88 | 40088 | 41088 | 42088 | 43088 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60088 | 61088 | 62088 | 63088 |

2.7 MDG SET OF CHANNELS ID 11 – BEST OF BOOK (RMF)

| | | | |
|--------------------|-----------------|----------------------|--------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 11 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Best of Book (RMF) |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.138 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.138 | 30138 | 31138 | 32138 | 33138 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50138 | 51138 | 52138 | 53138 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.139 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.139 | 30139 | 31139 | 32139 | 33139 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 50139 | 51139 | 52139 | 53139 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.138 | VEUA | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.138 | 40138 | 41138 | 42138 | 43138 |
| | | PEUA | PEUA | PEUA | PEUA |
| | | 60138 | 61138 | 62138 | 63138 |

2.8 MDG SET OF CHANNELS ID 18 – EQUITIES ITALY

| | | | |
|-------------|----------------|---------------------|----|
| Environment | V-EUA P-EUA | MDGSetOfChannels ID | 18 |
|-------------|----------------|---------------------|----|

| Optiq Segment name | Equities | MDGSetOfChannelsName | | Equities Italy | |
|---------------------------|---------------|----------------------|-------------|----------------|-------------|
| | | | | | |
| Channel Type | REFT | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.75 | vEUA: 30075 | vEUA: 31075 | vEUA: 32075 | vEUA: 33075 |
| Multicast Group IP Feed B | 224.0.213.75 | pEUA: 50075 | pEUA: 51075 | pEUA: 52075 | pEUA: 53075 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.75 | vEUA: 40075 | vEUA: 41075 | vEUA: 42075 | vEUA: 43075 |
| Multicast Group IP Feed B | 224.0.213.75 | pEUA: 60075 | pEUA: 61075 | pEUA: 62075 | pEUA: 63075 |
| | | | | | |
| Channel Type | FBMU | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.076 | vEUA: 30076 | vEUA: 31076 | vEUA: 32076 | vEUA: 33076 |
| Multicast Group IP Feed B | 224.0.213.076 | pEUA: 50076 | pEUA: 51076 | pEUA: 52076 | pEUA: 53076 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.077 | vEUA: 30077 | vEUA: 31077 | vEUA: 32077 | vEUA: 33077 |
| Multicast Group IP Feed B | 224.0.213.077 | pEUA: 50077 | pEUA: 51077 | pEUA: 52077 | pEUA: 53077 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.076 | vEUA: 40076 | vEUA: 41076 | vEUA: 42076 | vEUA: 43076 |
| Multicast Group IP Feed B | 224.0.213.076 | pEUA: 60076 | pEUA: 61076 | pEUA: 62076 | pEUA: 63076 |
| | | | | | |
| Channel Type | BBBO | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.126 | vEUA: 30126 | vEUA: 31126 | vEUA: 32126 | vEUA: 33126 |
| Multicast Group IP Feed B | 224.0.213.126 | pEUA: 50126 | pEUA: 51126 | pEUA: 52126 | pEUA: 53126 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.127 | vEUA: 30127 | vEUA: 31127 | vEUA: 32127 | vEUA: 33127 |
| Multicast Group IP Feed B | 224.0.213.127 | pEUA: 50127 | pEUA: 51127 | pEUA: 52127 | pEUA: 53127 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.126 | vEUA: 40126 | vEUA: 41126 | vEUA: 42126 | vEUA: 43126 |
| Multicast Group IP Feed B | 224.0.213.126 | pEUA: 60126 | pEUA: 61126 | pEUA: 62126 | pEUA: 63126 |
| | | | | | |
| Channel Type | FBOU | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.78 | vEUA: 30078 | vEUA: 31078 | vEUA: 32078 | vEUA: 33078 |

| | | | | | |
|---------------------------|--------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed B | 224.0.213.78 | pEUA: 50078 | pEUA: 51078 | pEUA: 52078 | pEUA: 53078 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.79 | vEUA: 30079 | vEUA: 31079 | vEUA: 32079 | vEUA: 33079 |
| Multicast Group IP Feed B | 224.0.213.79 | pEUA: 50079 | pEUA: 51079 | pEUA: 52079 | pEUA: 53079 |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.80 | vEUA: 30080 | vEUA: 31080 | vEUA: 32080 | vEUA: 33080 |
| Multicast Group IP Feed B | 224.0.213.80 | pEUA: 50080 | pEUA: 51080 | pEUA: 52080 | pEUA: 53080 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.78 | vEUA: 40078 | vEUA: 41078 | vEUA: 42078 | vEUA: 43078 |
| Multicast Group IP Feed B | 224.0.213.78 | pEUA: 60078 | pEUA: 61078 | pEUA: 62078 | pEUA: 63078 |

2.1 MDG SET OF CHANNELS ID 44 – EQUITIES ETLX

| | | | |
|--------------------|----------------|----------------------|---------------|
| Environment | V-EUA P-EUA | MDGSetOfChannels ID | 44 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Equities ETLX |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.30 | vEUA:30030 | vEUA:31030 | vEUA:32030 | vEUA:33030 |
| Multicast Group IP Feed B | 224.0.213.30 | pEUA:50030 | pEUA:51030 | pEUA:52030 | pEUA:53030 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.30 | vEUA:40030 | vEUA:41030 | vEUA:42030 | vEUA:43030 |
| Multicast Group IP Feed B | 224.0.213.30 | pEUA:60030 | pEUA:61030 | pEUA:62030 | pEUA:63030 |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.33 | vEUA:30033 | vEUA:31033 | vEUA:32033 | vEUA:33033 |
| Multicast Group IP Feed B | 224.0.213.33 | pEUA:50033 | pEUA:51033 | pEUA:52033 | pEUA:53033 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.34 | vEUA:30034 | vEUA:31034 | vEUA:32034 | vEUA:33034 |
| Multicast Group IP Feed B | 224.0.213.34 | pEUA:50034 | pEUA:51034 | pEUA:52034 | pEUA:53034 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.33 | vEUA:40033 | vEUA:41033 | vEUA:42033 | vEUA:43033 |
| Multicast Group IP Feed B | 224.0.213.33 | pEUA:60033 | pEUA:61033 | pEUA:62033 | pEUA:63033 |

| | | | | | |
|--------------|------|------------------|--|--|--|
| Channel Type | BBBO | Channel ID /Port | | | |
|--------------|------|------------------|--|--|--|

| Real-time | | | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.31 | vEUA:30031 | vEUA:31031 | vEUA:32031 | vEUA:33031 |
| Multicast Group IP Feed B | 224.0.213.31 | pEUA:50031 | pEUA:51031 | pEUA:52031 | pEUA:53031 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.32 | vEUA:30032 | vEUA:31032 | vEUA:32032 | vEUA:33032 |
| Multicast Group IP Feed B | 224.0.213.32 | pEUA:50032 | pEUA:51032 | pEUA:52032 | pEUA:53032 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.31 | vEUA:40031 | vEUA:41031 | vEUA:42031 | vEUA:43031 |
| Multicast Group IP Feed B | 224.0.213.31 | pEUA:60031 | pEUA:61031 | pEUA:62031 | pEUA:63031 |
| Channel Type | FBOU | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.35 | vEUA:30035 | vEUA:31035 | vEUA:32035 | vEUA:33035 |
| Multicast Group IP Feed B | 224.0.213.35 | pEUA:50035 | pEUA:51035 | pEUA:52035 | pEUA:53035 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.36 | vEUA:30036 | vEUA:31036 | vEUA:32036 | vEUA:33036 |
| Multicast Group IP Feed B | 224.0.213.36 | pEUA:50036 | pEUA:51036 | pEUA:52036 | pEUA:53036 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.35 | vEUA:40035 | vEUA:41035 | vEUA:42035 | vEUA:43035 |
| Multicast Group IP Feed B | 224.0.213.35 | pEUA:60035 | pEUA:61035 | pEUA:62035 | pEUA:63035 |

2.2 MDG SET OF CHANNELS ID 45 – GLOBAL EQUITY MARKET

| | | | |
|--------------------|----------------|----------------------|----------------------|
| Environment | V-EUA P-EUA | MDGSetOfChannels ID | 45 |
| Optiq Segment name | Equities | MDGSetOfChannelsName | Global Equity Market |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.81 | vEUA:30081 | vEUA:31081 | vEUA:32081 | vEUA:33081 |
| Multicast Group IP Feed B | 224.0.213.81 | pEUA:50081 | pEUA:51081 | pEUA:52081 | pEUA:53081 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.81 | vEUA:40081 | vEUA:41081 | vEUA:42081 | vEUA:43081 |
| Multicast Group IP Feed B | 224.0.213.81 | pEUA:60081 | pEUA:61081 | pEUA:62081 | pEUA:63081 |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.83 | vEUA:30083 | vEUA:31083 | vEUA:32083 | vEUA:33083 |
| Multicast Group IP Feed B | 224.0.213.83 | pEUA:50083 | pEUA:51083 | pEUA:52083 | pEUA:53083 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.97 | vEUA:30097 | vEUA:31097 | vEUA:32097 | vEUA:33097 |
| Multicast Group IP Feed B | 224.0.213.97 | pEUA:50097 | pEUA:51097 | pEUA:52097 | pEUA:53097 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.83 | vEUA:40083 | vEUA:41083 | vEUA:42083 | vEUA:43083 |
| Multicast Group IP Feed B | 224.0.213.83 | pEUA:60083 | pEUA:61083 | pEUA:62083 | pEUA:63083 |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.82 | vEUA:30082 | vEUA:31082 | vEUA:32082 | vEUA:33082 |
| Multicast Group IP Feed B | 224.0.213.82 | pEUA:50082 | pEUA:51082 | pEUA:52082 | pEUA:53082 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.96 | vEUA:30096 | vEUA:31096 | vEUA:32096 | vEUA:33096 |
| Multicast Group IP Feed B | 224.0.213.96 | pEUA:50096 | pEUA:51096 | pEUA:52096 | pEUA:53096 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.82 | vEUA:40082 | vEUA:41082 | vEUA:42082 | vEUA:43082 |
| Multicast Group IP Feed B | 224.0.213.82 | pEUA:60082 | pEUA:61082 | pEUA:62082 | pEUA:63082 |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.84 | vEUA:30084 | vEUA:31084 | vEUA:32084 | vEUA:33084 |
| Multicast Group IP Feed B | 224.0.213.84 | pEUA:50084 | pEUA:51084 | pEUA:52084 | pEUA:53084 |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.98 | vEUA:30098 | vEUA:31098 | vEUA:32098 | vEUA:33098 |
| Multicast Group IP Feed B | 224.0.213.98 | pEUA:50098 | pEUA:51098 | pEUA:52098 | pEUA:53098 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.84 | vEUA:40084 | vEUA:41084 | vEUA:42084 | vEUA:43084 |
| Multicast Group IP Feed B | 224.0.213.84 | pEUA:60084 | pEUA:61084 | pEUA:62084 | pEUA:63084 |

3. OPTIQ SEGMENT – 2. FUNDS REAL-TIME AND SNAPSHOT CONFIGURATION

3.1 MDG SET OF CHANNELS ID 1 – FUNDS

| | | | |
|--------------------|-----------------|----------------------|-------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 1 |
| Optiq Segment name | Funds | MDGSetOfChannelsName | Funds |

| | | |
|--------------|------|------------------|
| Channel Type | REFT | Channel ID /Port |
|--------------|------|------------------|

Real-time

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.130 | VEUA 30130 | | | |
| Multicast Group IP Feed B | 224.0.213.130 | PEUA 50130 | | | |

Snapshot

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.130 | VEUA 40130 | | | |
| Multicast Group IP Feed B | 224.0.213.130 | PEUA 60130 | | | |

| | | |
|--------------|------|------------------|
| Channel Type | FBMU | Channel ID /Port |
|--------------|------|------------------|

Real-time

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.131 | VEUA 30131 | | | |
| Multicast Group IP Feed B | 224.0.213.131 | PEUA 50131 | | | |

Channel Speed 1G

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.132 | VEUA 30132 | | | |
| Multicast Group IP Feed B | 224.0.213.132 | PEUA 50132 | | | |

Snapshot

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.131 | VEUA 40131 | | | |
| Multicast Group IP Feed B | 224.0.213.131 | PEUA 60131 | | | |

| | | |
|--------------|------|------------------|
| Channel Type | FBOU | Channel ID /Port |
|--------------|------|------------------|

Real-time

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.134 | VEUA 30134 | | | |
| Multicast Group IP Feed B | 224.0.213.134 | PEUA 50134 | | | |

Channel Speed 10G

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.135 | VEUA 30135 | | | |
| Multicast Group IP Feed B | 224.0.213.135 | PEUA | | | |

| | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| 50135 | | | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.133 | VEUA | | | |
| | | 40133 | | | |
| Multicast Group IP Feed B | 224.0.213.133 | PEUA | | | |
| | | 60133 | | | |

3.2 MDG SET OF CHANNELS ID 32 – ETF ACCESS

| | | | |
|--------------------|-----------------|----------------------|------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 32 |
| Optiq Segment name | Funds | MDGSetOfChannelsName | ETF Access |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.90 | VEUA 30090 | | | |
| Multicast Group IP Feed B | 224.0.213.90 | PEUA 50090 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.90 | VEUA 40090 | | | |
| Multicast Group IP Feed B | 224.0.213.90 | PEUA 60090 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.91 | VEUA 30091 | | | |
| Multicast Group IP Feed B | 224.0.213.91 | PEUA 50091 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.92 | VEUA 30092 | | | |
| Multicast Group IP Feed B | 224.0.213.92 | PEUA 50092 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.91 | VEUA 40091 | | | |
| Multicast Group IP Feed B | 224.0.213.91 | PEUA 60091 | | | |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.94 | VEUA 30094 | | | |
| Multicast Group IP Feed B | 224.0.213.94 | PEUA 50094 | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.95 | VEUA 30095 | | | |
| Multicast Group IP Feed B | 224.0.213.95 | PEUA 50095 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.93 | VEUA 40093 | | | |

Multicast Group IP Feed B 224.0.213.93 PEUA
60093

3.3 MDG SET OF CHANNELS ID 39 – FUNDS ETF ITALY

| | | | |
|--------------------|----------------|----------------------|-----------------|
| Environment | V-EUA P-EUA | MDGSetOfChannels ID | 39 |
| Optiq Segment name | Funds | MDGSetOfChannelsName | Funds ETF Italy |

In the tables below, in the “Channel ID/Port number” cells, the first number corresponds to the vEUA port number, the second corresponds to the pEUA port number

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.50 | 30050 | | | |
| Multicast Group IP Feed B | 224.0.213.50 | 50050 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.50 | 40050 | | | |
| Multicast Group IP Feed B | 224.0.213.50 | 60050 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.51 | 30051 | | | |
| Multicast Group IP Feed B | 224.0.213.51 | 50051 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.52 | 30052 | | | |
| Multicast Group IP Feed B | 224.0.213.52 | 50052 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.51 | 40051 | | | |
| Multicast Group IP Feed B | 224.0.213.51 | 60051 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.53 | 30053 | | | |
| Multicast Group IP Feed B | 224.0.213.53 | 50053 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.54 | 30054 | | | |

| | | | | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|--|
| Multicast Group IP Feed B | 224.0.213.54 | 50054 | | | | |
| Snapshot | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.53 | 40053 | | | | |
| Multicast Group IP Feed B | 224.0.213.53 | 60053 | | | | |
| Channel Type | FBOU | Channel ID /Port | | | | |
| Real-time | | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.56 | 30056 | | | | |
| Multicast Group IP Feed B | 224.0.213.56 | 50056 | | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.57 | 30057 | | | | |
| Multicast Group IP Feed B | 224.0.213.57 | 50057 | | | | |
| Snapshot | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.55 | 40055 | | | | |
| Multicast Group IP Feed B | 224.0.213.55 | 60055 | | | | |

3.4 MDG SET OF CHANNELS ID 31 – BEST OF BOOK (RMF)

| | | | |
|--------------------|-----------------|----------------------|--------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 31 |
| Optiq Segment name | Funds | MDGSetOfChannelsName | Best of Book (RMF) Funds |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.136 | VEUA 30136 | | | |
| Multicast Group IP Feed B | 224.0.213.136 | PEUA 50136 | | | |
| Channel Speed | 1G | Partition 1 | | | |
| Multicast Group IP Feed A | 224.0.212.137 | VEUA 30137 | | | |
| Multicast Group IP Feed B | 224.0.213.137 | PEUA 50137 | | | |
| | | | | | |
| Channel Speed | 100M | Partition 1 | | | |
| Multicast Group IP Feed A | 224.0.212.136 | VEUA 40136 | | | |
| Multicast Group IP Feed B | 224.0.213.136 | PEUA 60136 | | | |

4. OPTIQ SEGMENT – 3. FIXED INCOME REAL-TIME AND SNAPSHOT CONFIGURATION

4.1 MDG SET OF CHANNELS ID 2 – FIXED INCOME

| | | | |
|--------------------|-----------------|----------------------|--------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 2 |
| Optiq Segment name | Fixed Income | MDGSetOfChannelsName | Fixed Income |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.150 | VEUA 30150 | | | |
| Multicast Group IP Feed B | 224.0.213.150 | PEUA 50150 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.150 | VEUA 40150 | | | |
| Multicast Group IP Feed B | 224.0.213.150 | PEUA 60150 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.151 | VEUA 30151 | | | |
| Multicast Group IP Feed B | 224.0.213.151 | PEUA 50151 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.152 | VEUA 30152 | | | |
| Multicast Group IP Feed B | 224.0.213.152 | PEUA 50152 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.151 | VEUA 40151 | | | |
| Multicast Group IP Feed B | 224.0.213.151 | PEUA 60151 | | | |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.153 | VEUA 30153 | | | |
| Multicast Group IP Feed B | 224.0.213.153 | PEUA 50153 | | | |

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.154 | VEUA 30154 | | | |
| Multicast Group IP Feed B | 224.0.213.154 | PEUA 50154 | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.153 | VEUA 40153 | | | |
| Multicast Group IP Feed B | 224.0.213.153 | PEUA 60153 | | | |

4.2 MDG SET OF CHANNELS ID 12 – FIXED INCOME NORDIC ABM

| | | | |
|--------------------|-----------------|----------------------|-------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 12 |
| Optiq Segment name | Fixed Income | MDGSetOfChannelsName | Fixed Income Nordic ABM |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.149 | VEUA 30149 | | | |
| Multicast Group IP Feed B | 224.0.213.149 | PEUA 50149 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.149 | VEUA 40149 | | | |
| Multicast Group IP Feed B | 224.0.213.149 | PEUA 60149 | | | |

4.3 MDG SET OF CHANNELS ID 40 – FIXED INCOME Italy (MOT/ExtraMOT)

| | | | |
|--------------------|-----------------|----------------------|-----------------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 40 |
| Optiq Segment name | Fixed Income | MDGSetOfChannelsName | Fixed Income Italy (MOT/ExtraMOT) |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.40 | VEUA 30040 | | | |
| Multicast Group IP Feed B | 224.0.213.40 | PEUA 50040 | | | |
| Snapshot | | | | | |

| | | | | | |
|---------------------------|--------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.40 | VEUA 40040 | | | |
| Multicast Group IP Feed B | 224.0.213.40 | PEUA 60040 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.43 | VEUA 30043 | | | |
| Multicast Group IP Feed B | 224.0.213.43 | PEUA 50043 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.44 | VEUA 30044 | | | |
| Multicast Group IP Feed B | 224.0.213.44 | PEUA 50044 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.43 | VEUA 40043 | | | |
| Multicast Group IP Feed B | 224.0.213. 43 | PEUA 60043 | | | |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.45 | VEUA 30045 | | | |
| Multicast Group IP Feed B | 224.0.213.45 | PEUA 50045 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.46 | VEUA 30046 | | | |
| Multicast Group IP Feed B | 224.0.213.46 | PEUA 50046 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.45 | VEUA 40045 | | | |
| Multicast Group IP Feed B | 224.0.213.45 | PEUA 60045 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.41 | VEUA 30041 | | | |
| Multicast Group IP Feed B | 224.0.213.41 | PEUA 50041 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.42 | VEUA 30042 | | | |
| Multicast Group IP Feed B | 224.0.213.42 | PEUA 50042 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.41 | VEUA 40041 | | | |
| Multicast Group IP Feed B | 224.0.213.41 | PEUA 60041 | | | |

4.4 MDG SET OF CHANNELS ID 42 – FIXED INCOME ETLX (Bond-X)

| | | | |
|--------------------|-----------------|----------------------|---------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 42 |
| Optiq Segment name | Fixed Income | MDGSetOfChannelsName | Fixed Income ETLX(Bond-X) |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.60 | VEUA 30060 | | | |
| Multicast Group IP Feed B | 224.0.213.60 | PEUA 50060 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.60 | VEUA 40060 | | | |
| Multicast Group IP Feed B | 224.0.213.60 | PEUA 60060 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.61 | VEUA 30061 | | | |
| Multicast Group IP Feed B | 224.0.213.61 | PEUA 50061 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.62 | VEUA 30062 | | | |
| Multicast Group IP Feed B | 224.0.213.62 | PEUA 50062 | | | |

| Snapshot | | | | | |
|---------------------------|--------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.61 | VEUA 40061 | | | |
| Multicast Group IP Feed B | 224.0.213.61 | PEUA 60061 | | | |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.63 | VEUA 30063 | | | |
| Multicast Group IP Feed B | 224.0.213.63 | PEUA 50063 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.64 | VEUA 30064 | | | |
| Multicast Group IP Feed B | 224.0.213.64 | PEUA 50064 | | | |

| Snapshot | | | | | |
|---------------------------|--------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.63 | VEUA 40063 | | | |
| Multicast Group IP Feed B | 224.0.213.63 | PEUA 60063 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.58 | VEUA 30058 | | | |
| Multicast Group IP Feed B | 224.0.213.58 | PEUA 50058 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.59 | VEUA 30059 | | | |
| Multicast Group IP Feed B | 224.0.213.59 | PEUA 50059 | | | |

| Snapshot | | | | | |
|---------------------------|--------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.58 | VEUA 40058 | | | |
| Multicast Group IP Feed B | 224.0.213.58 | PEUA 60058 | | | |

5. OPTIQ SEGMENT – 4. WARRANTS & CERTIFICATES REAL-TIME AND SNAPSHOT CONFIGURATION

5.1 MDG SET OF CHANNELS ID 4 – WARRANTS & CERTIFICATES

| | | | |
|--------------------|-------------------------|----------------------|-------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 4 |
| Optiq Segment name | Warrants & Certificates | MDGSetOfChannelsName | Warrants & Certificates |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.155 | VEUA 30155 | VEUA 31155 | | |
| Multicast Group IP Feed B | 224.0.213.155 | PEUA 50155 | PEUA 51155 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.155 | VEUA 40155 | VEUA 41155 | | |
| Multicast Group IP Feed B | 224.0.213.155 | PEUA 60155 | PEUA 61155 | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.156 | VEUA 30156 | VEUA 31156 | | |
| Multicast Group IP Feed B | 224.0.213.156 | PEUA 50156 | PEUA 51156 | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.157 | VEUA 30157 | VEUA 31157 | | |
| Multicast Group IP Feed B | 224.0.213.157 | PEUA 50157 | PEUA 51157 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.156 | VEUA 40156 | VEUA 41156 | | |
| Multicast Group IP Feed B | 224.0.213.156 | PEUA 60156 | PEUA 61156 | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.159 | VEUA 30159 | VEUA 31159 | | |
| Multicast Group IP Feed B | 224.0.213.159 | PEUA 50159 | PEUA 51159 | | |

| Snapshot | | | | | |
|---------------------------|---------------|---------------|---------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.158 | VEUA 40158 | VEUA 41158 | | |
| Multicast Group IP Feed B | 224.0.213.158 | PEUA 60158 | PEUA 61158 | | |

5.2 MDG SET OF CHANNELS ID 41 – WARRANTS & CERTIFICATES Italy (SEDEX)

| | | | |
|--------------------|-------------------------|----------------------|---------------------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 41 |
| Optiq Segment name | Warrants & Certificates | MDGSetOfChannelsName | Warrants & Certificates Italy (SEDEX) |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|---------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.65 | VEUA 30065 | VEUA 31065 | | |
| Multicast Group IP Feed B | 224.0.213.65 | PEUA 50065 | PEUA 51065 | | |

| Snapshot | | | | | |
|---------------------------|--------------|---------------|---------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.65 | VEUA 40065 | VEUA 41065 | | |
| Multicast Group IP Feed B | 224.0.213.65 | PEUA 60065 | PEUA 61065 | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|--------------|------------------|---------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.66 | VEUA 30066 | VEUA 31066 | | |
| Multicast Group IP Feed B | 224.0.213.66 | PEUA 50066 | PEUA 51066 | | |

| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|--------------|---------------|---------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.67 | VEUA 30067 | VEUA 31067 | | |
| Multicast Group IP Feed B | 224.0.213.67 | PEUA 50067 | PEUA 51067 | | |

| Snapshot | | | | | |
|---------------------------|--------------|---------------|---------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.66 | VEUA 40066 | VEUA 41066 | | |
| Multicast Group IP Feed B | 224.0.213.66 | PEUA 60066 | PEUA 61066 | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------|------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |

| | | | | | |
|---------------------------|--------------|---------------|---------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.69 | VEUA 30069 | VEUA 31069 | | |
| Multicast Group IP Feed B | 224.0.213.69 | PEUA 50069 | PEUA 51069 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.68 | VEUA 40068 | VEUA 41068 | | |
| Multicast Group IP Feed B | 224.0.213.68 | PEUA 60068 | PEUA 61068 | | |

5.3 MDG SET OF CHANNELS ID 43 – WARRANTS & CERTIFICATES ETLX (Cert-X)

| | | | |
|--------------------|-------------------------|----------------------|---------------------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 43 |
| Optiq Segment name | Warrants & Certificates | MDGSetOfChannelsName | Warrants & Certificates ETLX (Cert-X) |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|---------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.20 | VEUA 30020 | VEUA 31020 | | |
| Multicast Group IP Feed B | 224.0.213.20 | PEUA 50020 | PEUA 51020 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.20 | VEUA 40020 | VEUA 41020 | | |
| Multicast Group IP Feed B | 224.0.213.20 | PEUA 60020 | PEUA 61020 | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.21 | VEUA 30021 | VEUA 31021 | | |
| Multicast Group IP Feed B | 224.0.213.21 | PEUA 50021 | PEUA 51021 | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.22 | VEUA 30022 | VEUA 31157 | | |
| Multicast Group IP Feed B | 224.0.213.22 | PEUA 50022 | PEUA 51022 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.21 | VEUA 40021 | VEUA 41021 | | |
| Multicast Group IP Feed B | 224.0.213.21 | PEUA 60021 | PEUA 61021 | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.24 | VEUA 30024 | VEUA 31024 | | |
| Multicast Group IP Feed B | 224.0.213.24 | PEUA 50024 | PEUA 51024 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.23 | VEUA 40023 | VEUA 41023 | | |
| Multicast Group IP Feed B | 224.0.213.23 | PEUA 60023 | PEUA 61023 | | |

6. OPTIQ SEGMENT – 5. BOURSE DE LUXEMBOURG REAL-TIME AND SNAPSHOT CONFIGURATION

6.1 MDG SET OF CHANNELS ID 3 – BOURSE DE LUXEMBOURG

Please note that the Bourse de Luxembourg Index messages are included in the Referential Data and Full Trade Information (REFT) real-time and snapshot channels.

| | | | |
|--------------------|----------------------|----------------------|----------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 3 |
| Optiq Segment name | Bourse de Luxembourg | MDGSetOfChannelsName | Bourse de Luxembourg |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.170 | VEUA 30170 | | | |
| Multicast Group IP Feed B | 224.0.213.170 | PEUA 50170 | | | |

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.170 | VEUA 40170 | | | |
| Multicast Group IP Feed B | 224.0.213.170 | PEUA 60170 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.171 | VEUA 30171 | | | |
| Multicast Group IP Feed B | 224.0.213.171 | PEUA 50171 | | | |

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.172 | VEUA 30172 | | | |
| Multicast Group IP Feed B | 224.0.213.172 | PEUA 50172 | | | |

| | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.171 | VEUA 40171 | | | |
| Multicast Group IP Feed B | 224.0.213.171 | PEUA 60171 | | | |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.173 | VEUA 30173 | | | |
| Multicast Group IP Feed B | 224.0.213.173 | PEUA 50173 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.174 | VEUA | | | |

| | | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|--|
| Multicast Group IP Feed B | 224.0.213.174 | 30174 | | | | |
| | | PEUA | | | | |
| | | 50174 | | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| | | | | | | |
| Snapshot | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.173 | VEUA | | | | |
| | | 40173 | | | | |
| Multicast Group IP Feed B | 224.0.213.173 | PEUA | | | | |
| | | 60173 | | | | |

7. OPTIQ SEGMENT – 9. INDICES REAL-TIME AND SNAPSHOT CONFIGURATION

7.1 MDG SET OF CHANNELS ID 13 – EURONEXT INDICES

| | | | |
|--------------------|-----------------|----------------------|------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 13 |
| Optiq Segment name | Indices | MDGSetOfChannelsName | Euronext Indices |

| Channel Type | REFI | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.250 | VEUA 30250 | | | |
| Multicast Group IP Feed B | 224.0.213.250 | PEUA 50250 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.250 | VEUA 40250 | | | |
| Multicast Group IP Feed B | 224.0.213.250 | PEUA 60250 | | | |

7.2 MDG SET OF CHANNELS ID 14 – EURONEXT INAV'S

| | | | |
|--------------------|-----------------|----------------------|-----------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 14 |
| Optiq Segment name | Indices | MDGSetOfChannelsName | Euronext iNAV's |

| Channel Type | REFI | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.251 | VEUA 30251 | | | |
| Multicast Group IP Feed B | 224.0.213.251 | PEUA 50251 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.251 | VEUA 40251 | | | |
| Multicast Group IP Feed B | 224.0.213.251 | PEUA 60251 | | | |

7.3 MDG SET OF CHANNELS ID 15 – EURONEXT DUBLIN INDICES

| | | | |
|-------------|-----------------|---------------------|----|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 15 |
|-------------|-----------------|---------------------|----|

| | | | | | | |
|---------------------------|---------------|----------------------|-------------------------|-------------|-------------|--|
| Optiq Segment name | Indices | MDGSetOfChannelsName | Euronext Dublin Indices | | | |
| Channel Type | REFI | Channel ID /Port | | | | |
| Real-time | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.252 | VEUA 30252 | | | | |
| Multicast Group IP Feed B | 224.0.213.252 | PEUA 50252 | | | | |
| Snapshot | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.252 | VEUA 40252 | | | | |
| Multicast Group IP Feed B | 224.0.213.252 | PEUA 60252 | | | | |

8. OPTIQ SEGMENT – 10. TRADE REPORTING AND PUBLICATION REAL-TIME AND SNAPSHOT CONFIGURATION

8.1 MDG SET OF CHANNELS ID 29 – APA SI QUOTES

| | | | |
|--------------------|---------------------------------|----------------------|---------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 29 |
| Optiq Segment name | Trade Reporting and Publication | MDGSetOfChannelsName | APA SI Quotes |

| Channel Type | APSI | Channel ID /Port | | | |
|---------------------------|---------------|------------------|---------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.145 | | VEUA 31145 | | |
| Multicast Group IP Feed B | 224.0.213.145 | | PEUA 51145 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.145 | | VEUA 41145 | | |
| Multicast Group IP Feed B | 224.0.213.145 | | PEUA 61145 | | |

8.2 MDG SET OF CHANNELS ID 30 – APA TRADE PUBLICATION

| | | | |
|--------------------|---------------------------------|----------------------|-----------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 30 |
| Optiq Segment name | Trade Reporting and Publication | MDGSetOfChannelsName | APA Trade Publication |

| Channel Type | APTR | Channel ID /Port | | | |
|---------------------------|---------------|------------------|---------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.146 | | VEUA 31146 | | |
| Multicast Group IP Feed B | 224.0.213.146 | | PEUA 51146 | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.146 | | VEUA 41146 | | |
| Multicast Group IP Feed B | 224.0.213.146 | | PEUA 61146 | | |

9. OPTIQ SEGMENT – 14. EURONEXT BLOCK

9.1 MDG SET OF CHANNELS ID 33 – EURONEXT BLOCK

| | | | |
|--------------------|-----------------|----------------------|----------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 33 |
| Optiq Segment name | Euronext Block | MDGSetOfChannelsName | Euronext Block |

| Channel Type | EBLK | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.99 | VEUA 30099 | | | |
| Multicast Group IP Feed B | 224.0.213.99 | PEUA 50099 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.99 | VEUA 40099 | | | |
| Multicast Group IP Feed B | 224.0.213.99 | PEUA 60099 | | | |

9.2 MDG SET OF CHANNELS ID 19 – TRADING AFTER HOURS ITALY

| | | | |
|--------------------|----------------|----------------------|---------------------------|
| Environment | V-EUA P-EUA | MDGSetOfChannels ID | 19 |
| Optiq Segment name | Block | MDGSetOfChannelsName | Trading After Hours Italy |

In the tables below, in the “Channel ID/Port number” cells, the first number corresponds to the vEUA port number, the second corresponds to the pEUA port number

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.70 | 30070 | | | |
| Multicast Group IP Feed B | 224.0.213.70 | 50070 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.70 | 40070 | | | |
| Multicast Group IP Feed B | 224.0.213.70 | 60070 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.128 | 30128 | | | |
| Multicast Group IP Feed B | 224.0.213.128 | 50128 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.129 | 30129 | | | |
| Multicast Group IP Feed B | 224.0.213.129 | 50129 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.128 | 40128 | | | |
| Multicast Group IP Feed B | 224.0.213.128 | 60128 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.71 | 30071 | | | |
| Multicast Group IP Feed B | 224.0.213.71 | 50071 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.72 | 30072 | | | |
| Multicast Group IP Feed B | 224.0.213.72 | 50072 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.71 | 40071 | | | |
| Multicast Group IP Feed B | 224.0.213.71 | 60071 | | | |

| Channel Type | FBOU | Channel ID /Port | | | |
|---------------------------|--------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.73 | 30073 | | | |
| Multicast Group IP Feed B | 224.0.213.73 | 50073 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.74 | 30074 | | | |
| Multicast Group IP Feed B | 224.0.213.74 | 50074 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.73 | 40073 | | | |
| Multicast Group IP Feed B | 224.0.213.73 | 60073 | | | |

10. OPTIQ SEGMENT – 16. IRISH BONDS & FUNDS

10.1 MDG SET OF CHANNELS ID 35 – EURONEXT DUBLIN BONDS AND FUNDS

| | | | |
|--------------------|---------------------|----------------------|---------------------------------|
| Environment | V-EUA P-EUA | MDGSetOfChannels ID | 35 |
| Optiq Segment name | Irish Bonds & Funds | MDGSetOfChannelsName | Euronext Dublin Bonds and Funds |

| Channel Type | IBFR | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.226 | VEUA 30226 | | | |
| Multicast Group IP Feed B | 224.0.213.226 | PEUA 50226 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.226 | VEUA 40226 | | | |
| Multicast Group IP Feed B | 224.0.213.226 | PEUA 60226 | | | |

11. OPTIQ SEGMENT – 8. COMMODITY DERIVATIVES REAL-TIME AND SNAPSHOT CONFIGURATION

11.1 MDG SET OF CHANNELS ID 16 – COMMODITY DERIVATIVES

| | | | |
|--------------------|-----------------------|----------------------|-----------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 16 |
| Optiq Segment name | Commodity Derivatives | MDGSetOfChannelsName | Commodity Derivatives |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.245 | VEUA 30245 | | | |
| Multicast Group IP Feed B | 224.0.213.245 | PEUA 50245 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.245 | VEUA 40245 | | | |
| Multicast Group IP Feed B | 224.0.213.245 | PEUA 60245 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.246 | VEUA 30246 | | | |
| Multicast Group IP Feed B | 224.0.213.246 | PEUA 50246 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.247 | VEUA 30247 | | | |
| Multicast Group IP Feed B | 224.0.213.247 | PEUA 50247 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.246 | VEUA 40246 | | | |
| Multicast Group IP Feed B | 224.0.213.246 | PEUA 60246 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.249 | VEUA | | | |
| Multicast Group IP Feed B | 224.0.213.249 | 30249 PEUA 50249 | | | |

| Snapshot | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.248 | VEUA 40248 | | | |
| Multicast Group IP Feed B | 224.0.213.248 | PEUA 60248 | | | |

11.2 MDG SET OF CHANNELS ID 38 – ~~COMMODITY DERIVATIVES~~ COMMODITY ENERGIES (POWER)

| | | | |
|--------------------|-----------------------|----------------------|----------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 38 |
| Optiq Segment name | Commodity Derivatives | MDGSetOfChannelsName | Commodity Energies (Power) |

| Channel Type | REFT | Channel ID /Port | | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|--|
| Real-time | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.211 | VEUA 30211 | | | | |
| Multicast Group IP Feed B | 224.0.213.211 | PEUA 50211 | | | | |

| Snapshot | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.211 | VEUA 40211 | | | |
| Multicast Group IP Feed B | 224.0.213.211 | PEUA 60211 | | | |

| <u>Channel Type</u> | <u>BBBO</u> | <u>Channel ID /Port</u> | | | | |
|----------------------------------|----------------------|-----------------------------|--------------------|--------------------|--------------------|--|
| <u>Real-time</u> | | | | | | |
| <u>Channel Speed</u> | <u>100M</u> | <u>Partition 1</u> | <u>Partition 2</u> | <u>Partition 3</u> | <u>Partition 4</u> | |
| <u>Multicast Group IP Feed A</u> | <u>224.0.212.212</u> | <u>VEUA</u> <u>30212</u> | | | | |
| <u>Multicast Group IP Feed B</u> | <u>224.0.213.212</u> | <u>PEUA</u> <u>50212</u> | | | | |

| Snapshot | | | | | |
|---------------------------|---------------|---------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.212 | VEUA 40212 | | | |
| Multicast Group IP Feed B | 224.0.213.212 | PEUA 60212 | | | |

| <u>Channel Type</u> | <u>FBMU</u> | <u>Channel ID /Port</u> | | | | |
|----------------------------------|----------------------|-------------------------|--------------------|--------------------|--------------------|--|
| <u>Real-time</u> | | | | | | |
| <u>Channel Speed</u> | <u>100M</u> | <u>Partition 1</u> | <u>Partition 2</u> | <u>Partition 3</u> | <u>Partition 4</u> | |
| <u>Multicast Group IP Feed A</u> | <u>224.0.212.214</u> | <u>VEUA</u> | | | | |
| <u>Multicast Group IP Feed B</u> | <u>224.0.213.214</u> | <u>30214</u> | | | | |
| | | <u>PEUA</u> | | | | |
| | | <u>50214</u> | | | | |

| Snapshot | | | | | |
|----------|--|--|--|--|--|
|----------|--|--|--|--|--|

| <u>Channel Speed</u> | <u>100M</u> | <u>Partition 1</u> | <u>Partition 2</u> | <u>Partition 3</u> | <u>Partition 4</u> |
|----------------------------------|----------------------|--------------------|--------------------|--------------------|--------------------|
| <u>Multicast Group IP Feed A</u> | <u>224.0.212.214</u> | <u>VEUA</u> | | | |
| <u>Multicast Group IP Feed B</u> | <u>224.0.213.214</u> | <u>40214</u> | | | |
| | | <u>PEUA</u> | | | |
| | | <u>60214</u> | | | |

12. OPTIQ SEGMENT – 11. INDEX DERIVATIVES REAL-TIME AND SNAPSHOT CONFIGURATION

12.1 MDG SET OF CHANNELS ID 23 – INDEX OPTIONS FRANCE

| | | | |
|--------------------|-------------------|----------------------|----------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 23 |
| Optiq Segment name | Index Derivatives | MDGSetOfChannelsName | Index Options France |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.220 | VEUA 30220 | | | |
| Multicast Group IP Feed B | 224.0.213.220 | PEUA 50220 | | | |

| | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.220 | VEUA 40220 | | | |
| Multicast Group IP Feed B | 224.0.213.220 | PEUA 60220 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.221 | VEUA 30221 | | | |
| Multicast Group IP Feed B | 224.0.213.221 | PEUA 50221 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.222 | VEUA 30222 | | | |
| Multicast Group IP Feed B | 224.0.213.222 | PEUA 50222 | | | |

| | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.221 | VEUA 40221 | | | |
| Multicast Group IP Feed B | 224.0.213.221 | PEUA 60221 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.224 | VEUA 30224 | | | |
| Multicast Group IP Feed B | 224.0.213.224 | PEUA 50224 | | | |

| | | | | | |
|---------------------------|---------------|--------------------------------|-------------|-------------|-------------|
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.225 | VEUA 30225 PEUA 50225 | | | |
| Multicast Group IP Feed B | 224.0.213.225 | | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.223 | VEUA 40223 | | | |
| Multicast Group IP Feed B | 224.0.213.223 | PEUA 60223 | | | |

12.2 MDG SET OF CHANNELS ID 24 – INDEX OPTIONS NETHERLANDS

| | | | |
|--------------------|-------------------|----------------------|---------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 24 |
| Optiq Segment name | Index Derivatives | MDGSetOfChannelsName | Index Options Netherlands |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.230 | VEUA 30230 | | | |
| Multicast Group IP Feed B | 224.0.213.230 | PEUA 50230 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.230 | VEUA 40230 | | | |
| Multicast Group IP Feed B | 224.0.213.230 | PEUA 60230 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.231 | VEUA 30231 | | | |
| Multicast Group IP Feed B | 224.0.213.231 | PEUA 50231 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.232 | VEUA 30232 | | | |
| Multicast Group IP Feed B | 224.0.213.232 | PEUA 50232 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.231 | VEUA 40231 | | | |
| Multicast Group IP Feed B | 224.0.213.231 | PEUA 60231 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.234 | VEUA 30234 | | | |
| Multicast Group IP Feed B | 224.0.213.234 | PEUA 50234 | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.235 | VEUA 30235 | | | |
| Multicast Group IP Feed B | 224.0.213.235 | PEUA 50235 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.233 | VEUA 40233 | | | |
| Multicast Group IP Feed B | 224.0.213.233 | PEUA 60233 | | | |

12.3 MDG SET OF CHANNELS ID 25 – INDEX DERIVATIVES OTHER (BELGIUM AND PORTUGAL)

| | | | |
|--------------------|-------------------|----------------------|-------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 25 |
| Optiq Segment name | Index Derivatives | MDGSetOfChannelsName | Index Derivatives Other |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.240 | VEUA 30240 | | | |
| Multicast Group IP Feed B | 224.0.213.240 | PEUA 50240 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.240 | VEUA 40240 | | | |
| Multicast Group IP Feed B | 224.0.213.240 | PEUA 60240 | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.241 | VEUA 30241 | | | |
| Multicast Group IP Feed B | 224.0.213.241 | PEUA 50241 | | | |
| Channel Speed | 1G | Partition | Partition 2 | Partition 3 | Partition 4 |

| | | | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| | | 1 | | | |
| Multicast Group IP Feed A | 224.0.212.242 | VEUA 30242 | | | |
| Multicast Group IP Feed B | 224.0.213.242 | PEUA 50242 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.241 | VEUA 40241 | | | |
| Multicast Group IP Feed B | 224.0.213.241 | PEUA 60241 | | | |
| Channel Type | FBMU | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.244 | VEUA 30244 | | | |
| Multicast Group IP Feed B | 224.0.213.244 | PEUA 50244 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.243 | VEUA 40243 | | | |
| Multicast Group IP Feed B | 224.0.213.243 | PEUA 60243 | | | |

12.4 MDG SET OF CHANNELS ID 26 – INDEX FUTURES FRANCE

| | | | | | |
|---------------------------|-------------------|----------------------|----------------------|-------------|-------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 26 | | |
| Optiq Segment name | Index Derivatives | MDGSetOfChannelsName | Index Futures France | | |
| Channel Type | REFT | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.190 | VEUA 30190 | | | |
| Multicast Group IP Feed B | 224.0.213.190 | PEUA 50190 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.190 | VEUA 40190 | | | |
| Multicast Group IP Feed B | 224.0.213.190 | PEUA 60190 | | | |
| Channel Type | BBBO | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.191 | VEUA | | | |

| | | | | | | |
|---------------------------|---------------|------------------------|-------------|-------------|-------------|--|
| Multicast Group IP Feed B | 224.0.213.191 | 30191 PEUA 50191 | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.192 | VEUA 30192 | | | | |
| Multicast Group IP Feed B | 224.0.213.192 | PEUA 50192 | | | | |
| Snapshot | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.191 | VEUA 40191 | | | | |
| Multicast Group IP Feed B | 224.0.213.191 | PEUA 60191 | | | | |
| Channel Type | FBMU | Channel ID /Port | | | | |
| Real-time | | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.194 | VEUA 30194 | | | | |
| Multicast Group IP Feed B | 224.0.213.194 | PEUA 50194 | | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.195 | VEUA 30195 | | | | |
| Multicast Group IP Feed B | 224.0.213.195 | PEUA 50195 | | | | |
| Snapshot | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.193 | VEUA 40193 | | | | |
| Multicast Group IP Feed B | 224.0.213.193 | PEUA 60193 | | | | |

12.5 MDG SET OF CHANNELS ID 27 – INDEX FUTURES NETHERLANDS

| | | | | | | |
|---------------------------|-------------------|----------------------|---------------------------|-------------|-------------|--|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 27 | | | |
| Optiq Segment name | Index Derivatives | MDGSetOfChannelsName | Index Futures Netherlands | | | |
| Channel Type | REFT | Channel ID /Port | | | | |
| Real-time | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.200 | VEUA 30200 | | | | |
| Multicast Group IP Feed B | 224.0.213.200 | PEUA 50200 | | | | |
| Snapshot | | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 | |
| Multicast Group IP Feed A | 224.0.212.200 | VEUA 40200 | | | | |
| Multicast Group IP Feed B | 224.0.213.200 | PEUA 60200 | | | | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.201 | VEUA 30201 | | | |
| Multicast Group IP Feed B | 224.0.213.201 | PEUA 50201 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.202 | VEUA 30202 | | | |
| Multicast Group IP Feed B | 224.0.213.202 | PEUA 50202 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.201 | VEUA 40201 | | | |
| Multicast Group IP Feed B | 224.0.213.201 | PEUA 60201 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.204 | VEUA 30204 | | | |
| Multicast Group IP Feed B | 224.0.213.204 | PEUA 50204 | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.205 | VEUA 30205 | | | |
| Multicast Group IP Feed B | 224.0.213.205 | PEUA 50205 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.203 | VEUA 40203 | | | |
| Multicast Group IP Feed B | 224.0.213.203 | PEUA 60203 | | | |

12.6 MDG SET OF CHANNELS ID 28 – INDEX FUTURES ITALY

| | | | |
|--------------------|-------------------|----------------------|---------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 28 |
| Optiq Segment name | Index Derivatives | MDGSetOfChannelsName | Index Futures Italy |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.196 | VEUA 30196 | | | |
| Multicast Group IP Feed B | 224.0.213.196 | PEUA 50196 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.196 | VEUA | | | |

Multicast Group IP Feed B 224.0.213.196 40196
 PEUA
 60196

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.197 | VEUA 30197 | | | |
| Multicast Group IP Feed B | 224.0.213.197 | PEUA 50197 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.198 | VEUA 30198 | | | |
| Multicast Group IP Feed B | 224.0.213.198 | PEUA 50198 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.197 | VEUA 40197 | | | |
| Multicast Group IP Feed B | 224.0.213.197 | PEUA 60197 | | | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.199 | VEUA 30199 | | | |
| Multicast Group IP Feed B | 224.0.213.199 | PEUA 50199 | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.229 | VEUA 30229 | | | |
| Multicast Group IP Feed B | 224.0.213.229 | PEUA 50229 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.254 | VEUA 40254 | | | |
| Multicast Group IP Feed B | 224.0.213.254 | PEUA 60254 | | | |

12.7 MDG SET OF CHANNELS ID 37 – INDEX OPTIONS ITALY

| | | | |
|--------------------|-------------------|----------------------|---------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 37 |
| Optiq Segment name | Index Derivatives | MDGSetOfChannelsName | Index Options Italy |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.215 | VEUA 30215 | | | |
| Multicast Group IP Feed B | 224.0.213.215 | PEUA | | | |

| | | | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| | | 50215 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.215 | VEUA 40215 | | | |
| Multicast Group IP Feed B | 224.0.213.215 | PEUA 60215 | | | |
| Channel Type | BBBO | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.216 | VEUA 30216 | | | |
| Multicast Group IP Feed B | 224.0.213.216 | PEUA 50216 | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.217 | VEUA 30217 | | | |
| Multicast Group IP Feed B | 224.0.213.217 | PEUA 50217 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.216 | VEUA 40216 | | | |
| Multicast Group IP Feed B | 224.0.213.216 | PEUA 60216 | | | |
| Channel Type | FBMU | Channel ID /Port | | | |
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.219 | VEUA 30219 | | | |
| Multicast Group IP Feed B | 224.0.213.219 | PEUA 50219 | | | |
| Channel Speed | 10G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.228 | VEUA 30228 | | | |
| Multicast Group IP Feed B | 224.0.213.228 | PEUA 50228 | | | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.218 | VEUA 40218 | | | |
| Multicast Group IP Feed B | 224.0.213.218 | PEUA 60218 | | | |

13. OPTIQ SEGMENT – 12. EQUITY DERIVATIVES REAL-TIME AND SNAPSHOT CONFIGURATION

13.1 MDG SET OF CHANNELS ID 20 – EQUITY DERIVATIVES FRANCE

| | | | |
|--------------------|--------------------|----------------------|---------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 20 |
| Optiq Segment name | Equity Derivatives | MDGSetOfChannelsName | Equity Derivatives France |

| | | |
|--------------|------|------------------|
| Channel Type | REFT | Channel ID /Port |
|--------------|------|------------------|

| Real-time | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.175 | VEUA 30175 | VEUA 31175 | VEUA 32175 | |
| Multicast Group IP Feed B | 224.0.213.175 | PEUA 50175 | PEUA 51175 | PEUA 52175 | |

| Snapshot | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.175 | VEUA 40175 | VEUA 41175 | VEUA 42175 | |
| Multicast Group IP Feed B | 224.0.213.175 | PEUA 60175 | PEUA 61175 | PEUA 62175 | |

| | | |
|--------------|------|------------------|
| Channel Type | BBBO | Channel ID /Port |
|--------------|------|------------------|

| Real-time | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.176 | VEUA 30176 | VEUA 31176 | VEUA 32176 | |
| Multicast Group IP Feed B | 224.0.213.176 | PEUA 50176 | PEUA 51176 | PEUA 52176 | |

| | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.177 | VEUA 30177 | VEUA 31177 | VEUA 32177 | |
| Multicast Group IP Feed B | 224.0.213.177 | PEUA 50177 | PEUA 51177 | PEUA 52177 | |

| Snapshot | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.176 | VEUA 40176 | VEUA 41176 | VEUA 42176 | |
| Multicast Group IP Feed B | 224.0.213.176 | PEUA 60176 | PEUA 61176 | PEUA 62176 | |

| | | |
|--------------|------|------------------|
| Channel Type | FBMU | Channel ID /Port |
|--------------|------|------------------|

| Real-time | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.179 | VEUA 30179 | VEUA 31179 | VEUA 32179 | |
| Multicast Group IP Feed B | 224.0.213.179 | PEUA 50179 | PEUA 51179 | PEUA 52179 | |

| Snapshot | | | | | |
|---------------|------|-------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |

| | | | | |
|---------------------------|---------------|-------|-------|-------|
| Multicast Group IP Feed A | 224.0.212.178 | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.178 | 40178 | 41178 | 42178 |
| | | PEUA | PEUA | PEUA |
| | | 60178 | 61178 | 62178 |

13.2 MDG SET OF CHANNELS ID 21 – EQUITY DERIVATIVES NETHERLANDS

| | | | |
|--------------------|--------------------|----------------------|--------------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 21 |
| Optiq Segment name | Equity Derivatives | MDGSetOfChannelsName | Equity Derivatives Netherlands |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.180 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.180 | 30180 | 31180 | 32180 | |
| | | PEUA | PEUA | PEUA | |
| | | 50180 | 51180 | 52180 | |

| | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.180 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.180 | 40180 | 41180 | 42180 | |
| | | PEUA | PEUA | PEUA | |
| | | 60180 | 61180 | 62180 | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.181 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.181 | 30181 | 31181 | 32181 | |
| | | PEUA | PEUA | PEUA | |
| | | 50181 | 51181 | 52181 | |

| | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.182 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.182 | 30182 | 31182 | 32182 | |
| | | PEUA | PEUA | PEUA | |
| | | 50182 | 51182 | 52182 | |

| | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.181 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.181 | 40181 | 41181 | 42181 | |
| | | PEUA | PEUA | PEUA | |
| | | 60181 | 61181 | 62181 | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.184 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.184 | 30184 | 31184 | 32184 | |
| | | PEUA | PEUA | PEUA | |
| | | 50184 | 51184 | 52184 | |

| | | | | | |
|---------------|-----|-------------|-------------|-------------|-------------|
| Snapshot | | | | | |
| Channel Speed | 10M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |

| | | | | |
|---------------------------|---------------|-------|-------|-------|
| Multicast Group IP Feed A | 224.0.212.183 | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.183 | 40183 | 41183 | 42183 |
| | | PEUA | PEUA | PEUA |
| | | 60183 | 61183 | 62183 |

13.3 MDG SET OF CHANNELS ID 22 – EQUITY DERIVATIVES OTHER (BELGIUM AND PORTUGAL)

| | | | |
|--------------------|--------------------|----------------------|--------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 22 |
| Optiq Segment name | Equity Derivatives | MDGSetOfChannelsName | Equity Derivatives Other |

| Channel Type | REFT | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.185 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.185 | 30185 | 31185 | 32185 | |
| | | PEUA | PEUA | PEUA | |
| | | 50185 | 51185 | 52185 | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.185 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.185 | 40185 | 41185 | 42185 | |
| | | PEUA | PEUA | PEUA | |
| | | 60185 | 61185 | 62185 | |

| Channel Type | BBBO | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.186 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.186 | 30186 | 31186 | 32186 | |
| | | PEUA | PEUA | PEUA | |
| | | 50186 | 51186 | 52186 | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.187 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.187 | 30187 | 31187 | 32187 | |
| | | PEUA | PEUA | PEUA | |
| | | 50187 | 51187 | 52187 | |
| Snapshot | | | | | |
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.186 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.186 | 40186 | 41186 | 42186 | |
| | | PEUA | PEUA | PEUA | |
| | | 60186 | 61186 | 62186 | |

| Channel Type | FBMU | Channel ID /Port | | | |
|---------------------------|---------------|------------------|-------------|-------------|-------------|
| Real-time | | | | | |
| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.189 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.189 | 30189 | 31189 | 32189 | |
| | | PEUA | PEUA | PEUA | |
| | | 50189 | 51189 | 52189 | |

| Snapshot | | | | | |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
| Multicast Group IP Feed A | 224.0.212.188 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.188 | 40188 | 41188 | 42188 | |
| | | PEUA | PEUA | PEUA | |
| | | 60188 | 61188 | 62188 | |

13.4 MDG SET OF CHANNELS ID 36 – EQUITY DERIVATIVES ITALY

| | | | |
|--------------------|--------------------|----------------------|--------------------------|
| Environment | V-EUA and P-EUA | MDGSetOfChannels ID | 36 |
| Optiq Segment name | Equity Derivatives | MDGSetOfChannelsName | Equity Derivatives Italy |

| | | |
|--------------|------|------------------|
| Channel Type | REFT | Channel ID /Port |
|--------------|------|------------------|

Real-time

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.210 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.210 | 30210 | 31210 | 32210 | |
| | | PEUA | PEUA | PEUA | |
| | | 50210 | 51210 | 52210 | |

Snapshot

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.210 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.210 | 40210 | 41210 | 42210 | |
| | | PEUA | PEUA | PEUA | |
| | | 60210 | 61210 | 62210 | |

| | | |
|--------------|------|------------------|
| Channel Type | BBBO | Channel ID /Port |
|--------------|------|------------------|

Real-time

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.206 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.206 | 30206 | 31206 | 32206 | |
| | | PEUA | PEUA | PEUA | |
| | | 50206 | 51206 | 52206 | |

| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------|----|-------------|-------------|-------------|-------------|
|---------------|----|-------------|-------------|-------------|-------------|

| | | | | | |
|---------------------------|---------------|-------|-------|-------|--|
| Multicast Group IP Feed A | 224.0.212.207 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.207 | 30207 | 31207 | 32207 | |
| | | PEUA | PEUA | PEUA | |
| | | 50207 | 51207 | 52207 | |

Snapshot

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.206 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.206 | 40206 | 41206 | 42206 | |
| | | PEUA | PEUA | PEUA | |
| | | 60206 | 61206 | 62206 | |

| | | |
|--------------|------|------------------|
| Channel Type | FBMU | Channel ID /Port |
|--------------|------|------------------|

Real-time

| Channel Speed | 1G | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------------------|---------------|-------------|-------------|-------------|-------------|
| Multicast Group IP Feed A | 224.0.212.209 | VEUA | VEUA | VEUA | |
| Multicast Group IP Feed B | 224.0.213.209 | 30209 | 31209 | 32209 | |
| | | PEUA | PEUA | PEUA | |
| | | 50209 | 51209 | 52209 | |

Snapshot

| Channel Speed | 100M | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---------------|------|-------------|-------------|-------------|-------------|
|---------------|------|-------------|-------------|-------------|-------------|

| | | | | |
|---------------------------|---------------|-------|-------|-------|
| Multicast Group IP Feed A | 224.0.212.208 | VEUA | VEUA | VEUA |
| Multicast Group IP Feed B | 224.0.213.208 | 40208 | 41183 | 42208 |
| | | PEUA | PEUA | PEUA |
| | | 60208 | 61208 | 62208 |