

Document title

OPTIQ™ MARKET DATA GATEWAY FEED CONFIGURATION

PRODUCTION AND DISASTER RECOVERY

Document type or subject

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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	September 2016	Optiq™ Market Data Gateway Production and Disaster Recovery (DR) Environment feed configuration details.

REFERENCE MATERIAL

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

- Euronext Cash and Derivatives Markets – Optiq MDG Client Specifications

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FURTHER INFORMATION

- For additional product 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 Production and Disaster Recovery (DR).

The Euronext Optiq™ Market Data Gateway Production environment (PROD) is located in Basildon and the Disaster Recovery (DR) environment is located at St. Denis. The Production Primary (P) and Secondary (S) Source IP Address ranges are provided in this document for the live and standby systems as part of the High Availability mechanism.

Customers are requested to allow the Production Primary (PROD P), Production Secondary (PROD S) and Disaster Recovery (DR) Source IP Address ranges through their Firewalls.

The Optiq MDG feed configuration file will be provided on a daily basis in XML format and it is required to use the feed configuration file 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 feed configuration file.

Together with the XML Standing Data files for the different Optiq Segments, customers will be able to map which instruments are available in which channel.

1.1 ASSET CLASS, OPTIQ SEGMENTS AND PARTITIONS

Below you will find an overview of the available Optiq Segments, the number of partitions per Optiq Segment and the Asset Class(es) that are part of each Optiq Segment.

Asset Class	Currency	Country Split	Optiq Segment	Number of Partitions
Equities	All	Netherlands	Equities	4
		France		
		Belgium		
		Portugal		
		UK		
Euronext Retail Matching Facility (RMF)	All	All		
Euronext Equity Off-Exchange Trade Reports	All	All		
Société Générale Systematic Internaliser (SI)	All	All		
ETFs	All	All	ETFs	1
Fixed Income	All	All	Fixed Income	1
Warrants and Certificates	All	All	Warrants and Certificates	1
Bourse de Luxembourg	All	All	Bourse de Luxembourg	1
Equity Options	All	Netherlands	Derivatives - Options	2
		France		
		Other (Belgium and Portugal)		
Index Options	All	Netherlands		
		France		
		Other (Belgium and Portugal)		
Currency Options	All	All		
AtomX (for Flex Contracts)	All	All		
Equity and Index Futures	All	Netherlands	Derivatives - Futures	2
		France		
		Other (Belgium and Portugal)		
Currency Futures	All	All		
Commodity Derivatives	All	All	Commodity Derivatives	1
Indices	All	All	Indices	1

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 SFTI Network and the services that were selected in the SFTI® order form.

Depending on the Asset Class, the following Optiq MDG channel types are made available to customers:

1. Pre-trade
 - a. BBO – Best Bid and Offer
 - b. FOB+BBO – Full Order Book and Best Bid and Offer
2. Post Trade – TR+STDATA –Reference Data and Full Trade Information
3. Indices.

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

			Compressed + Conflated (C+C)			
Channel Type			100Mbps Shaped		1Gbps Shaped	Unshaped
Post Trade	Pre-Trade	Indices	Snapshot	Real-time		
TR+STDATA C+C			X	X		
	BBO C+C		X	X		
	BBO Shaped				X	
	FOB+BBO C+C		X	X		
	FOB+BBO Shaped				X	
	FOB+BBO Unshaped					X
		INDICES	X	X		

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 (1) or snapshot (2)
2. The second number is n= 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 SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

Please note that DR Source IP ranges for Feed A and B will be provided later.

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

Real-time				
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	1(n)xxx		1(n)xxx	
Multicast Group IP	224.0.52.xxx	224.0.53.xxx	224.0.52.xxx	224.0.53.xxx
Port	1(n)xxx	1(n)xxx	1(n)xxx	1(n)xxx

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

Environment	Channel ID	Real-Time/Snapshot	Multicast Group Feed A	Multicast Group Feed B
Production	1(n)xxx	Real-Time	224.0.64.xxx	224.0.65.xxx
	2(n)xxx	Snapshot	224.0.66.xxx	224.0.67.xxx

2. OPTIQ SEGMENT - EQUITIES

2.1 ASSET CLASS EQUITIES – NETHERLANDS – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Equities	All	Netherlands

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10120		11120		12120		13120	
Multicast Group IP	224.0.64.120	224.0.65.120	224.0.64.120	224.0.65.120	224.0.64.120	224.0.65.120	224.0.64.120	224.0.65.120
Port	10120	10120	11120	11120	12120	12120	13120	13120
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	10121		11121		12121		13121	
Multicast Group IP	224.0.64.121	224.0.65.121	224.0.64.121	224.0.65.121	224.0.64.121	224.0.65.121	224.0.64.121	224.0.65.121
Port	10121	10121	11121	11121	12121	12121	13121	13121
Channel Type	BBO Shaped		BBO Shaped		BBO Shaped		BBO Shaped	
Channel ID	10122		11122		12122		13122	
Multicast Group IP	224.0.64.122	224.0.65.122	224.0.64.122	224.0.65.122	224.0.64.122	224.0.65.122	224.0.64.122	224.0.65.122
Port	10122	10122	11122	11122	12122	12122	13122	13122
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10123		11123		12123		13123	
Multicast Group IP	224.0.64.123	224.0.65.123	224.0.64.123	224.0.65.123	224.0.64.123	224.0.65.123	224.0.64.123	224.0.65.123
Port	10123	10123	11123	11123	12123	12123	13123	13123
Channel Type	FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10124		11124		12124		13124	
Multicast Group IP	224.0.64.124	224.0.65.124	224.0.64.124	224.0.65.124	224.0.64.124	224.0.65.124	224.0.64.124	224.0.65.124
Port	10124	10124	11124	11124	12124	12124	13124	13124
Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID	10125		11125		12125		13125	
Multicast Group IP	224.0.64.125	224.0.65.125	224.0.64.125	224.0.65.125	224.0.64.125	224.0.65.125	224.0.64.125	224.0.65.125
Port	10125	10125	11125	11125	12125	12125	13125	13125

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20120		21120		22120		23120	
Multicast Group IP	224.0.66.120	224.0.67.120	224.0.66.120	224.0.67.120	224.0.66.120	224.0.67.120	224.0.66.120	224.0.67.120
Port	20120	20120	21120	21120	22120	22120	23120	23120
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	20121		21121		22121		23121	
Multicast Group IP	224.0.66.121	224.0.67.121	224.0.66.121	224.0.67.121	224.0.66.121	224.0.67.121	224.0.66.121	224.0.67.121
Port	20121	20121	21121	21121	22121	22121	23121	23121
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20123		21123		22123		23123	
Multicast Group IP	224.0.66.123	224.0.67.123	224.0.66.123	224.0.67.123	224.0.66.123	224.0.67.123	224.0.66.123	224.0.67.123
Port	20123	20123	21123	21123	22123	22123	23123	23123

2.2 ASSET CLASS EQUITIES – FRANCE – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Equities	All	France

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10110		11110		12110		13110	
Multicast Group IP	224.0.64.110	224.0.65.110	224.0.64.110	224.0.65.110	224.0.64.110	224.0.65.110	224.0.64.110	224.0.65.110
Port	10110	10110	11110	11110	12110	12110	13110	13110
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	10111		11111		12111		13111	
Multicast Group IP	224.0.64.111	224.0.65.111	224.0.64.111	224.0.65.111	224.0.64.111	224.0.65.111	224.0.64.111	224.0.65.111
Port	10111	10111	11111	11111	12111	12111	13111	13111
Channel Type	BBO Shaped		BBO Shaped		BBO Shaped		BBO Shaped	
Channel ID	10112		11112		12112		13112	
Multicast Group IP	224.0.64.112	224.0.65.112	224.0.64.112	224.0.65.112	224.0.64.112	224.0.65.112	224.0.64.112	224.0.65.112
Port	10112	10112	11112	11112	12112	12112	13112	13112
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10113		11113		12113		13113	
Multicast Group IP	224.0.64.113	224.0.65.113	224.0.64.113	224.0.65.113	224.0.64.113	224.0.65.113	224.0.64.113	224.0.65.113
Port	10113	10113	11113	11113	12113	12113	13113	13113
Channel Type	FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10114		11114		12114		13114	
Multicast Group IP	224.0.64.114	224.0.65.114	224.0.64.114	224.0.65.114	224.0.64.114	224.0.65.114	224.0.64.114	224.0.65.114
Port	10114	10114	11114	11114	12114	12114	13114	13114
Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID	10115		11115		12115		13115	
Multicast Group IP	224.0.64.115	224.0.65.115	224.0.64.115	224.0.65.115	224.0.64.115	224.0.65.115	224.0.64.115	224.0.65.115
Port	10115	10115	11115	11115	12115	12115	13115	13115

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20110		21110		22110		23110	
Multicast Group IP	224.0.66.110	224.0.67.110	224.0.66.110	224.0.67.110	224.0.66.110	224.0.67.110	224.0.66.110	224.0.67.110
Port	20110	20110	21110	21110	22110	22110	23110	23110
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	20111		21111		22111		23111	
Multicast Group IP	224.0.66.111	224.0.67.111	224.0.66.111	224.0.67.111	224.0.66.111	224.0.67.111	224.0.66.111	224.0.67.111
Port	20111	20111	21111	21111	22111	22111	23111	23111
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20113		21113		22113		23113	
Multicast Group IP	224.0.66.113	224.0.67.113	224.0.66.113	224.0.67.113	224.0.66.113	224.0.67.113	224.0.66.113	224.0.67.113
Port	20113	20113	21113	21113	22113	22113	23113	23113

2.3 ASSET CLASS EQUITIES – BELGIUM (INCLUDING PUBLIC AUCTION MARKET) – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Equities	All	Belgium - includes Public Auction Market

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10100		11100		12100		13100	
Multicast Group IP	224.0.64.100	224.0.65.100	224.0.64.100	224.0.65.100	224.0.64.100	224.0.65.100	224.0.64.100	224.0.65.100
Port	10100	10100	11100	11100	12100	12100	13100	13100

Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	10101		11101		12101		13101	
Multicast Group IP	224.0.64.101	224.0.65.101	224.0.64.101	224.0.65.101	224.0.64.101	224.0.65.101	224.0.64.101	224.0.65.101
Port	10101	10101	11101	11101	12101	12101	13101	13101

Channel Type	BBO Shaped		BBO Shaped		BBO Shaped		BBO Shaped	
Channel ID	10102		11102		12102		13102	
Multicast Group IP	224.0.64.102	224.0.65.102	224.0.64.102	224.0.65.102	224.0.64.102	224.0.65.102	224.0.64.102	224.0.65.102
Port	10102	10102	11102	11102	12102	12102	13102	13102

Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10103		11103		12103		13103	
Multicast Group IP	224.0.64.103	224.0.65.103	224.0.64.103	224.0.65.103	224.0.64.103	224.0.65.103	224.0.64.103	224.0.65.103
Port	10103	10103	11103	11103	12103	12103	13103	13103

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10104		11104		12104		13104	
Multicast Group IP	224.0.64.104	224.0.65.104	224.0.64.104	224.0.65.104	224.0.64.104	224.0.65.104	224.0.64.104	224.0.65.104
Port	10104	10104	11104	11104	12104	12104	13104	13104

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID								
Multicast Group IP								
Port								

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20100		21100		22100		23100	
Multicast Group IP	224.0.66.100	224.0.67.100	224.0.66.100	224.0.67.100	224.0.66.100	224.0.67.100	224.0.66.100	224.0.67.100
Port	20100	20100	21100	21100	22100	22100	23100	23100

Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	20101		21101		22101		23101	
Multicast Group IP	224.0.66.101	224.0.67.101	224.0.66.101	224.0.67.101	224.0.66.101	224.0.67.101	224.0.66.101	224.0.67.101
Port	20101	20101	21101	21101	22101	22101	23101	23101

Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20103		21103		22103		23103	
Multicast Group IP	224.0.66.103	224.0.67.103	224.0.66.103	224.0.67.103	224.0.66.103	224.0.67.103	224.0.66.103	224.0.67.103
Port	20103	20103	21103	21103	22103	22103	23103	23103

2.4 ASSET CLASS EQUITIES – PORTUGAL – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Equities	All	Portugal

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10105		11105		12105		13105	
Multicast Group IP	224.0.64.105	224.0.65.105	224.0.64.105	224.0.65.105	224.0.64.105	224.0.65.105	224.0.64.105	224.0.65.105
Port	10105	10105	11105	11105	12105	12105	13105	13105
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	10106		11106		12106		13106	
Multicast Group IP	224.0.64.106	224.0.65.106	224.0.64.106	224.0.65.106	224.0.64.106	224.0.65.106	224.0.64.106	224.0.65.106
Port	10106	10106	11106	11106	12106	12106	13106	13106
Channel Type	BBO Shaped		BBO Shaped		BBO Shaped		BBO Shaped	
Channel ID	10107		11107		12107		13107	
Multicast Group IP	224.0.64.107	224.0.65.107	224.0.64.107	224.0.65.107	224.0.64.107	224.0.65.107	224.0.64.107	224.0.65.107
Port	10107	10107	11107	11107	12107	12107	13107	13107
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10108		11108		12108		13108	
Multicast Group IP	224.0.64.108	224.0.65.108	224.0.64.108	224.0.65.108	224.0.64.108	224.0.65.108	224.0.64.108	224.0.65.108
Port	10108	10108	11108	11108	12108	12108	13108	13108
Channel Type	FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10109		11109		12109		13109	
Multicast Group IP	224.0.64.109	224.0.65.109	224.0.64.109	224.0.65.109	224.0.64.109	224.0.65.109	224.0.64.109	224.0.65.109
Port	10109	10109	11109	11109	12109	12109	13109	13109
Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID								
Multicast Group IP								
Port								

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20105		21105		22105		23105	
Multicast Group IP	224.0.66.105	224.0.67.105	224.0.66.105	224.0.67.105	224.0.66.105	224.0.67.105	224.0.66.105	224.0.67.105
Port	20105	20105	21105	21105	22105	22105	23105	23105
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	20106		21106		22106		23106	
Multicast Group IP	224.0.66.106	224.0.67.106	224.0.66.106	224.0.67.106	224.0.66.106	224.0.67.106	224.0.66.106	224.0.67.106
Port	20106	20106	21106	21106	22106	22106	23106	23106
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20108		21108		22108		23108	
Multicast Group IP	224.0.66.108	224.0.67.108	224.0.66.108	224.0.67.108	224.0.66.108	224.0.67.108	224.0.66.108	224.0.67.108
Port	20108	20108	21108	21108	22108	22108	23108	23108

2.5 ASSET CLASS EQUITIES – UK – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Equities	All	UK

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10165		11165		12165		13165	
Multicast Group IP	224.0.64.165	224.0.65.165	224.0.64.165	224.0.65.165	224.0.64.165	224.0.65.165	224.0.64.165	224.0.65.165
Port	10165	10165	11165	11165	12165	12165	13165	13165
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	10166		11166		12166		13166	
Multicast Group IP	224.0.64.166	224.0.65.166	224.0.64.166	224.0.65.166	224.0.64.166	224.0.65.166	224.0.64.166	224.0.65.166
Port	10166	10166	11166	11166	12166	12166	13166	13166
Channel Type	BBO Shaped		BBO Shaped		BBO Shaped		BBO Shaped	
Channel ID	10167		11167		12167		13167	
Multicast Group IP	224.0.64.167	224.0.65.167	224.0.64.167	224.0.65.167	224.0.64.167	224.0.65.167	224.0.64.167	224.0.65.167
Port	10167	10167	11167	11167	12167	12167	13167	13167
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10168		11168		12168		13168	
Multicast Group IP	224.0.64.168	224.0.65.168	224.0.64.168	224.0.65.168	224.0.64.168	224.0.65.168	224.0.64.168	224.0.65.168
Port	10168	10168	11168	11168	12168	12168	13168	13168
Channel Type	FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10169		11169		12169		13169	
Multicast Group IP	224.0.64.169	224.0.65.169	224.0.64.169	224.0.65.169	224.0.64.169	224.0.65.169	224.0.64.169	224.0.65.169
Port	10169	10169	11169	11169	12169	12169	13169	13169
Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID								
Multicast Group IP								
Port								

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20165		21165		22165		23165	
Multicast Group IP	224.0.66.165	224.0.67.165	224.0.66.165	224.0.67.165	224.0.66.165	224.0.67.165	224.0.66.165	224.0.67.165
Port	20165	20165	21165	21165	22165	22165	23165	23165
Channel Type	BBO C+C		BBO C+C		BBO C+C		BBO C+C	
Channel ID	20166		21166		22166		23166	
Multicast Group IP	224.0.66.166	224.0.67.166	224.0.66.166	224.0.67.166	224.0.66.166	224.0.67.166	224.0.66.166	224.0.67.166
Port	20166	20166	21166	21166	22166	22166	23166	23166
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20168		21168		22168		23168	
Multicast Group IP	224.0.66.168	224.0.67.168	224.0.66.168	224.0.67.168	224.0.66.168	224.0.67.168	224.0.66.168	224.0.67.168
Port	20168	20168	21168	21168	22168	22168	23168	23168

2.6 ASSET CLASS RETAIL MATCHING FACILITY – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Euronext Retail Matching Facility	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B

Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10138		11138		12138		13138	
Multicast Group IP	224.0.64.138	224.0.65.138	224.0.64.138	224.0.65.138	224.0.64.138	224.0.65.138	224.0.64.138	224.0.65.138
Port	10138	10138	11138	11138	12138	12138	13138	13138
Channel Type	FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10139		11139		12139		13139	
Multicast Group IP	224.0.64.139	224.0.65.139	224.0.64.139	224.0.65.139	224.0.64.139	224.0.65.139	224.0.64.139	224.0.65.139
Port	10139	10139	11139	11139	12139	12139	13139	13139
Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID								
Multicast Group IP								
Port								

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B

Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20138		21138		22138		23138	
Multicast Group IP	224.0.66.138	224.0.67.138	224.0.66.138	224.0.67.138	224.0.66.138	224.0.67.138	224.0.66.138	224.0.67.138
Port	20138	20138	21138	21138	22138	22138	23138	23138

2.7 ASSET CLASS EQUITY OFF EXCHANGE TRADE REPORTS – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Euronext Equity Off-Exchange Trade Reports	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10147		11147		12147		13147	
Multicast Group IP	224.0.64.147	224.0.65.147	224.0.64.147	224.0.65.147	224.0.64.147	224.0.65.147	224.0.64.147	224.0.65.147
Port	10147	10147	11147	11147	12147	12147	13147	13147

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20147		21147		22147		23147	
Multicast Group IP	224.0.66.147	224.0.67.147	224.0.66.147	224.0.67.147	224.0.66.147	224.0.67.147	224.0.66.147	224.0.67.147
Port	20147	20147	21147	21147	22147	22147	23147	23147

2.8 ASSET CLASS SOCIETE GENERAL SYSTEMATIC INTERNALISER – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Equities	4

Asset class	Currency	Country
Societe Generale Retail Systematic Internaliser	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10148		11148		12148		13148	
Multicast Group IP	224.0.64.148	224.0.65.148	224.0.64.148	224.0.65.148	224.0.64.148	224.0.65.148	224.0.64.148	224.0.65.148
Port	10148	10148	11148	11148	12148	12148	13148	13148
Channel Type	FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10149		11149		12149		13149	
Multicast Group IP	224.0.64.149	224.0.65.149	224.0.64.149	224.0.65.149	224.0.64.149	224.0.65.149	224.0.64.149	224.0.65.149
Port	10149	10149	11149	11149	12149	12149	13149	13149
Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID								
Multicast Group IP								
Port								

	Snapshot							
Partition Number	Partition 1		Partition 2		Partition 3		Partition 4	
Feed A/B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B	Feed A	Feed B
Channel Type	FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20148		21148		22148		23148	
Multicast Group IP	224.0.66.148	224.0.67.148	224.0.66.148	224.0.67.148	224.0.66.148	224.0.67.148	224.0.66.148	224.0.67.148
Port	20148	20148	21148	21148	22148	22148	23148	23148

3. OPTIQ SEGMENT – ETF’S

3.1 ASSET CLASS ETF’S – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	ETF's	1

Asset class	Currency	Country
ETF's	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	10130	
Multicast Group IP	224.0.64.130	224.0.65.130
Port	10130	10130

Channel Type	BBO C+C	
Channel ID	10131	
Multicast Group IP	224.0.64.131	224.0.65.131
Port	10131	10131

Channel Type	BBO Shaped	
Channel ID	10132	
Multicast Group IP	224.0.64.132	224.0.65.132
Port	10132	10132

Channel Type	FOB+BBO C+C	
Channel ID	10133	
Multicast Group IP	224.0.64.133	224.0.65.133
Port	10133	10133

Channel Type	FOB+BBO Shaped	
Channel ID	10134	
Multicast Group IP	224.0.64.134	224.0.65.134
Port	10134	10134

Channel Type	FOB+BBO Unshaped	
Channel ID	10135	
Multicast Group IP	224.0.64.135	224.0.65.135
Port	10135	10135

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	20130	
Multicast Group IP	224.0.66.130	224.0.67.130
Port	20130	20130

Channel Type	BBO C+C	
Channel ID	20131	
Multicast Group IP	224.0.66.131	224.0.67.131
Port	20131	20131

Channel Type	FOB+BBO C+C	
Channel ID	20133	
Multicast Group IP	224.0.66.133	224.0.67.133
Port	20133	20133

4. OPTIQ SEGMENT – FIXED INCOME

4.1 ASSET CLASS FIXED INCOME – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Fixed Income	1

Asset class	Currency	Country
Fixed Income	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	10150	
Multicast Group IP	224.0.64.150	224.0.65.150
Port	10150	10150

Channel Type	BBO C+C	
Channel ID	10151	
Multicast Group IP	224.0.64.151	224.0.65.151
Port	10151	10151

Channel Type	BBO Shaped	
Channel ID	10152	
Multicast Group IP	224.0.64.152	224.0.65.152
Port	10152	10152

Channel Type	FOB+BBO C+C	
Channel ID	10153	
Multicast Group IP	224.0.64.153	224.0.65.153
Port	10153	10153

Channel Type	FOB+BBO Shaped	
Channel ID	10154	
Multicast Group IP	224.0.64.154	224.0.65.154
Port	10154	10154

Channel Type	FOB+BBO Unshaped	
Channel ID		
Multicast Group IP		
Port		

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	20150	
Multicast Group IP	224.0.66.150	224.0.67.150
Port	20150	20150

Channel Type	BBO C+C	
Channel ID	20151	
Multicast Group IP	224.0.66.151	224.0.67.151
Port	20151	20151

Channel Type	FOB+BBO C+C	
Channel ID	20153	
Multicast Group IP	224.0.66.153	224.0.67.153
Port	20153	20153

5. OPTIQ SEGMENT – WARRANTS & CERTIFICATES

5.1 ASSET CLASS WARRANTS & CERTIFICATES – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Warrants & Certificates	1

Asset class	Currency	Country
Warrants & Certificates	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	10155	
Multicast Group IP	224.0.64.155	224.0.65.155
Port	10155	10155

Channel Type	BBO C+C	
Channel ID	10156	
Multicast Group IP	224.0.64.156	224.0.65.156
Port	10156	10156

Channel Type	BBO Shaped	
Channel ID	10157	
Multicast Group IP	224.0.64.157	224.0.65.157
Port	10157	10157

Channel Type	FOB+BBO C+C	
Channel ID	10158	
Multicast Group IP	224.0.64.158	224.0.65.158
Port	10158	10158

Channel Type	FOB+BBO Shaped	
Channel ID	10159	
Multicast Group IP	224.0.64.159	224.0.65.159
Port	10159	10159

Channel Type	FOB+BBO Unshaped	
Channel ID		
Multicast Group IP		
Port		

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	20155	
Multicast Group IP	224.0.66.155	224.0.67.155
Port	20155	20155

Channel Type	BBO C+C	
Channel ID	20156	
Multicast Group IP	224.0.66.156	224.0.67.156
Port	20156	20156

Channel Type	FOB+BBO C+C	
Channel ID	20158	
Multicast Group IP	224.0.66.158	224.0.67.158
Port	20158	20158

6. OPTIQ SEGMENT – BOURSE DE LUXEMBOURG

6.1 ASSET CLASS BOURSE DE LUXEMBOURG – REAL-TIME AND SNAPSHOT CONFIGURATION

Please note that the Bourse de Luxembourg Index messages are included in the TR+STDATA C+C real-time and snapshot channels.

Environment	Optiq Segment name	Number of Partitions
Prod	BdL	1

Asset class	Currency	Country
Bourse de Luxembourg	All	Luxembourg

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	10170	
Multicast Group IP	224.0.64.170	224.0.65.170
Port	10170	10170

Channel Type	BBO C+C	
Channel ID	10171	
Multicast Group IP	224.0.64.171	224.0.65.171
Port	10171	10171
Channel Type	BBO Shaped	
Channel ID	10172	
Multicast Group IP	224.0.64.172	224.0.65.172
Port	10172	10172

Channel Type	FOB+BBO C+C	
Channel ID	10173	
Multicast Group IP	224.0.64.173	224.0.65.173
Port	10173	10173
Channel Type	FOB+BBO Shaped	
Channel ID	10174	
Multicast Group IP	224.0.64.174	224.0.65.174
Port	10174	10174
Channel Type	FOB+BBO Unshaped	
Channel ID		
Multicast Group IP		
Port		

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	20170	
Multicast Group IP	224.0.66.170	224.0.67.170
Port	20170	20170

Channel Type	BBO C+C	
Channel ID	20171	
Multicast Group IP	224.0.66.171	224.0.67.171
Port	20171	20171

Channel Type	FOB+BBO C+C	
Channel ID	20173	
Multicast Group IP	224.0.66.173	224.0.67.173
Port	20173	20173

7. OPTIQ SEGMENT – DERIVATIVES – OPTIONS

7.1 ASSET CLASS EQUITY OPTIONS – NETHERLANDS – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Equity Options	All	Netherlands

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10180		11180	
Multicast Group IP	224.0.64.180	224.0.65.180	224.0.64.180	224.0.65.180
Port	10180	10180	11180	11180

Channel Type	BBO C+C		BBO C+C	
Channel ID	10181		11181	
Multicast Group IP	224.0.64.181	224.0.65.181	224.0.64.181	224.0.65.181
Port	10181	10181	11181	11181

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10182		11182	
Multicast Group IP	224.0.64.182	224.0.65.182	224.0.64.182	224.0.65.182
Port	10182	10182	11182	11182

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10183		11183	
Multicast Group IP	224.0.64.183	224.0.65.183	224.0.64.183	224.0.65.183
Port	10183	10183	11183	11183

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10184		11184	
Multicast Group IP	224.0.64.184	224.0.65.184	224.0.64.184	224.0.65.184
Port	10184	10184	11184	11184

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID				
Multicast Group IP				
Port				

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20180		21180	
Multicast Group IP	224.0.66.180	224.0.67.180	224.0.66.180	224.0.67.180
Port	20180	20180	21180	21180

Channel Type	BBO C+C		BBO C+C	
Channel ID	20181		21181	
Multicast Group IP	224.0.66.181	224.0.67.181	224.0.66.181	224.0.67.181
Port	20181	20181	21181	21181

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20183		21183	
Multicast Group IP	224.0.66.183	224.0.67.183	224.0.66.183	224.0.67.183
Port	20183	20183	21183	21183

7.2 ASSET CLASS EQUITY OPTIONS – FRANCE – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Equity Options	All	France

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10175		11175	
Multicast Group IP	224.0.64.175	224.0.65.175	224.0.64.175	224.0.65.175
Port	10175	10175	11175	11175

Channel Type	BBO C+C		BBO C+C	
Channel ID	10176		11176	
Multicast Group IP	224.0.64.176	224.0.65.176	224.0.64.176	224.0.65.176
Port	10176	10176	11176	11176

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10177		11177	
Multicast Group IP	224.0.64.177	224.0.65.177	224.0.64.177	224.0.65.177
Port	10177	10177	11177	11177

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10178		11178	
Multicast Group IP	224.0.64.178	224.0.65.178	224.0.64.178	224.0.65.178
Port	10178	10178	11178	11178

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10179		11179	
Multicast Group IP	224.0.64.179	224.0.65.179	224.0.64.179	224.0.65.179
Port	10179	10179	11179	11179

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID				
Multicast Group IP				
Port				

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20175		21175	
Multicast Group IP	224.0.66.175	224.0.67.175	224.0.66.175	224.0.67.175
Port	20175	20175	21175	21175

Channel Type	BBO C+C		BBO C+C	
Channel ID	20176		21176	
Multicast Group IP	224.0.66.176	224.0.67.176	224.0.66.176	224.0.67.176
Port	20176	20176	21176	21176

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20178		21178	
Multicast Group IP	224.0.66.178	224.0.67.178	224.0.66.178	224.0.67.178
Port	20178	20178	21178	21178

7.3 ASSET CLASS EQUITY OPTIONS – OTHER (BELGIUM AND PORTUGAL) – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Equity Options	All	Other (Belgium and Portugal)

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10185		11185	
Multicast Group IP	224.0.64.185	224.0.65.185	224.0.64.185	224.0.65.185
Port	10185	10185	11185	11185

Channel Type	BBO C+C		BBO C+C	
Channel ID	10186		11186	
Multicast Group IP	224.0.64.186	224.0.65.186	224.0.64.186	224.0.65.186
Port	10186	10186	11186	11186

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10187		11187	
Multicast Group IP	224.0.64.187	224.0.65.187	224.0.64.187	224.0.65.187
Port	10187	10187	11187	11187

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10188		11188	
Multicast Group IP	224.0.64.188	224.0.65.188	224.0.64.188	224.0.65.188
Port	10188	10188	11188	11188

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10189		11189	
Multicast Group IP	224.0.64.189	224.0.65.189	224.0.64.189	224.0.65.189
Port	10189	10189	11189	11189

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID				
Multicast Group IP				
Port				

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20185		21185	
Multicast Group IP	224.0.66.185	224.0.67.185	224.0.66.185	224.0.67.185
Port	20185	20185	21185	21185

Channel Type	BBO C+C		BBO C+C	
Channel ID	20186		21186	
Multicast Group IP	224.0.66.186	224.0.67.186	224.0.66.186	224.0.67.186
Port	20186	20186	21186	21186

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20188		21188	
Multicast Group IP	224.0.66.188	224.0.67.188	224.0.66.188	224.0.67.188
Port	20188	20188	21188	21188

7.4 ASSET CLASS INDEX OPTIONS –NETHERLANDS – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Index Options	All	Netherlands

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10230		11230	
Multicast Group IP	224.0.64.230	224.0.65.230	224.0.64.230	224.0.65.230
Port	10230	10230	11230	11230

Channel Type	BBO C+C		BBO C+C	
Channel ID	10231		11231	
Multicast Group IP	224.0.64.231	224.0.65.231	224.0.64.231	224.0.65.231
Port	10231	10231	11231	11231

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10232		11232	
Multicast Group IP	224.0.64.232	224.0.65.232	224.0.64.232	224.0.65.232
Port	10232	10232	11232	11232

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10233		11233	
Multicast Group IP	224.0.64.233	224.0.65.233	224.0.64.233	224.0.65.233
Port	10233	10233	11233	11233

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10234		11234	
Multicast Group IP	224.0.64.234	224.0.65.234	224.0.64.234	224.0.65.234
Port	10234	10234	11234	11234

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID	10235		11235	
Multicast Group IP	224.0.64.235	224.0.65.235	224.0.64.235	224.0.65.235
Port	10235	10235	11235	11235

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20230		21230	
Multicast Group IP	224.0.66.230	224.0.67.230	224.0.66.230	224.0.67.230
Port	20230	20230	21230	21230

Channel Type	BBO C+C		BBO C+C	
Channel ID	20231		21231	
Multicast Group IP	224.0.66.231	224.0.67.231	224.0.66.231	224.0.67.231
Port	20231	20231	21231	21231

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20233		21233	
Multicast Group IP	224.0.66.233	224.0.67.233	224.0.66.233	224.0.67.233
Port	20233	20233	21233	21233

7.5 ASSET CLASS INDEX OPTIONS –FRANCE – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Index Options	All	France

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10220		11220	
Multicast Group IP	224.0.64.220	224.0.65.220	224.0.64.220	224.0.65.220
Port	10220	10220	11220	11220

Channel Type	BBO C+C		BBO C+C	
Channel ID	10221		11221	
Multicast Group IP	224.0.64.221	224.0.65.221	224.0.64.221	224.0.65.221
Port	10221	10221	11221	11221

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10222		11222	
Multicast Group IP	224.0.64.222	224.0.65.222	224.0.64.222	224.0.65.222
Port	10222	10222	11222	11222

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10223		11223	
Multicast Group IP	224.0.64.223	224.0.65.223	224.0.64.223	224.0.65.223
Port	10223	10223	11223	11223

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10224		11224	
Multicast Group IP	224.0.64.224	224.0.65.224	224.0.64.224	224.0.65.224
Port	10224	10224	11224	11224

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID	10225		11225	
Multicast Group IP	224.0.64.225	224.0.65.225	224.0.64.225	224.0.65.225
Port	10225	10225	11225	11225

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20220		21220	
Multicast Group IP	224.0.66.220	224.0.67.220	224.0.66.220	224.0.67.220
Port	20220	20220	21220	21220

Channel Type	BBO C+C		BBO C+C	
Channel ID	20221		21221	
Multicast Group IP	224.0.66.221	224.0.67.221	224.0.66.221	224.0.67.221
Port	20221	20221	21221	21221

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20223		21223	
Multicast Group IP	224.0.66.223	224.0.67.223	224.0.66.223	224.0.67.223
Port	20223	20223	21223	21223

7.6 ASSET CLASS INDEX OPTIONS –OTHER (BELGIUM AND PORTUGAL) – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Index Options	All	Other (Belgium and Portugal)

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10240		11240	
Multicast Group IP	224.0.64.240	224.0.65.240	224.0.64.240	224.0.65.240
Port	10240	10240	11240	11240

Channel Type	BBO C+C		BBO C+C	
Channel ID	10241		11241	
Multicast Group IP	224.0.64.241	224.0.65.241	224.0.64.241	224.0.65.241
Port	10241	10241	11241	11241

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10242		11242	
Multicast Group IP	224.0.64.242	224.0.65.242	224.0.64.242	224.0.65.242
Port	10242	10242	11242	11242

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10243		11243	
Multicast Group IP	224.0.64.243	224.0.65.243	224.0.64.243	224.0.65.243
Port	10243	10243	11243	11243

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10244		11244	
Multicast Group IP	224.0.64.244	224.0.65.244	224.0.64.244	224.0.65.244
Port	10244	10244	11244	11244

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID				
Multicast Group IP				
Port				

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20240		21240	
Multicast Group IP	224.0.66.240	224.0.67.240	224.0.66.240	224.0.67.240
Port	20240	20240	21240	21240

Channel Type	BBO C+C		BBO C+C	
Channel ID	20241		21241	
Multicast Group IP	224.0.66.241	224.0.67.241	224.0.66.241	224.0.67.241
Port	20241	20241	21241	21241

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20243		21243	
Multicast Group IP	224.0.66.243	224.0.67.243	224.0.66.243	224.0.67.243
Port	20243	20243	21243	21243

7.7 ASSET CLASS CURRENCY OPTIONS – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Currency Options	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10215		11215	
Multicast Group IP	224.0.64.215	224.0.65.215	224.0.64.215	224.0.65.215
Port	10215	10215	11215	11215

Channel Type	BBO C+C		BBO C+C	
Channel ID	10216		11216	
Multicast Group IP	224.0.64.216	224.0.65.216	224.0.64.216	224.0.65.216
Port	10216	10216	11216	11216

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10217		11217	
Multicast Group IP	224.0.64.217	224.0.65.217	224.0.64.217	224.0.65.217
Port	10217	10217	11217	11217

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10218		11218	
Multicast Group IP	224.0.64.218	224.0.65.218	224.0.64.218	224.0.65.218
Port	10218	10218	11218	11218

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10219		11219	
Multicast Group IP	224.0.64.219	224.0.65.219	224.0.64.219	224.0.65.219
Port	10219	10219	11219	11219

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID				
Multicast Group IP				
Port				

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20215		21215	
Multicast Group IP	224.0.66.215	224.0.67.215	224.0.66.215	224.0.67.215
Port	20215	20215	21215	21215

Channel Type	BBO C+C		BBO C+C	
Channel ID	20216		21216	
Multicast Group IP	224.0.66.216	224.0.67.216	224.0.66.216	224.0.67.216
Port	20216	20216	21216	21216

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20218		21218	
Multicast Group IP	224.0.66.218	224.0.67.218	224.0.66.218	224.0.67.218
Port	20218	20218	21218	21218

7.8 ASSET CLASS ATOMX – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Options	2

Asset class	Currency	Country
Atomx (Flex)	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	10199	
Multicast Group IP	224.0.64.199	224.0.65.199
Port	10199	10199

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	20199	
Multicast Group IP	224.0.66.199	224.0.67.199
Port	20199	20199

8. OPTIQ SEGMENT – DERIVATIVES – FUTURES

8.1 ASSET CLASS EQUITY & INDEX FUTURES – NETHERLANDS – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Futures	2

Asset class	Currency	Country
Equity and Index Futures	All	Netherlands

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10200		11200	
Multicast Group IP	224.0.64.200	224.0.65.200	224.0.64.200	224.0.65.200
Port	10200	10200	11200	11200

Channel Type	BBO C+C		BBO C+C	
Channel ID	10201		11201	
Multicast Group IP	224.0.64.201	224.0.65.201	224.0.64.201	224.0.65.201
Port	10201	10201	11201	11201

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10202		11202	
Multicast Group IP	224.0.64.202	224.0.65.202	224.0.64.202	224.0.65.202
Port	10202	10202	11202	11202

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10203		11203	
Multicast Group IP	224.0.64.203	224.0.65.203	224.0.64.203	224.0.65.203
Port	10203	10203	11203	11203

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10204		11204	
Multicast Group IP	224.0.64.204	224.0.65.204	224.0.64.204	224.0.65.204
Port	10204	10204	11204	11204

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID	10205		11205	
Multicast Group IP	224.0.64.205	224.0.65.205	224.0.64.205	224.0.65.205
Port	10205	10205	11205	11205

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20200		21200	
Multicast Group IP	224.0.66.200	224.0.67.200	224.0.66.200	224.0.67.200
Port	20200	20200	21200	21200

Channel Type	BBO C+C		BBO C+C	
Channel ID	20201		21201	
Multicast Group IP	224.0.66.201	224.0.67.201	224.0.66.201	224.0.67.201
Port	20201	20201	21201	21201

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20203		21203	
Multicast Group IP	224.0.66.203	224.0.67.203	224.0.66.203	224.0.67.203
Port	20203	20203	21203	21203

8.2 ASSET CLASS EQUITY & INDEX FUTURES – FRANCE – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Futures	2

Asset class	Currency	Country
Equity and Index Futures	All	France

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10190		11190	
Multicast Group IP	224.0.64.190	224.0.65.190	224.0.64.190	224.0.65.190
Port	10190	10190	11190	11190

Channel Type	BBO C+C		BBO C+C	
Channel ID	10191		11191	
Multicast Group IP	224.0.64.191	224.0.65.191	224.0.64.191	224.0.65.191
Port	10191	10191	11191	11191

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10192		11192	
Multicast Group IP	224.0.64.192	224.0.65.192	224.0.64.192	224.0.65.192
Port	10192	10192	11192	11192

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10193		11193	
Multicast Group IP	224.0.64.193	224.0.65.193	224.0.64.193	224.0.65.193
Port	10193	10193	11193	11193

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10194		11194	
Multicast Group IP	224.0.64.194	224.0.65.194	224.0.64.194	224.0.65.194
Port	10194	10194	11194	11194

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID	10195		11195	
Multicast Group IP	224.0.64.195	224.0.65.195	224.0.64.195	224.0.65.195
Port	10195	10195	11195	11195

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20190		21190	
Multicast Group IP	224.0.66.190	224.0.67.190	224.0.66.190	224.0.67.190
Port	20190	20190	21190	21190

Channel Type	BBO C+C		BBO C+C	
Channel ID	20191		21191	
Multicast Group IP	224.0.66.191	224.0.67.191	224.0.66.191	224.0.67.191
Port	20191	20191	21191	21191

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20193		21193	
Multicast Group IP	224.0.66.193	224.0.67.193	224.0.66.193	224.0.67.193
Port	20193	20193	21193	21193

8.3 ASSET CLASS EQUITY & INDEX FUTURES – OTHER (BELGIUM AND PORTUGAL) – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Futures	2

Asset class	Currency	Country
Equity and Index Futures	All	Other (Belgium and Portugal)

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10210		11210	
Multicast Group IP	224.0.64.210	224.0.65.210	224.0.64.210	224.0.65.210
Port	10210	10210	11210	11210

Channel Type	BBO C+C		BBO C+C	
Channel ID	10211		11211	
Multicast Group IP	224.0.64.211	224.0.65.211	224.0.64.211	224.0.65.211
Port	10211	10211	11211	11211

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10212		11212	
Multicast Group IP	224.0.64.212	224.0.65.212	224.0.64.212	224.0.65.212
Port	10212	10212	11212	11212

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10213		11213	
Multicast Group IP	224.0.64.213	224.0.65.213	224.0.64.213	224.0.65.213
Port	10213	10213	11213	11213

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10214		11214	
Multicast Group IP	224.0.64.214	224.0.65.214	224.0.64.214	224.0.65.214
Port	10214	10214	11214	11214

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID				
Multicast Group IP				
Port				

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20210		21210	
Multicast Group IP	224.0.66.210	224.0.67.210	224.0.66.210	224.0.67.210
Port	20210	20210	21210	21210

Channel Type	BBO C+C		BBO C+C	
Channel ID	20211		21211	
Multicast Group IP	224.0.66.211	224.0.67.211	224.0.66.211	224.0.67.211
Port	20211	20211	21211	21211

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20213		21213	
Multicast Group IP	224.0.66.213	224.0.67.213	224.0.66.213	224.0.67.213
Port	20213	20213	21213	21213

8.4 ASSET CLASS CURRENCY FUTURES – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Derivatives - Futures	2

Asset class	Currency	Country
Currency Futures	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-Io	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10140		11140	
Multicast Group IP	224.0.64.140	224.0.65.140	224.0.64.140	224.0.65.140
Port	10140	10140	11140	11140

Channel Type	BBO C+C		BBO C+C	
Channel ID	10141		11141	
Multicast Group IP	224.0.64.141	224.0.65.141	224.0.64.141	224.0.65.141
Port	10141	10141	11141	11141

Channel Type	BBO Shaped		BBO Shaped	
Channel ID	10142		11142	
Multicast Group IP	224.0.64.142	224.0.65.142	224.0.64.142	224.0.65.142
Port	10142	10142	11142	11142

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10143		11143	
Multicast Group IP	224.0.64.143	224.0.65.143	224.0.64.143	224.0.65.143
Port	10143	10143	11143	11143

Channel Type	FOB+BBO Shaped		FOB+BBO Shaped	
Channel ID	10144		11144	
Multicast Group IP	224.0.64.144	224.0.65.144	224.0.64.144	224.0.65.144
Port	10144	10144	11144	11144

Channel Type	FOB+BBO Unshaped		FOB+BBO Unshaped	
Channel ID				
Multicast Group IP				
Port				

	Snapshot			
Partition Number	Partition 1		Partition 2	
Feed A/B	Feed A	Feed B	Feed A	Feed B

Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	20140		21140	
Multicast Group IP	224.0.66.140	224.0.67.140	224.0.66.140	224.0.67.140
Port	20140	20140	21140	21140

Channel Type	BBO C+C		BBO C+C	
Channel ID	20141		21141	
Multicast Group IP	224.0.66.141	224.0.67.141	224.0.66.141	224.0.67.141
Port	20141	20141	21141	21141

Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	20143		21143	
Multicast Group IP	224.0.66.143	224.0.67.143	224.0.66.143	224.0.67.143
Port	20143	20143	21143	21143

9. OPTIQ SEGMENT – COMMODITIES

9.1 ASSET CLASS COMMODITIES – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Commodities	1

Asset class	Currency	Country
Commodity Derivatives	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time		Snapshot	
Partition Number	Partition 1		Partition 1	
Feed A/B	Feed A	Feed B	Feed A	Feed B
Channel Type	TR+STDATA C+C		TR+STDATA C+C	
Channel ID	10245		20245	
Multicast Group IP	224.0.64.245	224.0.65.245	224.0.66.245	224.0.67.245
Port	10245	10245	20245	20245
Channel Type	BBO C+C		BBO C+C	
Channel ID	10246		20246	
Multicast Group IP	224.0.64.246	224.0.65.246	224.0.66.246	224.0.67.246
Port	10246	10246	20246	20246
Channel Type	BBO Shaped			
Channel ID	10247			
Multicast Group IP	224.0.64.247	224.0.65.246		
Port	10247	10247		
Channel Type	FOB+BBO C+C		FOB+BBO C+C	
Channel ID	10248		20248	
Multicast Group IP	224.0.64.248	224.0.65.248	224.0.66.248	224.0.67.248
Port	10248	10248	20248	20248
Channel Type	FOB+BBO Shaped			
Channel ID	10249			
Multicast Group IP	224.0.64.249	224.0.65.249		
Port	10249	10249		
Channel Type	FOB+BBO Unshaped			
Channel ID				
Multicast Group IP				
Port				

10. OPTIQ SEGMENT – INDICES

10.1 ASSET CLASS INDICES – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Indices	1

Asset class	Currency	Country
Euronext Indices	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B
Channel Type	INDICES	
Channel ID	10250	
Multicast Group IP	224.0.64.250	224.0.65.250
Port	10250	10250

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B
Channel Type	INDICES	
Channel ID	20250	
Multicast Group IP	224.0.66.250	224.0.67.250
Port	20250	20250

10.2 ASSET CLASS INAV’S – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Indices	1

Asset class	Currency	Country
Euronext iNAVs	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B
Channel Type	TR+STDATA C+C	
Channel ID	10251	
Multicast Group IP	224.0.64.251	224.0.65.251
Port	10251	10251

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B
Channel Type	TR+STDATA C+C	
Channel ID	20251	
Multicast Group IP	224.0.66.251	224.0.67.251
Port	20251	20251

10.3 ASSET CLASS THIRD PARTY INDICES – REAL-TIME AND SNAPSHOT CONFIGURATION

Environment	Optiq Segment name	Number of Partitions
Prod	Indices	1

Asset class	Currency	Country
Third Party Indices	All	All

Feed A/B	Feed A	Feed B
Rendez-vous Point SFTI WAN	156.48.121.2	156.48.121.55
Rendez-vous Point SFTI Co-lo	156.48.99.5	
Primary IP Address	212.197.192.0/25	212.197.193.0/25
Secondary IP Address	212.197.192.0/25	212.197.193.0/25
Disaster Recovery IP Address	<multicasta><DR>	<multicastb><DR>

	Real-time	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	10252	
Multicast Group IP	224.0.64.252	224.0.65.252
Port	10252	10252

	Snapshot	
Partition Number	Partition 1	
Feed A/B	Feed A	Feed B

Channel Type	TR+STDATA C+C	
Channel ID	20252	
Multicast Group IP	224.0.66.252	224.0.67.252
Port	20252	20252