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Stock Exchange Group

Millennium Migration Update

Borsa Italiana

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Logical Connectivity

- CompIDs dedicated per market
 - MTA, AIM, ETFPlus, SeDeX, Euro/ExtraMOT, DomesticMOT, TAH
- Different kind of CompIDs
 - Standard
 - Advanced
 - Specialist
 - Secon level of quote
 - Bid only
- 1 CompID included per market with a capacity of 25 tps each.
- Number of tps (transactions per second) different considering the type of CompIDs:
 - Standard -> 50 tps
 - Advanced -> 150 tps
 - Specialist -> to be configured considering the market and the number of instruments quoted



Production environment

Production environment will have a PDC (Primary Data Centre) and a SDC (Secondary Data Centre) with a **Hot – Hot configuration**.

Unless it is not available, customers have always to connect to the Primary Data Centre.

For load balancing purposes, customers will be provided of the IP address and port which have to be used for the connection of each CompID.

The new production environment will be available for customer connectivity next Thursday 19th April 2012 and Friday 20th April 2012 starting from 6 pm CET to 8 pm CET.

Customers must confirm the CompIDs/users they will use for the first Dress Rehearsal and connectivity details (host IPs) within next Friday, 13th April 2012.

TAH Production Environment - PDC



Exchange Gateway (Trading) Services		
Service	Customer Information	
	Exchange IP Address	TCP Port
Fix Trading GW 01 - Channel 1	194.169.10.8	57351
Fix Trading GW 01 - Channel 1 Alternate	194.169.10.9	57351
Fix Trading GW 01 - Channel 2	194.169.10.8	57352
Fix Trading GW 01 Channel 2 - Alternate	194.169.10.9	57352
Native Trading 01	194.169.10.56	57701
Native Trading 02	194.169.10.57	57701
Native Trading 01 Recovery	194.169.10.56	57902
Native Trading 02 Recovery	194.169.10.57	57902
Post Trade Router 01 - Channel 1	194.169.10.24	57450
Post Trade Router 01 - Channel 1 Alternate	194.169.10.25	57450
Post Trade Router 01 - Channel 2	194.169.10.24	57451
Post Trade Router 01 -Channel 2 Alternate	194.169.10.25	57451
Drop Copy 01 - Channel 1	194.169.10.40	57550
Drop Copy 01 - Channel 1 Alternate	194.169.10.41	57550
Drop Copy 01 - Channel 2	194.169.10.40	57551
Drop Copy 01 - Channel 2 Alternate	194.169.10.41	57551
BTT FTP 1	81.174.64.61	21 (FTP)
BTT FTP 2	81.174.64.62	21 (FTP)

Market Information Services		Feed A						
Multicast, Recovery and Replay Addressing		Multicast Feed A			Replay Service (Active)		Recovery Service (Active)	
Channel name	Config type	Multicast address (Active)	Multicast Source IP Address	Service Port (UDP)	LSEG VIP IP	External TCP Port	LSEG VIP IP	External TCP Port
TAH (Primary)	ITCH	224.4.2.208	194.169.10.68	60200	194.169.10.76	63411	194.169.10.76	64411

TAH Production Environment - SDC



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Exchange Gateway (Trading) Services		
Service	Customer Information	
	Exchange IP Address	TCP Port
Fix Trading GW 02 - Channel 1	194.169.12.8	57351
Fix Trading GW 02 - Channel 1 Alternate	194.169.12.9	57351
Fix Trading GW 02 - Channel 2	194.169.12.8	57352
Fix Trading GW 02 Channel 2 - Alternate	194.169.12.9	57352
Native Trading 3	194.169.12.56	57701
Native Trading 4	194.169.12.57	57701
Native Trading 3 Recovery	194.169.12.56	57902
Native Trading 4 Recovery	194.169.12.57	57902
Post Trade Router 02 - Channel 1	194.169.12.24	57450
Post Trade Router 02 - Channel 1 Alternate	194.169.12.25	57450
Post Trade Router 02 - Channel 2	194.169.12.24	57451
Post Trade Router 02 -Channel 2 Alternate	194.169.12.25	57451
Drop Copy 02 - Channel 1	194.169.12.40	57550
Drop Copy 02 - Channel 1 Alternate	194.169.12.41	57550
Drop Copy 02 - Channel 2	194.169.12.40	57551
Drop Copy 02 - Channel 2 Alternate	194.169.12.41	57551
BTT FTP 1	81.174.64.61	21 (FTP)
BTT FTP 2	81.174.64.62	21 (FTP)

Market Information Services		Feed B						
Multicast, Recovery and Replay Addressing		Multicast Feed B			Replay Service (Active)		Recovery Service (Active)	
Channel name	Config type	Multicast address (Active)	Multicast Source IP Address	Service Port (UDP)	LSEG VIP IP	External TCP Port	LSEG VIP IP	External TCP Port
TAH (Primary)	ITCH	224.4.3.208	194.169.12.68	60200	194.169.12.76	63411	194.169.12.76	64411

Migration Plan



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- 21st April 2012 – first Dress Rehearsal mandatory for all TAH members
- 28th April 2012 – second optional Dress Rehearsal
- 5th May 2012 – last Dress Rehearsal for Trading After Hour (login test only – no roll-back to the old Platform)
- 7th May 2012 – go live date TAH
- During the Dress Rehearsals all markets will be available (Millennium IT for TAH, Tradelect for main markets, SOLA for IDEM)
- Customers not member of TAH market can take part to the Dress Rehearsals and verify the correct behavior of their market data feed applications developed with the new version of EMAPI libraries 2.6



MDF/DDMPlus changes

Together with the migration of TAH market to MIT, new TAX servers will be introduced (same IP addresses, new application ports 8888/8889) dedicated to the markets that will migrate to the new Platform.

The new version of EMAPI libraries (2.6) will go live for all markets (also for SOLA and Tradelect Platform) together with the go-live of the TAH market on MIT.

Customers are asked to request the MDF/DDMPlus users that will be enabled to connect to the TAH market on the new application ports by April 13th.

All the MDF/DDMPlus users currently configured will remain active, enabled to connect to the current application ports and receive market data feed for the main markets on Tradelect Platform and IDEM market on SOLA Platform.

With the second phase of the migration to MIT Platform, market data feed for the main markets will be disseminated via the new application ports 8888/8889.

The current ports 6868/6869 will remain active and used to disseminate market data feed for IDEM market on SOLA Platform.



Conformance Test

All proprietary applications used to trade on TAH market must pass the conformance test before the first Dress Rehearsal.

Customers are warmly suggested to connect to the CDS as soon as possible in order to test their applications.

By the first Dress Rehearsal it is necessary to complete the Conformance Test for the interconnected applications that will connect to the MDF/DDMPlus service in order to receive the live data feed for the markets that will migrate to the Millennium IT platform.

The applications that will receive the live data feed for the IDEM market and/or for the markets running on the TradElect platform before their migration to MIT are requested to schedule a Checklist for the new EMAPI version.

Access via Co-Location Service



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- Space in the same Datacenter where the Millennium Exchange Primary Datacenter, the IDEM market and the MDF/DDM+ services are located
- Direct ultra low latency connection (1 or 10Gb fibre, according to customer request) to all Borsa Italiana's trading and information systems:
 - MTA, MOT, ETF Plus and SeDeX (including ITCH)
 - IDEM Market (including HSVF)
 - MDF/DDM+
- Open connectivity model providing access through:
 - Customer proprietary lines (wide range of available carriers)
 - Borsa Italiana's provided network (Blt Network)
 - Internet VPN
- For further information:
<http://www.borsaitaliana.it/exchangehosting>

Trading Front-End - BTS



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STM [BIT | MTA] Order/Price Depth Configuration Orders Tool

STM [BIT | MTA]

Price Depth → Order Depth

BNo	BWkSize	BSize	BPrC	APrc	ASize	AWkSize	ANo
1		12	7.00...	7.47...	100		1
1		230	6.52...	9.00...	10		1

Last 5 Trades

Prc	Size	Time

Info

Last: 7.450000
RefPrc: 7.450000
OpngPrc: 7.450000
TheorOpngPrc: 7.450000
ValidOpngPrc: 7.450000
TotOpngExeSize: 7.450000
ImbalanceAtOpng: 7.450000
Low: 7.450000
High: 7.450000
Dblase: Continuous trading

Price Info Configuration Orders

ACE [BIT | MTA]

Symbol Instr Mkt Prc Size Amount Time Type

I200z0	FIB II	BIT ...	21...	2	219.950...	11:5...	Regu...
I200z0	FIB II	BIT ...	21...	2	219.950...	11:5...	Regu...
I200z0	FIB II	BIT ...	21...	3	329.925...	11:5...	Regu...
IT00z2	MIB...	BIT ...	10...	5	133.750...	11:5...	Regu...
IT00z2	MIB...	BIT ...	10...	5	133.750...	11:5...	Regu...
IT00z2	MIB...	BIT ...	10...	5	133.750...	11:5...	Regu...
IT00z2	MIB...	BIT ...	10...	5	133.687...	11:5...	Regu...
IT00z2	MIB...	BIT ...	10...	5	133.687...	11:5...	Regu...
I200z0	FIB II	BIT ...	21...	2	219.950...	11:5...	Regu...

Orders

0 @ Day

Size (1) Price (8.50) At any price Market order

Validity Day

Capacity Customer Auto CO

Buy Trigger Order Sell

Price Depth

BNo	BSize	BPrC	APrc	ASize	ANo
1	28.900	7.58...	7.60...	50.200	1
1	14	6.50...			

Order Depth

BQty	BSize	BPrC	APrc	ASize	ACQty
	28.900	7.58...	7.60...	50.200	
	14	6.50...			

Watcher 1

Cat	ISIN	Instr	Expiry	Legs	BSize	BPrC	APrc	ASize	LastTrdPrc	LastTrdSize	LastTrdTime	High	Low	CumSize	NumTrades	TheorOpenPrc	OpenPrc	OpenImbalance	ClosePrc	RefPrc	Phat
F...	IT...	FIB II	201...		3	21...	21...	6	21.99500	2	11:53:10.000	22...	20...	222	71		21.995...			20.54...	Cont
F...	IT...	FIB...	201...			21...	21...	2.266	21.00000	3	11:13:52.000	21...	21...	2.711	80		21.000...			20.84...	Cont
F...	IT...	FIB...	201...			21...	21...	103						2.641	52					20.76...	Cont
F...	IT...	FIB...	201...						20.91000	5	11:51:07.000	20...	20...	1.911	37		20.900...			20.90...	Cont
M...	IT...	AC...																		1.400...	Cont
F...	IT...	A2A			201	1.0...	1.0...	5.758								1.000000				1.190...	Ext
M...	IT...	AC...			28.9...	7.5...	7.6...	50.2...	7.590000	1.000	10:20:36	7.5...	7...	1.100	2					7.600...	Cont
M...	IT...	AC...			100	4.2...	5.0...	100												4.700...	Cont
M...	IT...	AC...							49.000000	100	10:40:48	49...	49...	100	1	49.000000		0		49.00...	Cont
M...	IT...	AC...						1.5...	1.300000	100	10:37:42	1.3...	1...	100	1					1.300...	Cont
M...	IT...	AC...			105	1.0...														1.200...	Cont
M...	IT...	AC...																		3.900...	Cont

- The new version is already available in CDS environment for all the markets.

Next Steps



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- **7th May 2012 – go live date TAH**
- The Dress Rehearsals for the migration of the main markets (MTA, ETF Plus, Domestic/Euro MOT, SedeX, MIV, AIM) will be scheduled after the TAH market is live on MIT Platform.
 - First planned Dress Rehearsal for the main markets: 26th May 2012
- Scheduled go live date for main markets – second half of June 2012

Contact details



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Documentation:

<http://www.borsaitaliana.it/borsaitaliana/intermediari/gestione-mercati/migrazionemillenniumitmit/millenniumitmigration.htm>

<http://www.borsaitaliana.it/borsaitaliana/intermediari/gestione-mercati/migrazionemillenniumitmit/millenniumitmigration.en.htm>