



OSLO BØRS CASH EQUITY AND FIXED INCOME MARKET MIGRATION TO INFOLECT

# Mandatory Customer Dress Rehearsals Guide

Saturday 12 December 2009

Saturday 16 January 2010

Saturday 30 January 2010

This guide is produced for vendors of Oslo Børs equities and fixed income data

## Test overview

Vendors are required to logon with a minimum of 1 information connection per software used and to test all connections planned for use in production.

Both Oslo Børs and the Group recommends that customers test with their full production 'go live' configuration of ennoblements and connections during all dress rehearsals. However, reconfiguration of test servers/applications to mirror production configuration for participation in the dress rehearsals is permissible.

Vendors involved in both equity and fixed income markets are expected to perform functional testing in both markets.

During the test session customers are required to perform the following activities:

- Verify connectivity and logon to Infolect with a minimum of 1 USAP per software used
- Verify the correct message handling of the market data feeds through Infolect

At the end of the test session, customers are required to:

- Restore/rollback their software applications back to the previous production versions if required
- Where applicable, restore servers/applications back to test configuration for connectivity to CDS
- Confirm via email that testing has been successful (see section Test Result Confirmation)

We would like to remind all vendors of their responsibility for the correct operation of their applications after any roll forward/rollback procedure and should satisfy themselves at the end of the dress rehearsal that they are ready to commence as normal on the next trading day.

Vendors will be able to view a real-time schedule of the day's activities on the following website:

<http://www.londonstockexchange.com/weekendactivitymonitor/>

In advance of the test, vendors are requested to contact Oslo Børs to confirm their attendance and contact details for each software instance (i.e. email, phone, software represented).

## **Pre-rehearsal activities**

Before the dress rehearsals, members are requested to have completed all appropriate testing where necessary:

- Conformance testing on TradElect and/or Infolect if required
- General Customer Development Service (CDS) testing covering trading, market data and post trading checks
- Production enablement setup
- Technical network, application and hardware changes, (see Appendix A for production IP address details)

Vendors are also requested to familiarize themselves with related documentation for the Oslo Børs cash equities and fixed income market migration to Infolect. Website links can be found in under “Customer support/further information”.

Vendors will receive Idle Polls and Reference Data on the G01-G15 Service Channels prior to each dress rehearsal. However, telnet or other TCP connectivity will not be available until the day of the rehearsal.

## **Market Data**

Reference Data will be sent out at the start of each dress rehearsal to aid customer testing.

Oslo Indices will be available during the dress rehearsals and messages will be disseminated via the G13 Service Channel. Oslo News messages will also be available and messages will be disseminated via the G12 Service Channel.

## **Reference Prices**

All instruments will have their reference prices set to the prices of the previous day as per a normal trading day. This is to ensure that realistic prices are entered during the test session.

Closing prices will be disseminated via Infolect after Friday market close ahead of each dress rehearsal.

## **Session Timetable**

All times are in Central European Time (CET)

	Start	End
Infolect Connectivity	09:00	16:00
Infolect Reference Data (including line block at 10:10 to test re-requesting)	10:00	10:45
Infolect Functional Testing	11:00	16:00
Infolect High Volume Period	12:00	12:30

The above schedule of information will be updated in real-time during all dress rehearsals via:

<http://www.londonstockexchange.com/weekendactivitymonitor/>

Please note that Information regarding TradElect will also affect Infolect.

## Market Period Schedules

Please find in Appendix B the business schedules to be followed for all the dress rehearsals.

Any orders remaining on the order book at the end of the dress rehearsals will not be deleted by the Exchange but will be cleared down at the end of the day.

## Test Requirements

As a minimum, vendors should carry out the following:

### Logon procedure

- Connect each market data application to the Infolect Interactive (II) using a minimum of 1 USAP per software used

Oslo Børs will at least undertake the following activities during functional testing:

- Halt and resume individual instruments
- Halt and resume multiple instruments
- Amend a closing price for an equity instrument
- Perform instrument trading period changes
- Customer order deletions (individual or multiple) in conjunction with customer approval
- Customer execution and trade report deletions (individual or multiple) in conjunction with customer approval

### Market data dissemination and re-request activity

- Check receipt of reference data
- Check receipt of real time market data (orders and prices)
- Check all appropriate ISV/Software market data functionality
- Infolect Re-request (minimum of 1 message re-requested, will be prompted by line block during reference data dissemination or customer logging on afterwards)
- Check all appropriate market data functionality

#### Rollback procedures

- Logout each trading application from TradElect and Infolect
- Restore/rollback production trading application version and data
- Where applicable, re-configure servers/applications for connection to CDS environment

### **High Volume Input Period**

All dress rehearsals will include a high volume input period. Members are requested to enter high volumes of trading messages into TradElect which will result in a higher volume in Infolect.

### **Test Results Confirmation**

At the end of each test session, customers are required to confirm the success of their day's testing. The preferred approach is to send an email to: [technicalsupport@oslobors.no](mailto:technicalsupport@oslobors.no) confirming all connectivity and functional testing for the migration was completed successfully.

Customers are requested to include confirmation of their readiness for the next trading day's activities following successful rollback testing (where applicable).

In addition, for the final dress rehearsal only, customers are required to confirm in the same email, their readiness to go live.

### **Customer Support / Further Information**

During the dress rehearsals, customers should contact the Oslo Børs Service Desk on: +47 2234 1818 or [technicalsupport@oslobors.no](mailto:technicalsupport@oslobors.no) for technical assistance from 09:00 (CET).

Further information specific to the Oslo Børs markets' migration to TradElect (including the FIX 5.0 Interface Service and Technical Description, the Oslo Børs Market Configuration Matrix and the FIX Conformance Test Tool (FCTT) guide) can be found at both the Oslo Børs and the Group's websites at the following links:

[http://www.obvps.no/obvps\\_eng/Frontpage/Delta](http://www.obvps.no/obvps_eng/Frontpage/Delta)

<http://www.londonstockexchange.com/techguidenotes>

## Appendix A Multicast IP Addresses

Multicast Addressing PROD				
Oslo Service Channel	Description	Multicast IP Address	Port	Multicast Source Address
G01	Oslo Equities - Level 1	224.4.6.1	60000	194.169.13.80
G02	Oslo Equities - Level 2	224.4.6.2	60000	194.169.13.80
G03	Oslo Equities (Instrument) Reference Data	224.4.6.3	60000	194.169.13.80
G04	Oslo Fixed Income - Level 1	224.4.6.4	60000	194.169.13.80
G05	Oslo Fixed Income - Level 2	224.4.6.5	60000	194.169.13.80
G06	Oslo Fixed Income (Instrument) Reference Data	224.4.6.6	60000	194.169.13.80
G07	Oslo Warrants - Level 1	224.4.6.7	60000	194.169.13.80
G08	Oslo Warrants - Level 2	224.4.6.8	60000	194.169.13.80
G09	Oslo Warrants (Instrument) Reference Data	224.4.6.9	60000	194.169.13.80
G10	Oslo Market Status Indicators	224.4.6.10	60000	194.169.13.80
G11	Oslo Market Reference Data	224.4.6.11	60000	194.169.13.80
G12	Oslo News	224.4.6.12	60000	194.169.13.80
G13	Oslo Indices	224.4.6.13	60000	194.169.13.80
G14	Government Bond Restricted Auction Level 1	224.4.6.14	60000	194.169.13.80
G15	Government Bond Restricted Auction Level 2	224.4.6.15	60000	194.169.13.80

## Appendix B Period Schedule For All Dress Rehearsals

Please note that all times are in CET.

### Equities:

The following will be applicable for all equity segments in TradElect which will be reflected in Infolect:

Start Time	Market Activity
11:00	Start order entry/maintenance. System open for manual trade reports
11:15	Opening Auction
15:00	End of continuous trading
15:05	Closing auction
15:30	Stop trade reporting/publishing service/order deletion
15:30	Order expiry end time

### Fixed income:

The following will be applicable for fixed income segments in TradElect which will be reflected in Infolect:

Market Activity	Segments			
	OBA	OBOC	OABM	OBTM,OABT
Start order entry/maintenance. System open for manual trade reports	11:00	11:00	11:15	11:15
Start BBO	11:05	11:05	11:15	11:15
Opening auction	11:15	11:15	N/A	N/A
Closing auction	N/A	14:59	N/A	N/A
End of continuous trading	15:00	15:00	N/A	N/A
Stop trade reporting/publishing service/order deletion	15:00	15:00	15:00	15:00
Order expiry end time	15:00	15:00	15:00	15:00