Nordic
Growth Market

Boerse Stuttgart Group

Release Plan – NGM & Spotlight Stock Market

Elasticia upgrade 21-24 April, 2023

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System version upgrade for NGM & Spotlight Stock Market

A new version of the Elasticia trading system will be rolled out for NGM and Spotlight Stock Market. The roll out will take place during the weekend 21-24 April, 2023. The first trading day in the new version will be Monday 24 April, 2023.

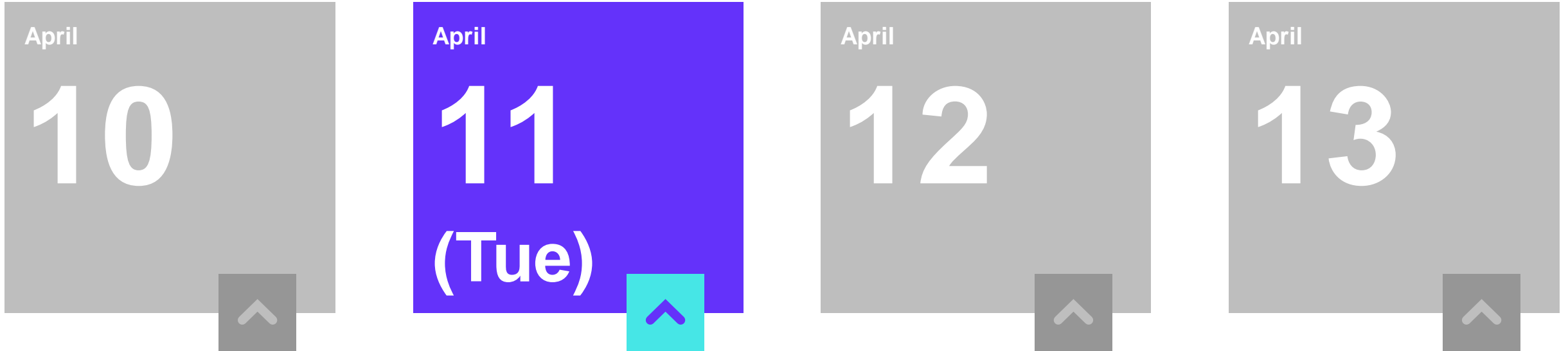The intended audience for the information presented here is:

- Elasticia integrators
- NGM and Spotlight members
- Market Data Vendors

IMPORTANT: BX Swiss is scheduled for a system release roll out during the weekend 5-8 May, 2023. The details on the BX Swiss release will be communicated separately.

> **Note! This is a mandatory update - the protocols and schemas are updated.**

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Actions required prior to release weekend

RELEASE PLAN

April	April	April	April
10	**11 (Tue)**	**12**	**13**

DEADLINE

Last day to send the following information to **support@ngm.se**

- Contact details for the release weekend (all participants)
- Confirmation on successful integration testing (integrators)

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Release weekend overview

RELEASE PLAN

April

21

(Fri)

Markets close

After market closing the normal instrument updates will take place, and then the exchange will be shut down.

April

22

(Sat)

Upgrade

Participants upgrade their systems and confirms to support@ngm.se the status of their upgrade no later than CET 14:30.

April

23

(Sun)

Decision

Reserved for roll back.

April

24

(Mon)

Go Live

First day of trading in the upgraded system.

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Major changes

Description

Automatic Site Failover

Improved site failover, and repeatable order, quote and trade operations.

- Site failover without manual intervention
- Repeatable (idempotent) order, quote and trade operations as a faster alternative to full snapshot recovery in site failover.

Support for FIX Classic

FIX Classic (tag-value) is available as message encoding, in addition to FIX FAST.

- Same FIX protocol and messages, only different encoding
- Note: bandwidth requirements will be higher for FIX Classic compared to FIX FAST

Quote On Demand

New functionality: Quote on Demand

- Order-initiated private automatic auction outside central limit order book (CLOB), with optional order book sweep.
- Quote request sent to market makers

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System setup changes

Description

New FIX account model

Summary of changes

- All "PUB-..." users are deprecated, in their stead "XYZ-..." (membercode, trader group number, account number) are used.
- Sendercompid is always the trader group, i.e. "XYZ-…"
- Targetcompid is always the "channel" name.
- All channels use the same IP address
- Two IP addresses are provided, these are active/active nodes on different geographic sites. See below for Disaster Recovery.

New FIX Session configuration

```
Old Credentials (e.g. for org XYZ, group 2, userid 122456)                    New Credentials (e.g. for org XYZ, group 2, userid 122456)

Username       SenderCompId TargetCompId IP-address Port Notes                 Username       SenderCompId TargetCompId IP-address Port  Notes

XYZ-2-122456 XYZ-2         NGM          IP-1       20200 Trading               XYZ-2-122456 XYZ-2         NGM          IP-A       20200 Trading
PUB-1-122456 PUB-1         NGM          IP-1       20300 Market data (equities) XYZ-2-122456 XYZ-2         EQUITY       IP-A       20300 Market data (equities)
PUB-2-122456 PUB-2         NGM          IP-1       20301 Market data           XYZ-2-122456 XYZ-2         ETP-1        IP-A       20300 Market data
PUB-3-122456 PUB-3         NGM          IP-1       20302 Market data           XYZ-2-122456 XYZ-2         ETP-2        IP-A       20300 Market data
PUB-4-122456 PUB-4         NGM          IP-2       20303 Market data           XYZ-2-122456 XYZ-2         ETP-3        IP-A       20300 Market data
PUB-5-122456 PUB-5         NGM          IP-2       20304 Market data           XYZ-2-122456 XYZ-2         ETP-4        IP-A       20300 Market data
PUB-6-122456 PUB-6         NGM          IP-2       20305 Market data (spotlight) XYZ-2-122456 XYZ-2         SPOT         IP-A       20300 Market data (spotlight)
```

New Disaster Recovery and Failover procedure

Summary of changes

- The legacy exchange-side failover procedures are deprecated in favour of an active/active topology.
- Clients may connect to either site according to preference.
- Clients must maintain configuration (i.e. IP addresses) to address either site and be able to switch between them.

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Testing required prior to launch

System version upgrade

Integrators must confirm successful testing of their systems to <u>support@ngm.se</u> no later than Tuesday, April 11, 2023.

All production participants must test and verify their systems provided by their integrators prior to launch.

Information on the available test systems, including information on scheduled events taking place in the test systems is described here:

<u>https://www.ngm.se/en/the-exchange/technical-documentation/elasticia-2-0-test-system</u>.

> **Note! This is a mandatory update - the protocols and schemas are updated.**

Actions required prior to launch

ELASTICIA UPGRADE 21-24 APRIL, 2023

List of mandatory confirmations prior to the release weekend

The requested information should be sent to support@ngm.se.

- **Production participants**
  - ❏ 11 April (Tue) – Send contact information for the upgrade weekend.

- **Integrators (directly integrating with Elasticia)**
  - ❏ 11 April (Tue) – Send confirmation on successful testing.
  - ❏ 11 April (Tue) – Send contact information for the upgrade weekend.

> ❯ **Note! This is a mandatory update - the protocols and schemas are updated.**

Release weekend

ELASTICIA UPGRADE 21-24 APRIL, 2023

Communication channel

The communication from NGM on the progress and the actions of the release weekend will be through the Elasticia Participants mail-list (aka "ngm-dev", a Google forum maillist).

For registration on the Elasticia Participants list, please email support@ngm.se or go to https://groups.google.com/group/ngm-dev and request access.

> **Note! This is a mandatory update - the protocols and schemas are updated.**

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Release weekend – Schedule

ELASTICIA UPGRADE 21-24 APRIL, 2023

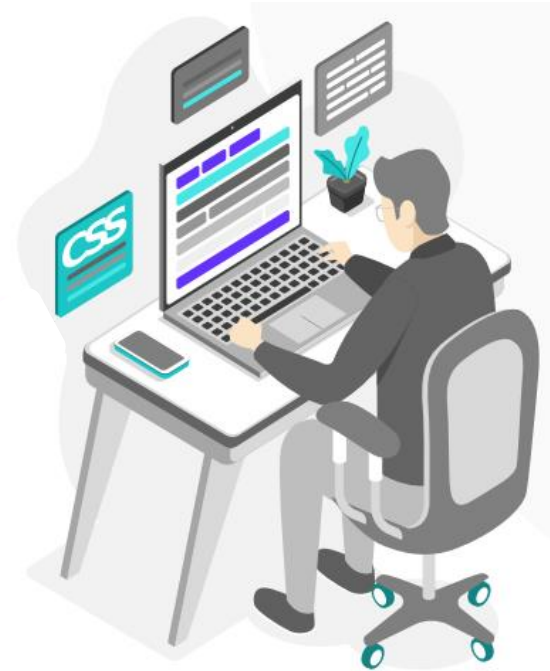| Date	Procedure	NGM & Spotlight
Friday 21 April	Normal daily instrument update in Elasticia	CET 20:30-20:35
	Market surveillance remove all orders from the order books	CET ~20:35
	Access to Elasticia is closed down	CET ~20:40
	NGM announce go ahead for confidence testing	Late
Saturday 22 April	**Confidence testing by participants**	Until CET 14:30
	Clients confirm their upgrade to support@ngm.se no later than CET 14:30	CET 14:30
	"Go" / "No go" announcement by NGM	CET 16:00
Sunday 23 April	Reserved for roll back	TBD if needed

Release weekend

Confidence testing and confirmation Saturday 22 April

Clients should test at least the following after the systems have been upgraded:

- Connectivity test – verify that you can login.

- Market information – verify that you can snapshot market information.

- Instrument information – verify that you can snapshot the instrument information.

Clients shall confirm their upgrade to support@ngm.se no later than CET 14:30. The e-mail shall include the following information:

- Member name and contact information.

- Connectivity test successful (Yes/No)

- Status on upgrade (Ready/Problem description)

> **Note! This is a mandatory update - the protocols and schemas are updated.**

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NGM Support

NGM Support availability during the release weekend (normal hours are CET 08:00 – 20:30)

Friday: Telephone and E-mail: CET 08:00 – 21:00

Saturday: Telephone and E-mail: CET 09:00 – 16:00

Sunday: Only in case of roll back! Telephone and E-mail: CET 10:00 – 16:00

Monday: Telephone and E-mail: CET 07:00 – 20:30

Contact information

Telephone: +46 8 566 390 60

E-mail: support@ngm.se

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