# EURONEXT DISASTER RECOVERY TEST 5 OCTOBER 2024: GUIDELINES FOR PARTICIPANTS

Document type

FUNCTIONAL OVERVIEW

| Version number | Date |
|---|---|
| 1.0 | 16 Sep 2024 |

| Number of pages | Author |
|---|---|
| 15 | Euronext |

# PREFACE

## PURPOSE

The purpose of this document is to provide Euronext clients with the agenda and the guidelines related to the Euronext 2024 Disaster Recovery Test.

## TARGET AUDIENCE

This document should be read by Euronext clients participating in the 2024 Disaster Recovery Tests.

## WHAT'S NEW?

The following lists only the most recent modification made to this revision/version.

| Version Number | Date | Change Description |
|---|---|---|
| 1.0 | 16 September 2024 | First version |

## ASSOCIATED DOCUMENTS

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

■ Optiq OEG Service - Euronext Cash and Derivatives Markets - Interface Specification - External - v5.29.0
■ Optiq MDG Production Connectivity - Euronext Cash and Derivatives Markets - External - v5.33.0
■ Common File Transfer System Members - User Guide - Euronext Cash and Derivatives Markets - External - v5.35.0
■ Euronext Optiq Market Data Gateway MDG Lite - Production Connectivity v1.4

For the latest version of documentation please visit the IT Documentation page.

## DEFINITIONS

■ **Production (Primary Datacentre – DC1)**: Euronext Markets on Optiq and surrounding systems hosted in the Data Centre in Bergamo, Italy.
■ **Disaster Recovery (Secondary Datacentre - DC2)**: Disaster Recovery event occurs when Euronext switches the Optiq markets from the Euronext production environment to the Euronext DR environment. The DR environment is hosted in the Data Centre in Saint-Denis (France) and provides redundant standby systems to be used upon a failure of the Euronext Production environment.

# CONTENTS

# 1.  DISASTER RECOVERY TEST

The objective is to simulate in a real-life scenario that the Disaster Recovery trading architecture and Disaster Recovery Plan are fully operational within the targeted time frame.

The test will be an important opportunity for clients to test the Business Continuity event, when Exchange switches from the production environment to its secondary site (DR environment), which provides redundant standby systems to be used upon the failure of the Exchange Production environment.

A business continuity event occurring on the Exchange's trading system will encompass a whole market, including all the segments and partitions. That implies that both Cash and Derivatives Euronext markets will be in scope for this test.

**The Euronext Disaster Recovery test will take place on Saturday 5 October 2024.**

Euronext recommends that all clients take advantage of this service, however the test is not mandatory.

- Disaster Recovery takes place on a Saturday with the support of the FIA organization. It supports technical and functional testing on the Production and Disaster Recovery environments.

- All clients will be authorised to take part to the Disaster Recovery test weekend. However Clients are invited to **validate the connectivity to Euronext Disaster Recovery site** (via a telnet connection) **prior** to the Saturday test (telnet connectivity to DR site is available between 00:05 and 23:50 every day).

- Clients are invited to participate actively in the Saturday test by sending orders/quotes to enrich the orderbooks.

- At the end of the Disaster Recovery test, Clients are required to rollback/clean up all data and applications in order to reset the status of system to what it was on the previous Friday evening (at the end of the Trading session).

## 1.1  DATE AND WEBFORM FOR THE REGISTRATION

| DATE | EVENT | DESCRIPTION |
|------|-------|-------------|
| **5 October 2024** | Production Disaster recovery | Disaster recovery test |

FIA Webform to register to the **Disaster Recovery test**. Details on registration steps are available here: https://www.fia.org/fia/articles/2024-fia-disaster-recovery-exercise-registration-steps

## 1.2  COMMUNICATION DURING DISASTER RECOVERY TEST

During the Disaster Recovery test, Euronext will keep clients informed on all activities through the Market Status Webpage: https://live.euronext.com/market-status.

All clients are advised to subscribe to the Market Status alerts, which can be done through My Subscriptions menu on the Euronext customer connect web portal.

Compared to a real event of Disaster Recovery, email will not be published during the test, only web and RSS feed will be published.

Support will be provided by the Operational Client Support Desk from 10:00 to 16:30 CEST, by email at clientsupport@euronext.com and by phone at:

| | |
|---|---|
| Belgium | +32 2620 0585 |
| France | +33 1 8514 8585 |
| Ireland | +353 1 6174 289 |
| Italy | +39 02 7242 6080 |
| Netherlands | +31 20 721 9585 |
| Norway | +31 20 721 9585 |
| Portugal | +351 2 1060 8585 |
| UK | +44 207 660 8585 |

## 1.3    SCOPE OF THE TEST

The following is included in the test:

- Both production trading systems of Euronext's Data Centres: **DC1**, located in Aruba (Bergamo – IT) and **DC2** (DR Data Centre), located in the Paris region.

- Trading engines:

  o **Optiq Cash Markets**: Equities, Funds, Warrants & Certificates, Fixed Income, Trade Confirmation System (TCS), Transaction Reporting and Publication System (Saturn).
  o **Optiq Derivatives Markets**: Equity Derivatives, Index Derivatives, Commodity Derivatives.

- **Order Entry Gateway** (OEG) and **Market Data Gateway** (MDG)

The following systems/services are not part of the test:

- Co-location access: connectivity from to DR systems is not available
- Post-trade systems: trades will **not** be sent to the clearing and settlement systems.

### 1.3.1  Markets

The scope of the Disaster Recovery test is to perform technical and functional testing on all Markets operated by Euronext.

A business continuity event occurring on the Exchange's trading system will encompass the whole market, including all the segments and partitions. That implies that both **Cash** and **Derivatives** Euronext markets will be in scope for this test.

Clients can validate Trading and the reception of Market Data both in Production and Disaster Recovery environments.

### 1.3.2  Environments

As previously mentioned, the following environments are in scope for the Disaster Recovery test:

| ENVIRONMENT | LOCATION |
|---|---|
| **Production** | Aruba – Bergamo – IT |
| **Disaster Recovery** | St Denis – FR |

### 1.3.3  Applications and services

Please see below the applications and services that are in scope for the Disaster Recovery test:

| EURONEXT APPLICATION | SERVICES | PRODUCTION | DISASTER RECOVERY |
|---|---|---|---|
| **Optiq CASH & DERIVATIVES** | ▪ Order Entry Gateway (OEG)<br>▪ Market Data Gateway (MDG), including (for Italian markets only) **MDG Lite**<br>▪ Drop Copy | Available | Available |
| **Index** | ▪ Indices Market data dissemination[1] | Not available | Available |
| **Saturn Web** | ▪ Approved Reporting Mechanism (ARM)<br>▪ Short Code Long Code Management (SLC)<br>▪ Off Book On Exchange Trade Reporting (OBOE)<br>▪ Commodity Positions Reporting | Not available | Available |
| **Trade Confirmation System (TCS)** | ▪ Off-Market, Dutch Funds and ATFund services | Not available | Available |
| **Common File Transfer System (CFTS)** | ▪ Referential Data service: Standing Data, SBE templates, Tick Size | Available | It remains available on PROD |
| **ENX Trader** | ▪ Euronext Trading station | Available | Available |
| **SCORE** | ▪ System for centralization of Offers on Regulated markets of Euronext Paris, used by Issuers to manage IPOs. | Not available | Available |
| **PLUG** | ▪ Application used by Issuers to manage listings and trading reference data. | Not available | Available |

**MyEuronext** Portal is not in scope for the test and will be available as per standard service model.

### 1.3.4  Not in scope for the Disaster Recovery test

▪ Co-location access: connectivity from to DR systems is not available
▪ Post-trade systems: trades will **not** be sent to the clearing and settlement systems.

---

[1] Customers are reminded that FTSE indices are not disseminated by Optiq

## 1.4 DISASTER RECOVERY TEST SCRIPT

During the Disaster Recovery test, Euronext highly recommend clients to execute the **logon** from:

- At least one Logical Access per Firm ID per segment they are active on
- From all their network sources (except from Colocation) that may be used in case of DR event.

Note: The **Optiq OEG IP-Filtering** security in place on Disaster Recovery is fully aligned with the Production configuration, therefore only the source IPs already configured in Production for the Firm IDs/Logical Accesses will be allowed to Log-on to the Disaster recovery site.

If needed, Euronext can provide to clients the list of registered source IPs per Firm ID. Requests can be sent to market-access@euronext.com.

As previously mentioned, the below services will be in scope for the Disaster Recovery test:

- OEG: trading Members are asked to execute trading activity both in Production and DR environments

- MDG: Market Data are disseminated over the same channels as for Production.

- Web Applications Trading members are advised to validate the access to the applicable web applications (CFTS, Saturn, Trade Confirmation System).

**Note**: during the Saturday test, clients will be allowed to access the same services they access in production on standard trading days only.

## 2.  SCHEDULE

Please see below the detailed schedule of Disaster Recovery test of **5 October 2024**. Note that in case of any changes during Disaster Recovery day, Euronext will keep clients informed via the Market Status Webpage: https://live.euronext.com/market-status.

| DATE | DESCRIPTION |
|---|---|
| **10:00 CEST** | **Start of Disaster Recovery test:** participants are invited to check the status and last updated on the Market Status web page. |
| **10:15 CEST** | **Client connection to Euronext DC1 central systems:** Clients can start their systems and connect their applications to the **Production** environment hosted in the Aruba Data Centre in Bergamo, Italy. |
| **10:30 CEST** | **Referential Data:** Market data referential messages published over the Euronext Market Data Gateway and referential data files available via CFTS. |
| **11:00 CEST** | **Call Phase (Pre-Opening):** on all Euronext markets the call phase will start. Clients can start sending orders. |
| **11:15 CEST** | **Continuous trading:** clients can trade on all Euronext Markets. |
| **12:00 CEST** | **Approximate time of the disaster event:** Beginning of the failover from DC1 to DC2<br><br>Euronext will proceed with the failover procedure from DC1 to DC2 and carry out all necessary assessments to check the platform readiness of DC2. Clients will then be given the readiness status to reconnect and must shift their network connection to DC2. |
| **13:15 CEST** | **Disaster recovery:** Euronext will start the **Disaster Recovery** site.<br><br>**Note:** Disaster recovery can only be tested by clients that have an independent Disaster Recovery connection in place or connections in one of the Euronext London Points of Presence. Connectivity to DR from the co-location in the Aruba Data Centre will **not** be available. |
| **13:45 CEST** | **Client connection to Saint-Denis:** Clients can (re)start their systems and connect to the **Disaster Recovery** environment. |
| **14:00 CEST** | **Call Phase (Pre-Opening):** Clients can start sending orders to the Disaster Recovery trading platform. |
| **14:15 CEST** | **Continuous trading:** clients can trade on all Euronext Markets in the Disaster Recovery environment. |

| 16:00 CEST | **End of the test and Roll-Back to Aruba Data Centre** |
|---|---|
| **16:15 CEST** | **End of Disaster Recovery test:** Clients should disconnect from all Euronext applications and rollback/clean up all data and applications in order to reset the status of system to what it was on the previous Friday evening (at the end of the Trading session). |
| **17:00 -18:00** | **Aruba Data Centre is started to allow Member to test successful Rollback prior to Monday morning.** |
| **Client Feedback** | **Disaster Recovery test client feedback:** Clients are asked to confirm the Disaster Recovery Test results by sending an email to clientsupport@euronext.com. |

# 3.    KEY INFORMATION

Clients can find below a list of important information they should be aware of to successfully participate to the Disaster Recovery test.

## 3.1    TRADING DATE AND REFERENTIAL FILES DATE

Although the test will be executed on **5 October 2024**, the standing data files and any CFTS files will be dated with following Monday's date (**7 October 2024**).

Instruments and orderbook will reflect the situation of the following Monday, therefore all corporate events that took place the day before (on Friday evening) will be reflected on instruments tradable during the test.

## 3.2    FAILOVER TO THE DISASTER RECOVERY SITE

The Disaster Recovery event consists of a failover from the Production environment in Aruba (Bergamo) to the Disaster Recovery site in the Paris region.

## 3.3    ROLL-BACK OF CLIENT APPLICATIONS

After the Disaster Recovery test, clients should rollback/clean up all data and applications in order to reset the status of system to what it was on the previous Friday evening (at the end of the Trading session)

**Purging all order entry and market data sent and received during Saturday's Disaster Recovery test is under Clients' responsibility.**

## 4.    CONTACTS

| TEAM | CONTACT DETAILS | |
|---|---|---|
| **Operational Client Support Desk** | **Telephone:** | |
| | Belgium | +32 2620 0585 |
| | France | +33 1 8514 8585 |
| | Ireland | +353 1 6174 289 |
| | Italy | +39 02 7242 6080 |
| | Netherlands | +31 20 721 9585 |
| | Norway | +31 20 721 9585 |
| | Portugal | +351 2 1060 8585 |
| | UK | +44 207 660 8585 |
| | **Email:** clientsupport@euronext.com | |

# APPENDIX

## A.1 ORDER ENTRY SEGMENTS/PARTITIONS AND DROP COPY IPS

**Production Environment**

| OPTIQ SEGMENT NAME | PARTITION ID | PROD IP |
|---|---|---|
| **Equities** | 10 | 212.107.95.2 |
| | 11 | 212.107.95.5 |
| | 12 | 212.107.95.8 |
| | 13 | 212.107.95.11 |
| **Funds (ETFs)** | 20 | 212.107.95.14 |
| **Fixed Income (Bonds)** | 30 | 212.107.95.20 |
| **Warrants and Certificates** | 40 | 212.107.95.23 |
| | 41 | 212.107.95.47 |
| **Bourse De Luxembourg** | 50 | 212.107.95.17 |
| **Block** | 140 | 212.107.95.60 |
| **Commodities** | 80 | 212.107.95.29 |
| **Equity Derivatives** | 120 | 212.107.95.38 |
| | 121 | 212.107.95.41 |
| | 122 | 212.107.95.35 |
| **Index Derivatives** | 110 | 212.107.95.32 |
| **Drop Copy   Cash** | 990 | 212.107.95.66 |
| | 991 | 212.107.95.67 |
| | 992 | 212.107.95.68 |
| | 993 | 212.107.95.69 |
| **Drop Copy Derivatives** | 980 | 212.107.95.72 |
| | 981 | 212.107.95.73 |
| | 982 | 212.107.95.74 |
| | 983 | 212.107.95.75 |

**Disaster Recovery Environment**

| OPTIQ SEGMENT NAME | PARTITION  ID | DISASTER RECOVERY |
|---|---|---|
| **Equities** | 10 | 212.197.254.1 |
| | 11 | 212.197.254.3 |
| | 12 | 212.197.254.4 |
| | 13 | 212.197.254.5 |
| **Funds (ETFs)** | 20 | 212.197.254.7 |
| **Fixed Income (Bonds)** | 30 | 212.197.254.6 |
| **Warrants and Certificates** | 40 | 212.197.254.9 |
| | 41 | 212.197.254.10 |
| **Bourse De Luxembourg** | 50 | 212.197.254.13 |

| Block | 140 | 212.197.254.16 |
|---|---|---|
| Commodities | 80 | 212.197.254.25 |
| Equity Derivatives | 120 | 212.197.254.20 |
| | 121 | 212.197.254.21 |
| | 122 | 212.197.254.22 |
| Index Derivatives | 110 | 212.197.254.24 |
| Drop Copy Cash | 990 | 212.197.254.12 |
| | 991 | 212.197.254.26 |
| | 992 | 212.197.254.27 |
| | 993 | 212.197.254.28 |
| Drop Copy Derivatives | 980 | 212.197.254.31 |
| | 981 | 212.197.254.32 |
| | 982 | 212.197.254.33 |
| | 983 | 212.197.254.34 |

Please review the Optiq OEG Service - Euronext Cash and Derivatives Markets - Interface Specification - External - v5.29.0 for details on the Unicast IP addresses.

## A.2 MARKET DATA IPS

**Production and Disaster Recovery Environments**

| | FEED A | FEED B |
|---|---|---|
| Rendez-vous Point (RP) for Colocation | 212.107.67.240 | 212.107.67.241 |
| Rendez-vous Point (RP) for CMC | 212.107.67.248 | 212.107.67.249 |
| Primary IP Address | 212.107.93.0/24 | 212.107.94.0/24 |
| Secondary IP Address | 212.107.93.0/24 | 212.107.94.0/24 |
| Disaster Recovery IP Address | 212.197.240.0/24 | 212.197.241.0/24 |
| Channel ID 1(n)xxx Real-Time | 224.0.208.0/24 | 224.0.209.0/24 |
| Channel ID 2(n)xxx Snapshot | 224.0.210.0/24 | 224.0.211.0/24 |

Please review the Optiq MDG Production Connectivity - Euronext Cash and Derivatives Markets - External - v5.33.0 for details on the Multicast IP addresses.

## A.3 MDGLITE

| | IP Address |
|---|---|
| Primary IP Address MDG Lite Destination | 212.107.95.0/24 |
| Secondary IP Address of MDG Lite Destination | 212.197.254.0/24 |
| Primary IP Address Source of Multicast | 212.107.93.0/24 |
| Secondary IP Address Source of Multicast | 212.107.94.0/24 |

Please review the Euronext Optiq Market Data Gateway MDG Lite - Production Connectivity v1.4 for further details.

## A.4 COMMON FILE TRANSFER SYSTEM (CFTS)

| NETWORK | ENVIRONMENT | DOMAIN NAME | IP ADDRESS |
|---|---|---|---|
| CMC Access (SFTP and API access methods) | Production | cftsoptiq-prod.euronext.com | 212.107.67.2 |
| | Production Backup (in case of primary failure) | cftsoptiq-prod-backup.euronext.com | 212.107.67.3 |
| SFTP Internet Access (Port 22000) | Production | sftp.cfts.prodnr.euronext.cloud | Cloud IP addresses are dynamic |
| API Internet Access | Production | api.cfts.prodnr.euronext.cloud | Cloud IP addresses are dynamic |
| Website Access | Production | https://connect2.euronext.com/ | N/A |

Please review the Common File Transfer System Members - User Guide - Euronext Cash and Derivatives Markets - External - v5.35.0 for further details.

## A.5 WEBHOSTING CONFIGURATION INFORMATION

**Production Environment**

| Production (Bergamo) | | |
|---|---|---|
| | IP address | DNS |
| Saturn API | 212.107.68.132 | https://saturnapi-prod.euronext.com |
| Saturn Web using RSA/TOTP | 212.107.68.133 | https://saturn-prod.euronext.com |
| TCS Web | 212.107.68.134 | https://tcsprod.euronext.com |
| ENX Trader | | https://enxtrader.euronext.com/ |
| Score | 212.107.68.139 | https://score.euronext.com/ |
| Plug-Web | 212.107.68.131 | https://plug-prod.euronext.com |

**Disaster Recovery Environment**

| Disaster Recovery (ST Denis) | | |
|---|---|---|
| | IP address | DNS |
| Saturn API | 212.197.239.67 | https://saturnapi-dr.euronext.com |
| Saturn Web using RSA/TOTP | 212.197.239.103 | https://saturn-dr.euronext.com |
| TCS Web | 212.197.239.68 | https://tcshttps://tcs-dr.euronext.com/dr.euronext.com |
| Score | 212.197.239.84 | http://score-dr.euronext.com/ |
| Plug-Web | 212.197.239.70 | https://plug-dr.euronext.com |