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INTRODUCTION

PURPOSE

The purpose of this document is to inform Euronext clients about the agenda and activities related to the Data Centre Migration Dress Rehearsals.

TARGET AUDIENCE

This document should be read by Euronext clients participating in the Dress Rehearsal.

WHAT'S NEW?

The following lists only the most recent modification made to this revision/version. For the Document History table, see the Appendix.

REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
1.0	14 April 2022	Euronext	First version
1.1	22 April 2022	Euronext	Change in section 3.1 – Trading date of the <u>following Monday</u>
1.2	03 May 2022	Euronext	Change in section 2.0 – Revised Schedule Change in section 3.1 – Referential file names
1.3	05 May 2022	Euronext	Update typo section 3.1
1.4	17 May 2022	Euronext	Change in section 2.0 – Revised Schedule Change in section 1.3.3 – Functional test on Disaster Recovery is not in scope

ASSOCIATED DOCUMENTS

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

- Euronext Data Centre - Migration Guidelines v2.2
- Euronext Markets - OPTIQ OEG Connectivity Specifications v3.4 - Aruba Data Centre
- Euronext Optiq Market Data Gateway - Production Environment v3.1 - Aruba Data Centre
- Euronext Markets - OEG Connectivity Telnet Tests v3.2 - Aruba Data Centre

DEFINITIONS

- **Production** – Euronext Markets on Optiq and surrounding systems hosted in the Data Centre in Basildon, United Kingdom.
- **“New” Production** – Euronext Markets on Optiq and surrounding systems hosted in the Data Centre in Bergamo, Italy.
- **Disaster Recovery (DR)** – A Euronext Disaster Recovery event occurs when Euronext switches client systems processing from the Euronext production environment to the Euronext DR environment. The DR environment provides redundant standby systems to be used upon the failure of the Euronext Production environment.
- **“New” Disaster Recovery (DR)** – A Euronext Disaster Recovery event occurs when Euronext switches client systems processing from the future Euronext production environment to the future Euronext DR environment. The future DR environment remains hosted in the Data Centre in Saint-Denis, France and must provide redundant standby systems to be used upon the failure of the Euronext “New” Production environment.
- **Dress Rehearsal** – The Dress Rehearsals will take place before the Go-Live weekend, allowing customers to test the target “New” Production Data Centre infrastructure and “New” Disaster Recovery.
- **Roll-back** – Data and applications are reverted back to the situation as on Friday evening, before each Dress Rehearsal.
- **SP** – Service Provider.
- **CMC** – Client Managed Connectivity.

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1. DRESS REHEARSAL

The objective of the Dress Rehearsal is to simulate the Data Centre migration of Euronext’s trading architecture and to validate that all services are fully operational.

The third Dress Rehearsal will allow clients to simulate the conditions of the migration weekend and connect their trading systems to the “New” Production environment (hosted in the Aruba Data Centre) and telnet to the Disaster Recovery environment. A failover to the Euronext Disaster Recovery site was simulated during the first and second Dress Rehearsals.

Euronext strongly recommends that clients participate in the third and final **Dress Rehearsal on 21 May 2022**. Note that the third Dress Rehearsal is the last opportunity for functional testing on the New Production environment. Euronext recommends all clients that have not yet participated in a Dress Rehearsal to test on the “New” Next EUA environment prior to participation in the third Dress Rehearsal.

Clients can use the [webform](#) to register for the Dress Rehearsal.

General notes:

- The Dress Rehearsal takes place on a Saturday to avoid impact on Production services. It supports functional testing on the “New” Production and “New” Disaster Recovery environments.
- Clients will be authorised to take part in the Dress Rehearsal weekend only if they have validated their connectivity set-up during the technical testing phase by completing and returning the “Test Form for Unicast & Multicast - New Production Environment - Aruba Data Centre”.
- Clients are invited to participate actively in the Saturday test by sending orders / quotes to enrich the orderbooks.

At the end of the Dress Rehearsal, Clients must roll back all data and applications to the situation as it was on the previous Friday evening (at the end of the Trading session).

1.1 TIMETABLE

DATE	EVENT	DESCRIPTION
23 April 2022	“New” Production “New” Disaster Recovery	First Dress Rehearsal (completed)
07 May 2022	“New” Production “New” Disaster Recovery	Second Dress Rehearsal (completed)
21 May 2022	“New” Production “New” Disaster Recovery (telnet only)	Third Dress Rehearsal

Register for the Dress Rehearsal via the [webform](#).

1.2 COMMUNICATION DURING DRESS REHEARSAL

During the Dress Rehearsal, Euronext will keep clients informed of all activities through the [Market Status Webpage: https://live.euronext.com/market-status](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](#).

1.3 SCOPE OF THE TEST

The scope of the Dress Rehearsal is outlined below for each specific section.

1.3.1 Markets

The scope of the Dress Rehearsal day is to perform administrative and functional testing for all Markets operated by Euronext and the Bourse de Luxembourg Market.

Markets in scope are:

- Euronext Markets - All Euronext Cash & Derivatives Markets
- Other Market - Bourse de Luxembourg

1.3.2 Environments

The following environments are in scope for the Dress Rehearsals, however the scope of each Dress Rehearsal can be adjusted.

NEW TARGET ENVIRONMENT	NEW LOCATION
"New" Production	Aruba – Bergamo – IT
"New" Disaster Recovery	St Denis – FR (no change)

1.3.3 Applications and services

Please see below the applications and services that are in scope for the Third Dress Rehearsal (21 May 2022).

EURONEXT APPLICATION	SERVICES	"NEW" PRODUCTION
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Optiq	Order Entry Gateways (OEG) Market Data Gateway (MDG) Drop Copy	Functional testing
Saturn Web	Approved Publication Arrangement (APA) Approved Reporting Mechanism (ARM) Short Code Long Code Management (SLC) Off Book On Exchange Trade Reporting (OBOE) OTC Cleared functionalities Commodity Positions Reporting	Available (as of 15:00 CEST, the exact time will be confirmed via Market status)
Trade Confirmation System (TCS) Web	Web for Off-Market and Dutch Funds services	Available (as of 13:00 CEST)
Euronext File Services (EFS)	Standing Data SBE templates Tick Sizes	Available (as of 12:30 CEST)
EOD (End of Day)	Connectivity only, no files will be made available – Technical testing only	Available (as of 13:00 CEST)

Note: The Disaster Recovery environment will not be functionally available for clients testing during the Third Dress Rehearsal. Telnet to “New” Disaster Recovery environment remains available any time as of 4 April 2022 and also available during the third Dress Rehearsal.

1.3.4 Not in scope for the Dress Rehearsal

Clients should be advised that post-trade systems and front-to-back testing is not available on the Dress Rehearsal. Clients that wish to validate their front-to-back systems are invited to connect to the Next EUA environment to test all their post-trade applications.

1.4 TEST SCRIPT FOR DRESS REHEARSAL

For a detailed description of all the tests to be performed by clients, please see the [Euronext Data Centre - Migration Guidelines](#), section 4. Below is a summary of the most important tests to be performed during the Dress Rehearsal.

Test to be performed:

- **Log-on for OEG.** All Trading members are advised to perform a successful log-on with at least 1 logical access **per segment** they trade, and this should be replicated for each Member Code / FIRM ID owned by the Trading Member. In addition, the client should perform the test from all the forecasted network sources (i.e. Colocation, CMC, Indirect colocation, Indirect CMC) and Service Providers that may be used in Production.

Note: The **Optiq OEG IP-Filtering** security will be put in place as it will be for Production Go-Live planned on 6 June 2022, meaning that only source IPs already registered for dedicated Firm IDs (Logical Access) will be allowed to receive Log-on acknowledgement.

1. For clients not impacted by infrastructure change, the source IPs set-up is replicated from Basildon to Bergamo.
2. For clients impacted by infrastructure change, the following process is applied:
 - a) For Direct clients, IPs are assigned and registered by Euronext.
 - b) For Indirect clients (clients behind Service Providers), firstly IPs are assigned by the SP according to the range assigned to the SP by Euronext. Secondly, IPs are registered by Euronext upon the SP's request.

Prior to the Dress Rehearsal, clients are strongly advised to test the Log-on on the Next EUA environment, as Optiq OEG IP-Filtering is already in place on this environment. In the case of any issues linked to Log-on, clients are advised to contact the Operational Client Services desk.

In addition, Euronext can provide the list of already registered source IPs to the client on request to cas@euronext.com (the request should include Firm ID).

- **Functional OEG.** Trading Members are advised to send orders.
- **Functional MDG.** Trading Members are strongly advised to validate the Market Data messages received. The Market Data message received could be both technical and functional (clients should be aware that functional messages will be disseminated when clients send orders to the market). This includes standing data, real-time feeds and snapshots.

Note: Clients without trading access can only validate the receipt of Market Data.

- **Web Applications.** Trading members are advised to validate the access to the applicable web applications (EFS, Saturn, Trade Confirmation System, EOD). The availability of each application per environment will be confirmed per Dress Rehearsal.
- **Multi-User Cross-Connect Colocation Services.** Colocated clients with a multi-user Cross-Connect to consume market data from a Service Provider or to get access to the Euronext Markets through their broker are strongly recommended to validate their Cross-Connect during the Dress Rehearsal to ensure readiness for Go-Live.

Note: If a given member is using different connectivity set-ups, it is strongly invited to test within all its possible connectivity combinations.

TYPE OF CLIENTS	TEST REQUIRED FOR NEW PRODUCTION			
	Administrative – Logon for OEG	Functional – OEG	Functional – MDG	Administrative – Web Applications
Colocation direct	Mandatory (1 logical access per segment per FIRM ID)	Optional	Optional	Optional
Colocation behind Service Provider				
Connectivity direct (CMC / London PoP)				
Connectivity behind Service Provider				

1.5 DRESS REHEARSAL FORMS

Please see below the forms relevant to the Dress Rehearsal:

- [Dress Rehearsal Registration](#)
- [Provide your results for Production](#)
- [Provide your results for Disaster Recovery \(not in scope of third Dress Rehearsal\)](#)

2. SCHEDULE

Please see below the detailed schedule for the Third Dress Rehearsal (21 May 2022). Please note that in the case of any changes to scheduled activities on Dress Rehearsal day, Euronext will keep clients informed through the [Market Status Webpage](https://live.euronext.com/market-status): <https://live.euronext.com/market-status>.

For the Third Dress Rehearsal, the activation of the Disaster Recovery environment is not in scope. Euronext would like to provide more time for client testing on the “New” Production environment and will operate the same schedule that will apply during the Go-Live Weekend (4 June 2022).

Schedule

DATE	DESCRIPTION
12:00 CEST	<p>Euronext will be starting Optiq. The clients will be informed via Market status when all Segments are up and clients are advised to validate their connection.</p> <p>Standing Data Files publication on EFS. Euronext will publish all standing data files on Euronext File Services. The complete list of EFS files is provided in point 3.</p> <p>Note: the Indices file (OptiqMDG_PROD_CashStandingDataFile_Indices_YYYYMMDD.xml) will be published later at around 13:00 CEST.</p>
12:30 CEST	<p>Optiq has been started. Clients start their systems and connect their applications to the “New” Production environment hosted in the Aruba Data Centre in Bergamo, Italy.</p> <p>As a reminder, clients should perform the logon from all the forecasted network sources (i.e. Colocation, CMC, Indirect colocation, Indirect CMC) and for all Service Providers that may be used in Production.</p>
13:00 CEST	<p>Standing Data Files. The Indices file (OptiqMDG_PROD_CashStandingDataFile_Indices_YYYYMMDD.xml) will be published on EFS at around 13:00 CEST.</p> <p>Note: clients should note that all Standing Data Files will be republished again together with the Indices file, even though they were available earlier.</p> <p>Referential Data: Market data referential messages will be published over the Euronext Market Data Gateway.</p>
13:30 CEST	<p>Call Phase (Pre-Opening). Clients can connect and send orders to the trading platform.</p>
13:40 CEST	<p>Continuous trading. Clients can trade on all Euronext Markets including TCS. Euronext will communicate separately on the availability of Saturn (as of 15:00 CEST, the exact time will be confirmed via Market status).</p>

16:15 CEST	High Availability Event. Euronext will simulate a failover on the Equities segment, Partition 11 – 212.107.95.5
16:30 CEST	High Availability Event. Euronext will simulate a failover on the Equities Derivatives segment, Partition 121 – 212.107.95.41
17:00 CEST	Stop of all applications. Euronext will stop all applications in “New” Production environment hosted in the Aruba Data Centre in Bergamo, Italy.
Client Feedback	Dress Rehearsal Client Feedback: Clients are requested to confirm the Dress Rehearsal Test results by filling in the Dress Rehearsal Results webform for Production .
18:00 CEST – 19:30 CEST	Roll-Back to Basildon Data Centre. At the end of the test, Euronext will start the applications in the current Basildon Data Centre, United Kingdom, to reflect the situation for the following Monday and so that clients can validate the rollback of their own system until 19:30 CEST.
19:30 CEST	End of Dress Rehearsal Test. Euronext will stop all applications in the current Basildon Data Centre. Clients can disconnect from all Euronext applications. It is mandatory that clients roll back their internal systems to the situation on the last trading day before the Dress Rehearsal test (situation at the end of the previous trading session).

3. IMPORTANT REMINDERS

Clients are advised to keep the below reminders in mind during and after the Dress Rehearsal.

3.1 TRADING DATE REFERENTIAL FILES

The trading date during the dress rehearsal **will reflect the date of the following Monday**. Since the instruments and orderbook will reflect the situation of the following Monday, all corporate events that took place the day before (on Friday evening) will be considered.

Please see below the complete list of the EFS files that will be present during the Dress Rehearsal planned for 21 May 2022.

Clients should be aware that date on the filename will reflect the date of Monday 23 May 2022, so for example the Block standing data file will be named: OptiqMDG_PROD_CashStandingDataFile_Block_20220523.xml.

This logic is true for all files that will be published on Saturday 21 May 2022.

You will see the below EFS Files in the following folders:

Folder Block:

- OptiqMDG_PROD_CashStandingDataFile_Block_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_Block_yyyymmdd.xml

Folder Indices:

- OptiqMDG_PROD_CashStandingDataFile_Indices_yyyymmdd.xml

Folder Funds:

- OptiqMDG_PROD_CashStandingDataFile_Funds_yyyymmdd.xml
- OptiqMDG_PROD_PrevDayCapAndVolTradFile_Funds_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_Funds_yyyymmdd.xml

Folder FixedIncome:

- OptiqMDG_PROD_CashStandingDataFile_FixedIncome_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_FixedIncome_yyyymmdd.xml
- OptiqMDG_PROD_PrevDayCapAndVolTradFile_FixedIncome_yyyymmdd.xml

Folder Equities:

- OptiqMDG_PROD_CashStandingDataFile_Equities_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_Equities_yyyymmdd.xml
- OptiqMDG_PROD_PrevDayCapAndVolTradFile_yyyymmdd.xml

Folder WarrantsAndCertificates:

- OptiqMDG_PROD_CashStandingDataFile_WarrantsAndCertificates_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_WarrantsAndCertificates_yyyymmdd.xml
- OptiqMDG_PROD_PrevDayCapAndVolTradFile_WarrantsAndCertificates_yyyymmdd.xml

Folder BDL:

- OptiqMDG_PROD_CashStandingDataFile_Bdl_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_Bdl_yyyymmdd.xml
- OptiqMDG_PROD_PrevDayCapAndVolTradFile_Bdl_yyyymmdd.xml

Folder Current:

- OptiqMDG_PROD_MemberMappingFile_ALL_yyyymmdd.xml
- OptiqMDG_PROD_CashTickSizeReferentialFile_ALL_yyyymmdd.xml
- OptiqMDG_PROD_RepoSettlementPriceFile_ALL_yyyymmdd.xml

Folder Forex:

- OptiqMDG_PROD_CashStandingDataFile_yyyymmdd.xml

Folder EquityDerivatives:

- OptiqMDG_PROD_CashTickSizeReferentialFile_EquityDerivatives_yyyymmdd.xml
- OptiqMDG_PROD_DerivativesStandingDataFile_EquityDerivatives_yyyymmdd.xml
- OptiqMDG_PROD_OpenInterestFile_EquityDerivatives_yyyymmdd.xml
- OptiqMDG_PROD_DerivativesTickSizeFile_EquityDerivatives_yyyymmdd.xml
- OptiqMDG_PROD_ReferenceSpreadsFile_EquityDerivatives_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_EquityDerivatives_yyyymmdd.xml

Folder Commodities:

- OptiqMDG_PROD_DerivativesStandingDataFile_Commodities_yyyymmdd.xml
- OptiqMDG_PROD_CashTickSizeReferentialFile_Commoditie_yyyymmdd.xml
- OptiqMDG_PROD_OpenInterestFile_Commoditie_yyyymmdd.xml
- OptiqMDG_PROD_DerivativesTickSizeFile_Commoditie_yyyymmdd.xml
- OptiqMDG_PROD_ReferenceSpreadsFile_Commoditie_yyyymmdd.xml
- OptiqMDG_PROD_TimeTableFile_Commoditie_yyyymmdd.xml

Folder IndexDerivatives:

- OptiqMDG_PROD_DerivativesStandingDataFile_IndexDerivatives_yyyymmdd.xml
- OptiqMDG_PROD_CashTickSizeReferentialFile_IndexDerivatives_yyyymmdd.xml
- OptiqMDG_PROD_OpenInterestFile_IndexDerivatives_yyyymmdd.xml

- OptiqMDG_PROD_DerivativesTickSizeFile_IndexDerivatives_YYYYMMDD.xml
- OptiqMDG_PROD_ReferenceSpreadsFile_IndexDerivatives_YYYYMMDD.xml
- OptiqMDG_PROD_IndexDerivatives_Commoditie_YYYYMMDD.xml
- IndexDerivatives/Current/UTPDerivatives_Production_TotalReturnFuturesConversionParameters_IndexDerivatives_SOD_YYYYMMDD.xml

3.2 FAILOVER TO THE DISASTER RECOVERY SITE

The Disaster Recovery event consists of a failover from the “New” Production environment in Aruba, Bergamo to the “New” Disaster Recovery site in Saint-Denis, Paris. Data are disseminated when the Disaster Recovery site has been started completely. A failover to the Euronext Disaster Recovery site was simulated during the first and second Dress Rehearsals and is not in scope of the third Dress Rehearsal on 21 May 2022.

3.3 ROLL-BACK OF CLIENT APPLICATIONS

After the Dress Rehearsal test, clients must restore/roll back their internal Production systems to reflect the conditions of Friday evening (day before the Dress Rehearsal), including all corporate events.

It is important that clients do not synchronise their order book with data from the Dress Rehearsal test day.

Clients are responsible for purging all market data and order entry data sent and received during the Saturday Dress Rehearsal test.

4. CONTACTS

Find below the contact details of Euronext’s teams:

TEAM	CONTACT DETAILS
<p>Operational Client Services Desk</p> <p>Members’ first point of contact for the Data Centre migration. Technical & functional assistance with the development and testing on Optiq. Assistance with the use of the Production, EUA and Disaster Recovery environment, timeline and customer readiness checklist.</p>	<p>Tel:</p> <ul style="list-style-type: none">■ Belgium +32 2 620 0585■ France +33 1 8514 8585■ Ireland +353 1 617 4289■ Netherlands +31 20 721 9585■ Norway +31 20 721 9585■ Portugal +351 2 1060 8585■ UK +44 20 7660 8585 <p>Email:</p> <ul style="list-style-type: none">■ DCmigration@euronext.com