

Document title**EURONEXT CONFORMANCE TESTING AND ALGORITHM POLICY****Document type or subject****Policy****Version number****5.0****Date****28Aug2025****Number of pages****14****Author****Euronext**

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References to an RTS should be taken to refer to the Delegated Act implementing the regulatory technical standards and not to the draft document submitted by ESMA to the European Commission.

PREFACE**PURPOSE**

This document details the Euronext policy and accompanying procedures for

- (i) any party involved in developing, testing or deploying in-house or ISV (independent software vendor) trading applications that interoperate with the Euronext Trading Platform;
- (ii) ISVs who develop, test and deploy trading applications that interoperate with the Euronext Trading Platform;
- (iii) Application Service Providers (ASP) and hosted solutions that enable use of the Euronext Trading Platform; and
- (iv) any party involved in using algorithms for trading purposes.

TARGET AUDIENCE

This policy, along with any accompanying documents which are detailed below, must be complied with by those Members, ASPs or ISVs responsible for developing, testing, or deploying trading applications and algorithms on the Euronext production environment.

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	4 Sep 2017	Euronext	Initial document
2.0	10 Oct 2017	Euronext	Minor Updates
3.0	03 Mar 2020	Euronext	Type of Conformance Required for the different types of members and the new contact details
4.0	28 Sept 2024	Euronext	Document Review
5.0	28 Aug 2025	Euronext	Document Updates

ASSOCIATED DOCUMENTS

The following list of items are the associated technical documents, which either should be read in conjunction with this document or which provide other relevant information for Members and/or ISVs:

- Technical documents available at [Euronext Connect web page](#):
 - Optiq OEG ME Cash Conformance Test Script
 - Optiq OEG ME Cash Conformance Test Script
 - Euronext Markets – OEG Connectivity Specification
 - Optiq OEG Client Specifications Fix 5.0 Interface
 - Optiq OEG Client Specification SBE Interface
 - Euronext Cash Markets Optiq Kinematics Specifications
 - Euronext Cash and Derivatives Markets – Optiq MDG Client Specifications
 - Short long code management application (SLC Manager)

CONTACT

Please find below the contact details for customer support teams at Euronext. The Operational Client Services and Market Access teams support the technical on-boarding of Clients and ensuring their readiness by:

- on-boarding new Clients;
- configuring access to the test and production environments;
- sending functional and technical information to Clients related to Euronext Projects;
- answering technical and functional Client questions related to Euronext Projects;
- assisting Clients in their testing and validation on the EUA (test) environment;
- providing follow-up on Client conformance testing; and
- assessing Clients' state of readiness with regards to technical changes.

Team	Contact details
Operational Client Support (OCS)	☎ Tel: +33 1 85 148 585
	✉ Email: clientsupport@euronext.com
Market Access	☎ Tel: +33 1 8514 8589
	✉ Email: market-access@euronext.com

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1. INTRODUCTION

This policy sets out the approach undertaken by Euronext in order to allow a Member, an ASP or an ISV (as defined below) to:

- (i) certify that their trading applications used for Euronext comply with all applicable law and regulation; and
- (ii) provide details of how to ensure a trading application or an algorithm is eligible for deployment in the Euronext production environment.

2. SCOPE/DEFINITIONS

For the purposes of this document:

- **“Access”** means:
 - On Euronext hosted solutions:
 - Order entry access;
 - Market data access;
 - Web access (TCS, Atom-X, Saturn); and
 - On third party hosted solutions:
 - Access to Euronext Block.
- **“API”** means Application Programming Interface
- **“ASP”** means an application service provider who provides hosted service solutions to enable the use of the Euronext Trading Platform.
- **“Clients”** means Members, ISVs and ASPs who offer trading algorithms and / or who develop, test and deploy applications that inter-operate with the Euronext Trading Platform.
- **“Euronext Trading Platform”** means any of Euronext’s electronic trading platforms, as modified and updated by Euronext from time to time.
- **“ISV”** means an independent software provider who develops ISV Software (i.e. software that provides an interface between third party software and the Euronext Trading Platform to enable securities and/or derivatives to be traded on the Trading Platform and who provides that software to one or more Members or other service providers.
- **“Markets”** means:
 - For Cash : Equities, Structured Products, Bonds, Funds, TCS, Euronext Block, and
 - For Derivatives : Options, Futures, Commodities.
- **“Market Data”** means any market information (but not that used in a test environment) including, without limitation, quotes, prices, volumes, timestamps and other data in respect of, amongst other things, indices and securities, bonds, futures contracts, option contracts, commodities and other financial instruments, which is (i) marketed by Euronext and/or any Euronext group company and (ii) made available to any third party by Euronext and/or any Euronext group company subject always to separate terms and conditions between the third party and Euronext and/or any Euronext group company, such terms being available from Euronext on request.
- **“Member”** or **“Market Member”** has the meaning ascribed to it in the Euronext Trading Platform Agreement

3. CONFORMANCE TESTING

3.1 PURPOSE AND TIMING OF THE CONFORMANCE TEST

To ensure the integrity of the market, Clients are required to conform applications that interface with Euronext in order to (i) interact with Euronext's matching logic and (ii) process the data flows coming to and from Euronext, as described by the external specifications relevant to each of Euronext's applications.

Conformance testing shall verify the functioning of the following, as provided in Article 9 of RTS 7 (Article 48(6) of Directive 2014/65/EU):

- (b) the ability of the system to interact as expected with the trading venue's matching logic and the adequate processing of the data flows from and to the trading venue;*
- (c) the basic functionalities such as submission, modification or cancellation of an order or an indication of interest, static and market data downloads and all business data flows;*
- (d) the connectivity, including the cancel on disconnect command, market data feed loss and throttles, and the recovery, including the intra-day resumption of trading and the handling of suspended instruments or non-updated market data.*

Clients shall be required to have taken and validated conformance testing for its trading application prior to the deployment of:

- a new Euronext trading application,
- a substantial update of an existing Euronext trading system requiring Client development and testing,
- a new Client trading application, trading strategy, or
- a substantial update to a Client's trading application, algorithm or trading strategy.

Depending on the scope of changes made to the trading applications as listed above, Clients will be asked to either pass a mandatory or optional conformance test. In addition, a selection of functions or supported types of orders may be excluded if not used by the Client.

3.2 CLIENT REQUIRED ACTIONS TO COMPLETE CONFORMANCE TESTING

In order to successfully complete their conformance testing, Clients are required to:

1. Complete their on-boarding process and connect to the test and production platforms;
2. Test the new or upgraded application in the EUA environment;
3. Pass the formal conformance test;

4. Deploy the application into the production environment; and
5. Activate a new order entry session if needed.

3.2.1 COMPLETING ON-BOARDING AND CONNECTIVITY

Before testing and taking their conformance tests, Clients need to have previously undertaken the following actions:

- Finalize the Euronext membership on-boarding process, through **Euronext Membership**
- Obtain access to the Euronext External User Acceptance (EUA) and production platforms, through **Market Access team**.

3.2.2 TESTING IN THE EXTERNAL USER ACCEPTANCE (EUA) ENVIRONMENT

Before taking their conformance tests, Clients are required to thoroughly test the new or upgraded trading application's interaction, basic functionalities and connectivity on the Euronext External User Acceptance (EUA) platform by themselves.

The OCS team can provide assistance and provide activity on the EUA platform by injecting orders, generating trades or producing any type of event that are generally conducted by Market Surveillance in the Production environment. For example, OCS can halt an instrument, change collars, or modify a price reference and settlement.

3.2.3 PASSING THE CONFORMANCE TEST

Before taking their conformance tests, Clients are required to thoroughly test the new or upgraded trading application's interaction, basic functionalities and connectivity on the Euronext External User Acceptance (EUA) platform by themselves.

Prior to conforming their software solutions, customers are required to have completed the following tasks:

1. Connect to the EUA environment using the connectivity guidelines document for support.
2. Develop, test and validate their software solution, using the specifications for support
3. Confirm successful connectivity to the new Exchange File Server (EFS) to access Standing Data Files
4. Request an appointment for the coordinate test part via the Connect portal

Customers should identify all test scenarios supported by their application and complete the full set of uncoordinated test cycles before booking through the webform a slot to complete the coordinated test cases with OCS analyst.

Conformance tests can take place at the following times:

Day	Time (CET)
Monday	9 am – 5 pm
Tuesday	9 am – 5 pm
Wednesday	2 pm – 5 pm
Thursday	9 am – 5 pm
Friday	9 am – 5 pm

No conformance test will take place on Wednesday morning as the EUA platform is closed for maintenance until 14:00 CET

When conformance tests do not require an appointment with an Optiq Analyst, Clients are required to:

- Test their application by following dedicated test script and
- Provide the results of the tests to OCS team, usually through a web form on the Client's Connect interface.

The following members and providers are required to perform a mandatory OEG full conformance test:

- New trading members accessing the Euronext Optiq® platform directly who are not yet certified on the Optiq platform
- Trading members using an in-house software which is already certified on the Optiq platform but is subject to a new release
- Software providers not yet certified on the Optiq platform

The below table describes the types of conformance test applicable for the different types of members and providers:

Type of Member/Non-Member	Conformance Type
New ISV	Full Conformance
Existing Euronext member using in-house solution and changing of protocol	Full Conformance
Existing Euronext member using an ISV solution and changing of protocol	Full Conformance
Existing Euronext member implementing a new in-house solution	Full Conformance
Existing Euronext member implementing new functionalities on their in-house solution	Partial Conformance
Existing Euronext member implementing new functionalities on their ISV solution already certified	Partial Conformance
Existing Euronext member becoming MM	Partial Conformance
Existing Euronext member upgrading their in-house solution	Partial Conformance
Existing ISV upgrading their solution	Partial Conformance
New Euronext member using existing ISV solution already certified	Self-Certification Webform
Existing Euronext member using in-house solution already certified and a new TMC/Member code	Self-Certification Webform
Existing Euronext member using ISV solution already certified and a new TMC/ Member code	Self-Certification Webform
Existing Euronext member implementing a new ISV solution already certified	Self-Certification Webform
Existing Euronext member using in-house solution and joining a new market (Paris/Ams/Bru/Lis/Dublin/ Milan/Oslo)	Self-Certification Webform
Existing Euronext member using ISV solution and joining a new market (Paris/Ams/Bru/Lis/Dublin/Milan/Oslo)	Self-Certification Webform
Existing Euronext member using in-house solution and joining an existing contract/instrument	Self-Certification Webform
Existing Euronext member using ISV solution and joining an existing contract/instrument	Self-Certification Webform
Existing Euronext member using in-house solution and joining a new contract/instrument	Self-Certification Webform
Existing Euronext member using ISV solution and joining a new contract/instrument	Self-Certification Webform
New or Existing Euronext member joining TCS web or e-TCS platform	Not required

- **Full Conformance** test offers a style test that examines all functional and technical aspects available for the platform/market the client is conforming to. It will allow customers to validate the full scope of the Optiq order entry gateway (OEG), taking into account all message types that will be offered. This testing will be made available across all markets, and across all product types.
- **Partial Conformance** test is offered only to existing customers that had passed already a full conformance tests and wish to implement new functionalities for a particular platform/market. During partial conformance testing, only limited functional messages are tested.
- **Self-Certification webform:** Software already certified and no developments made, Clients must be filled out the dedicated webform and tested all functional messages used in production environment.

Following the conformance test, the Optiq Analyst will review the results of each test script to ensure that the test steps within each test script have been completed correctly and match the anticipated results. Once these two requirements are complete, the Optiq Analyst will provide feedback to the Client.

If the test is successful, the Client will receive a certificate including the results of the conformance test and certifying the test was successfully completed.

If the test is unsuccessful, the Client will receive feedback on where the test failed and why. The Client will be expected to make the necessary changes to its trading application and to pass the failed part of the conformance test again. The Client may directly liaise with the Optiq Analyst if there is a perception that the issue causing the failure is linked to the conditions of the test environment.

The following items are checked:

- The functional behavior and message sequencing in each scenario
- If the session was maintained for the entire period or if it dropped
- If any errors were produced over the time period

3.2.4 DEPLOYMENT

Once the Client's trading application has successfully passed all the steps of the conformance test, it is eligible to be deployed and used in the Euronext production environment. Members will be authorized by Euronext to use the new software in the Euronext production environment. ISVs will be authorized by Euronext to deploy their conformed software to their customers.

3.3 FAILURE TO PROVE CONFORMANCE TESTS HAVE BEEN SUCCESSFULLY PASSED

At any time, and in accordance with the relevant provisions of the Euronext Service Provider Agreement for ISVs or ASPs and/or the relevant provision of the Euronext Trading Platform Access Agreement for Members, Euronext can audit a Client. Where a technical or functional issue in the production environment is due to a Client application, Euronext will ask the Client to provide all the necessary evidence that a conformance test was successfully passed with the current version of the software.

If the Client fails to prove the software used in production is conformed, Euronext reserves the right to take any measure that it deems appropriate to guarantee the integrity of the market and the safety of the other market participants, including preventing access to the production environment by the application until a

conformance test has been executed and successfully passed. It is the responsibility of the Client to ensure that the application used in production is compliant with applicable regulatory and Euronext requirements.

4. MEMBERS TRADING ALGORITHMS POLICY

4.1 PURPOSE AND TIMING OF ALGORITHM TESTING

Article 10 of RTS 7 (Article 48(6) of Directive 2014/65/EU) holds that *“Trading venues shall require their Members to certify that the algorithms they deploy have been tested to avoid contributing to or creating disorderly trading conditions prior to the deployment or substantial update of a trading algorithm or trading strategy and explain the means used for that testing.”*

To avoid disorderly trading conditions, Euronext requires Members to have undertaken algorithm (“**algo**”) testing for each of their trading algorithms prior to the deployment of:

- a new trading algorithm; or
- a material change made to an existing trading algorithm.

4.2 MEMBER REQUIRED ACTIONS

In order to successfully complete their algorithm declaration, Members are required to:

1. Complete their on-boarding, connectivity and conformance testing;
2. Test the algo prior deployment in the production environment;
3. Declare the Algo ID short and long code.

Members are responsible for thoroughly testing their algorithms prior to the deployment in production or substantial update of a trading algorithm or trading strategy, in order to avoid contributing to or creating disorderly trading conditions. It is the sole responsibility of each Member to ensure that adequate testing is conducted, and that their algorithms operate in a safe and orderly manner.

Upon request, **Members should be able to provide Euronext with appropriate information regarding the algorithm(s) used in their trading software**, including testing evidence, methodology, and the nature of the algorithm logic implemented.

Members may leverage the Euronext EUA platform to perform algo testing under specific scenarios, such as stressed market conditions on particular instruments and abnormal events or situations. Please contact the Operational Client Support (OCS) team to obtain more information on the Euronext testing environment.

In case of planned stress testing activities, **Members are required to notify the OCS Team in advance (clientsupport@euronext.com)**.

A dedicated planning process will be undertaken to ensure proper coordination, availability of resources, and preservation of the integrity and stability of the test environment during the execution of such tests.

4.2.1.1 ALGO DECLARATION

Any algorithm interacting with a Euronext platform must be uniquely identified with an Algo ID. Upon order entry, Members are required to identify the algo responsible for the decision making as well as the algo responsible for making the execution, using the 'short code' of the respective Algo ID. Short codes deployed in order entry are to be 'declared' via a mapping to the Algo ID 'long code' and 'code type' via the dedicated Short Long Code (SLC) Manager tool.

Members are required to generate their own short codes. Members deploying an ISV algo may rely on the ISV to generate a short code, using negative integers appointed to the ISV by Euronext OCS.

New Algo ID declarations (mappings) are to be submitted to Euronext no later than 22:30 CET on the day algo has injected orders on a Euronext platform for the first time.

Euronext will use the Algo ID long code in combination with order entry data for the purpose of regulatory reporting under RTS 24 of MiFID II. Please refer to the SLC Manager specifications for more information about the declaration of short and long code mappings