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# COMMON FILE TRANSFER SYSTEM – MEMBER USER GUIDE

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# PREFACE

## PURPOSE

The purpose of this document is to provide general technical information about Euronext Common File Transfer System Services. Euronext Common File Transfer System (CFTS) provides file distribution services to customers that have either an EMDDA (market data), SPA (Service Provider) or TPA (Trading Platform) agreement to get access to the core trading chain of Euronext.

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Any migration approach, implementation plan, or target date described herein remains indicative only and shall become effective solely upon receipt of all required approvals and the completion of the relevant decision-making processes.

## TARGET AUDIENCE

This document should be read by Developers, Exchange Connectivity Managers, Trading Support Teams and anybody involved in the setup and the configuration of Optiq MDG solution in End User Acceptance (EUA) and Production environments

## SUPPORT

Please find below the contact details:

- Operational Client Services Desk: mailto: clientsupport@euronext.com
- Belgium +32 2 620 0585
- France +33 1 8514 8585
- Ireland +353 1 617 4289
- Italy +39 02 7242 6080
- Netherlands +31 20 721 9585
- Portugal +351 2 1060 8585
- UK +44 20 7660 8585

## 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. | CHANGE DESCRIPTION |
|---|---|
| 6.370.0 | Section 7 CFTS Reconciliation Data Service Summary<br>▪ In Reconciliation Data Service File List, describe Golden File renaming from GF_<yyyy-MM-dd>-<Firm ID>.zip to GF_<yyyy-MM-dd>_<Firm ID>.zip with effective date January 25th 2027<br>Section 8 CFTS EOD Data Service Summary<br>• Add details on the new TradesFile planned for replacement of the FTRRM legacy file, which will be made available from January 25th 2027 onwards. |

## 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:

- Euronext Cash and Derivatives Markets – Optiq Files – Interface Specification
- Euronext Cash and Derivatives Markets – Web Secured Communication Standards – Technical Specification
- MyEuronext – CFTS – Members – User Guide

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# 1 OVERVIEW

The Common File Transfer System (CFTS) is designed to centralize access to configuration and data files for customers via Euronext private Colocation/CMC network and the Internet. This new critical service is based on a resilient and secured infrastructure. Separate domain names will exist per environment.

MyEuronext CFTS offers online access through https, enabling online access management of MyEuronext trading member contacts to CFTS data services, browsing of data service folders and the downloading of files. MyEuronext CFTS access management includes the saving of SFTP SSH public keys generated by trading members. API access method, client ID, client secret and client secret expiry date, can be generated through MyEuronext CFTS access management option.

CFTS SFTP access method utilizes the SSH key pairs authenticate and encryption. Customers must generate their own SSH keys pairs and register their public key with Euronext to gain access to file locations. SFTP public keys are used for authentication, instead of using passwords. The public key authentication uses a pair of keys, one private and one public.

CFTS API access method authenticates users through the use of API client ID and client secret. Users will request a CFTS access token through a CFTS API by providing their client ID and secret. On receiving the CFTS API access token, users can utilize APIs, to search for folders, subfolders and files, and download files.

Customers covered by this Euronext Common File Transfer System are companies who have signed one of the following agreements:

- Euronext Market Data Distribution Agreement (EMDDA)
- Service Provider Agreement (SPA)
- Trading Platform Agreement (TPA)

In addition customers wishing to utilize the MyEuronext CFTS application, must have agreed the MyEuronext website terms and conditions.

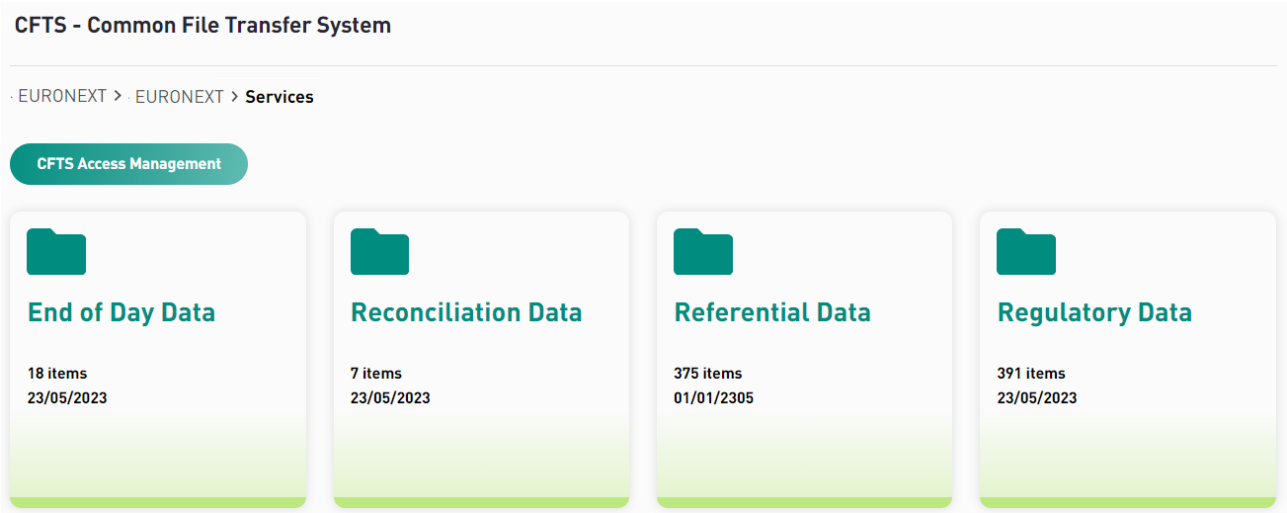
Euronext will deliver additional file distribution services and functionality through CFTS in future releases. Additional CFTS services, will offer both standard and customized private files per trading member, thereby becoming the hub for file transfer between Euronext and clients.

# 2 CFTS SERVICE ACCESS

CFTS Services can be accessed either through SFTP, APIs or the MyEuronext CFTS web-based application.

## 2.1 MYEURONEXT CFTS APPLICATION ACCESS

To gain access to the MyEuronext CFTS web-based application, trading member contacts must be registered on the MyEuronext website. The customers' Member Connectivity Administrator (MCA) must grant MyEuronext contacts a CFTS user role, assign CFTS services and access methods.




For details on MyEuronext website CFTS application please see the latest version of the MyEuronext – CFTS – Members – Users Guide, on the Euronext Connect Customer Portal.

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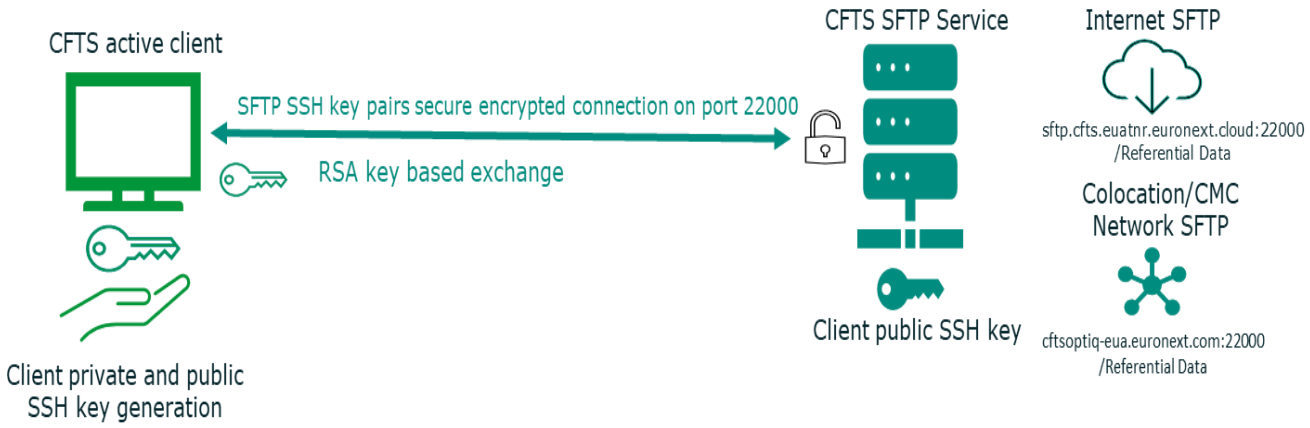
## 2.2 CFTS SFTP SERVICE ACCESS

To gain access to the CFTS SFTP, members must have generated and saved their SFTP SSH public key on MyEuronext CFTS application (see MyEuronext – CFTS – Members – User Guide).

Secure Socket Shell (SSH), also called Secure Shell, creates a secure connection when you access a remote server. Secure File Transfer Protocol (SFTP) uses SSH and provides a secure way to transfer files between computers. SSH in SFTP Servers is an encrypted network protocol that uses public key cryptography to create a more secure method to authenticate a client's identity and rights to access a server.

Authorized and authenticated trading members can gain CFTS SFTP access, either through internet or Colocation/CMC networks. SFTP connections will be authenticated using SSH protocol key pairs. Trading members must generate their own public and private keys, with the public key being saved against their Euronext CFTS client user role. The member's private keys must be kept secure and stored locally on their own network. Access to the SFTP folder locations can only be secured by using a combination of the public and private keys (key pairs), and with access being granted to the SFTP access method on MyEuronext CFTS.




The following is a list of supported cryptographic algorithms for the security policy **2020-06 Restricted**, used in CFTS SFTP:

| SshCiphers |
|---|
| aes128-ctr |
| aes128-gcm@openssh.com |
| aes192-ctr |
| aes256-ctr |
| aes256-gcm@openssh.com |

| SshKexs |
|---|
| diffie-hellman-group14-sha256 |
| diffie-hellman-group16-sha512 |
| diffie-hellman-group18-sha512 |
| diffie-hellman-group-exchange-sha256 |
| ecdh-sha2-nistp256 |
| ecdh-sha2-nistp384 |
| ecdh-sha2-nistp521 |

| SshMacs |
|---|
| hmac-sha2-256 |
| hmac-sha2-256-etm@openssh.com |
| hmac-sha2-512 |

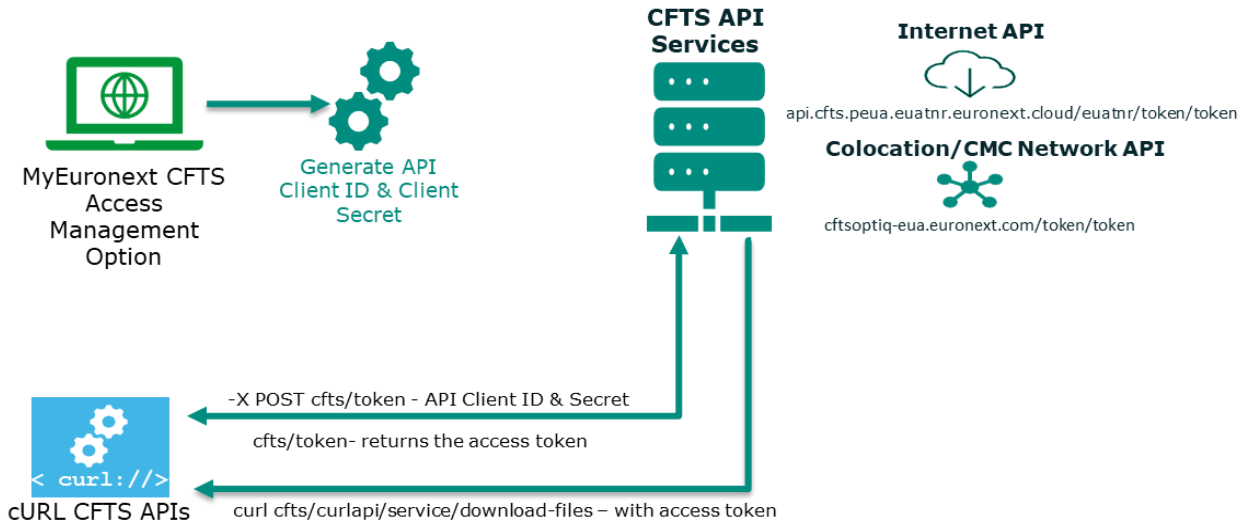
| |
|---|
| hmac-sha2-512-etm@openssh.com |
| umac-128-etm@openssh.com |
| umac-128@openssh.com |

| TlsCiphers |
|---|
| TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256 |
| TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 |
| TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA384 |
| TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 |
| TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 |
| TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 |
| TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 |
| TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 |

## 2.3 CFTS API SERVICE ACCESS

To gain API access, to the CFTS Referential Data and EOD services data, members must generate an API client ID, client secret and client secret expiry date, through MyEuronext CFTS Access Management option (see MyEuronext – CFTS – Members – User Guide). And also be granted a CFTS Client member or technical partner user role through MyEuronext Company Settings.

The CFTS API client ID and client secret, generated through MyEuronext CFTS Access Management option, must be used to request a CFTS API access token. Clients must post a request to the cfts/token API with their client ID and client secret to receive a CFTS API access token. The access token, retrieved from cfts/token, must be included in all CFTS API get requests.




Client secrets will expiry after 6 months and must be regenerated through MyEuronext CFTS Access Management option. CFTS API access tokens expiry after 1 hour, and must be newly requested, using the cfts/token API with the client ID and client secret.

CFTS provides four APIs, summarized below, see section 5.1 for the details of each API.
The CFTS APIs are currently available for Referential Data and EOD services only.

| CFTS API | Description |
|---|---|
| cfts/token | Provide users with a token to enable to access to the other CFTS APIs |
| cfts/file-search | Enable users to get lists of service folders, subfolders and files |
| cfts/download-files | Enable users to retrieve a pre-signed file URL for download by file ID |
| cfts/download-files-names | Enable users to retrieve a pre-signed file URL for download by filename |

# 3 PRE-REQUISITES

As a pre-requisite, customers are required to have a company agreement signed with Euronext (EDDA, SPA or TPA). And signed the MyEuronext website terms and conditions.

To access the CFTS services data through SFTP or APIs, in both Next EUA and Production, the customers' MCA must have granted their contact, the CFTS Client Member or technical partner user role, through MyEuronext Company Settings, and validate the user role. In MyEuronext CFTS, the MCA must assign the service and the access method. Access method attributes must also be generated and saved. For SFTP access the client's SSH public key must be saved. And for API access clients must generate a client ID, client secret and client secret expiry date, through MyEuronext CFTS Access Management option.

API Client secrets will expire after 6 months and must be regenerated through MyEuronext CFTS Access Management option.

Only contacts registered on MyEuronext website, granted a CFTS Client Member or technical partner user role, and assigned CFTS services, can access CFTS data services. For more information about MCAs and their registration, please check the Connect Membership Webforms User Guide.

For additional technical information SFTP SSH encryption and other technical communication standards please check the latest version of Euronext Secure Communications standards on the Euronext Connect Customer Portal.

## 3.1 UPDATES TO AUTHENICATION ATTRIBUTES

Changes to the SSH public keys or CFTS registered user email addresses, and the regeneration of API client secrets, should be submitted through MyEuronext CFTS web based application.

Please check that the SFTP SSH public key you are using in your script or application matches exactly the public key saved on MyEuronext CFTS. Also check that your public key does not contain any hidden control characters, carriage return or line feeds (CRLF).

API Client secrets will expire after 6 months and must be regenerated through MyEuronext CFTS Access Management option.

## 3.2 MYEURONEXT CFTS DISPLAY AND ACCESS ISSUES

If you encounter any display issues, please clear your web browser cache on the relevant webpage (by pressing simultaneously *Ctrl-F5*).

If you encounter any access issues, this may be due to your information security or network policy. Please make sure the security clearance step referred to in the First Connection guide is properly checked, and that the following domains are allowed:

Next EUA environment: https://api.cfts.peua.euatnr.euronext.cloud/euatnr/api

Production environment: https://api.cfts.prodnr.euronext.cloud/prodnr/api

**Note:** Current EUA environment is not available through MYEuronext CFTS.

## 3.3 CFTS SERVICE DOMAIN NAMES

The table below provides the domain names used to connect to MyEuronext CFTS, CFTS SFTP and CFTS API data services.

Referential Data, EOD, Regulatory and Reconciliation service data files are available to trading members via Colocation/CMC network and internet connectivity using SFTP access. The API access method can be used to retrieve Referential Data and EOD service data files through a Colocation/CMC and internet connection. All CFTS Service data files are available through the MyEuronext CFTS web-based application.

| NETWORK | ENVIRONMENT | DOMAIN NAME | IP ADDRESS |
|---|---|---|---|
| **Colocation/ CMC Access (SFTP and API access methods)** | Next EUA | cftsoptiq-eua.euronext.com | 212.107.67.18 |
| | Next EUA Backup (in case of primary failure) | cftsoptiq-eua-backup.euronext.com | 212.107.67.19 |
| | Current EUA | cftsoptiq-veua.euronext.com | 212.107.67.21 |
| | 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** | Next EUA | sftp.cfts.euatnr.euronext.cloud | Cloud IP addresses are dynamic |
| | Current EUA | sftp.cfts.veua.euatnr.euronext.cloud | Cloud IP addresses are dynamic |
| | Production | sftp.cfts.prodnr.euronext.cloud | Cloud IP addresses are dynamic |
| **API Internet Access** | Next EUA | api.cfts.peua.euatnr.euronext.cloud | Cloud IP addresses are dynamic |
| | Production | api.cfts.prodnr.euronext.cloud | Cloud IP addresses are dynamic |
| **Website Access** | Next EUA | https://eua-connect.euronext.com/ | N/A |
| | Production | https://connect2.euronext.com/ | N/A |

CFTS SFTP service is enabled through Port 22000. And will authenticate connectivity based on the registered CFTS user email address with both client private and public SSH keys. For MyEuronext CFTS web-based application access please reference the latest version of MyEuronext – CFTS – Members – User guide, on the Euronext Connect Customer Portal.

## 3.4 API ACCESS ISSUES

If you encounter any access issues, this may be due to your information security or network policy. Please make sure the security clearance step referred to in the First Connection guide is properly checked, and that the following domains are allowed:

**Next EUA environment:**

https://api.cfts.peua.euatnr.euronext.cloud/euatnr/api

https://enx-euatnr-eu-west-1-cfts-peua-storage-s3kms-output.s3.eu-west-1.amazonaws.com/output

https://cftsoptiq-eua.euronext.com/download

**Production environment:**

https://api.cfts.prodnr.euronext.cloud/prodnr/api

https://enx-prodnr-eu-west-1-cfts-storage-s3kms-output.s3.eu-west-1.amazonaws.com/output/

https://cftsoptiq-prod.euronext.com/download

Please read section A.2 Trouble shooting API response codes.

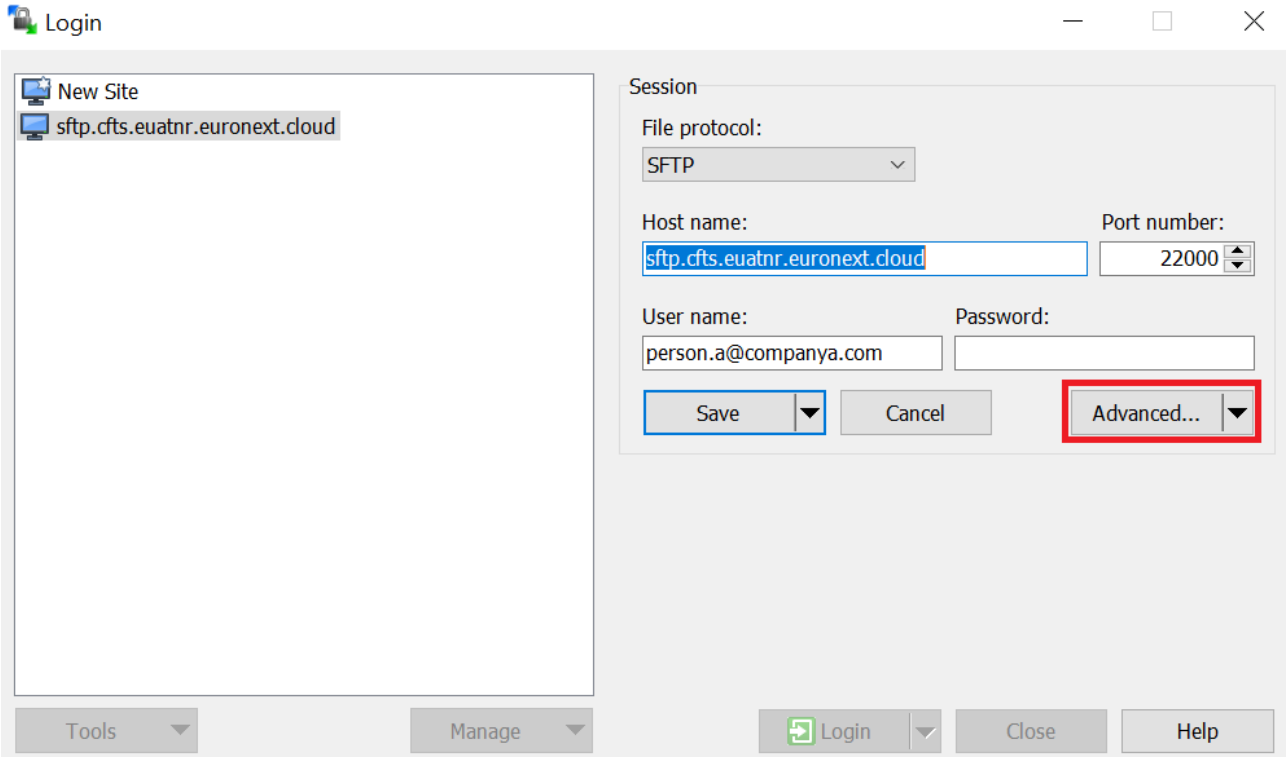
# 4 SFTP SSH KEY GENERATION

SFTP SSH public and private keys can be generated using a number of different proprietary applications and operating systems. For the purposes of illustration, Microsoft WinSCP, was used to provide an example of generating SSH keys.

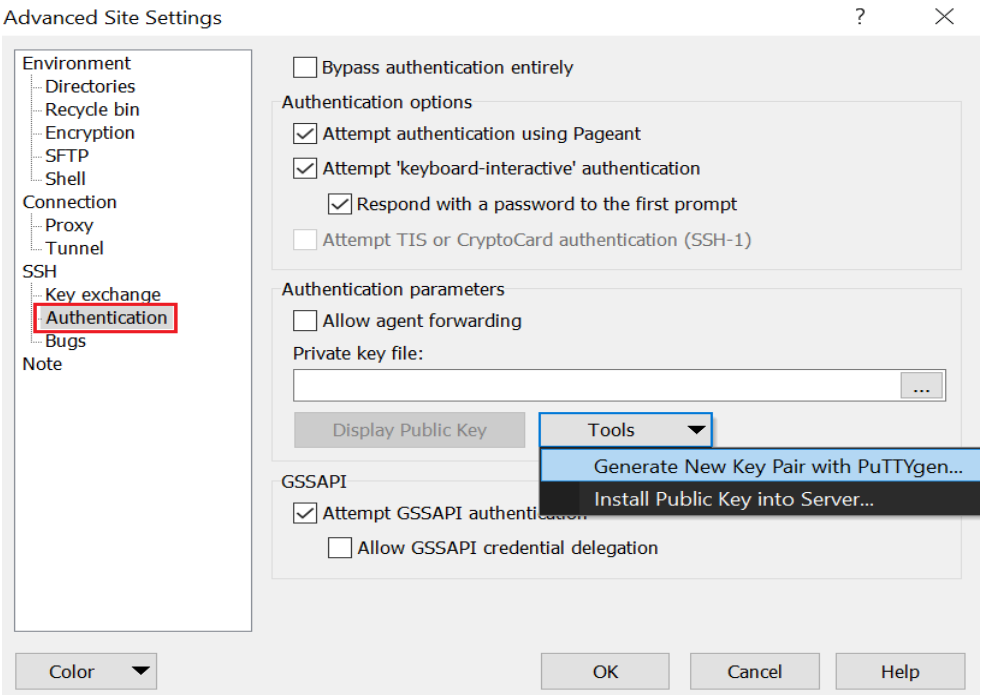
### Steps to generate SSH keys

1. Open WinSCP
2. Select New Site
3. Populate the following field values and select Save

| FIELD | VALUE |
|---|---|
| File protocol | SFTP |
| Host name | sftp.cfts.euatnr.euronext.cloud |
| Port number | 22000 |
| User name | CFTS user email account registered with Euronext |

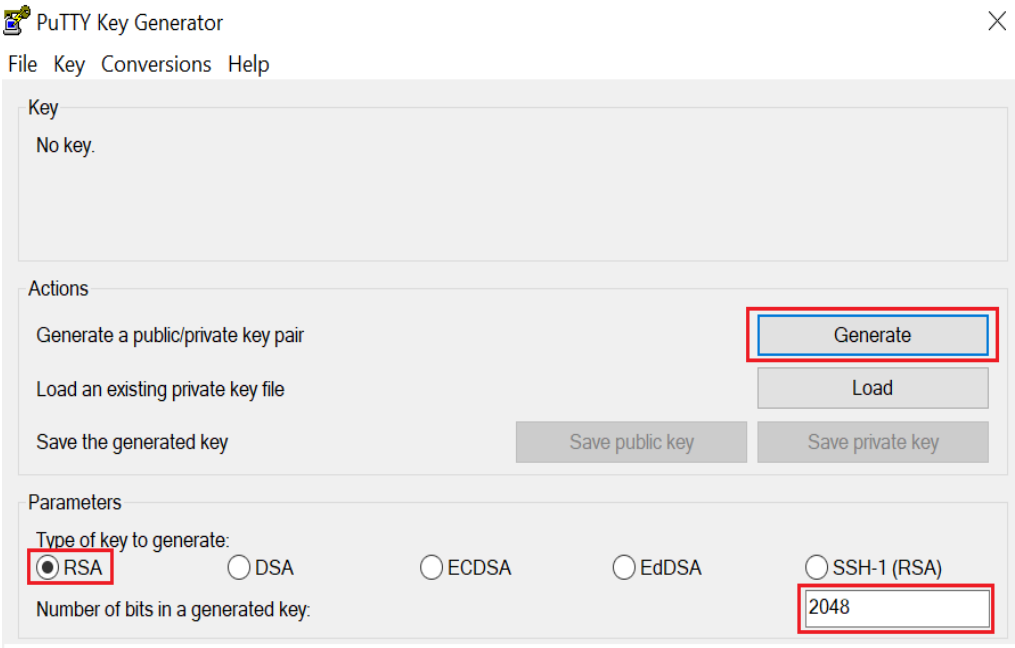


4. Select Advanced, Authentication, Tools, Generate New Key Pair with PuTTYgen.

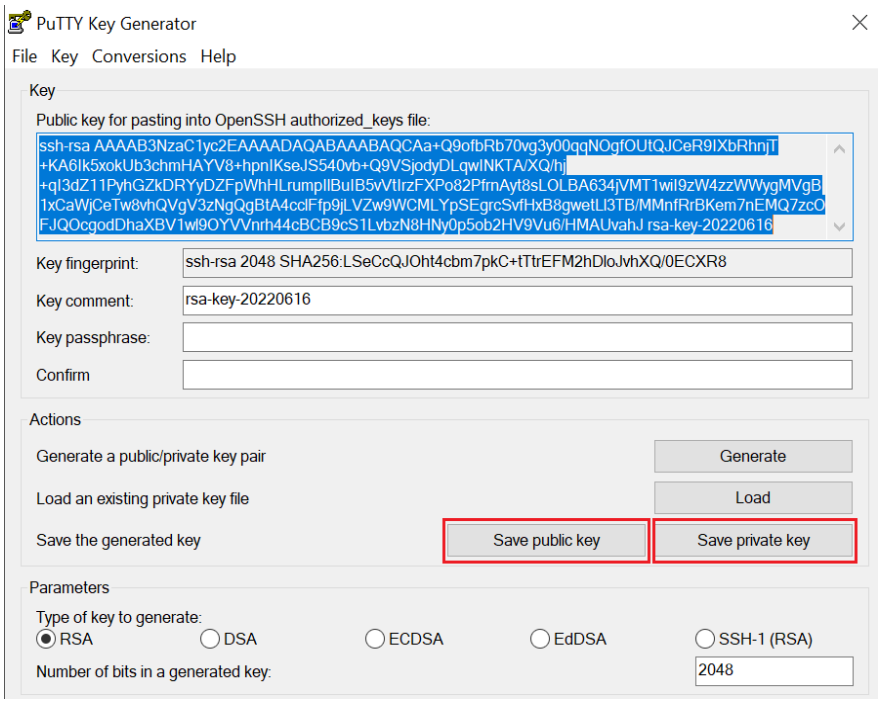



5. Select, Generate.

Ensure the type of key to generate, RSA, is selected and the default number of bits is 2048.



6. Select, Save public key.

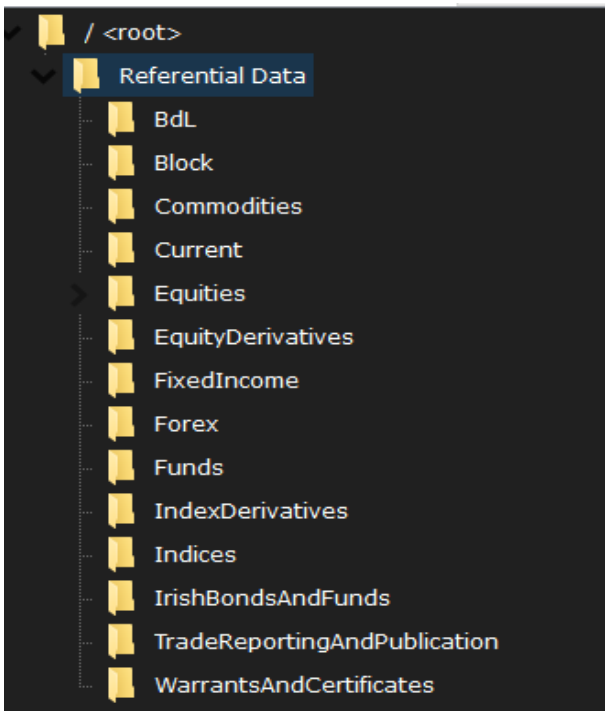



7. The SSH public key generated must be saved by the company's MCA on the My Euronext CFTS web based application against the users that want to access the CFTS services through SFTP.

8. Repeat the key generation for the private key. And select save private key.

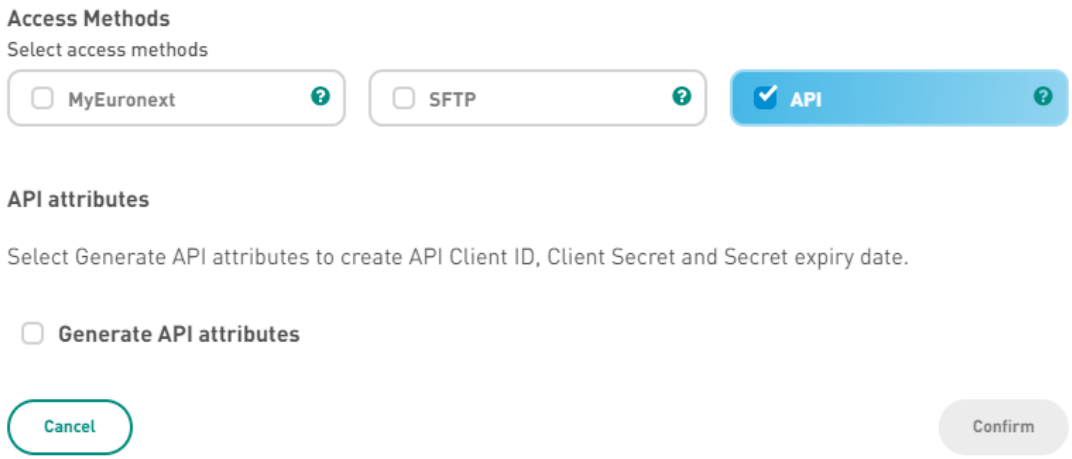
The private generated should be saved locally only.

9. Select Login to view sftp.cfts.euatnr.euronext.cloud folders and files.

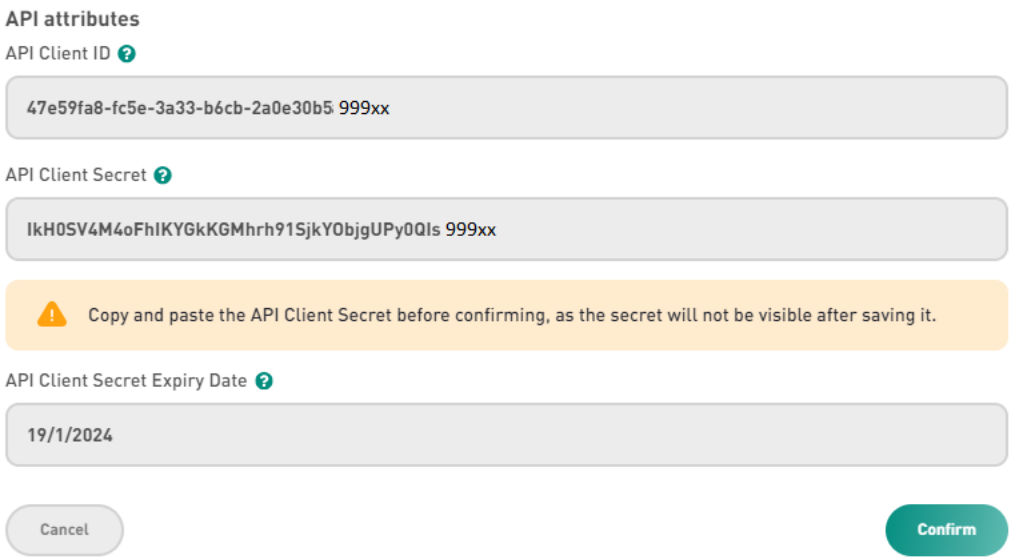


# 5 API CLIENT ID AND CLIENT SECRET GENERATION

Customers wishing to access CFTS services data via APIs access must generate an API client ID, client secret and client secret expiry date through MyEuronext CFTS Access Management option.
The CFTS API access is currently available for Referential Data and EOD services only.




There is a onetime option, to copy and paste, the client ID and client secret. Users must take this opportunity to securely save their CFTS API credentials locally. Client IDs and secrets can be regenerated on demand through MyEuronext CFTS Access Management option.




Client secrets will expire after 6 months and must be regenerated through MyEuronext CFTS Access Management option.

The CFTS API client ID and client secret generated through MyEuronext CFTS Access Management option can be used to request a CFTS API access token. Clients must post a request to the cfts\token API with their client ID and client secret to receive a CFTS API access token. The access token must be included in all CFTS API get requests.

CFTS API access tokens expiry after 1 hour and must be newly requested using the cfts/token API with the client ID and client secret.

## 5.1 USING CFTS APIs

CFTS provides a RESTful APIs to assist customers wishing to automate the retrieval CFTS Referential Data and EOD service data files, through their own applications. Noting that CFTS SFTP access can also be utilized for the same purposes.

CFTS APIs can be utilized by using cURL commands or scripts. cURL, stands for client URL (Uniform Resource Locators). cURL is a command line tool that developers use to transfer data to and from a server. At the most fundamental, cURL lets you talk to a server by specifying the location (in the form of a URL) and the data you want to send or retrieve. The recommended cURL version is 8.0.1 or later, for more information visit https://curl.se/.

To access CFTS APIs users must be granted a CFTS Client Member or technical partner user role through MyEuronext Company Settings. And on MyEuronext CFTS have a CFTS service assigned with the access method API. The API client ID and client secret must be valid and not expired. If the client secret has expired it can be regenerated using MyEuronext CFTS Access Management option. CFTS APIs are currently available for Referential Data and EOD services only.

### 5.1.1 Next EUA URLs and APIs

The table below provides a list of CFTS URLs and APIs that can that be used in Next EUA. For internet production URLs, replace, euatnr, with prodnr. And for CMC/Colocation replace, eua, with prod.

| NETWORK | URL AND API | DESCRIPTION |
|---|---|---|
| **Internet** | https://api.cfts.peua.euatnr.euronext.cloud/euatnr/token/token | Provide users with an access token to enable to access CFTS APIs |
| | https://api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/file-search | Enable users to get lists of service folders, subfolders and files |
| | https://api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/download-files | Enable users to retrieve a pre-signed URL to download files by file ID. A maximum of 10 files can be retrieved in one request. |
| | https://api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/download-file-names | Enable users to retrieve a pre-signed URL to download files by filename. A maximum of 10 files can be retrieved in one request. |
| **CMC/Colocation** | https://cftsoptiq-eua.euronext.com/token/token | Provide users with an access token to enable to access CFTS APIs |
| | https://cftsoptiq-eua.euronext.com/curlapi/service/file-search | Enable users to get lists of service folders, subfolders and files |
| | https://cftsoptiq-eua.euronext.com/curlapi/service/download-files | Enable users to retrieve a pre-signed URL to download files by file ID. A maximum of 10 files can be retrieved in one request. |
| | https://cftsoptiq-eua.euronext.com/curlapi/service/download-file-names | Enable users to retrieve a pre-signed URL to download files by filename. A maximum of 10 files can be retrieved in one request. |

### 5.1.2 Production URLs and APIs

The table below provides a list of CFTS URLs and APIs that can that be used in Production.

| NETWORK | URL AND API | DESCRIPTION |
|---|---|---|
| **Internet** | https://api.cfts.prodnr.euronext.cloud/prodnr/token/token | Provide users with an access token to enable to access CFTS APIs |
| | https://api.cfts.prodnr.euronext.cloud/prodnr/curlapi/service/file-search | Enable users to get lists of service folders, subfolders and files |
| | https://api.cfts.prodnr.euronext.cloud/prodnr/curlapi/service/download-files | Enable users to retrieve a pre-signed URL to download files by file ID. A maximum of 10 files can be retrieved in one request. |
| | https://api.cfts.prodnr.euronext.cloud/prodnr/curlapi/service/download-file-names | Enable users to retrieve a pre-signed URL to download files by filename. A maximum of 10 files can be retrieved in one request. |
| **CMC/Colocation** | https://cftsoptiq-prod.euronext.com/token/token | Provide users with an access token to enable to access CFTS APIs |
| | https://cftsoptiq-prod.euronext.com/curlapi/service/file-search | Enable users to get lists of service folders, subfolders and files |
| | https://cftsoptiq-prod.euronext.com/curlapi/service/download-files | Enable users to retrieve a pre-signed URL to download files by file ID. A maximum of 10 files can be retrieved in one request. |
| | https://cftsoptiq-prod.euronext.com/curlapi/service/download-file-names | Enable users to retrieve a pre-signed URL to download files by filename. A maximum of 10 files can be retrieved in one request. |

Following sections provide detailed examples of cURL commands and responses using CFTS APIs with mocked a client ID, client secret and access token values. A maximum of 10 files that can be download per get request.

For CFTS API standard response codes, see section A.2 Trouble Shooting API response codes.

### 5.1.3 cfts/token

This API provides users with a bearer access token, to utilize CFTS APIs for file searches and downloads, the token will expire in one hour. The CFTS API client ID and client secret generated through MyEuronext CFTS Access Management option, must be used to request a CFTS API access token. Clients must post a request to the cfts\token API with their client ID and client secret, to receive a CFTS API access token. The access token must be included in all other CFTS API get requests.

| Parameter(s) | Parameter description | Mandatory | Sample values |
|---|---|---|---|
| **Client ID** | Uniquely identify clients requesting CTFS service access method API for Referential Data and EOD Services. MyEuronext CFTS Access Management option, service API access method, client ID, attribute. It will be combined with the client secret to authorize client's with an access token to utilize CFTS APIs. | Yes | 3005f67c-ad3f-4ed4-8d20-e0110f71f999x |
| **Client Secret** | MyEuronext CFTS Access Management option, service, API access method, selection, client secret, attribute It will be combined with the client ID to authorize client's with an access token to utilize CFTS APIs. | Yes | plain text |

| JSON Response attribute | Type |
|---|---|
| token | String |

#### 5.1.3.1 POST Access Token cURL Command

Internet URL : api.cfts.peua.euatnr.euronext.cloud/euatnr/token/token

CMC/Colocation URL: cftsoptiq-eua.euronext.com/token/token

```
curl -X POST -H "Content-Type: application/json" -d "{\"clientId\":\"b05d0ee0-fcf7-3897-
bae7-730bb67b99xx\",    \"clientSecret\":\"ge/JEOmnlxfL2JNWKhcgs6OlMmTtGdNSPusUDY99xx=\"}"
https://api.cfts.peua.euatnr.euronext.cloud/euatnr/token/token
```

#### 5.1.3.2 cfts/token Response


```
{"token":
"eyJraWQiOiI2NzA0NjU3Zi00NmVmLTQ2NTctYTgzNy01YmQ5YWI3ZDk2NGUiLCJhbGciOiJSUzI1NiJ9.eyJzdWIiOiJ0ZXN0LW
NsaWVudDIiLCJhdWQiOiJ0ZXN0LWNsaWVudDIiLCJuYmYiOjE2Nzk1ODA2NzIsInNjb3BlIjpbImNmdHMiXSwiaXNzIjoiaHR0cD
pcL1wvY2Z0cy5ldXJvbmV4dC5jb20iLCJleHAiOjE2Nzk1ODA5NzIsImlhdCI6MTY3OTU4MY3Mn0.CXU0MUgtGgQd0OaIZ4UhhXo
roruCr5NQ5gZuXudwwHFBlVqmohIbPhx_IZ_E8zjyr6mnS7b_eKNX1cxUrhZnFDPxh5CrHK2s8pY8SnFaf5oA_c0cye8UQR2B0_B
feZNn1NU4w8jx3kaP5h9pFIbLPJY1WQU72UoPw_KsizqRG4guicufVtpvxhqjlawi8cLAjVo14n9ExrwQz3dpjOQZcWqgTyUtfr6
YfacUQWIwtv75ftW41sTIBw4wJ0q7m0CexCtLHT2zrWmR4kQ2kkmxTEmxWKFCL9G9M5Z03GKKaTAbC4gIWFoqdmjCzjI2t4RNGSv
bg3gdLZP-xxx999"}
```


CFTS API access tokens expiry after 1 hour and must be newly requested using the cfts/token API with the client ID and client secret.

### 5.1.4 cfts/curlapi/service/file-search

Enable users to retrieve lists of service folders, subfolders and files using search parameters.

The folderStructure parameter, must contain a trailing folder delimiter (/), Referential%20Data/Current/ or, EOD/. Where spaces are contained within a search parameter value, replace the space with the encoded characters %20. When combining parameters in your search criteria, use ampersand (&). i.e. folderStructure=Referential%20Data&fileDate=2023-07-18.

For additional CFTS EOD Service file attributes and values, see section 8.4 EOD File Attributes.

| Parameter(s) | Parameter description | Options | Mandatory | Sample values |
|---|---|---|---|---|
| **folderStructure** | Combine CFTS Service name, Service folder and subfolder name | Service name, folder and sub folder names, don't populate to list all service folders | No | Referential%20Data/Current/ |
| **firmId** | Define the trading member's private Firm ID folder to list and/or download files | Trading member's Firm ID, mandatory for EOD service | Yes | 00000001 |
| **fileName** | Search for this filename | Populate you wish to search for an individual filename, don't populate to list all service folders | No | OptiqMDG_p-EUA_MemberMappingFile_ALL_20230322.xml |
| **fileDate** | Search for files generated on this date | File creation date (YYYY-MM-DD) Populate to list all files created on that date | No | 2023-07-18 |
| **fileType** | EOD service only, filter a filename list based on the file type | Active Orders, Trades, Euronext Securities Don't populate to list all files regardless of file type | No | Active%20Orders, Trades, Euronext Securities |
| **market** | EOD service only, filter a filename list based on the market | Regulated market, Warrants Don't populate to list all files regardless of market type | No | Regulated%20Market, Warrants |
| **page** | Response page number | The page number used for pagination | No | 1 |
| **size** | Page size | Maximum default page size | No | Default 50, maximum value is 50. |

| JSON Response attribute | Type |
|---|---|
| Files (array of files) | String |
| fileId | String |
| filename | String |
| date | String |
| format | String |
| page | String |
| size | String |

#### 5.1.4.1 GET cfts/curlapi/service/file-search cURL Command

Internet URL : api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/file-search

CMC/Colocation URL: cftsoptiq-eua.euronext.com/curlapi/service/file-search

```
curl -X GET "https://api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/file-
search?firmId=00000120&foldeStructure=Referential%20Data/Equities/Current/&fileDate=2023-
07-13" -H "Accept: application/json" -H "Authorization: Bearer
eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJWVGJvazExaW9IY0xybGowWTFDTEk5U3JmdWZwTXRpRlc3dHB5d2xQbmRU
Y3QyQ2FXelNGUENDTFZWN2huZllVIiwic2NvcGUiOiJjZnRzIiwiY2xpZW50X2lkIjoiZDE3ZjY3YmItMTc5YS0zY
zk5LWE2ODQtOTAxZGI0NjNmOGE1IiwiaWF0IjoxNjg5MTg2NDIzLCJleHAiOjE2ODkxOTAwMjN9.K-wCUmi-
Lwpu6PAqH8QO3eVhx1y0uMJSf0yTuLU99xx"
```

Request to get a list of files from the Referential Data service, Equities, Current folder, with a file date of 13/07/2023.

#### 5.1.4.2 cfts/curlapi/service/file-search Response


```
{"content":[{"files":[{"fileId":"tzQPFh_kHbiPQYLvNZ8_wA==","fileName":"OptiqMDG_p-
EUA_TimeTableFile_Equities_20230713.xml","size":855198,"date":"2023-07-
13","format":"xml"},{"fileId":"Ck3gIzQYKAXg5VilOMY1Mg==","fileName":"OptiqMDG_p-
EUA_CashStandingDataFile_Equities_20230713.xml","size":18146494,"date":"2023-07-
13","format":"xml"},{"fileId":"tVZXGaOK82V2tuEparAhVA==","fileName":"OptiqMDG_p-
EUA_AuthorizedPriceFluctuationFile_Equities_20230713.xml","size":77940,"date":"2023-07-
13","format":"xml"},]}],"pageable":{"sort":{"sorted":false,"unsorted":true,"empty":true},"pageNumber
":0,"pageSize":50,"offset":0,"paged":true,"unpaged":false},"totalElements":3,"totalPages":1,"last":t
rue,"size":3,"number":0,"sort":{"sorted":false,"unsorted":true,"empty":true},"numberOfElements":3,"f
irst":true,"empty":false}
```


### 5.1.5 cfts/curlapi/service/download-file-names

Enable users to retrieve file pre-signed URLs to download files by filename(s). A maximum of ten files can be downloaded per request.

| Parameter(s) | Parameter description | Mandatory | Sample values |
|---|---|---|---|
| firmId | User's trading firm ID with the authorization to access the data files | Yes | 09999999 |
| fileName<br>10 file maximum | CFTS Unique filename | Yes | OptiqMDG_p-EUA_CashTickSizeReferentialFile_ALL_20230616.xml |

| JSON Response attribute | Type |
|---|---|
| Downloads (array of filenames and pre-Signed URLs) | String |
| fileName | String |

| | |
|---|---|
| preSignedUrl | String |

#### 5.1.5.1 GET cfts/curlapi/service/download-file-names cURL Command

Internet URL : api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/download-file-names

CMC/Colocation URL: cftsoptiq-eua.euronext.com/curlapi/service/download-file-names

```
curl -X GET "https://api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/download-file-
names?firmId=09999999&filNames=OptiqMDG_p-EUA_CashTickSizeReferentialFile_ALL_20230616.xml" -H
"Accept: application/json" -H "Authorization: Bearer
eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJDaHk5MmhXcDJaYjNBWWdCV0QydzFjWWZYVWtKdFJreDJWUlFodklQcVFwZXExbU5xRnZ
fckQ0UUF4M1RMemE4Iiwic2NvcGUiOiJjZnRzIiwiY2xpZW50X2lkIjoiODMwMmU2ODAtZjAyYS0zNjcwLTkwMzktZmFhODExNmM
4ODQyIiwiaWF0IjoxNjg2NjYwNDE5LCJleHAiOjE2ODY2NjQwMTl9.EjX3z3uCJ9E7qcqCwfq1nQmNQQ7oa3WgEVzCDR9999x"
```

Request to retrieve a file pre-signed URL to download a file by filename. Where multiple filenames are contained within a single request, separate the filenames by a comma. E.g. fileNames?filename1,filename2.

#### 5.1.5.2 cfts/curlapi/service/download-file-names Response


```
{"downloads":[{"fileName":"OptiqMDG_p-EUA_CashTickSizeReferentialFile_ALL_20230616.xml
","preSignedUrl":"https://enx-euatnr-eu-west-1-cfts-peua-storage-s3kms-output.s3.eu-west-
1.amazonaws.com/output/Regulatory/00000120/MMSTATS_XMIL_DAILY_00000120_20230210.csv?X-Amz-Security-
Token=IQoJb3JpZ2luX2VjEKT%2F%2F%2F%2F%2F%2F%2F%2F%2F%2FwEaCWV1LXdlc3QtMSJHMEUCIGP9GOqPDRdzohUoUj4PWl
zh4txgNjaBifqLUgPZWUsLAiEA6zFYoRlMaqn5BQRCWiFW7Hm%2Bi3LDYmsCRBbzeF1amYoqjAQI7f%2F%2F%2F%2F%2F%2F%2F%
2F%2F%2FARAEGgwzNTcyMzQzNzQ1NjkiDDIJ%2BS5gprSAbNQH8yrgAyqx7lRwWM2kBz0zqnBEqC7rCFhGls84D2fFkGeIioZTz7
nltgb5RbaMx36%2BpHDMUD4%2BYkc4LVIIfhPPHuaB6v%2BApSN3JGWZSyKOK%2FCLEGrK%2Fq3EFijVkddC1KV5p0UfssnbfJq%
2Fizq7ET86xlZvp%2BEf2xlR8hXHccg34dvDfc65uXIB1fguVtr9uSfqrGvu89rH91pUVeiUhwHMVfEJ5ZtVI6A2XNhJxl7y9P0E
22Jthzj4CxeM6g3Fqc191KBwp%2BepMYtz0FS1qgSn41Ff1n%2BUI2Fr9ZDHkYn3pfzJJAoBB%2B3enmC2mi1HeFGhQZy3poaq5w
jc%2Bf%2BxE9u136sYEKNQDYfP0Wq0zF7x5iVIqxpaNA%2Bh3REUuenHlAui%2BFCvmDZQHWZErFJ1BlIY2ApvZ%2BcSB%2FPH8q
XlMG7qQZKgxeEO%2FjezyR7hXtqlVZf3Cu5cigHu0%2BFD2jTMO4JBrXQ63OHLQSnOCCMfVH6yi9yDPqnBrpn7X3gx5dzdcxdPmN
SGkg0Mzxx2AJQykYlpI6MZcQlhSzEcmqikzI%2BaLDNW1QXI0LTNVAbJC2B2WMHVYGYumG8gw%2B7ojctZztjYnPqcCiBdDDX3h2
y78a3fd9F24S0lSuIBAbyXj86UN5J9XbWkrTDKsqGkBjqlAQALR4dS501FN5fIshxlPoIWEc4B8KAAqinKt5ipp4zwmV2WBZkya%
2ByuRxDTt3Vi3FVrzo5siyLZsv0Mt6b1nWtwMKdwPbe15NZEfNttJMPhizPT5np4rDTMRH3pbAfnp7ELbvrdCUxdNpL60bYdRfs8
U1i76D8m%2BbG3%2BrJPugfWxnpbSFiuDesuF2l1PRMBI4cJi1SxSe0bAnsA0CzG6ypXAcQ9Ng%3D%3D&X-Amz-
Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20230613T130700Z&X-Amz-SignedHeaders=host&X-Amz-
Expires=3599&X-Amz-Credential=ASIAVGLGT66U3MYOLUN2%2F20230613%2Feu-west-1%2Fs3%2Faws4_request&X-Amz-
```


CMC/Colocation file preSigned URLs will begin with cftsoptiq-eua.euronext.com/download (see section 3.4)

The pre-signed URL can be used to download and save the file.

#### 5.1.5.3 Sample Curl command – File save

```
curl -s --proxy "http://your_proxy" -i -o a_filename.csv "https://a_cfts_file_presigned URL"
```

Where your network does not contain a proxy server the proxy parameter can be removed.

## 5.1.6 cfts/curlapi/service/download-files

Enable users to retrieve file pre-signed URL to download files by file ID(s).

A maximum of ten files can be downloaded per request.

| Parameter(s) | Parameter description | Mandatory | Sample values |
|---|---|---|---|
| firmId | User's trading firm ID with the authorization to access the data files | Yes | 09999999 |
| fileId(s)<br>10 file IDs maximum | CFTS unique file identifier | Yes | vzNB45miFYMIkAi_pYEKWA== |

| JSON Response attribute | Type |
|---|---|
| downloads (array of fileIds and preSignedUrls) | String |
| fileId | String |
| preSignedUrl | String |

### 5.1.6.1 GET cfts/curlapi/service/download-files cURL Command

Internet URL : api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/download-files

CMC/Colocation URL: cftsoptiq-eua.euronext.com/curlapi/service/download-files

```
curl -X GET "https://api.cfts.peua.euatnr.euronext.cloud/euatnr/curlapi/service/download-
files?firmId=09999999&fileIds=EA3sWUgaSc9V_5qCTq3aBw==" -H "Accept: application/json" -H
"Authorization: Bearer
eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJDaHk5MmhXcDJaYjNBWWdCV0QydzFjWWZYVWtKdFJreDJWUlFodklQcVFwZXExbU5xRnZ
fckQ0UUF4M1RMemE4Iiwic2NvcGUiOiJjZnRzIiwiY2xpZW50X2lkIjoiODMwMmU2ODAtZjAyYS0zNjcwLTkwMzktZmFhODExNmM
4ODQyIiwiaWF0IjoxNjg2NjYwNDE5LCJleHAiOjE2ODY2NjQwMTl9.EjX3z3uCJ9E7qcqCwfq1nQmNQQ7oa3WgEVzCDR9999x"
```

Request to retrieve a pre-signed URL to download a file by file identifier.

Where multiple file identifiers are contained within a single request, separate the file IDs by a comma. E.g. fileIds=fileId1,fileId2,fileId3.

### 5.1.6.2 cfts/curlapi/service/download-files Response


```
{"downloads":[{"fileId":"EA3sWUgaSc9V_5qCTq3aBw==","preSignedUrl":"https://enx-euantnr-eu-west-1-
cfts-euntnr-storage-s3kms-output.s3.eu-west-
1.amazonaws.com/output/EOD/09999999/FTRRM_09999999_20230327.zip?X-Amz-Security-
Token=IQoJb3JpZ2luX2VjEKT%2F%2F%2F%2F%2F%2F%2F%2F%2F%2FwEaCWV1LXdlc3QtMSJHMEUCID59mWTSXilchwK2k63vIW
nc0EDQ5QmuD9Kaf7SZi1qbAiEAlqIqDyjGduoyfZUYVz9mKDm3wK4MslJ1no41QLycqqQqjAQI7f%2F%2F%2F%2F%2F%2F%2F%2F
%2F%2FARAEGgwzNTcyMzQzNzQ1NjkiDEJRy7ySGkCEBYgdeSrgA5OSaWIidE4int7o6H0OinR%2FeE7vP5XtUcUacpymRjIPVMVu
yF7eLqldDIAmlUb8ikNoX5d62Us2nuizs1pDlnqO5hpKIFgQv4Usszy4COGBn09pYhgzAIethSFarSTB3jymNCbZnmy9vYlPqEeo
gfoEWZhhamjQ%2BiyiRMFxDcGXd%2FkdiTNZJGCcerjFh1oTrwlNWf5yfF8kUsx6p3ojyviAwiVVGsGJ2Js4cHYaLZUrVs3QeugQ
J4cm0cxTSx1S%2Floub0SFvkpJelV2b8r4YjqlWg%2Ft1kDdUcLZR08e%2BDU2r0CJr4TxBTF3qPgB%2BUWFY8UAXSyjBrZ9T2Vs
ZFhz1OqIy%2Ft8I%2Bb%2BE0PpaLiO0VzTDXDkNwiHctO9mWPGd93BkurcjCmGasera2S8yXTFFS%2BLeWDn8fvshg7LBO1l1I8B
qExs8OurHjaLTZSy9X1vSu02SdnnrpJKoU3XIRWTvj9p9Plja3uNrO6xvTMFQsKca8EAMcqbzkuPRkLRXWwD0UGlFflcASjg6Jjf
eKLvbxn%2Bwv%2Bvr3gJxTi2eZZhCzBYfijVznuIOLXDCAviBPWSqc4oZosV9guRMCHfgu0%2FTRh8yGu7b8c9wOT35O49QXl5NL
eshBTq19zgeByuXEZcLTCOtKGkBjqlAWNjwrFiuBWy%2Fdj8k6ENisi%2FhkKXhh0GoYXrhhSR9Mn3BQYTea5TilG2ijVAgsZYTN
reP%2BFyW28Y20HHoHXC1g9EHphmzsiByizw9DPkfgW%2FwjaHmjuN9sYuWeHSLTHpTf3NCVVfXYlICSHujymY3AZgKZ4gqxC2uf
9d%2B55ZHyHCJ6jYd3j22P0sbLkdi5g5mCvX2dJfnzH%2BRVqBwFOJaRm%2F%2BbErvQ%3D%3D&X-Amz-Algorithm=AWS4-
HMAC-SHA256&X-Amz-Date=20230613T125837Z&X-Amz-SignedHeaders=host&X-Amz-Expires=3599&X-Amz-
Credential=ASIAVGLGT66U4UCFF2XU%2F20230613%2Feu-west-1%2Fs3%2Faws4_request&X-Amz-
Signature=e57b839e677ae02cf9da54987005c41b89efa30c846b8cfb1c9b42e12949999x"}]}
```


CMC/Colocation file preSigned URLs will begin with cftsoptiq-eua.euronext.com/download (see section 3.4)

The pre-signed URL can be used to download and save the file.

### 5.1.6.3 Sample Curl command – File save

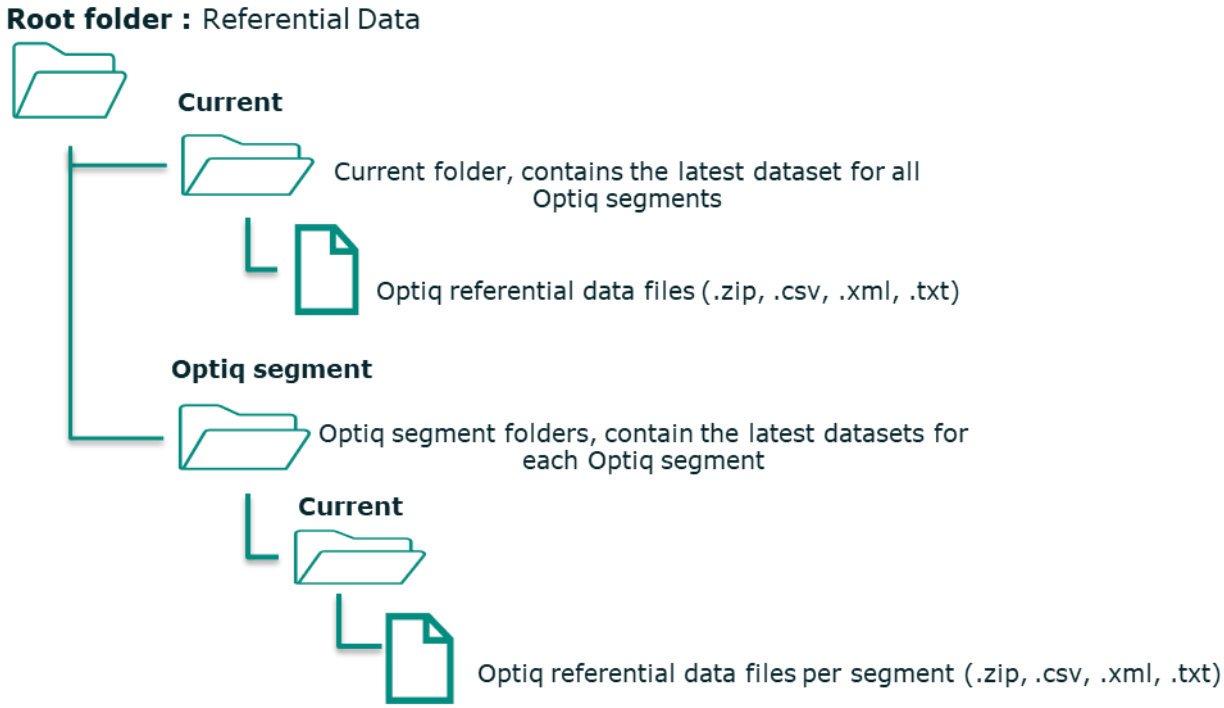
```
curl -s --proxy "http://your_proxy" -i -o a_filename.csv "https://a_cfts_file_presigned URL"
```

Where your network does not contain a proxy server the proxy parameter can be removed.

# 6 CFTS REFERENTIAL DATA SERVICE SUMMARY

Euronext CFTS Referential data service provides key Optiq data referential data files.
Optiq referential data files will be available for download before the start of each trading day. And will provide an online archive of referential data files for the last five trading days.

The Current folders contain the latest files Optiq referential data files for an environment and per Optiq segment.




## 6.1 REFERENTIAL DATA FILES PER ENVIRONMENT

Separate domain names will exist per environment.

The Current environment folder contains the latest files Optiq referential data files for all Optiq segments.

| REFERENTIAL DATA FILES PER ENVIRONMENT | DESCRIPTION |
|---|---|
| CashTickSizeReferentialFile_All | The Tick size file contains different tables defining the variable tick sizes used for trading activity |
| MembershipMappingFile_All | Firm ID, Firm name, Instrument group code, LEI code for all members |
| RepoSettlementPriceFile_All | Repo Settlement Price File is used to communicate the previous day settlement price for each repo instruments |
| Euronext RLP Universe | Euronext RLP (Retail Liquidity Provider) Universe file |
| MBR_FAMINSTR | Instrument families categorization |
| LP_OBLIGATIONS | Liquidity Providers Obligations file |
| Closing Price Recovery | Provides the Closing Price. Available only under exceptional circumstances. |

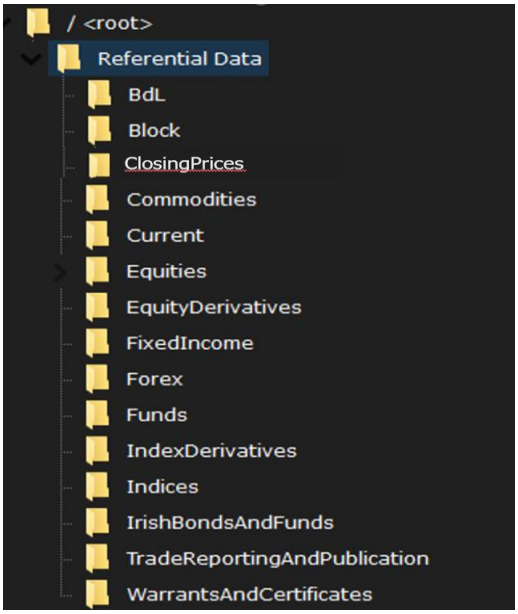
## 6.2 REFERENTIAL DATA FILES PER OPTIQ SEGMENT

Files available per Optiq segment folder are as follows and will be provided in XML format:

| REFERENTIAL DATA FILES PER OPTIQ SEGMENT | DESCRIPTION |
|---|---|
| CashStandingData File | The Cash Standing Data file provides Referential Data for cash markets |
| CashTickSizeReferential File | The Tick size file contains different tables defining the variable tick sizes used for trading activity |
| DerivativesStandingData File | The Derivatives Standing Data files provides Referential Data for derivatives markets, containing Contract Standing Data, Outright Standing Data and Strategies Standing Data |
| DerivativesTickSize File | The Tick size file contains different tables defining the variable tick sizes used for trading activity |
| OpenInterest File | Open Interest file provide open interest information provided by Euronext Clearing on derivatives instruments |
| ReferenceSpreads File | Reference Spreads File provide data to calculate Dynamic Collar Reference Price when Reference Price Origin is set to 'Mid-BBO or Fair Value' and data to calculate Dynamic Collars |
| PrevDayCapAndVolTrade File | Previous Day Capital and Volume Traded file provides: Previous Volume Traded and Previous Day Capital Traded information |
| TimetableFile File | The Timetable file indicates the scheduled trading patterns, on a given day, associated to a Symbol Index linked by the Pattern ID |
| RepoSettlementPrice File | Repo Settlement Price File is used to communicate the previous day settlement price for each repo instruments |
| TRF Conversion Parameters File | The Total Return Futures (TRF) file provides contract Referential Data: Contract code, Maturity, Number of days to expiry, Daily Settlement Price. Pricing of Funding leg and Dividend leg: Daily accrued funding, daily accrued dividend, Accumulated funding, Accumulated dividend |
| SBETemplates (for MDG and OEG) | Simple Binary Encoding (SBE) is the open-source binary protocol used as the solution for market data and order entry messaging in Optiq. SBE was designed within the FIX Protocol Limited organization, with a focus on low band width utilization and the goal of producing a binary encoding solution for low-latency financial trading. Templates define structure and content messages. |
| Authorized Price Fluctuation File | The Authorized Price Fluctuation file details the Authorized Price Fluctuation (APF) tables, on a given day. The APF tables are used in the context of Static, Dynamic and Order Price Control Collars. Using the instrument price as a key, the APF table allows to deduce the corresponding Allowed Price Fluctuation. |
| Exchange Rates File | The Exchange Rates File (in XML) provides on a daily basis, currency exchange rates for various currency pairs against euro, sourced from a data provider. The file contains the closing exchange rates from the previous trading day, which are intended to be used for the current trading day.<br><br>Those exchange rates might be used on the Optiq platform for different purposes (e.g. Order Amount Limit conversion in euro as part of the Riskguard OAL command). |

## 6.3 REFERENTIAL DATA SERVICE DIRECTORY

The referential data service directory can be found under the folder /Referential Data, on the CFTS SFTP domain.




## 6.4 REFERENTIAL DATA SERVICE FILE LIST

The table below lists the files that will be made available through CFTS SFTP Referential Data Service for download.

| Output folder path | File naming convention |
|---|---|
| BdL/Current/ | OptiqOEG_<ENV>_SBETemplate_BdL_<yyyyMMdd>.xml |
| BdL/Current/ | OptiqMDG_<ENV>_SBETemplate_BdL_<yyyyMMdd>.xml |
| BdL/Current/ | OptiqMDG_<ENV>_AuthorizedPriceFluctuationFile_BdL_<yyyyMMdd>.xml |
| BdL/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_BdL_<yyyyMMdd>.xml |
| BdL/Current/ | OptiqMDG_<ENV>_TimeTableFile_BdL_<yyyyMMdd>.xml |
| BdL/Current/ | OptiqMDG_<ENV>_PrevDayCapAndVolTradFile_BdL_<yyyyMMdd>.xml |
| Block/Current/ | OptiqMDG_<ENV>_AuthorizedPriceFluctuationFile_Block_<yyyyMMdd>.xml |
| Block/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_Block_<yyyyMMdd>.xml |
| Block/Current/ | OptiqMDG_<ENV>_TimeTableFile_Block_<yyyyMMdd>.xml |
| Block/Current/ | ExchangeRates_<yyyyMMdd>_Block.xml |
| Commodities/Current/ | OptiqOEG_<ENV>_SBETemplate_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_SBETemplate_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_OpenInterestFile_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_OpenInterestFile_CommodityDerivatives_Power_<yyyyMMdd>.xml |

| Output folder path | File naming convention |
|---|---|
| Commodities/Current/ | OptiqMDG_<ENV>_OpenInterestFile_Commodity_Other_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_ReferenceSpreadsFile_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_CashTickSizeReferentialFile_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_TimeTableFile_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_DerivativesStandingDataFile_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | OptiqMDG_<ENV>_DerivativesTickSizeFile_Commodities_<yyyyMMdd>.xml |
| Commodities/Current/ | **NIM1_**<ENV>_<yyyyMMdd>_<version>.csv (InstrumentMappingFile) |
| Current/ | OptiqMDG_<ENV>_RepoSettlementPriceFile_ALL_<yyyyMMdd>.xml |
| Current/ | OptiqMDG_<ENV>_MemberMappingFile_ALL_<yyyyMMdd>.xml |
| Current/ | IDSCash_<ENV>_MBR_FAMINSTR_<yyyyMMdd>.txt |
| Current/ | IDSCash_<ENV>_Euronext-RLPUniverse_<yyyyMMdd>.csv |
| Current/ | OptiqMDG_<ENV>_CashTickSizeReferentialFile_ALL_<yyyyMMdd>.xml |
| Current/ | IDSCash_<ENV>_LP_OBLIGATIONS_<CountryCode XX>_<yyyyMMdd>_<versionNo>.csv.gz |
| Equities/Current/ | OptiqOEG_<ENV>_SBETemplate_Equities_<yyyyMMdd>.xml |
| Equities/Current/ | OptiqMDG_<ENV>_SBETemplate_Equities_<yyyyMMdd>.xml |
| Equities/Current/ | OptiqMDG_<ENV>_AuthorizedPriceFluctuationFile_Equities_<yyyyMMdd>.xml |
| Equities/Current/ | OptiqMDG_<ENV>_PrevDayCapAndVolTradFile_Equities_<yyyyMMdd>.xml |
| Equities/Current/ | OptiqMDG_<ENV>_TimeTableFile_Equities_<yyyyMMdd>.xml |
| Equities/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_Equities_<yyyyMMdd>.xml |
| Equities/Current/ | ExchangeRates_<yyyyMMdd>_Equities.xml |
| EquityDerivatives/Current/ | OptiqMDG_<ENV>_DerivativesStandingDataFile_EquityDerivatives_<yyyyMMdd>.xml |
| EquityDerivatives/Current/ | OptiqOEG_<ENV>_SBETemplate_EquityDerivatives_<yyyyMMdd>.xml |
| EquityDerivatives/Current/ | OptiqMDG_<ENV>_SBETemplate_EquityDerivatives_<yyyyMMdd>.xml |
| EquityDerivatives/Current/ | OptiqMDG_<ENV>_OpenInterestFile_EquityDerivatives_<yyyyMMdd>.xml |
| EquityDerivatives/Current/ | OptiqMDG_<ENV>_TimeTableFile_EquityDerivatives_<yyyyMMdd>.xml |
| EquityDerivatives/Current/ | OptiqMDG_<ENV>_ReferenceSpreadsFile_EquityDerivatives_<yyyyMMdd>.xml |
| EquityDerivatives/Current/ | OptiqMDG_<ENV>_CashTickSizeReferentialFile_EquityDerivatives_<yyyyMMdd>.xml |
| EquityDerivatives/Current/ | OptiqMDG_<ENV>_DerivativesTickSizeFile_EquityDerivatives_<yyyyMMdd>.xml |
| FixedIncome/Current/ | OptiqOEG_<ENV>_SBETemplate_FixedIncome_<yyyyMMdd>.xml |
| FixedIncome/Current/ | OptiqMDG_<ENV>_SBETemplate_FixedIncome_<yyyyMMdd>.xml |
| FixedIncome/Current/ | OptiqMDG_<ENV>_AuthorizedPriceFluctuationFile_FixedIncome_<yyyyMMdd>.xml |
| FixedIncome/Current/ | OptiqMDG_<ENV>_PrevDayCapAndVolTradFile_FixedIncome_<yyyyMMdd>.xml |
| FixedIncome/Current/ | OptiqMDG_<ENV>_TimeTableFile_FixedIncome_<yyyyMMdd>.xml |
| FixedIncome/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_FixedIncome_<yyyyMMdd>.xml |
| FixedIncome/Current/ | ExchangeRates_<yyyyMMdd>_Fixed_Income.xml |
| Forex/Current/ | OptiqMDG_<ENV>_SBETemplate_Forex_<yyyyMMdd>.xml |
| Forex/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_Forex_<yyyyMMdd>.xml |
| Funds/Current/ | OptiqMDG_<ENV>_SBETemplate_Funds_<yyyyMMdd>.xml |
| Funds/Current/ | OptiqMDG_<ENV>_AuthorizedPriceFluctuationFile_Funds_<yyyyMMdd>.xml |
| Funds/Current/ | OptiqMDG_<ENV>_PrevDayCapAndVolTradFile_Funds_<yyyyMMdd>.xml |
| Funds/Current/ | OptiqMDG_<ENV>_TimeTableFile_Funds_<yyyyMMdd>.xml |
| Funds/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_Funds_<yyyyMMdd>.xml |
| Funds/Current/ | OptiqOEG_<ENV>_SBETemplate_Funds_<yyyyMMdd>.xml |

| Output folder path | File naming convention |
|---|---|
| Funds/Current/ | ExchangeRates_<yyyyMMdd>_Funds.xml |
| IndexDerivatives/Current/ | UTPDerivatives_<ENV>_TotalReturnFuturesConversionParameters_IndexDerivatives_SOD_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | UTPDerivatives_<ENV>_TotalReturnFuturesConversionParameters_IndexDerivatives_SOD_<yyyyMMdd>.csv |
| IndexDerivatives/Current/ | UTPDerivatives_<ENV>_TotalReturnFuturesConversionParameters_IndexDerivatives_EOD_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | UTPDerivatives_<ENV>_TotalReturnFuturesConversionParameters_IndexDerivatives_EOD_<yyyyMMdd>.csv |
| IndexDerivatives/Current/ | OptiqMDG_<ENV>_SBETemplate_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | OptiqMDG_<ENV>_OpenInterestFile_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | OptiqMDG_<ENV>_DerivativesTickSizeFile_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | OptiqMDG_<ENV>_CashTickSizeReferentialFile_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | OptiqMDG_<ENV>_TimeTableFile_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | OptiqMDG_<ENV>_DerivativesStandingDataFile_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | OptiqOEG_<ENV>_SBETemplate_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | OptiqMDG_<ENV>_ReferenceSpreadsFile_IndexDerivatives_<yyyyMMdd>.xml |
| IndexDerivatives/Current/ | *DeliverableBonds_<YYYYMMDD>.csv* |
| Indices/Current/ | OptiqMDG_<ENV>_SBETemplate_Indices_<yyyyMMdd>.xml |
| Indices/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_Indices_<yyyyMMdd>.xml |
| IrishBondsAndFunds/Current/ | OptiqMDG_<ENV>_SBETemplate_IrishBondsAndFunds_<yyyyMMdd>.xml |
| TradeReportingAndPublication/Current/ | OptiqMDG_<ENV>_SBETemplate_TradeReportingAndPublication_<yyyyMMdd>.xml |
| WarrantsAndCertificates/Current/ | OptiqMDG_<ENV>_TimeTableFile_WarrantsAndCertificates_<yyyyMMdd>.xml |
| WarrantsAndCertificates/Current/ | OptiqMDG_<ENV>_SBETemplate_WarrantsAndCertificates_<yyyyMMdd>.xml |
| WarrantsAndCertificates/Current/ | OptiqMDG_<ENV>_AuthorizedPriceFluctuationFile_WarrantsAndCertificates_<yyyyMMdd>.xml |
| WarrantsAndCertificates/Current/ | OptiqMDG_<ENV>_PrevDayCapAndVolTradFile_WarrantsAndCertificates_<yyyyMMdd>.xml |
| WarrantsAndCertificates/Current/ | OptiqMDG_<ENV>_CashStandingDataFile_WarrantsAndCertificates_<yyyyMMdd>.xml |
| WarrantsAndCertificates/Current/ | OptiqOEG_<ENV>_SBETemplate_WarrantsAndCertificates_<yyyyMMdd>.xml |
| Closing_Prices/Current | closing_price_recovery_<yyyyMMdd>_<hhmmdd>.csv |

## 6.5 FILE SPECIFICATIONS

For all details of individual file specifications please reference the latest version of the Euronext Cash and Derivatives Markets – Optiq Files - Interface Specifications – External, on the Euronext Connect Customer Portal.

Also see the latest file specifications, Euronext Markets – Member Mapping File Specification, on the Euronext Connect Customer Portal.

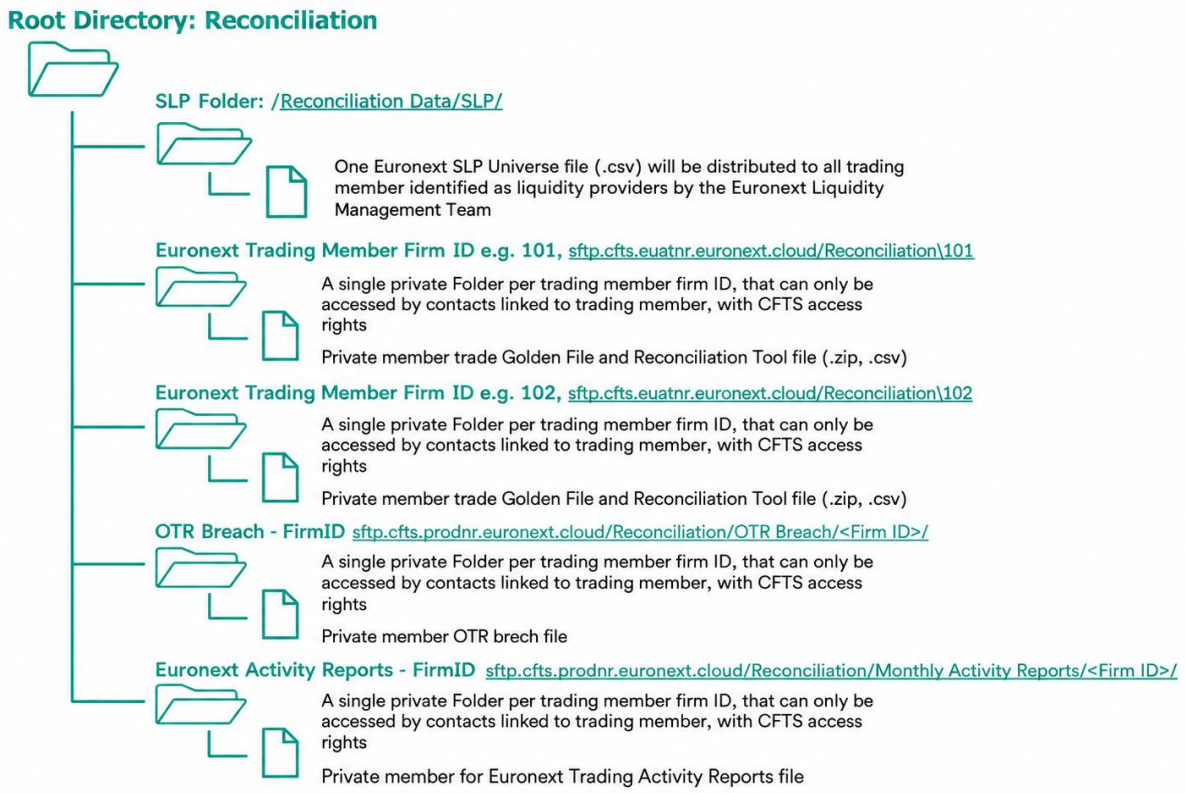
# 7 CFTS RECONCILIATION DATA SERVICE SUMMARY

Euronext CFTS Reconciliation Data service provides key private Optiq trading reconciliation files, per trading member firm ID, that are generated in the event of an incident on the Optiq trading platform.
Private Optiq trading reconciliation files will be available for download, in dedicated folders per trading member, in the event of an incident with the Optiq trading platform.

Within this section, the following additional files are also uploaded in their respective dedicated folders: OTR Breach files, House Orders Below 40k files, and Monthly Activity Reports.

Trading members identified by Euronext as liquidity providers will have access to a Supplementary Liquidity Providers (SLP) folder, to download the Euronext SLP Universe file.

Connectivity to the Reconciliation Data Service can be made through the internet only (see section 3.1).




## 7.1 RECONCILATION DATA FILES PER ENVIRONMENT

Separate domain names will exist per environment.

The files available per environment, in a private folder, per trading member firm ID, are as follows:

| RECONCILIATION DATA FILES PER ENVIRONMENT | **DESCRIPTION** |
|---|---|
| GF (Golden File) trade reconciliation | The file will contain all the trades that occurred in a day for a single member by Optiq segment. There will be one file per day, per member and per segment. Files are only generated in the event of Optiq trading platform incident. |
| RF (Reconciliation File) trade reconciliation tool | The file will contain all trades reported by the Reconciliation Tool in a single alert per trading member by Optiq segment. Multiple files maybe generated per day. |
| SLP\Euronext SLP Universe | This file lists all Euronext Supplementary Liquidity Providers (SLP) instruments by instrument code, Mnemonic and basket. |
| OTR Breach | Daily report notifying the Member of detected Order-to-Trade Ratio (OTR) breach alerts on Euronext Equities markets. The report is generated exclusively when a breach is detected |
| House Orders Below 40k File | Daily report notifying the Member of orders submitted under the "House" account type with a nominal value below €40,000. The report is generated exclusively when a breach is detected |
| Monthly Activity Reports | Monthly report providing Member activity statistics (SID Cards and Ranking Reports) per market place, product group, instrument and account type, including Rank and Market Share over the last 25 months. |

## 7.2 RECONCILIATION DATA SERVICE DIRECTORY

The reconciliation data service directory can be found under the folder /Reconciliation Data, on the internet CFTS SFTP domain.

## 7.3 RECONCILIATION DATA SERVICE FILE LIST

The table below lists the files that will be made available through CFTS SFTP Reconciliation Data Service for download.

| **OUTPUT SUB-FOLDER PATH** | **FILE NAMING CONVENTIONS** |
|---|---|
| /<Firm ID>/ | GF_<yyyy-MM-dd>-<Firm ID>.zip to be renamed to GF_<yyyy-MM-dd>_<Firm ID>.zip with effective date January 25th 2027 |
| /<Firm ID>/ | RF_<yyyyMMdd>_<hhmmss>_<Firm ID>_<Optiq segment shortname>.ZIP |
| /SLP/ | EURONEXT_SLPUNIVERSE-<yyyyMMdd >.csv |
| /OTR Breach/ | <yyyyMMdd>_Equities_OTR_<MemberName>_<FirmID>.xlsx<br><yyyymmdd>_Bonds_HouseOrdersBelow40k_<MemberName>_<FirmID>.xlsx<br><yyyymmdd>_Bonds_LPOrdersBelow40k_<MemberName>_<FirmID>.xlsx |

| | |
|---|---|
| / Monthly Activity Reports / | SID_Card_Cash_<MemberName>_<FirmID>_<yyyymm>.xlsx<br>Ranking_Report_Cash_<MemberName>_<FirmID>_Total_<yyyymm>.xlsx<br>SID_Card_Derivatives_<MemberName>_<FirmID>_<yyyymm>.xlsx<br>Ranking_Report_Derivatives_<MemberName>_<FirmID>_A_<yyyymm>.xlsx<br>Ranking_Report_Derivatives_<MemberName>_<FirmID>_E_<yyyymm>.xlsx |

## 7.4 FILE SPECIFICATIONS

Individual Reconciliation Data Service file specifications are detailed the sections below.

### 7.4.1 Golden File (GF) Specification

The Euronext Golden File lists all clients trades that were effectively sent by Euronext to Central Counterparty Clearing Houses at the time of its generation. It provides a complete overview of compensated operations at a given moment. This file is only created in the exceptional case where the functioning of the transaction integration chain at Euronext is altered.

Its format consists of a flat csv file, delimited by a semi-colon. For a given client, there will be as many files as Optiq segments. All trading member's csv files will be zipped into a single file for download. The file will be available through CFTS Reconciliation Data Service using SFTP with SSH key authentication, , and on MyEuronext CFTS.

The first line of the file contains the field names delimited by a semi-colon.

The second line of the file contains a header and detail dividing line with dashes.

- File Availability: Internal Euronext trading reconciliation incident.
- Scope of contents: All trades per member.
- Intraday updates: This file will be generated upon an internal Euronext trade reconciliation incident being raised.

File name will follow this template:

GF_<yyyy-MM-dd>_<Firm ID>.zip

Where <ENV> can take the following values: Production, Current EUA (vEUA), Next EUA (p-EUA).

| Field | Short Description | Format | Len | Values | Presence |
|---|---|---|---|---|---|
| TRADE_DATE | Trade execution date (YYYYMMDD) | Date | 12 | 20221017 | Mandatory |
| TRADE_TIME | Trade execution date and time in microseconds | Unsigned integer 64 | 12 | 2022-10-17T08:07:46.707265Z | Mandatory |
| EXEC_ID | Trade execution identifier | Unsigned integer 32 | 10 | 12289 | Mandatory |
| MNEMONIC | Instrument mnemonic code | String | 5 | ENX | Mandatory |
| ISIN | ISIN Code | String | 30 | NL0006294274 | Mandatory |
| SYMBOL_INDEX | Exchange identification code of the instrument/contract. | Integer | 10 | 1143559 | Mandatory |
| SEGMENT | Optiq Segment short name. An Optiq segment is a universe of instruments sharing common trading properties. | String | 3 | EQU | Mandatory |

| Field | Short Description | Format | Len | Values | Presence |
|---|---|---|---|---|---|
| AXX_TYPE | Account Type | String | 8 | CLIENT | Mandatory |
| CCP | Central counterparty clearing houses (CCPs) short name | String | 11 | Euronext Clearing | Mandatory |
| *ORDER_ID | Numerical order identifier assigned by the Post Trade Box (where cleared operations are stored) | Numeric | 8 | 4353 | Mandatory |
| CLIENT_ORDER_ID | Client Order Id | Numeric | 8 | -1,16E+10 | Mandatory |
| SIDE | Buy / Sell | String | 1 | B or S | Mandatory |
| PRICE | Price with decimal | Float | 10 | 75.0 | Mandatory |
| QTY | Quantity with decimal | Float | 10 | 350 | Mandatory |
| VALUE | PRICE multiplied by QTY | Float | 10 | 236250.00 | Mandatory |
| CURRENCY | Currency acronym | String | 3 | EUR | Mandatory |
| LAST_MARKET | Market identifier code | String | 4 | XPAR | Mandatory |
| TVTIC | Trading Venue Transaction Identification Code | String | 52 | 513BMG45584102 0 | Mandatory |

* This identifier is not the Optiq Order_ID, however there is a formula to deduce this one from that Order_ID provided in the Golden File.

### 7.4.2 Reconciliation File (RF) Specification

The Euronext Reconciliation Tool File lists all trades that were booked into Optiq but not sent by Euronext to Central Clearing Counterparty Houses at the time of its generation. It provides a full overview of all operations still pending (not fully integrated) within Optiq and not yet cleared. This file is only created in the exceptional case where the functioning of the transaction integration chain at Euronext is compromised.

Its format consists of a is flat csv file, delimited by a semi-colon. It provides a list of trades per member by Optiq segment. All trading member's csv files will be zipped into a single file for download. The file will be available through CFTS Reconciliation Data Service using SFTP with SSH key authentication, and on MyEuronext CFTS.

The first line of the file contains the field names delimited by a semi-colon.

- File Availability: Internal Euronext trading reconciliation incident.
- Scope of contents: Trades booked by clients but not cleared per member.
- Intraday updates: This file will be generated upon an internal Euronext trade reconciliation incident being raised.

File name will follow this template:

RF_<yyyyMMdd>_<hhmmss>_<Firm ID>_<Optiq segment shortname>.ZIP

Where <ENV> can take the following values: Production, Current EUA (vEUA), Next EUA (p-EUA).

| Field | Short Description | Format | Len | Values | Presence |
|---|---|---|---|---|---|
| TRADE_DATE | Trade execution date (YYYYMMDD) | Date | 12 | 20221017 | Mandatory |
| TRADE_TIME | Trade execution date and time in microseconds | Unsigned integer 64 | 12 | 2022-10-17T08:07:46.707265Z | Mandatory |
| EXEC_ID | Trade execution identifier | Unsigned integer 32 | 10 | 12289 | Mandatory |
| MNEMONIC | Instrument mnemonic code | String | 5 | ENX | Mandatory |

| Field | Short Description | Format | Len | Values | Presence |
|---|---|---|---|---|---|
| ISIN | ISIN Code | String | 30 | NL0006294274 | Mandatory |
| SYMBOL_INDEX | Exchange identification code of the instrument/contract. | Integer | 10 | 1143559 | Mandatory |
| SEGMENT | Optiq Segment short name. An Optiq segment is a universe of instruments sharing common trading properties. | String | 3 | EQU | Mandatory |
| AXX_TYPE | Account Type | String | 8 | CLIENT | Mandatory |
| CCP | Central counterparty clearing houses (CCPs) short name | String | 11 | Euronext Clearing | Mandatory |
| *ORDER_ID | Numerical order identifier assigned by the Post Trade Box (where cleared operations are stored) | Numeric | 8 | 4353 | Mandatory |
| CLIENT_ORDER_ID | Client Order Id | Numeric | 8 | -1,16E+10 | Mandatory |
| SIDE | Indicates the side of the order. Buy, Sell, Cross | String | 1 | Sell | Mandatory |
| PRICE | Price with decimal | Float | 10 | 75.0 | Mandatory |
| QTY | Quantity with decimal | Float | 10 | 350 | Mandatory |
| VALUE | PRICE multiplied by QTY | Float | 10 | 236250.00 | Mandatory |
| CURRENCY | ISO Currency Code | String | 3 | EUR | Mandatory |
| LAST_MARKET | Market identifier code | String | 4 | XPAR | Mandatory |
| TVTIC | Trading Venue Transaction Identification Code | String | 52 | 513BMG455841020 | Mandatory |
| LOGICAL_ACCESS_ID | Trading member's logical access identifier | Unsigned integer 32 | 10 | 9999999 | Mandatory |

### 7.4.3 EURONEXT SLP Universe FILE

The Euronext SLP (Supplementary Liquidity Providers) File, is flat csv file, delimited by a semi-colon. It provides a list of instruments codes with their associated index. The file will be available through CFTS Reconciliation Data Service using SFTP with SSH key authentication, and on MyEuronext CFTS.

The first line of the files contains the internal filename and application reference, date and time the file was created.

The second line of the file contains the field names delimited by a semi-colon.

The last line of the file contains the internal filename and application reference, date and time the file was created, and the number of data rows contained within the file.

- File Availability: Available 24/7.
- Scope of contents: All SLP instruments.
- Intraday updates: This file will be updated overnight.

File name will follow this template:

EURONEXT_SLPUNIVERSE-<yyyyMMdd >.csv

| Field | Short Description | Format | Len | Values | Presence |
|---|---|---|---|---|---|
| InstrumentCode | Instrument code | String | 12 | FR0000130809 | Mandatory |

| Field | Short Description | Format | Len | Values | Presence |
|---|---|---|---|---|---|
| TradingCode | Trading instrument code | String | 12 | FR0000130809 | Mandatory |
| Mnemonic | Instrument mnemonic code | String | 5 | GLE | Mandatory |
| Name | Instrument name | String | 30 | SOCIETE GENERALE | Mandatory |
| Basket | Basket identifier | String | 1 | A | Mandatory |

### 7.4.4 EURONEXT OTR Breach FILE

Daily report informing the Member that its activity on Euronext Equities markets has generated Order-to-Trade Ratio (OTR) breach alerts.

The purpose of this report is to notify the Member of detected breaches and recommend that it reviews and adjusts its trading behaviour and/or algorithms as soon as possible in order to avoid future charges related to OTR breaches.

This file is generated exclusively when breach activity has been detected.

### 7.4.5 EURONEXT HOUSE ORDERS BELOW 40K FILE

Daily report informing the Member that orders submitted to Euronext markets under the “House” account type have been identified with a nominal value below €40,000.

The purpose of this report is to notify the Member of such activity and recommend that it reviews and adjusts its trading behaviour and/or algorithms, where appropriate, in order to avoid potential future charges.

This file is generated exclusively when breach activity has been detected.

### 7.4.6 EURONEXT MONTHLY MEMBER ACTIVITY REPORT FILE

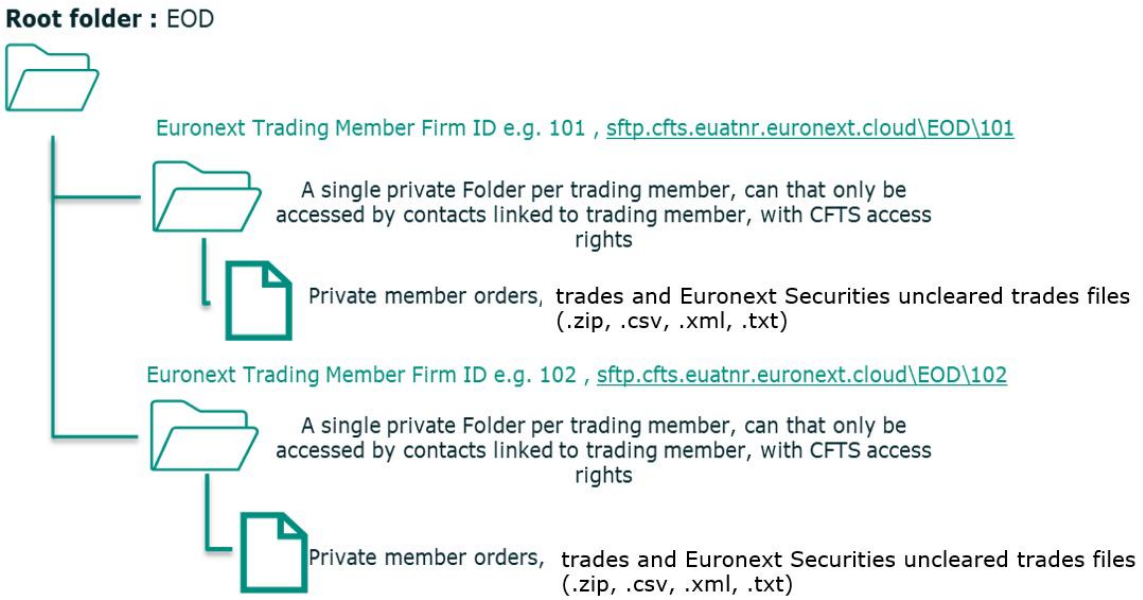
**SID Cards:** Monthly and YTD Member activity per market place/product group/instrument/account type with Rank and Market Share

**Member Ranking Reports:** Monthly member activity over last 25 months per market place/product group with Rank and Market Share

# 8 CFTS EOD DATA SERVICE SUMMARY

Euronext CFTS EOD (End Of Day) Data service allows trading member firms to retrieve and download files, containing order and trade information belonging to its member firm code. Files are distributed by CFTS into private data folders per trading member firm ID. EOD files will be available for downloading on a daily basis.

Connectivity to the EOD Data Service can be made through the internet only (see section 3.1).




## 8.1 EOD DATA FILES PER ENVIRONMENT

Separate domain names will exist per environment.

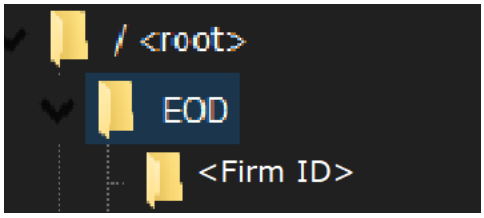
The files available per environment, in a private folder, per trading member firm ID, are as follows:

| **EOD** DATA FILES PER ENVIRONMENT | **DESCRIPTION** |
|---|---|
| FTRRM_<Firm ID>_<yyyyMMdd>.zip | Contains all trades, per trading member firm ID, executed during the last trading day in the Optiq Matching Engine in Optiq Cash segments. The files 'FTRRM*.txt' are always generated, even if empty, ensuring every firm has a file each day regardless of the trading activity.<br><br>Note: In case of Takeover Bid / IPO / Direct Distribution, the trades are excluded from End-Of-Day trade files |
| TradesFile_<FirmId>_<YYYYMMDD>.xml | Contains all trades, per trading member firm ID, executed during the last trading day in the Optiq Matching Engine in Optiq Cash segments.<br><br>File planned for replacement of the FTRRM legacy file. TradesFile will be made available from January 25th 2027 onwards. |

| | |
|---|---|
| FORDCXML_<Firm ID>_<yyyyMMdd>.zip | Contains all orders, per trading member firm ID, remaining in the book for the next Trading Day for the Equities, Funds and Fixed Income Optiq segments.<br><br>The files 'FORDCXML*.txt' are always generated, even if empty, ensuring every firm has a file each day regardless of the trading activity. |
| FORDCWXML_<Firm ID>_<yyyyMMdd>.zip | Contains all orders, per trading member firm ID, remaining in the book for the next Trading Day for the Warrants & Certificates Optiq segment. |
| LCH_<Environment>_WCUTL_<Firm ID>_<yyyyMMdd>_<version no>.zip | Contains all uncleared Warrants & Certificates trade Legs generated by Euronext Securities and sent to the settlement platforms, per trading member firm ID. |
| LCH_<Environment>_WCNET_<Firm ID>_<yyyyMMdd>_<version no>.zip | Contains all uncleared net instructions generated by Euronext Securities due to daily netting (record 00280) and regularizations (record 00281) |
| LCH_<Environment>_WCOBF_<Firm ID>_<yyyyMMdd>_<hhmmss>.zip | The aim of this file is to give each Trading Member Firm the detail of its Settlement Outbound, MT5xx messages sent by Euronext Securities which related to both records 00280 and 00281 of the NET file, per trading member firm ID. |

## 8.2 EOD DATA SERVICE DIRECTORY

The EOD data service directory can be found under the folder /EOD, on the internet CFTS SFTP domain.




## 8.3 EOD DATA SERVICE FILE LIST

The table below lists the files that will be made available through CFTS SFTP EOD Data Service for download.

| OUTPUT SUB-FOLDER PATH | FILE NAMING CONVENTIONS |
|---|---|
| /<Firm ID>/ | FTRRM_<Firm ID>_<Date YYYYMMDD>.zip |
| /<Firm ID>/ | TradesFile_<FirmId>_<YYYYMMDD>.xml |
| /<Firm ID>/ | FORDCXML_<Firm ID>_<Date YYYYMMDD>.zip |
| /<Firm ID>/ | FORDCWXML_<Firm ID>_<Date YYYYMMDD>.zip |
| /<Firm ID>/ | LCH_<LCH SA Environment>_WCUTL_<Firm ID>_<Date YYYYMMDD>_<version no>.zip |
| /<Firm ID>/ | LCH_<LCH SA Environment>_WCNET_<Firm ID>_<Date YYYYMMDD>_<version no>.zip |
| /<Firm ID>/ | LCH_<LCH SA Environment>_WCOBF_<Firm ID>_<yyyyMMdd>_<hhmmss>.zip |

## 8.4 EOD FILE ATTRIBUTES

The EOD file attributes, market and file type, can be used in conjunction with the cfts/file-search API, to filter file search responses based on the attribute value(s).

| File | Description | Market | File Type | Format | Internal ZIP Format |
|---|---|---|---|---|---|
| FTRRM | Trades (RM) in legacy format (Equities, Funds, Fixed Income, Warrants & Certificates, Block) | Regulated Market | Trades | zip | TXT |
| TradesFile | Trades (RM) in XML Optiq format (Equities, Funds, Fixed Income, Warrants & Certificates, Block) | Regulated Market | Trades | XML | XML |
| FORDCXML | Active Orders (RM) in XML Optiq format (Equities, Funds, Fixed Income) | Regulated Market | Active Orders | zip | XML |
| FORDCWXML | Active Orders (Warrant) in XML Optiq format | Warrants | Active Orders | zip | XML |
| LCH_EP_WCUTL | New Uncleared Trades captured by Euronext Securities (Gross) | Warrants | LCH | zip | CSV |
| LCH_EP_WCNET | New Uncleared Net Instructions generated by Euronext securities due to daily netting and regularizations | Warrants | LCH | zip | CSV |
| LCH_EP_WCOBF | All MT5xx messages sent by Euronext Securities which related to both records 00280 and 00281 of the NET file | Warrants | LCH | zip | TXT |

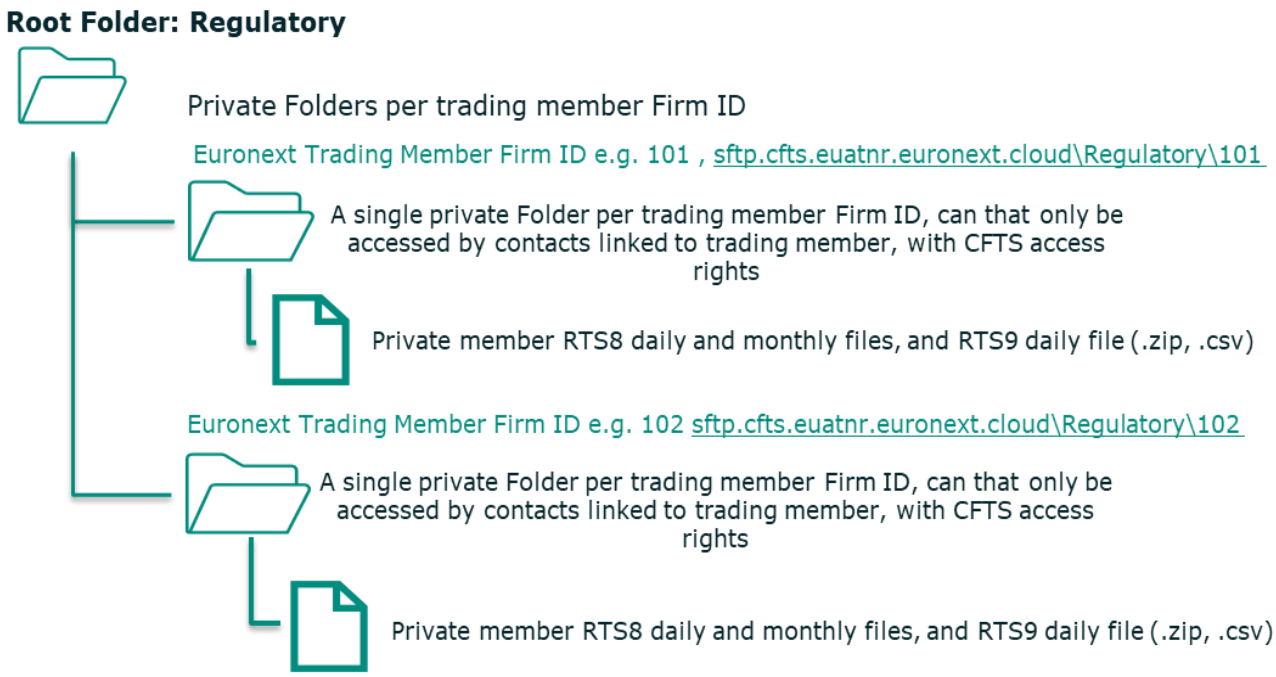
## 8.5 FILE SPECIFICATIONS

For all details of individual file specifications please reference the latest version of the Euronext Cash Markets - End Of Day Files - Interface Specification - External on the Euronext Connect Customer Portal.

# 9 CFTS REGULATORY DATA SERVICE SUMMARY

Euronext CFTS Regulatory Data service allows trading member firms to retrieve and download files, containing, daily and monthly RTS8 Market Making Performance Report, daily RTS9 Order to Trade (OTR) Ratio reports and REMIT Transaction reporting, all belonging to its member firm code. The reports are distributed by CFTS into private data folders per trading member firm ID. Regulatory report files will be available for downloading on a daily basis.

Connectivity to the Regulatory Data Service can be made through the internet only (see section 3.1).




## 9.1 REGULATORY DATA FILES PER ENVIRONMENT

Separate domain names will exist per environment.

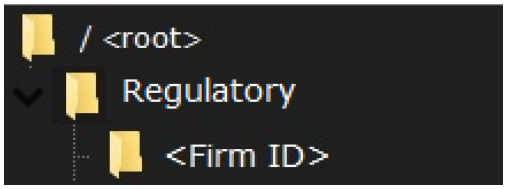
The files available per environment, in a private folder, per trading member firm ID, are as follows:

| REGULATORY DATA FILES PER ENVIRONMENT | DESCRIPTION |
|---|---|
| MMSTATS_<MIC Code>_DAILY_<Firm ID>_<yyyyMMdd>.csv | The Cash market RTS8 detailed daily performance report are produced per operating MIC (XMIL for Borsa Italiana markets) and member, and recorded in separated files, each with fixed-length format. |
| MMSTATS_<MIC Code>_MONTHLY_<Firm ID>_<yyyyMMdd>.csv | The Cash market RTS8 detailed monthly performance report are produced per operating MIC (XMIL for Borsa Italiana markets) and member, and recorded in separated files, each with fixed-length format. |
| MMSTATS_<MIC Code>_<Market Type>_DAILY_<Firm ID>_<yyyyMMdd>.csv | The Derivatives market RTS8 files, will be distinguished from the cash files by having the Market Type value 'D' in the filename. RTS8 detailed daily performance report are produced per operating MIC (XMIL for Borsa Italiana markets) and member, and recorded in separated files, each with fixed-length format. |

| | |
|---|---|
| MMSTATS_<MIC Code>_<Market Type>_MONTHLY_<Firm ID>_<yyyyMMdd>.csv | The Derivatives market RTS8 files, will be distinguished from the cash files by having the Market Type value 'D' in the filename. RTS8 detailed monthly performance report are produced per operating MIC (XMIL for Borsa Italiana markets) and member, and recorded in separated files, each with fixed-length format. |
| OTRSTATS_<MIC Code>_DAILY_<Firm ID>_<yyyyMMdd>.csv | The Cash market RTS9 detailed daily report per member and market, containing a line each time a member triggers an 'OTR breach' or an 'OTR warning' on an instrument. |
| OTRSTATS_<MIC Code>_<Market Type>_DAILY_<Firm ID>_<yyyyMMdd>.csv | The Derivatives market RTS9 files, will be distinguished from the cash files by having the Market Type value 'D' in the filename. RTS9 detailed daily report per member and market, containing a line each time a member triggers an 'OTR breach' or an 'OTR warning' on an instrument. |
| <yyyyMMdd>_REMITTable1_V3_<RRMCODE>_<sequenceNumber>.xml | The REMIT Transaction Reporting File for the Nordic Power Futures market. File produced per member ID and per trading day. REMIT contains instruments, orders and trades. |
| Receipt_<yyyyMMdd>_REMITTable1_V3_<RRMCODE>_<sequenceNumber>.xml | The REMIT Transaction Reporting Feedback File for the Nordic Power Futures market. It refers to the content of the REMIT Transacting Reporting file sent to ACER. |
| MarketShare_<membercode>_<MM>_<yyyyMMdd>.xlsx | The Market share Report file generated by Global Analytics Dataiku application (non ITMS generated). An excel file providing a table with the member volumes/market shares calculated per MICs and split by Continuous, Auctions and totals.<br><br>Note: This file is made available by GA Dataiku application for clients asking it and only made available in CFTS folder by ITMS (for details on file ask GA team) |
| Daily_performance_membercode_YYYYMMDD.xlsx | Daily_performance_membercode_YYYYMMDD.xlsx is the Member Liquidity Report, for monitoring of the performance of the Marker Maker for the provided liquidity in the derivatives markets.<br><br>Note: This file is made available by GA Dataiku application for clients asking it and only made available in CFTS folder by ITMS (for details on file ask GA team |
| SLP_report_<YYYYMMDD>_<membercode>.xlsx<br><br>SLP_report_<YYYYMMDD>_<membercode>.pdf | The SLP Stats Daily Report files generated by Global Analytics Dataiku application (non ITMS generated). An excel file providing the monitoring performance for the liquidity providers clients, plus a PDF document only with very limited information from the full report.<br><br>Note: This files are made available by GA Dataiku application for clients asking it and only made available in CFTS folder by ITMS (for details on file ask GA team). |

## 9.2 REGULATORY DATA SERVICE DIRECTORY

The Regulatory data service directory can be found under the folder /Regulatory, on the internet CFTS SFTP domain.




## 9.3 REGULATORY DATA SERVICE FILE LIST

The table below lists the files that will be made available through CFTS SFTP Regulatory Data Service for download.

| OUTPUT SUB-FOLDER PATH | FILE NAMING CONVENTIONS |
|---|---|
| /<Firm ID>/ | MMSTATS_<MIC Code>_DAILY_<Firm ID>_<yyyyMMdd>.csv |
| /<Firm ID>/ | MMSTATS_<MIC Code>_MONTHLY_<Firm ID>_<yyyyMMdd>.csv |
| /<Firm ID>/ | MMSTATS_<MIC Code>_<Market Type>_DAILY_<Firm ID>_<yyyyMMdd>.csv |
| /<Firm ID>/ | MMSTATS_<MIC Code>_<Market Type>_MONTHLY_<Firm ID>_<yyyyMMdd>.csv |
| /<Firm ID>/ | OTRSTATS_<MIC Code>_DAILY_<Firm ID>_<yyyyMMdd>.csv |
| /<Firm ID>/ | OTRSTATS_<MIC Code>_<Market Type>_DAILY_<Firm ID>_<yyyyMMdd>.csv |
| /<Firm ID>/ | <yyyyMMdd>_REMITTable1_V3_<RRMCODE>_<sequenceNumber>.xml |
| /<Firm ID>/ | Receipt_<yyyyMMdd>_REMITTable1_V3_<RRMCODE>_<sequenceNumber>.xml |
| /<Firm ID>/ | MarketShare_<membercode>_<MM>_<yyyyMMdd>.xlsx |
| /<Firm ID>/ | Daily_performance_membercode_YYYYMMDD.xlsx |

## 9.4 FILE SPECIFICATIONS

For all details of individual file specifications please reference the latest version of the Euronext Cash Markets – Regulatory Reporting RTS8 File - Interface Specification - External and Euronext Cash Markets – Regulatory Reporting RTS9 File – Interface Specification – External, on the Euronext Connect Customer Portal.

# APPENDIX

## A.1 REFERENTIAL DATA SERVICE OPTIQ SEGMENT FOLDER LIST

The below table represents the list of available CFTS Optiq segment folders available at the time of publication.

| OPTIQ SEGMENT |
|---|
| BDL (Bourse de Luxembourg) |
| Commodities (Commodity Derivatives) |
| Equities |
| Equity Derivatives |
| Block (Euronext Block) |
| Fixed Income |
| Forex |
| Funds |
| Index Derivatives |
| Indices |
| Irish Bonds & Funds |
| Trade Reporting and Publication |
| Warrants and Certificates |

## A.2 TROUBLE SHOOTING API RESPONSE CODES

The following table shows the possible return codes from API requests.
For all 400s response codes, please check that;

- your MCA, has granted the API user the CFTS Client Member user role, and the role is approved.
- your user has been assigned the CFTS Referential Data or EOD Service with the access method API.
- the MyEuronext CFTS client ID and client secret match the ones you are using.
- the client secret has not expired.
- the CFTS access token provided through cfts/token has not expired, it expires after 1 hour, you can request a new token, using cfts/token.
- please check the syntax and values used in your command or script.
- where errors persist, use curl -v (verbose) to log command responses.
- Use, curl -I, to include headers in output, if needed for support purposes.

Where the content of the response is empty (content []), please check that the firmId, folderStructure, and any additional parameter values are valid.

| **Return values** | **Description** |
|---|---|
| 200 OK | The **GET** request was successful |
| 201 Created | The **POST** request was successful and the resource is returned as JSON. |
| 204 No Content | The **POST** request was successful and nothing is returned in the body. |
| 400 Bad Request | Bad request status code indicates that the server was unable to process the request due to invalid information sent by the client. The request needs corrected. Please check that the request syntax and values are correct. Check the client ID, client secret and access token are valid. And that the client secret or access token have not expired. On MyEuronext CFTS Access management option, check to user still has the Referential Data or EOD service selected with the access method API, and the client secret expiry date. Generate a new client ID and secret if necessary.<br><br>If the firmId parameter does not have the correct format, the response will be returned, {"code":"VALIDATION_FAILED","message":"Validation failed for object='fileSearchRequest'. Error count: 1","fieldErrors":[{"code":"REGEX_PATTERN_VALIDATION_FAILED","message":"Field firmId can't have only space and max length is 8 characters.","property":"firmId","rejectedValue":123456789"}]} |
| 401 Unauthorized | The user is not authenticated, a valid user token is necessary. The API access token may have expired, regenerate an access token using cfts/token. Check the client ID, client secret and access token are valid. And that the client secret or access token have not expired. On MyEuronext CFTS Access management option, check to user still has the Referential Data or EOD service selected with the access method API, and the client secret expiry date. Generate a new client ID and secret if necessary.<br><br>A request to download files contains more then 10 files, VALIDATION FAILED, size must be between 0 and 10, reduce the number of files in the request to 10. |
| 403 Forbidden | Forbidden response status code indicates that the server understands the request but refuses to authorize it. e.g., the user is not allowed to download a file. Maybe to due an invalid client ID or client secret, or expired access token. Regenerate your access using cfts/token with your client ID and client secret. Also check MyEuronext CFTS Access Management option, that the user has a CFTS Client member user role, the CFTS service assigned and the access method API selected.<br><br>Where a user does not have the authorization to firm or service the following response will be returned, {"httpStatus":"FORBIDDEN","code":403,"message":"Denied user |

| Return values | Description |
|---|---|
| | access.","path":"/curlapi/service/<cfts api name>"} Check MyEuronext CFTS Access Management for the user assigned CFTS services. |
| 404 Not Found | A resource could not be accessed, e.g., a file could not be found. |
| 405 Method Not Allowed | The request is not supported. |
| 422 Unprocessable | The server understands the content type and syntax of the request entity, but still server is unable to process the request for some reason. Please check that the request syntax and values are correct. |
| 500 Server Error | The 500 Internal server error status code indicates that the processing of the request on the Euronext CFTS server failed unexpectedly. If you are able to replicate this error consistently, please report it to Euronext. |
| curl(3) | URL_MALFORMAT<br><br>The URL was not properly formatted. Check the syntax of the command, ensure quotes " ", correctly shape the header parameters |
| curl(6) | Couldn't resolve host. The given remote host was not resolved. Check the URL name and syntax;<br><br>**Internet** : api.cfts.peua.euatnr.euronext.cloud/euatnr/token/token,<br><br>**CMC/Colocation**: cftsoptiq-eua.euronext.com/token/token<br><br>Check that access to internal domains are not blocked on your network. If the URLs are correct and the error persists, use, curl -v, and report ,the issue with a copy of the verbose log to Euronext, provide the environment, CFTS user contact name and email address. |
| curl(28) | Operation timeout. The specified time-out period was reached according to the conditions. Failed to connect to url port 80 after 87280 ms: Couldn't connect to server.<br><br>Check that access to internal domains are not blocked on your network. If the error persists, use, curl -v, and report the issue with a copy of the verbose log to Euronext, provide the environment, CFTS user contact name and email address. |
| curl(23) | curl: (23) Failed writing received data to disk/application.<br><br>if you are trying to save a file and getting this response, use curl –-proxy option.<br><br>curl -s --proxy "http://<your local proxy>" -i -o <a_filename>.<ext> “http://<file preSigned URL>” |

## A.3 DOCUMENT HISTORY TABLE

| REVISION NO | DATE | AUTHOR | CHANGE DESCRIPTION |
|---|---|---|---|
| 5.17.0 | 1 Aug 2022 | IT Market Services – COL - WMA | Creation of the document. |
| 5.18.0 | 15 Sep 2022 | IT Market Services – COL | Update to CFTS SPTF Domain names, diagrams and SSH Key generation screen shots. Distribution of file, SBETemplate_ALL, no longer valid. Include CFTS Referential data sub-folder and filenames combined table provided. Financial Derivatives Optiq segment discontinued. |
| 5.19.0 | 07 Oct 2022 | IT Market Services – COL | Included Reconciliation and Corporate Action ETFs services |
| 5.20.0 | 28 Oct 2022 | IT Market Services – COL | Included CFTS EOD (End Of Day) Data service, section 7 |
| ‘5.20.1 | 6 Dec 2022 | IT Market Services – COL | Correction to CFTS internet SFTP domain, sftp.cfts.prodnr.euronext.cloud. Populated production domain name IP addresses |
| 5.21.0 | 16 Dec 2022 | IT Market Services – COL | The following changes have been made to this version of the document:<br>■ In CFTS Service Domain names: IP Address and Domain Name updated |
| 5.21.1 | 16 Dec 2022 | IT Market Services – COL | Section 5.4 Correction to AuthorizedPriceFluctuationFile filename prefix changed to OptiqMDG_<ENV>_AuthorizedPriceFluctuationFile |
| 5.21.2 | 13 Jan 2023 | IT Market Services - COL | Inclusion of MyEuronext CFTS web based application access and section 8 Regulatory Data Service |
| 5.23.0 | 7 Mar 2023 | IT Market Services – COL | Inclusion of LP_OBLIGATIONS file in the Referential Data Service, Current, folder |
| 5.25.0 | 9 Aug 2023 | IT Market Services – COL | Inclusion of API access method, sections 2.3, 3.1, 3.2 and 5. |
| 5.30.0 | 13 Nov 2023 | IT Market Services - COL | Correction to typo in curl command sample, 5.1.5.1, filNames, fileNames. Addition of section 3.4 API Access Issues to include preSigned. Update to section 7.4.2 Reconciliation File specification inclusion of Logical_Access_ID field. And update to side and currency field descriptions. Correction to 6.4 Referential data service file list for BdL<br>Section 9 Regulatory Service, Derivatives market RTS8 and RTS9 files will be made available. |
| 5.35.0 | 3 Jul 2024 | IT Market Services – WMA | Addition of “Current EUA” (vEUA) environment which is available through CMC/Colocation network and CFTS AWS Lambda function using SFTP access method |
| 5.36.0 | 18 Sep 2024 | IT Market Services – FPI | Addition of the supported cryptographic algorithms used in CFTS SFTP in section “2.2 - CFTS SFTP Service Access”. |
| 5.38.0 | 25 Sep 2024 | IT Market Services – FPI | Update of the supported cryptographic algorithms TransferSecurityPolicyRestricted-2020-06, used in CFTS SFTP in section “2.2 - CFTS SFTP Service Access”. |
| 5.353.0 | 30 Jan 2025 | IT Market Services – NTDP | The following sections were updated:<br>■ Section 9 CFTS Regulatory Data Service Summary: updated to add the newly available regulatory file REMIT |
| 5.353.1 | 10 Feb 2025 | IT Market Services – MRO | ■ References to LCH SA are replaced by Euronext Securities for Settlement, Euronext Clearing as CCP;<br>■ Correction in 8.1, removed reference to OTC trades |

| REVISION NO | DATE | AUTHOR | CHANGE DESCRIPTION |
|---|---|---|---|
| 5.355.0 | 23 Apr 2025 | IT Market Services – FSI - MPE | The following changes have been made to this version of the document:<br>in Referential Data Service Directory<br>▪ added ClosingPrices directory<br>in Referential Data Service File List:<br>▪ added file DeliverableBonds_<YYYYMMDD>.csv<br>▪ added file closing_price_recovery_<yyyyMMdd>_<hhmmdd>.csv |
| 5.358.0 | 26 Sept 2025 | IT Market Services | The following changes have been made to this version of the document:<br>• Section 9 CFTS Regulatory Data Service Summary: updated to add the newly available regulatory files Market Share and Daily Performance (produced by Global Analytics Dataiku application)<br>• In Section 6 CFTS Referential Data Service Summary:<br>○ updated to add the newly available InstrumentMappingFile - NIM1_<ENV>_<yyyyMMdd>_<version>.csv ( ownership of the file and production by ENX Clearing application and just moved to CFTS folder by ITMS)<br>○ updated to add the newly available files OptiqMDG_<ENV>_OpenInterestFile_CommodityDerivatives_Power_<yyyyMMdd>.xml and OptiqMDG_<ENV>_OpenInterestFile_Commodity_Other_<yyyyMMdd>.xml (ownership of the file and production by ENX Clearing application and just moved to CFTS folder by ITMS) |
| 5.358.1 | Oct 2025 | IT Market Services | The following changes have been made to this version of the document:<br>• In Section 9 CFTS Regulatory Data Service Summary: updated to add the newly available files "SLP Stats Daily Report" files (produced by Global Analytics Dataiku application). |
| 6.361.0 | 29 Oct 2025 | IT Market Services - MKO | The following changes have been made to this version of the document:<br>• In Section 8.4 EOD File Attributes: corrected filenames to LCH_EP_WCUTL, LCH_EP_WCNET, LCH_EP_WCOBF;<br>• In Section 6 CFTS Referential Data Service Summary:<br>○ Updated to add the newly available Exchange Rates File |
| 6.365.0 | 1 Apr 2026 | IT Market Services - MRO | The following changes have been made to this version of the document:<br>Section 8.1 CFTS EOD Data Service Summary:<br>• FORDCXML*.txt and FTRRM*.txt are generated in any case, even if there are no orders /trades (files are empty in these cases);<br>• FTRRM*.txt do not include trades from Takeover Bid / IPO / Direct Distribution. |
| 6.367.0 | 3 Jun 2026 | Euronext – O.C.S. | Section 7 – CFTS Reconciliation Data Service Summary:<br>▪ Added files Euronext OTR Breach file, Euronext House orders below 40k file, Euronext LP orders below 40k file and Euronext Monthly Member Activity Report file. |
| 6.369.0 | 9 Sept 2026 | IT Market Services | Section 7 – CFTS Reconciliation Data Service Summary:<br>▪ Removed file Euronext LP Orders Below 40k file |

| REVISION NO | DATE | AUTHOR | CHANGE DESCRIPTION |
|---|---|---|---|
| 6.370.0 | 13 Oct 2026 | IT Market Services | Section 7 CFTS Reconciliation Data Service Summary :<br>▪ in Reconciliation Data Service File List, described Golden File renaming from GF_<yyyy-MM-dd>-<Firm ID>.zip to GF_<yyyy-MM-dd>_<Firm ID>.zip with effective date January 25th 2027<br>Section 8 CFTS EOD Data Service Summary:<br>▪ added details on the new TradesFile planned for replacement of the FTRRM legacy file, which will be made available from January 25th 2027 onwards. |