Information Systems Guide

OMIClear

Version:	1.1
Date of version:	June 20, 2014

Version Index

Date	Version	Description of change
18.11.2013	1.0	Document creation
20.06.2014	1.1	Content revision and update

Contents

1   Introduction

This document is a reference guide for users of OMIClear software platforms and communications infrastructure. The document aims to clarify how technological access to OMIClear Clearing system and other information extraction systems is accomplished. The following points are highlighted:

1. Specification of access solutions to OMIClear clearing system, OMIClear Website and OMIClear FTP;
2. Comparison of the different options for insight giving on the best suitable access solution in each case;
3. Procedures for access requests and user support;
4. Specification of technical requirements for the different OMIClear systems;
5. Description of possible connectivity types to OMIClear;

Targeting points above, the document is structured in 3 sections:

- Systems accesses description (chapter 2);
- Systems accesses requirements (chapter 3);
- Available connectivity types (chapter 4);

This document and the others referenced in it are available on OMIClear website, at the following address: http://omiclear.pt/Downloads/tabid/170/language/en-GB/Default.aspx

2 Systems access description

OMIClear has available different software solutions that must be seen as being part of one from two distinct groups:

a. The main operational platform; or
b. Complementary information extraction platforms.

MiClear is the main platform that supports OMIClear´s activities of CCP, clearing, risk management and settlement and it is accessible for all participants in those services. It is the deal registration platform and here the daily clearing operations are executed and relevant information made available to members. MiClear is the only system part of the main operational group and every member may have one or more active user accounts in this system.

The second group - complementary information extraction platforms - are other solutions from where some OMIClear information can be retrieved. These systems retrieve information from MiClear so they do not add new clearing content, just another access method and in another format. Currently there are two systems in this group: OMIClear website and OMIClear FTP. These contain some additional data coming from the OMIP markets which also provide some general information to these platforms. For a better understanding on how OMIClear systems fit together and their available interfaces follows diagram 1.
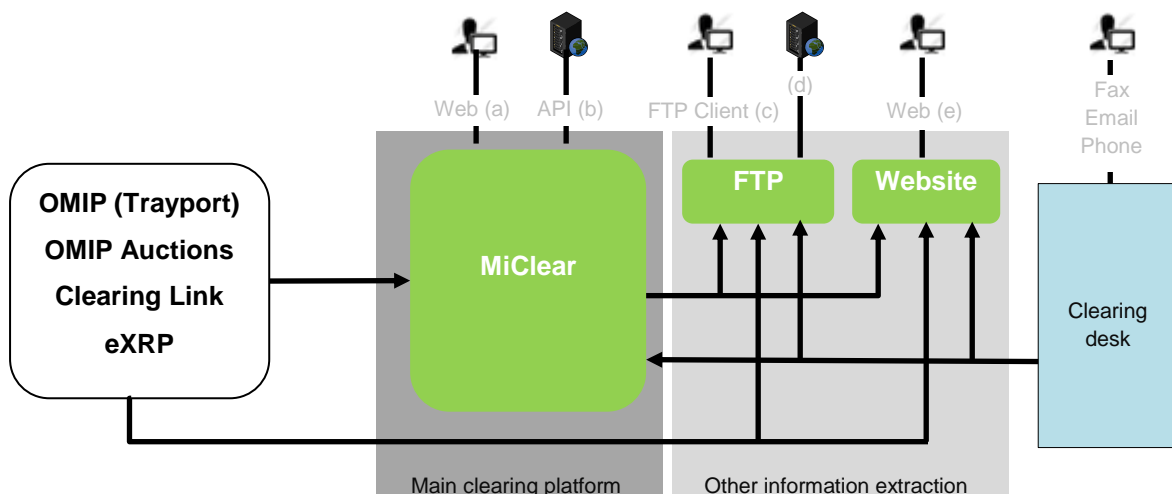

Diagram 1 - OMIClear systems and interface architecture

Looking to the diagram it schematizes deals coming from different sources (OMIP Trayport platform, OMIP Auctions, ClearingLink and eXRP) entering on the Miclear platform. Here daily operations are executed and part of the generated information is used by FTP and Website platforms for other information extraction solutions.

Next subchapters will approach on each of OMIClear system, making emphasis on the available interfaces (marked as (a), (b), (c), (d) and (e) on diagram 1), when they apply as a solution and what the procedures are to require an access.

2.1 Miclear

Miclear is OMIClear clearing platform, which was specified and developed internally to support OMIClear operations. It is a state of the art system which was carefully tailored to OMIClear's specific requirements and participants needs, being also flexible and scalable in order to support the introduction of new products and markets with reduced time and effort.

MiClear accesses are only available for the participants in OMIClear services. From the user standpoint, the application consists of a web interface with a supporting API for middle and back office integration. It allows extraction of operational reports which can be retrieved from both interfaces. The following report groups are available:

- Billing reports
- Collateral report
- Margining reports
- Markets Information
- Position Reports
- Settlement Reports
- Trade History

The web interface, marked on diagram 1 as (a), permits an easy user-friendly access to reports. This doesn't require programmatic development for the information retrieval. It's available on the following link: https://clearing.omiclear.pt.

After login in, data is available on a windows explorer metaphor interface, providing the ability to navigate between them on an organized and clear way. To obtain a report the user just needs to select the wanted option from an explorer tree and a report header is rendered to provide the input search criteria needed for that report to display. From the web interface

reports can be analysed, searched (also text within a report), exported to XML, CSV, TIFF, DOC, XLS and MHTML, printed and also filtered.

Currently some simple operational actions can also be executed directly on MiClear platform. By example, trade approval from some sources and trade splitting. These operations are only available on the web interface.

The API interface, marked on diagram 1 as (b), provides a programmatic interface for information retrieval from the platform, allowing integration of data from it on other applications / systems. The API is read only so all operations that require to give commands or write / edit existing data must be executed by the web interface.
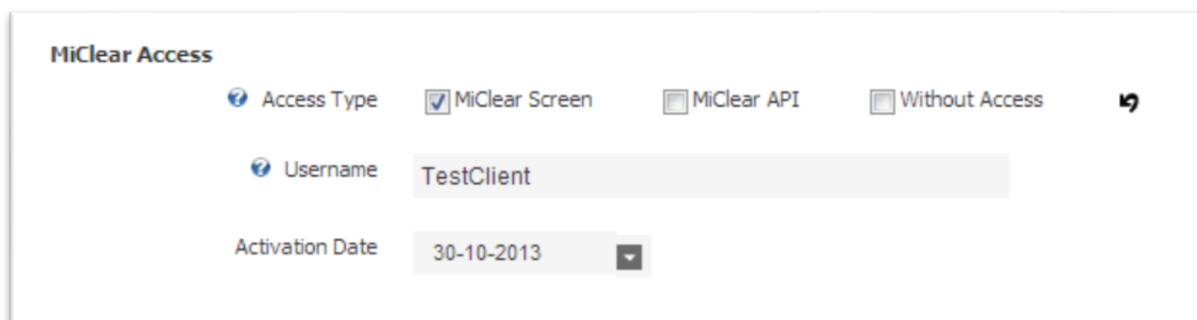
The MiClear API is developed over the standard WebServices technology (WSDL / SOAP / HTTP) and can be accessed with software written in any language that supports this common technology. All communication is encrypted using SSL. The API does not return files but raw xml data which is processed on client side and converted in the desired output / format.

The API specification is provided to users and prospective users on request to the Information Systems department from OMIClear.

The following table resumes the existing accesses available for MiClear.

MiClear Accesses	Web Interface	API
Report extraction	Yes	Yes
Available reports	Billing reports, Collateral reports, Margining reports, Markets Information, Position Reports, Settlement Reports, Trade History	
Action commands	Yes	No
User Interface	Yes	No
Programmatic Interface	No	Yes
Access link	https://clearing.omiclear.pt	WSDL file

Request for accesses to Miclear are made directly on the OMIClear Website using the Member's Corner section. On the creation / configuration of a user, the information of figure 1 must be given and this will be applied on the MiClear platform by OMIClear.

Figure 1 - MiClear access request and configuration on OMIClear website Members Corner.

In case of any problem introducing the wanted configuration on OMIClear's website, Marketing department should be contacted to solve the problem.

2.2   FTP

The FTP platform is prepared to give access to general information and not user (Member) specific. Therefore the data extracted from the FTP includes common clearing information and market informations (provided by OMIP trading platform), being equal for every user who accesses it.

In total the following reports can be extracted:

- Futures Market Data
- Clearing Prices
- Spot Prices
- Initial Margin Input Tables
- Reference Prices

These reports are updated on a daily basis. For more information on FTP reports content please see the "OMIClear FTP Access Guide".

Access to FTP platform can be made through like any usual FTP, so it can be by a final user without development or by a self-created software for automation and own platform integration.

A final end user can use any FTP client to access the files. This access is the one marked as (3) on diagram 1. By example Filezilla and SmartFTP are examples of free clients you can download from the web and install on your PC to access content. There are also free online solutions which do not need any installation, by example http://www.net2ftp.com/ and http://www.ftplive.com/ftp.html. Some internet browsers already include native FTP access support. Take care that none of the software mentioned in this paragraph is supported neither managed by OMIClear so installing and using it is on your own risk.

Programmatic access, marked as (4) on diagram 1, can be developed in any language that supports FTP connections like all usual FTP clients. Data is downloaded in CSV format (comma separated values) and can be parsed from this to the wanted structure.

Subscription to FTP requires the fulfilment of the G05 form. To request for an FTP access Marketing department from OMIClear should be contacted. They will inform about the formal procedure to be followed and the conditions and terms accepted before the access is given.

2.3   Website

From OMIClear Website general market and clearing information is available, also general reports and access to some configuration of Miclear services. The reports can be retrieved from the download section. The Information available is:

- Market Data (Market Bulletin, Spot Prices and Volumes, Clearing Prices, and Derivatives Reference Prices);
- Clearing Info (Calendar, Instrument List, Price list);
- Products Information;
- OMIClear rules;
- MIBEL regulation.
- Registration Models

Downloaded files are in CSV, PDF, WORD or EXCEL format. Some files are downloaded together in a ZIP format. To view this files use an unzip application to retrieve files.

Another relevant feature is the Member's Corner functionality. Member's Corner is an operational tool available online that allow members to manage the admission and maintenance process, and also to store process related documents or to add/remove the company operational users.

After a OMIClear member registers to the website, OMIClear will give access to his private sector on the site for a new user, namely the company supervisor and responsible for upload / update of relevant information.

1) Once this person has access to the Members Corner, the first thing to do is create a "New Member" (in the image "OMIP_Clearing") in which several information has to be uploaded: name, head office information (address, commercial registration number, VAT number…), share capital information (amount, entity type, articles of association, certificate of incorporation…) and invoicing information.

2) The second step is to create a "New Membership Type" (in the image "Clearing Member") and fill in all the information about it: participation model (admission request, legal documents…), company financial information (rating notations, annual reports, audited accounts…), technical and operational conditions (financial collateral agreement, organisational structure, members code…) and Authorised Representative and Clearing & Settlement Manager information (Models C07 and C08 and CVs).

3) In the third step of the process, several users and Clearing Accounts can be created by just clicking in "New Person" (in the image "Persons") or "New Account" (in the image "Accounts"). In each new person created in the Members Corner, some information about the users should be provided, being also possible to manage the access to the Miclear System in this very same page. When creating a new Clearing Account, a code for each one is needed.

Figure 1 – Miclear user management on OMIClear Website

When this process is completed and if a Trading Member creates his own Trading Account (from OMIP market) the link between the Trading Account and the Clearing Account can also be done through the Members Corner. These documents and information should be modified or substituted directly on the website when the company or people details change.

OMIClear Website is reachable from the most common web browsers, this is the (e) access marked on diagram 1, on the following links: www.omiclear.eu; www.omiclear.pt. For now downloads are available for all users (registered or not). This information is available for final

users who accesses the website but is not prepared for programmatic integration and automation with external systems.

3 Systems Access Requirements

Each platform access method has its own requirements. Some were already approached on the previous section but next requirements are listed together for each access type on all OMIClear platforms.

3.1 MiClear access requirements

As detailed before in this document, MiClear has two access methods: Web interface and API. Both have the following requirements (divided by logistic and technological requirements):

- **Access requirements:**

  - Be a participant or a prospective participant in OMIClear services;
    More on how to become an OMIClear member can be found on OMIClear Website.

  - Have a valid username and password;
    MiClear passwords follow a secure password policy. Complete description of password policy is available in Miclear user guide which is available upon request.
    The request for new users can be made in the Members Corner on OMIClear Website or by fulfilling the G02 form for Miclear Operator Management.

- **Technological requirements:**

  - A connection to OMIClear systems (chapter 4 for details on this);

  - Available access to destination: clearing.omiclear.pt;

o Available access to Port: 443 (https);

Special care for no firewall, anti-virus or any other packet sniffer blocks accesses to the given destination and Port.

o For Web Interface access: Microsoft Internet Explorer web browser (most recent versions must use compatibility mode). Other browsers can also work but OMIClear only tests with Internet Explorer;

o For API access: needs development in programming language with web services support.

3.2   FTP access requirements

The requirements for accessing OMIClear FTP are described next. Technically the requirements are equal as for any default FTP platform.

- **Access requirements:**

   o Sign the FTP Server subscription model (Model G05);

   o Have a valid username and password;

   FTP passwords are automatically generated under security rules. The password is given after receiving the signed Model G05.
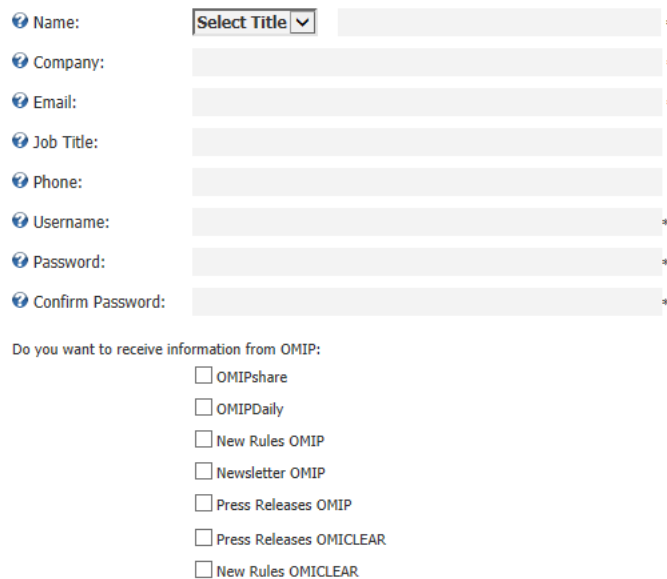
- **Technologic requirements:**

   o A connection to OMIClear systems (chapter 4 for details on this);

   o Available access to destination: ftp.omiclear.pt;

   o Available access to Port: 25 (https);

   o A functioning FTP Client or software which enables connection to a FTP platform;

3.3   Website access requirements

OMIClear Website does not have any special requirement so the ones listed below are the ones applied on most internet websites:

- **Access requirements:**

  - For open market information there are no access requirements since currently information can be gotten with or without login in to the Website;

  - To access the Member's Corner, a username and password is needed. For new users a registration form must be filled online, after which the give username and password will be assigned.

Figure 2 – OMIClear website registration form

- **Technologic requirements:**

  - A connection to OMIClear systems (chapter 4 for details on this);

  - Internet Web Browser;

- o Available access to regular http port: 80 (http);

4   Connectivity to OMIClear

Connectivity to OMIClear systems can be achieved by 2 distinct ways: an internet connection or a leased line. Both give access to all OMIClear systems so the choice between best option is not system dependent. The first one is definitely simpler to obtain but the leased line guarantees connection availability independent from public networks.

The following table resumes differences between the connection options:

Connection	Leased Line	Internet
MiClear	**Yes**	**Yes**
FTP	**Yes**	**Yes**
Website	**Yes**	**Yes**
Implementation time	**Usually over 1 month**	**Not required**
Access type	**Dedicated**	**Shared (public)**
Cost	**Setup and Annual fee***	**Free**

* Please refer to OMIClear Price List

The differences between internet connection and a leased line consist in the implementation time, access type and costs. Further description on each solution, requirements and advantages/disadvantages for both are analysed next.

4.1   Internet connection

Clients that intend to connect to OMIClear Systems by an Internet Connection, should have a link to an Internet Service Provider (ISP) with an appropriate bandwidth for the intended use. Sugested minimum bandwidth is at least 1 Mbps.

OMIClear systems are connected to the Internet with a dedicated bandwidth and in peak situations a higher value of bandwidth is available for the connection. Despite this, the connection is shared for everyone who connects thru the Internet so the overall dynamic

performance may be impacted by the number of connections. This is a disadvantage for this type solution.

Since nowadays all companies have already an Internet connection this usually does not require any implementation time. Be aware that sometimes a special port has to be opened to allow connectivity to a specific system.

4.2   Leased line

Connection to OMIClear by leased lines grant a dedicated bandwidth with a constant value.

Leased line has an initial setup and an annual fee because of the setup and maintenance of the network / equipment that in OMIClear's datacentre will connect to the line.

The requirements to establish the line are:

1) First the model **G01 - Trading / Clearing Systems Access Technology** must be fulfilled and delivered to OMIClear Marketing department;

2) Every member is free to have his preferred line supplier;

3) Be aware of the following technical requirements for the delivered line:
     o   UTP cable
     o   Address range: 2 IPs
     o   Capacity to NAT to OMIClear compatible network (not always necessary)
     o   The line end has to be delivered to OMIClear's datacentre address (to be provided during the setup process)
     o   On a disaster situation, OMIClear will recover to a disaster recovery datacenter. If wanted, another line can be delivered there (address to be provided on request):

   Please notice that it is important to communicate the technical requirements on time to the line supplier.

4) The interconnection network type between dedicated line supplier and OMIClear systems must be communicated;

5 Contacts

Any problem or support needed for meeting the logistic requirements can be forwarded to OMIClear Clearing or Marketing departments who will be happy to help in these questions.

- Clearing desk recorded **phone** number: +351 21000 6020
- Clearing desk **email** address: clearing [at] omiclear.pt
- Direct **Marketing** email address: marketing [at] omiclear.pt

Questions related with the operation on the Miclear platform should be made to Clearing and problems on operation with the website and FTP platforms should be made to the Marketing contacts.

Any problem or support needed for meeting the technologic requirements can be forwarded to Information Systems department who will be happy to help in these questions:

- Direct **Information Systems** email address: IS [at] omiclear.pt

Questions related with leased line issues should be made to the Information system email.

List of documents referred in this guide, available at www.omiclear.pt

- Information Systems Guide

- OMIClear FTP Access Guide

- Model G05 Model to request FTP Access

- Model G01 - Trading / Clearing Systems Access Technology

- Model G02 - Management of Operators - MiClear

- *MiClear API Specification

*Available after request to IS [at] omiclear.pt