

How to connect to



CONNECTIVITY MEANS

- ❖ Cap
- ❖ Map
- ❖ eCCW

CASH DAILY TIME FRAME

REPORTING

- ❖ List of common messages
- ❖ Batch Files
 - Public
 - Private

CONNECTIVITY MEANS

- ❖ Cap
- ❖ Map
- ❖ eCCW

Preface

This guide has been written for new and future members. It aims to describe the target architecture for LCH.Clearnet systems and standard connection options available to members and service providers, with reference to the various technical, financial, regulatory and practical considerations involved.

This document sticks to general principles of the Clearing System architecture, in order to provide the members with an overall view of LCH.Clearnet's offered services and installation and communication processes for clearing systems.

Should you require further information, your contact at LCH.Clearnet will be pleased to help you.

Note

- **This guide is not a binding document and is subject to change.**
- The technical presentations and diagrams are intended solely for educational purposes and are not to be construed as technical specifications.
- LCH.Clearnet provides this document for information only, and every effort has been made to assure its accuracy. LCH.Clearnet, however, does not assume liability for any damage resulting from the use of the information herein.

Document history

Version (1)	Date (2)	Nature of changes (3)	Scope (4)	Sections changed (5)
Version 6.0	August 2005	Initial LCH.Clearnet connectivity Brochure		
Version 6.1	December 2006	Satellite Dismantling Suppress of public messages Creation of public files	Total	ALL
Version 6.2	April 2007	Intraday Margin Call Modification of SPAN files	P57	List of SPAN files
Version 6.3	March 2008	Replaces CCW by eCCW services	Total	ALL
Version 6.4	October 2008	Add Intraday Open interest files names	P57	EPPUBLICXXLCDP04nnn EPPUBLICXXLCDP03nnn

Notes:

- (1) the version number of the document.
- (2) date that the updated pages were released.
- (3) description of the kinds of changes that were made to the document.
- (4) the extent of the document modification - total, one new section, etc.
- (5) the sections that were updated.

Contents

Preliminary Chapter	8
General overview of Access Solutions.....	8
Chapter 1	10
LCH.Clearnet Technical Environment.....	10
Introduction	11
1.1 - LCH.CLEARNET GENERAL DESCRIPTION	11
1.1.1 - Continuous data transfer	11
1.1.2 - Modular Service Offer	11
1.1.3 - General technical factors	11
1.1.4 - New standardised access protocol	12
1.2 - LCH.CLEARNET ACCESS SOLUTIONS	12
1.3 - LCH.CLEARNET FEATURES	14
1.3.1 - Central systems and communications frontal	14
1.3.2 - MMTP Protocol	14
1.3.3 - Network	15
Chapter 2	16
LCH.Clearnet Access	16
Solutions.....	16
2.1 - CAPI[®] SOLUTION	17
2.1.1 - Overview	17
2.1.2 - Detailed description	18
2.1.3 - Who is this solution for:	18
2.1.4 - Equipment provided	19
2.1.4.1 - Hardware and software.....	19
2.1.4.2 - Network.....	19
2.1.5 - Technical specifications	19
2.1.6 - Technical architecture	20
2.1.7 - Costs	20
2.1.8 - Limits and advantages	20
2.1.8.1 - Limits.....	20
2.1.8.2 – Advantages	20
2.1.9 - Scalability	20
2.2 - MAPI[®] SOLUTION	21
2.2.1 - Overview	21
2.2.2 - Detailed description	22
2.2.3 - Who is this solution for:	23
2.2.4 - Technical specifications	23
2.2.5 - Technical architecture	23
2.2.6 - Limits and advantages	23
2.2.6.1 - Limits.....	23

2.2.6.2 - Advantages	23
2.2.7 - Scalability	23
2.3 - eCCW[®] SOLUTION	24
2.3.1 - Overview	24
2.3.2 Introduction	25
2.3.3 eCCW Users Architecture Overview	25
2.3.3.1 eCCW Options	25
2.3.4. eCCW Services	28
2.3.4.1 Mains principles:	28
Chapter 3.....	32
Actors and respective tasks	32
3.1 - THE MEMBER	33
3.2 - LCH.CLEARNET	33
3.2.1 - Customer Technical Helpdesk.....	33
3.2.2 - LCH.Clearnet	33
3.3 – TECHNICAL SUPPLIER	33
Chapter 4.....	34
Steps for implementing an access to the Clearing System platforms	34
4.1- GLOBAL OVERVIEW	35
4.2 - DETAILED PROCESS	35
4.2.1 - STEP 1: Select a relevant solution	35
4.2.2 - STEP 2: Implementation.....	35
4.2.3 - STEP 3: Tests and training.....	36
4.2.4 - STEP 4: Clear the way to success – Go live in Production	36
4.2.5 - HOW TO CONNECT	37
Chapter 5.....	38
Appendix	38
Glossary	39
CASH	41
DERIVATIVES	46
REPORTING	49

Preliminary Chapter

General overview of Access Solutions

LCH.Clearnet members are offered several possibilities in order to set up their access to the clearing systems. Members choice will be made upon their own internal requirements and constraints, and the way they prefer to manage their access.

In order to meet members requirements, LCH.Clearnet has set up 3 different access solutions:

- CAPI solution (Certified Access Point Interface)
- MAPI solution (Mutualized Access Point Interface)
- eCCW solution (access to Central Counterparty Webservices through internet or linked with CAPI/MAPI access)

All solutions share the same background in terms of technical reliability, but each one offers different possibilities and advantages.

CAPI solution

- Main outcomes of the solution
 - ✓ A certified Access Point dedicated to one member
 - ✓ Handles data encryption and compression
 - ✓ Order flow through the terrestrial network
- Advantages of the solution
 - ✓ An open architecture
 - ✓ Interconnection with other in-house systems (back-office...)
 - ✓ Help for an in-house or ISV solution
 - ✓ Can be installed at the member's or ISV site
 - ✓ Allows re-processing of delivered real-time feeds

MAPI solution

- Main outcomes of the solution
 - ✓ Designed especially for ISV
 - ✓ Allows several members to share equipment
 - ✓ Allows mutualization of the access point interface for several members
 - ✓ LCH.Clearnet hardware installed at the ISV site
 - ✓ Handles order certification on behalf of the ISV with the member's agreement
 - ✓ Member's pricing and connection processes defined and handled by the ISV
- Advantages of the solution
 - ✓ Full facilities management solution offered by providers to their clients
 - ✓ Members can receive data through the network managed by the provider
 - ✓ The solution is directly charged to ISV
 - ✓ Cost for members defined and charged by the ISV
 - ✓ All LCH.Clearnet hardware installed at the ISV site

eCCW solution (Access to Central Counterparty Webservices)

- Main outcomes of the solution
 - ✓ Dedicated to LCH.Clearnet clearing business
 - ✓ Certified access point
 - ✓ One member code per eCCW access (one eCCW access card per user)
 - ✓ End-to-end solution
 - ✓ Handles basic clearing functions
 - ✓ Can be used everywhere (via internet)
- Advantages of the solution
 - ✓ Easy to implement
 - ✓ Windows-based workstation
 - ✓ Real time access to general and member specific clearing data
 - ✓ Enables TMF to view their trades in the CMF environment when authorized by CMF
 - ✓ Possibility of switching between test and production environments

Chapter 1

LCH.Clearnet Technical Environment

Introduction

This chapter contains simplified technical information designed to give an overview of the solutions used to access the LCH.Clearnet system and its back up solutions.

Data and diagrams are given for information only and should not, therefore, be considered as constituting full technical specifications.

All references to CAPI[®] apply equally to MAPI[®].

Note that CAPI[®], MAPI[®], eCCW[®], CLEARING HUB[®], Clearing System, PACIN[®], PACOUT[®], PLUGIN[®] and PLUGOUT[®] are registered trademarks.

1.1 - LCH.CLEARNET GENERAL DESCRIPTION

The system used for interconnecting LCH.Clearnet information systems with members' information systems features an architecture based on two main principles:

- continuous data transfer
- modular service offer

This architecture is unique and common to all of the LCH.Clearnet SA services:

- Clearing services, through LCH.Clearnet SA and its Clearing System for the Paris, Lisbon, Brussels, Amsterdam and Luxemburg Markets.

1.1.1 - Continuous data transfer

Regarding the Clearing Services, the same architecture allows real-time processing, including real-time risk and position management.

1.1.2 - Modular Service Offer

In its members' needs for understanding, LCH.Clearnet has also developed a system of modular services via standardised access points. This enables members to access firstly the selected business environment (trading or clearing) and, secondly, the specific products they require (cash & derivatives for Paris, Brussels, Amsterdam and Lisbon, only cash for Luxemburg)

1.1.3 - General technical factors

Members can opt between a range of alternative access solutions, depending on how far they intend to be directly involved in the access solution management.

Members are therefore free to choose their own service ISVs and access methods, given that, in any case, data transfers are done through:

- landline WANs (wide-area networks), clearing public files (SPAN, Referential data) and the private clearing feed (postings, give-up,..).

1.1.4 - New standardised access protocol

All exchanged messages between LCH.Clearnet and its members use standardised protocol MMTP® (see glossary page 39) which have the following main features:

- transit via TCP/IP transport layers
- secure transmission support
- improved reconnection following connection failure CAPI®
- access to multiple applications without mandatory addressing
- support for all kinds of market message flow or instructions
- backup facilities.

1.2 - LCH.CLEARNET ACCESS SOLUTIONS

LCH.Clearnet has developed a modular range of 3 different access solutions:

- CAPI® (Certified Access Point Interface)
- MAPI® (Mutualized Access Point Interface)
- eCCW (Access to Central Counterparty Webservices)

All solutions rely on an open technical architecture, based on a client / server mode.

The eCCW® solution is a dedicated to its specific business environment (i.e. clearing).

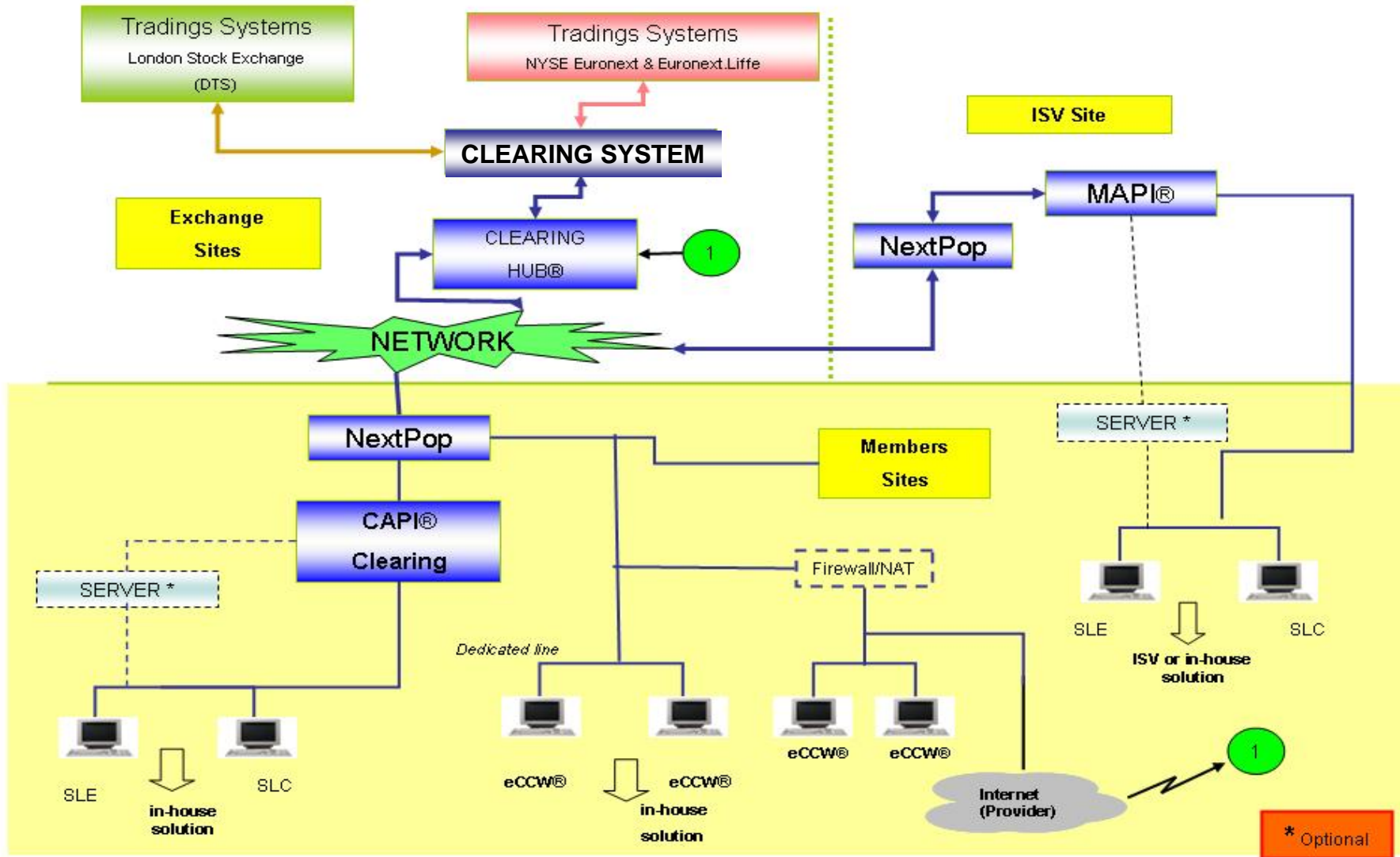
The CAPI® and MAPI® solutions can, each one of them, handle simultaneously the two activities (trading and clearing).

Further service access solutions may be added in the future. The member's choice depends on its will to have an outsourced or in-house solution:

- Implement an end-to-end solution with data entry and query capabilities
- Use in-house technical resources or outsourced facilities management (ISV's services)
- Subcontract message certification to an ISV

Members cannot access LCH.Clearnet services otherwise than through one of these solutions, all of them providing encrypted data transfers between members and LCH.Clearnet systems in order to guarantee security and confidentiality. The diagram on page 13 gives a simplified view of the alternative solutions.

ARCHITECTURE – LCH.CLEARNET



1.3 - LCH.CLEARNET FEATURES

LCH.Clearnet is setting up a network based on TCP/IP protocols (see glossary page 39), multiplexing and frame-relay technologies.

Furthermore, LCH.Clearnet gives to members the opportunity to make a choice between several Telecom providers.

1.3.1 - Central systems and communications frontal

All LCH.Clearnet members access to the Clearing System via a standardized interface: the "CLEARING HUB[®]".

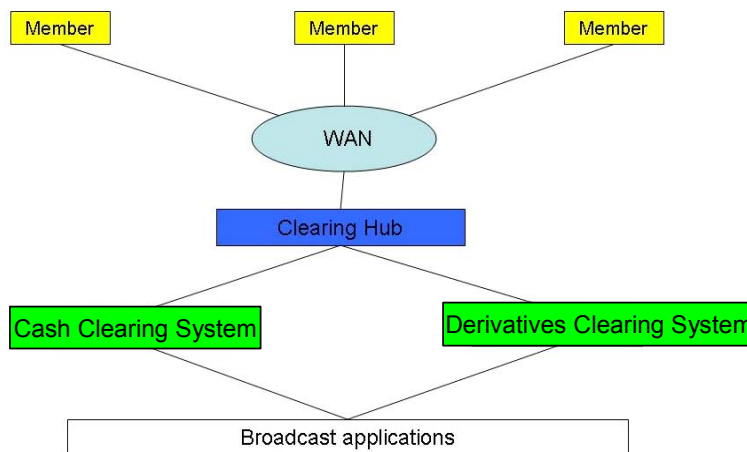
The "Hub" is a communication front-end performing messages switching between the Clearing System and members.

This section is common to all LCH.Clearnet service access solutions. It addresses some of the technical aspects of the standardised interface between Members and LCH.Clearnet information systems, regardless of the different access solutions described in following paragraphs.

This standardised interface is the CLEARING HUB[®].

The CLEARING HUB[®] uses a special message-handling system, which main function is the switching of data interchanges, and is made up of three subsystems:

- Access points linking LCH.Clearnet's information systems to members' certified access points,
- Switch for routing messages to their destination,
- Two administrative and supervisory modules.



Overview of CLEARING HUB[®]

1.3.2 - MMTP Protocol

Developed by LCH.Clearnet, the MMTP protocol:

- ✓ uses the TCP/IP transport layers,
- ✓ contributes to transmission security,
- ✓ facilitates service resumption after connection failure,
- ✓ provides addressing – free access to many applications.

1.3.3 - Network

The communications frontal “CLEARING HUB®” uses:

- ✓ the MMTP protocol,
- ✓ the point of presence at the member’s or ISV site (NEXTPOP),
- ✓ Bandwitch (Nx64K channels) set up according to the member’s needs and technical configuration,
- ✓ TCP/IP for network links.

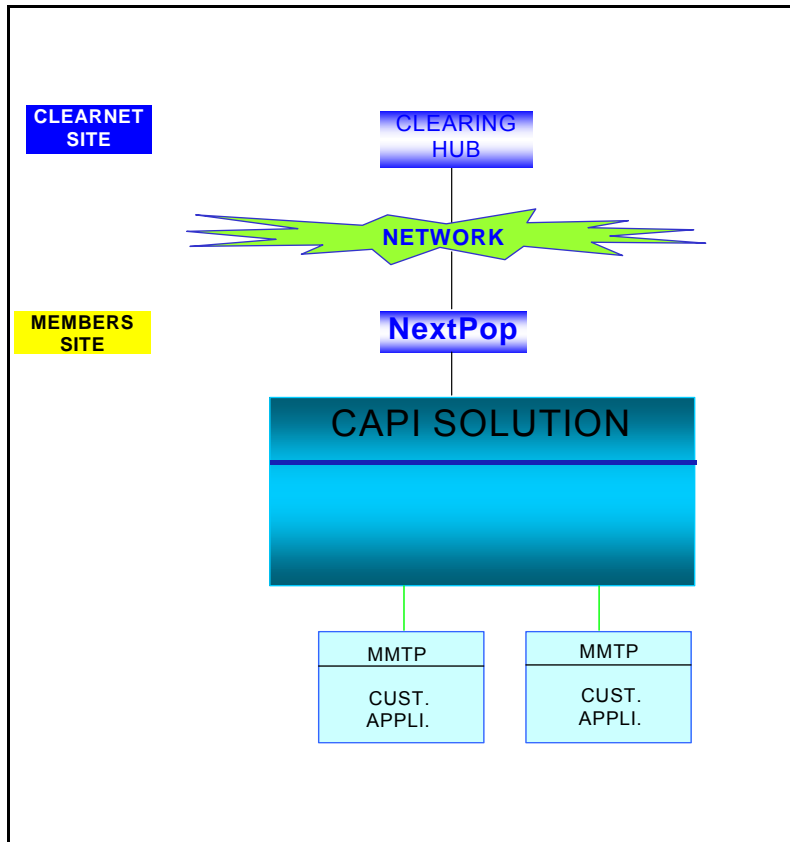
Local access points have been set up in countries with a significant number of members (i.e. Paris, London, Brussels, Amsterdam, Frankfurt, Lisbon/Porto, Luxemburg) and more will follow.

Chapter 2

LCH.Clearnet Access Solutions

2.1 - CAPI® SOLUTION

2.1.1 - Overview



This solution provides members with certified access points (see glossary page 39), message flows, data transfer standards and optional protocol development tools.

A CAPI® solution may include:

- A unique NEXTPOP
- both Trading CAP and Clearing CAP.

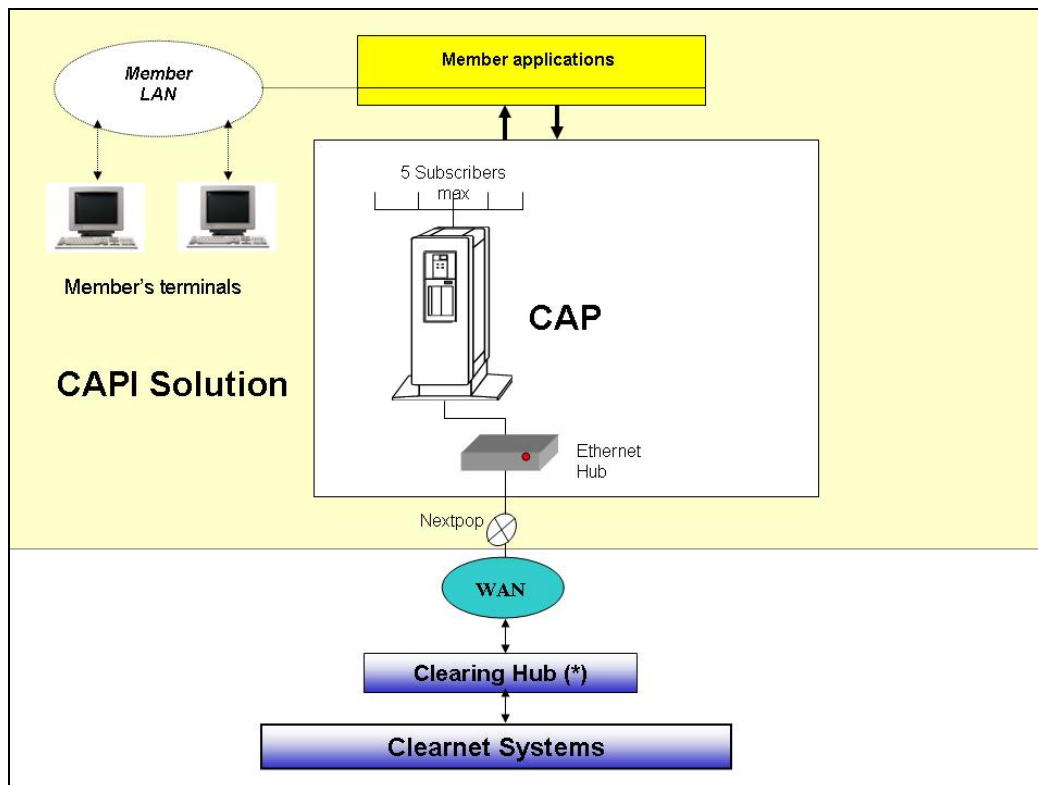
The CAP is an access server that compresses, encrypts and stores data transiting between the member and LCH.Clearnet systems.

Each CAP is dedicated to a single business environment (clearing) and a single platform (production or test). Still, a CAPI® solution can support simultaneously a “trading” CAP and a “clearing” CAP, whatever the protocol set up on each CAP. Such a combination is possible because the protocols (session and application) between each CAP and the LCH.Clearnet systems are only MMTP. It enables members to set up their own server and workstation configuration with the API and message specifications provided by LCH.Clearnet, or with an independent software provider.

A CAPI® configuration can be installed at a member’s site or at an ISV site through a facilities management agreement.

To handle incoming and outgoing message flows, members must develop (or outsource the development of) their own applications (SLEs and SLCs, see glossary page 39), compliant with the CAPI® specifications.

2.1.2 - Detailed description



CAPI[®] solution – general description

The CAPI[®] solution is made up of a computer (the CAP, see glossary page 39), which constitutes the certified access point, a multi-service network access router (NEXTPOP), plus optional application programming interfaces (API, see glossary page 39) for the protocol development with a technical documentation.

The CAP is a single-member, single platform (live or testing), single-function (trading or clearing) station, and each CAP can handle five subscribers (SLEs and SLCs). It can be used both for cash and derivative markets.

Members can develop any SLEs and SLCs on any hardware (MMTP API are provided on AIX, HP, NT, SUN)....

2.1.3 - Who is this solution for:

This solution addresses members seeking independent control over message flows, with full responsibility for incoming and outgoing messages. Members opting for this solution may use their own resources or commission access services from subcontractors or publishers.

2.1.4 - Equipment provided

2.1.4.1 - Hardware and software

- ✓ CAP (PC) including the associated software

2.1.4.2 - Network

- ✓ Router with NEXTPOP service
- ✓ Ethernet hub/ Switch
- ✓ Leased line

The local area network between the CAPI[®] and the servers and workstations must be installed and managed by the member.

2.1.5 - Technical specifications

- ✓ A CAPI[®] solution is dedicated to one and only one member
- ✓ A router can be connected to a maximum of 8 CAP
- ✓ Each CAP can support 5 subscribers
- ✓ Each CAP can be linked to one and only one environment (e.g. production or simulation)
- ✓ Each CAP requires a capacity of three 64K lines (one data line, one monitoring line, one service line)
- ✓ A CAPI[®] solution can support simultaneously several CAPs either clearing or trading ones
- ✓ The CAPI[®] gives access to Amsterdam, Paris, Brussels and Lisbon markets for cash and derivatives and only on cash to Luxemburg.

2.1.6 - Technical architecture

The CAPI[®] solution uses a three-tier architecture:

Tier 1 – Composed by the member network, hardware and software.

Tier 2 – Composed by PC and connections carrying incoming and outgoing message flows broadcasts.

These two Tiers form the interface acting as Certified Access Point (CAPI[®]).

Exchanges between the CAPI[®] and client applications must comply with MMTP[®] protocols and application protocols (e.g. SLE, SLC, file transfers). These exchanges require three 64-Kbps network channels for each CAP.

Tier 3 – Composed by Clearing and/or Trading systems, responsible for actually processing members' messages (e.g. orders, instructions,...).

Communication between Tiers 1 and 2 is via a member-developed solution.

Communication between Tiers 2 and 3 is via the private network and the ORDER FLOW HUB[®] and / or the CLEARING HUB[®].

Security at the CAP level is provided by the following mechanisms:

- Dedicated Dongle
- Data compression and encryption

CAP software upgrades can be downloaded directly by the Customer Technical Support (CTS). The Customer Technical Support can take remote control on CAPs for basic checks.

2.1.7 - Costs

- Software and Hardware costs for basic and additional CAPI[®]
- One shot installation fees & monthly fees

2.1.8 - Limits and advantages

2.1.8.1 - Limits

Each certified access point (CAP) can accommodate five subscribers . Members requiring more subscribers (or backup solutions) will have to install additional CAP systems.

2.1.8.2 – Advantages

- Open architecture
- Capabilities for integration in existing middle-office and back-office systems

2.1.9 - Scalability

The CAPI[®] solution gives members full control over their information systems, computer equipment, and relations with other suppliers.

Increase in number of CAP systems

For backup or flow distribution reasons, a member may wish to upgrade its NEXTPOP to accommodate more CAP.

A 2-Mb NEXTPOP can manage up to eight CAPs.

2.2 - MAPI[®] SOLUTION

2.2.1 - Overview

This solution provides the ISV with a multi-member certified access point that handles message certification, encryption, compression and transmission for the members connected to LCH.Clearnet through the provider.

It enables a provider to share its access point between several members and to define with each member the requested technical configuration.

The equipment provided by LCH.Clearnet and its technical specifications are strictly identical to the CAPI[®] solution. The only distinction is that this equipment is installed at ISV's site.

The provider is responsible for the network, feeds and order certification between the MAPI[®] and its customers.

Members must be aware that the ISV provided solutions are not certified by LCH.Clearnet.

With the MAPI[®], the member commissions the following services from a third-party provider (the ISV):

- Data transfer between member and system for accessing central LCH.Clearnet services
- Management of messages exchanged with LCH.Clearnet systems
- Certified identification of messages origin

DATA TRANSFER

The ISV supplies the member with network services for end-to-end connection between client applications and the MAPI[®].

ADMINISTRATION OF EXCHANGES WITH LCH.CLEARNET SYSTEMS

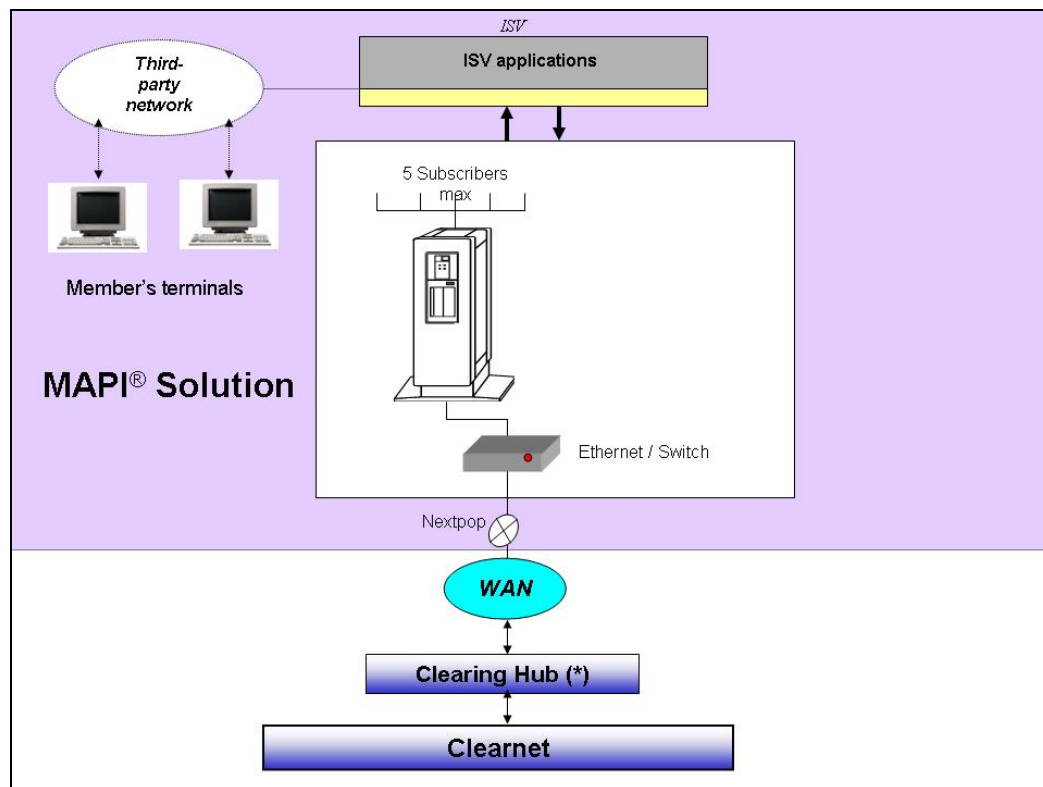
The ISV supplies the member with message exchange services using shared computer resources serving several members at the same time. Sharing means that the ISV will manage multiplexing of data streams for all subscriber members using the solution.

The ISV will guarantee correct transfer of the member's messages and ensure that each member will only receive messages addressed to it.

The ISV will be capable of supplying full data on service operation in the event of incident, at the request of the member or of LCH.Clearnet.

2.2.2 - Detailed description

The diagram below shows a typical MAPI® solution:



MAPI® solution –detailed description

From a technical point of view, the MAPI® solution is similar to the CAPI® solution. LCH.Cleartnet grants user rights to the ISV for the purpose of providing services to several members who must be pre-declared to LCH.Cleartnet.

Like a CAP, a MAP (see glossary page 39) supports up to five subscribers, each of which can serve a number of authorised members. Each MAPI® subscriber is therefore associated with a list of members, the number of which is set up by the Customer Technical Support. A member can be associated with several subscribers or several MAPIs®.

CAPI® and MAPI® subscribers can access several LCH.Cleartnet services.

The accessible services' list is defined for each subscriber by the Customer Technical Support on the basis of stated requirements.

2.2.3 - Who is this solution for:

This solution addresses members seeking the benefits of shared services from an ISV.

2.2.4 - Technical specifications

ISVs must comply with the specifications and quality requirements given to them by LCH.Clearnet, and with members' specifications. LCH.Clearnet specifications give detailed information on the following points:

- Network and protocols
- Data and system supervision
- Support, maintenance and upgrades
- Reciprocal undertakings and responsibilities

2.2.5 - Technical architecture

From a technical point of view, the service access structure will be determined by the member and the ISV, although it must comply with LCH.Clearnet specifications.

2.2.6 - Limits and advantages

2.2.6.1 - Limits

The ISV must comply with the specifications and quality requirements given to members by LCH.Clearnet. The ISV must also undertake to upgrade its information system and member services in regard with LCH.Clearnet information system upgrades and in constant compliance with LCH.Clearnet specifications.

2.2.6.2 - Advantages

- Providers can offer a full facilities management solution to their customers
- Members can receive the clearing data feed through a network managed by the provider
- MAPI[®] solution directly charged to ISV
- Cost for member defined and charged by the ISV
- The MAPI[®] gives access to Amsterdam, Paris, Lisbon and Brussels markets for cash and derivatives and only on cash to Luxemburg

2.2.7 - Scalability

With this solution, members are free to negotiate information system upgrades directly with their service ISVs.

2.3 - eCCW[®] SOLUTION

2.3.1 - Overview

The eCCW[®] solution is available on internet or over LCH.Clearnet network (public LAN solution or private LAN solution); please refer to chapter § 2.3.3. This solution is dedicated to LCH.Clearnet clearing business and handles the basic clearing functions.

The eCCW is a single-member solution, multi-platform (testing and production) forming a certified access point to the Clearing System. Installation and connection advises are available from the Customer Technical Support.

This solution provides the member with the Clearing System workstations developed by LCH.Clearnet and handling the basic functions of the clearing business. The eCCW servers are located in LCH.Clearnet operation center. The feeds are sent to the members through internet network or through the LCH.Clearnet network. eCCW can be used everywhere on the world via Internet connection

Members must be aware that no external system can be real time connected to a LCH.Clearnet Clearing Workstation[®].

2.3.2 Introduction

The aim of this document is to provide users with a general view of the suggested solution and to facilitate members' choice.

The eCCW project is to replace the current LCH.Clearnet workstation (CCW) by a more flexible and less expensive solution.

The scope of this solution is the following:

- To create a simple client solution via internet or over LCH.Clearnet network including:

- o A different URL for Test and Production platforms
- o A different page for Cash and Derivatives Markets
- o Access control card based on Secur ID technology

2.3.3 eCCW Users Architecture Overview

In order to enforce system resiliency, LCH.Clearnet SA recommends to users to set up a resilient network infrastructure, compliant with their business continuity needs.

Recommended Workstation Configuration

PC capable of properly running Windows XP (or above) or Linux as operating system, with an internet browser (Internet Explorer 6.0 or Firefox 2.0).

The system should be configured to allow HTTPS connexions and local execution of JavaScript programs by the web browser.

2.3.3.1 eCCW Options

With the new eCCW, the users will have several choices to implement the eCCW product:

- Internet-based eCCW
- eCCW over MSA (Customer private LAN)
- eCCW over MSA (LCH.Clearnet public LAN)
- eCCW over dedicated access (Customer private LAN)
- eCCW over dedicated access (LCH.Clearnet public LAN)

The only difference between the MSA and the dedicated access is that dedicated access is limited to the bandwidth of your leased line (i.e. 64 Kbps in most of the cases)

Each eCCW architecture option is described below along with technical characteristics, limitations and constraints.

2.3.3.1.1 Internet based eCCW

Characteristics (See Figure 1)

The flows between the eCCW client and the server will transit through the Internet network.

The internet provider is the internet provider of the user.

The eCCW service will be accessed from any user workstation located within the company LAN like any other Internet-based application besides the authentication that must take place using the Secure id process.

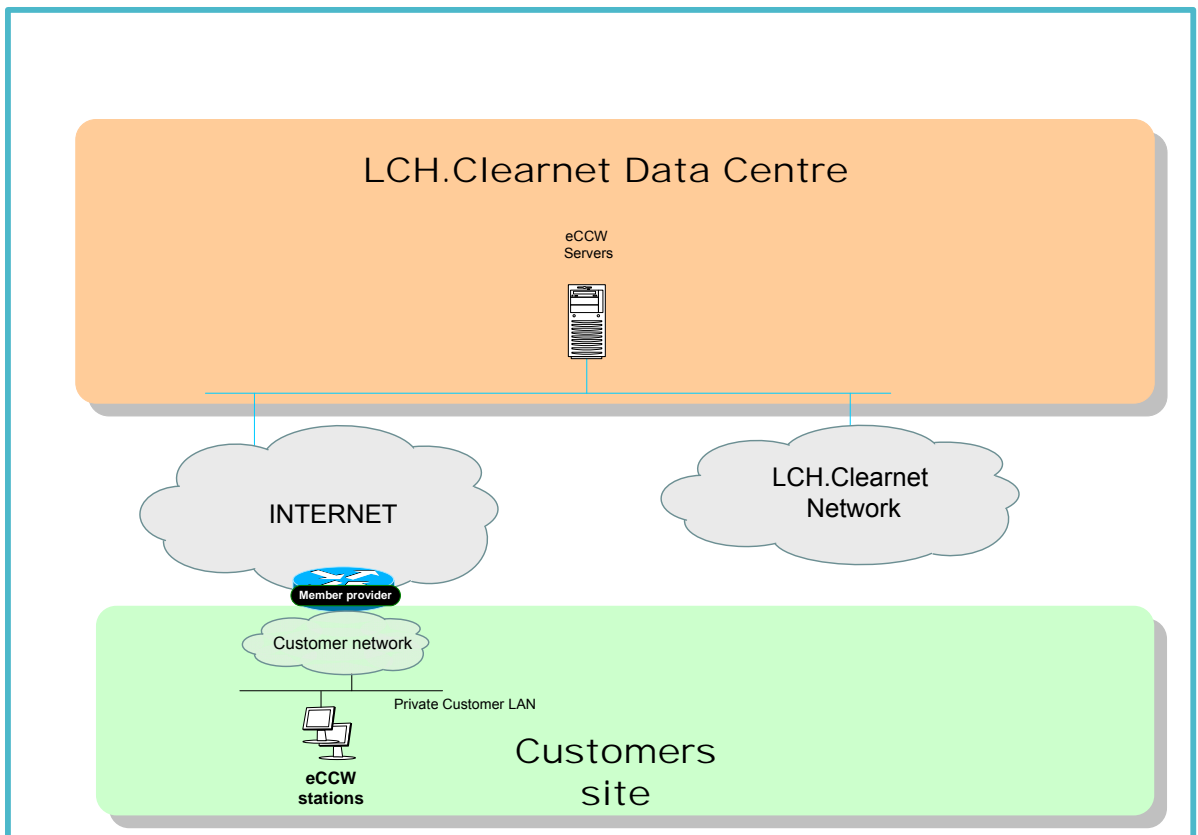


Figure 1

2.3.3.1.2 eCCW over MSA

User Private LAN Solution Characteristics (See Figure 2 – Left side)

The flows between the eCCW user and the server will transit through the LCH.Clearnet private network. (Leased lines)

The user workstation is hosted on the user company LAN.

Each workstation that requires access to eCCW must encompass a eCCW source address translation under the responsibility of the user.

A different URL should be used to reach eCCW server through Internet or through the LCH.Clearnet network.

LCH.Cleernet Public LAN Solution Characteristics (See Figure 2 – right side)

The flows between the eCCW user and the server will transit through the LCH.Cleernet private network. (Leased lines)

The user workstation is hosted on the LCH.Cleernet public LAN located at the user office.

The user workstation is therefore dedicated to a eCCW usage.

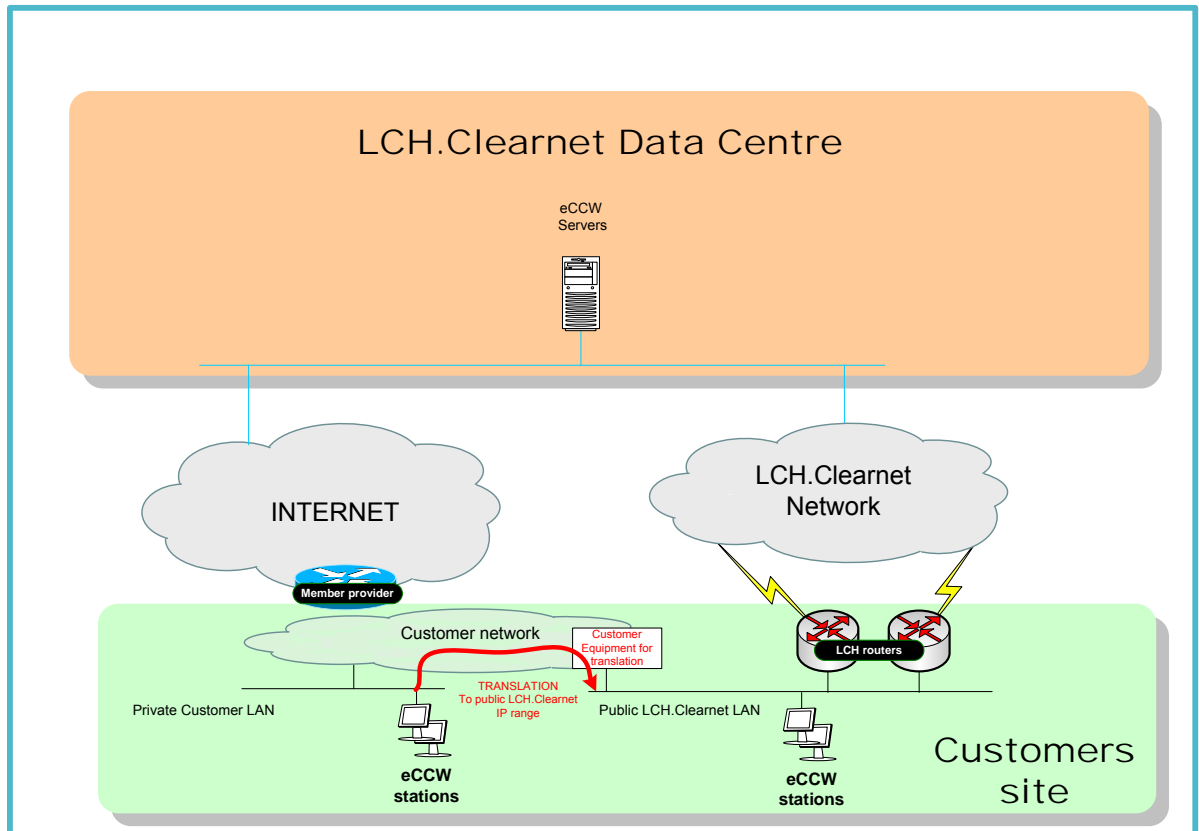


Figure 2

2.3.3.1.3 eCCW over Dedicated Access

It is important to note that the dedicated access solution runs over a 64Kbps leased line and therefore there is a limitation in using the eCCW file download function which will impact the real time application.

Customer Private LAN Solution Characteristics (See Figure 3 – left side)

The flows between the eCCW user and the server will transit through the LCH.Cleernet private network (leased lines.)

The user workstation is hosted on the user company LAN..

Each workstation that requires access to eCCW must encompass a eCCW source address translation under the responsibility of the user.

A different URL should be used to reach eCCW server through Internet or through the LCH.Cleartnet network.

The dedicated Access 64 Kbps leased line is limited to three devices (eCCW or CCW).

LCH.Cleartnet Public LAN Solution Characteristics (See Figure 3 – right side)

The flows between the eCCW user and the server will transit through the LCH.Cleartnet private network. (Leased lines)

The user workstation is hosted on the LCH.Cleartnet public LAN located at the user office.

The user workstation is therefore dedicated to a eCCW usage.

ECCW over dedicated access has the same constraints as running over MSA.

The dedicated Access 64 Kbps leased line is limited to three devices (eCCW or CCW)

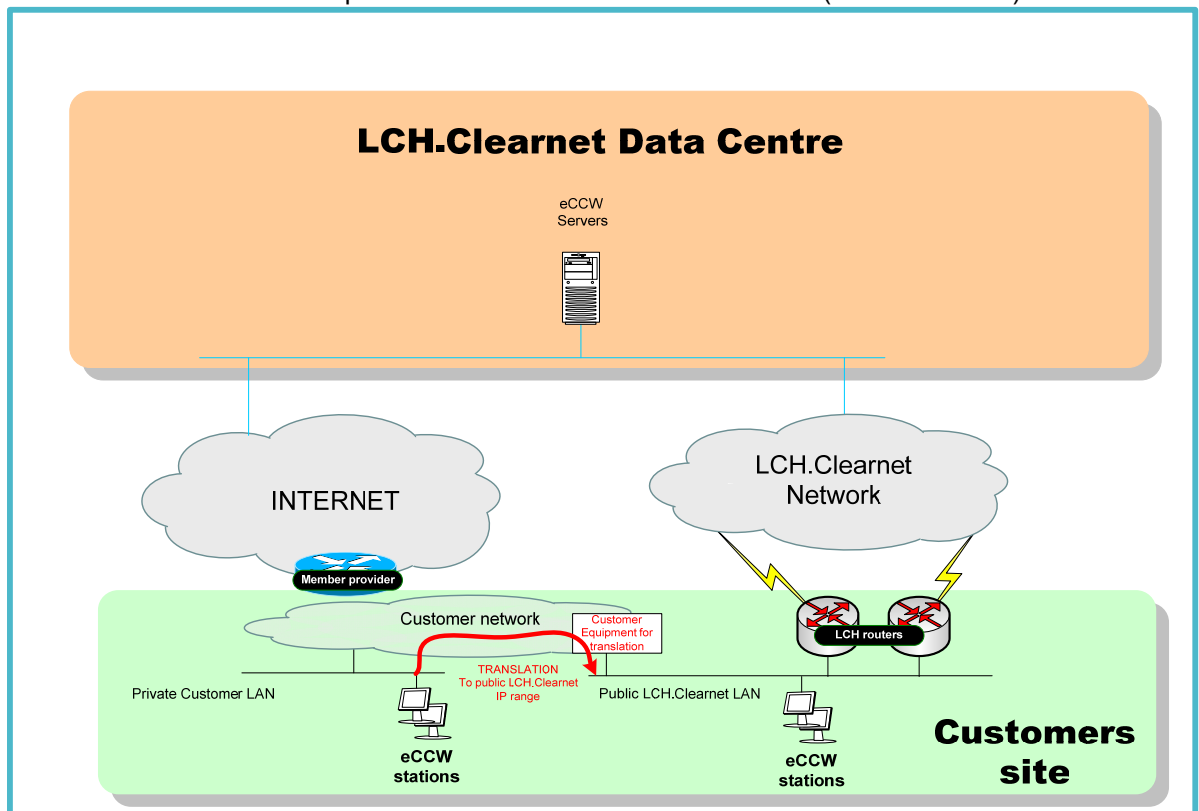


Figure 3

2.3.4. eCCW Services

2.3.4.1 Mains principes:

2.3.4.1.1 eCCW Members Security Administrators (EMSA):

- Each customer must nominate at least one eCCW Security Administrator (EMSA) who will manage user access for their organisation through local procedures which manage:
 - The order form to eCCW
 - The whole users eCCW access cards

- The PIN code for users
- Change management of eCCW access cards

For more detail concerning EMSA definition, please refer to Appendix 1 of the Order Form.

2.3.4.1.2 eCCW access card authentication:

- Users will require a unique **username**
- **A user name** in an organisation is linked to one and only one token in a given environment and must be unique to the organisation in that environment (i.e. Production or user Test)
- User names will be provided by the LCH.Clearnet **on request** on the Member
- User names shall be meaningful enough to uniquely identify the user
- User names will be based on first and last name of users

For your information, please note that very short names and generic names for job roles will be prohibited.

2.3.4.1.3 eCCW package includes:

- 2 eCCW access cards (1 for production and 1 for testing)
- Optional : 1 eCCW access card to Backup

2.3.4.1.4 Profile options:

- Read & write
 - Definition: full access on consultation & command
- Read Only
 - Definition: Access only on consultation
- Access
 - Definition: specify the products and user codes that the login will be granted access to
 - Cash or/and Derivatives

2.3.5 User general Information of a eCCW access card



2.3.5.1 Mains principles:

- Members are responsible for the authentication tools which have been provided to them.

- **The PIN code** is a code only known by the user. This code is unknown by the card: the latter does not have a chip enabling it to record the Pin code, like a bank card, the card only mixes the code entered by the user and the code displayed on the screen.

. Before your first connection, LCH.Clearnet will deliver initial PIN codes to the EMSA (upon your request).

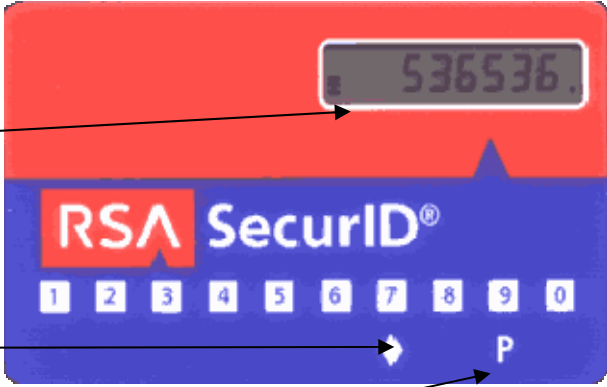
The eCCW access card displays a code which changes every 60 seconds (If you have not entered your PIN code, the displayed code does not enable you to authenticate yourselves).

- **The Passcode** is the combination of the Pin code and the code displayed by the card. The PASSCODE must be entered at the time of your connection.

Note: for confidentiality reasons, the PASSCODE is not displayed on the computer screen at the authentication time.

2.3.5.2 eCCW access card picture

The eCCW access card generates passwords which are usable only once.

<p>The code is displayed 60 seconds maximum. This symbol indicates the validity period of the code.</p> <p>To obtain your password, enter your pin code (4 digits) on the keyboard.</p> <p>Press the \diamond key to obtain your code</p> <p>The P key allows you to reinitialise the code displayed on the screen</p>	 <p>The image shows an RSA SecurID access card. It has a red top section and a blue bottom section. A small LCD screen at the top right displays the number 536536. Below the screen is a numeric keypad with buttons for digits 1 through 0. To the right of the keypad is a key with a diamond symbol and a right-pointing arrow. Below the keypad is a key with the letter 'P'. Arrows from the text on the left point to the screen, the diamond key, and the 'P' key.</p>
---	--

Chapter 3

Actors and respective tasks

3.1 - THE MEMBER

- ✓ fills out and signs order forms
- ✓ controls technical installations
- ✓ tests the environment and prepares to production

3.2 - LCH.CLEARNET

3.2.1 - Customer Technical Helpdesk

CTH is in charge of the connection between members and the Clearing System:

- ✓ Manages Access Points and the CLEARING HUB®.
- ✓ Manages the systems' technical parameters (Dongle delivery for example).
- ✓ Provides the technical support to members and ISV.
- ✓ checks the Order Forms and follow up the installation process with members and subcontractors.

3.2.2 - LCH.Clearnet

- ✓ checks orders and follows up the process with members and CTH
- ✓ sets up members' training
- ✓ provides Last saved by useres member's training on eCCW®
- ✓ organizes individual and general testing
- ✓ grants access to production mode to members.

3.3 – TECHNICAL SUPPLIER

A technical supplier on behalf of LCH.Clearnet:

- ✓ Operates and integrates technical installation process
- ✓ Manages:
 - CAPI® / MAPI® implementation and CAPI® / MAPI® connectivity
 - routers and leased lines implementation
- ✓ Maintains technical installation (entry point: LCH.Clearnet).

Chapter 4

Steps for implementing an access to the Clearing System platforms

4.1- GLOBAL OVERVIEW

- ✓ STEP 1: Select a relevant solution
- ✓ STEP 2: Implementation
- ✓ STEP 3: Tests and training
- ✓ STEP 4: Clear the way to success – Go live in Production.

4.2 - DETAILED PROCESS

4.2.1 - STEP 1: Select a relevant solution

TASKS	ORGANIZATIONS	OBJECTIVES AND EXPECTED RESULTS
Contact with member or ISV	LCH.Clearnet in each country	A detailed presentation on membership and technical solution is given to the member for the clearing issues
Send the API and message specifications to member if requested	LCH.Clearnet	Member or ISV develops its server and workstation software
Sign and send to LCH.Clearnet the order form	Member or ISV	Beginning of the connection process. Order of the solution (CAPI [®] , CCW [®] , dish...)
Check order form's compliance	Customer Technical Helpdesk Contact:	Initiation of implementation step +33 1 70 37 66 00 or LCHClearnetsa_CTH@lchclearnet.com

4.2.2 - STEP 2: Implementation

TASKS	ORGANIZATIONS	OBJECTIVES AND EXPECTED RESULTS
Order LCH.Clearnet/Technical supplier	Customer Technical Helpdesk Contact:	Start deployment actions +33 1 70 37 66 00 or LCHClearnetsa_CTH@lchclearnet.com
Technical visit	Technical supplier	Design the member's network configuration
Installation of LCH.Clearnet hardware and software components, central system and network configuration	Member	Member's connection is operational Member is registered within the Clearing System
Installation of server and workstations for the CAPI [®] solution	Member and/or ISV	Member's solution installed

TASKS	ORGANIZATIONS	OBJECTIVES AND EXPECTED RESULTS
Define and set up technical parameters and send them to members (ports, Dongle etc...)	Customer Technical Helpdesk Contact:	Member's solution about to be tested +33 1 70 37 66 00 or LCHClearnetsa_CTH@lchclearnet.com

4.2.3 - STEP 3: Tests and training

TASKS	ORGANIZATIONS	OBJECTIVES AND EXPECTED RESULTS
Technical and functional testing	Customer Technical Helpdesk Member or ISV	Member's solution operational in the simulation environment
LCH.Clearnet Clearing Workstation® training	LCH.Clearnet Member	Operators are operational

4.2.4 - STEP 4: Clear the way to success – Go live in Production

TASKS	ORGANIZATIONS	OBJECTIVES AND EXPECTED RESULTS
Connection to live platform	Customer Technical Helpdesk Contact:	Member's solution operational in the production environment +33 1 70 37 66 00 or LCHClearnetsa_CTH@lchclearnet.com
Start up date	LCH.Clearnet	Green Light from corresponding entities (LCH.Clearnet / CMF / TMF / ISV)

4.2.5 - HOW TO CONNECT

Do not forget to activate the eCCW access cards by contacting the **Customer Technical Helpdesk (CTH)** at the following phone number:

+ 33 1 70 37 66 00

- Test platform

- Internet Access:

- <https://eua.lchclearnet.e-ccw.com/Cash>
- <https://eua.lchclearnet.e-ccw.com/Derivatives>

- Private Network Access

(eg MSA access via LCH.Clearnet Public LAN or via Member LAN):

- <https://eua.wan.lchclearnet.e-ccw.com/Cash>
- <https://eua.wan.lchclearnet.e-ccw.com/Derivatives>

- Production platform

- Internet Access:

- <https://prod.lchclearnet.e-ccw.com/Cash>
- <https://prod.lchclearnet.e-ccw.com/Derivatives>

- Private Network Access

(eg MSA access via LCH.Clearnet Public LAN or via Member LAN):

- <https://prod.wan.lchclearnet.e-ccw.com/Cash>
- <https://prod.wan.lchclearnet.e-ccw.com/Derivatives>

Chapter 5

Appendix

Glossary

LCH.Clearnet provides this document for information only, and every effort has been made to assure its accuracy. LCH.Clearnet, however, does not assume liability for any damage resulting from the use of the information herein.

API

Application Programming Interface.

Programming libraries used by client applications. Only one APIs is available for clearing: MMTP

CAP

The computer included into a CAPI®.

CAPI®

Certified Access Point Interface

A device handling network between a member's site and the "CLEARING HUB®" or the "Order Flow HUB", including data compressing and encryption.

A CAPI® handles the communication for one member.

CLEARING HUB® (for clearing only)

The new message handling interface-managing application flows between the central systems and the access points.

Dongle

Physical key located on each access solution in order to authorise and secure daily access to the markets.

eCCW®

Access to Central Counterparty Webservices

This program provides an access to the LCH.Clearnet clearing services.

Ethernet HUB

Electronic unit for interconnecting networks, printers, PCs, ...

IP (Internet Protocol)

Communication protocol used by the NSC systems and the Clearing System.

ISV

Independent Software Vendor

A provider offering a software and/or facilities management solution to access the LCH.Clearnet clearing systems.

Local Access Point

A network repeater (a hub) allowing members to be connected through a local line.

MAP

The computer included into a MAPI®.

MAPI®

Mutualized Access Point Interface

A multi-member device handling network and satellite communication between a provider's site and the "CLEARING HUB®" or the "Order Flow HUB". The MAPI® handles communication for several members.

MMTP

Market Message Transfer Protocol Standardised communication protocol used:

- by client applications to access the CAPI® or the MAPI® solution
- as an interface between the CAPI® / MAPI® and the “CLEARING HUB®” or the “Order Flow Hub”.

NEXTPOP

Point Of Presence.

Certified network access point allowing a member or ISV to connect to network. It includes routers and leased lines (bandwidth).

Order Flow HUB (for trading only)

The new message handling interface-managing application flows between the central systems and the access points.

Physical server

Computer hardware on which order management server (SLE) and/or broadcast server (SLC) software reside.

Router

A network device that performs dynamic routing between the Hub (Order Flow or Clearing) and the access point.

SLC

Broadcast Server

A logical server (server software), developed by the member or ISV ; it receives the market data feed, stores this information in a local database that maintains a picture of the current state of the market, and makes this information available on the workstations.

(SLC – “Serveur Local de Consultation” in French means local consultation server.).

SLE

Order Management Server

A logical server (server software) developed by the member or ISV ; it handles the interactive communication between the Clearing/Trading central systems and members, including all private messages issued by the Clearing System /Trading, i.e. the order feed (orders, acknowledgments, trade notices, cancellations, etc.).

(SLE – “Serveur Local d’Emission” in French means local transmission server.)

Subscriber

Logical access to a CAP.

A CAP can support up to 5 subscribers.

TCP/IP

TCP/IP means ‘Transmission Control Protocol/Internet Protocol’.

It comes from the names of the two major protocols i.e protocols TCP and IP.

TCP/IP represents in a certain way the unit of the rules of communication on internet and is based on the concept addressing IP i.e the fact of providing an address IP to each machine of the network in order to be able to dispatch packages of data.





CASH

DAILY TIME FRAME














Daily Production CASH & DERIVATIVES

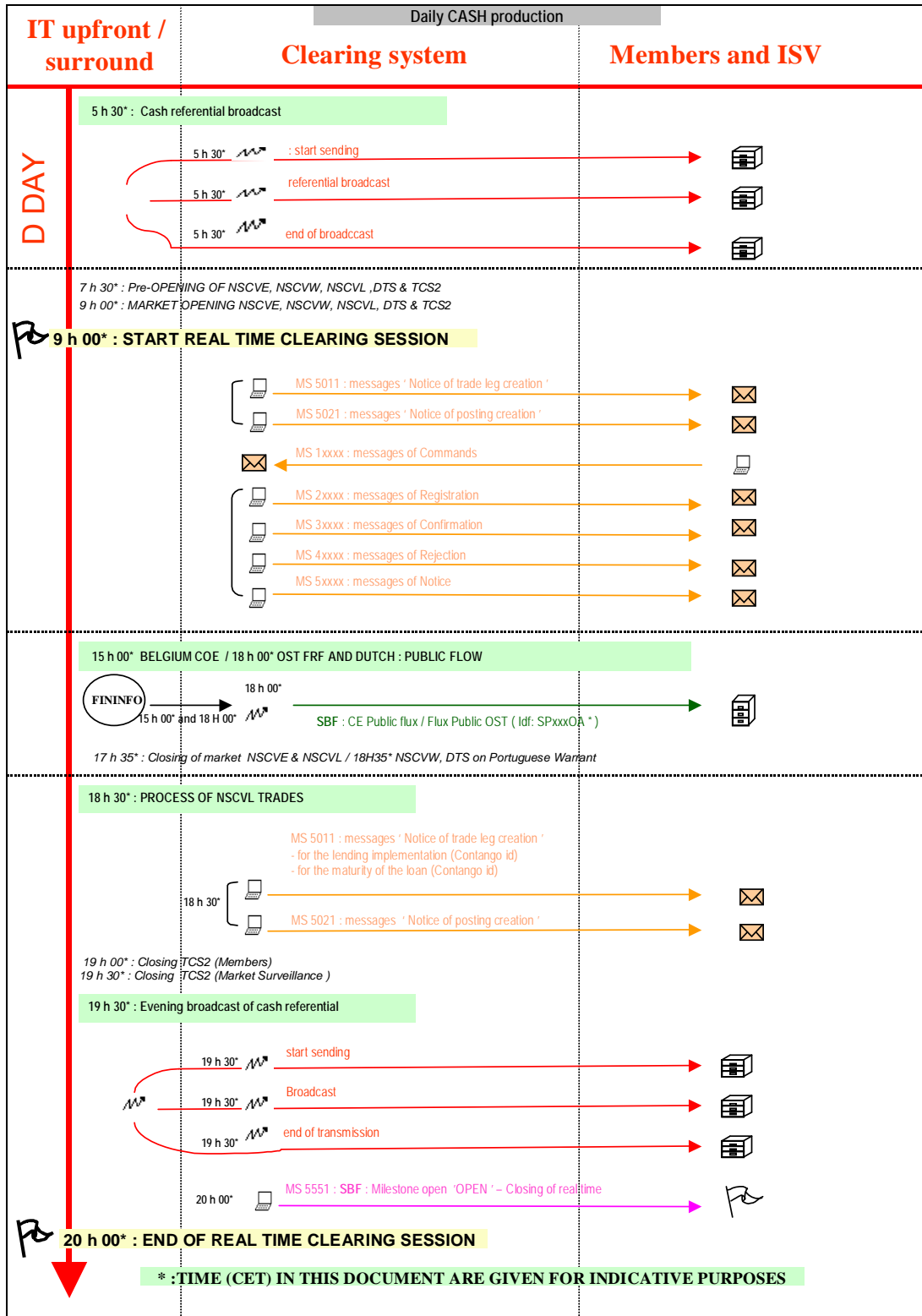
List of symbols used

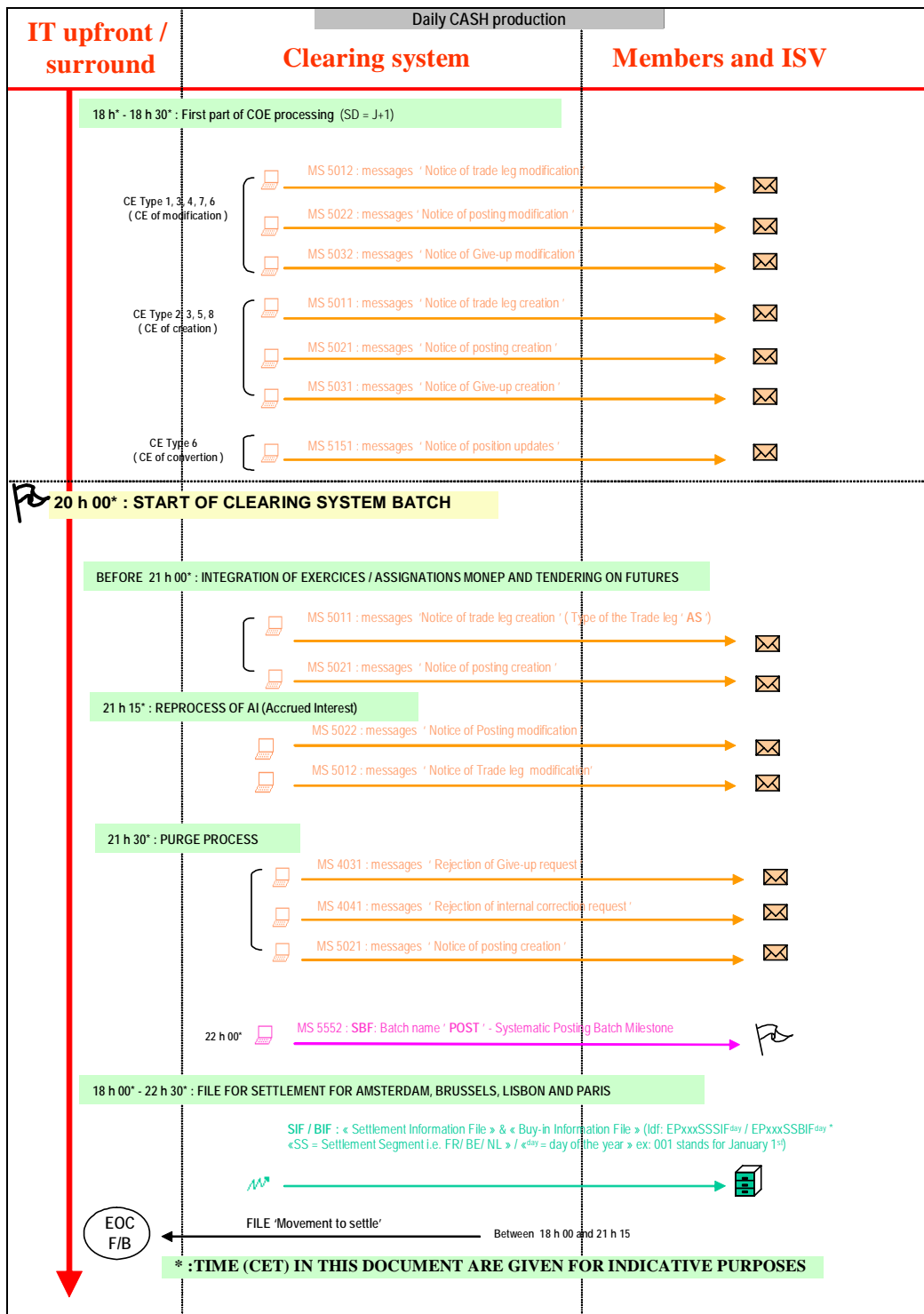
• *Transmission sending mode :*

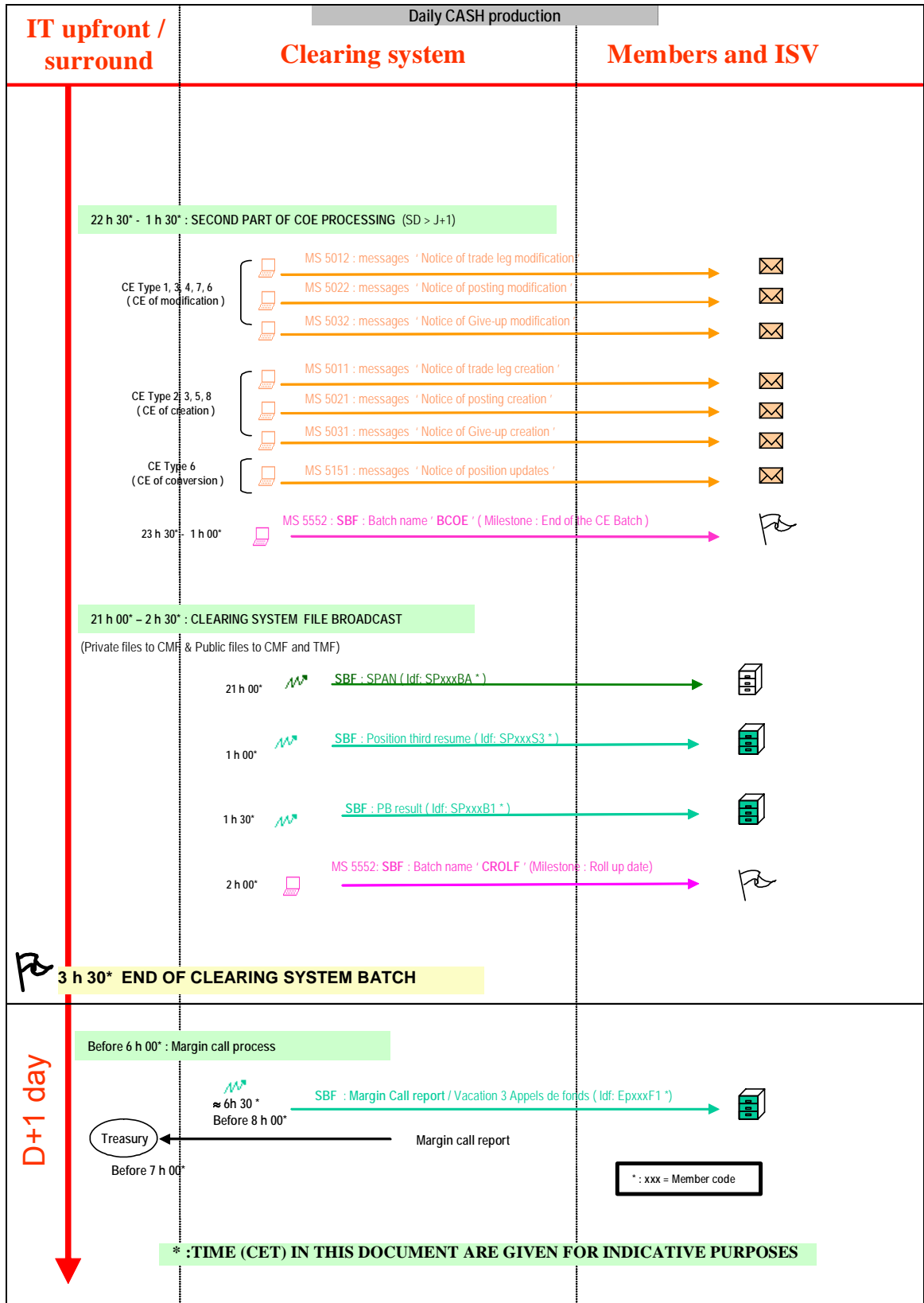
-  Screen mode
-  CFT broadcast
FTP broadcast (Private or Public files)

• *Files, milestones and messages :*

- | | | |
|---|---|-------------------|
|  |  | Private files |
|  |  | Public files |
|  |  | Private messages |
|  |  | Public messages |
|  |  | Milestone Batches |
|  |  | Time Milestones |
| |  | |









DERIVATIVES

DAILY TIME FRAME

Daily Derivatives production

Daily Real time

7 : 00 : START REAL TIME SESSION

7 : 00 : Re-sending of GLOBEX messages and Corporate Event positions if applicable

8 : 00 : Opening Liffe Connect system



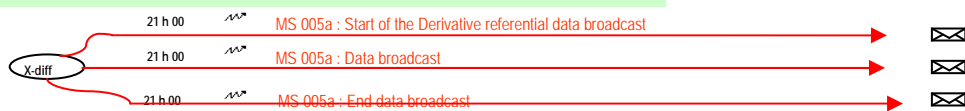
17 : 35 : Closing of Liffe Connect except for block trades and FCE (Globex session)



19 : 30 : END OF REAL TIME CLEARING SESSION (20 : 00 on expiry date)



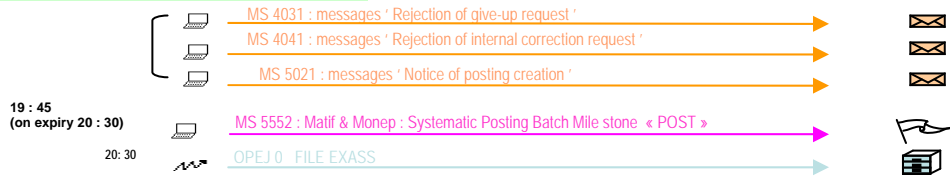
21 h 00 : Derivative referential broadcast



Daily Batch

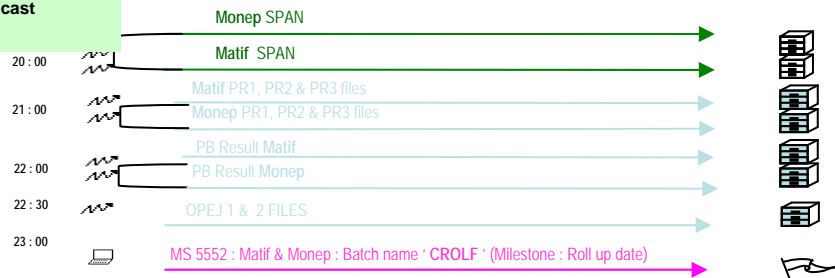
19 : 30 : START OF CLEARING SYSTEM BATCH (20 : 00 at expiry)

19 : 45 : Purge Treatment ODA emptying



20 : 00 : End of GLOBEX session

20 : 00 - 22 : 30 : Broadcast Clearing System files



23 : 30 : END OF CLEARING SYSTEM BATCH

Before 6 h 00 : Margin Calls process





REPORTING

- ❖ List of most common messages

- ❖ Batch Files

- Public
 - Private

List of most common and used messages

This document presents the most common application messages exchanged by SLEs and the Clearing System. The application enables the SLE to enter, modify, and cancel clearing instructions via the Clearing System and to obtain information about trades and position accounts.

- ✓ The Clearing System can generate a total of 105 messages, public and private.
- ✓ The Clearing System provides two types of services: solicited services and unsolicited services.

SOLICITED SERVICES

The solicited services of the Clearing System concern the following:

- ✓ posting/give-up:
These functions process posting and give-up for members on the day the trade occurs.
- ✓ position adjustment:
These functions process position modifications which are not directly related to a trade (i.e. exercise, abandonment, offsetting, internal and external transfers) for members.
- ✓ correction:
These functions process trade modifications posterior to the trade date.
- ✓ position account maintenance:
These functions allow members to update the position account database.

The SLE sends a message to the Clearing System requesting a service. The Clearing System performs the service and returns the results to the SLE via one or more messages.

UNSOLICITED SERVICES

Certain services are performed by the Clearing System without SLEs sending a request message. Messages are then sent to the SLEs concerned to inform them of the results of these services.

The unsolicited services concern essentially the following:

- ✓ trade reception:
When a trade from one of the following trading engines (NSC-VE; NSC-VW; NSC-VL; TCS; DTS and CONNECT) is integrated, messages are sent to members who own the trade legs. The integration of the trade is followed by automatic posting (posting instruction on the order), automatic give-up (give-up instruction on the order), systematic posting (posting set-up for the trade leg owner), or systematic give-up (give-up set-up for the trade leg owner). When these clearing instructions are processed, unsolicited messages are generated and sent to members.

MESSAGE CLASS

There are six messages classes used for the Clearing System services:

- ✓ COMMAND messages:
are requests sent by Members to the CLEARING system to be processed by the Clearing System
- ✓ REGISTRATION messages:
are sent by the Clearing System to members when a COMMAND is received (or when the Clearing Organisation users initiate an operation on behalf of members) but not processed immediately (for example operation with a delayed execution).
- ✓ CONFIRMATION messages:
are sent by the Clearing System to members when a COMMAND or an operation initiated by a Clearing Organisation on behalf of a member has been successfully processed. It can be the confirmation of a COMMAND received and

executed immediately or the confirmation of the delayed execution of a registered COMMAND.

- ✓ REJECTION messages:
are sent by the Clearing System to indicate that a registered COMMAND has been rejected.
- ✓ RESPONSE ERROR messages:
are sent by the Clearing System to acknowledge a COMMAND message when the request can not be processed (i.e. consistency check error).
- ✓ NOTICE messages:
are generated by internal the Clearing System processes (assignment), or following a COMMAND coming from another member (e.g. give-up). They do not refer to a COMMAND sent by the receiving member.

Notes: for each position update, the Clearing System lists the new and the previous positions in the CONFIRMATION or NOTICE message.

Each time a trade is processed, the Clearing System lists the quantity remaining to be processed (for the trade in question and for all trades on the contract for the trading day) in the corresponding CONFIRMATION (or NOTICE) message.

LIST OF MOST COMMON AND USED MESSAGES

Function/Process	Message	Code Number
Trade registration	Notice of trade leg creation	5011
Posting Creation	Notice of posting creation	5021
	Command for posting creation	1021
	Confirmation of posting creation	3021
Posting Modification	Notice of posting modification	5022
	Command for posting modification	1022
	Confirmation of posting modification	3022
Posting Cancellation	Notice of posting cancellation	5023
	Command for posting cancellation	1023
	Confirmation of posting cancellation	3023

COMPLETE TABLE OF SERVICES

Clearing System Services	Function/Process	Message	Code Number
Trade Adjustment Transaction	Trade registration	Notice of trade leg creation	5011
	Trade registration	Notice of trade leg modification	5012
	Trade registration	Notice of trade leg cancellation	5013
	Posting Creation	Notice of posting creation	5021
	Posting Creation	Command for posting creation	1021
	Posting Creation	Confirmation for posting creation	3021
	Posting Modification	Notice of posting modification	5022
	Posting Modification	Command for posting modification	1022
	Posting Modification	Confirmation for posting modification	3022
	Posting Cancellation	Notice of posting cancellation	5023
	Posting Cancellation	Command for posting cancellation	1023
	Posting Cancellation	Confirmation for posting cancellation	3023
	Give-up Creation	Notice of give-up creation	5031
	Give-up Creation	Command for give-up request	1031
	Give-up Creation	Registration of give-up request	2031
	Give-up Creation	Notice of take-up request	5034
	Give-up Creation	Notice of give-up request	5036
	Give-up Creation	Rejection of give-up request	4031
	Give-up Creation	Notice of give-up rejection	5037
	Take-up Creation	Command for take-up creation	1034
	Take-up Creation	Confirmation of give-up creation	3031
	Take-up Creation	Confirmation trade leg creation	3011
	Give-up Modification	Notice of give-up modification	5032
	Give-up Cancellation	Command for give-up cancellation	5033
	Give-up Cancellation	Notice of give-up cancellation	1033
	Give-up Cancellation	Confirmation of give-up cancellation	3033
	Internal Correction Creation	Command for internal correction request	1041
	Internal Correction Creation	Registration of internal correction request	2041
	Internal Correction Creation	Confirmation of internal correction creation	3041
	Internal Correction Creation	Rejection of internal correction request	4041

Clearing System Services	Function/Process	Message	Code Number
	External Correction Creation	Command for external correction request	1051
	External Correction Creation	Registration of external correction request	2051
	External Correction Creation	Notice of external correction acceptance request	5051
	External Correction Creation	Notice of external correction rejection	5055
	External Correction Creation	Rejection of external correction request	4051
	External Correction Acceptance	Command for external correction acceptance and posting	1054
	External Correction Acceptance	Registration of external correction acceptance	2054
	External Correction Acceptance	Notice of external correction acceptance	5054
	External Correction Acceptance	Confirmation of external correction creation	3051
	External Correction Cancellation	Command for external correction cancellation	1053
	External Correction Cancellation	Notice of external correction cancellation	5053
	External Correction Cancellation	Confirmation of external correction cancellation	3053
Position Adjustment Services	Internal Transfer Creation	Command for internal transfer request	1061
	Internal Transfer Creation	Registration of internal transfer request	2061
	Internal Transfer Creation	Confirmation of internal transfer creation	3061
	Internal Transfer Creation	Rejection of internal transfer request	4061
	Internal Transfer Cancellation	Command for internal transfer cancellation	1063
	Internal Transfer Cancellation	Registration of internal transfer cancellation	2063
	Batch internal transfer	Notice of batch internal transfer creation	5061
	External Transfer Request	Command for external transfer request	1071
	External Transfer Request	Registration of external transfer request	2071
	External Transfer Request	Notice of external transfer acceptance request	5074
	External Transfer Request	Rejection of external transfer request	4071
	External Transfer Request	Notice of external transfer rejection	5076

Clearing System Services	Function/Process	Message	Code Number
	External Transfer Acceptance	Command for external transfer acceptance and PA	1074
	External Transfer Acceptance	Notice of external transfer acceptance	5075
	External Transfer Acceptance	Registration of external transfer acceptance	2074
	External Transfer Creation (after CO validation)	Confirmation of external transfer creation	3071
	External Transfer Cancellation	Command for external transfer cancellation	1073
	External Transfer Cancellation	Notice of external transfer cancellation	5073
	External Transfer Cancellation	Registration of external transfer cancellation	2073
	Batch External Transfer	Notice of batch external transfer creation	5071
	Offsetting Creation	Command for offsetting creation	1121
	Offsetting Creation	Confirmation of offsetting creation	3121
	Offsetting Cancellation	Command for offsetting cancellation	1123
	Offsetting Cancellation	Confirmation of offsetting cancellation	2123
	Exercise Creation	Notice of exercise creation	5091
	Exercise Creation	Command for exercise creation	1091
	Exercise Creation	Registration of exercise creation	2091
	Exercise Creation	Confirmation of exercise creation	3091
	Exercise Creation	Rejection of exercise request	4091
	Exercise Cancellation	Command for exercise cancellation	1093
	Exercise Cancellation	Registration of exercise cancellation	2093
	Exercise Cancellation	Confirmation of exercise cancellation	3093

Clearing System Services	Function/Process	Message	Code Number
	Abandonment Creation	Notice of abandonment creation	5081
	Abandonment Creation	Command for abandonment creation	1081
	Abandonment Creation	Registration of abandonment creation	2081
	Abandonment Creation	Confirmation of abandonment creation	3081
	Abandonment Creation	Rejection of abandonment request	4081
	Abandonment Cancellation	Command for abandonment cancellation	1083
	Abandonment Cancellation	Registration of abandonment cancellation	2083
	Abandonment Cancellation	Confirmation of abandonment cancellation	3083
	Assignment/Expiration	Notice of assignment creation	5101
	Assignment/Expiration	Notice of non-assignment creation	5102
	Assignment/Expiration	Notice of underlying position creation	5103
	Assignment/Expiration	Notice of resetting of position	5111
	Opening of Position	Notice of opening of position creation	5131
	Position Value Update	Notice of position updates	5151
	Transmission of Position	Notice of start of position transmission	5140
	Transmission of Position	Notice of position transmission	5141
	Transmission of Position	Notice of end of position transmission	5149
Position Account Maintenance Services	Position Account Creation	Command for position account creation	1161
	Position Account Creation	Registration of position account creation	2161
	Position Account Creation	Confirmation of position account creation	3161
	Position Account Modification	Command for position account modification	1162
	Position Account Modification	Confirmation of position account modification	3162
	Position Account Cancellation	Command for position account cancellation	1163
	Position Account Cancellation	Registration of position account cancellation	2163
	Position Account Cancellation	Confirmation of position account cancellation	3163

Clearing System Services	Function/Process	Message	Code Number
Information Services	Cut-off Times	Notice of clearing operation status	5551
	Batch Progress	Notice of end of clearing batch	5552
General Messages	All	Notice of error	5999
	All	Response error	3999

Public files

File code	File name	Products		
		Matif	Monep	Cash
	CLEARING FILES			
	<i>Public Span Files</i>			
SPAN.OPXXXBD			X	
SPAN.OPXXXBI	<i>New Intra-day SPAN</i>		X	
SPAN.FPXXXBA		X		
SPAN.FPXXXBB		X		
SPAN.FPXXXBC		X		
SPAN.SPXXXBA				X
SPAN.SPXXXBE				X
	<i>Corporate Events Files</i>			
SPAN.SPXXXOA				X
SPAN.SPXXXOB				X
	<i>Referential & Settlement Public Files</i>			
EPPUBLICXXLCCD02				X
EPPUBLICXXLCCD01				X
EPPUBLICXXLCDD01		X	X	
EPPUBLICXXLCDI01		X	X	
EPPUBLICXXLCDC01		X	X	
EPPUBLICXXLCDP01		X	X	
EPPUBLICXXLCDP02		X	X	
EPPUBLICXXLCDP03		X		
EPPUBLICXXLCDP04		X		
EPPUBLICXXLCDE01		X	X	
EPPUBLICXXLCDE02		X	X	
EPPUBLICXXLUCD01				X
EPPUBLICXXLUCD02				X
EPPUBLICXXLCCC01	<i>Underlying cash closing price</i>	X	X	

File code	File name	Matif	Products	
			Monep	Cash
CLEARING FILES				
	<i>Private Position and Performance Bond Files</i>	X		
POS.FP***S1	<i>Positions per account, premiums, margin</i>	X		
POS.FP***S2	<i>SimilarS1, Aggregated by risk calculation base</i>	X		
POS.FP***S3	<i>Includes all the clearing events during the clearing session</i>	X		
POS.FP***B1		X		
POS.OP***S1	<i>Positions per account, premiums, margin</i>		X	
POS.OP***S2	<i>SimilarS1, Aggregated by risk calculation base E</i>		X	
POS.OP***S3	<i>Includes all the clearing events during the clearing session</i>		X	
POS.OP***B1	<i>This is the file which contains the detail of the risk calculation, per PB Account and per BFCC.</i>		X	
POS.OP***B2	<i>This is the file which contains the detail of the risk calculation, per PB Account and per BFCC.</i>		X	
POS.OP***B3	<i>This is the file which contains the detail of the risk calculation, per PB Account and per BFCC.</i>		X	
	<i>Private Positions Files</i>			
POS.SP***S3	<i>Includes all the clearing events during the clearing session</i>			X
POS.SP***B1				X
	<i>Trade Leg Reconciliation for CMF (this file will be charged)</i>			
POS.SP***TC				X
	<i>Trade Leg Reconciliation for TMF (this file will be charged)</i>			
POS.SP***TT				X
	<i>Corporate Event Summary File for CMF</i>			
POS.SP***CE				X
ACTIVITY REPORTING FILES				
	<i>Daily Operations Monep Files (these files are charged)</i>			
POS.OP***J0	<i>Option Exercises and assignment</i>		X	
POS.OP***J1	<i>Give ups, positions accounts, offset..</i>		X	
POS.OP***J2	<i>Positng, Trade legs, Position summary, product referential, corrections....</i>		X	
	<i>Daily Operations Monep Files Only Dutch products (this file will be charged)</i>			
POS.OP***J3	<i>Specific to the Dutch market : Similar to the J2 including the Dutch fees</i>		X	
FINANCE AND TREASURY FILES				
	<i>Financial Information Files</i>			
EP*****CNMCnn				
EP*****EUMCnn				
	<i>Elements of Valuation Files</i>			
EP*****CNMCRP				
EP*****EUMCRP				
	<i>Cash Fees Report</i>			
EP*****Cfyymm	<i>Cash Clearing fees Flat file</i>			X

File code	File name	Products		
		Matif	Monep	Cash
	SETTLEMENT FILES			
	<i>Settlement Connect Files</i>			X
EP*****BESIF ^{day}	<i>Settlement Information file (Brussels)</i>			X
EP*****BEBIF ^{day}	<i>Buy-in Information file (Brussels)</i>			X
EP*****FRSIF ^{day}	<i>Settlement Information file (Paris)</i>			X
EP*****FRBIF ^{day}	<i>Buy-in Information file (Paris)</i>			X
EP*****PTSIF ^{day}	<i>Settlement Information file (Lisbon)</i>			X
EP*****PTBIF ^{day}	<i>Buy-in Information file (Lisbon)</i>			X
EP*****NLSIF ^{day}	<i>Settlement Information file (Amsterdam)</i>			X
EP*****NLBIF ^{day}	<i>Buy-in Information file (Amsterdam)</i>			X
EP*****LUSIF ^{day}	<i>Settlement Information file (Luxemburg)</i>			X
EP*****LUBIF ^{day}	<i>Buy-in Information file (Luxemburg)</i>			X