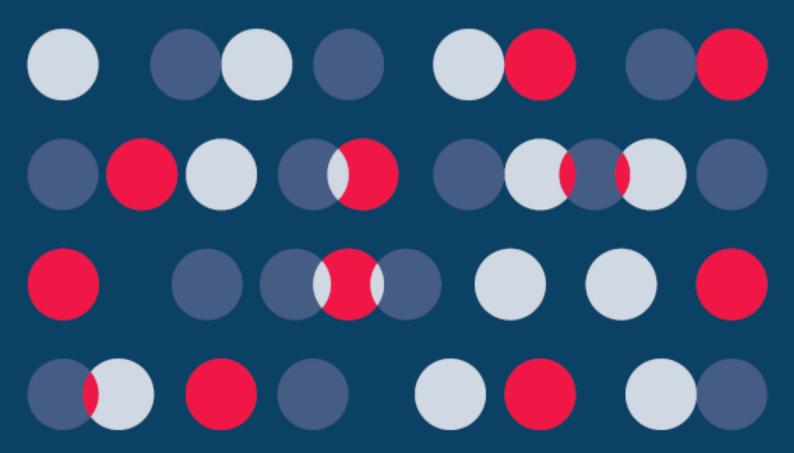
Aug 2022

OTC Clearing Hong Kong Limited

OASIS Web Portal User Manual





OASIS Web Portal User Manual Part I General Information

| Disclaimer | |
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The information of this document serves for education, training and/or on-boarding purposes only. HKEx assumes no responsibility for any errors, omissions or conflicts with clearing house rules, procedures and other official notice/circulars. Also, all examples in this document are used for illustration purposes only, and should not be considered the results of actual market circumstances. All matters pertaining to specifications herein are made subject to further revision and are superseded by official HKEx rules.

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Part I General Information

Amendment Log

| Updated | Document / | Description |
|----------|----------------------------|--|
| Date | Section | |
| | | Revise the Part I section 2 and 4 to reflect the changes due to launch of client clearing Revise the access profile type available for Clearing Members |
| May 2014 | Part I, section 2, 3 and 4 | Remove Hutchison Global Communications Limited (HGC) as Accredited Vendors of SDNet/2 |
| Dec 2014 | Part I, section 4 | Additional access level "selfservice_documentdownload" |
| May 2016 | Part I, section 3 | - security best practices for usage in OASIS Web Portal |
| Oct 2016 | Part I, section 4 | Two additional access level "selfservice_limitenq" and "selfservice_loginonly" |
| Mar 2021 | Part I, section 4 | One additional access level "whatif_ClearingMemberID" Remove access level "selfservice_loginonly" |
| Aug 2022 | | - Housekeeping changes |

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Part I General Information

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Part I General Information

1. Introduction

OASIS stands for "OTC Account Services Information System" which is a Web Portal provided by OTC Clear to its Clearing Members to manage the collateral holdings and obligations with OTC Clear.

This OASIS Web Portal User Manual aims to enable the Clearing Members of OTC Clear to make full and efficient use of OASIS by providing instructions for using the system's functions (user account administration, collateral request submission, and historical collateral requests enquiry and report retrieval).

All instructions and activities in OASIS are subject to the respective Rules and Procedures of OTC Clear.

Contents

The Web Portal User Manual covers all available functions on OASIS. It is divided into five sections:

Part I:

■ General & System Related Information of OASIS

Part II to V

- Using OASIS
 - 1. User Account Administration
 - 2. Collateral Management
 - 3. Margin Simulator

This Web Portal User Manual will be subject to further amendments and changes to cover the continuous expansion of OASIS' services.

For any suggestions and comments about the content of the Web Portal User Manual, please contact:

Operations Department
OTC Clearing Hong Kong Limited
30/F, One Exchange Square,
8 Connaught Place, CentralHong Kong

Hotline: 2211-6506 Fax: 2427 2211

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Part I General Information

Hotlines

The following hotlines are available to answer Clearing Members' enquiries on matters related to OASIS and its operations:

General Enquiries:

2211 6506

Tel. No. : Email Address : Service Hours : otc_operations@hkex.com.hk

9:00 a.m. to 6:00 p.m., Monday to Friday

OASIS Collateral Management Hotline:

Tel. No. 2211 6501

Service Hours: 9:00 a.m. to 6:00 p.m., Monday to Friday

OASIS Margin Simulator Hotline:

2211 6062

Tel. No. : Service Hours : 9:00 a.m. to 6:00 p.m., Monday to Friday

Technical Enquiries:

2211 6526

Tel. no. : Service Hours : 9:00 a.m. to 6:00 p.m., Monday to Friday

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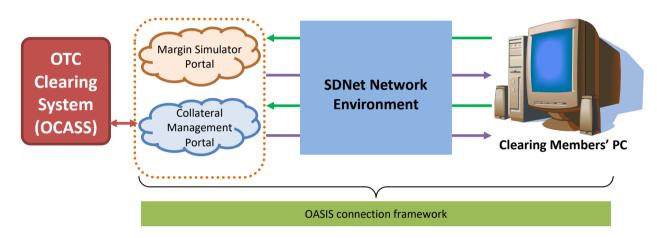


2. System Overview

2.1. Framework Overview

The following diagram shows the connectivity between OTC Clear's Clearing System (OCASS) and OASIS.

Diagram1. Connection of OTC Clearing System and OASIS



As shown in the diagram, Clearing Members need a PC (dedicated PC is recommended due to security concern) connecting OASIS via the Securities and Derivatives Network (SDNet).

SDNet is a consolidated network infrastructure designed to support multiple market system networks. Currently, SDNet supports many of the existing market systems of Hong Kong Exchanges and Clearing Limited (HKEx) including the Hong Kong Futures Automated Trading System (HKATS) and the Derivatives Clearing and Settlement System (DCASS). Please refer to "Section 3 Technical Requirement" for application and the installation details.

After completing the installation of SDNet and connection to OASIS, Clearing Members will be provided with two URLs, one for logging on to collateral management portal and another for margin simulator portal.

2.2. OASIS Operating Hours

The operating hours of OASIS are:

7:30 a.m. to 11:00 p.m., every OTC Clear Clearing Day¹

Please note not all functions of OASIS are available throughout the operating hours. A number of functions on OASIS have different operating hours and are detailed in the corresponding sections of PART II to IV.

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¹ means, at any time, each day appearing on the OTC Clear Clearing Days Calendar that is in effect at such time



2.3. Functions and Key Features

OASIS has the following main functions to facilitate Clearing Members' daily operations:

User account administration portal

- Maintenance Functions
 - o Create new user
 - Lock/unlock user
 - o Reset password of user
- Enquiry Functions
 - o Enquire status of user
 - Enquire general setting of the portal

Collateral management portal

- Maintenance Functions
 - Submit collateral deposit/withdrawal requests
 - Fulfill margin calls requirement
- Enquiry Functions
 - o Enquire collateral account movement
 - o Enquire the status of collateral deposit/withdrawal requests
 - o Enquire margin calls
- Reporting Functions
 - o Retrieval of various types of reports², including:
 - Trade reports
 - Settlement reports
 - Margin reports
 - Market Data reports

Margin simulator portal

- Simulation Functions
 - o Simulating margin requirement for a single trade
 - Simulating margin requirement for a portfolio

Key features of the three portals:

User account administration portal

■ An interactive web browser terminal providing online user account creation/modification and enquiry of user account status via a secured network

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² Please refer to the Report Usage Guide for more details on the specifications of each report published by OTC Clear, the guidance for interpreting the contents therein, and the frequency of publication of each such report.



■ "Maker-Checker" mechanism to ensure user account/modifications are initiated and approved by different users.

Collateral management portal

- An interactive web browser terminal providing online input, enquiry and report download via a secured network
- "Maker-Checker" mechanism to ensure collateral deposit / withdrawal requests are created and approved by different users.

Margin simulator portal

- Clearing Member-friendly interface allowing users to manually input trade details or adopt "bulk upload" (for portfolio) approach for margin simulation
- Display margin requirement before and after the simulation for easy analysis of the impact to the existing portfolio

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3. Technical Requirements

3.1. Connection Requirements

Clearing Members are connected to the OASIS through Securities and Derivatives Network 2 (SDNet/2) infrastructure. SDNet/2 is provided by different network vendors to the Clearing Members. HKEx has defined a set of commercial and technical requirements for the SDNet/2 infrastructure. Through a comprehensive accreditation process, initially, 2 vendors have been appointed to provide SDNet/2 network services. These Accredited Vendors are (in alphabetical order): Hong Kong Telecommunications (HKT) Limited (also known as PCCW) and Wharf T&T Limited (Wharf T&T).

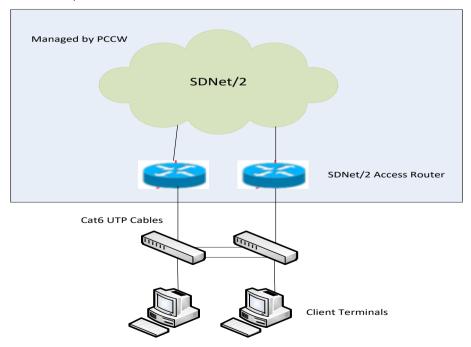
To apply for SDNet/2, Clearing Members should first approach the Accredited Vendors and get the SDNet/2 application form and information. The Accredited Vendors' contact numbers and email addresses are set out in the SDNet/2 Information Pack. Clearing Members should compare offers from the Accredited Vendors, read carefully all the terms and conditions as specified on the application form and the relevant material before completion of the application form. For general enquiry on the application process, interested party can contact the technical hotline in Part I section 1.

Clearing Members may apply either single link connection (without resilience) or dual links connection for their backup site. However from system resilience perspective, *dual links connection should be installed for the production site.* The bandwidth requirement for 1 to 2 concurrent OASIS user(s) is 1M and for 3 to 4 concurrent OASIS users is 2M. Also, OASIS users should access the portal via SDNet/2 using a dedicated PC. Clearing Members should ensure the security of information transmission and LAN switch for dual links or multiple dedicated PC connections.

The following two diagrams show the dual links and single link connection communication network setup.

Option 1: Dual links connection (for production site)

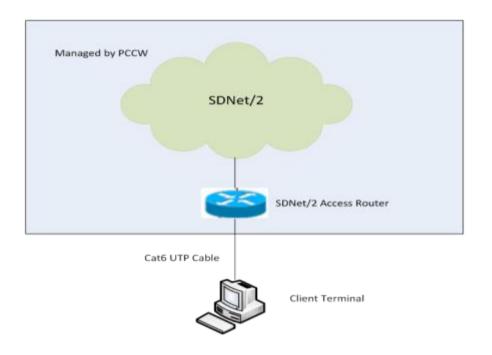
Remark: Hub is required for dual links connection.



Options 2: Single link connection

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3.2. Software Requirements

OASIS Users' PC specifications:

Recommended configurations for an OASIS user PC are as follows:

| Items | Descriptions |
|---------------------------|---|
| Hardware Configuration | For MS Windows 7 Professional: - Processor: Intel Core i5 2400 /3.1GHz - Memory: 4GB - Local Hard Disk: 500GB |
| Software Configuration | Operating System (OS): - MS Windows 7 Professional - Browser: best viewed by Internet Explorer 9.0 (IE 9.0) - Java Runtime Environment : JRE 6.0 |

3.3. Computer Virus / Worm Security Measures/security best practices

Computer virus or worms are one of the concerns in the security measures of computer system. Various security measures have been employed in OASIS to protect it from computer virus or worms attacks. Besides, there are other potential sources of computer virus or worms e.g. use of external storage device in Clearing Member's PC for downloading OASIS information or uploading files to conduct simulation. Clearing Members should take the following precautionary measures for the OASIS users' PCs:

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Virus protection

Install anti-virus software on OASIS users' PCs and regularly update the virus definitions from the vendor. If OASIS user is using a dedicated PC without Internet connection, in some case, the vendor may make available the definition files daily in the Internet for download. Clearing Members may download the updated virus definition file with a PC with Internet access, save the file in a disk or flash disk and install the update at the OASIS users' PC.

Microsoft OS patch

Regularly review and install the latest Microsoft security patches in OASIS users' PCs. Clearing Members may subscribe to Microsoft technical security notifications to keep up-to-dated about security vulnerability and patches available.

If OASIS user is using a dedicated PC without Internet connection, Microsoft security patches can be downloaded from Microsoft Download Center (or Microsoft Update Catalogue) separately with a PC having Internet access. Clearing Members may then save the file in a disk or flash disk and install the patch.

Security best practices

OASIS users are highly recommended to have their own personal workstation to access OASIS web portal. If OASIS users are sharing the workstation to access OASIS web portal, users should login the workstation using his/her own credentials. In addition, users are required to log out the OASIS web portal by clicking the "Log Out" link and then logout the workstation after use.

3.4. Prohibited Actions on OASIS System

Clearing Members must not perform any unauthorised access or security scanning (no matter at network, system or application level) on OASIS and any related network device not owned by them. Any such attempt will be regarded as illegal access or malicious intrusion to OASIS.

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4. Access Control and User Account Management

4.1. Access Control

OASIS provides different access rights to ensure that only relevant information is accessible to the authorised users of Clearing Members. These include:

- Clearing Member ID
- User profile, which includes:
 - user ID
 - user access group assignment

Clearing Member ID

OTC Clear assigns a Clearing Member ID to each Clearing Member/Client upon the approval of its membership/setup request. For Clearing Member, it is a twelve-character code.

Example: ABCDBANK001T

For Client, it is a code with 6 to 7 characters for the short name / short identifier of the client.

Example: XXXXXXX

User ID:

For each Clearing Member, OTC Clear will provide 4 user accounts with access to User account administration portal ("OASIS admin users").

A unique user ID is required for each user accounts for OASIS.

User ID for OASIS admin users will be assigned by OTC Clear. It has the following syntax:

admin[#]@[ClearingMemberID]

(e.g. admin1@ABCDBANK001T).

User ID for OASIS users will be assigned by OASIS admin users. It has the following syntax:

[UserName]@[ClearingMemberID], where the maximum characters of UserName is 18 (e.g.john_dow@ABCDBANK001T).

User name is assigned by the OASIS admin user, please refer to **Part II, Section 2.1** for creation of OASIS user accounts

HKEx has the right to suspend or delete OASIS user as its discretions

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User Access Group:

All OASIS admin users share the same user access group while there are two types of access profile for OASIS user. Please refer to Table 4.2 for the functions available for the different access groups.

4.2. User Account Management

Clearing Members can apply extra OASIS admin user accounts and/or increase the maximum number of OASIS user accounts by completing and submitting "OASIS User Account Maintenance Form" to OTC Clear. The form is available for download on the HKEx website.

Upon the approval of the OASIS admin user account request, each OASIS Admin user will be assigned a unique User ID and a temporary password to logon to OASIS. Clearing Members are required to change the password at the first logon and every 90days.

Clearing Member is responsible to manage its own list of OASIS users. Further details on the features available in OASIS User Account Administrative Portal to aid account management can be found in Part II of this user guide.

Table 4.2 Functions available for different OASIS user access groups:

| | User Access Groups | | | | | |
|---|-----------------------------|---------------------------------|---|--------------------------------------|--------------------------|---------------------------------|
| ACCESSIBLE FUNCTIONS | selfservice_ clientadmin | selfservice_c ollateral_user | selfservice_c ollateral_appr over | selfservice_ documentd ownload | selfservice_l imitenq | whatif_Clear ingMemberl D |
| OASIS User Account Administration Portal | | | | | | |
| View Status of OASIS users Create new OASIS users Amend setting of existing OASIS user Lock/unlock existing OASIS user Download Report on status of OASIS user Authorise request on changes on OASIS user | | | | | | |
| OASIS Collateral Management Portal | | | | | | |
| MARGIN CALL | | | | | | |
| Enquire Margin Calls Issued Submit change to settle margin call in non-base currencies | | Ø | ☑ | Ø | | |
| COLLATERAL DEPOSIT | | | | • | • | • |
| View Historical Collateral Deposit Request Create Collateral Deposit Request | | N N | | ☑ | | |

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| Cancel Collateral Deposit Request Reject Collateral Deposit Request Authorise Collateral Deposit Request COLLATERAL | | Ø | | | |
|--|------|----------|----------|---|--|
| WITHDRAWAL | | | | | |
| View Historical Collateral Withdrawal Request Create Collateral Withdrawal Request Cancel Collateral Withdrawal Request Reject Collateral Withdrawal Request Authorise Collateral Withdrawal Request | N N | N | ☑ | | |
| REPORT FUNCTIONS | | | | | |
| Search Historical Reports Download Reports | abla | | V | | |
| Settlement Limit | | | | | |
| Enquiry Portal | | | | | |
| Settlement Limit Monitoring | | | | V | |
| OASIS Margin Simulator Portal | | | | | |
| What-if Trade Calculation What-if Portfolio Calculation | | | | | |

Clearing Members' Responsibilities

Each Clearing Member is responsible for informing OTC Clear of any subsequent changes to the list of authorised signatories in relation to any request to OTC Clear for OASIS access.

It is the responsibility of each Clearing Member to control the access to OASIS by ensuring the security and confidentiality of the User IDs and passwords of its assigned users. Clearing Members shall be liable for all instructions inputted into OASIS via the OASIS Users ID assigned to them.

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