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OTC Clearing Hong Kong Limited

OTC ACCOUNT SERVICES INFORMATION SYSTEM ("OASIS") CONFIGURATION GUIDE

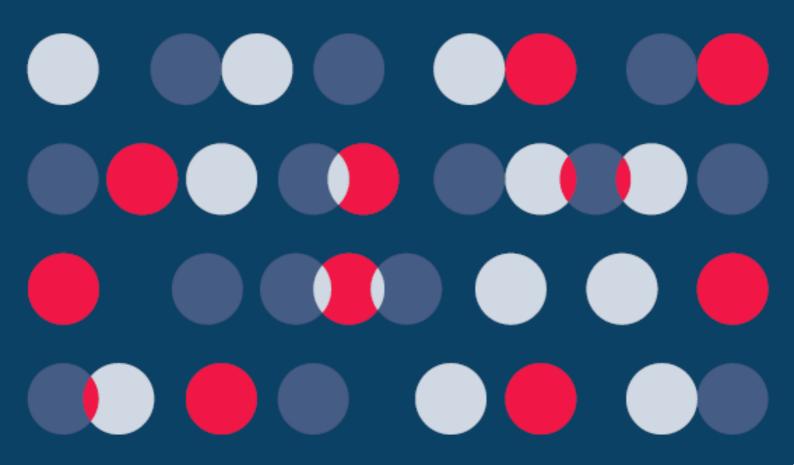


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Introduction

This document provides the Clearing Members of OTC Clear the installation procedures to configure their own PCs for accessing OASIS (also known as Web Portal).

The installation mainly comprises of the following 4 steps:

- 1. Hardware Setup
- 2. Communication Line Setup
- 3. Window IP Address and Configuration Setup
- 4. Additional configuration for Internet Explorer



Step 1: Hardware Setup

The recommended OASIS user PC configurations are as follows:

Items	Descriptions
Software Configuration	 Operating System (OS): Windows 10 version 1703 or higher Browser: Best viewed by Internet Explorer 11.0 (IE 11.0)

Step 2: Communication Line Setup

Step 2.1

Connect the PC to SDNet/2 Routers

Step 2.1.1:

Ensure the Metro Ethernet communication lines and routers are installed and configured properly by the SDNet/2 service vendor

Step 2.1.2:

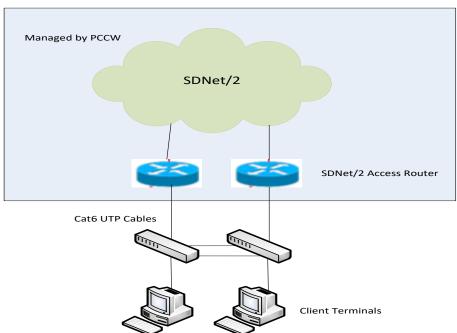
Connect the SDNet/2 routers to the LAN switch(es) with LAN cables. The LAN interface of the SDNet/2 router supports up to Gigabit Ethernet and it is configured as "Auto Negotiation" (i.e. both speed and duplex mode are auto). The LAN switch ports (connecting the SDNet/2 routers) should have similar "auto" configuration settings and must provide a single VLAN (Layer2) for connecting SDNet/2 router and the PC.

Step 2.1.3:

HSRP/VRRP group number on SDNet/2 router for OASIS will be assigned by the SDNet/2 service vendor. Clearing members should avoid using the same HSRP/VRRP group number in their network for applications other than OASIS.

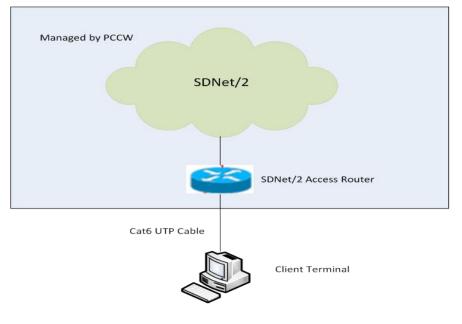


Connect the PC to the routers and LAN switch with LAN cables. There are two possible options to establish the connection:



Option 1: Dual-link connection (for production site)









Open protocols are used to access OASIS, i.e. TCP/IP, HTTPS, DNS. Clearing Members may use Firewall to protect OASIS user PC which may resides in their internal network.

This section provides the necessary firewall setup information between OASIS user PC and the SDNet/2 routers.

The followings are the IP addresses of the production OASIS servers connecting the OASIS user PC:

Server	Production IP Address
HTTPS (Web Server – OASIS	10.154.11.22 (Primary)
Collateral Management Portal)	10.153.11.22 (Secondary)
HTTPS (Web Server – OASIS	10.154.11.22 (Primary)
Settlement Limit Enquiry Portal)	10.153.11.22 (Secondary)
DNS Server	10.154.11.21 (Preferred)
	10.153.11.21 (Alternate)
OTC Secure File Transfer	10.154.11.71 (Primary)
(sFTP) for OASIS Reports Download Services	10.153.11.71 (Secondary)

The following services should be granted in the firewall.

	Port No.	Protocol	Direction	Descriptions
DNS	53	UDP	From OASIS user PC to DNS Server	Domain Name Service
HTTPS	443	ТСР	From OASIS user PC to Web Server	Online Traffic
SFTP	10022	ТСР	From OASIS user PC to OTC Secure File Transfer (sFTP) for OASIS Reports Download Services	SFTP report download services



Access to development OASIS web portal

Clearing member is required to apply for development SDNet/2 link when there is a need to access development environment of OASIS web portal. It is highly recommended to setup a dedicated network segment for testing OASIS user PC.

The followings are the IP addresses of the development OASIS servers connecting the OASIS user PC:

Server	Development IP Address
HTTPS (Web Server – OASIS Collateral Management Portal)	10.153.11.12 (Development)
HTTPS (Web Server – OASIS Settlement Limit Enquiry Portal)	10.153.11.12 (Development)
OTC Secure File Transfer (sFTP) for OASIS Reports Download Services	10.153.11.12 (Development)



Source IP Address

Each Clearing Member is assigned with a pre-defined range of IP addresses. The Clearing Member should ensure that each OASIS user PC should appear with the same IP address as original in each connection. If there is any Network Address Translation (NAT) being performed, the Clearing member's firewall should translate it back to the original IP address range (assigned by network vendor) otherwise the terminal login authentication will fail. In addition, the NAT should be a one-to-one mapping to the terminal. In another words, the IP address of each OASIS user PC should be translated to a unique value within the original IP address range.



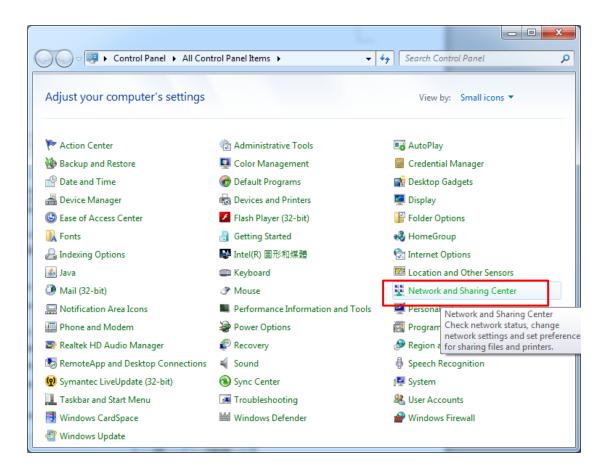
Step 3: Windows IP Address and Configuration Setup - TCP/IP for SDNet/2 Router & Ethernet Card Connection

Step 3.1

Login in as an *administrator* to perform the following procedures.

Step 3.2

Click "Start", go to the "Control Panel", then select "Network and Sharing Center"





Step 3.3

Click "Local Area Connection" under "View you active networks"

	the second		
G 🗢 🙀 🕨 Control Panel 🕨	All Control Panel Items Network and Sharing Center	✓ 4 Search Control Panel	م
Control Panel Home Change adapter settings Change advanced sharing settings	View your basic network information and set up connections WOAF3421 CORP.HKEX 2 (Unauthenticat Internet View your active networks CORP.HKEX 2 (Unauthenticat Internet View your active networks Connect or disconnect View your active networks Access type: Internet View your active networks Set up a new connection or network Set up a new connection or network Set up a new connection or network Set up a new connection or network Set up a new connection or network Connect or a network Connect or a network Connect or a network Connect or reconnect to a wireless, wired, dial-up, or VPN network connection. Set up a network connection or network computers, or change sharing settings. Toubleshoot problems Diagnose and repair network problems, or get troubleshooting information.		
See also HomeGroup			
Internet Options			
Windows Firewall			

Step 3.4

Click "Properties".

🃮 Local Area Connection Status	×
General	
Connection	
IPv4 Connectivity:	Local
IPv6 Connectivity:	Limited
Media State:	Enabled
Duration:	42 days 20:09:29
Speed:	100.0 Mbps
Dgtails	
Activity	
Sent —	Received —
Bytes: 1,238,975,627	670,115,394
Properties Disable	Diagnose

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Step 3.5

Check the box of "Internet Protocol Version 4 (TCP/IP)" and click then "Properties".

🖳 Local Area Connection Properties 📃 💌
Networking
Connect using:
🔮 Broadcom NetXtreme Gigabit Ethernet
<u>C</u> onfigure
This connection uses the following items:
✓ Client for Microsoft Networks ✓ ✓ ✓ ✓ ✓ ØoS Packet Scheduler ✓ Internet Protocol Version 6 (TCP/IPv6) ✓ Internet Protocol Version 4 (TCP/IPv4) ✓ Link-Layer Topology Discovery Mapper I/O Driver ✓ Link-Layer Topology Discovery Responder Install Properties
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. OK Cancel



Step 3.6

Select "Use the following IP address" radio button and enter the "IP address" and "Default gateway" assigned by your SDNet/2 service vendor (PCCW/HKBNES).

The service vendor will assign a set of unique "IP address" and "Default gateway" for **each** OASIS user PC.

Enter "255.255.255.0" for "Subnet mask".

Select "Use the following DNS server addresses" radio button and enter the "Preferred DNS server" and "Alternate DNS server" (if available) set out in Step 2.2 above. Enter "10.154.11.21" for "Preferred DNS" and "10.153.11.21" for "Alternate DNS Server", then click "OK".

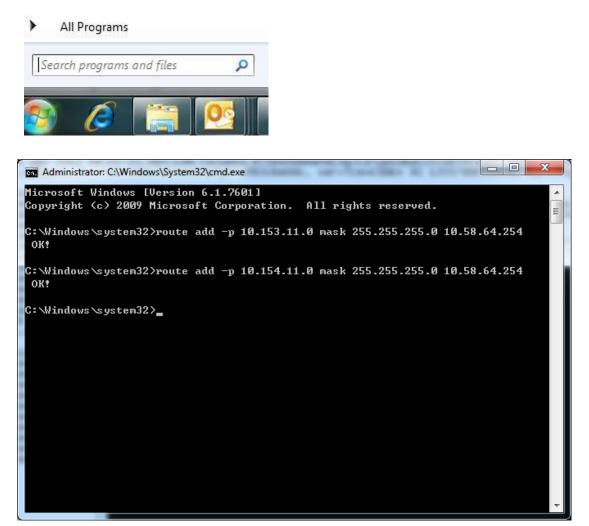
Intern	net Protocol Version 4 (TCP/IPv4)	Properties	? 💌	
Gen	eral			
thi	u can get IP settings assigned auton s capability. Otherwise, you need to r the appropriate IP settings.			
) <u>O</u> btain an IP address automatical	У		
-	Use the following IP address: —			
	<u>I</u> P address:			
	S <u>u</u> bnet mask:			
	Default gateway:			
	Obtain DNS server address autor	natically		
O Use the following DNS server addresses:				
	Preferred DNS server:			
	<u>A</u> lternate DNS server:			
		Adva	nced	
		ОК	Cancel	



Step 3.7

Add static route in OASIS user PC/Server

Click "Start" and type "cmd.exe" in the search bar to retrieve the command window.



Input the following sample command: *route add –p 10.153.11.0 mask 255.255.255.0 x.x.x.254 route add –p 10.154.11.0 mask 255.255.255.0 x.x.x.254*

Remarks: "x.x.x.254" represents the unique "Default gateway" assigned for each PC by the service vendor.



Step 3.8 Restart the computer

For Clearing Member having more than one OASIS user PC, please repeat step 3.6 to 3.8 for each PC.

Reference information:

Range of IP address / Subnet mask (24-bit) to be assigned by the two SDNet/2 service vendors (PCCW/HKBNES):

- 1. PCCW 10.58.0.0/24 to 10.58.127.0/24
- 2. HKBNES 10.59.0.0/24 to 10.59.127.0/24

IP address range to be used by Clearing Members are x.x.x.65 ~ x.x.x.190.

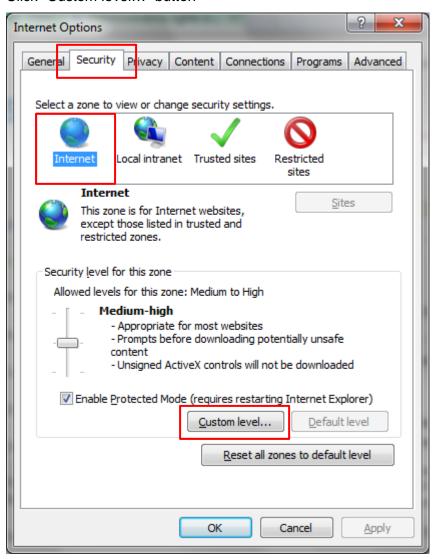


Step 4: Configurations for Internet Explorer

OASIS supports Internet Explorer, which can be downloaded on Microsoft's website <u>http://www.microsoft.com/windows/internet-explorer/default.aspx</u>.

Step 4.1

Launch Internet Explorer, select Tools > Internet Options from the Menu Bar Select Security Tab, and then select the Internet zone Click "Custom level..." button



Step 4.2

Select "**Enable**" for "Include local directory path when uploading files to a server", then click "OK"

Security Settings - Internet Zone	x
Settings	
Prompt	<u> </u>
Don't prompt for client certificate selection when no certificat	
 Disable 	
Enable	
Drag and drop or copy and paste files	
🔘 Disable	
Enable	
Prompt	
Include local directory path when uploading files to a server	
O Disable	
Enable	
Installation of desktop items	
 Disable 	
 Enable (not secure) 	
Prompt (recommended)	-
1 aunching applications and unsafe files	
*Takes effect after you restart Internet Explorer	
Reset custom settings	
Reset to: Medium-high (default)	
OK Cance	el

Step 4.3

It is noticed that, for intranet sites, Internet Explorer may enable Compatibility View by default. Please note that OASIS needs Compatibility View disabled for proper running.

Launch Internet Explorer, select Tools > Compatibility View Settings Uncheck the checkbox "Display intranet sites in Compatibility View" Then Close this settings window.

Compatibility View.	bsites to be displayed in
idd this website:	
	Add
Websites you've added to Compatibil	ity View-
Treaster you're budeo to compatible	Remove
Include updated website lists from	n Microsoft
Display intranet sites in Compatibi	lity View

Step 4.4

Go to OASIS Collateral Management Portal / Margin Simulator URL <u>https://www.otcclearinghk.com/eSelfService</u>

Go to OASIS Settlement Limit Enquiry Portal URL https://www.otcclearinghk.com/OnlineEnquiry/

Point to "Pop-up blocked" information bar, then right click on it and then click on "Always Allow Pop-ups from This Site..."

Pop-up blocked. To see this pop-up or additional options click here	Temporarily Allow Pop-ups Always Allow Pop-ups from This Site Settings More information		×
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Click "Yes" to allow pop-ups from this site

Allow pop-ups from this site?	×
Would you like to allow pop-ups from	
(<u>Y</u> es <u>N</u> o	