1 GENERAL INFORMATION

This document describes how to use the various functions of DCASS Terminal which consists of a DCASS Server and a DCASS Clearing Workstation. No part of this DCASS Terminal User Guide may be copied, distributed, transmitted, transcribed, stored in a retrieval system, translated into any human or computer language, or disclosed to third parties without written permission from HKEX.

The DCASS Terminal is the HKEX customized version of the NASDAQ OMX client application which provides easy access to DCASS and is designed to support Clearing Participants with low to medium clearing volume[1] as it facilitates manual input of post-trade activities. HKEX also provide an alternative for Clearing Participants to connect their back-office system to DCASS through DCASS OAPI on a host-to-host basis to enable straight-through-processing which can support high clearing volume. Clearing Participants who are interested in developing their customized DCASS OAPI applications can obtain relevant information in HKEX web site at http://www.hkex.com.hk/eng/market/clr/dvclr/dcass/dcass.htm.

1.1 HOTLINE

In case Clearing Participants encounter any operational problem or technical difficulties, please contact the following hotline:

<div style="background-color:yellow; border:1px solid black; text-align:center">

DCASS Hotline   2979 7222
from 9:00 a.m. to 6:45 p.m., Monday to Friday, excluding public holiday

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[1] *General speaking, Clearing Participants with around 10,000 daily trades are considered having medium clearing volume.*

1.2 INPUT SERVICING

Certain transactions can only be input by the relevant Clearing House upon proper instructions from Clearing Participants.   The instructions can be submitted by facsimile the appropriate Post-trade Input forms below to the Clearing House no later than the System Input Cutoff time.   Under emergency situation, such as line failure or DCASS Terminal failure, Clearing Participants may also request the relevant Clearing House to input post-trade transactions on their behalf by submitting the appropriate On-Behalf-Of Processing Request forms below no later than the System Input Cutoff time.   The below forms can be downloaded from HKEX website.

Function	Clearing House	
	HKCC	SEOCH
Post-trade Input forms:		
Position netting between standard and Flexible Option series	Form 4	N/A
External position transfer	Form 5	Form A5
Annulment of position netting	Form 6	Form A6
On-Behalf-Of Processing Request forms *:		
Rectify trade	Form 1	Form A1
Give up / take up request	Form 2	Form A2
Average price trade (APT)	Form 3	Form A3
Internal position transfer, position netting for same series and different series (except between standard and Flexible Option series)	Form 4	Form A4
Cover / decover call request[#]	N/A	Form A7
Exercise / exercise adjustment request[#]	N/A	Form A8

Notes:
* On-Behalf-Of Processing services are subject to charges
[#] Emergency on-behalf input transactions are not applicable to After-Hours Futures Trading session

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1.3 OPERATION TIMELINE

Time	Activities
From 5:00 a.m. to 7:30 a.m.	Close for post-trade adjustments Open for queries for all products
After 7:30 a.m. to Before Pre-market / 30 mins prior to Market Open of T session	(i) Open for queries only: - Interest Rate Products - Equity Products - Equity Index Products except those listed in (ii) below (ii) Open for both post-trade adjustments and queries: - Hang Seng Index Futures/Options, - Mini-Hang Seng Index Futures/Options - H-shares Index Futures/Options - Mini-H shares Index Futures/Options - Flexible Index Options - RMB Currency Futures/Options - Metal Futures
From Pre-market / 30 mins prior to Market Open of T session up to 6:45 p.m.	Open for post-trade adjustments[1] and queries for all products Report download for previous business day is restricted from 6:45 p.m. onward[2]
From 5:15 p.m. to 12:30 a.m. next calendar day	Open for post-trade adjustments and queries for next day trades of: - Hang Seng Index Futures - Mini-Hang Seng Index Futures - H-shares Index Futures - Mini-H shares Index Futures
From 5:15 p.m. to 1:45 a.m. next calendar day	Open for post-trade adjustments and queries for next day trades of: - Metal Futures - RMB Currency Futures
After 6:45 p.m.	Close for post-trade adjustments for historical and current day trades[5]
SEOCH AB end time[3]	7:10 p.m.
HKCC AB end time[3]	9:00 p.m.
Evening Batch end time[3]	9:30 p.m.

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Time	Activities
After 12:30 a.m. next calendar day	Close for post-trade adjustments for next day trades of: - Hang Seng Index Futures - Mini-Hang Seng Index Futures - H-shares Index Futures - Mini-H shares Index Futures
After 1:45 a.m. next calendar day	Close for post-trade adjustments for next day trades of: - Metal Futures - RMB Currency Futures
Night Batch end time[4]	5:00 a.m. next calendar day All logins to DCASS will be terminated by night batch process.

Notes:

1) *Post-trade adjustments include the following transactions: rectify trade, give up and take up, position transfer, position netting, exercise request, cover call, average price trade*

2) *Reports will be automatically downloaded to the DCASS Server when they are available. In case the reports need to be manually retrieved again, it can be done before 6:45 p.m. (System Input Cutoff Time for historical and current day trades) on the next business day except for Risk Parameter File (RPF). Clearing Participants can retrieve RPF via DCASS Terminal before 8:30 a.m. on the next business day or download it from HKEX website at http://www.hkex.com.hk/eng/market/rm/rm_dcrm/riskdata/rpf/riskdata.asp.*

3) *End time for AB and batch jobs are estimation. It may be earlier or later.*

4) *Curfew will start at 1:45 a.m., so from 1:45 a.m. to 5:00 a.m. next calendar day, DCASS Server will not be able to reconnect to DCASS Host if the DCASS Server has been logged out within that said time period.*

5) ***Participants are strongly encouraged to complete their post-trade activities 30 minutes before 6:45 p.m., the 30 minutes to 6:45 p.m. should be treated as Emergency Buffer for post-trade input.***

1.4

1.4 USING THE DCASS TERMINAL

Clearing Participants can retrieve trade and position information, issue exercise requests, perform trade give up and take up operations, make covered call requests, etc. To facilitate faster access, the DCASS Terminal stores most of the information in the participant's local machine.

BU_xxxx101 and BU_xxxx102 is the standard naming convention for DCASS Terminal User Ids, where "Cxxx" is the DCASS Customer Code of the Clearing Participant. Should Clearing Participants want to request for additional DCASS Terminal User IDs, they have to provide justification and contact Clearing House for such request. However, please note that there can only be 5 concurrent login of Terminal User IDs for each DCASS Server.

1.4.1 STARTING THE DCASS TERMINAL

1. Logon to Windows

2. Start the DCASS Terminal from the desktop icon or from the Start menu.

3. The DCASS Terminal main menu and the login prompt will appear.
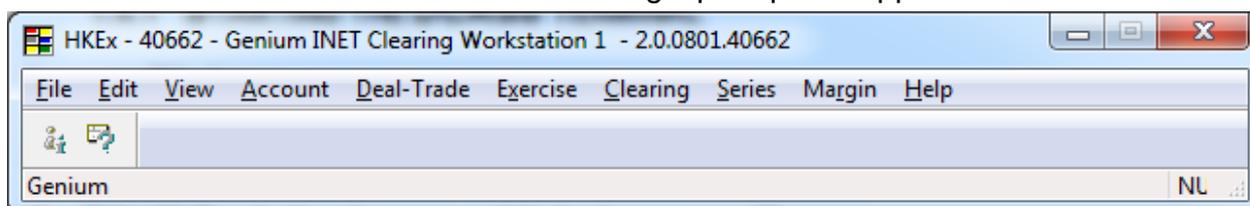
4. Use the DCASS User information assigned by HKEX to login
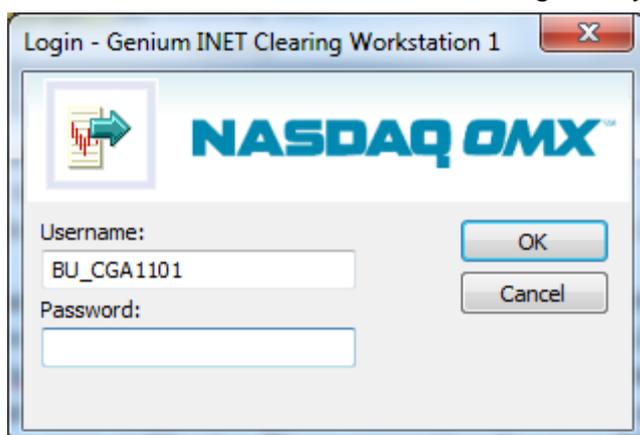
Note:
Please bear in mind that screens displayed in this user guide were taken during testing and may differ from the actual screens in the production environment. Use them as a guide only.

1.4.2   FIRST TIME LOGIN OR WHEN THE PASSWORD IS EXPIRED

If the user provided to Clearing Participants is expired (the first time user or password expired every 90 days), Clearing Participants are required to change the password during login. After the password is changed, Clearing Participants are required to re-login again.   Steps are as follows:

i)   Clearing Participants will be asked to change their password:
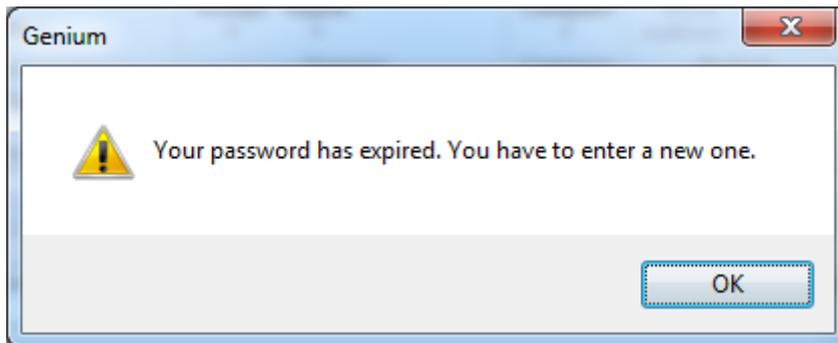
ii) "Change password" screen appears and Clearing Participants are required to provide the <New Password> and <Confirm Password>:
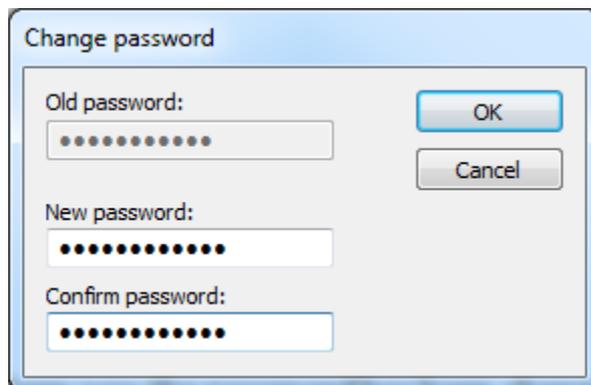
iii) A confirmation message will be given to inform Clearing Participants the password has been changed:
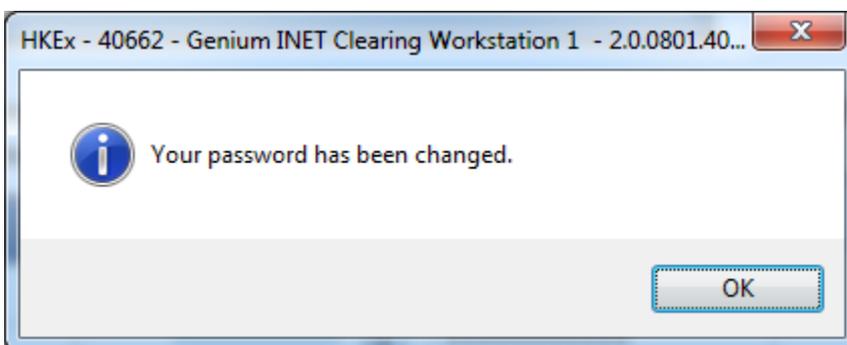
iv) Then Clearing Participants will be required to re-login again using the new password.

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Notes:
1) *Clearing Participants will not be able to login the system if they do not change their password*
2) *Percent (%) and backslash (\) are not accepted for password character.*
3) *The message of "Your password has been changed" will be given whenever the user is updated in the system. For example, if the access right of the user is changed by DCASS Administrator.*

1.4.3   CHANGE PASSWORD BEFORE PASSWORD EXPIRATION

Clearing Participants can change the password before the password is expired. Simply select "Change Password" from the "File" menu when Clearing Participants are using DCASS Terminal.
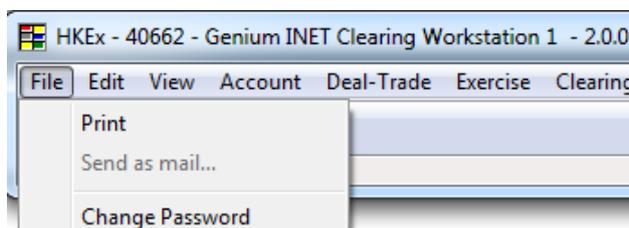
Unlike changing password during login, Clearing Participants need to provide their password (old password) before they can change it.
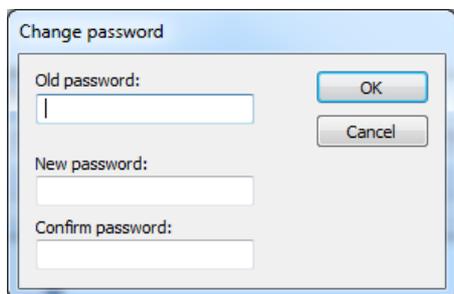
1.4.4   PROBLEM LOGIN

The followings are the error messages Clearing Participants may encounter during login if Clearing Participants input either incorrect user name, incorrect password or other invalid login attempt.

1.7
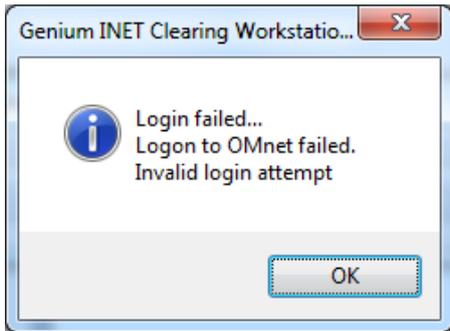
Other invalid login attempt can be due to:

a) The user is locked by the system due to too many invalid login attempts (10 times);
b) Clearing Participants are trying to login the system when the system is not available (e.g. during curfew period).

In case of (a), please contact DCASS Hotline at 2979 7222 for unlock of login account. For (b), please try to login the system when it is available.   Invalid login attempts also include login from unauthorized location.

1.4.5   WORKING WITH WINDOWS

The DCASS Terminal allows multiple windows to be opened on the screen at the same time.   Only one window can be active at any time and the active window is indicated by the active title bar.   In the screenshot below, the Exercise History window is the active window.   To switch the active window to another window, simply click on it and it will be brought to the front of the screen.

1.8
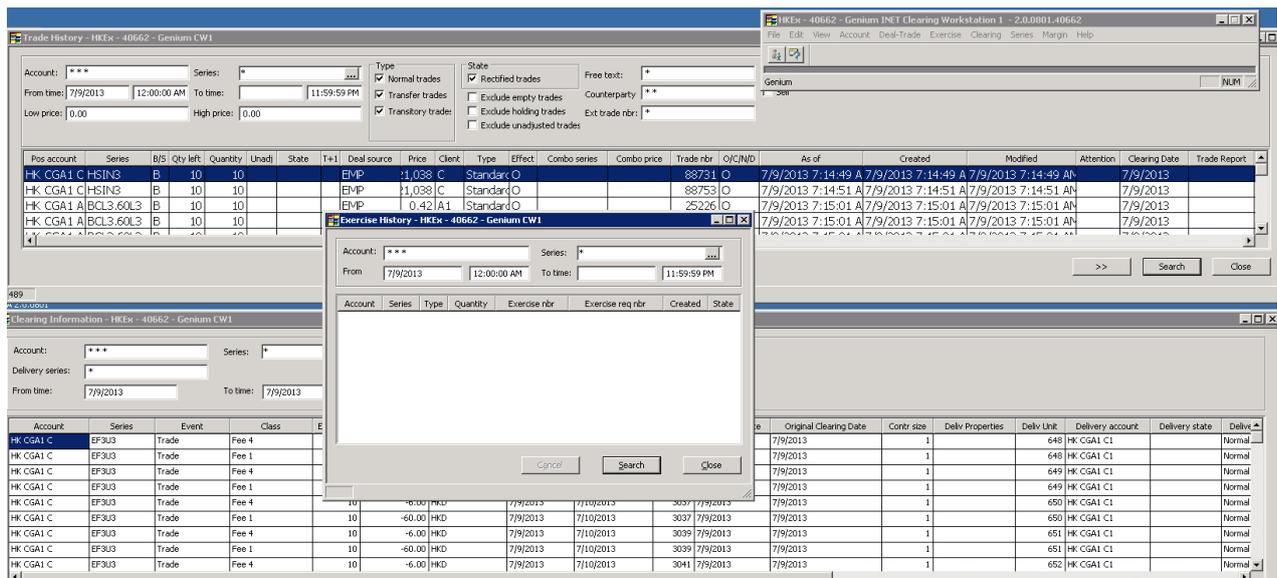
Click on the top left corner of the windows' title bar to open the standard menu:
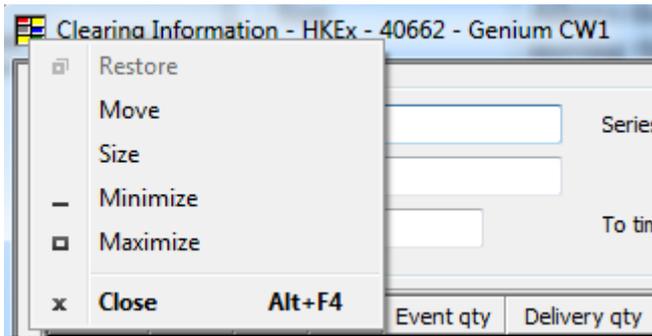
Function	Description
Restore	Restores the window to its previous size and location
Move	Allows the active window to be moved by moving the mouse or by pressing the arrow keys
Size	Allows the active window to be resized by moving the mouse or by pressing the arrow keys
Minimize	Hides the active window into the taskbar
Maximize	Maximizes the active window to full size
Close	Closes the active window Shortcut: **Alt + F4**

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1.5 APPLICATION FEATURES

Most of the windows in the DCASS Terminal share common characteristics such as the selection filters, the main data table and action buttons at the bottom of the window.

1.5.1 SELECTION FILTERS

1.5.1.1 Time / Date and other Numerical Fields

The Time and Date fields which appear in many windows throughout the application allow the users to select the date, or range of dates, to perform searches.   Users can select the date by using the up and down arrow keys on the keyboard or by typing the in the whole date.

Numerical fields, such as "Price", will increase by using the arrow keys.

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1.5.1.2   Use of Wildcards

The asterisk "*" is used as a wildcard for searching.   It can be used to match any string of text during a search to retrieve the all of the matching results.

*e.g. To display all of the accounts of Clearing Participant CGA1's accounts, a search using "HK CGA1 *" can be used to retrieve the full list.*
*A search, in a series field, with "XYZ*W4" can be used to retrieve a list of all series of XYZ put options which expire in November 2014, including XYZ12.00W4, XYZ14.00W4, XYZ16.00W4 etc.*

The percentage "**%**" symbol is used as a wildcard for any single character.

e.g. In the series field, a search using "XYZ12.00%4" can be used to retrieve a list of all series of XYZ options with a strike price of 12.00 which expire in 2014.

1.5.1.3   Account Field

In DCASS, all account names are comprised of three parameters, each separated by a space among them, viz., the country code, participant code and the account code *e.g. HK CDA1 C1.*

If only the account code is entered, *i.e. just "C1"*, the system will automatically insert the preceding country code and the terminal's participant code. *E.g. simply entering "C1" will become "HK CDA1 C1" for the Clearing Participant CDA1.*

1.5.1.4   Check boxes

Many selection filters include checkboxes.   Marking a checkbox indicates that that option will be included in the search.   Leaving all checkboxes unchecked is equivalent to have them all checked.

1.5.2   DATA TABLE

1.5.2.1   Selecting Rows of Data

Highlighting rows in the data table make them available for the functions for the particular window or from their respective right-click menus.

To select a single row of data in a window, click on it to highlight it.   Clicking on an already highlighted row will deselect it.

To select more than one consecutive row, left-click down on one row and drag the mouse pointer to add rows to the selection and then release the mouse button. Holding down the "Shift" key on the keyboard has the same effect as the left mouse button.

To select multiple rows individually, hold down the "Ctrl" key on the keyboard and click on the rows to add them to the selection individually.

In most of the Data Table areas, right clicking will bring up a short-cut menu which contains additional features available to the particular window (*e.g. Rectify Trade…*) as well as some that are common to many windows (*e.g. Columns, Sorting etc.*).

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1.5.2.2 Viewing a Single Record

In a table of data, double-clicking on a record will open up the Details window displaying all the information for that record.
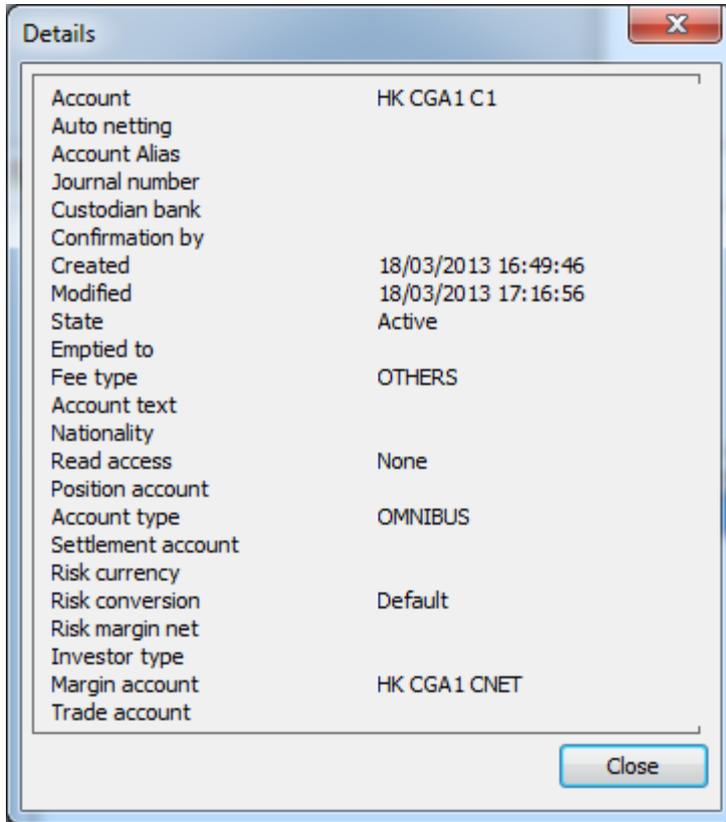
1.5.2.3 Columns

The Columns feature enables users to select which columns of data they wish to display for the current window.
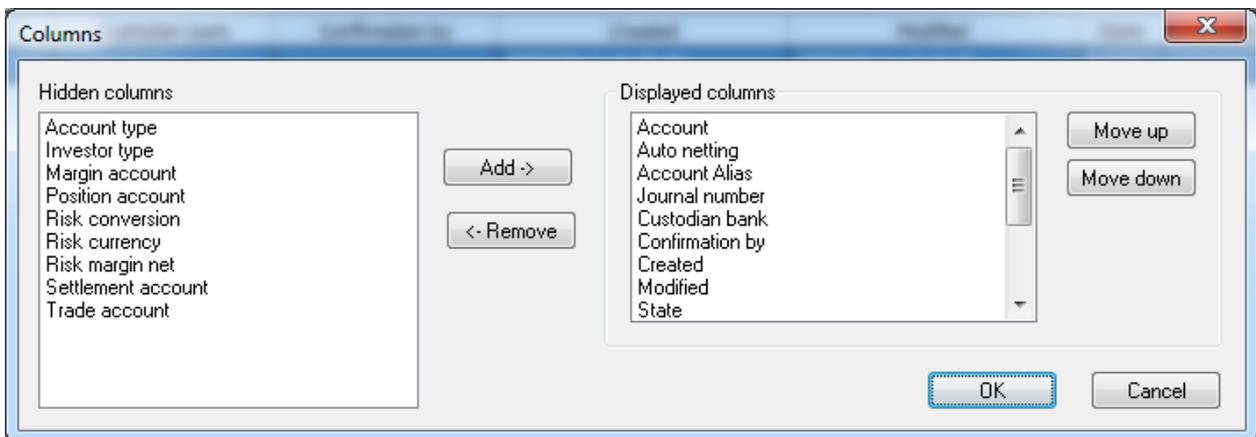
The "Hidden Columns" field lists the columns that are not shown while the "Displayed Columns" field lists the columns that are currently displayed in the table.

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Column names can be shuffled between the "Hidden Columns" and the "Displayed Columns" by selecting the desired column and clicking **<Add>** or **<Remove>** button. In addition, the order of the Displayed Columns can be re-arranged by clicking the <**Move up**> or <**Move down**> button.

1.5.2.4   Print

The "Print" option opens up a standard Print Setup window allowing users to select printers and other print options on their computers.   The data in the current window will be printed.

1.5.2.5   Sorting

The "Sorting" function will produce a window which allows users to select one to three sorting order(s) for the data in the current window.   Alternatively, for single sorting order, users can just click the column title in the active window and the system will sort the whole data table in the ascending order of that data field under that column title. Clicking the column title repeatedly will toggle the sorting order between ascending and descending.
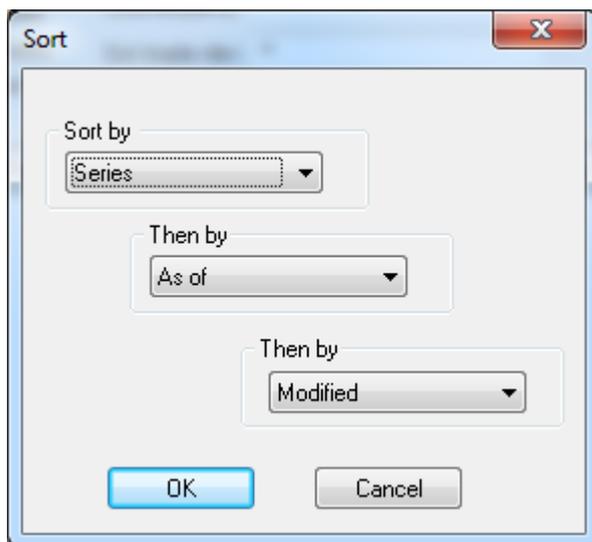
1.5.2.6   Copy & Copy All

The "Copy" function will copy the currently highlighted row(s) to the clipboard, allowing it to be pasted onto other applications.   The "Copy All" function works similarly and will copy the entire table of data.

Please note that the select and copy functions are available for most windows but not all.

1.6   OTHERS

1.6.1   GENERAL PROPERTIES

The General Properties window is accessed from the menu "Edit" – "Properties".   **Most of the information in this window should be kept intact and should only be changed under the instruction of HKEX**.   For example, the information in "Connection" should not be changed without instruction from HKEX.

Clearing Participants can change the following three settings:

1) Reports: Change the default target location for the "Save as…" command (See section 5.2.1)
2) Clearing Message: Set the visible and sound notification for clearing message
3) Data Table Font: Change the font of the Data Table
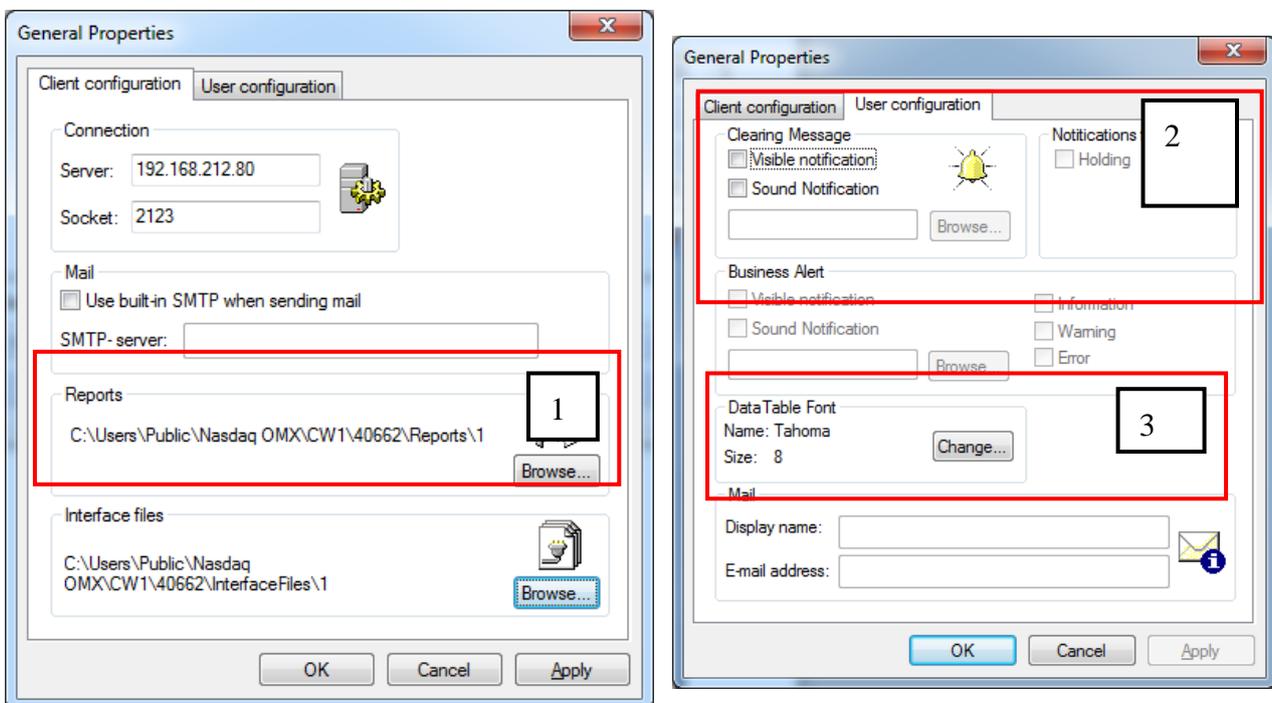
1.6.2   CONNECTION INFORMATION

Clicking on the [icon] button opens up the Connection Information window. It displays the connection information about the current login session and the status of the connection. "Client" is the name of DCASS Terminal User. "User" is the name of DCASS Server User.
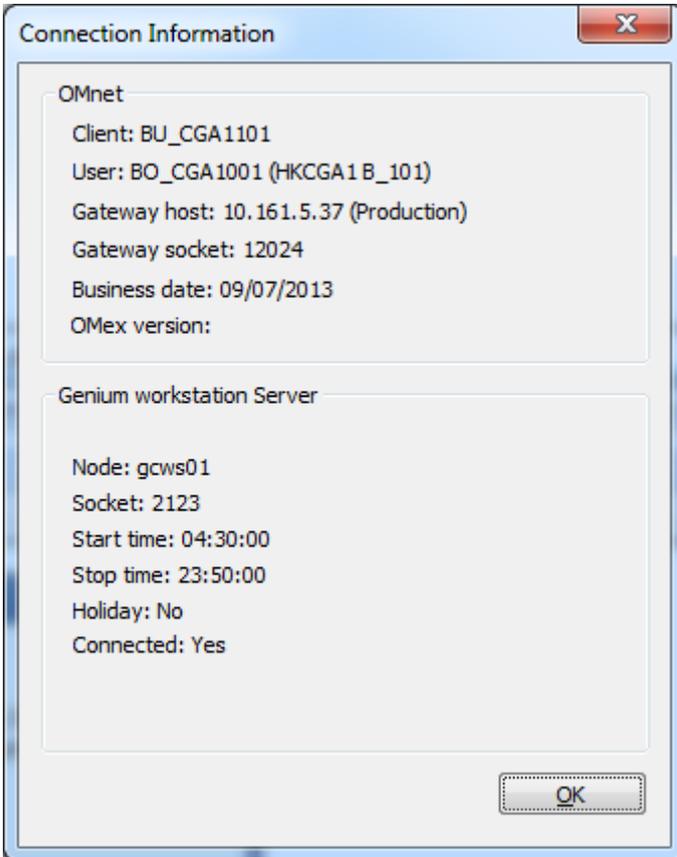
1.6.3   ABOUT

Clicking   on [icon] the button opens up the About window. This window contains information   about the current version of the DCASS software.

1.16
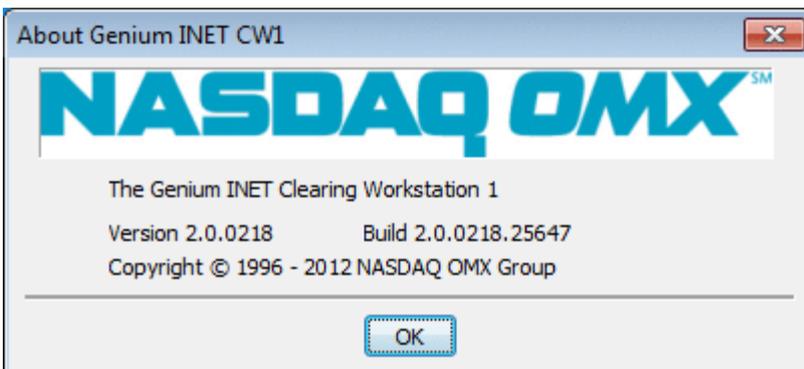
1.6.4   DISCONNECTION

If the DCASS Terminal loses connection with the DCASS Server, a message will appear to inform users that the connection has been lost.
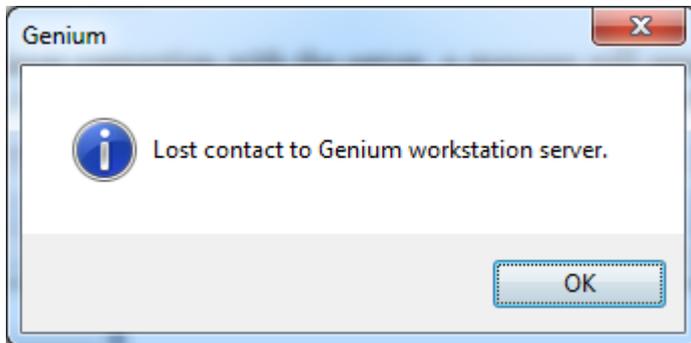
The message "Not connected to server" will scroll across the bottom of the main menu.
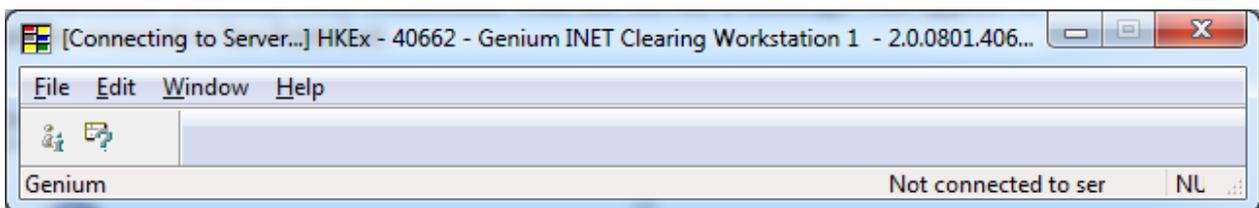
When receiving a large volume of trade information, the DCASS Server may log out the DCASS Terminal. For example, when a user performs APT trade involving several hundred of trades, the DCASS Server will be busy in handling the APT operation and may be disconnected from the DCASS Terminal.   Once the DCASS Server completes its internal operation, user will have to re-login the DCASS Terminal.

On non-business days, the DCASS Server will not be connected to the DCASS Host. If Clearing Participants try to login, the following message will be given.

1.17
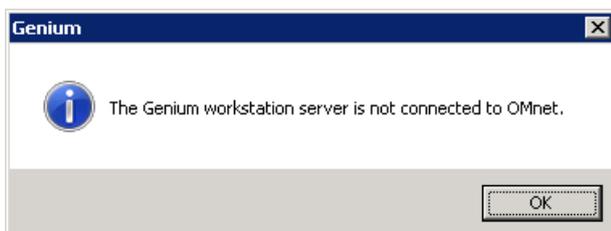
"Not Connected to OMnet" will be displayed on the top of DCASS Terminal to remind Clearing Participants about the connection status.   Since the DCASS Server is not connected to the DCASS Host, information provided may not be up-to-dated.
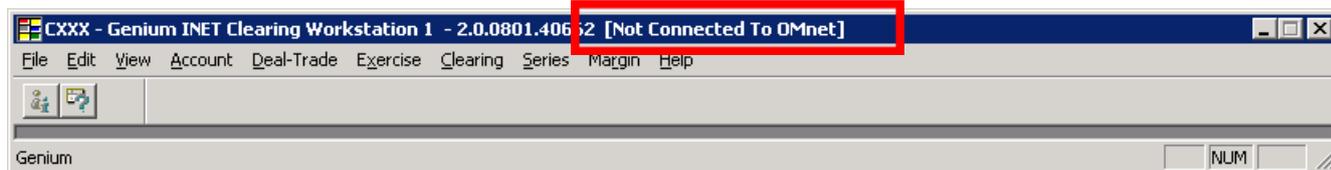
1.6.5   DCASS HOUSE KEEPING

1.6.5.1   Reboot of DCASS Server

It is advised that Clearing Participants should reboot the DCASS Server on a regular basis.   HKEX recommends Clearing Participants to reboot the DCASS Server on every weekend any time no later than Sunday, 12:00 a.m. mid-night (HK time).

1.6.5.2   Database Monitoring

By default, DCASS Server will keep trade and delivery records in the past 2 weeks in DCASS database by performing housekeeping job.   In case of database reload due to new installation or database recovery, DCASS Server will try to download 2 weeks data from DCASS Host.   DCASS Host will not keep 2 weeks data for all markets, as it has different housekeeping mechanism.   But at least records for non-expired series in the past 5 business days will be available for DCASS Server to download.

To ensure normal database size and smooth operations of DCASS Server, Clearing Participants are advised to perform the following procedures **on monthly basis** (e.g. on the first business day of each month) to monitor the database size usage of the DCASS Server.   Such regular monitoring will enable the Clearing Participant to discover any abnormal growth in the size of the DCASS database, where an abnormally large database could result in operation failure of the DCASS Server used by the Clearing Participant.

Procedures to monitor DCASS DATABASE SIZE

1) Logon DCASS Server

2) Go to the database directory, the path is

   C:\Users\Public\NASDAQ OMX\CW1\40662\Database\1
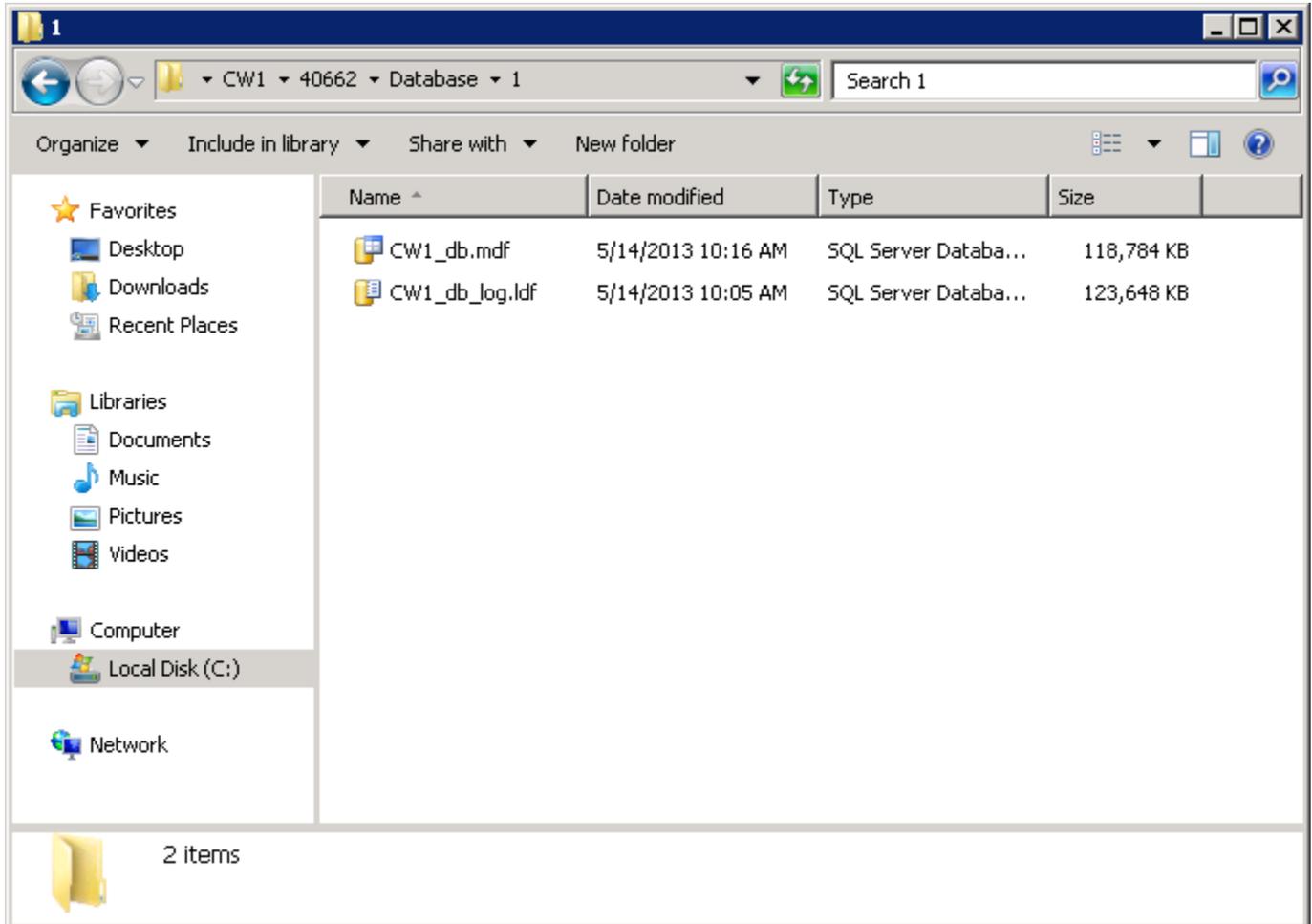
3) Check the size of the file **CW1_db.mdf** as shown in the above screen dump

4) If the file size exceeds 7GB, please inform DCASS Hotline at 2979 7222 as soon as possible

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1.6.6   DCASS TERMINAL BACKUP FACILITIES

Backup facilities for DCASS are installed at the Backup Centre.   Clearing Participants can use the Backup Centre to continue their DCASS activities in the event of breakdown of their own DCASS Servers or other reasons.   All functions, such as input and enquiry, will be provided at the Backup Centre.   Request for usage of the Backup Centre is subject to availability.

Clearing Participants are required to sign and complete a request form (Form S), and then return it by fax or email to the Clearing House at least 2 hours prior to the System Input Cutoff Time (for T Session) or the T+1 Session Cutoff Time.   Clearing Participants must process more than 20 post-trade transactions at the DCASS Backup Centre.   Request for processing 20 or less post-trade transactions at the DCASS Backup Centre will not be accepted by the Clearing House.   Each Clearing Participant is allowed to use one DCASS Backup Terminal at the Backup Centre at a time and must notify the Clearing House at 2211-6932 after use.

Upon signature verification of Form S, the Clearing House will arrange the DCASS Terminals and have them ready for use in approximately one hour.   Trade history for T and T-1 days of the requesting Clearing Participant will be downloaded to a designated DCASS Backup Terminal.

A DCASS Server login ID with naming convention of "BO_Cxxx7xx"[2] and a DCASS Terminal user login ID with naming convention of "BU_Cxxx6xx" together with respective login passwords will be granted to the requesting Clearing Participant. Such login IDs are exclusive for Clearing Participant's usage at the Backup Centre only.

Request for usage of the Backup Centre is only valid for the day.   Should a Clearing Participant requires to use the Backup Centre on the following day, it should re-apply on the next day.

Location of the Backup Centre is:

21/F One Exchange Square
8 Connaught Place
Central
Hong Kong

DCASS Hotline: 2979-7222
Email: posttrade@hkex.com.hk

Service Hours of the Backup Centre:

10:00 a.m. to T+1 Session Cutoff Time on each business day
(or such time as the Clearing House may determine from time to time)

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[2] Where "Cxxx" is DCASS Customer Code of the Clearing Participant

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HKEX
香港交易所

THE SEHK OPTIONS CLEARING HOUSE LIMITED /
HKFE CLEARING CORPORATION LIMITED
(*A wholly-owned member of the Hong Kong Exchanges and Clearing Limited Group*)

Cash & Derivatives Clearing Operations	Fax: 2868 0134
30/F One Exchange Square	Tel: 2211 6932
8 Connaught Place, Central, Hong Kong	Email: posttrade@hkex.com.hk

Application deadline:
2 hours before System Input Cutoff Time (for T Session) or before T+1 Session Cutoff Time

Please confirm with HKCC/SEOCH over the phone for the receipt of form

REQUEST FOR USAGE OF DCASS TERMINAL AT BACKUP CENTRE

Particulars of Clearing Participant

Clearing Participant's Name :	DCASS Customer Code :

Reason for using the Backup Centre : _____

Expected number of post-trade transactions to input : _____

Contact Person for this Request Form :

Name :	Tel. No. :
Position :	Fax No. :

Particulars of users working at Backup Centre

Name :

_____   _____
Authorised Signature(s)   Date

[with company chop, ONLY applicable if it forms part of your signing instruction]

Name of Signatory(ies) : _____

FOR CLEARING HOUSE USE				
VERIFIED/ DATE	APPROVED/ DATE	REJECTED/ DATE	CHECK-IN TIME	CHECK-OUT TIME

Updated: April 2017