

香港中央結算有限公司
(香港交易及結算所有限公司全資附屬公司)

HONG KONG SECURITIES CLEARING COMPANY LIMITED
(A wholly-owned subsidiary of Hong Kong Exchanges and Clearing Limited)

通告 CIRCULAR

Subject: Regular Data Centre Failover Rehearsal for CCASS and VaR Platform on 6 November 2021 – For CCASS Participants and Designated Banks

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Hong Kong Exchanges and Clearing Limited (“HKEX”) will conduct a regular CCASS data centre failover rehearsal (“the Rehearsal”) on Saturday, 6 November 2021.

The objective of the Rehearsal is to enable CCASS Participants (“CPs”), Designated Banks (“DBs”) and related parties to familiarize themselves with the contingency procedures for data centre failover of CCASS and VaR Platform. The Rehearsal will also cover the data centre failover of other HKEX systems including OTP-C, OTP-CSC, HKATS, DCASS, CCMS, OCASS, OASIS and HKEX Orion Market Data Platform.

CPs and DBs are cordially invited to participate in the Rehearsal via their CCASS Terminals and Participant Gateways (PGs), and VaR Platform for Clearing Participants, where applicable. CPs and DBs who wish to participate in the Rehearsal should register through “Event” under [Client Connect](#) **on or before 2 November 2021.**

CPs and DBs can refer to the Attachment for the Rehearsal details. CPs and DBs are advised to read carefully the information package and follow instructions during the Rehearsal.



Due to the Rehearsal, CCASS services will be suspended on 6 November 2021. CPs and DBs should take note of the following:

- CCASS Production Reports as of Saturday, 6 November 2021, will be available on the following Monday, 8 November 2021.
- CPs and DBs who do not intend to participate in the Rehearsal should NOT logon CCASS on Saturday, 6 November 2021.

CPs and DBs are strongly recommended to coordinate with their IT teams and/or vendors for necessary preparation for the Rehearsal. Moreover, CPs and DBs should secure sufficient operation staff and support from their IT teams and/or vendors at all times during the Rehearsal.

Hector Lau
Head of Clearing & Depository
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This circular has been issued in the English language with a separate Chinese language translation. If there is any conflict in the circulars between the meaning of Chinese words or terms in the Chinese language version and English words in the English language version, the meaning of the English words shall prevail.



**Data Centre Failover Rehearsal for
CCASS and VaR Platform**

Information Package

for

CCASS Participants and Designated Banks

(6 November 2021)

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1. Introduction

As a market operator, Hong Kong Exchanges and Clearing Limited (HKEX) has its own contingency plan in place for possible scenarios that would cause interruption to its operations. One of the scenarios is the failure of primary data centre which would trigger a failover to the secondary data centre. To enable CCASS Participants (CPs), Designated Banks (DBs) and related parties to familiarize themselves with the contingency procedures in case CCASS and VaR Platform need to switch to the secondary data centre, HKEX conducts data centre failover rehearsal (the Rehearsal) on a regular basis.

HKEX would like to invite all CPs and DBs (including those using CCASS Terminals (C3Ts) and Participant Gateways (PGs)) to participate in the Rehearsal, which will be held on 6 November 2021 (Saturday).

This Information Package is designed to assist CPs and DBs in planning and preparing for the Rehearsal. CPs and DBs should read this Information Package carefully to ensure all necessary preparations are in place before participating in the Rehearsal. A copy of this document should also be passed to their IT supports or system vendors to ensure the availability of proper technical support and operations resources before and during the Rehearsal.

2. Objectives

The objectives of the Rehearsal are to verify the followings:

- i. Data centre could be failover within the target completion time under contingency situation
- ii. CPs and DBs able to access CCASS and continue their CCASS operations during data centre failover
- iii. Clearing Participants able to access RAP and VaR Online during data centre failover (where applicable).

3. Important Notes to CCASS Participants and Designated Banks

Before the Rehearsal day, CPs and DBs should ensure their workstations are configured with the required DNS server IP, as follows:

- Preferred DNS: 10.243.1.1 (UDP Port 53)
- Alternate DNS: 10.243.65.1 (UDP Port 53); and

Verify the DNS setup and connectivity to the Alternate DNS according to Section 4.5 of the [Technical Guide](#).

Furthermore, CPs and DBs should note the following arrangements for the preparation and execution of the Rehearsal:

3.1 CCASS – applicable to ALL CCASS Participants and Designated Banks

- a) CPs and DBs should logon their C3Ts and PGs, where applicable, **at 11:30 promptly to start the Rehearsal.**

- b) CPs should use their production C3Ts and PGs, where applicable. Users must use Internet Explorer (IE) to access CCASS via C3Ts.
- c) During the Rehearsal, CPs should execute the verification on CCASS **before** verifying RAP and VaR Online (if applicable).
- d) The CCASS reports/data files available in the Rehearsal are for rehearsal purpose only. CPs and DBs should not rely on such CCASS reports/data files for production use.
- e) For CPs who will perform file upload during the Rehearsal, they should prepare the testing upload files beforehand.
- f) The staff of CPs and DBs who will participate in the Rehearsal must have experience in using CCASS in their daily business activities, and have the production smartcards and passwords for accessing CCASS during the Rehearsal. Besides, CPs and DBs should ensure that the participating staff will be able to perform or access the required CCASS functions. The Delegated Administrators (DAs) of CPs and DBs are encouraged **NOT** to change any user function access during the Rehearsal as it will take time to take effect.
- g) **CPs and DBs are reminded to remove ALL their testing upload files and CCASS reports/data files downloaded during the Rehearsal from their production C3Ts and PGs to avoid any mis-use upon normal CCASS operations on next business day.**
- h) If CPs and DBs would use their production Back Office System (BOS) to perform the Rehearsal, they should ensure that their production BOS data are properly backed up before the Rehearsal. A data restore procedure should also be in place before the Rehearsal so that production data can be restored to their production BOS after the on-line sessions of the Rehearsal. CPs and DBs should discuss the issue with their in-house IT teams or BOS vendors before the Rehearsal if such procedures are required.
- i) CPs and DBs using PGs in the Rehearsal should make sure that their Participant Supplied Systems (PSS) are NOT connected to their production environment during the Rehearsal or back-up and restore procedures are already in place to clean up and resume their system back to production image after the Rehearsal.
- j) **CPs and DBs who use BOS or PSS of PGs in the Rehearsal are reminded to do clean-up and make sure that their corresponding BOS or PSS used in the Rehearsal have been resumed to production image and ready for normal business activities on the next business day.**
- k) CPs and DBs should also ensure network equipment is powered up and connected at all times before and after the Rehearsal.
- l) CPs and DBs should refer to the Checklist in [Appendix A](#) and the Schedule and Timetable listed in [Section 4.2](#) for the action items to be performed before, during and after the Rehearsal for preparation and execution. In order to achieve the objectives, it is imperative that CPs and DBs follow the Rehearsal checklist and rundowns. CPs and DBs should ensure their participating staff is familiar with the requirements and procedures prior to participating in the Rehearsal.

- m) **In addition, CPs and DBs are recommended to maintain a proper audit trail in respect of each transaction performed during the Rehearsal. A responsible officer or his/her designate of each participating CPs and DBs are advised to be present during the Rehearsal to supervise the testing process and to be responsible for relaying any issues arising during the Rehearsal to HKEX.** In any event, it is recommended that an internal briefing should be held by each CP and DB prior to the Rehearsal to ensure that (1) staff involved fully understand all requirements and procedures and (2) proper arrangements have been put in place by the CP and DB to comply with the Rehearsal requirements.
- n) CPs and DBs should ensure that they have access to the emails of the designated contact person(s) nominated in the registration in order to receive emergency messages from HKEX during the Rehearsal.
- o) After completion of the Rehearsal, CPs and DBs are required to complete and return the “Data Centre Failover Rehearsal Confirmation Form” as set forth in [Appendix C](#) to HKEX **at or before 18:00 on 6 November (Saturday)**.

3.2 VaR Platform – *applicable to Clearing Participants only*

- a) On Rehearsal day, Clearing Participants should complete the verification on CCASS **before** verifying their access to VaR Platform via RAP and VaR Online (if applicable).
- b) Clearing Participants should use the registered client workstations to access RAP, i.e. with IP addresses submitted in the registration form for HKSCC Report Access Platform (RAP).
- c) Clearing Participants manually connect to RAP via SFTP client should ensure that the participating staff is familiar with RAP connection via SFTP client.
- d) To prevent concurrent login which is restricted in RAP, Clearing Participants should set “Number of simultaneous connections” or “Limit for concurrent download” to “1” in SFTP client.
- e) Clearing Participants should ensure that the participating staff has completed the first time login process on VaR Online and have the login password set before the Rehearsal.
- f) User should use Chrome browser to access VaR Online. If user has bookmarked VaR Online, please check if the correct URL (i.e. <https://rmcd.hkexpostrade.com.hk>) is being saved in Chrome browser to ensure it will be leading to the correct webpage.
- g) In case any Clearing Participant not using HKEX provided Domain Name System (DNS) services to access RAP and VaR Online, please arrange staff with experience to update the host table or change IP addresses during the Rehearsal.
- h) Clearing Participants using host table to access RAP & VaR Online, should check and ensure the domain for RAP and VaR Online will be resolved to the following IP addresses in the **host table** during the respective sessions in the Rehearsal:

Session	System	IP Address	URL
Session 1: Primary Data Centre	RAP	10.243.2.51	rapcc.hkexposttrade.com.hk
	VaR Online	10.243.2.32	rmcd.hkexposttrade.com.hk
		10.243.2.15	sso.hkexposttrade.com.hk
		10.243.2.14	idm.hkexposttrade.com.hk
Session 2: Secondary Data Centre	RAP	10.243.66.51	rapcc.hkexposttrade.com.hk
	VaR Online	10.243.66.32	rmcd.hkexposttrade.com.hk
		10.243.66.15	sso.hkexposttrade.com.hk
		10.243.66.14	idm.hkexposttrade.com.hk
After completion of Rehearsal	RAP	Follow the IP addresses shown for Session 1	
	VaR Online		

Please refer to section 4.2 for detail schedule.

- i) Clearing Participants using **IP addresses** to access RAP, before conducting DR connectivity, should check and ensure the RAP's IP address has been changed from primary connection to secondary connection, i.e. 10.243.66.51.

Before re-connecting to Primary Data Centre after DR connectivity (please refer to section 4.2 for detail schedule), resume to primary connection, i.e. 10.243.2.51.

4. Schedule and Arrangements

4.1 Overview

CPs and DBs should verify their C3Ts, PGs, RAP and VaR Online (where applicable) able to connect HKEX's new secondary data centre and primary data centre with the upgraded infrastructure.

4.2 Schedule and Timetable

During the Rehearsal, CPs and DBs should follow the schedule and timetable as follows:

Execution Date: 6 November 2021 (Saturday)

Logical Date: 6 November 2021 (Saturday)

TIME FROM	TIME TO	REHEARSAL SCOPE	REMARKS
6 November 2021 (Saturday)			
On-line Session at Primary Data Centre (Session 1)			
11:30	12:15	<p>CCASS – applicable to ALL CPs and DBs</p> <ul style="list-style-type: none"> Logon to CCASS via: https://www.ccass.com Perform on-line maintenance and enquiries Retrieve reports/data files Upload batch files, if necessary (for CPs only) <p>VaR Platform via RAP & VaR Online – applicable to Clearing Participants only</p> <ul style="list-style-type: none"> Access RAP to retrieve VaR Platform reports/data files via “inbox” folder Logout from RAP Logon to VaR Online via https://rmcd.hkexposttrade.com.hk Upon successful logon, the main view will be displayed and the connectivity verification is completed Logout from VaR Online 	<ul style="list-style-type: none"> CPs & DBs are advised to report duty no later than 11:30 a.m. on the Rehearsal day. CPs & DBs should logon to CCASS and check broadcast messages via CCASS at major action points of the Rehearsal, such as <ol style="list-style-type: none"> Shortly before start of the Rehearsal After CCASS service is resumed at the secondary data centre Refer to Appendix B1 for recommended CCASS executions before failover SI file validation run will be executed upon successful upload NO batch-settlement-run
12:15 – 12:30		Simulate contingency situation occurred at HKEX's Primary Data Centre	
12:15 – 14:30		Failover to HKEX's Secondary Data Centre	

Information Package for CCASS Participants & Designated Banks

TIME FROM	TIME TO	REHEARSAL SCOPE	REMARKS
On-line Session at Secondary Data Centre (Session 2)			
14:30	16:00	<p>CCASS – applicable to ALL CPs and DBs</p> <ul style="list-style-type: none"> Logon to CCASS via: https://www.ccass.com Perform on-line enquiries Upload batch files, if necessary Retrieve reports/data files <p>Note: The reports retrieved during Session 2 would be the same as those retrieved during Session 1.</p> <p>VaR Platform via RAP & VaR Online – applicable to Clearing Participants only</p> <ul style="list-style-type: none"> Access RAP to retrieve VaR Platform reports/data files via “inbox” folder Logout from RAP Logon to VaR Online via https://rmcd.hkexposttrade.com.hk Upon successful logon, the main view will be displayed, and the connectivity verification is completed Logout from VaR Online 	<ul style="list-style-type: none"> Refer to Appendix B2 for execution requirement of CCASS SI file validation run will be executed upon successful upload ATI file validation run will be executed at 14:50 SI matching will be executed at 15:00 NO batch-settlement-run CCASS transactions performed during Session 1 will be available for enquiry during Session 2
16:00		Access to CCASS, VaR Platform via RAP and VaR Online closes	<ul style="list-style-type: none"> The Rehearsal is completed Fill in Data Centre Failover Rehearsal Confirmation Form in Appendix C and email or fax to HKEX by 18:00
16:00 – 22:30		Re-connect to HKEX’s Primary Data Centre	
Production Verification Session : Connect to Primary Data Centre (Optional)			
22:30	23:30	<p>Connectivity to CCASS</p> <ul style="list-style-type: none"> Logon to CCASS using the production Smartcard and password via https://www.ccass.com Logout from CCASS by clicking “Logout” hyperlink at top right corner <p>Connectivity to VaR Platform via RAP and VaR Online (where applicable)</p> <ul style="list-style-type: none"> Logon RAP to verify connectivity; then logout from RAP Logon VaR Online using Chrome browser to verify connectivity, via https://rmcd.hkexposttrade.com.hk, 	

TIME FROM	TIME TO	REHEARSAL SCOPE	REMARKS
		the message "Authentication Failure" will be displayed	

4.3 User Profile and Password

The user profiles of CPs and DBs are based on the latest production image prior to the Rehearsal, i.e. 5 November 2021 (Friday).

During the Rehearsal, DAs of CPs and DBs are responsible for resetting user passwords in case any user's password is revoked. If password reset is performed during the Rehearsal, the users concerned should use the *latest* password (i.e. after password reset in the Rehearsal) for production use on the following business day (Monday).

4.4 Rehearsal Environment

The Rehearsal will be conducted based on the production image as of 6 November 2021. When CPs and DBs logon CCASS (or VaR Platform, if applicable) during the Rehearsal, they will be simulating production operation during 6 November 2021. For testing purpose, the Rehearsal day will be set as a business day in CCASS and VaR Platform.

4.5 Eligible Securities

Hong Kong stocks, Shenzhen and Shanghai A-shares admitted as CCASS Eligible Securities as of 6 November 2021 are available to use during the Rehearsal. Trading of Hong Kong market, Shenzhen and Shanghai A-shares markets are **NOT** available during the Rehearsal.

4.6 Transactions to be Executed

CCASS on-line session(s) will be available in the Rehearsal. CPs are required to perform the recommended CCASS functions and logon during **both** on-line sessions. CPs should refer to [section 4.2](#) and [Appendix B](#) for the detailed execution script respectively.

4.7 Report Download and Batch File Upload via CCASS

CCASS reports/data files can be retrieved via "Report Download" function via C3T and PG during the Rehearsal.

In addition, to facilitate CPs to verify the results of their uploaded testing files in CCASS, SI Batch Input Control Reports will be available shortly after the successful upload of SI batch files, while ATI Batch Input Control Reports will be available after the completion of the scheduled ATI file validation run. Please note only SI and ATI file transfer functions will be available during the Rehearsal.

4.8 Retrieval of VaR Platform Reports/ Data Files via RAP and Logon to VaR Online

As part of VaR Platform Familiarisation Programme, Clearing Participants can retrieve VaR Platform reports/data files via the “inbox” folder of RAP and logon to VaR Online during the Rehearsal.

5. Typhoon and Black Rainstorm Arrangements

In case Typhoon Signal No. 8 (or above) or Extreme Conditions or Black Rainstorm Warning is issued or continues to be issued between 07:00 a.m. to 11:30 a.m. on the day of Rehearsal, the Rehearsal will be cancelled and will not be resumed for the rest of the day.

In case Typhoon Signal No. 8 (or above) or Extreme Conditions is issued after 11:30 a.m. on the day of Rehearsal, the Rehearsal will be terminated 15 minutes thereafter.

In case Black Rainstorm Warning is issued after 11:30 a.m. on the day of Rehearsal, all scheduled activities of the Rehearsal will continue until completion.

6. Communication Channels

Before the Rehearsal, i.e. approximately 2 hours, CPs and DBs can call CCASS Hotline at 2979-7111 to check whether the Rehearsal will be held according to schedule.

During the Rehearsal, HKEX will communicate with CPs and DBs via the following channels:

- a. under normal situation, HKEX will communicate with CPs and DBs via Broadcast Messages through CCASS;
- b. in case of emergency where CPs and DBs are unable to access CCASS, HKEX will notify CPs and DBs of any ad hoc arrangements via email and/or phone calls.

CPs and DBs should ensure that their nominated person(s) will be reachable during the prescribed time and the relevant email addresses and mobile phone numbers submitted to HKEX are accurate.

7. Help Desk

For any queries during the preparation and execution of the Rehearsal, CPs and DBs can contact **CCASS Hotline** at **2979-7111** for assistance. For RAP and VaR Online connectivity queries, please contact **VaR Platform Hotline** at **2211-6828**.

APPENDIX A: Data Centre Failover Rehearsal Checklist

ITEMS TO BE CHECKED		✓
(A) Before the Rehearsal		
1	Have you read and understood this document?	
2	Have you passed this document to your internal IT support team or system vendor and ensured that they would take follow-up actions (if necessary)?	
3	Should the designated contact person(s) be changed, have you submitted the updated contact details (Email address and telephone number(s)) to HKEX?	
4	Have you arranged access for your designated contact person(s) to receive HKEX's communication via email and/or CCASS's Broadcast Messages before and during the Rehearsal?	
5	Have you ensured that the participating users have access to CCASS functions to be tested in the Rehearsal and their Smartcard passwords are valid?	
6	If you would use your BOS in the Rehearsal, have you developed proper procedures to switch your BOS for testing purpose and prepared a data restore procedure in place to restore production data after the Rehearsal?	
7	If you are PG users, have you ensured that proper procedures are developed to switch to testing environment without affecting the existing production PSS, and that a restore procedure is in place?	
8	Have you prepared the testing upload files in case you would like to execute SI or ATI file upload in the Rehearsal?	
9	Have you configured and verified Alternate Domain Name Servers (DNS) on workstations for access CCASS, RAP and VaR Online according to Section 4.5 of the Technical Guide ?	
10	For Clearing Participants, have you ensure you have your userID, password and workstations ready to verify RAP and VaR Online? For RAP, you should use the registered client workstations to access RAP, i.e. with IP addresses submitted in the registration form for HKSCC Report Access Platform (RAP).	
(B) After the Rehearsal		
1	Have you cleaned up or removed the testing data or upload files or downloaded reports/data files from the production C3T or PG after the Rehearsal?	
2	Have you restored the BOS or PSS of PG to production image and ensured they are ready for production use on the next business day?	
3	Have you submitted the "Data Centre Failover Rehearsal Confirmation Form" (Appendix C) to HKEX before 18:00, 6 November 2021 upon completion of the Rehearsal?	

APPENDIX B1: Recommended Executions for Session 1

Execution Time	11:30 – 12:15
Description for Session 1	
Objectives :	
	<p><u>CCASS</u> – applicable to ALL CPs and DBs</p> <p>Able to perform the following via CCASS with connection to the primary data centre:</p> <ol style="list-style-type: none"> a. on-line maintenance and enquiries b. download reports/data files c. upload files (for CPs only) <p><u>VaR Platform via RAP & VaR Online</u> – applicable to Clearing Participants only</p> <p>Clearing Participants should be able to perform the following via RAP and VaR Online with connection to the new secondary data centre:</p> <ol style="list-style-type: none"> a. login RAP and VaR Online (if applicable). b. retrieve VaR Platform reports/data files via RAP
(I) On-line Enquiry, Maintenance and Upload Files:	
	<p>CPs are recommended to perform the following on-line CCASS functions:</p> <ol style="list-style-type: none"> 1) Input ATI 2) SI Maintenance 3) SI/ATI File Transfer 4) Enquire Broadcast Message <p><u>Notes :</u> <i>CPs are encouraged to perform the ATI/SI batch file transfers which are considered as critical business transactions with HK stocks, Shenzhen and Shanghai A-shares during the Rehearsal.</i></p> <p><u>ATI File Transfer</u></p> <ul style="list-style-type: none"> • <i>ATI file uploaded before failover during Session 1 should be restored after failover to the secondary data centre.</i> • <i>ATI file validation run will be executed at 2:50 p.m. in Session 2. Following that the ATI Batch Input Control Report will be available.</i> <p><u>SI File Transfer</u></p> <ul style="list-style-type: none"> • <i>Same as in production, SI file validation run will be executed upon completion of file upload. Following that the SI Batch Input Control Report will be available to CPs. In case there is any rejected record displayed in the SI Batch Input Control Report, it is NOT necessary to upload another SI upload file.</i> • <i>SIs successfully uploaded before failover during Session 1 should be restored after failover to the secondary data centre. SI matching run will be executed at 3:00 p.m. in Session 2.</i> <p>To facilitate the data verification in Session 2, CPs are recommended to perform the following enquiries:</p>

	<ol style="list-style-type: none"> 1) Enquire Stock Account Movement <ol style="list-style-type: none"> a. the stock movement as of 5 Nov 2021 b. the stock movement as of 6 Nov 2021 2) Enquire Due/Overdue Position <ol style="list-style-type: none"> a. the due/overdue positions as of 5 Nov 2021 3) Enquire SI <ol style="list-style-type: none"> a. the SIs available for enquiry as of 5 Nov 2021 and 6 Nov 2021 <p><u>Notes :</u> <i>Recommend CPs to save enquiry screens for data image as of 6 November 2021 for verification before performing any input activities</i></p>
<p>(II) Retrieval of Reports/Data Files:</p>	
	<p>DBs should logon to CCASS to download CCASS reports/data files to verify the connectivity.</p> <p>CPs should retrieve the following CCASS reports/data files to facilitate the data verification of Hong Kong market, Shenzhen or Shanghai A-shares markets or all markets during Session 2.</p> <p><u>With reports dated 5 Nov 2021</u> Statement of Stock Movement Reports (CSESM01/CSESM02)</p> <ul style="list-style-type: none"> • Next Settlement Day Due/Overdue Position Report (CSEOP01) • SI Status Report (CCLSI01) <p><u>With reports dated 6 Nov 2021</u></p> <ul style="list-style-type: none"> • SI Batch Input Control Report (CCLEI01), after performing the SI file transfer, if applicable • ATI Batch Input Control Report (CSEBA01), shortly after completion of ATI file validation run, if applicable <p><u>Notes :</u> <i>CPs are recommended to change the download directories and/or the file names when performing report/data file download during the Rehearsal by changing (i) the directory(ies) at "SAVE TO DIRECTORY" or (ii) the file name(s) at "SAVE TO" input fields for specific market or global reports. Otherwise, the reports/data files retrieved during the Rehearsal might replace your production CCASS reports/data files in your defaulted report directory(ies).</i></p> <p>Production CCASS reports/data files dated 5 November 2021 and 6 November 2021 will be available during the Rehearsal.</p>
<p>(III) After completing (I) and (II): Verify RAP and VaR Online (if applicable)</p>	
	<p>Clearing Participants should carry out the following to verify the connectivity:</p> <ol style="list-style-type: none"> a. Login RAP using registered client workstations to access RAP to retrieve VaR Platform reports/ data files via "inbox" folder b. Logon VaR Online using Chrome browser via https://rmcd.hkexpostrade.com.hk. Upon successful logon, the message "Authentication Failure" will be prompted

APPENDIX B2: Recommended Executions for Session 2

Execution Time	14:30 – 16:00
Description for Session 2	
Objectives :	
	<p><u>CCASS</u> – applicable to ALL CPs and DBs</p> <p>Able to perform the following via CCASS with connection to the secondary data centre:</p> <ol style="list-style-type: none"> a. on-line maintenance and enquiries b. download reports/data files c. upload files (for CPs only) <p><u>RAP & VaR Online</u> – applicable to Clearing Participants only</p> <p>Clearing Participants should be able to perform the following via RAP and VaR Online with connection to the secondary data centre:</p> <ol style="list-style-type: none"> a. login RAP and VaR Online (if applicable). b. retrieve VaR Platform reports/data files via RAP
(I) On-line Enquiry, Maintenance and Upload Files:	
	<p>CPs are recommended to perform the following on-line CCASS functions:</p> <ul style="list-style-type: none"> • Input ATI • SI Maintenance • SI/ATI File Transfer • Enquire Stock Account Movement • Enquire Due/Overdue Position • Enquire SI • Enquire Broadcast Message <p><u>Notes :</u></p> <p><i>CPs are encouraged to perform the ATI/SI batch file transfers which are considered as critical business transactions with HK stocks, Shenzhen and Shanghai A-shares during the Rehearsal.</i></p> <p><u>ATI File Transfer</u></p> <ul style="list-style-type: none"> • <i>ATI file validation run will be executed at 2:50 p.m., including those ATI file, if any, uploaded during Session 1. Following that the ATI Batch Input Control Report will be available.</i> <p><u>SI Matching Run and File Transfer</u></p> <ul style="list-style-type: none"> • <i>SI matching run will be executed at 3:00 p.m., including those SIs input or uploaded successfully during Session 1</i> • <i>Same as in production, SI file validation run will be executed upon completion of file upload. Following that the SI Batch Input Control Report will be available to CPs. In case there is any rejected record displayed in the SI Batch Input Control Report, it is NOT necessary to upload another SI upload file.</i>
(II) Retrieval of Reports/Data Files:	

	<p>DBs should logon to CCASS to download CCASS reports/data files to verify the connectivity.</p> <p>CPs should retrieve the following CCASS reports/data files</p> <p><u>With reports dated 5 Nov 2021</u></p> <ul style="list-style-type: none"> • Statement of Stock Movement Reports (CSESM01/CSESM02) • Next Settlement Day Due/Overdue Position Report (CSEOP01) • SI Status Report (CCLSI01) <p><u>With reports dated 6 Nov 2021</u></p> <ul style="list-style-type: none"> • SI Batch Input Control Report (CCLEI01), after performing the SI file transfer, if applicable • Intra-Day ISI/SI Full List (CSESI02), after online maintenance of SI and/or performing the SI file transfer, if applicable • ATI Batch Input Control Report (CSEBA01), after performing the ATI file transfer and ATI file validation run at around 2:50 p.m., if applicable <p><u>Notes :</u> <i>CPs are recommended to change the download directories and/or the file names when performing report/data file download during the Rehearsal by changing (i) the directory(ies) at "SAVE TO DIRECTORY" or (ii) the file name(s) at "SAVE TO" input fields for specific market or global reports. Otherwise, the reports/data files retrieved during the Rehearsal might replace your production CCASS reports/data files in your defaulted report directory(ies).</i></p> <p>Production CCASS reports/data files dated 5 November 2021 and 6 November 2021 will be available during the Rehearsal.</p>
(III) Data Verification:	
	<p>CPs are recommended to perform data verifications on the following CCASS functions against the CCASS reports/data files retrieved during Session 1:</p> <ol style="list-style-type: none"> 1) Enquire Stock Account Movement <ol style="list-style-type: none"> a. verify the stock movement as of 5 Nov 2021 against the Statement of Stock Movement Reports (CSESM01/CSESM02) b. verify the stock movement as of 6 Nov 2021 after Input ATI and/or the ATI file validation run 2) Enquire Due/Overdue Position <ol style="list-style-type: none"> a. verify the due/overdue positions as of 5 Nov 2021 against the Next Settlement Day Due/Overdue Position Report (CSEOP01) 3) Enquire SI <ol style="list-style-type: none"> a. verify the SIs available for enquiry (excluding SI(s) that has been inputted during the Rehearsal) against the SI Status Report (CCLSI01) as of 5 Nov 2021

	b. verify the SIs with input date as of 6 Nov 2021 after SI Maintenance, SI matching run and/or SI file validation run
(IV) After completing (I) to (III): Verify RAP and VaR Online (if applicable)	
	Clearing Participants should carry out the following to verify the connectivity: c. Login RAP using registered client workstations to access RAP to retrieve VaR Platform reports/ data files via “inbox” folder d. Logon VaR Online using Chrome browser via https://rmcd.hkexposttrade.com.hk . Upon successful logon, the main view will be displayed

APPENDIX C: Data Centre Failover Rehearsal Confirmation Form

To : Hong Kong Exchanges and Clearing Limited

Email : ClearingDrill@hkex.com.hk

Fax No: 2579-0136

Date: _____

CCASS Participant /Designated Bank Information

Name Participant ID / Bank No.

Participating User (Name and Signature)

Tel: _____

CCASS Authorised Signatory(ies)

Name and Signature
(with company chop, ONLY applicable if it forms part of your
signing instruction)

S.V.

CCASS Participants / Designated Banks should complete this form and email or fax to HKEX **by 18:00 on 6 November 2021 (Saturday)**. The form should be completed by the individual(s) who took part in the Rehearsal and reviewed by a responsible officer.

Please tick as appropriate:

1. During **Session 1**, did you encounter any problems when connecting to CCASS primary data centre while accessing:

(i) **CCASS** – applicable to ALL CCASS Participants & Designated Banks

No

Yes, please provide details: _____

(ii) **RAP and VaR Online** (if applicable) – applicable to Clearing Participants only

No

Yes, please provide details: _____

2. During **Session 2**, did you encounter any problems when connecting to CCASS secondary data centre while accessing:

(i) **CCASS** – applicable to ALL CCASS Participants & Designated Banks

No

Yes, please provide details: _____

(ii) **RAP and VaR Online** (if applicable) – applicable to Clearing Participants only

No

Yes, please provide details: _____

Thank you for completing the Confirmation Form.

By returning this form, we consent to the processing of personal data in accordance with the Privacy Policy Statement included in this form.

Privacy Policy Statement

Hong Kong Exchanges and Clearing Limited, and from time to time, its subsidiaries (together the "Group") (and each being "HKEX", "we", "us" or "member of the Group") for the purposes of this Privacy Policy Statement as appropriate) recognise their responsibilities in relation to the collection, holding, processing, use and/or transfer of personal data under the Personal Data (Privacy) Ordinance (Cap. 486) ("PDPO"). Personal data will be collected only for lawful and relevant purposes and all practicable steps will be taken to ensure that personal data held by us is accurate. We will use your personal data which we may from time to time collect in accordance with this Privacy Policy Statement.

We regularly review this Privacy Policy Statement and may from time to time revise it or add specific instructions, policies and terms. Where any changes to this Privacy Policy Statement are material, we will notify you using the contact details you have provided us with and, where required by the PDPO, give you the opportunity to opt out of these changes by means notified to you at that time. Otherwise, in relation to personal data supplied to us through the HKEX website or otherwise, continued use by you of the HKEX website or your continued relationship with us shall be deemed to be your acceptance of and consent to this Privacy Policy Statement, as amended from time to time.

If you have any questions about this Privacy Policy Statement or how we use your personal data, please contact us through one of the communication channels set out in the "Contact Us" section below.

We will take all practicable steps to ensure the security of the personal data and to avoid unauthorised or accidental access, erasure or other use. This includes physical, technical and procedural security methods, where appropriate, to ensure that the personal data may only be accessed by authorised personnel.

Please note that if you do not provide us with your personal data (or relevant personal data relating to persons appointed by you to act on your behalf) we may not be able to provide the information, products or services you have asked for or process your requests, applications, subscriptions or registrations, and may not be able to perform or discharge the Regulatory Functions (defined below).

Purpose

From time to time we may collect your personal data including but not limited to your name, mailing address, telephone number, email address, date of birth and login name for the following purposes:

1. to process your applications, subscriptions and registration for our products and services;
2. to perform or discharge the functions of HKEX and any company of which HKEX is the recognised exchange controller (as defined in the Securities and Futures Ordinance (Cap. 571)) ("Regulatory Functions");
3. to provide you with our products and services and administer your account in relation to such products and services;
4. to conduct research and statistical analysis;
5. to process your application for employment or engagement within HKEX to assess your suitability as a candidate for such position and to conduct reference checks with your previous employers; and
6. other purposes directly relating to any of the above.

Direct marketing

Where you have given your consent and have not subsequently opted out, we may also use your name, mailing address, telephone number and email address to send promotional materials to you and conduct direct marketing activities in relation to HKEX financial services and information services, and financial services and information services offered by other members of the Group.

If you do not wish to receive any promotional and direct marketing materials from us or do not wish to receive particular types of promotional and direct marketing materials or do not wish to receive such materials through any particular means of communication, please contact us through one of the communication channels set out in the "Contact Us" section below. To ensure that your request can be processed quickly please provide your full name, email address, log in name and details of the product and/or service you have subscribed.

Identity Card Number

We may also collect your identity card number and process this as required under applicable law or regulation, as required by any regulator having authority over us and, subject to the PDPO, for the purpose of identifying you where it is reasonable for your identity card number to be used for this purpose.

Transfers of personal data for direct marketing purposes

Except to the extent you have already opted out we may transfer your name, mailing address, telephone number and email address to other members of the Group for the purpose of enabling those members of the Group to send promotional materials to you and conduct direct marketing activities in relation to their financial services and information services.

Other transfers of your personal data

For one or more of the purposes specified above, your personal data may be:

1. transferred to other members of the Group and made available to appropriate persons in the Group, in Hong Kong or elsewhere and in this regard you consent to the transfer of your data outside of Hong Kong;
2. supplied to any agent, contractor or third party who provides administrative,

telecommunications, computer, payment, debt collection, data processing or other services to HKEX and/or any of other member of the Group in Hong Kong or elsewhere; and

3. other parties as notified to you at the time of collection.

How we use cookies

If you access our information or services through the HKEX website, you should be aware that cookies are used. Cookies are data files stored on your browser. The HKEX website automatically installs and uses cookies on your browser when you access it. Two kinds of cookies are used on the HKEX website:

Session Cookies: temporary cookies that only remain in your browser until the time you leave the HKEX website, which are used to obtain and store configuration information and administer the HKEX website, including carrying information from one page to another as you browse the site so as to, for example, avoid you having to re-enter information on each page that you visit. Session cookies are also used to compile anonymous statistics about the use of the HKEX website.

Persistent Cookies: cookies that remain in your browser for a longer period of time for the purpose of compiling anonymous statistics about the use of the HKEX website or to track and record user preferences.

The cookies used in connection with the HKEX website do not contain personal data. You may refuse to accept cookies on your browser by modifying the settings in your browser or internet security software. However, if you do so you may not be able to utilise or activate certain functions available on the HKEX website.

Compliance with laws and regulations

HKEX and other members of the Group may be required to retain, process and/or disclose your personal data in order to comply with applicable laws and regulations or in order to comply with a court order, subpoena or other legal process (whether in Hong Kong or elsewhere), or to comply with a request by a government authority, law enforcement agency or similar body (whether situated in Hong Kong or elsewhere) or to perform or discharge the Regulatory Functions. HKEX and other members of the Group may need to disclose your personal data in order to enforce any agreement with you, protect our rights, property or safety, or the rights, property or safety of our employees, or to perform or discharge the Regulatory Functions.

Corporate reorganisation

As we continue to develop our business, we may reorganise our group structure, undergo a change of control or business combination. In these circumstances it may be the case that your personal data is transferred to a third party who will continue to operate our business or a similar service under either this Privacy Policy Statement or a different privacy policy statement which will be notified to you. Such a third party may be located, and use of your personal data may be made, outside of Hong Kong in connection with such acquisition or reorganisation.

Access and correction of personal data

Under the PDPO, you have the right to ascertain whether we hold your personal data, to obtain a copy of the data, and to correct any data that is inaccurate. You may also request us to inform you of the type of personal data held by us. All data access requests shall be made using the form prescribed by the Privacy Commissioner for Personal Data ("Privacy Commissioner") which may be found on the official website of the Office of the Privacy Commissioner or via this link <https://www.pcpd.org.hk/english/publications/files/Dforme.pdf>.

Requests for access and correction of personal data or for information regarding policies and practices and kinds of data held by us should be addressed in writing and sent by post to us (see the "Contact Us" section below).

A reasonable fee may be charged to offset our administrative and actual costs incurred in complying with your data access requests.

Termination or cancellation

Should your account or relationship with us be cancelled or terminated at any time, we shall cease processing your personal data as soon as reasonably practicable following such cancellation or termination, provided that we may keep copies of your data as is reasonably required for archival purposes, for use in relation to any actual or potential dispute, for the purpose of compliance with applicable laws and regulations and for the purpose of enforcing any agreement we have with you, for protecting our rights, property or safety, or the rights, property or safety of our employees, and for performing or discharging our functions, obligations and responsibilities.

General

If there is any inconsistency or conflict between the English and Chinese versions of this Privacy Policy Statement, the English version shall prevail.

Contact us

By Post:
Personal Data Privacy Officer
Hong Kong Exchanges and Clearing Limited
8/F., Two Exchange Square
8 Connaught Place
Central
Hong Kong

By Email:
DataPrivacy@HKEX.COM.HK