## Getting Started For Terminal Operations

# ACCESS CONTROL

**INTRODUCTION:**

CCMS provides different access control mechanisms to ensure that only relevant information is accessible to authorised users. These include:

- smartcard
- Participant ID
- user profile, which includes:
  - user ID
  - user access level assignment
- IP address
- inactivity timeout

**1. Smartcard:**

Smartcard is a physical security token for Participants to access CCMS. Participants can access CCMS through CCMS or CCASS Terminal (collectively called "C3T"). Each C3T is attached with a smartcard reader. A Participant must insert his smartcard into the smartcard reader and input password in order to logon to CCMS.

A smartcard reader will be required for each C3T installed. Participants will need to apply smartcard readers by completing and submitting to the Clearing House the 'Order Form for Smartcard Reader(s)'.

A Participant may delegate his CCMS operations to a number of internal staff ("CCMS users"). HKEX will issue a smartcard to each of the CCMS users. It should be noted that each smartcard is unique to that assigned CCMS user, and cannot be shared by other users or Participants. For a user who is assigned the access to both CCASS and CCMS, he may use the same smartcard to access both systems.

To establish a new CCMS user, a Participant will need to apply to the Clearing House by submitting the 'Smartcard Request Form for CCASS/CCMS User' for a smartcard for that assigned user for access control purposes. The Participant must ensure that its newly assigned user creates his initial smartcard password or changes his initial smartcard password (where applicable) immediately upon receipt of the smartcard. Please refer to Section 3.3 for the Change Smartcard Password procedures.

A CCMS user must initialise his/her smartcard by creating a smartcard password (6 - 8 digits) when he/she first logs on to CCMS. Users are recommended to change their smartcard passwords periodically. Please refer to Section 3.3 on CHANGE SMARTCARD PASSWORD.

If a user enters an incorrect smartcard password three consecutive times, the smartcard password will be revoked. The Delegated Administrator (DA) of the Participant can reset the smartcard passwords of their users. Please refer to Section 3.2 for the role of DA and Section 7.2.7 for the Reset Smartcard Password procedures.

**2. Participant ID:**

For Cash Participants (HKSCC):

HKSCC assigns a Participant ID to each Participant when he/she is admitted into CCASS. It is a six-character code (e.g. B12345) consisting of a one-digit prefix and five-digit serial number. The prefix indicates the participant nature (B for Clearing Participants which are also Exchange Participants of SEHK; A for Clearing Agency Participants; C for Custodian Participants / Clearing Participants which are not Exchange Participants of SEHK, e.g. registered institutions; L for Stock Lender Participants; P for Stock Pledgee Participants; and numeric number for investor). CCASS Participants have the same Participant ID to access both CCASS and CCMS.

For Derivatives Participants (HKCC and SEOCH):

HKCC or SEOCH assigns a Participant ID to a Participant when he/she applies to access CCMS. It is a six-character code. For derivatives participants, the code is defined as HKXXXn, where:

XXX = a unique mnemonic assigned to represent the participant (normally same as the one in DCASS)
n = 1 for HKCC participants, and 2 for SEOCH participants

Example: HKABC1. This would be participant "ABC" of HKCC.

**3. User ID:**

A Participant may delegate his CCMS operations to a number of internal staff ("CCMS users"). A unique user ID is assigned to each CCMS user by HKEX. It is an eight-character code (e.g. HKABC101 or B1234501), of which the first six characters are identical to the Participant ID. HKEX has the right to suspend or delete the user ID of a Participant.

**4. User Access Level Assignment:**

CCMS users can only access pre-authorised CCMS functions. Due to the job nature of individual user and internal control consideration (e.g., operator as maker, manager as checker, etc.), a CCMS user may only be allowed to access relevant CCMS functions (e.g., data entry functions for operators, and authorisation functions for managers).

CCMS functions are grouped into different categories, called User Access Group. Participants are recommended to assign appropriate combinations of the User Access Groups to each of the users as his/her user access level through its Das, by considering segregation of duties for internal control. Participant may alter the User Access Level of its CCMS users at any time through its DA. If a CCMS user attempts to use an unauthorised function, an error message will be displayed. Please refer to Table 3.1.1 for the definition of CCMS user access groups.

**TABLE 3.1.1 - CCMS USER FUNCTIONS**

| CCMS FUNCTIONS | USER ACCESS LEVEL CODE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | Q | R | S | T | U | W | X | BA | BB | BC | BD | BE |
| GENERAL FUNCTIONS | | | | | | | | | | | | | |
| Enquire Broadcast Message | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| View Circular | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Report Download | | | | | | | | | | | | ✓ | |
| Report Profile Maintenance | | | | | | | | | | | | ✓ | |
| STOCK TRANSFER FROM/TO CCASS | | | | | | | | | | | | | |
| Add CCASS-To-CCMS Stock Transfer | ✓ | | | | | | | | | | | | |
| Add CCMS-To-CCASS Stock Transfer | | | | | | ✓ | | | | | | | |
| Add General to Specific Stock Collateral | | ✓ | | | | | | | | | | | |
| Add Specific to General Stock Collateral | | | | | ✓ | | | | | | | | |
| CASH TRANSFER TO CCASS | | | | | | | | | | | | | |
| Add CCMS-To-CCASS Cash Transfer | | | ✓ | | | | | | | | | | |
| COLLATERAL DEPOSIT | | | | | | | | | | | | | |
| Add Cash Collateral Deposit Order | | | | | | | | | | ✓ | | | |
| Delete Cash Collateral Deposit Order | | | | | | | | | | ✓ | | | |
| Authorise Cash Collateral Deposit Order | | | | | | | | | | | ✓ | | |
| Add Non-Cash Collateral Deposit Order | | | | | | | | | | ✓ | | | |
| Delete Non-Cash Collateral Deposit Order | | | | | | | | | | ✓ | | | |
| Authorise Non-Cash Collateral Deposit Order | | | | | | | | | | | ✓ | | |
| Enquire Deposit or Withdrawal Order | | | | | | | | | | ✓ | ✓ | | |
| COLLATERAL WITHDRAWAL | | | | | | | | | | | | | |
| Add Cash Collateral Withdrawal Order | | | | | | | | | | ✓ | | | |
| Delete Cash Collateral Withdrawal Order | | | | | | | | | | ✓ | | | |
| Authorise Cash Collateral Withdrawal Order | | | | | | | | | | | ✓ | | |
| Add Non-Cash Collateral Withdrawal Order | | | | | | | | | | ✓ | | | |
| Delete Non-Cash Collateral Withdrawal Order | | | | | | | | | | ✓ | | | |
| Authorise Non-Cash Collateral Withdrawal Order | | | | | | | | | | | ✓ | | |
| Enquire Deposit or Withdrawal Order | | | | | | | | | | ✓ | ✓ | | |
| PARTICIPANT SUBMITTED DEPOSIT/ WITHDRAWAL ORDER | | | | | | | | | | | | | |
| Reject Submitted Cash Collateral Deposit/ Withdrawal Order | | | | | | | | | | | ✓ | | |
| COLLATERAL TRANSFER | | | | | | | | | | | | | |
| Add Cash Collateral Account Transfer Instruction | | | | | | | | | | ✓ | | | |

| CCMS FUNCTIONS | USER ACCESS LEVEL CODE | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | P | Q | R | S | T | U | W | X | BA | BB | BC | BD | BE |
| Delete Cash Collateral Account Transfer Instruction | | | | | | | | | | ✓ | | | |
| Authorise Cash Collateral Account Transfer Instruction | | | | | | | | | | | ✓ | | |
| Enquire Cash Collateral Account Transfer Instruction | | | | | | | | | | ✓ | ✓ | | |
| Add Non-Cash Collateral Account Transfer Instruction | | | | | | | | | | ✓ | | | |
| Delete Non-Cash Collateral Account Transfer Instruction | | | | | | | | | | ✓ | | | |
| Authorise Non-Cash Collateral Account Transfer Instruction | | | | | | | | | | | ✓ | | |
| Enquire Non-Cash Collateral Account Transfer Instruction | | | | | | | | | | ✓ | ✓ | | |
| SPECIFIC CASH COLLATERAL | | | | | | | | | | | | | |
| Add Pending Specific Cash Collateral | | | | | | | ✓ | | | | | | |
| Delete Pending Specific Cash Collateral | | | | | | | ✓ | | | | | | |
| Authorise Pending Specific Cash Collateral | | | | | | | | ✓ | | | | | |
| Enquire Specific Cash Collateral | | | | | | | ✓ | ✓ | | | | | |
| PREFERRED SINGLE SETTLEMENT CURRENCY | | | | | | | | | | | | | |
| Change Preferred Single Settlement Currency | | | | | | | ✓ | | | | | | |
| Delete Pending Preferred Single Settlement Currency | | | | | | | ✓ | | | | | | |
| Authorise Pending Preferred Single Settlement Currency | | | | | | | | ✓ | | | | | |
| Enquire Preferred Single Settlement Currency | | | | | | | ✓ | ✓ | | | | | |
| ENQUIRE COLLATERAL INFORMATION | | | | | | | | | | | | | |
| Enquire Collateral Account | | | | | | | | | | | | | ✓ |
| Enquire Collateral Account To Transaction Account Relationship | | | | | | | | | | | | | ✓ |
| Enquire Collateral Account Balance | | | | ✓ | | | | | | | | | ✓ |
| Enquire Collateral Account Movement | | | | ✓ | | | | | | | | | ✓ |
| Enquire Collateral Inventory | | | | ✓ | | | | | | | | | ✓ |
| Enquire Interest Calculation Result / Accommodation Fee | | | | ✓ | | | | | | | | | ✓ |
| Enquire Currency Exchange Rate and Haircut | | | | ✓ | | | | | | | | | ✓ |
| Enquire Collateral Effective Haircut & Valuation Price | | | | ✓ | | | | | | | | | ✓ |
| Enquire Specific Cash Collateral Movement | | | | ✓ | | | | | | | | | |

'✓' means the user has the access right to the functions.
HKSCC Participants can apply user groups P, Q, R, S, T, U, W and X.
HKCC Participants can apply user groups BA, BB, BC, BD and BE.
SEOCH Participants can apply user groups U, BA, BB, BC, BD and BE.

**TABLE 3.1.2 - DELEGATED ADMINISTRATOR FUNCTIONS**

| SECUIRTY MANAGEMENT FUNCTIONS | USER ACCESS LEVEL CODE |
|---|---|
| | EE |
| SECURITY MANAGEMENT | |
| Enquire User Profile | ✓ |
| View User Group Listing (with accessible C/3 functions) | ✓ |
| View User Profile Listing | ✓ |
| View Disabled User Listing | ✓ |
| View SRN Listing | ✓ |
| View User Profile Maintenance Report | ✓ |

'✓' means the user has the access right to the functions.

## 5. IP address :

When a Participant set up a C3T, HKEX will assign an IP address (Internet Protocol) for configuration into the computer. HKEX maintains the relationship of IP addresses and their relevant Participants, and will deny access attempts from PCs with unrecognised IP addresses.

## 6. Inactivity timeout:

CCMS is automatically logged off if the user does not operate at the terminal for a certain time period (about 15 minutes). To access CCMS again, the user has to close the browser and perform the logon procedures. This prevents other unauthorised persons from using the C3T if a CCMS user forgets to logoff from CCMS. Please refer to Section 3.4 for further details on inactivity timeout.

## 7. Participants' security responsibility

Each Participant is responsible for establishing and informing the Clearing House of subsequent changes to the list of authorised signatories to approve various request forms regarding smartcard readers, smartcards, CCMS users, DAs and other matters in relation to CCMS access.

It is the responsibility of each Participant to control access to its C3Ts and to its smartcards to ensure the security and confidentiality of the User IDs and smartcard passwords of its assigned users and DAs, to ensure that its smartcards are associated with appropriate Access Levels for segregation of duties and its assigned users abide by the Access Levels assigned to each of them, to ensure the security and confidentiality of the Authorisation Code (detailed in Section 3.2) of its DAs, and to ensures that its DAs abide by the Administrator Rights assigned to them.

A Participant shall immediately notify the Clearing House to disable the user profile associated with a smartcard by completing and submitting to the Clearing House the 'Report Loss of Smartcard' form if it is found that the smartcard is lost or has been stolen.

Participants shall liable for all instructions input into CCMS via their C3Ts. Participants requiring a new smartcard or a replacement smartcard must complete and submit to the Clearing House the ‘Smartcard Request Form for CCASS/CCMS User’. Participants are required to pay the appropriate fees for issuance or replacement of a smartcard as stipulated in the clearinghouses' Rules and Operational Procedures.