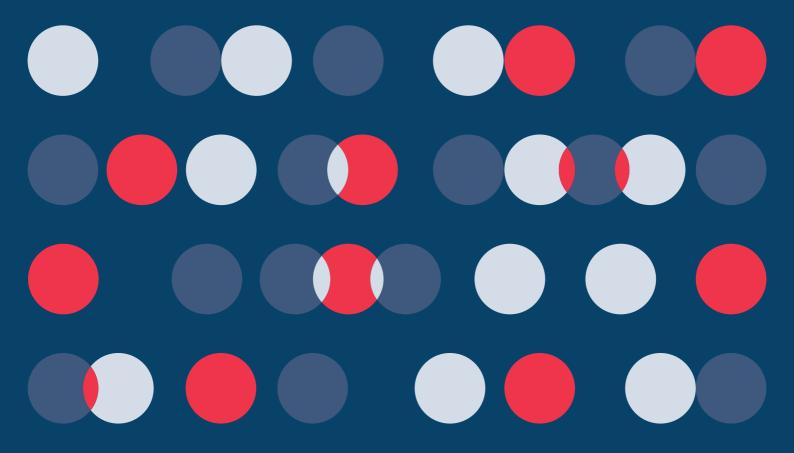


## INFORMATION PAPER

**HKATS & DCASS UPGRADE** 



## AMENDMENT HISTORY

Version	Date	Changes
1.0	26 Jul 2017	Initial version
1.1	08 Nov 2017	Updated to incorporate the latest timeline and technical details,
		including the holiday trading arrangement and the setting of
		exercise limit for OCH Contracts by SEOCH Participants

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## SECTION I: INTRODUCTION

- Hong Kong Exchanges and Clearing Limited (HKEX) is committed in maintaining the stability and reliability of the market infrastructure, as well as enhancing the flexibility of Hong Kong Futures Automated Trading System (HKATS) and Derivatives Clearing And Settlement System (DCASS) to adopt the future market development in an on-going basis.
- In view of technology evolution and to respond to the needs from the markets, HKEX has decided to upgrade (Upgrade) its derivatives platform, HKATS and DCASS, in 2018. The Upgrade will bring the derivatives market a simplified infrastructure, with reduction of hardware footprints at Participant premises. As planned and communicated during the previous system upgrade in 2013, the transitional access point, Network Gateway (NG), will be decommissioned along with this Upgrade. Furthermore, both Trading and Clearing Workstations, currently known as CLICK and DCASS Terminals (as well as DCASS Servers), connecting HKATS and DCASS respectively will also be terminated upon the Upgrade.
- 3. After the Upgrade in 2018, Central Gateway (CG) will be the only access point to HKATS and DCASS.
- 4. A new browser based frontend application, i.e. Core Desktop Trading will be provided for block trade facilities and serving as a contingency access to HKATS. Similarly, a new browser based frontend application, namely Core Desktop Clearing will be provided to Clearing Participants (CP) replacing the existing DCASS Servers and DCASS Terminals.
- 5. Please see Appendix A for the changes in System Infrastructures and Section IV for the tentative implementation schedule, with a plan to rollout the Upgrade by Q3 2018.
- 6. This information paper presents an overview of the Upgrade for the derivatives market and highlights the market impact with a tentative project schedule, to assist Participants to plan and prepare for the Upgrade.

## SECTION II: INFRASTRUCTURAL CHANGES

## A. Central Gateway as the Only Access Point

- 7. CG was introduced in 2013, to allow Participants to access HKATS and DCASS by directly connecting to the HKEX host servers. As of May 2017, over 80% of HKATS and DCASS OAPI connections have been migrated to CG to enjoy the lower transaction latency.
- 8. Upon the launch of Upgrade, CG will be the only access point to HKATS and DCASS. HKEX will decommission the access to HKATS and DCASS via NG as planned.
- 9. To prepare for the decommissioning of NG, Exchange Participants (EP) and CP currently accessing HKATS and DCASS via NG are advised to migrate the concerned connection(s) to CG soonest possible. However, Participants who still maintain any of their NG connections after Market Rehearsal (MR) should maintain their NG, including those NG decommissioned subsequently, until the completion of the two-week stabilization period after the launch of the Upgrade.
- 10. For those EP who re-distributes the market data obtained from NG should seek alternative data source, such as via the HKEX Orion Market Data Platform for Derivatives Market (OMD-D) or other service providers. HKEX will introduce a new feed package under OMD-D as a market data solution to EP for the NG decommissioning. More details can be found in Section B.
- 11. MR, tentatively scheduled in Q3 2018, will only support and accept CG connections in order to simulate the upgraded infrastructure. Participants are advised to complete the migration of NG connections to CG by Q2 2018 to avoid changing their network configurations back and forth between NG and CG during the MR period.

12. To facilitate and encourage Participants to migrate their NG connections to CG earlier, HKEX will offer a promotion program from 1 April 2018 to the tentative launch date in Q3 2018. Only active NG connections in December 2017 will be eligible to the promotion program. The successful migrated CG connections will be charged at a concession rate of HK\$1,750 per connection per month temporality upon the FULL decommissioning of Participants' NG connections for OAPI and DCASS servers (if applicable) within the promotion program. Upon the launch of Upgrade, the charges for all CG connections will be resumed to the existing standard rate, i.e. HK\$2,600 according to the Exchange and Clearing Houses Rules and Procedures<sup>1</sup>. Enrollment form of the promotion program will be available in Q1 2018.

## B. Market Data Solutions

- 13. EP subscribing to any existing datafeed product (Derivatives Standard, Derivatives Premium or Derivatives FullTick) on OMD-D will be granted 20 free terminals, instead of the existing 2 terminals, for displaying "Level 2" market data (i.e. 10 price depth) for internal use from April 2018 upon the full migration of the EP's NG connections to CG, meaning that the EP will save the monthly subscription fee of HK\$75 per terminal for up to 20 terminals.
- 14. EP can have access to the "Level 2" market data through direct connection to OMD-D or through data services of Information Vendors.
- 15. In addition, a new feed package, namely Derivatives Lite (D-Lite) under OMD-D will be introduced for EP to support their internal use including non-display usage and provision of trading facility such as internet trading to their clients, which are the major usage of the market data from NG nowadays.
- 16. The D-Lite comprises the following two new feeds, both with update interval of one second:
  - a. Conflated 5 price depth feed
  - b. Snapshot order feed for active series, which refer to the series eligible for the Volatility Control Mechanism (VCM) in the Derivatives Market.

HKFE: http://www.hkex.com.hk/-/media/HKEX-Market/Services/Rules-and-Forms-and-Fees/Rules/HKFE/Rules/fe-app-b.pdf?la=en

HKCC: http://www.hkex.com.hk/-/media/HKEX-Market/Services/Rules-and-Forms-and-Fees/Rules/HKCC/Rules/CC-AppA.pdf?la=en

SEOCH: http://www.hkex.com.hk/-/media/HKEX-Market/Services/Rules-and-Forms-and-Fees/Rules/SEOCH/Operational-Procedures/app-q1.pdf?la=en

- 17. Subscribers of the D-Lite can also opt to receive trade information from the existing streaming OMD-D Trade Feed without additional cost.
- 18. The subscription fee to the D-Lite will be HK\$2,000 per month (subject to approval), and this is a flat fee and there will not be charges for licence fee, end-user/subscriber usage fee, connection fee etc. EP shall enter into a Market Data End-User Licence Agreement for accessing the data of the new feed package for internal use. If EP are disseminating the data to their trading clients, a Market Data Vendor Licence Agreement is needed. Nonetheless, EP are only required to pay the flat fee of HK\$2,000 per month.
- 19. The D-Lite is targeted for rollout in April 2018 and there will be a MR in Q1 2018. More details on the D-Lite implementation will be available via HKATS and DCASS Upgrade web corner in due course.
- 20. The bandwidth requirements for the new feed package and the complimentary trade feed are as below:

Feed	5 Price Depth Feed		Order Feed	Trade	Feed
Product	Non SOM*	SOM	-	Non SOM	SOM
Bandwidth (Mbps)	6	8	3	2	1

<sup>\*</sup> SOM refers to Stock Options Market

21. Subscribers of D-Lite could also enjoy Redistribution Fee and Connection Fee waivers for OMD Derivatives Standard should they wish to provide deeper depths services to their trading clients.

## C. Core Desktop for Trading and Clearing

- 22. A new browser-based front-end application, namely Core Desktop Trading, will be provided to EP for contingency purpose.
- 23. Block trade functions will also be available via Core Desktop Trading.
- 24. Core Desktop Clearing will be offered as a replacement to DCASS Servers and DCASS Terminals. CP are still required to maintain their DCASS Servers and DCASS Terminals during the two-week stabilization period after the launch of the Upgrade.

25. Both Core Desktop Trading and Clearing will access HKATS and DCASS with CG connection via SDNet. Please refer to Appendix B for the web browser requirements of Core Desktop.

## D. Report Retrieval

- 26. With the decommissioning of DCASS Servers and DCASS Terminals, DCASS and Pre-Trade Risk Management (PTRM) reports will no longer be downloaded to Participants' DCASS Servers; instead Participants should retrieve DCASS and PTRM reports directly from HKEX's Report Servers according to their own schedule and operation needs. Same as today, Participants are recommended to make necessary planning and review on the capacity and security setting for local storage of the retrieved reports / data files. Please refer to Appendix B for report retrieval requirements.
- 27. HKEX's Report Servers will be implemented by Q2 2018 and available in parallel with existing DCASS Servers for report retrieval until the launch of the Upgrade. Technical details for connecting to HKEX's Report Servers will be available in Q1 2018.

## E. Pre-Trade Risk Management (PTRM) System

28. The existing PTRM connection and infrastructure will remain unchanged; Google Chrome will be the supported browser.

## F. SDNet Requirements

- 29. With the decommissioning of NG, CLICK, DCASS Servers and Terminals, Participants are reminded to stock take their current allocation of SDNet bandwidth to these connections.
- 30. Participants are also reminded to assess their SDNet bandwidth requirements for connecting to the newly introduced Core Desktop Trading and Clearing, Report Servers and OMD-D service, if applicable. Please refer to Appendix C for the minimum SDNet bandwidth requirements for various connections.
- 31. Participants are required to have sufficient SDNet bandwidth installed prior to the MR tentatively scheduled in Q1 2018 for OMD-D service and Q3 2018 for HKATS & DCASS Upgrade.

## SECTION III: FUNCTIONAL ENHANCEMENTS

## A. Increase the length of HKATS Root Symbol

32. The length of HKATS root symbol<sup>2</sup> will be increased from 3 to 5 alpha-numeric characters. Participants are reminded to review their systems including but not limited to trading, clearing, market data and reports on the capability to receive, process and store the HKATS root symbol with 5 alpha-numeric spaces.

- 33. HKATS root symbols of existing derivatives products will remain unchanged; no data conversion will be required.
- 34. New derivatives products to be launched after the Upgrade may carry a HKATS root symbol up to 5 characters. It is expected that the length of HKATS root symbols will vary from 3 to 5 characters upon the Upgrade.
- 35. Layout and/or content of reports and data files retrieved for HKEX's derivatives market, including PTRM reports, DCASS reports and Risk Parameter File (RPF) will be modified accordingly. Please refer to Appendix D for a list of files and reports to be enhanced and Appendix E for a summary of enhancements to RPF.

## B. Increase the field length of the "exchange info" field at order level

- 36. The length of "Exchange Info" field at order level will be extended from 32 bytes to 40 bytes. Upon the Upgrade, Participants should only use the leftmost 15 bytes of the data field. The remaining rightmost 25 bytes of the data field will be reserved for HKEX's future use. Participants are not allowed to input any information to this portion of "Exchange Info" field.
- 37. The corresponding "Pass Through" data field in Position Movement Details Report (TP003) for CP will be extended from 32 to 40 characters accordingly.
- 38. A full list of affected OAPI(s)<sup>3</sup> is available via <u>HKEX website</u>. Participants should ensure and confirm their OAPI programs and Back Office Systems (BOS) are able to support the extended "Exchange Info" and "Pass Through" fields.

For example, HSI and HKB are the HKATS root symbols for Hang Seng Index and HSBC Holdings Plc. respectively.

<sup>&</sup>lt;sup>3</sup> HKATS related OAPI can be found in <u>HKATS OAPI Specifications</u>; DCASS related OAPI can be found in <u>DCASS OAPI Specifications</u>.

## C. Allow SEOCH Participant to input an exercise parameter for OCH Contracts<sup>4</sup>

- 39. Currently, the in-the-money (ITM) triggering percentage for automatic generation of stock options exercise limit is prescribed by SEOCH as 1.5% of the strike. If needed, SEOCH Participants may choose to input their exercise requests through DCASS Terminals in respect of those OCH Contracts that they wish to exercise. With the Upgrade, instead of following SEOCH's prescribed limit, SEOCH Participants will be able to configure their own automatic generation exercise limit per Instrument Type via Core Desktop Clearing.
- 40. SEOCH Participants can set their own ITM limits for all spot month contracts on or before expiry; such limit can be entered as a percentage or at a fixed value. Please refer to Appendix F for illustrations on setting of ITM limit.
- 41. The existing Automatic Exercise Information for stock options Report (TP013) will remain the same i.e. only showing those spot month series to be automatically exercised by the SEOCH, based on the 1.5% triggering limit prescribed by SEOCH. SEOCH Participants who choose to use the new function should verify their input by using the Automatic Exercise Limits Window. SEOCH Participants are reminded to have proper internal control in the maintenance of ITM limits.

## D. Support new business initiatives

- 42. The Upgrade will also enhance the capability to support the following new business initiatives:
  - a. contracts with flexible expiry dates for HKFE products (namely weekly / daily expiry contracts)
    - ability to trade and clear contracts in addition to the existing contracts with monthly expiry dates
  - b. holiday trading of HKFE products
    - ability to trade and clear contracts during Hong Kong holidays, such as Easter and Christmas holidays
    - Holiday Product (H Product) and non-Holiday Product (Non-H Product) will have different trading calendars

<sup>&</sup>lt;sup>4</sup> OCH Contract means a contract between SEOCH and SEOCH Participant pursuant to a novation in accordance to Options Clearing Rules of SEOCH.

c. Summary of arrangements during Hong Kong holidays is highlighted below. Please refer to Appendix G for more details.

	During a HK Holiday (H)		
	Holiday Product(H Product)	Non-Holiday Product (Non-H Product)	
	<ul> <li>Settle H-1 day-end obligations on <u>H day</u></li> </ul>		
Holiday	<ul> <li>Conduct Trading/Clearing/Post trade activities during H day</li> </ul>	NO Trading/Clearing/Post trade activities	
Participant	Settle H intra-day obligation settle during H day	Settle H-1 day-end obligation settle on H+1 day	
	<ul> <li>Settle H day-end obligation settle on H+1 day</li> </ul>		
Non- Holiday Participant	NO activity during H day		

- 43. Reports and data files will be enhanced to support these new initiatives. Please refer to Appendix D for details. Participants interested in the above new business initiatives should get their Trading Systems, BOS and OAPI programs, if applicable, ready together with the Upgrade. However, all Participants should take note of the enhanced system behavior and ensure it will not impact their existing system processing.
  - a. For DCASS reports, there is no change to the report layouts due to this initiative. Only H Product related activities will be shown on DCASS reports generated during Hong Kong holidays, if applicable.
  - b. For CCMS reports, only CCMPY02 will be modified by adding a new section showing Holiday Participants' day-end obligations in relation to Non-H Products to be settled on the day after holidays.
  - c. All DCASS and CCMS reports for that particular Clearing House will be available if the Clearing House is opened for clearing on the day.
  - d. For Daily Market Report, availability of reports for the concerned products will follow their own trading calendar.
- 44. Furthermore, to prepare for the launch of the Upgrade, HKEX will include flexible expiry dates contracts for HKFE products and holiday trading of HKFE products in the MR. Readiness and verification in supporting these initiatives will be optional. However, Participants who do not intend to support the relevant new initiatives should also verify and ensure that the enhancement/modification do not impact their existing system processing. Please refer to technical briefing material for more details.

# E. Enhance margin offset support

45. To support new business initiatives and to enhance margin offset capability, enhancements will be made to the RPF. Please refer to Appendix E for details.

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## SECTION IV: TO-DO LIST FOR PARTICIPANTS

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## A. <u>Project Initiation</u> - from June to July 2017 [Completed]

- 46. <u>Reserve resources for the Upgrade:</u> Participants are encouraged to assess, evaluate and reserve sufficient resources, in manpower, technical and financial aspects for the Upgrade. Including the procurement of hardware & software, as well as bandwidth requirement, in order to support the migration of NG connection to CG, subscription of market datafeed from OMD-D, browser-based requirements for Core Desktop as well as report retrieval via Report Servers.
- 47. <u>Engage IT or vendors</u>: Participants should liaise with your internal IT teams and/or system vendors to assess and identify potential system modifications including but not limited to Trading System, BOS and/or OAPI programs, if applicable.
- 48. <u>Source of market data</u>: With the decommissioning of NG, Participants currently using OAPI to retrieve market data via NG should assess, seek and determine the alternative sources of market data that can meet your business needs.
- B. Development Stage from September 2017 to Q1 2018
- 49. <u>Technical briefing</u>: <u>Material</u> for the technical briefing can be found on the HKATS and DCASS web corner.
- 50. <u>System Modifications</u>: Both <u>HKATS</u> and <u>DCASS</u> OAPI specifications are available via HKEX website. Participants should review the OAPI specification, assess and plan for the modification of their BOS/OAPI programs.
- C. Getting Ready from Q1 to Q2 2018
- 51. <u>End-to-End Testing:</u> To facilitate Participants' verification of their self-developed systems, a testing environment will be available starting tentatively from Q2 2018. Participants can connect to the testing environment to verify the compatibility among interface system, BOS, HKATS and DCASS host servers.

- 52. <u>Certification Test:</u> Tentatively, OAPI certification testing environment will be available for Participants from April to June 2018. Participants are encouraged to conduct OAPI certification test earlier to allow sufficient buffer to cater for bug fixing and retest, if applicable.
- 53. <u>Procurement of Hardware & Software:</u> Participants should assess the need to redeploy the existing hardware & software, such as NG, DCASS Servers/Terminals upon the completion of the 2-week stabilisation after launch, if applicable, and/or procure new equipment to cater for the upgraded infrastructure. Please refer to Appendix B for technical requirements details for Core Desktop and Report Servers.
- 54. <u>SDNet requirement:</u> Participants should review and assess their existing SDNet bandwidth and setup; and engage the accredited vendors to make necessary upgrade and adjustment, if needed. Please refer to Appendix C for bandwidth requirement information.
- 55. <u>Core Desktop:</u> Participants should nominate their operation staff to attend the Core Desktop briefing to learn and get familiar with the navigation and workflow of the new browser-based front-end applications for both Trading and Clearing, tentatively in May 2018. Moreover, Participants should use their existing User IDs to access Core Desktop under the Upgrade. Details will be announced separately in due course.
- 56. <u>Migration of NG connection to CG:</u> Participants should ensure their readiness of connectivity at least two months prior to the MR. To avoid unnecessary interruption due to condensing all migration within a short period of time, Participants are encouraged to migrate their NG connections to CG earlier. To facilitate and encourage Participants to migrate their NG connections to CG earlier, HKEX will offer a promotion program from 1 April 2018 to the tentative launch date in Q3 2018. Only active NG connections in December 2017 will be eligible to the promotion program. Enrollment form of the promotion program will be available in Q1 2018.

## D. Rollout Activities - Q3 2018

- 57. <u>Connectivity Test:</u> Before the execution of the MR, Participants should participate in the connectivity test to ensure they can connect to Core Desktop, Report Servers, HKATS and DCASS hosts via CG under the upgraded infrastructure.
- 58. <u>Market Rehearsal (MR):</u> As the final preparation and verification of readiness before the Upgrade rollout in Q3 2018, all Participants have to participate in the MR; and provide confirmation and declaration of their readiness. Participants are recommended to ensure their operations and systems support the enhanced system features, including

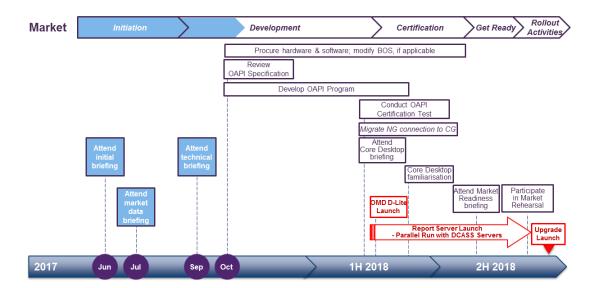
extension of HKATS root symbols field, setting their own ITM limits for OCH Contracts (if applicable), modified RPF and report download from HKEX's Report Servers. Participants who intend to participate in the new business initiatives, including contracts with flexible expiry dates and holiday trading of HKFE products should also ensure their system able to support the relevant enhanced system features.

## E. <u>Communication</u>

59. HKEX will post the Upgrade information and the latest update to the designated "HKATS and DCASS Upgrade" web corner. Participants are encouraged to visit the designated web corner for the latest progress of Upgrade.

## SECTION V: TENTATIVE IMPLEMENTATION SCHEDULE

60. The tentative implementation schedule for HKATS and DCASS Upgrade is summarized as follows:



Legend : Completed Tasks

## **SECTION VI: ENQUIRIES**

61. For enquiries and further clarification on the Upgrade, please write to:

Hong Kong Exchange and Clearing Limited
12/F One International Finance Centre
1 Harbour View Street
Central
Hong Kong

Re: Information Paper on HKATS and DCASS Upgrade

62. Alternatively, please contact us by email to <a href="https://hkex.com.hk">hkatssupport@hkex.com.hk</a> and <a href="mailto:clearingpsd@hkex.com.hk">clearingpsd@hkex.com.hk</a> or call our hotlines<sup>5</sup>:

(+852) 2211 6360 (Trading) (+852) 2979 7222 (Clearing)

63. A designated web corner has been set up at the HKEX website for all Upgrade related information. Participants should refer to the "HKATS and DCASS Upgrade" web corner for most up-to-date information.

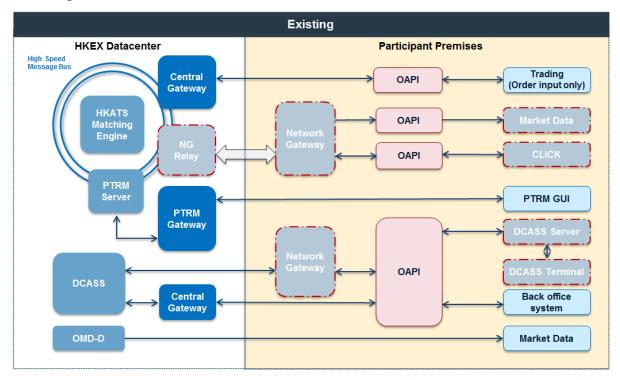
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All calls to our HKATS and DCASS hotlines would be recorded. Please refer to the following link for HKEX privacy policy statement: <a href="http://www.hkex.com.hk/Global/Exchange/Privacy-Policy?sc-lang=en">http://www.hkex.com.hk/Global/Exchange/Privacy-Policy?sc-lang=en</a>

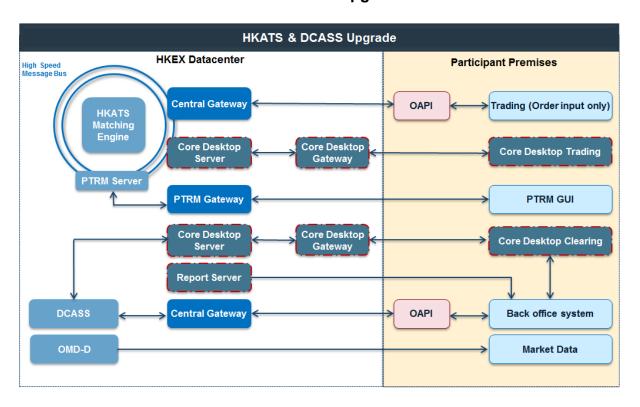
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# Appendix A: Changes in System Infrastructure

## **Existing Infrastructure**



## New Infrastructure after HKATS & DCASS Upgrade



Legend : infrastructure changes upon the Upgrade

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# Appendix B: Requirements for Core Desktop and Report Retrieval

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Core Desktop (Trading / Clearing)	Minimum Requirement
Processor	Intel Core i3-550 3.2GHz or higher
RAM	4GB
Storage	3GB
Network adapter	100Mbps full-duplex
Monitor	21" with 1280 x 1024 resolution
Operating System	Microsoft Windows 7 (64 bit)
Layered software	Anti-virus software
Supported Browser	Google Chrome <sup>6</sup>
Network Circuit	<ul><li>via SDNet connection</li><li>Firewall/Services Ports configuration, if necessary</li></ul>

Report Server	Recommended Installation Requirement
Operating System	Secure File Transfer Protocol compliance platform
Software for Report Download	Secure File Transfer Protocol compliance software
Network Circuit	<ul><li>via SDNet connection</li><li>Firewall/Services Ports configuration, if necessary</li></ul>

<sup>&</sup>lt;sup>6</sup> Google Chrome will be the supported browser for PTRM as well.

# Appendix C: Bandwidth Requirements

To ensure smooth operations under Upgrade and support the anticipated growth in the derivatives market volumes, the minimum requirements for the SDNet bandwidth are listed in the table below.

Per Connection		Bandwidth Requirement	
		HKATS only	DCASS only
	OAPI	3 Mbps <sup>7</sup>	3 Mbps
Central Gateway	Core Desktop	0.4 Mbps	0.4 Mbps
	Report Retrieval	N/A	1 Mbps
PTRM Gateway		1 N	/lbps

Please note that subject to market conditions, HKEX may consider revising the bandwidth requirements from time-to-time and Participants may need to upgrade their SDNet accordingly. HKEX will issue separate circulars to notify Participants of the updated requirements when needed.

3 Mbps is optimal for support up to 250 TPS with 2 copies of firm based broadcast (BO5).

# Appendix D: List of Files and Reports to be enhanced

Functional enhancement	Enhanced file and report	Related enhancement
A. Increase the length of HKATS Root Symbol	TP001, TP002, TP003, TP004, TP009, TP010, TP011, TP012	Extend the "Series" field length from 15 to <u>20</u> characters to incorporate  - the extension of HKATS Root Symbol from 3 to <u>5</u> characters  - the contract date code for flexible expiry date
	TP014	Extend the "Series Security ID" field length from 4 to <u>5</u> characters to incorporate the extension of HKATS Root Symbol from 3 to <u>5</u> characters.
	RP001, RP004, RP005, RP006, RPI07/RP007, RP009, RPI11/RP011, RPF <sup>8</sup> , UMR <sup>9</sup>	Extend the "Commodity" field length to incorporate the extension of HKATS Root Symbol from 3 to <u>5</u> characters.  For RPF, rearrange the "Combined Commodity Code" field to cater for the extension of HKATS Root Symbol from 3 to <u>5</u> characters
	Daily Market Report, PTRM Audit report, Utilization report and Limit file	Extension of HKATS Root Symbol from 3 to <u>5</u> characters for new product initiatives.

RPF refers to Risk Parameter File
 UMR refers to Unit Margin Rate File

Functional enhancement	Enhanced file and report	Related enhancement
	Large Open Positions Report Template for Futures Market	Extend the "Product Code" field length from 4 to <u>6</u> to incorporate the extension of HKATS Root Symbol from 3 to <u>5</u> characters.
	Large Open Positions Report Template for Stock Options market	Extend the "Option Class" field length from 3 to <u>5</u> to incorporate the extension of HKATS Root Symbol from 3 to <u>5</u> characters.
B. Increase the field length of the "exchange info" field at order level	TP003	Extend the "Pass Through" field length from 32 to 40 characters
C. Contracts with flexible expiry dates	TP001, TP002, TP003, TP004, TP009, TP010, TP011, TP012	Extend the "Series" field length from 15 to <u>20</u> characters to incorporate  - the extension of HKATS Root Symbol from 3 to <u>5</u> characters  - the contract date code for flexible expiry date
	RPF, RP004, RPI07/RP007, RPI11/RP011, MERT <sup>10</sup>	All products under the same Combined Commodity with flexible expiry contracts will display contract date code after the existing contract month code.  For enhancement to RPF, please refer to Appendix E.
	Daily Market Report	New daily market report format to be introduced with further granularity to identify the expiry date down to daily and weekly level.

<sup>&</sup>lt;sup>10</sup> MERT refers to Client Margin Estimate Reference Table

Functional	Enhanced file and report	Related enhancement
enhancement		Rolatoa omianoomont
	Large Open Positions Report Template for Futures	Extend the "Contract Month" field length from 6 to <b>9</b> characters to
	Market	incorporate the contract date code for flexible expiry date.
D. Holiday Trading <sup>11</sup>	TP001, TP002, TP003,	Report date will be displayed as
	TP004, TP005, TP006,	current day if that particular
	TP007, TP008, TP010,	market has been opened for
	TP012	trading for the day; otherwise the report date will be displayed as
	RPI03/RP003, RP004,	previous business day.
	RP005, RP006,	
	RPI07/RP007, RP008,	
	RP009, RP010,	
	RPI11/RP011, RP012,	
	UMR, MERT	
	CCMS report: CCMPY01/02	Report layout will be changed to
		cater for holiday trading
	Daily Market Report	Availability of the report for
		concerned products will follow
		their own trading calendar
E. Enhance margin	RPF, RPI03/RP003,	Align the name of Product Area
offset support	RPI10/RP010	with the Combined Commodity
		Group Code to be displayed in RPF.
		For enhancement to RPF, please refer to Appendix E.

All DCASS and CCMS reports for that particular Clearing House will be available if the Clearing House is opened for clearing on the day.

# Appendix E: Enhancements to the Risk Parameter File (RPF)<sup>12</sup>

To support new business initiatives and to enhance margin offset capability, the following enhancements will be made to the Risk Parameter File:

Functional enhancement	Modified record type	Related enhancement
Increase the length of HKATS Root Symbol	2, 3, C, 4, 5, 6	Rename of Combined Commodity Code: - FEXXX or SEXXX to FXXX or SXXX
Contracts with flexible expiry dates	3 B, 81, 82	<ul> <li>Initial to Maintenance Ratio (fields 69-80)</li> <li>Tier with Day Code (fields 81-96)</li> <li>Applicable for all contracts in the same Combined Commodity (e.g. FHSI which comprises of HSI, MHI &amp; XHS) with the flexible expiry date contracts</li> <li>Add Day Code (Rec Type B: fields 25-26 &amp; 34-35; Rec Type 8: fields 36-37 &amp; 45-46)</li> <li>Applicable for all contracts in the same Combined Commodity with the flexible expiry date contracts</li> </ul>
Regroup of Combined Commodity Group "CCG"	5	<ul> <li>Map Combined Commodity <fdhh> and <fdhs> to CCG &lt;<u>DJI</u>&gt; and remove CCG <dhh> and <dhs></dhs></dhh></fdhs></fdhh></li> <li>Map Combined Commodity <srkb>To CCG <hke> and remove CCG <rso></rso></hke></srkb></li> </ul>

Please refer to file specification available in CME website for details. Risk Parameter sample file will be available for download in Q1 2018.

Functional enhancement	Modified record type	Related enhancement
Enhance margin offset support	6	Scanning Based ICS with Intercommodity Spread Method Code "04" (fields 89-90) will be introduced, with the following RPF changes:  Non target leg X Required Flag (fields 20-20, 38-38, 56-56, 74-74) and target leg Required flag (field 94-94)  Combined Commodity Code for non-target legs X (fields 21-26, 39-44, 57-62, 75-80) and for target leg (fields 95-100)  Delta/Spread Ratio for non-target leg X (fields 27-33, 45-51, 63-69, 81-87) and for target leg (fields 111-117) which are always set to 0010000  Min number of legs Required (fields 118-121)
	82	Composite Delta (currently 3 <sup>rd</sup> and 4 <sup>th</sup> decimals filled with zero) will be filled with four decimal places (Rec Type 8: fields 97-101)
	Т	Additional rows for exchange rate on the reverse currency pairs

# Appendix F: Setting Own In-the-money ("ITM") Exercise Limit for OCH Contracts

# <u>Setting Participants' Own In-the-money ("ITM") Exercise Limit for OCH Contracts via</u> "Create Automatic Exercise Limit"

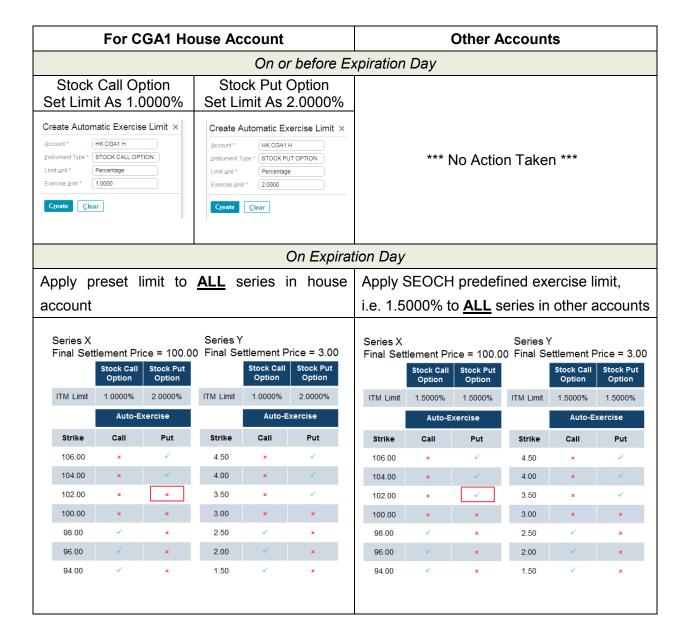
- SEOCH Participants should take extra cautious when setting up their own exercise limit in DCASS. Exercise limit will take effect immediately upon confirmation.
- SEOCH Participants can input their own exercise limit as
  - a percentage of the strike; or
  - a fixed value,

at Participant level or account level. Please refer to the examples below on the application of the preset limit on the expiration day.

- For preset exercise limit at Participant level, the limit will be applicable to <u>ALL</u>
  accounts. If the exercise limit is set at account level, such limit only applicable to that
  particular account.
- The preset exercise limit will
  - apply to <u>ALL</u> series within the same instrument type, i.e. either stock call option or stock put option;
  - override SEOCH's prescribed exercise limit i.e. at 1.5% of the strike.
- DCASS will conduct automatic exercise process based on the latest preset exercise limit. For example, if a Participant set its exercise limit at Participant level as 1.1000%, then set another exercise limit at account level as 1.2000% for its house account. On expiration date, DCASS will apply 1.2000% to its house account and 1.1000% for the rest of the accounts.

## **Examples:**

Case 1: A Participant defined its own exercise limit, in <u>percentage (%)</u>, for its house account only, i.e. at account level, as follows:



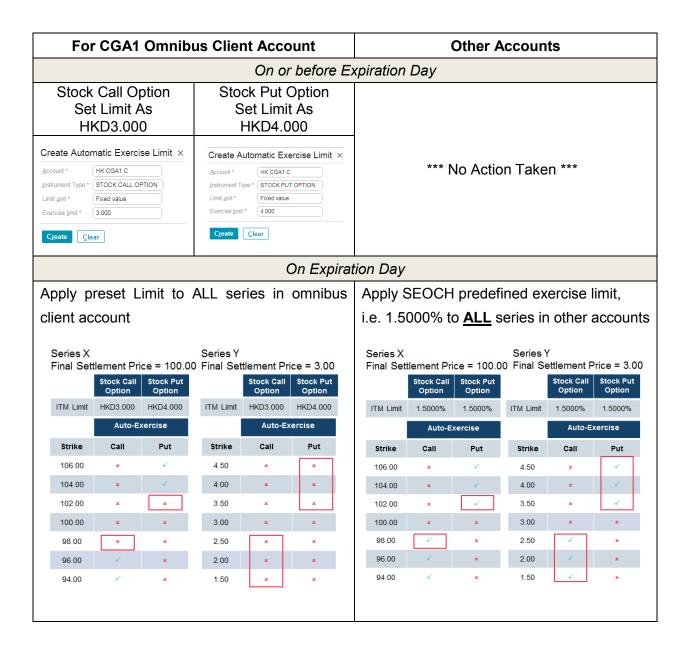
#### A series will be auto-exercised:

- Call options: if the Final Settlement Price ≥ (strike \* (1 + ITM limit in %))
- Put options: if the Final Settlement Price ≤ (strike \* (1 ITM limit in %))

#### Legend:

- ▼ The series will be automatically exercised.
- The series will <u>not</u> be automatically exercised
  - The limit preset for house account by the Participant overridden SEOCH's predefined exercise limit. For strike at 102.00, the put options for series X in house account will NOT be auto-exercised, with the preset limit at 2.0000%; while the put options in other accounts will auto-exercise by applying SEOCH's prescribed limit at 1.5000%.

Case 2: A Participant defined its own exercise limit, in <u>fixed value (\$)</u>, for its omnibus client account only, i.e. at account level, as follows:



#### A series will be auto-exercised:

- Call options: if the Final Settlement Price ≥ (strike + ITM limit at fixed value)
- Put options: if the Final Settlement Price ≤ (strike ITM limit at fixed value)

## Legend:

- ▼ The series will be automatically exercised.
- The series will not be automatically exercised
- The limit preset for omnibus client account by the Participant overridden SEOCH's predefined exercise limit. Hence, both call & put options for series X and series Y have different auto-exercise results as compared those in other accounts applying SEOCH's prescribed limit at 1.5000%.

# Appendix G: Collateralisation Arrangement under the Holiday Trading of HKFE Products Initiative

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## A. Collateralisation Arrangement

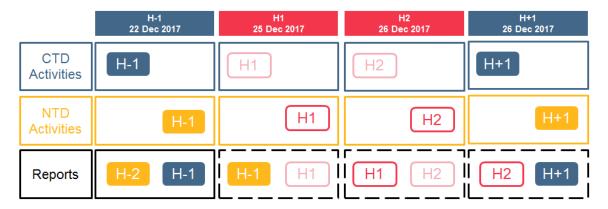
The table below summarized the collateralisation arrangement under holidays trading.

		HK Business Day	HK Holiday (H)		HK Business Day
		H-1 (22 Dec 2017)	H1 (25 Dec 2017)	H2 (26 Dec 2017)	H+1 (27 Dec 2017)
Holiday Trading Par	ticipant				
Collateral Deposit & Withdrawal		Normal	<ul> <li>Cash collateral deposit only</li> <li>Collateral withdrawal <u>not</u> allowed</li> </ul>		Normal
Day-end Collateralisation & Payment for DDI	Holiday Trading Product	DDI to be collected on H1 (25-Dec)	DDI to be collected on H2 (26-Dec)	DDI to be collected on H+1 (27-Dec)	Normal
	Non-holiday Trading Product	<ul><li>Set aside outstanding debit</li><li>Not include shortfall amount</li></ul>	N/A	Re-post of H-1 (22-Dec) day-end margin and outstanding debit set aside	
Day-end DCI standing withdrawal instruction		No DCI generated	No DCI generated	DCI to be released on H+1 (27-Dec)	Normal
Intra-day Collateralisation		Normal	To be collected on same day	To be collected on same day	Normal
Holiday Collateralisation	Holiday Trading Product	N/A	N/A	N/A	N/A
	Non-holiday Trading Product	Apply	N/A	N/A	N/A
Non-Holiday Trading	g Participant				
Collateral Deposit and Withdrawal		Normal	N/A		Normal
Day-end Collateralisation & Payment for DDI		DDI to be collected on H+1 (27-Dec)	N/A		Normal
Day-end DCI standing withdrawal instruction		DCI to be released on H+1 (27-Dec)			Normal
Intra-day Collateralisation		Normal	N/A		Normal
Holiday Collateralisation		Apply	N/A		N/A

## **B.** Reporting Arrangement

## • For Holiday Trading Participant

- reports available during holidays are same as those available during normal days, i.e. including NTD activities on previous day, together with CTD activities on current day;
- no change to DCASS reports;
- new sections will be added to CCMS report, CCMPY02 to provide summaries on the shortfall/outstanding debit of Non-Holiday Trading Products, please refer to the technical briefing material for more details.



#### Legend:

Normal Day Activities
Holiday Activities

## • For Non-Holiday Trading Participant

- reports available during normal days remain unchanged;
- if a particular Clearing House is opened for trading and/or clearing on holidays, reports will be generated and available during holidays, showing only the day end of day position records as of previous Business Day.



 Please refer to Appendix D for more information on enhanced files and reports; and Appendix E for enhanced Risk Parameter File (RPF).

