Section A – Notes to the Application

a. **Market Making Orion Central Gateway – Securities Market (MMOCG-C) Session:** MMOCG-C session in the application form and explanatory note has the same meaning of Market Making Central Gateway (MMCG) session as defined in the Rules of the Exchange. A MMCG session means a Central Gateway (CG) session applied by an Exchange Participant (EP)

   (i)   for carrying out market making activities in a Market Making Security (e.g. Designated Exchange Traded Funds, Leveraged and Inverse Products (L&I Products) and securities traded under the Pilot Program) by a Securities Market Maker (SMM) itself and/ or by a SMM's registered Designated Specialists.   A dedicated MMCG session must be set up for each registered Designated Specialist for conducting the market making activities; or

   (ii) for carrying out liquidity provisioning activities to a Structured Product (e.g. Derivative Warrants, Callable Bull/Bear Contracts & Inline Warrants) by a Structured Product Liquidity Provider (SPLP) or by a Backup SPLP when SPLP fails to provide liquidity provision; or

   (iii) for carrying out the market making or liquidity providing activities in a dual counter stock by a Dual Counter Market Maker (DCMM).

   A MMCG session may be used for single/ both SMM and DCMM purposes.   Separate MMCG Session must be for Designated Specialist and for SPLP.

   EPs may connect their Broker Supplied System (BSS) to CG via subscription to one or more MMCG sessions. The MMCG session is for trading only (i.e. for orders/ trades submission) and do not carry securities market data.   EPs may subscribe to market data directly from HKEX Orion Market Data Platform – Securities (OMD-C) or indirectly via information vendors. For each MMCG session an EP subscribes, it may apply for a Backup CG session.

b. **Broker Number Assignment**:   A broker number will be assigned to each MMCG session.
    For SPLP's MMCG session, up to 500 Structured Products will be assigned to a broker number.
    If MMCG Session is for both SMM and DCMM purposes, two broker numbers (max) will be assigned.   One broker number will be served for SMM purpose and another broker number will be served for DCMM purpose. EPs are required to use these two broker numbers correctly for their assigned purposes and must not confuse the usage.

c. **Message Protocol:** A MMCG Session can support either Binary or FIX message protocol. Selection must be specified before the connection. EP should refer to the interface specifications of CG for details of these two message protocols at http://www.hkex.com.hk/eng/market/sec_tradinfra/ocg/orioncg.htm

d. **IP Address Scheme for CG/BSS:** It will be provided separately in the Connectivity Guide HKEX Orion Central Gateway – Securities Market (OCG-C). EPs should assign the IP addresses within their own usable IP address range to the MMCG session.   IP addresses which have already been assigned by other EPs will not be allowed to be used.

e. **Testing Requirement of a MMCG Session under application**: A full cycle of BSS conformance test shall include offline simulator test, end-to-end test and rollout test.   BSS testing package can be downloaded via Electronic Communication Platform (ECP).   Potential EP, who has submitted OCG-C Session Application Form, may contact HKEX – Participant General Enquiry Hotline at 2840-3626 for collection of the BSS testing package.   After submission of positive simulator test and end-to-end test results, HKEX will schedule EP to conduct rollout test to verify the connection among BSS, the applied MMCG session and OTP-C Host via production circuits.

(Updated in April 2023)

Below is the different types of conformance test required for the application for a new MMCG session:

	BSS Version	Network to be connected	Type of Conformance Test required to conduct		
			Offline Simulator Test	End-to-End Test	Rollout Test
Application for a new MMCG session	New BSS	New or Existing SDNet/2 or HSN	Yes	Yes	Yes
	Existing BSS	New or Existing SDNet/2 or HSN	No	No	Yes

f. Rollout the New MMCG Session: EP may rollout the new MMCG session after successful completion of required test(s), submission of offline simulator test confirmation reply, end-to-end test confirmation reply, end-to-end test result via test portal website, BSS Declaration and rollout notification to HKEX by giving not less than 1 week in advance notice, getting appointment by Issuer as Liquidity Provider of structured products/ getting approval from HKEX for Securities Market Maker Permit(s) or registration of Designated Specialist(s)/ getting approval from HKEX for Dual Counter Market Maker Permit(s).

g. Relocation of Existing Circuits Connected to BSS: EP has to inform HKEX by submitting the "Requisition Form for Change of BSS Connection Information for Orion Central Gateway – Securities Market (OCG-C) / Drop Copy Session" at least 1 week advance notice prior to the effective date and submission of positive Rollout Test feedback form.   EP is required to participate in the Rollout Test.

h. Circuit and Network Switch Installation: Dual-circuit connection is required for connecting each CG session. EP can either install dedicated dual circuits for CG session(s) or share the same dual circuits of CG session(s) with other HKEX applications, depending on the type of network subscription. Please refer to the table below for details. EP should ensure sufficient bandwidth to meet the needs of different HKEX applications and consider system resiliency.

Type of network subscription	Other HKEX applications allowed to **share same circuits with CG session(s)**					
	Drop-Copy	OMD-C	CCCG	CC Drop-Copy	OMD-CC	Kill Switch
(i) SDNet/2 circuit	✓	✓	✓	✓	✓	✓
(ii) SDNet/2 ASP connection	✓	✓	✓	✓	✓	✓
(iii) HSN	✓	✓	✓	✓	✓	✓
(iv) HSN Virtual Port Service	✓	✓	✓	✓	✓	✓

✓ *allow to share same circuits with CG session(s)*
X *not allow to share same circuits with CG session(s)*

Type of network subscription:

(i) via SDNet/2 circuits provided by Accredited Vendor. The contact information of Accredited Vendor is posted at HKEX website

https://www.hkex.com.hk/Services/Connectivity/SDNet-2/Securities-Trading-(OTPC-Shanghai-and-Shenzhen-Connect)?sc_lang=en

(ii) via SDNet/2 Application Service Provider (ASP) connection provided by ASP. ASP subscribes SDNet/2 circuits from Accredited Vendor and provides shared SDNet/2 circuit connectivity to multiple EPs and manages network connectivity on behalf of its service subscribers. However, there is a cap on the number of EPs and turnover market share on each SDNet/2 ASP connection to minimize concentration risk. EP may check with the ASP for details before subscribing to the services. In addition, EP should check with the ASP circuit number, IP addresses and installation date in order to fill in the form of Application for Central Gateway.

For more information on ASP connections, please refer to "Frequently Asked Questions" of SDNet/2 on HKEX website

http://www.hkex.com.hk/Global/Exchange/FAQ/Securities-Market/Trading/SDNET-2?sc_lang=en.

(iii) via HKEX Service Network (HSN) provided by HKEX Hosting Services. The contact information of HKEX Hosting Services is posted at HKEX website http://www.hkex.com.hk/eng/prod/hosting/hostingservices.htm.

(iv) via HSN Virtual Port Service provided by HKEX Hosting Services Approved ASP. Multiple EP's trading facilities can be aggregated on the same HSN connection. However, there is a cap on number of EPs

and turnover market share on each aggregated HSN connection to minimize concentration risk. EP may check with the HKEX Hosting Services Approved ASP before subscribing to the services. In addition, EP should check with the HKEX Hosting Services Approved ASP circuit number, IP addresses and installation date in order to fill in the form of Application for Central Gateway.

EP is responsible for arranging with network provider directly for circuits and network switch(es) installation, quotation and billing arrangement. EP should ensure the readiness of circuits and network switch(es) prior to connecting to CG session. For further details on network configuration, EP should refer to the [Connectivity Guide HKEX Orion Central Gateway - Securities Market (OCG-C)](#).

For market data related arrangement, please contact HKEX-IS by sending email to marketdata@hkex.com.hk.

i. **Bandwidth Requirement:** The minimum bandwidth requirement for MMCG session is 40 Kbps/throttle rate.

j. **Standard CG Throttle Rate:** Each MMCG session shall assign at least 2 standard CG throttle rates and up to 250 standard CG throttle rates.   EP can (i) base on CG throttle rate calculation [*i.e. First 5 listings of eligible securities assigned to MMCG session will be eligible for 2 standard CG throttle rates and an additional throttle rate will be eligible for the next 5 eligible securities (i.e. 6 to 10, 11 to 15 etc) up to 500 eligible securities.*] or (ii) request additional standard CG throttle rates in addition to the above calculation.   In any cases, the total number of standard CG throttle rates assigned to the session cannot be more than 250 standard CG throttle rates.

Standard CG throttle rate assigned to a MMCG session will not be withdrawn upon delisting of the eligible securities (i.e. the number of standard CG throttle rate assigned to a MMCG session will be increased but not decreased, unless the CG throttle rate(s) are re-assigned to other MMCG session(s) under the same EP).

One standard CG throttle rate provides the throughput of 2 messages per second.

k. **Message Rate Throttling:** All in-bound messages such as order submission, quote, etc. are collectively referred to as messages.   Messages exceeding the entitled message rate will be rejected and BSS should be able to re-submit the message(s) when necessary. HKEX reserves the right to disconnect a MMCG session, without any further exchange of messages, if that MMCG session is found to be violating the entitled message rate excessively.

l. **Monthly Fee for MMCG Session/ Backup MMCG Session:** The monthly fee will be charged at amounts depending on the number of standard CG throttle rates assigned to the MMCG session/Backup MMCG session (i.e. low, standard and high capacity) rolled out at the first trading day of each month. The fee is calculated on a full calendar month basis. A new MMCG session/ Backup MMCG session rolled out on the 2nd trading day or afterwards during the month will be charged of the monthly fee in the following month. There will be no refund of MMCG session/ Backup MMCG session fee for the month if the termination is effective during the month. Please refer to Section B – "Fees and Charges" for details of charges.

m. **Monthly Fee for Standard CG Throttle Rate Assigned to a MMCG Session:** The monthly fee will be charged base on the number of standard CG throttle rate assigned to the MMCG session as at the first trading day of each month. The fee is calculated on a full calendar month basis. There will be no adjustment on the movement of standard CG throttle rate during the month.   Please refer to Section B – "Fees and Charges" for details of charges.

n. **Backup Arrangement for MMCG Session:** In order to reduce disruption to the EP's trading operations due to failure of its CG/BSS, for each MMCG session, EP may apply for a backup MMCG session for connection from a backup MMCG/BSS in its office or in its business continuity centre by providing a maximum 3 additional IP addresses to HKEX for the same Comp ID. EP can connect to its backup MMCG session via the backup CG/BSS and continue trading without prior notification to HKEX. EP should take note that at any time, only one of the 4 BSS IP addresses (i.e. 1 primary and 3 backup IPs) is allowed to connect by using the assigned Comp ID.

o. **HKEX Orion Market Data Platform – Securities Market (OMD-C) Connection:** EP may choose to receive market data directly from OMD-C or indirectly via information vendors for internal use. If EP chooses the former, EP needs to enter into the Market Data End-User Licence Agreement with HKEX Information Services Limited (HKEX-IS). EP can choose Securities Standard (SS), Securities Premium (SP) or Securities FullTick (SF) connection. Under the Market Data End-User Licence Agreement, each EP using OCG-C (previously known as OCG) will be given two OMD-C SS connections free of charge on End-User License Fees and Connection Fees. If EP chooses OMD-C SP and/or OMD-C SF or does not use OCG-C, no fee exemption

will be given. For redistribution of OMD-C market data, EP is required to obtain a Market Data Vendor Licence Agreement and subject to the corresponding fees of all the three OMD-C datafeed products. For details of OMD-C service and charges, you may refer to http://www.hkex.com.hk/services/market-data-services/infrastructure/hkex-orion-market-data-platform-securities-market-omd-c?sc_lang=en or contact HKEX-IS by sending email to marketdata@hkex.com.hk.

Separately, EP who provides and/ or subscribes securities market data display terminals from other HKEX-IS licensed information vendors for its own internal usage purposes are eligible to claim for 20 free securities market data display units in total for each month.   For details, please refer to the Declaration Form as posted in HKEX website.

Section B – Fees and Charges

a. One-Time Charge

Fee Type	Amount (HK$)
Administration fee for each MMCG session or backup MMCG session	$20,000

b. Monthly Fee

Chargeable Item	Amount (HK$)

MMCG Session Fee or Backup MMCG Session depending on the number of standard CG throttle rates assigned:
Low Capacity
    Up to 20 standard CG throttle rates assigned
 	
Standard Capacity
    21 – 60 standard CG throttle rates assigned
 	
High Capacity
    61 – 100 standard CG throttle rates assigned
    101 – 150 standard CG throttle rates assigned
    151 – 200 standard CG throttle rates assigned
    201 – 250 standard CG throttle rates assigned
	
	$7,500 for each session
	
	$10,000 for each session
	
	$15,000 for each session
	$20,000 for each session
	$25,000 for each session
	$30,000 for each session

Each Standard CG Throttle Rate assigned to a MMCG session	$480