

Section A – Notes to the Application

- a. **HKEX Orion Central Gateway (OCG) Session:** OCG in the application form and explanatory note has the same meaning of Central Gateway (CG) as defined in the Rules of the Exchange. A Market Making Central Gateway (MMCG) session means a 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) by a Structured Product Liquidity Provider (SPLP) or by a Backup SPLP when SPLP fails to provide liquidity provision.

EPs may connect their BSS to Central Gateway via subscription to one or more MMCG sessions. MMCG sessions are for trading only 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.
- 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 OCG Platform](#).
- e. **Testing Requirement of the Applied MMCG Session:** A full cycle of BSS conformance test shall include offline simulator test, end-to-end test and rollout test. EP 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.

Below is the type of conformance test to conduct for the applied MMCG session:

	BSS Version	Network to be connected	Type of Conformance Test required to conduct		
			Offline Simulator Test	End-to-End Test	Rollout Test
Applied 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 Applied MMCG Session:** EP may rollout the newly applied MMCG session after successful completion of required test(s), submission of offline simulator test confirmation reply, end-to-end test confirmation reply, execution checklist (if applicable), 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).

(Updated in May 2020)

- 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 HKEX Orion Central Gateway (OCG) Trading / Drop Copy Session” at least 3 trading days in advance prior to the effective date. EP is required to participate in the Rollout Test. If EP wishes not to participate in the Rollout Test, it is required to complete and return the “Application for Exemption from Conducting Rollout Test”. If the exemption is granted, the EP undertakes all possible technical and/or operational risks, that may have been resulted from non-participation in Rollout Test to verify the connection of the BSS after relocation. The EP also warrants that it will not request HKEX to carry out any troubleshooting or changes in production environment for, and not limited to, server hardware, system software, network setting or network equipment (e.g. circuits, router, switch & firewall), from Monday to Friday in case of failure in connection of the BSS after the relocation.
- 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
(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
[http://www.hkex.com.hk/Services/Connectivity/SDNet-2/Securities-Trading-\(AMS3-Shanghai-and-Shenzhen-Connect\)?sc_lang=en](http://www.hkex.com.hk/Services/Connectivity/SDNet-2/Securities-Trading-(AMS3-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 OCG Platform](#).

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 roll out on the 2nd trading day or afterwards during the month will be charged the monthly fee in the following month while there will be no refund of the monthly fee of MMCG session/ Backup MMCG session if 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 only one of the 4 BSS IP addresses (i.e. 1 primary and 3 backup IPs) can be allowed connection using the assigned Comp ID at any time.
- 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 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, 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.

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	\$7,500 for each session
Standard Capacity	
21 – 60 standard CG throttle rates assigned	\$10,000 for each session
High Capacity	
61 – 100 standard CG throttle rates assigned	\$15,000 for each session
101 – 150 standard CG throttle rates assigned	\$20,000 for each session
151 – 200 standard CG throttle rates assigned	\$25,000 for each session
201 – 250 standard CG throttle rates assigned	\$30,000 for each session
Each Standard CG Throttle Rate assigned to a MMCG session	\$480