Frequently Asked Questions

Updated: 20 January 2017

The FAQ will be updated from time to time to include more details and is subject to change.

General

1.1 What is CCCG?

CCCG stands for China Connect Central Gateway, which is a new market access gateway based on Orion Central Gateway (OCG) model for HK Securities Market to provide a consistent interface between the Broker Supplied Systems (BSS) of China Connect Exchange Participants (CCEPs) and HKEX's China Stock Connect System (CSC).

1.2 What are the benefits of using CCCG?

Among the many benefits that CCCG brings to all stakeholders, HKEX believes the following are the most significant:

1. Elimination of CCOG hardware devices
2. Consolidation of SDNet/2 circuits
3. One China Connect standard throttle allows two messages per second
4. Decoupling of trading and market data
5. High capacity sessions with up to 250 throttles per CCCG session
6. High resilience
7. Drop Copy service

1.3 What is a CCCG session?

A CCCG session means a connection to CCCG for communication between a BSS and CCCG.

1.4 Is it mandatory to use CCCG? Can CCEPs continue to use CCOG after the rollout of CCCG?

CCOG will not be supported and will be retired after the end of the transition period following the launch of CCCG. For CCEPs using CCOG, they are reminded to migrate to CCCG before the retirement of CCOG. CCEPs not planning to migrate to CCCG will be notified individually to de-install their CCOGs in due course. New CCEPs are required to subscribe to CCCG.

1.5 As a General Clearing Participant (GCP) providing third party clearing services to other CCEPs, can we receive trade details of all our CCEP clients through a single China Connect Drop-Copy session?

No. A China Connect Drop-Copy session may only receive trade details of one CCEP. Application to China Connect Drop-Copy sessions should be made by the CCEPs.

1.6 Will market data be disseminated through CCCG?

No. To allow better utilization of network bandwidth and remove duplication of

market data for CCEPs with multiple CCOGs, CCCG does not disseminate any market data.   Securities market data will be disseminated through HKEX Orion Market Data Platform – China Connect (Securities) (OMD-CC).

1.7   Do CCEPs have to subscribe market data directly from OMD-CC or can CCEPs subscribe from Information Vendors or from Shanghai & Shenzhen Stock Exchanges?

CCEPs can subscribe to OMC-CC to receive the same Northbound market data as provided by CCOG.   Alternatively they can obtain market data services from Information Vendors, or directly from Shanghai Stock Exchange and/or Shenzhen Stock Exchanges if they wish.

1.8   Can a CCEP enroll both OMD-CC and CCCG in one application and conduct certification test in one go?

For the convenience of CCEPs, the application for CCCG and OMD-CC can be done at the same time.   However, the certification tests for CCCG and OMD-CC will be conducted separately.

1.9   How many OMD-CC connections would be offered to CCEPs?

For each CCEP who would like to directly connect to OMD-CC, two sets of OMD-CC connections with one price-depth market data of the designated securities of Shanghai Stock Exchange and/or Shenzhen Stock Exchange would be offered free of charge.

1.10   What is the difference between the OMD-CC offline simulator test and the OMD-CC Readiness Test? Are CCEPs required to pass both tests to declare readiness?

A CCEP planning to receive OMD-CC data is required to declare readiness by performing either the OMD-CC Offline Simulator Test or the OMD-CC Readiness Test, but not both.

The OMD-CC Offline Simulator Test is designed for CCEPs who are existing direct connection clients of HKEX Orion Market Data Platform – Securities Market (OMD-C) and intend to use an OMD-C application which has already passed the OMD-C Readiness Test according to the record of HKEX-IS to gain access to OMD-CC.   The scope of the OMD-CC Offline Simulator Test is lighter than the Readiness Test as it rides on a tested application, and it does not require installation of testing lines.

Other CCEPs are required to complete the OMD-CC Readiness Test to declare their readiness before joining the market rehearsal.   CCEPs will need to install a pair of testing lines to connect to the OMD-CC Readiness Test environment.

Fees and Charges (subject to regulatory approval)

2.1   What are the fees and charges for CCCG sessions?

Subject to regulatory approval, the same fee structure for OCG will be applied to CCCG.   Each CCCG session has a one-time administration charge of $20,000. This charge will be waived for each CCCG session if there is a corresponding reduction of one CCOG used for the same purpose.

In addition, a monthly session fee is charged per below:

Session Type	Number of standard CCOG Throttles assigned	Monthly Fee (HKD)
Lite	<=20	$2,000 for the 1st Session for trading or its backup of each CCEP; $7,500 for each other Session
Standard	21-60	$10,000 for each Session
High Capacity	61-100	$15,000 for each Session
	101-150	$20,000 for each Session
	151-200	$25,000 for each Session
	201-250	$30,000 for each Session
Drop Copy	N/A	nil for the 1st Session for production and its backup for each CCEP; $4,500 for each other Session

2.2 Will there be changes to China Connect throttle fees?

There is no change to one-time or monthly China Connect throttle fee. Backup China Connect Throttle fee will not apply to CCCG Backup Session but still apply to Backup CCOG.

2.3 Will CCEPs need to pay more in using CCCG than using CCOG?

CCEPs using CCCG are expected to have savings due to consolidation of SDNet/2 circuits, elimination of CCOG hardware and backup throttle charges, and savings in hosting and manpower costs associated with CCOG and its maintenance.

Example: CCEP has 1 CCOG, migrates to 1 lite CCCG session

Monthly Fee (HKD)	Standard CCOG	HA CCOG	CCCG
CCOG Hardware (amortized to 36 months)	$833	$2,888	-
CCOG Maintenance	$250	$730	-
CCOG User Fee	$1,250		-
CCOG Session Fee	-		$2,000
Throttle Fee (one)	$960		$960
Market Data	Free		Free (2 sets of OMD-CC connections will be offered to each CCEP)
Total	$3,293	$5,828	$2,960
Savings	$333	$2,868	

Backup Arrangements

3.1 What is a backup CCCG session?

The purpose of a backup CCCG session is to allow a CCEP to connect from one of its backup BSS to CSC in the event that its production BSS encounters a

problem. CCCG will run in High-Availability (HA) mode regardless of whether a CCEP subscribes to backup CCCG session(s) or not.

3.2 Can a CCEP use CCOG and CCCG in parallel for market access purpose?

CCOG and CCCG can run in parallel with HKEX's existing market access infrastructure, until the end of the transition period.

Technical Details

4.1 What is the new bandwidth requirement for CCCG and OMD-CC?

The bandwidth requirement for CCCG sessions is listed as below:

CCCG Session	Minimum Bandwidth Requirement[1] (FIX & Binary)
Trading	60 Kbps / Throttle
Drop Copy (Orders and Trades Option)	60 Kbps / Throttle [2]
Drop Copy (Trades Only Option)	20 Kbps / Throttle [2]

Note:
1. Minimum bandwidth requirement is also applicable to HKEX Service Network (HSN).
2. Throttle calculation for China Connect Drop-Copy session:
   - China Connect Drop-Copy session includes orders and trades from the CCCG sessions and non-CCCG devices (i.e. CCOG/BSS devices).

The bandwidth requirement for OMD-CC is listed as below:

Market	Minimum Bandwidth Requirement
Shanghai Stock Exchange (SSE)	1 Mbps
Shenzhen Stock Exchange (SZSE)	1 Mbps
SSE + SZSE	2 Mbps

4.2 Can CCCG and/or OMD-CC share the same SDNet/2 or HKEX Service Network (HSN) circuits? Furthermore, can CCCG and/or OMD-CC share the same SDNet/2 or HSN circuits with a CCEP's existing OCG and/or OMD-C sessions?

Yes. CCCG and OMD-CC can share the same SDNet/2 or HSN circuits. CCCG and/or OMD-CC can share the same SDNet/2 or HSN circuits with a CCEP's existing OCG and/or OMD-C sessions. CCEP has to ensure sufficient bandwidth is subscribed to meet its business needs.

4.3 Is a network re-configuration required to include CCCG/OMD-CC in the existing SDNet/2 or HSN circuits?

Yes, CCEPs, who are planning to add CCCG/OMD-CC service in their existing circuits, are required to contact the SDNet/2 provider or HKEX hosting service team to arrange the network re-configuration. There is lead-time involved and cost may be incurred in the network re-configuration. CCEPs are suggested to refer to the following links or contact their selected network provider for more

details.

SDNet/2:
http://www.hkex.com.hk/eng/market/sec_tradinfra/Documents/SDNet2_Pricing_Technical_Service%20Level_effective%20March%202016.pdf

HSN:
http://www.hkex.com.hk/eng/prod/hosting/pricing.htm

https://www.hkex.com.hk/chi/prod/hosting/Documents/HKEX%20Hosting%20Information%20Package%20v4%20Jul%202016%2020161003.pdf

4.4 If a CCEP establishes multiple CCCG sessions from multiple BSS server locations, is it possible to use one pair of SDNet/2?

In general, one pair of SDNet/2 circuits is needed for each location to connect its BSS to CCCG.

4.5 Can a CCEP connect multiple production BSS to 1 CCCG session?

No. Only one BSS can connect to one CCCG session at a time.

4.6 How many broker numbers can be assigned to 1 CCCG session?

An EP is allowed to have up to 80 broker numbers assigned to all of its AMS/3 and CSC trading devices.   As such, the maximum number of broker numbers that can be assigned to one CCCG session is 80.

4.7 What are the inbound business message(s) supported by CCCG?

CCCG supports two inbound business messages:
- New Order – Single (D) (FIX Protocol) / New Order – Single (11) (Binary Protocol)
- Order Cancel Request (F) (FIX Protocol) / Cancel Order (13) (Binary Protocol)

4.8 Are there any new Exec Type(s) in the Execution Report message introduced in CCCG?

Two new Exec Types are introduced for CCCG:

Exec Type	Description	Order Status Field
A = Pending New (FIX) / A = Pending New (Binary)	**Order Pending to be accepted by the Home Market** Indicates that a new order has been accepted by CSC and forwarded to the home market.	A = Pending New (FIX) / 10 = Pending New (Binary)

Exec Type	Description	Order Status Field
6 = Pending Cancel (FIX) / 6 = Pending Cancel (Binary)	**Order Pending to be Cancelled** Indicates that an Order Cancel Request has been accepted by CSC and forwarded to the home market.	6 = Pending Cancel (FIX) / 6 = Pending Cancel (Binary)

4.9 What are the order types supported by CCCG?

CCCG supports Limit Order only:
- FIX protocol: OrdType = 2(Limit) & MaxPriceLevels = 1
- Binary protocol: Order Type = 2(Limit) & Max Price Levels = 1

Note:
BSS shall make sure the **presence** of tag MaxPriceLevels / Max Price Levels in the New Order message.

4.10 Can CCCG provide checking for Price and Notional Value?

No, there is neither Price nor Notional Value checking for CCCG.   BSS shall make sure **not** to include tag ExecInst(=18)(FIX) / Execution Instructions(Binary) in the New Order message.

4.11 Are there any other FAQ that can facilitate the development of BSS interfacing with CCCG?

Yes, **Questions 4.9 to 4.12** of OCG FAQ are also applicable to CCCG.

4.12 Can CCCG share the existing OCG production lines and IP address?

CCCG can share the existing OCG production lines.   However, CCCG application uses a new IP address subnet, which is different from OCG.

Tentative on-boarding Arrangements

5.1 What is the timeline of on-boarding activities for the initial rollout of CCCG?

The tentative on-boarding timelines for the initial rollout of CCCG is as follows:

On-boarding Activities	Tentative Timeline
Provision of CCCG Interface Specification	Already available on the China Connect web corner
Provision of CCCG Offline Simulator Test Package	Available to download via ECP from 13 December 2016 onwards
Submission of CCCG Offline Simulator Test Result	27 January 2017
End-to-End Test	Q1 2017
Market Rehearsals	Q2 2017

Initial Rollout	Q2 2017

5.2 What is the on-boarding arrangement after the initial rollout?

CCEP can choose to migrate to CCCG by joining the two scheduled batch rollouts in Q2 and Q3 2017 respectively, or completing the conformance tests in regular testing sessions afterwards. CCEP should discuss with its BSS vendors and decide the best timing to migrate to CCCG based on the arrangement suitable to individual CCEP. CCEP should complete the applicable conformance tests (e.g. simulator test, end to end test, rollout test) to ensure the system readiness before rollout of each BSS that will connect to CCCG.

5.3 Can BSS vendors perform conformance tests on behalf of their clients?

Conformance tests can be conducted by vendors on the same version of the BSS solution on behalf of all its clients. Conformance declarations must be provided to the Exchange by individual CCEP.

5.4 Is there any restriction on migrating throttles from CCOG to CCCG by a phased approach?

During the transition period, CCEPs can migrate their CCOG throttles to CCCG and reallocate them among different trading CCCG sessions according to their own business needs. Similar to the current arrangement for CCOG, CCEPs have to inform HKEX at least 3 trading days before the effective date of the migration/ reallocation.