

Orion Cash Platform (OCP)

New API Services through Connection Gateway for Clearing and Settlement

Briefing Session

12-Oct-2026 Cantonese Session
13-Oct-2026 English Session

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香港交易所

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Agenda

- Objectives of the Session
- Introduction of the New API Services
- Functions and Features of the New API Services
- Impact to Participant Gateway Users
- Preparing for OCP API Adoption
- Tentative Implementation Schedule & Next Steps

Objectives of the Session



Provide an overview and updates on the **new API[1] services** for accessing the CCASS[2] clearing, settlement, enquiries and broadcast functions, including information on how to adopt these services



Purpose is to keep Participants[3] fully informed and prepared for the new API services and, for those who are **existing Participant Gateway (PG) users**, to explain the scope and impact of the PG replacement



Participants should refer to the **circulars** and **technical documents** available on the OCP webpage and Developer Corner for details

1. API: Application Programming Interface
2. CCASS: the Central Clearing and Settlement System
3. CCASS Participants, excluding Investor Participants

Introduction of the New API Services



Why Develop New API Under OCP

Three Drivers

The new services are driven by three key objectives:

1

Enable direct, automated access to core functions

Provides an access point for automated, high-volume processing of clearing, settlement, enquiries and broadcast functions.

2

Replace the Participant Gateway (PG)

Enhance operational efficiency, streamline the user experience, and simplify setup and authentication.

3

Build on open, extensible standards

The new API follows the REST[1] API standard with JSON[2] payloads, keeping the service scalable and easy to extend for future functions.

1. REST: Representational State Transfer
2. JSON: JavaScript Object Notation

Who Can Adopt the New API Services

1

Existing PG users – mandatory

Existing PG users are required to implement the new API services to maintain access to their currently subscribed CCASS functions for the automated, system-based submission of instructions and enquiries.

2

Other CCASS Participants[1] – optional

Participants interested in connecting to CCASS through a system-to-system integration approach may choose to onboard the new API, gaining real-time instruction submission, enquiries and push notifications.

1. CCASS Participants, excluding Investor Participants

Functions and Features of the New API Services



Functions Supported by the OCP API

Clearing, settlement, enquiry and broadcast functions delivered through the OCP API

Function Area	Functions	OCP API
Maintain SI[1]	Input / Change / Cancel / Enquire SI · Change Hold Matched SI · Revoke Matched SI · Enquire SI Unmatched Reason · Change Matched / Settled SI* · Enquire Deleted SI*	✓
Maintain ISI[2]	Input / Change / Cancel / Enquire ISI	✓
Maintain DI[3]	Input DI · Change DI Requirement	✓
Maintain ATI[4]	Input ATI · Input / Change / Cancel / Enquire Mass ATI	✓
Maintain STI[5]	Input / Revoke / Enquire STI · Input / Change / Cancel / Enquire Mass STI	✓
Enquiries	Due / Overdue Position · Stock Account Balance · Stock Account Movement · Settlement Activity Money Position	✓
Push Notifications	Broadcast / Notification Messages · SI Status Updates*	✓

Remark

- ***** **New capabilities introduced with the OCP API**, with no equivalent in the Participant Gateway today.
- **Enquire DI** and **Enquire ATI** currently available via PG will be discontinued.

1. SI: Settlement Instruction
2. ISI: Investor Settlement Instruction
3. DI: Delivery Instruction
4. ATI: Account Transfer Instruction
5. STI: Stock Segregated Account Transfer Instruction

OCP API Service Highlights

Real-Time & Event-Driven Services

- Real-time transactions and enquiries via REST APIs
- WebSocket broadcast, notifications and participant alerts

Secure Identity & Access

- OAuth 2.0 / OpenID Connect via New OCP Login Management Portal, role-based access
- HTTPS and Secure WebSocket with request validation

Seamless CCASS Integration

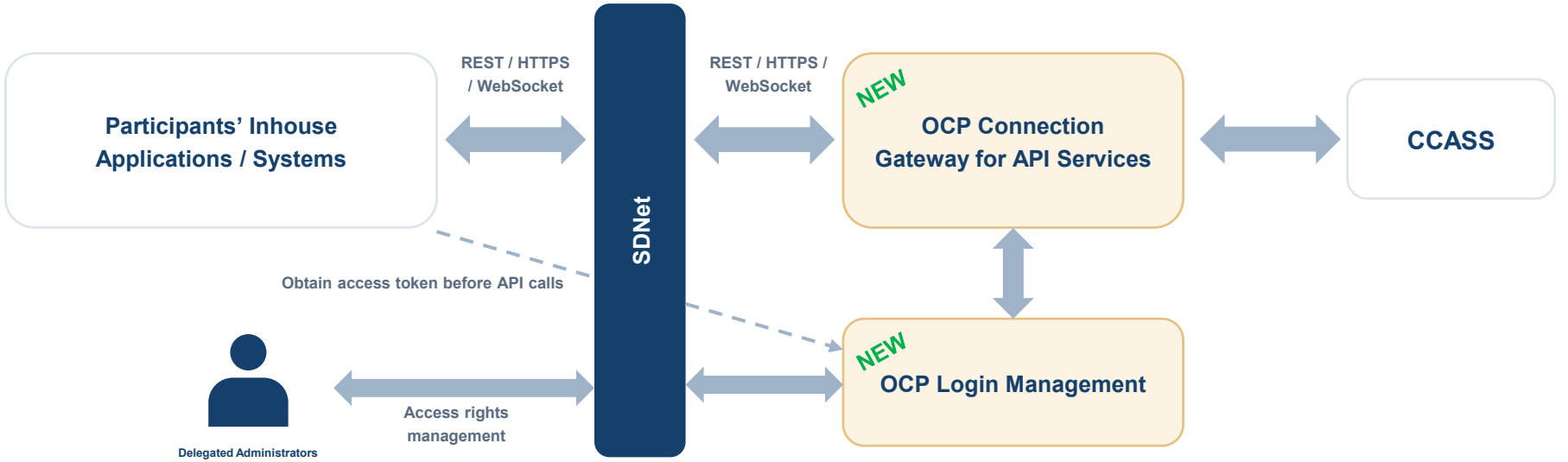
- Connects to CCASS over SDNet[1]
- Reuses existing CCASS business data fields and logic

Testing & Onboarding Support

- API technical specification, simulator and Developer Corner for client testing

1. SDNet: Securities and Derivatives Network

Lightweight API Infrastructure over SDNet



All OCP API traffic runs over SDNet and passes through the OCP Connection Gateway before reaching CCASS

Generic API Standards

Pagination for Enquiry API

- Cursor-based nextCursor paging replaces PG's enquiry key / PNCI[1] approach

Concurrent Update Control

- Modification requests must carry the latest update timestamp
- Mismatched timestamps are rejected to protect data integrity

Duplication Check

- Unique Participant Transaction Reference (PTR) on every request
- Duplicate PTRs are rejected by the system

Validation & Audit Trail

- OCP applies field and business validation while retaining all CCASS validations
- API-input instructions are captured in existing CCASS audit trail reports

Standardized Behaviour Across APIs

- OpenAPI standard and JSON format across all APIs
- Unified error codes, throttling and timeout handling

1. PNCI: Page Number / Continuation Indicator

API Throttle Rates

THROTTLE LIMIT **Each API endpoint is capped at 4 transactions per second (TPS), applied to each API account subscribed**

HKEX counts requests in each fixed one-second window (e.g. 12:00:00–12:00:01), allowing up to 4 requests before the count resets. Only requests sent are counted — responses do not consume the limit.

Request-Response APIs

4 TPS *in total*

- The total across all request-response endpoints is 4 TPS — a shared ceiling per API account

Push-Based APIs

Separate *from the 4 TPS pool*

- Throttling is counted separately from the request-response limit
- One subscription is allowed to each push-based endpoint

Remark

- **Real Time Trade and Reference Data APIs** throttle separately from the 4 TPS pool

Impact to Participant Gateway Users



Impact on Participant Gateway

PG Replacement

Existing PG users: start preparing early. The Participant Gateway is being decommissioned in 2027* — plan migration and testing well ahead of the retirement dates below.

1

Report Download and File Transfer move to RAP

The Report Download and File Transfer functions available via PG are replaced by the Report Access Platform (RAP) using an SFTP-based[1] method.

2

PG is decommissioned in stages

The Report Download function will be decommissioned in Q2 2027*, with the entire Participant Gateway decommissioned in Q3 2027*.

* *Tentative schedule; dates are subject to regulatory approval..*

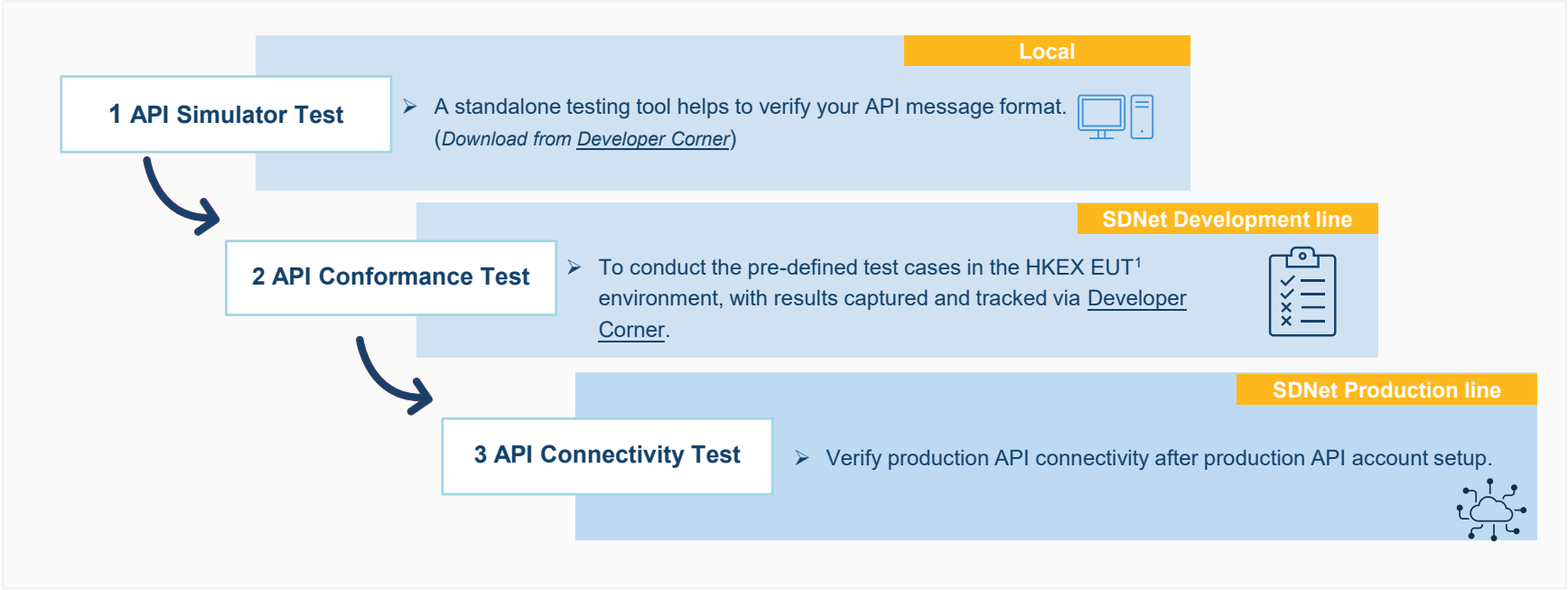
1. SFTP: Secure File Transfer Protocol

Preparing for OCP API Adoption



What is OCP API Certification Test

- Participants intending to adopt the OCP API Services are required to complete the following tests to demonstrate their system readiness.



1. EUT: External User Test

Testing Preparation

Pre-requisites

Eligibility

Participantship

HKEX

Must be admitted by HKSCC[1] as an HKSCC Participant (link)

API Resources & Test Services

Developer Corner Setup

Submit DCDA1 form to apply via Client Connect

(Refer to Access Management Guide)

DAs[2] to manage Developer Corner User Access

Testing Environment Access

Active SDNet Development Line

Submit TechS6 form* to apply via Client Connect

- Existing PG users can share existing line or subscribe a new one

**Refer to CCASS Infrastructure (link), ensure new application is submitted 6 weeks prior to conformance test*

1. HKSCC: Hong Kong Securities Clearing Company Limited
2. DA: Delegated Administrator

Testing Preparation

Conditional Testing Requirement

- The OCP Certification Test requirements are determined based on the participant's OCP API adoption status.
- The table below summarises the applicable tests under each scenario.

OCP API Service	API Account	Network Connection (Production)	Testing Required to Conduct		
			Simulator Test	Conformance Test	Connectivity Test
New Endpoint Subscription	New	New SDNet line	✓	✓	✓*
		Existing SDNet line	✓	✓	✓*
	Existing	New SDNet line	✓	✓	Optional/ requested by HKEX
		Existing SDNet line	✓	✓	
Existing Endpoint Subscription	New	New SDNet line	✖	✖	
		Existing SDNet line	✖	✖	
	Existing	New SDNet line	✖	✖	
		Existing SDNet line	✖	✖	

* For first-time OCP API users, HKEX strongly recommends CP to arrange a Connectivity Test session before launch by contacting the OCP Support team (OCP_Support@hkex.com.hk).

Testing Checklist

1. API Simulator Test → 2. API Conformance Test → 3. API Connectivity Test

Local

1.1 Download the API Simulator Package from Developer Corner
(refer to API Certification Testing Guide - Sect. 3.7)



1.2. Conduct the predefined test cases using the standalone offline simulator

1.3. Download the Simulator Test result verification report

Testing Checklist

1. API Simulator Test → **2. API Conformance Test** → 3. API Connectivity Test

SDNet Development line

2 weeks Testing Window in HKEX EUT environment

2.1. Download the *API Conformance Test Information Package* from Developer Corner
(refer to API Certification Testing Guide - Sect. 3.6)



2.2. Submit the *OCP API Certification Test Application Form (TechS9)** via Client Connect and;

Email the Simulator Test result verification report to cdco_ossa@hkex.com.hk and request HKSCC for an API Conformance Test Session

2.3. Receive the Test Service Registration Token/URL from HKSCC in 1-2 weeks

2.4. Register and execute the Conformance Test via Developer Corner

2.5. Submit the *OCP API System Readiness Declaration Form (TechS10)** via Client Connect

Generate and email the API Conformance Test completion Report to cdco_ossa@hkex.com.hk

Once positively verified, proceed to the connectivity test with your production set-up

* TechS9 and TechS10 are accepted for RTT Test registration only. They are not yet open for Clearing and Settlement functions – the opening date will be announced in due course.

Testing Checklist

1. API Simulator Test → 2. API Conformance Test → **3. API Connectivity Test**

SDNet Production line

3.1. Verify the OCPLM[1] DAs[2] has been setup (OCPDA1) and any additional production API accounts required (OCPDA2) if applicable.

3.2. HKSCC will assign EA[3] function role(s) to CP's designated EAs and uplift the entitled API account limit (if applicable)

3.3. OCPLM DAs to setup production API Account(s)
(Refer to OCP Onboarding Guide Sect. 2.7 for step-by-step instructions)

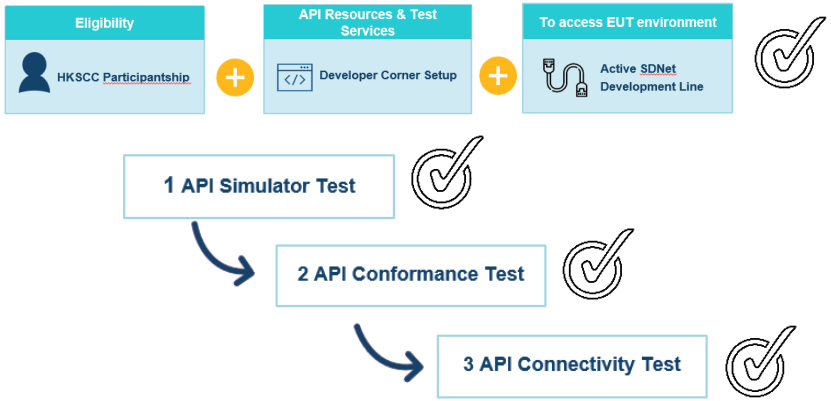
3.4. Contact OCP_Support@hkex.com.hk to arrange a connectivity test session and complete test (if applicable) before service adoption.



HKEX will review all API activity logs to access participant's readiness

1. OCPLM: OCP Login Management
2. DA: Delegated Administrator
3. EA: External Delegated Administrator

Completion



- Once both the OCP API Certification Test and Production setup processes have been completed

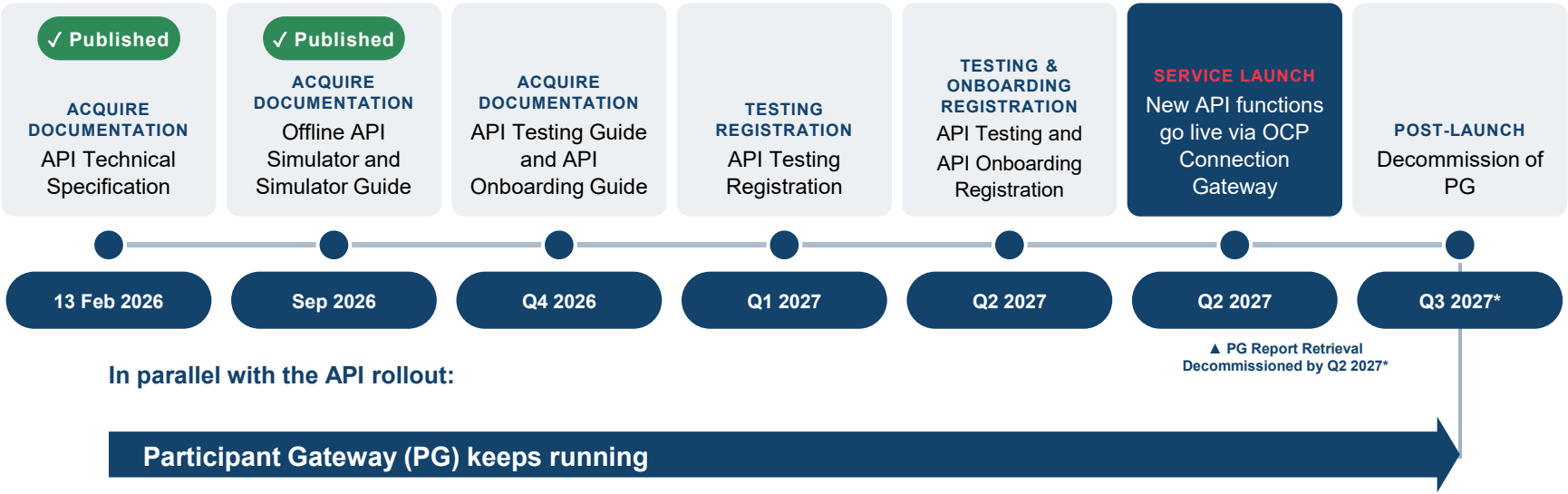
You are ready to use the OCP API Service!

Enquiry: OCP_Support@hkex.com.hk

Tentative Implementation Schedule & Next Steps



Tentative Implementation Schedule



- * *Tentative schedule; dates are subject to regulatory approval.*
- *The fee schedule for API account subscription will be announced in due course.*

Next Steps

- Participants should start preparing for any necessary internal system changes and review their operational procedures accordingly

- Participants should refer to the following circulars for details:
  - Circular dated 13 February 2026 PT/SCS/CCASS/007/2026
  - Circular dated 17 September 2026 PT/SCS/CCASS/031/2026

- Participants should also refer to the API Technical Specifications on the Developer Corner for API study and development:
  - OCP API Technical Specifications (Version 1.3)

- During internal development and testing, participants are strongly encouraged to utilise the Offline API Simulator available on Developer Corner to validate their API implementation

- For enquiries, please contact the CCASS Hotline at 2979-7111 or the OCP Support mailbox at OCP_Support@hkex.com.hk