

External Testing Environment Connectivity Guide

Orion Derivatives Platform (ODP) Stage 2 – Trading

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Version History

Version	Publication Date	Description
1.0	10 August 2026	First version

Definitions

Terms	Definitions
HSTN	Hosting Services Testing Network
SDNet	Securities and Derivatives Network

SECTION I: OVERVIEW

1. The External Test Environment provides a facility for Exchange Participants (“EPs”) or Independent Software Vendors (“ISVs”) to test on their functional ability to connect to the ODP Trading Gateway to validate functionalities, message format and data form etc. of their internal systems. It is the responsibility of EPs and ISVs to ensure their technical architecture has been properly set up to support their trading activities.
2. The External Test Environment is not a production environment. EPs and ISVs should not conduct any forms of non-functional tests or activities such as load tests, performance tests, or security tests on the External Test Environment.
3. All data; including the IP addresses used within the External Test Environment is for testing purposes only. The data; including the IP addresses may differ from data used in production. EPs and ISVs should not use real production data in their test activities. HKEX does not bear any liability on the data used in the External Test Environment.
4. This document aims to provide network configuration information and guidance to assist EPs or ISVs in setting up their networks to connect to the HKEX Orion Derivative Platform – Trading (“ODP-TR”) External Testing Environments.
5. This document contains:
 - 5.1. Configuration information, i.e. IP addresses and port ranges of the ODP-TR Trading Gateway in the ODP-TR External Testing Environment.
 - 5.2. Guidelines / policies for Testing SDNet/2 and HKEX Service Testing Network (“HSTN”) connection.

SECTION II: PARTICIPANT SET-UP JOURNEY

6. Participants should complete the following activities before starting ODP-TR testing.

Step	Participant Action
A	Arrange SDNet testing line through an HKEX-accredited vendor, or HSTN circuit via HKEX Hosting Services Team.
B	Submit the relevant form through Client Connect to notify HKEX of the installation of the ODP-TR testing site.

SECTION III: ODP-TR EXTERNAL TESTING ENVIRONMENT

Connectivity Options

7. This section provides information for the connectivity of the Broker Supplied System (BSS) from the EP's end to HKEX's ODP-TR External Testing Environment. EPs can use their existing HKATS Testing SDNet/2 or HSTN circuit to connect to both HKATS testing environments, and ODP-TR External Testing Environment.
8. EPs can choose from the following methods to access the ODP-TR External Testing Environment:
 - 8.1. Access via a Testing SDNet/2 Single Circuit, which is for ODP-TR External Testing Environment Test only (See Section [Testing SDNet/2 Single Circuit](#))
 - 8.2. Access via a shared Testing SDNet/2 Circuit, which is for both ODP-TR External Testing Environment and OMD-D Readiness Test (See Section [Shared Testing SDNet/2 Circuit for ODP-TR and OMD-D](#))
 - 8.3. Access via HKEX HSN, this is for HSTN users (See Section [ODP-TR Trading Gateway External Testing Environment Access for HSTN Users](#))
9. For EPs or ISVs choosing SDNet/2 connectivity (Section [Testing SDNet/2 Single Circuit](#) and [Shared Testing SDNet/2 Circuit for ODP-TR and OMD-D](#)) to access HKEX ODP-TR External Testing Environment, the connectivity to the HKEX External Testing Environment is carrier-neutral. EPs can choose one or more of the following SDNet/2 Accredited Vendors for subscription to the SDNet/2 (in alphabetical order):
 - 9.1. HKBN Enterprise Solutions HK Limited (HKBNES)
 - 9.2. Hong Kong Telecommunications (HKT) Limited

Testing SDNet/2 Single Circuit

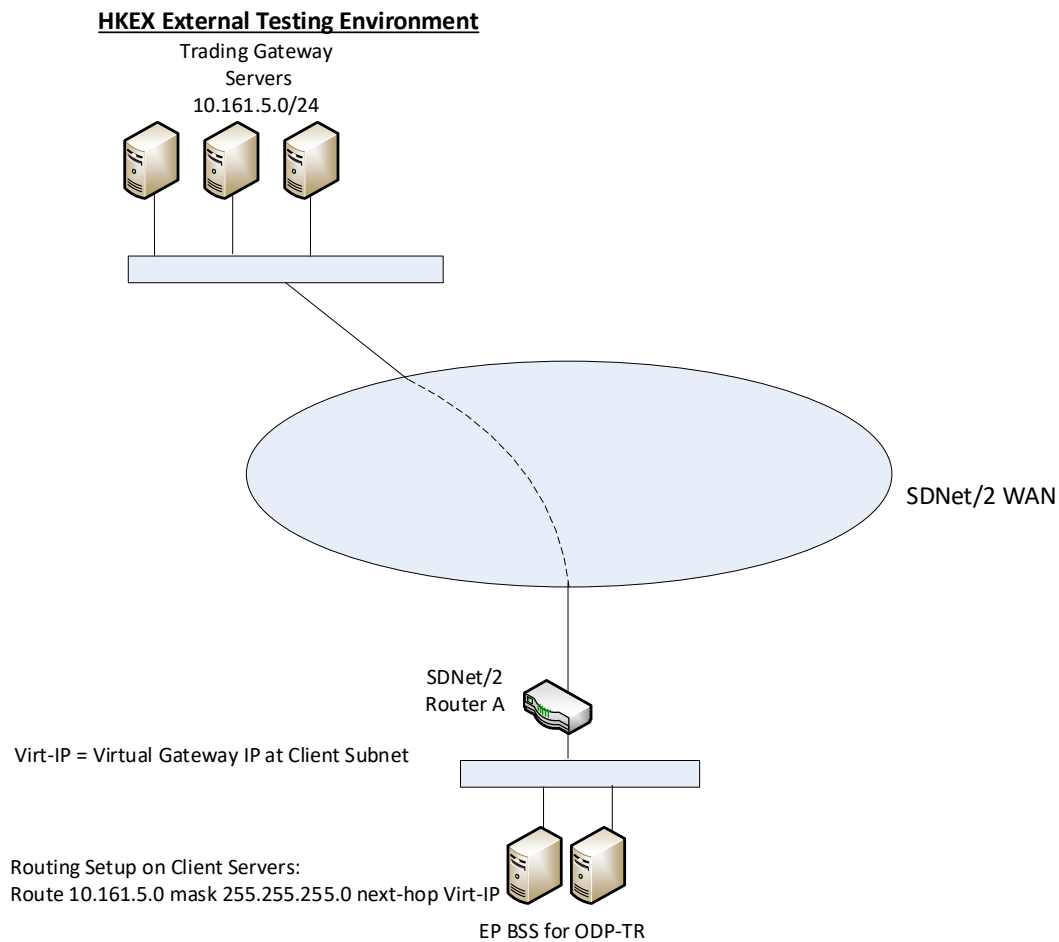
10. EPs or ISVs can subscribe to a single SDNet/2 circuit to conduct testing in ODP-TR External Testing Environment.
11. The minimum bandwidth requirement for this single circuit is detailed below.

Table 1: Minimum bandwidth requirement for ODP-TR Trading Gateway

Applications	Minimum Bandwidth
ODP-TR Trading Gateway	1Mbps

The below diagram provides an overview of the ODP-TR External Testing Environment network setup for a single SDNet/2 circuit.

Figure 1: External Testing Environment Network for Trading Gateway (Single SDNet/2 Circuit)



12. EPs or ISVs may apply for a new testing circuit through an SDNet/2 Accredited Vendor. Upon receipt of the testing circuit application form, the SDNet/2 Accredited Vendor will install the SDNet/2 router (for new connections) and provide the EP with the information required to configure the EP's switch.

Table 2: EP Switch Parameters

Parameter	Configuration / Value
Router Interface	Gigabit Ethernet Interface (Physical port is assigned by SDNet/2 Accredited Vendor)
Port Speed	Auto Sense up to 1Gbps
Duplex Mode	Auto Negotiation
HSRP/VRRP Group	100
IP Subnet	An IPv4 subnet (A.B.C.0) will be provided by SDNet/2 Accredited Vendor and the subnet mask is 255.255.255.0

Gateway IP	Virtual IP (Virt-IP) is A.B.C.254
EP's usable IP address range	EP may use <u>A.B.C.1 to A.B.C.223</u> to assign IP address for their BSS servers and network devices. It should be noted that the exact IP addresses of BSS servers and network devices will be provided to EPs upon enrolment in the Trading Gateway service. The range from A.B.C.224 to A.B.C.254 are reserved by HKEX.

13. EP's or ISV's network switches must provide a single VLAN (Layer 2) connection for the single SDNet/2 router for HSRP/VRRP communication between themselves.
14. HSRP/VRRP group 100 is used for ODP-TR Trading Gateway. EPs should avoid using this group number in the SDNet/2 EP subnet.
15. BSS must be configured with the recommended IP address range within the allocated subnet.
16. No routing protocol will be exchanged between SDNet/2 router and EP's network.

Shared Testing SDNet/2 Circuit for ODP-TR and OMD-D

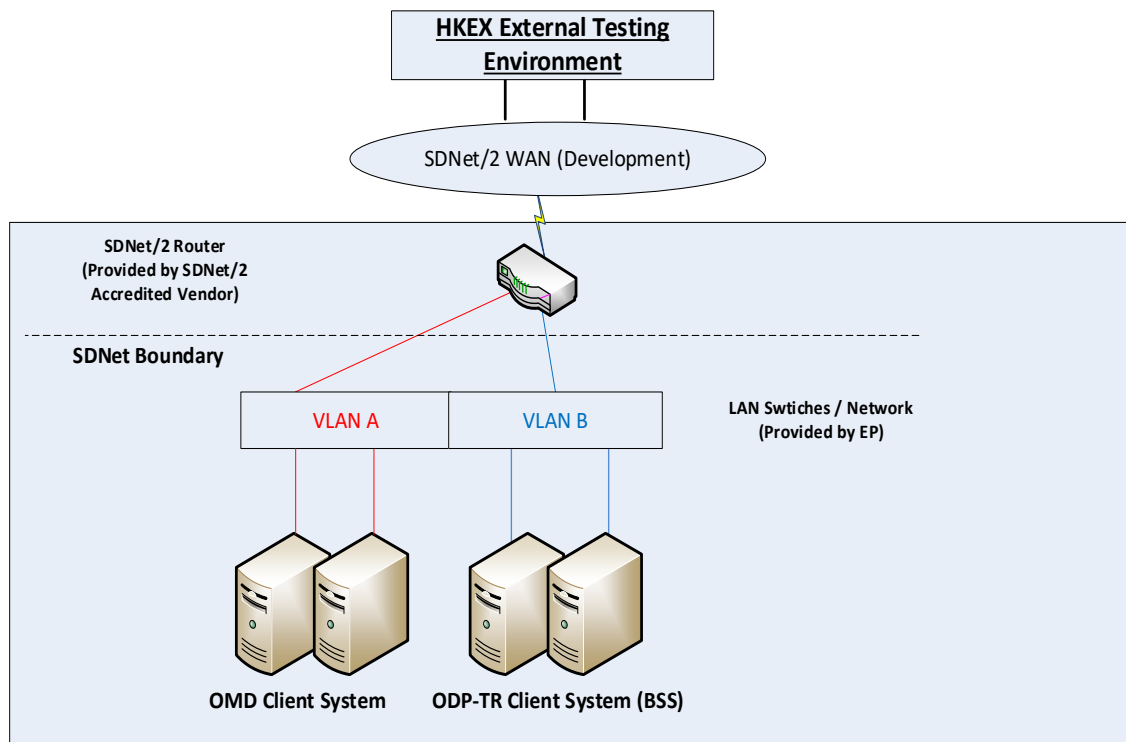
17. If EPs or ISVs are entitled to an OMD-D data feed, the EP can subscribe to OMD-D messages via the same testing circuit while conducting testing in the ODP-TR External Environment.
18. This same testing circuit allows EPs to complete:
 - 18.1. ODP-TR External Environment Test; and/or
 - 18.2. OMD-D Readiness Test
19. Please note that a set of dual circuits is required if EPs plan to connect to OMD-D Readiness Test environment. (For more details regarding OMD-D Readiness Test, EPs should refer to [OMD-D web corner](#)).
20. The minimum bandwidth requirement for the ODP-TR portion of the shared testing circuit is detailed in the table below. For the bandwidth requirement of OMD-D, please refer to Section 3.2.2 of the HKEX Orion Market Data Platform - OMD-D Connectivity Guide available under "Technical Documents of OMD-D for ODP Migration" in the [OMD-D web corner](#).

Table 3: Minimum ODP-TR Bandwidth required for Shared SDNet/2 Test Circuit

Applications	Minimum Bandwidth
ODP-TR Trading Gateway	1Mbps

21. The below diagram provides an overview of the shared SDNet/2 testing circuit for both the ODP-TR Trading Gateway and the OMD-D Readiness Test.

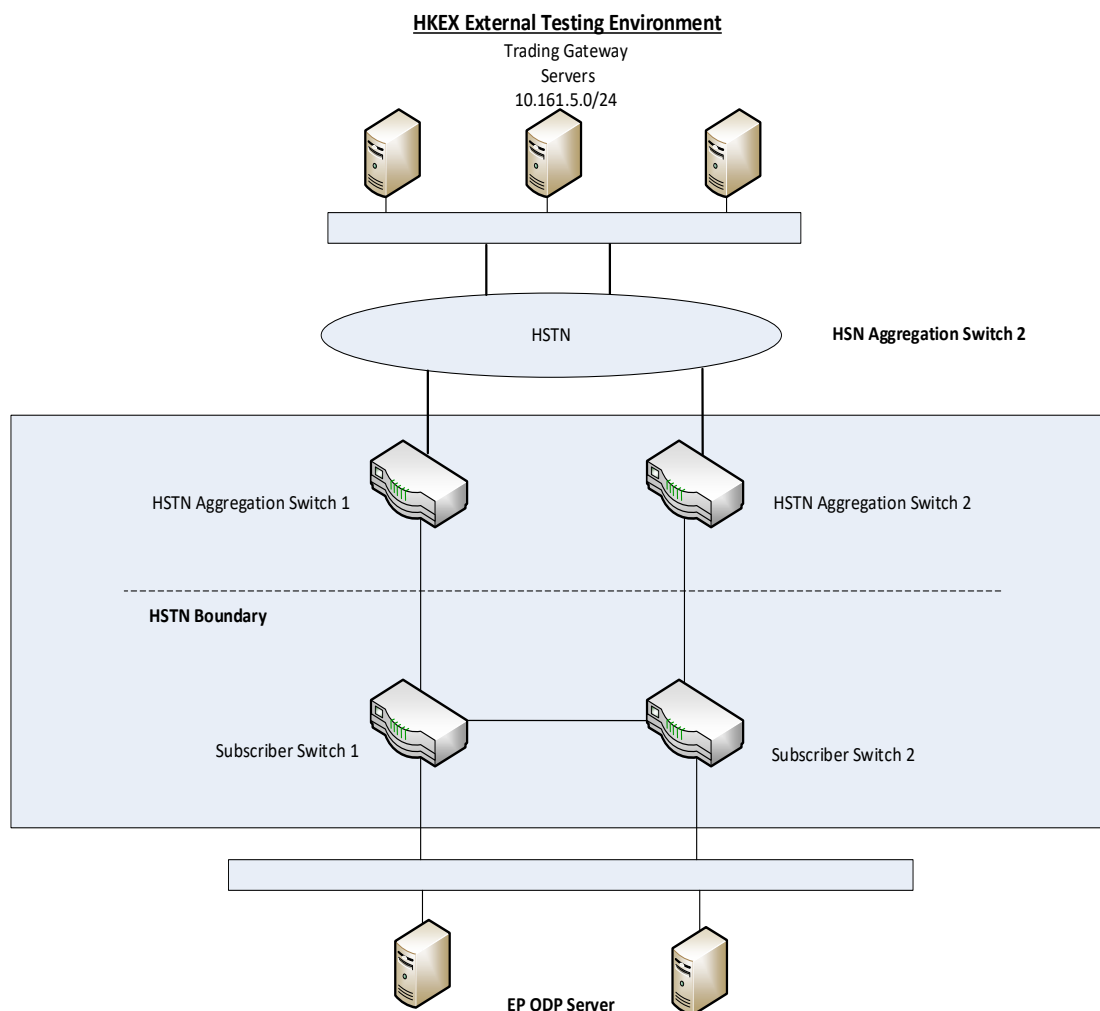
Figure 2: Shared SDNet/2 Testing Circuit for both ODP-TR Trading Gateway and OMD-D



ODP-TR Trading Gateway External Testing Environment Access for HSTN Users

22. To facilitate testing over a network environment that simulates the HKEX Hosting Services Network (HSN), EPs or software vendors may subscribe to the Hosting Services Testing Network (HSTN).
23. The diagram below provides an overview of the ODP-TR External Testing Environment network setup for HSTN.

Figure 3: External Testing Environment Network for ODP-TR Trading Gateway (HSTN)



24. A class C 24bit subnet will be assigned for each subscriber. A guideline for IP address is illustrated as below. Actual server IP address will be assigned after services are subscribed.
25. For details of HSTN network setup, EPs or ISVs may contact the HKEX Hosting Services team via email hssales@hkex.com.hk.

Table 4: Guideline for IP address

Applications	Minimum Bandwidth
ODP-TR BSS	x.x.x.1 to x.x.x.223
RESERVED	x.x.x.224-240
Primary LAN Gateway	x.x.x.241
Secondary LAN Gateway	x.x.x.242
RESERVED	x.x.x.243-253
Virtual Gateway	x.x.x.254

SECTION IV: ENQUIRIES

26. Please refer to the contact details below for enquiries regarding HSN and SDNet/2 services.

Table 5: Service Contact Information

Service	Contact No.	Email Address
For HSN service	2211-6447	hssales@hkex.com.hk
For SDNet/2 service		
Hong Kong Telecommunications (HKT) Limited	2888-2929 or dedicated Account Manager	sdnet@pccw.com or email to dedicated Account Manager
HKBN Enterprise Solutions HK Limited	2112-9000(Ordering) 121-388 (Billing & General Enquiry)	sdnet@hkbn.com.hk

SECTION V: APPENDIX A

SDNet/2 Accredited Vendor Information

27. Two Accredited Vendors have been selected and accredited to provide SDNet/2 network services. These vendors are (in alphabetical order):

27.1. HKBN Enterprise Solutions HK Limited (HKBNES)

27.2. Hong Kong Telecommunications (HKT) Limited

28. For details of SDNet/2 circuit price information/ technical specification/ service level, please refer to:

[https://www.hkex.com.hk/Services/Connectivity/SDNet_2/Derivatives-Trading-\(HKATS\)?sc_lang=en](https://www.hkex.com.hk/Services/Connectivity/SDNet_2/Derivatives-Trading-(HKATS)?sc_lang=en)

SECTION VI: APPENDIX B

ODP-TR Trading Gateway Server Connectivity Information (IP Addresses and Ports)

29. The following table outlines the IP addresses and port ranges of the ODP-TR Trading Gateway to which the EP is required to connect. EPs should inform their carrier to enable connectivity for these ranges. It should be noted that the exact Trading Gateway IP addresses and port numbers will be provided to EPs upon enrolment in the Trading Gateway service.

Table 6: ODP-TR IP addresses and port ranges

Range Type	Range
Trading Gateway and Lookup Server IP Range	10.161.5.171 – 10.161.5.210
Trading Gateway and Lookup Server Port Range	45000 – 45200

30. To verify the circuit connectivity from EP BSS to ODP-TR External Testing environment, EP can conduct telnet test from the SD/Net Dev circuit or HSTN circuit to 10.161.5.172:45091

SECTION VII: APPENDIX C

OMD-D Connectivity Information for External Testing Environment

31. For OMD-D connectivity information for the External Testing Environment, please refer to Section 2.2 of the HKEX Orion Market Data Platform - OMD-D Connectivity Guide available under **Technical Documents of OMD-D for ODP Migration** in [OMD-D web corner](#).

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