

## 1. Price of SDNet/2 Circuit (Effective from 1<sup>st</sup> March 2016)

SDNet/2 services are provided by the Accredited Vendors directly to Exchange Participants (EPs) and Clearing Participants (CPs). EPs/CPs shall apply the services and engage into commercial agreements with the Accredited Vendors directly. However, all Accredited Vendors shall offer SDNet/2 services to EPs/CPs according to a price scheme below.

Prices listed below are on a per circuit basis and applicable to both production circuits and testing circuits. A dual-circuit configuration will cost 2 times the cost of a single circuit.

### a. One-time Charge for New Circuit Installation

The following table shows the one-time charge for installation of new SDNet/2 circuit.

| Bandwidth          | One-time charge for new circuit installation<br>by Accredited Vendors (per circuit) |     |           |
|--------------------|---|-----|-----------|
|                    | PCCW  | HGC | Wharf T&T |
| 1M-20M<br>Circuit  | Waived  |     |           |
| 30M -1G<br>Circuit | Contact Accredited Vendors for information  |     |           |

### b. Monthly Charge for Circuit Rental

The following table shows the prices of different bandwidth ranges by each Accredited Vendor for circuit rental:

| Bandwidth*           | Capped Price <sup>1</sup> of Monthly Charge for Circuit Rental<br>by Accredited Vendors (per circuit) |             |             |
|----------------------|---|-------------|-------------|
|                      | PCCW  | HGC         | Wharf T&T   |
| 1M Circuit           | ≤ HK\$1,300   | ≤ HK\$1,300 | ≤ HK\$1,300 |
| 2M Circuit           | ≤ HK\$1,900   | ≤ HK\$1,900 | ≤ HK\$1,900 |
| 3M Circuit           | ≤ HK\$2,400   | ≤ HK\$2,400 | ≤ HK\$2,400 |
| 4M Circuit           | ≤ HK\$2,900   | ≤ HK\$2,900 | ≤ HK\$2,900 |
| 5M Circuit           | ≤ HK\$3,000   | ≤ HK\$3,000 | ≤ HK\$3,000 |
| 6M Circuit           | ≤ HK\$3,100   | ≤ HK\$3,100 | ≤ HK\$3,100 |
| 7M Circuit           | ≤ HK\$3,200   | ≤ HK\$3,200 | ≤ HK\$3,200 |
| 8M Circuit           | ≤ HK\$3,300   | ≤ HK\$3,300 | ≤ HK\$3,300 |
| 9M Circuit           | ≤ HK\$3,400   | ≤ HK\$3,400 | ≤ HK\$3,400 |
| 10M Circuit          | ≤ HK\$3,500   | ≤ HK\$3,500 | ≤ HK\$3,500 |
| 20M Circuit          | ≤ HK\$4,500   | ≤ HK\$4,500 | ≤ HK\$4,500 |
| 30M to 1G<br>Circuit | Contact Accredited Vendors for information <sup>2</sup>   |             |             |

<sup>1</sup> Capped Prices for 1M to 20M Circuit Only.

<sup>2</sup> EPs/CPs are advised to contact respective Accredited Vendors for prices of 30M and above circuits.

\*EPs are required to subscribe a minimum bandwidth of 3 Mbps and 10 Mbs for production circuits to support Central Gateway (CG) and Network Gateway (NG) connections to HKATS respectively. A minimum bandwidth of 1Mbps is required for testing circuit. EPs may request to upgrade the bandwidth on a needed basis. Therefore, the above tables show the capped price of different bandwidth ranges.

### c. Monthly Charge for Network Switch Rental

The following table shows the capped prices by each Accredited Vendor for network switch rental:

| Service        | Capped Price of Monthly Charge for Network Switch by Accredited Vendors (per network switch) |           |           |
|----------------|--|-----------|-----------|
|                | PCCW   | HGC       | Wharf T&T |
| Network Switch | ≤ HK\$200  | ≤ HK\$500 | ≤ HK\$200 |

### d. One-time Charge for Circuit Bandwidth Upgrade/Downgrade/Reconfiguration /Relocation/Standby Service

The following table shows the charges by each Accredited Vendor for circuit bandwidth upgrade / downgrade / reconfiguration / internal relocation / external relocation / standby service:

| Service   | Capped Price <sup>3</sup> of One-time Charge (1-20M Circuit) <sup>4</sup> by Accredited Vendors (per circuit) |   |  |
|---|---|---|--|
|   | PCCW  | HGC   | Wharf T&T  |
| Circuit Bandwidth Upgrade /Downgrade Charge   | HK\$1,500   | HK\$1,500   | HK\$1,500  |
| Reconfiguration   | HK\$1,500   | HK\$1,500   | HK\$1,500  |
| Internal Relocation <sup>5</sup>  | HK\$1,500   | HK\$4,500   | HK\$1,500  |
| External Relocation (different building)  | HK\$5,000   | HK\$9,000   | HK\$5,000  |
| Standby-service Charge (minimum two hours)  |   |   |  |
| i. <u>Office hours</u><br>- <u>Monday – Friday 09:00am – 09:00pm</u><br>- <u>Saturday 09:00am to 01:00pm</u><br>ii. <u>Non office hours and Public Holidays</u> | - HK\$2,000 per hour (minimum 2 hours)<br>- HK\$2,000 for subsequent hour                                     | - On-site: HK\$4,000 per hour (minimum 2 hours)<br>- Off-site: HK\$2,000 per hour (minimum 2 hours) | - Office hours: HK\$1,800 per hour; (minimum 2 hours)<br>- Non office hours and Public Holiday: HK\$3,000 per hour (minimum 2 hours) |

<sup>3</sup> Capped Prices for 1M to 20M Circuit Only.

<sup>4</sup> EPs/CPs are advised to contact respective Accredited Vendors for prices of 30M and above circuits.

<sup>5</sup> Relocation of circuit within the same building

**e. Minimum Subscription Period and Termination Notice**

For all SDNet/2 circuits, a minimum subscription period and advance termination notice are applicable.

|                             |          |
|-----------------------------|----------|
| Minimum Subscription Period | 3 months |
| Advance Termination Notice  | 1 month  |

EPs should aware the terms and conditions for circuit subscription may vary among 3 Accredited Vendors. For details, please contact the Accredited Vendors.

**Note:** *All prices provided are capped prices for reference only. EPs/CPs are advised to contact the respective Accredited Vendors for more information on actual prices, subscription terms and conditions.*

## 2. Technical Specifications of SDNet/2

SDNet/2 services provided by all Accredited Vendors will meet the technical specifications set out by HKEx. The following paragraphs highlight the key technical specifications of SDNet/2.

### a. Round-trip End-to-End Network Latency

The average end-to-end round trip latency of the circuits provided by the Accredited Vendors will be less than or equal to 1.5 milliseconds<sup>6</sup> from the following districts in Hong Kong SAR to HKEx's Data Centres.

| Region           | District            |
|------------------|---------------------|
| Hong Kong Island | Central and Western |
|                  | Wan Chai            |
|                  | Eastern             |
|                  | Southern            |
| Kowloon          | Yau Tsim Mong       |
|                  | Sham Shui Po        |
|                  | Kowloon City        |
|                  | Wong Tai Sin        |
|                  | Kwun Tong           |
| New Territories  | Kwai Tsing          |
|                  | Tsuen Wan           |
|                  | Tai Po              |
|                  | Sha Tin             |
|                  | Sai Kung            |

### b. Network Availability and Resiliency

All Accredited Vendors will provide a highly available and resilient network infrastructure under SDNet/2 services and conform to the following availability and resiliency specifications.

| Resiliency Design                          | Specification   |
|--|---|
| Overall Network Availability               | Not less than 99.999%   |
| Core Network Equipment Diversity           | Multiple sets of core equipment such that a major network incident will minimize the impact to EP/CP Circuits.                |
| Core Network Centre Geographical Diversity | Hong Kong Island: 2 Network Centres<br>Kowloon: 2 Network Centres   |
| Circuit Diversity                          | Dual Circuits of EP/CP will go through different network centres and access exchanges of the Vendor via separate fibre paths. |
| Network Resiliency                         | There is no single point of failure inside the Accredited Vendor's network centres and access exchanges.                      |
| Circuit Failover Time                      | < 2 seconds   |

<sup>6</sup> The end-to-end latency is measured from the Accredited Vendor's access point in HKEx data centre to the EP/CP office.

### 3. Service Level

#### a. Service Level of Individual Circuit

The Accredited Vendors will provide the following Service Level Agreement (SLA) for each individual EP/CP circuit.

| Service Level Measurement      | Service Level Agreement (SLA)                             |                   |
|--------------------------------|---|-------------------|
| Service Provisioning Lead Time | < 14 calendar days  |                   |
| Circuit Availability           | 99.999%   |                   |
| Restoration Time               | 1 hour before market opens to 1 hour after market closes: | less than 1 hour  |
|                                | Other hours:  | less than 2 hours |

#### b. Non-Compliance with SLA

During the minimum subscription period or agreed contract period, in the event of non-compliance with SLA, EPs/CPs have the right to terminate the individual SDNet/2 Circuit from their Accredited Vendors by giving one month advance notice if:

- i. the Circuit Availability for any single circuit (or for any individual circuit comprising a dual circuit) in any single calendar month is not met and neither is the Restoration Time in respect of such circuit fault at any time during that month; or
- ii. the Circuit Availability is not met for any single circuit (or for any individual circuit comprising a dual circuit) in any two calendar months within a period of 6 months.