

HKEX Data Marketplace

Secure File Transfer Protocol Configuration Guide

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Document History

Version	Date of Issue	Comments
V1.0	18 Dec 2024	First distribution version.
V1.1	14 Feb 2025	1. Updated SFTP Setup Prerequisites.
		2. Updated the documentation to cover the new SFTP folder organisation structure for the various data sources.
		3. Added 4 Data and Folders Availability Period.
		4. Added APPENDIX 1 Public Key Registration Email Template
V1.2 19 May 2025 1. Added SFTP - 0		1. Added supported key format under 2.1 Prerequisites to using SFTP – c, 2.3 How to Troubleshoot and APPENDIX 1.
		2. Updated SFTP Host URL under <u>2.2 FileZilla Configuration /</u> Log-on.



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1 Overview

This document describes how to set up and configure the Secure File Transfer Protocol (SFTP) option for data product delivery in <u>Data Marketplace</u>.

2 SFTP Setup Guide

2.1 Prerequisites to using SFTP

- a. The SFTP user must be a registered user in Data Marketplace (Please refer to <u>Guidance &</u> <u>Reference Materials</u> page for registration steps).
- b. Download the necessary tools (public-private key pair generator and SFTP Client).
- c. The SFTP user will need to generate a public-private key pair using a key pair generator.

Public key algorithms: the algorithms that the server will accept for host key authentication are rsa-sha2-256, rsa-sha2-512, ecdsa-sha2-nistp256 or ssh-ed25519.

Public key format: OpenSSH formatted key is accepted. Other formats are not supported.

d. Send an email to <u>datamarketplace@hkex.com.hk</u> with the public key information for account SFTP entitlement. Please refer to <u>APPENDIX 1</u> for a Public Key Registration Email Template.

User can use a SFTP Client and key pair generator supporting the Secure File Transfer Protocol (SFTP) of the user's choice, such as the following:

- Cyberduck
- FileZilla

2.2 FileZilla Configuration / Log-on

This guide will show a configuration example using the free SFTP application FileZilla.

- Open FileZilla and go to File \rightarrow Site Manager
- Add a New Site and enter details as below:

Configuration Item	Value
Protocol	SFTP – SSH File Transfer Protocol
Host	sftp.data.hkex.com.hk
Port	22
Logon Type	Key file
User	Data Marketplace user email address
Key file	Under the Key file field, select the SSH key (Private Key) you saved earlier from <u>2.1 Prerequisites to using SFTP</u> above



- After the configuration click "Connect"
- Verify File Transfer
 - Once connected, you should see the files available on the server
- Download: Select and download the files you need

2.3 How to Troubleshoot

If you face issues, consider the following:

- Check Key Format: Ensure the key is in the supported format (OpenSSH)
- **Firewall/Port Issues:** Ensure no firewall or port restrictions are blocking the SFTP port (22)
- Permissions: Verify that you have the required permissions to access the files

3 Folder Organisation Structure

The SFTP functionality allows users to securely download data products they are entitled to via SFTP.

The data product files will be organized in folders in the format below:

- **Subscriptions**: Arranged by Dataset Code * under the **root** folder
- Historical Data Orders: Arranged by Order ID under the Downloads folder
- **Data Catalog Downloads**: Arranged by Download Request Name + Timestamp or Dataset Code + Timestamp (if no request name provided) under the **Downloads** folder

*Dataset Code can be found on each product page in <u>Data Marketplace</u>.

The table below shows the default folder structure for each of these data sources:

Source	Folder Structure	Example
Subscriptions	root/[Dataset Code]/[Data Asset Code]/HKEX/YYYY/MM/DD	root/CFBC/HKEX-DAILY- SOFB/HKEX/2025/02/14
Historical Data Orders	root/Downloads/[Order_ID_DXXXXX]	root/Downloads/Order_ID_D251234
Data Catalog Downloads	root/Downloads/[Download Name]_YYYYMMDD_hhnnss	root/Downloads/MyDownloadReques t_20250209_214856
	If no download request name is provided: root/Downloads/[Dataset Code]_Download_YYYYMMDD_hhnnss	root/Downloads/SHD_Download_20 250209_214905



3.1 Subscriptions

Data folders for active subscriptions are arranged alphabetically by Dataset Code at the root level on the SFTP server.

Please refer to each product page in <u>Data Marketplace</u> for Dataset Code information.

The structure for each Data Product follows this format: /Dataset Code

/Data Asset code

/HKEX

/YYYY

/MM

/DD

The screenshot below shows an example of the SFTP folders for an active subscription.

Remote site: /CFBC/HKEX	-DAILY-SFOB/	HKEX/2025/02/	/03					
e 🔁 CFBC								
🖕 🚬 HKEX-DAILY-SFOB								
ia								
	03							
	04							
	05							
	06							
	10							
	11							
	12							
	13							
P Downloads								
Filename	Filesize	Filetype	Last modified	Permissions	Owner/Group			
		1						
Ez CEBC 20250203.zip	889 402 646	7IP File	4/02/2025 12:0	-rw-rr	0.0			
	555,402,040		., 52, 2025 12/011					
1 file. Total size: 889,402,646	1 file. Total size: 889,402,646 bytes							

3.2 Historical Data Orders

Orders for historical data placed on the Data Marketplace will be fulfilled under the **Downloads** folder in the SFTP server. Each order will have its own folder with the name 'Order_ID_' followed by the Order ID number for the order.

/Downloads

/[Order_ID_DXXXXX]

The screenshot below shows an example of the SFTP folders for a Data Marketplace order.



Remote	site: /Downloads/Order_ID_D2501016							
~ 🗖 /								
> 📒	> CFBD-NSOM							
>	> CFBD-SOM							
~ 📒	Downloads							
~	Crder_ID_D2501016							
	CFBD-SOM_20250214_065941							
	EHD_20250214_064335							
	EHD_20250214_064428							
	SSD_20250214_064333							
>	Order_ID_D2501021							
	ccass_download_to_ireland_20250214_073957							
	som_2_months_20250214_092853							
Filename	~	Filesize	Filetyne					
	•	Filesize	riietype					
SSD_	20250214_064333		Directory					
SHD	SHD 20250214 064428 Directory							

Directory

Directory

3.3 Data Catalog Downloads

SHD_20250214_064335

CFBD-SOM_20250214_065941

Download requests from the Data Marketplace will appear under the **Downloads** folder in the SFTP server. Each download will have its own folder, the name of the folder will depend on whether a name was entered at the time of the Data Catalog download request.

If the user provided a name for the download request, then the folder structure will be as follows:

/Downloads

/[Download Name]_YYYYMMDD_hhnnss

If the user did not provide a name for the download request, then the folder structure will be as follows:

/Downloads

/[Dataset Code]_Download_YYYYMMDD_hhnnss

The screenshot below shows an example of the SFTP folders for both a download request with and without a name provided.



Remote site: /Downloads	/CFBC_Downlo	oad_20250217_1	15038		~
CFBC Downloads CFBC_Down CFBC_Down CFBC_Down CFBC_Down	load_20250217 20250217_1043	115038	Withc	out downlo	pad request name, Dataset Code = CFBC
			With	download	request name, name provided = SSD_Feb_25
	F 1	51.1	1	D · · ·	
Filename III III CFBC_20250217T0348	1,909,250,	ZIP File	17/02/2025 2:5	-rw-rr	0 0
1 file. Total size: 1,909,250,3	1 file. Total size: 1.909.250.375 bytes				

4 Data and Folders Availability Period

The following data and folders availability period is applied in the SFTP server:

- New files are made available for active **Subscriptions** with each file available for 14 days after publication.
- **Historical Data Orders** become available for download for 14 days after the orders are fulfilled.
- **Data Catalog Downloads** are available for download for 14 days after the files are generated.

After the availability period, the files will automatically be removed from the SFTP server. To access a file again after 14 days, user can re-trigger a download request from the Data Product page on the Data Marketplace, after which the new download will also be available for 14 days.

Should you have any questions, please contact <u>datamarketplace@hkex.com.hk</u> for assistance.



APPENDIX 1

Public Key Registration Email Template

To: datamarketplace@hkex.com.hk

Subject: SFTP Public Key Registration Request

Body:

Dear HKEX Data Marketplace Support team,

Please assist to register below public key for account SFTP entitlement.

- Data Marketplace Account: < User's Email Address>
- SFTP Public Key*: <Paste your public key here>

Regards,

XXX

* Please note only OpenSSH-formatted public key is supported.