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# Cboe Digital Margin Files v1.0

Please contact Cboe Digital sales representatives or Client Services for more information on this documentation.

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## 1 Change History

Date	Message(s) or Section	Description
20231102		Version 0.1

## 2 General Concepts

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### 2.1 Rate Limiting

Requests are throttled per IP address. Limit: 5 requests in a 10 second period.

When the rate limit is exceeded, a response with status **429 -> Too Many Requests** is returned.

If the limit is exceeded the IP address will be restricted from making new requests for 60 seconds.

We highly recommend adding logic to your application to gracefully process the 429 Too Many Requests message. We suggest that if the limit is breached, your application will pause for the required time in order to be within the rate limiting again. An application that repeatedly breaches the limit will keep extending the restricted period, thus, preventing your application from functioning correctly again.

### 3 Public Files API Service

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Cboe Digital offers a public API service that can be used to retrieve certain publicly available files programmatically.

#### 3.1 REST API Endpoint URL

- **Production:** <https://publicfiles.cboedigital.com/prdpublicfiles>
- **New Release (test):** <https://publicfiles.newrelease.cboedigital.com/nrlpublicfiles>

#### 3.2 Files Types

The following file types will be available in the Public Files API Service:

- SETTLEMENTS

#### 3.3 List Available Files

This endpoint will be used by users to retrieve for a given day, the list of files that are available to be retrieved.

- **HTTP Request Type:** GET
- **Endpoint:** `/{YYYY}/{MM}/{DD}/index.txt`

#### Inputs

Field	Req'd	Value
YYYY	Y	Year. Format: YYYY
MM	Y	Month. Format: MM
DD	Y	Day. Format: DD

#### Example Request :

```
import requests
import json

url = "https://publicfiles.cboedigital.com/prdpublicfiles/2023/10/16/index.txt"
response = requests.request("GET")

print(response.text.splitlines())
```

#### Outputs

List of files available for the given date

#### Example Response :

```
[ 'SETTLEMENTS_MIDDAY_20231016_20231016283456.csv',
  'SETTLEMENTS_EOD_20231016_20231016230105.csv' ]
```

### 3.4 Get File

This endpoint will be used to retrieve a file.

- **HTTP Request Type:** GET
- **Endpoint:** /{YYYY}/{MM}/{DD}/{filename}

#### Inputs

Field	Req'd	Value
YYYY	Y	Year. Format: YYYY
MM	Y	Month. Format: MM
DD	Y	Day. Format: DD
filename	Y	Name of the file to be retrieved

#### Example Request :

```
import requests

url =
"https://publicfiles.cboedigital.com/prdpublicfiles/2023/10/16/SETTLEMENTS_EOD_2023
1016_20231016230105.csv"

response = requests.request("GET", url)
print(response.text)

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import pandas as pd

df =
pd.read_csv("https://publicfiles.cboedigital.com/prdpublicfiles/2023/10/16/SETTLEME
NTS_EOD_20231016_20231016230105.csv")
```

#### Outputs

File in csv format.

#### Example Response :

```
'Record Date,Record Type,Contract Code (Symbol),Maturity Year,Maturity
Month,Maturity/Expiration Date,Settlement Price,Base Currency,Quote Currency,Exchange
Rate,Upper Bound,Lower Bound\n2023-10-16,FSP,BTCV23,2023,10,2023-10-
27,28611.0,TBTC,USD,28611.0,,\n2023-10-16,FSP,BTCX23,2023,11,2023-11-
24,28605.0,TBTC,USD,28605.0,,\n2023-10-16,FSP,BTCZ23,2023,12,2023-12-
29,28606.0,TBTC,USD,28606.0,,\n2023-10-16,FSP,ETHV23,2023,10,2023-10-
27,1582.0,TETH,USD,1582.0,,\n2023-10-16,FSP,ETHX23,2023,11,2023-11-
24,1581.5,TETH,USD,1581.5,,\n2023-10-16,FSP,ETHZ23,2023,12,2023-12-
29,1581.0,TETH,USD,1581.0,,\n2023-10-16,FSP,FBTV23,2023,10,2023-10-
27,28587.0,TBTC,USD,28587.0,,\n2023-10-16,FSP,FBTX23,2023,11,2023-11-
```

24,28587.0,TBTC,USD,28587.0,,\n2023-10-16,FSP,FBTZ23,2023,12,2023-12-  
 29,28585.0,TBTC,USD,28585.0,,\n2023-10-16,FSP,FETV23,2023,10,2023-10-  
 27,1579.3,TETH,USD,1579.3,,\n2023-10-16,FSP,FETX23,2023,11,2023-11-  
 24,1579.9,TETH,USD,1579.9,,\n2023-10-16,FSP,FETZ23,2023,12,2023-12-  
 29,1579.2,TETH,USD,1579.2,,\n2023-10-16,SSP,BCH/BTC,,,\n0.0107,TBCH,TBTC,0.0107,,\n2023-10-  
 16,SSP,BCH/USD,,,\n507.3,TBCH,USD,507.3,,\n2023-10-  
 16,SSP,BTC/USD,,,\n47.0,TBTC,USD,47.0,,\n2023-10-  
 16,SSP,ETH/BTC,,,\n0.0309,TETH,TBTC,0.0309,,\n2023-10-  
 16,SSP,ETH/USD,,,\n1880.03,TETH,USD,1880.03,,\n2023-10-  
 16,SSP,LTC/USD,,,\n172.7,TLTC,USD,172.7,,\n2023-10-  
 16,SSP,TBCH/TBTC,,,\n0.007956,TBCH,TBTC,0.007956,,\n2023-10-  
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 16,SSP,TBTC/TEST,,,\n54482.9,TBTC,TEST,54482.9,,\n2023-10-  
 16,SSP,TBTC/USD,,,\n27098.8,TBTC,USD,27098.8,,\n2023-10-  
 16,SSP,TBTC/USDC,,,\n27088.0,TBTC,USDC,27088.0,,\n2023-10-  
 16,SSP,TEST/USD,,,\n1.0,TEST,USD,1.0,,\n2023-10-  
 16,SSP,TETH/TBTC,,,\n0.05995,TETH,TBTC,0.05995,,\n2023-10-  
 16,SSP,TETH/TEST,,,\n4102.1,TETH,TEST,4102.1,,\n2023-10-  
 16,SSP,TETH/USD,,,\n1624.51,TETH,USD,1624.51,,\n2023-10-  
 16,SSP,TETH/USDC,,,\n1623.85,TETH,USDC,1623.85,,\n2023-10-  
 16,SSP,TLTC/TBTC,,,\n0.002378,TLTC,TBTC,0.002378,,\n2023-10-  
 16,SSP,TLTC/USD,,,\n64.39,TLTC,USD,64.39,,\n2023-10-  
 16,SSP,TXRP/USD,,,\n0.23,TXRP,USD,0.23,,\n2023-10-16,SSP,USD/USD,,,\n1.0,USD,USD,1.0,,\n2023-  
 10-16,SSP,USDC/USD,,,\n1.0002,USDC,USD,1.0002,,\n'

## 4 File Formats

### 4.1 Settlement Prices

A summary report of settlement prices.

	Field	Description	Format
1	Record Date	Date for which the settlement prices apply	YYYY-MM-DD
2	RecordType	FSP = Futures Settlement Price	String
3	ContractCode	Contract code	String
4	MaturityYear	Contract Maturity year	YYYY
5	MaturityMonth	Contract Maturity month	m
6	Maturity/ExpirationDate	Contract Maturity Date	YYYYMMDD
7	Cap	Upper Price Boundary of a contract (Previously used for fully funded - not applicable to margin)	Decimal
8	SettlementPrice	Settlement price	Decimal
9	BaseCurrency	Base currency	String
10	QuoteCurrency	Quote currency	String
11	ExchangeRate	Exchange rate	Decimal