TM3 CFS File Workflow using Data Library for Python

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Import Libraries

```
In [1]:   import lseg.data as ld
          import lseg.data.delivery.cfs as cfs
          from datetime import timedelta
```

Step 1: Open the Session

```
In [ ]:   ld.open_session('platform.ldp')
          #ld.open_session(config_name='./lseg-data.devrel.config.json')
```

```
Out[ ]:   <lseg.data.session.Definition object at 0x7c2c5921e0d0 {name='ldp'}>
```

The `bucket-name` for the TM3 (Municipal Market Monitor) feed data is **bulk-Custom**.

Please contact your LSEG representative to help you with the `packageId` .

```
In [ ]:   package_id = 'Your Package ID'
          bucket_name = 'bulk-Custom'
```

Step 2: Query for specific Date using modified_since and page_size=100 to limit data return<-- Recommended One

Now we come to getting the `FileSets` information. The application needs to send a request to RDP to list **the first** 100 FileSets under the input `bucket` and `package_id` that has been modified since `modified_since` as follows.

The `modified_since` parameter can help an application to limit the returned File-Set only for the File-Set that has been modified after a specified time.

```
In [7]:   response = cfs.file_sets.Definition(
              bucket = bucket_name,
```

```
    package_id = package_id,
    page_size = 100,
    modified_since="2025-07-25T12:00:00Z"
    ).get_data()
response.data.df
```

Out[7]:

	availableTo	bucketName	contentTo	modified	status	files	
0	2026-01-29T20:56:37Z	bulk-custom	2025-07-29T20:55:00Z	2025-07-29T20:56:41Z	READY	[4b7d-cd53-0631a812-9207-95b66f8fc5ca]	4af1-df11 6d0a70b
1	2026-01-30T20:56:33Z	bulk-custom	2025-07-30T20:55:00Z	2025-07-30T20:56:36Z	READY	[4eda-d4b4-34cf5dab-a6d9-e9a8ed3031fa]	4460-fac7 020f300
2	2026-01-31T20:56:13Z	bulk-custom	2025-07-31T20:55:00Z	2025-07-31T20:56:16Z	READY	[4e6a-aad8-032daa50-8f36-1a0c1af4943c]	4a41-7401 98414cb7
3	2026-02-05T20:56:17Z	bulk-custom	2025-08-05T20:55:00Z	2025-08-05T20:56:21Z	READY	[4ec8-010a-3379a1f2-86d9-14631e49e74b]	4cf8-e47f 617500a3
4	2026-02-06T20:56:08Z	bulk-custom	2025-08-06T20:55:00Z	2025-08-06T20:56:11Z	READY	[4229-c5f0-6231c0e5-8499-62fe598d63ae]	4330-cf67 2650ee95
5	2026-02-07T20:56:06Z	bulk-custom	2025-08-07T20:55:00Z	2025-08-07T20:56:10Z	READY	[4892-55ea-56b0a98a-ac80-c24d16ac34f0]	4b20-c921a 6443c8f3
6	2026-02-12T20:56:20Z	bulk-custom	2025-08-12T20:55:00Z	2025-08-12T20:56:24Z	READY	[45b7-c5b9-dc845e53-82d9-2313307fb8c6]	470e-3573 2b1da22(
7	2026-02-13T20:56:27Z	bulk-custom	2025-08-13T20:55:00Z	2025-08-13T20:56:31Z	READY	[42ae-f644-4f7439b3-ae19-224d6af53e17]	486e-70e9 15cd2b8a
8	2026-02-14T20:56:36Z	bulk-custom	2025-08-14T20:55:00Z	2025-08-14T20:56:40Z	READY	[48f2-be28-92dc9f53-902a-443f158e8ec3]	45da-6ba54 17945dc(
9	2026-02-19T20:56:38Z	bulk-custom	2025-08-19T20:55:00Z	2025-08-19T20:56:42Z	READY	[4121-60d3-4fafa863-8020-8576e39e0fab]	4bef-ba7a7 3ed6062
10	2026-02-20T20:56:04Z	bulk-custom	2025-08-20T20:55:00Z	2025-08-20T20:56:08Z	READY	[4447-af76-c1718e05-aff6-6d5341a1eac6]	4482-225a3 8ff35b9e

Get the file URL detail from the File Set

The `file set` information is in the `id` column. Example with the first one.

```
In [8]:  first_file_set_id = response.data.df.at[0,'id']

         response_fileset = cfs.files.Definition(first_file_set_id).get_data()
         response_fileset.data.df
```

Out[8]:

	modified	filesetId	md5	filename	fil‹
0	2025-07-29T20:56:41Z	4af1-0efc-df11c8a3-b0ce-6d0a70b6f0e9	eeef3e416689c2405c8c1a6d4c36bd6f	TM3_SIFMAIndex2025-07-29	

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Step 2.5: Or you can listing the 100 records of the FileSets using the Bucket Name and Package ID and page_size=100

```
In [9]:  response = cfs.file_sets.Definition(
             bucket = bucket_name,
             package_id = package_id,
             page_size = 100).get_data()
         response.data.df
```

Out[9]:

	availableTo	bucketName	contentTo	modified	status	files	
0	2025-12-10T18:35:58Z	bulk-custom	2025-06-10T18:35:00Z	2025-06-10T18:36:01Z	READY	[456c-388a-1e9b601a-afff-03fb592bcd20]	4006-9 7a0f(8 950478c2
1	2025-11-06T17:27:36Z	bulk-custom	2025-05-06T17:25:00Z	2025-05-06T17:27:39Z	READY	[4ce5-f175-af239ab4-901e-980e8421fa5b]	400a-5 23b3 8 e944e06a
2	2025-11-22T18:11:27Z	bulk-custom	2025-05-22T18:10:00Z	2025-05-22T18:11:30Z	READY	[43d7-c6a9-5606cc46-aadb-3a2956aee17e]	400a-b 8d5b; b 196c8cb6
3	2025-11-06T20:41:59Z	bulk-custom	2025-05-06T20:40:00Z	2025-05-06T20:42:02Z	READY	[4122-202a-76877d41-a207-294439244348]	4011-3 761d8 b ae98c9f1
4	2025-12-10T20:06:16Z	bulk-custom	2025-06-10T20:05:00Z	2025-06-10T20:06:19Z	READY	[481e-01d3-ab6b0052-af23-98bbef9e5f1d]	4011-9 815fe b e345988(
...	...	...	...	...	...	...	
95	2025-10-24T16:11:28Z	bulk-custom	2025-04-24T16:10:00Z	2025-04-24T16:11:31Z	READY	[49bb-d8ab-73518718-ba96-eddbb1f2618f]	40cb-3 fd6a8 8 10ae3d2l
96	2025-12-17T18:16:39Z	bulk-custom	2025-06-17T18:15:00Z	2025-06-17T18:16:42Z	READY	[4d16-1dfa-7a4479bb-b09c-528b517248dc]	40ce-c 4fb5e b b64c5ee
97	2025-11-14T19:41:24Z	bulk-custom	2025-05-14T19:40:00Z	2025-05-14T19:41:27Z	READY	[46d2-cdb7-74152835-92aa-7b63d35e350c]	40cf-(6b5dc 9 f5974b63
98	2025-12-10T20:41:17Z	bulk-custom	2025-06-10T20:40:00Z	2025-06-10T20:41:20Z	READY	[41c7-46e1-fa35cc97-884d-980b11395e84]	40d0-c 813d5 a 05519f08
99	2025-12-17T19:21:43Z	bulk-custom	2025-06-17T19:20:00Z	2025-06-17T19:21:46Z	READY	[46d2-8e62-a58e26ce-88b9-b27afc78ab2a]	40d4-4 76be5 b e44c4955

100 rows × 14 columns

The FileSets can be more than 100!!

Please note that the FileSets can be more than 100 records. The API returns data maximum 100 records per one query.

You can do the paging to turn on the next page as follows:

```
In [10]:
page1_response = cfs.file_sets.Definition(
    bucket = bucket_name,
    package_id = package_id,
    page_size = 100).get_data()
display(page1_response.data.df)


token = page1_response.data.raw['skip_token']

page2_response = cfs.file_sets.Definition(
    bucket='bulk-Custom',
    page_size=100,
    skip_token=token,
).get_data()
display(page2_response.data.df)
```

	availableTo	bucketName	contentTo	modified	status	files	
0	2025-12-10T18:35:58Z	bulk-custom	2025-06-10T18:35:00Z	2025-06-10T18:36:01Z	READY	[456c-388a-1e9b601a-afff-03fb592bcd20]	4006-91 7a0fc5 86 950478c22a
1	2025-11-06T17:27:36Z	bulk-custom	2025-05-06T17:25:00Z	2025-05-06T17:27:39Z	READY	[4ce5-f175-af239ab4-901e-980e8421fa5b]	400a-53 23b3c2 87 e944e06ac7
2	2025-11-22T18:11:27Z	bulk-custom	2025-05-22T18:10:00Z	2025-05-22T18:11:30Z	READY	[43d7-c6a9-5606cc46-aadb-3a2956aee17e]	400a-b1 8d5b28 b8 196c8cb6b3
3	2025-11-06T20:41:59Z	bulk-custom	2025-05-06T20:40:00Z	2025-05-06T20:42:02Z	READY	[4122-202a-76877d41-a207-294439244348]	4011-3e 761d81 b5 ae98c9f1e9
4	2025-12-10T20:06:16Z	bulk-custom	2025-06-10T20:05:00Z	2025-06-10T20:06:19Z	READY	[481e-01d3-ab6b0052-af23-98bbef9e5f1d]	4011-95 815fe9 bb e3459880c8
...	...	...	...	...	...	...	...
95	2025-10-24T16:11:28Z	bulk-custom	2025-04-24T16:10:00Z	2025-04-24T16:11:31Z	READY	[49bb-d8ab-73518718-ba96-eddbb1f2618f]	40cb-36 fd6a8b 8c 10ae3d2ba
96	2025-12-17T18:16:39Z	bulk-custom	2025-06-17T18:15:00Z	2025-06-17T18:16:42Z	READY	[4d16-1dfa-7a4479bb-b09c-528b517248dc]	40ce-cb 4fb5e6 b7 b64c5eeffe
97	2025-11-14T19:41:24Z	bulk-custom	2025-05-14T19:40:00Z	2025-05-14T19:41:27Z	READY	[46d2-cdb7-74152835-92aa-7b63d35e350c]	40cf-03 6b5ddb 9a f5974b6351
98	2025-12-10T20:41:17Z	bulk-custom	2025-06-10T20:40:00Z	2025-06-10T20:41:20Z	READY	[41c7-46e1-fa35cc97-884d-980b11395e84]	40d0-d8 813d58 a6 05519f086d
99	2025-12-17T19:21:43Z	bulk-custom	2025-06-17T19:20:00Z	2025-06-17T19:21:46Z	READY	[46d2-8e62-a58e26ce-88b9-b27afc78ab2a]	40d4-42 76be5a 99 e44c495513

100 rows × 14 columns

	availableTo	bucketName	contentTo	modified	status	files	
0	2025-10-28T13:48:04Z	bulk-custom	2025-04-28T13:46:00Z	2025-04-28T13:48:07Z	READY	[41f1-56a1-deec20cc-9741-cfc07c837143]	40d4-5b fdaf71 b0 da3aaee6e
1	2025-11-22T12:38:14Z	bulk-custom	2025-05-22T12:37:00Z	2025-05-22T12:38:17Z	READY	[49e8-b9bd-72d8a421-8a26-0886bee66f77]	40d4-5f 1739e5 93 04af7da18
2	2025-12-27T20:38:09Z	bulk-custom	2025-06-27T20:37:00Z	2025-06-27T20:38:13Z	READY	[4bfb-eaf6-50fa3db6-862c-0b215b91c831]	40d4-66 95a130 8e c70bc6e30
3	2026-01-31T21:13:42Z	bulk-custom	2025-07-31T21:12:00Z	2025-07-31T21:13:45Z	READY	[42e1-3602-dcf1282a-99b2-34379145be4e]	40d4-68 14ffb8 94 9864cfec
4	2026-01-29T20:01:55Z	bulk-custom	2025-07-29T20:00:00Z	2025-07-29T20:01:58Z	READY	[4e28-6e54-f778c719-bf26-635798cb4b27]	40d4-80 23ee02 94 94561bfee
...	...	...	...	...	...	...	
95	2026-01-31T12:18:09Z	bulk-custom	2025-07-31T12:15:00Z	2025-07-31T12:18:11Z	READY	[4db9-c15d-ffac1419-88bb-51d573015fee]	40db-8c 78d284 a4 134de7e1b
96	2025-11-29T21:01:51Z	bulk-custom	2025-05-29T21:00:00Z	2025-05-29T21:01:54Z	READY	[4e50-e44a-3d92bb9c-83c5-6118d5ec136a]	40db-93 7f97c3 87 750de14e5
97	2025-12-16T20:03:08Z	bulk-custom	2025-06-16T20:00:00Z	2025-06-16T20:03:11Z	READY	[4266-d323-f3ec5354-bb72-eadecc6b75f5]	40db-ab b8e392 ac a1dcc0a94
98	2025-11-19T22:02:20Z	bulk-custom	2025-05-19T22:00:00Z	2025-05-19T22:02:23Z	READY	[48e6-450e-8afa94b9-a90f-b2e5add61aab]	40db-c0 fed31f ab e37ad7c22
99	2026-02-05T19:02:15Z	bulk-custom	2025-08-05T19:00:00Z	2025-08-05T19:02:18Z	READY	[4c27-9489-8d1d1b4f-a4b2-3ee950f5e039]	40db-d6 b9c267 88 9e7f7335b

100 rows × 14 columns

Step 3: Get the Cloud file URL using FileSet

The next step is getting the file URL on the Cloud service.

```
In [11]:   file_url = response_fileset.data.files[0]
           print(file_url)
```

```
CFSFile({'id': '4b7d-cd53-0631a812-9207-95b66f8fc5ca', 'filename': 'TM3_SIFMAIndex20
25-07-29', 'fileset_id': '4af1-0efc-df11c8a3-b0ce-6d0a70b6f0e9', 'storage_location':
{'url': 'https://a206464-bulk-custom.s3.amazonaws.com/GE-11328/2025/07/29/TM3_SIFMAI
ndex2025-07-29', '@type': 's3'}, 'created': '2025-07-29T20:56:41Z', 'modified': '202
5-07-29T20:56:41Z', 'href': 'https://api.refinitiv.com/file-store/v1/files/4b7d-cd53
-0631a812-9207-95b66f8fc5ca/stream', 'file_size_in_bytes': 180, 'md5': 'eeef3e416689
c2405c8c1a6d4c36bd6f'})
```

Step 4: Downloading the actual file from the Cloud

Our beloved Zscaler blocks my download :p.

```
In [9]:   file_downloader = cfs.file_downloader.Definition(file_url).retrieve()
          file_downloader.download()
          file_downloader.extract()
```

```
Out[9]:   'TM3_SIFMAIndex2025-07-29'
```

Step 5: Close the Session

This close session mechanism allows an application to invalidate its tokens if the end-user logs out, changes identity, or exits the respective application.

```
In [10]:   ld.close_session()
```

```
In [ ]:
```