# CAMEO API Documentation – Rolling Release

##### For rolling release, data from May 2023 (5 files each of Sentinel-1, Sentinel-2, Sentinel-3 & Landsat8) is ingested to metadata index and the data storage. Below are the API details for this release.

##### Search API

In search API, an optional parameter, online\_search, is set which will allow search to be forwarded to data providers rather than the Metadata Index. Also, if the parameter is False/not provided, and data is not available in the metadata index, the search will automatically forward to online data providers.

Parameters geometry, constellation, start\_datetime, password and username are mandatory parameters. The default limit is 10 and default end\_datetime is current date. If wrong parameter type or value is sent, the parameters will be set to default values. "SENTINEL-2" is default for constellation; current date for start\_datetime.

We have created a private bucket for WP3 and the details are as below:

Username/access Id: ucd-wp3-mgr

Password/secret key: m@n&g3r-uCdwp3

Bucket name: ucdwp3

For shared bucket ‘repository’, the details are as below:

Username/access Id: ucd-wp3-usr

Password/secret key: U53r-uCdwp3

Bucket name: repository

NB: The 'repository' bucket is the location where you can locate the data that has already been ingested.

IP: 10.11.1.100

Port number: 80

Protocol : S3(HTTP)

For APIs, IP is 10.11.2.101 and port is 31010.

# **VPN**

# **username:** cameo.ucd

password: [C4Me0.UCD@634](mailto:C4Me0.UCD@634" \t "_blank)!

access key id: UCDUser336869863cecf4307f43c5a11e98ee62e1db776d1005272cf68b97c5f92e42a8

# **API**

Username: ucd-wp3-user

Password: U(dWp3u$3r24

###### Request: https://10.11.2.101:31010/cameo/search

###### Body:

{

"constellation":"SENTINEL-2",

"start\_datetime":"2023-01-02T00:00:00Z",

"end\_datetime": "2023-02-01T23:59:00Z",

"username": "cameo",

"password": "cameo",

"online\_search": "False",

"limit": 1,

"eo:cloud\_cover": 10,

"processing:level": "LEVEL1",

"geometry": {

"coordinates": [

[

[

-6.066376,

52.314038

],

[

-6.129791,

51.328067

],

[

-4.557892,

51.278925

],

[

-4.460022,

52.263137

],

[

-6.066376,

52.314038

]

]

],

"type": "Polygon"

}

}

###### Response:

{

"box": "POLYGON ((-6.066376 52.314038, -6.129791 51.328067, -4.557892 51.278925, -4.460022 52.263137, -6.066376 52.314038))",

"cloud\_cover": "7.05646630236794",

"constellation": "SENTINEL-2",

"created": "2023-01-02T11:33:59.024Z",

"geometry": {

"coordinates": [

[

[

-6.066376,

52.314038

],

[

-6.129791,

51.328067

],

[

-4.557892,

51.278925

],

[

-4.460022,

52.263137

],

[

-6.066376,

52.314038

]

]

],

"type": "Polygon"

},

"id": "urn:eo:MetadataId:7e1b022b-5293-4612-88a2-768f7edcf0a6",

"instruments": "MSI",

"metadata\_id": "7e1b022b-5293-4612-88a2-768f7edcf0a6",

"processing\_level": "LEVEL1C",

"published": "2023-01-02T14:26:08.158Z",

"snow\_cover": "0",

"thumbnail": "https://catalogue.dataspace.copernicus.eu/get-object?path=/Sentinel-2/MSI/L1C/2023/01/02/S2B\_MSIL1C\_20230102T113359\_N0509\_R080\_T29UQT\_20230102T121121.SAFE/S2B\_MSIL1C\_20230102T113359\_N0509\_R080\_T29UQT\_20230102T121121-ql.jpg"

}

Below is the response for onlineSearch:

[

{

"cloudCover": 95.316223237481,

"collection": "SENTINEL-2",

"geometry": {

"coordinates": [

[

[

-6.005371,

53.211992871884

],

[

-6.072174,

52.226225391291

],

[

-4.4689636,

52.1754847191696

],

[

-4.365814,

53.1594219676414

],

[

-6.005371,

53.211992871884

]

]

],

"type": "Polygon"

},

"instrument": "MSI",

"platform": "S2A",

"processingLevel": "S2MSI1C",

"published": "2023-01-27T15:49:16.693Z",

"snowCover": 0,

"startDate": "2023-01-27T11:33:31.024Z",

"title": "S2A\_MSIL1C\_20230127T113331\_N0509\_R080\_T29UQU\_20230127T133034.SAFE"

}

]

##### Metadata API

###### Request: https://10.11.2.101:31010/cameo/metadata/f75dc70c-bb17-4cc2-ba7b-c7d48e2c5362

###### Body:

Username and password are mandatory fields.

###### {

"username": "cameo",

"password": "cameo"

}

###### Response:

{

"cloud\_cover": "7.05646630236794",

"constellation": "SENTINEL-2",

"created": "2023-01-02T11:33:59.024Z",

"data\_id": "51081c4e-e1b8-4c67-836e-b3592e7e9528",

"geometry": {

"coordinates": [

[

[

-6.066376,

52.314038

],

[

-6.129791,

51.328067

],

[

-4.557892,

51.278925

],

[

-4.460022,

52.263137

],

[

-6.066376,

52.314038

]

]

],

"type": "Polygon"

},

"instore": "True",

"instruments": "MSI",

"metadata\_expiration\_date": "2025-09-21 15:00:32.996644",

"metadata\_id": "ac1d05e5-0ccb-4b2f-bf43-d3de43449995",

"metadata\_ingestion\_date": "2023-09-22 15:00:32.996641",

"orbit\_direction": "DESCENDING",

"processing\_level": "LEVEL1C",

"product\_id": "fa83a4de-710d-51d2-b26c-84319d4ac219",

"product\_type": "S2MSI1C",

"published": "2023-01-02T14:26:08.158Z",

"quicklook": "None",

"resolution": "0.0",

"sensor\_mode": "None",

"size": "768305200",

"snow\_cover": "0",

"status": "ONLINE",

"thumbnail": "https://catalogue.dataspace.copernicus.eu/get-object?path=/Sentinel-2/MSI/L1C/2023/01/02/S2B\_MSIL1C\_20230102T113359\_N0509\_R080\_T29UQT\_20230102T121121.SAFE/S2B\_MSIL1C\_20230102T113359\_N0509\_R080\_T29UQT\_20230102T121121-ql.jpg",

"timeliness": "None",

"title": "S2B\_MSIL1C\_20230102T113359\_N0509\_R080\_T29UQT\_20230102T121121"

}

OR

{

"message": "No result found for the given MetadataID: 3fde8b0c-a58a-4f2c-8609-aaf70b7fefbc "

}

##### Data API

###### Request: https://10.11.2.101:31010/cameo/data/90a00fcd-133e-4e53-ba28-0d90d8d8bbe7

###### Body:

Username and password are mandatory fields.

{

"username": "cameo",

"password": "cameo"

}

###### Response:

{

"data\_id": "51081c4e-e1b8-4c67-836e-b3592e7e9528",

"data\_s3\_link": "http://10.11.1.100:80/repository/fa83a4de-710d-51d2-b26c-84319d4ac219",

"instore": "True",

"metadata\_id": "urn:eo:MetadataId:ac1d05e5-0ccb-4b2f-bf43-d3de43449995"

}

OR

{

"message": "No result found for the given DataID: 90a00fcd-133e-4e53-ba28-0d90d8d8bbe7 "

}

##### Ingestion API

As of now, this API is used to ingest metadata to metadata index, and data to open-source storage CEPH or ECS. Storing to Oracle cloud will be implemented for the next release. Currently, the number of downloads is limited to 5 regardless of the limit specified.

###### Request: https://10.11.2.101:31010/cameo/ingest\_metadata

###### Body:

{

"download\_data": "False",

"start\_datetime":"2023-01-02T00:00:00Z",

"end\_datetime": "2023-02-01T23:59:00Z",

"limit": 10,

"eo:cloud\_cover": 10,

"storage:platform": "ceph",

"constellation": ["sentinel-1", "sentinel-2","sentinel-3","landsat8"],

"username": "cameo",

"password": "cameo",

"geometry": {

"coordinates": [

[

[

-6.066376,

52.314038

],

[

-6.129791,

51.328067

],

[

-4.557892,

51.278925

],

[

-4.460022,

52.263137

],

[

-6.066376,

52.314038

]

]

],

"type": "Polygon"

}

}

Parameters start\_date, username and password are mandatory fields. download\_data field allows the user to download data to S3 bucket which is specified in storage:platform parameter. If storage:platform is not specified, default is ‘CEPH’. Ingestion of multiple satellite data is possible if the constellation is given as list, e.g., "constellation":["sentinel-2", sentinel-1"]

Parameter geometry is optional. User can define the area of interest (AOI) for ingestion. If no AOI is provided, whole Ireland island will be taken as default AOI.

Allowed values for storage:platform are ["CEPH", "ECS"]. Allowed values for constellation are ["SENTINEL-1", "SENTINEL-2", "SENTINEL-3", "Landsat8"].

##### Note:

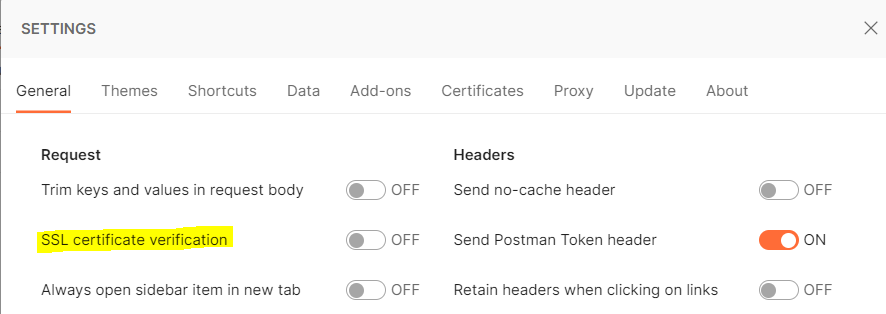
##### Use URL using python requests library:

Since the certificate is self-signed, the " verify " parameter of the "get" method in requests should be disabled by setting it to False.

res = requests.get(url, verify=False)

##### Using Postman:

In settings, set the SSL certificate verification to ‘off’.



Please feel free to reach out to us if you have any questions or require assistance. We would also highly appreciate any feedback you may have.

###### Contact details:

[alan.barnett@dell.com](mailto:alan.barnett@dell.com)

[merry.globin@dell.com](mailto:merry.globin@dell.com)