Accessing NSIDC DAAC Data in the NASA Earthdata Cloud

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Gaining access

Access to the NSIDC DAAC data holdings in Earthdata Cloud requires an Earthdata Login. If you haven't already, provide your Earthdata login and associated email address to Kate Heightley (kate.heightley@colorado.edu) so that NSIDC DAAC can set up your access.

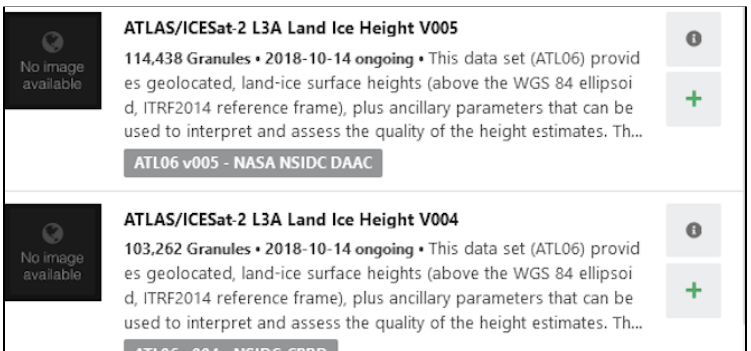
If you do not have an Earthdata login, you'll need to create one. You can do so here: https://urs.earthdata.nasa.gov/users/new

You will receive an email once your access is established.

Searching for and downloading data through Earthdata Search Client

1. Go to search.earthdata.nasa.gov and be sure to login with the Earthdata Login that you provided to gain access to the NSIDC Cloud data holdings.
2. Search for `NSIDC_CPRD` in the text search box. This will list the collections that NSIDC DAAC has made available in Earthdata Cloud. You can additionally filter for any other temporal/spatial/keyword constraints as you normally would when searching for a collection.

NOTE: Some collections listed in the results will have a gray box with "NSIDC-CPRD" and some will show "NASA NSIDC DAAC"



(see image to the right). As long as you searched on “NSIDC-CPRD”, both of these results represent data in the NSIDC cloud environment.

3. After selecting a collection, you can narrow granules by the same constraints you have been using already.
4. You can download a single science granule by clicking on the download button (the down arrow pointing to a disk) when viewing a specific granule tile.
    - If you want to look at the other available data within the granule (metadata files, browse files, etc), click on the vertical "..." menu on the right side of the granule card to go to "View details". In the "links" section of the information tab, any of the https://data.nsidc.earthdatacloud.nasa.gov links are available for download.
5. You can also acquire a list of links for multiple files by using the “Download All” button at the bottom-right of the granule tile. The only download option currently available for data in the cloud is the “Direct Download” option which will provide you a list of links to the files.
    - **NOTE**: Currently, this includes the HTTPs links and S3 links. Only the HTTPs links can be used to download data from Earthdata Cloud
    - The S3 links cannot be used to directly download the data. However, if you download a file, you can strip out the S3 links via a POSIX compatible terminal (mac/linux/cygwin) with the following sed script:

      ```
      sed -i -e '/^s3:\/\//d' yourfile.txt
      ```

      This will be suitable to download individually or feed into a bulk download tool.

Searching for data in Earthdata Search for direct S3 data access

NOTE: You will need the ability to run processes in AWS in the **us-west-2** region. This also assumes some level of AWS knowledge.

1. Get your list of files:
    a. Follow steps 1-3 from above to narrow your search to a selection of granules you are interested in accessing directly via S3.
    b. Get the list of links for all the files in your search by using the “Download All” button at the bottom-right of the granule tile, then select the “Direct Download” option. This will provide you a list of links to the files.
    c. You can get the S3 links from the list by stripping out all the HTTPs links via a POSIX compatible terminal (mac/linux/cygwin) with the following sed script:

       ```
       sed -i -e '/^https:\/\//d' yourfile.txt
       ```
2. Get your temporary AWS credentials for direct S3 access:
    a. Either, go to the following URL in your browser and login via Earthdata Login:
       https://data.nsidc.earthdatacloud.nasa.gov/s3credentials

       Or set up a .netrc file via step 1 of these instructions and use cURL:

       ```
       curl -b ~/.urs_cookies -c ~/.urs_cookies -L -n
       'https://data.nsidc.earthdatacloud.nasa.gov/s3credentials'
       ```

b. You need to save the three credential fields (“accessKeyId”, “secretAccessKey”, and “sessionToken”) at a minimum. The "expiration" field will also be useful to know so that you can get new credentials when these expire.

3. Use your Access Key ID and Secret Access Key to access the data in S3. If you are using the AWS CLI, this can be done with a call similar to the following (all on one line):

```
AWS_ACCESS_KEY_ID=your_accessKeyId AWS_SECRET_ACCESS_KEY=your_secretAccessKey
AWS_SESSION_TOKEN=your_sessionToken aws s3 cp s3://thes3url ./localfile
```

Alternately, you can set your credentials as environment variables:

```
export AWS_ACCESS_KEY_ID=your_accessKeyId;
export AWS_SECRET_ACCESS_KEY=your_secretAccessKey;
export AWS_SESSION_TOKEN=your_sessionToken;
aws s3 cp s3://thes3url ./localfile;
```

a. **NOTE**: You *must* be in the **us-west-2** region of AWS to access data via S3 directly; any out-of-region requests must go through the HTTPs endpoints instead.

Searching for data in CMR for direct S3 access

NOTE: You will need the ability to run processes in AWS in the **us-west-2** region. This also assumes some level of AWS, CMR, and json parsing knowledge.

1. First, get an Earthdata Login token by following these instructions:
   https://nsidc.org/support/how/how-request-earthdata-login-token
2. Use your Earthdata Login token to search for granules using the CMR API. There is extensive documentation at the CMR Search API Documentation Page. This will get you startedt:

   ```
   curl -H 'Echo-token: yourtoken'
   'https://cmr.earthdata.nasa.gov/search/granules.json?provider=NSIDC_CPRD&
   short_name=ATL03&version=005'
   ```

   a. This will return 10 results in json format. For paging and scrolling options, please look at these instructions for paging and scrolling.
   b. Typically, for direct S3 access, you will want the element in the links array that has rel type `http://esipfed.org/ns/fedsearch/1.1/data#` and starts with `s3://`
3. Once you have the S3 links for the granules of interest, follow steps 2-3 above for getting your temporary AWS credentials and accessing the data.

Additional resources for working with NSIDC DAAC in Earthdata Cloud

<Coming Soon>

Providing feedback and making requests

Feedback and suggestions are welcome. Please use this form to submit feedback.

Early access overview

This document provides an overview of what NSIDC DAAC is providing to Earthdata Cloud, including conditions of use.