National Aeronautics
and
Space Administration

EARTHDATA

Downloading Data from the NASA Earthdata Cloud Using the earthaccess Python Library

WEBINAR SHORT

April 22, 2026

A chasm between users and NASA Earthdata Cloud

Before **`earthaccess` users needed to:**

⛔ Format each search term for dozens of independent systems across NASA data centers
⛔ Store and send multiple types of credentials
⛔ Create separate workflows for in-region access vs local download
⛔ Interact with cloud-based object storage

Original artwork by Dr. Allison Horst: https://openscapes.org/gallery

Now **`earthaccess` enables seamless:**

✅ Authentication: earthaccess handles authentication with NASA.

✅ Search: earthaccess abstracts NASA's search API (CMR) into a *pythonic* module.

✅ Access: earthaccess allows download or direct S3 access ("streaming") of NASA Earthdata

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earthaccess demo resources

earthaccess documentation
https://earthaccess.readthedocs.io/en/stable/

Notebook location:
https://github.com/nsidc/NSIDC-Data-Tutorials/tree/main/notebooks/NASA_Earthdata_webinar_short

Required:

NASA Earthdata Login - freely available to all
Sign up here: https://urs.earthdata.nasa.gov

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earthaccess resources

Documentation: https://earthaccess.readthedocs.io/en/stable/

Where to ask questions: https://earthaccess.zulipchat.com/

Github location: https://github.com/earthaccess-dev/earthaccess

- Open a GitHub issue to report a bug, unexpected behavior, a stumbling block in our documentation, or any other problem.
- Open a Q&A GitHub Discussion to ask questions, share insights, or connect with others about Earth data access (broadly)
- Open an Ideas GitHub Discussion to suggest new features or improvements, and find collaborators and coordinate the work
- Join a Collaboration Café to meet other users/developers/maintainers and get help on, or give help to, anything related to Earth data access

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earthaccess demo prerequisites

Required

- Latest release of `earthaccess`, which can be installed with `mamba`, `conda` or `pip`. Quickstart guide with installation guidance
- Python 3.8 or higher
- xarray - for opening up hdf5 files
- hvplot - for creating a scatter plot of some data

Recommended

- Jupyter lab https://jupyter.org/
- Github account https://github.com/ - so you can access a copy of the Jupyter notebook I'll be using

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NASA Openscapes

Openscapes has a long history of actionable science, data and software engineering, & teaching

Since 2021!

We build, share, teach, & maintain:

earthaccess

python library

code-based authentication, search, access. Users and contributors welcome!

earthdata.nasa.gov/data/tools/earthaccess

Earthdata Cloud Cookbook

Open source, code-based tutorials https://nasa-openscapes.github.io/earthdata-cloud-cookbook

30+ workshops on our JupyterHub

Supporting users, collaborators, Champions Cohorts

https://nasa-openscapes.github.io

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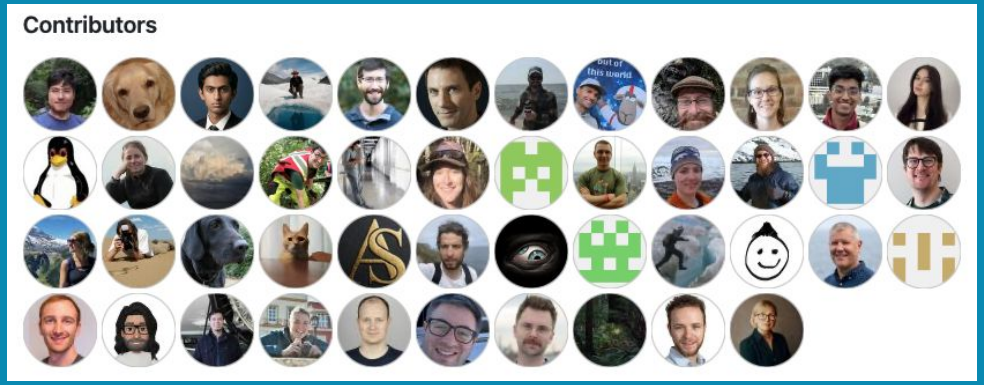
Connect with us!

```
pip install earthaccess

or

conda install -c conda-forge earthaccess
```

https://github.com/earthaccess-dev/earthaccess



Bi-weekly Collaboration Cafés, Tuesdays 11-1 MST

- **Fostering new contributions through small group work aligning around specific topics or features. Please reach out if you are interested in joining!**
- **See our Community Calendar for info.**