Airborne and Field Data In the Clouds

What's this Earthdata Cloud Thing?

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What is Earthdata Cloud?

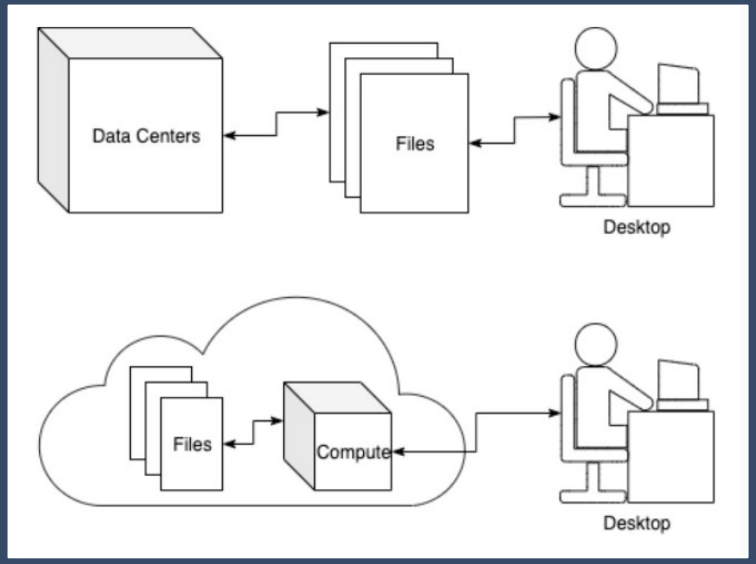
- Evolution of the infrastructure for the Earth Observing System Data and Information System (EOSDIS)
- A common platform, using public cloud (Amazon Web Services) for delivering data and services
- A migration that will take years to complete

https://earthdata.nasa.gov/eosdis/cloud-evolution

Why?

- Enable user access to large volume data
- Remove barriers to cross-DAAC data access and tools
- Enable synergy across the ESDIS elements, particularly the DAACs

➔ *Enable the next level of Open Science, including Analysis In Place*



Credit: Matthew Hanson, Element 84

What doesn’t change?

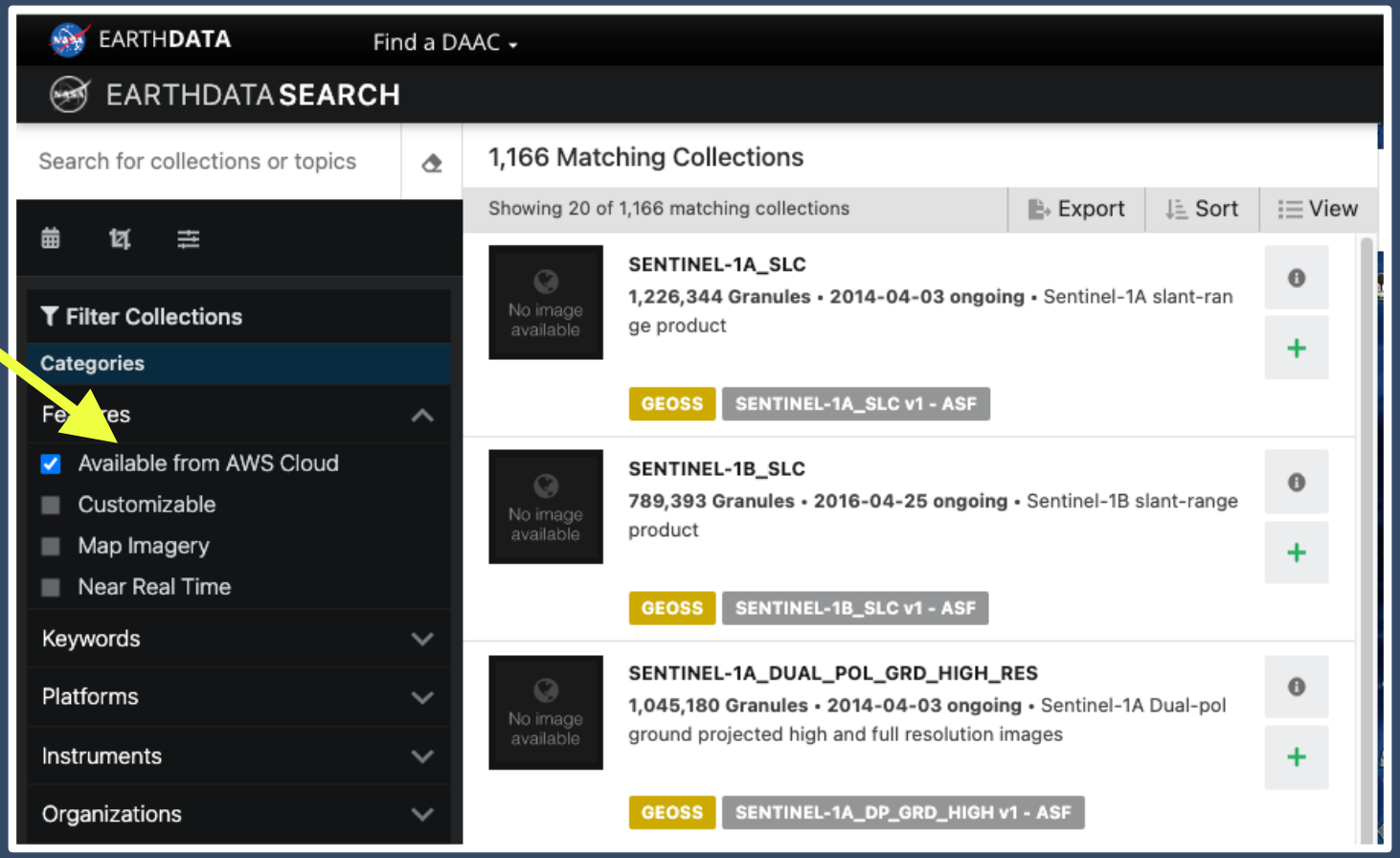
- **Data Access policy:** *NASA data remains free and open. Users just need an Earthdata Login account and there are no download or use charges for users.*
- **DAACs retain their science focus:** *At some level, it doesn’t matter whether the servers are running on site or in the cloud.*

What are we enabling?

- End user direct access to data using Amazon S3 protocol (does require an AWS account and this is restricted to same region access)
- Cross-DAAC tools for subsetting, reprojection, regridding (Harmony, OPeNDAP, …)
- SpatioTemporal Asset Catalog (STAC)
- Cloud-native for new missions (including some cloud-optimized data formats)

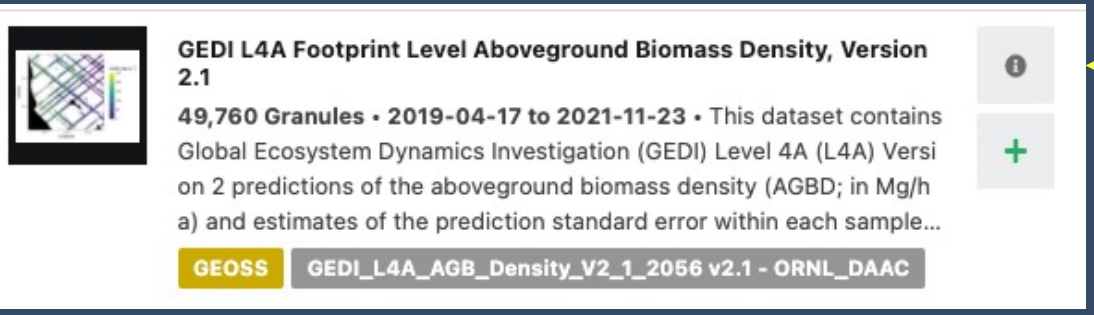
- The current migration focus is the most heavily used ESDIS data and data for new missions

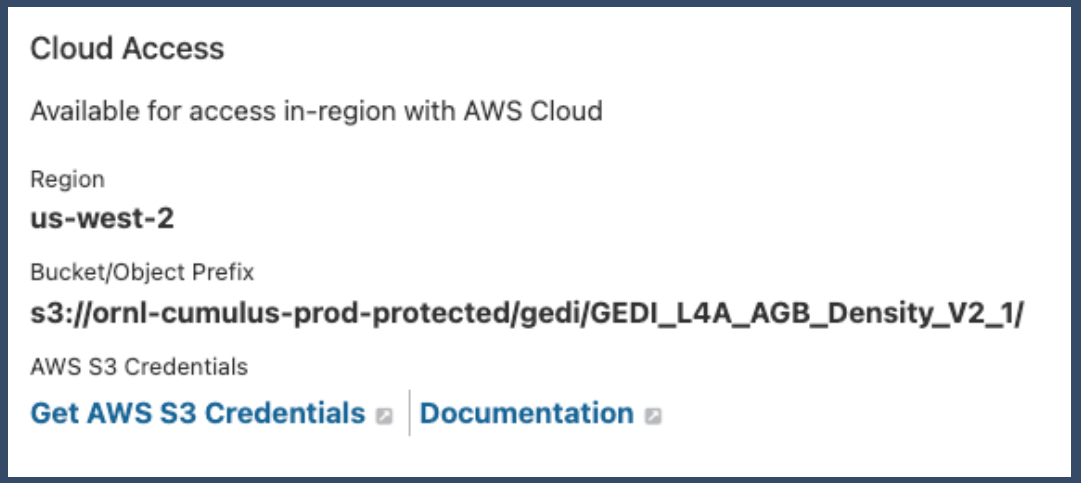
What data is already there?



https://search.earthdata.nasa.gov

Accessing Data





Accessing Data - Harmony

Services

Users should be able to seamlessly analyze data from different NASA data centers in ways previously unachievable. Harmony aims to increase usage and ease of use of EOSDIS' data, focusing on opportunities made possible by cloud-accessible data.

Together

Transform how the development community works together to achieve #1. Let's reuse the simple, but necessary components (e.g. EDL, UMM, CMR and Metrics integration) and let's work together on the hard stuff like chaining, scaling and cloud optimizations.

https://harmony.earthdata.nasa.gov/

More info

- Search: Earthdata Cloud, Earthdata Harmony
- Learning Resources and tutorials from different DAACs
- Earthdata Webinar