



Developing Resources for Users to Discover, Access, and Use GES DISC Data and Services in the Cloud

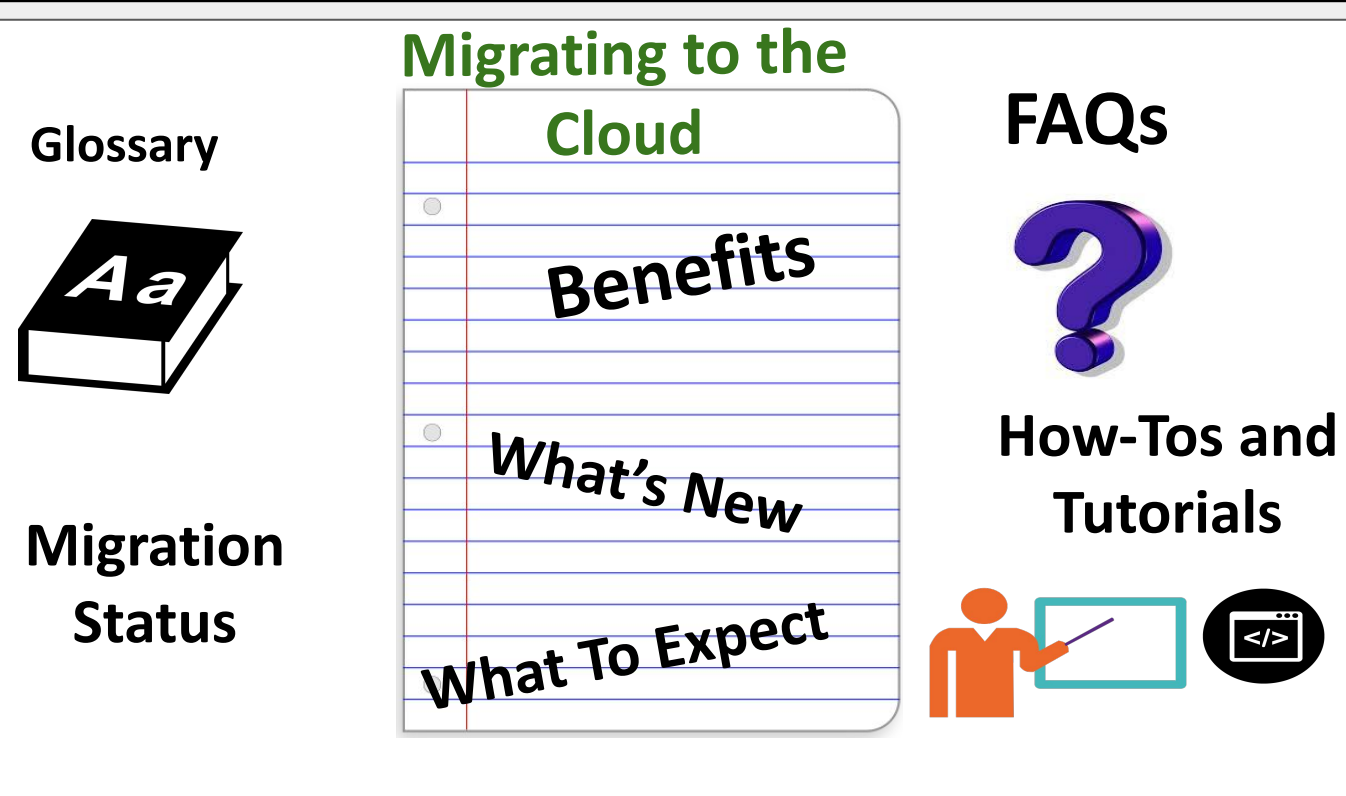


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GES DISC published resources to guide users on accessing data from the Earthdata Cloud. These resources are geared toward cloud beginners.

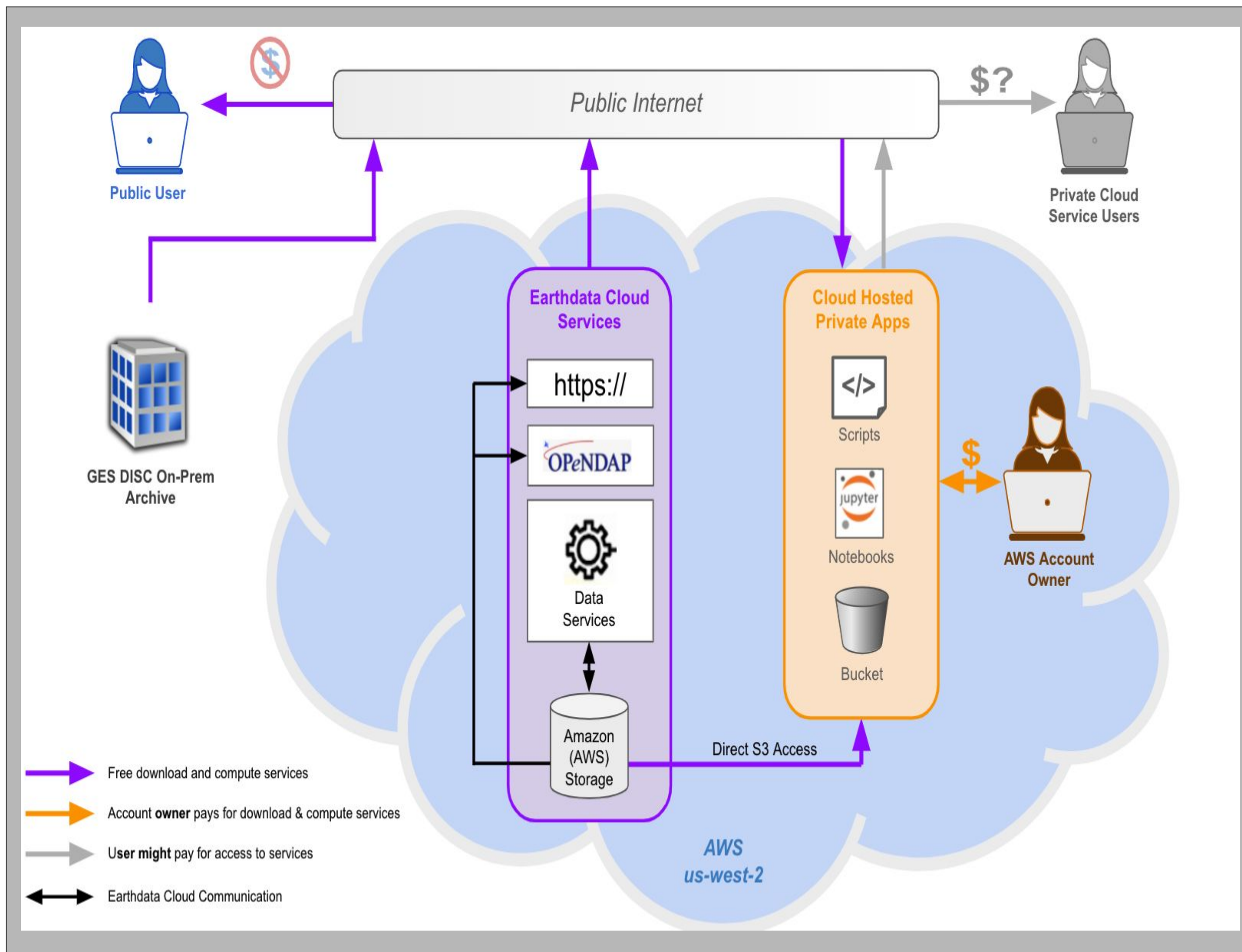
The cloud resources published include an introduction to the cloud, Frequently Asked Questions (FAQs), glossary entries, a table of cloud-enabled GES DISC datasets, and How-To guides relating to the Earthdata Cloud. These resources were reviewed by subject matter experts and first-time users of the cloud.

Through collaborations with Openscapes and Transform to Open Science (TOPS) communities, GES DISC will produce cloud resources to guide users in performing in-cloud analysis as the experimental use cases from our UWG mature, and datasets become available in ARCO format, and enterprise services and tools become available to users.



While developing cloud resources, we encountered the following challenges with the current Earthdata Cloud structure and capabilities:

- data is hosted through a single cloud vendor that is incompatible with/difficult to work with other cloud vendors
- the cloud cost model is confusing and new to users, therefore there is reluctance to migrate existing workflows to the cloud
- most cloud-enabled datasets are not in cloud-optimized data formats limiting the efficiency of in-cloud analytics



Existing GES DISC services & tools remain available to users

Downloading, OPeNDAP, L34RS, Giovanni, and all your favorites are still there for you

In-cloud data "streaming" and analysis is possible, as long as you're in the right region

The **Migration Status** table shows users which GES DISC datasets are **currently** in the Earthdata Cloud

Direct S3 access allows for users in the **AWS us-west-2 region** to obtain and work with GES DISC data in the cloud

The resources were built upon the foundational materials published by EOSDIS, PO.DAAC and NASA Openscapes.

The Jupyter Notebooks are available in NASA GitHub which enables collaboration and fosters open Science

More resources will be published that will guide users to perform in-cloud analysis

View on the GES DISC website

The screenshot displays the GES DISC website interface. At the top, there's a navigation bar with links to Home, About, Data, and more. Below this, there's a section titled "GES DISC" with a subtitle "Atmospheric Composition, Water & Energy Cycles and Climate Variability". The main content area is divided into several sections: "Introduction", "Benefits", "What's New", "Migration Status", "FAQs", "Glossary", and "Data Collections". The "Introduction" section highlights the migration to the cloud and the benefits of using the cloud. The "Benefits" section lists several advantages, including improved performance, multiple data access methods, multidisciplinary data access, analysis next to data, and expanded services. The "What's New" section mentions that GES DISC now offers users the option to access data collections in the cloud via Direct S3 access. The "Migration Status" section provides a table of datasets and their migration status.

Mission/Project	Available Collections	HTTPS	Direct S3 Access
OPM MERO	s3://gesdisc-cumulus-prod-protected/OPM_L3/	✓	✓
OPM Merged IR	s3://gesdisc-cumulus-prod-protected/MERGED_IR/	✓	✓
NLDAS	s3://gesdisc-cumulus-prod-protected/NLDAS/	✓	✓
GLDAS	s3://gesdisc-cumulus-prod-protected/GLDAS/	✓	✓
MERRA-2	s3://gesdisc-cumulus-prod-protected/MERRA2/	✓	✓
OC2-2	s3://gesdisc-cumulus-prod-protected/OC2_DATA/	✓	✓
OMI / Aura	s3://gesdisc-cumulus-prod-protected/Aura_OMI_Level12/	✓	✓
SeaWiFS TROPOM	s3://gesdisc-cumulus-prod-protected/SP_TROPOM_Level12/	✓	✓
CHRP	s3://gesdisc-cumulus-prod-protected/CHRP/	✓	✓
CLIMCAPS (AQUA)	s3://gesdisc-cumulus-prod-protected/Aqua_Sounder_Level12/	✓	✓
CLIMCAPS (JP1S-1)	s3://gesdisc-cumulus-prod-protected/JP1S1_Sounder_Level12/	✓	✓
CLIMCAPS (SNPP)	s3://gesdisc-cumulus-prod-protected/SNPP_Sounder_Level12/	✓	✓

All content related to cloud resources is tagged with "Earthdata Cloud"

The screenshot displays the "How-To's" section of the GES DISC website. It provides detailed instructions on how to access data in the cloud. The section is titled "How-To's" and includes a "Refine By" filter. The main content area is divided into several sections: "Introduction", "Benefits", "What's New", "Migration Status", "FAQs", "Glossary", and "Data Collections". The "Introduction" section highlights the migration to the cloud and the benefits of using the cloud. The "Benefits" section lists several advantages, including improved performance, multiple data access methods, multidisciplinary data access, analysis next to data, and expanded services. The "What's New" section mentions that GES DISC now offers users the option to access data collections in the cloud via Direct S3 access. The "Migration Status" section provides a table of datasets and their migration status.

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GLDAS	s3://gesdisc-cumulus-prod-protected/GLDAS/	✓	✓
MERRA-2	s3://gesdisc-cumulus-prod-protected/MERRA2/	✓	✓
OC2-2	s3://gesdisc-cumulus-prod-protected/OC2_DATA/	✓	✓
OMI / Aura	s3://gesdisc-cumulus-prod-protected/Aura_OMI_Level12/	✓	✓
SeaWiFS TROPOM	s3://gesdisc-cumulus-prod-protected/SP_TROPOM_Level12/	✓	✓
CHRP	s3://gesdisc-cumulus-prod-protected/CHRP/	✓	✓
CLIMCAPS (AQUA)	s3://gesdisc-cumulus-prod-protected/Aqua_Sounder_Level12/	✓	✓
CLIMCAPS (JP1S-1)	s3://gesdisc-cumulus-prod-protected/JP1S1_Sounder_Level12/	✓	✓
CLIMCAPS (SNPP)	s3://gesdisc-cumulus-prod-protected/SNPP_Sounder_Level12/	✓	✓

GES DISC: <https://disc.gsfc.nasa.gov> Suggestions or subscription to our mailing list: gsfc-dl-help-disc@mail.nasa.gov