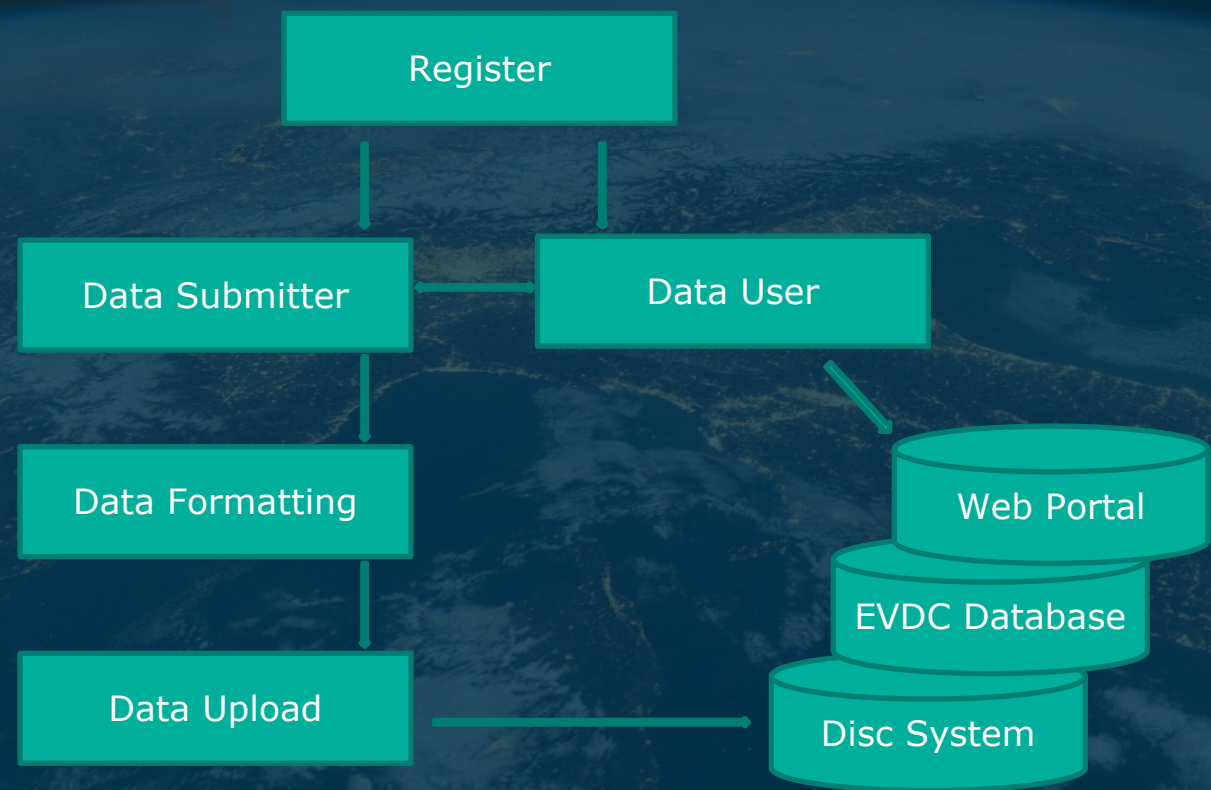


Introduction to EVDC as Cal/Val infrastructure	20
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Data Agreements/Data Protocols

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Encourage dissemination of data and results for scientists involved in measurement campaigns and contributing networks/stations, and to protect the rights of the involved individual scientists.

The EVDC data protocol - <https://protocol.evdc.nilu.no/>

The EarthCARE protocol - <https://earthcare-protocol.evdc.nilu.no/>

The JATAC data protocol - <https://jatac-protocol.evdc.nilu.no/>

In short: by sharing your data (RD, preliminary, final QC), you also get access to other groups data, but you can not distribute these outside the Cal/Val Campaign team (ECVT) or publish without permissions

Protocol for exchange of EarthCARE Validation Team (ECVT) data for EVDC ESA Validation Data Centre <https://evdc.esa.int/>

This protocol aims to encourage dissemination of data and results for scientists involved in the EarthCARE measurement campaigns and contributing networks/stations and to protect the rights of the involved individual scientists. The data from the EarthCARE campaigns and networks is provided to EVDC with the permission of each organization or data provider contributing to the campaign.

EarthCARE-specific conditions for the correlative data protocols:

1. A registry of the EarthCARE Principal Investigators (PIs) will be kept in EVDC. EarthCARE PIs and Co-Is, as members of the ECVT, will formally get access to the EarthCARE Cal/Val area when they have signed this data protocol.
2. Access is strictly personal through nominative login and password.
3. Preliminary data should be submitted to the EarthCARE Cal/Val area in EVDC compatible formats fully documented or self-descriptive, and compliant with Generic Earth Observation Metadata Standards (GEOMS). An exception to this format and metadata restriction applies only when the necessary conversion is unfeasible even with EVDC support.
4. All members of the ECVT and EarthCARE algorithm developers of the ESA data products are to have equal and complete access to the measurements produced during EarthCARE campaign.
5. Re-distribution of data by others than the owner to third parties, or partners outside the ECVT and the ESA algorithm developers is not allowed and requires written permission from the data originator with copy to the EarthCARE project.
6. The ownership of the data remains with the data originator.
7. By using these EarthCARE data, the data user accepts that an offer for co-authorship will be made through personal contact with the data providers or owners.
8. Any change to the above conditions as applied to the submitted dataset will require approval from the data originator.

In case of data privacy queries, please contact the ESA Data Protection Officer (dpo@esa.int).

[GO TO THE EVDC WEBSITE](#)

You hereby agree to the conditions of this data protocol when submitting this form

Name:

Institution and Position (PI, Student, etc)

EarthCARE campaign name and AOID

E-mail:

[SIGN AND SUBMIT DATA PROTOCOL](#)

Digital signature

Personal account

Manual approval process

Information by e-mail from

NADIR-team

Addressed in the Demo
and the Q&A sessions
later today

Data formatting

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GEOMS format

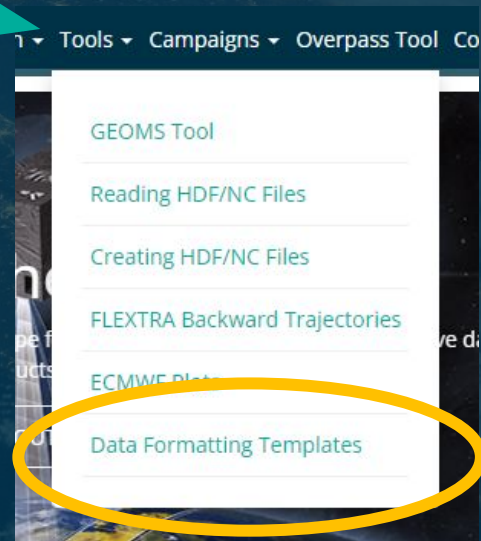
Data submitted to EVDC need to be formatted in the GEOMS
(The Generic Earth Observation Metadata Standard) format

□ special key-words in the header + HDF of NetCDF

Information, video and tutorials available under “Documentation”

EVDC separates between 3 modes of data formatting:

- Local data formatting *1)
- Supported data formatting *2)
- Data conversion by EVDC *3)



1) Local data formatting:

The Data Submitter (DS) is familiar with EVDC and GEOMS, and has resources/scripts/knowledge to format the data locally.

2) Supported data formatting:

DS has some knowledge and plans for local data formatting, but needs assistance from EVDC with setting up the scripts, finding the required **template**, format the data...

3) Data conversion by EVDC:

DS may, or may not be, familiar with GEOMS, but has no capacity to format the data locally.

Data is submitted to EVDC in a “fairly good” mode, and **[conversion]**2GEOMS is run inside the EVDC. Addressed in the Demo later today.

Available templates:

<https://evdc.esa.int/tools/data-formatting-templates/>

GEOMS-TE-LIDAR-AEROSOL-005.csv 15.33 KiB

2	LATITUDE.INSTRUMENT	CONSTANT
2	LONGITUDE.INSTRUMENT	CONSTANT
2	ALTITUDE.INSTRUMENT	CONSTANT
2	DATETIME	DATETIME
2	DATETIME.START	DATETIME
2	DATETIME.STOP	DATETIME
2	INTEGRATION.TIME	DATETIME

GEOMS Data Formatting Templates

Data reporting templates are used as an additional guidance to file formatting for specific instruments. Similar instruments, e.g. a LIDAR, within a monitoring network report the same mandatory data.

To help you format your files, EVDC has set up an [Online GEOMS File Creation Tool](#). At the bottom of the tool, you can find example files for each instrument. These example files might be helpful for data submitters learning how to format the files in GEOMS.

You may read more about GEOMS templates at the [AVDC](#) site.

2011-10-03 GEOMS-TE-BOUY-001.csv
 2020-06-15 GEOMS-TE-CLOUD-RADAR-001.csv
 2018-05-28 GEOMS-TE-FTIR-002.csv
 2021-06-03 GEOMS-TE-FTIR-003.csv
 2020-09-01 GEOMS-TE-FTIR-COCCON-001.csv
 2019-11-21 GEOMS-TE-FTIR-FRM4GHG-001.csv
 2015-12-23 GEOMS-TE-FTIR-ISO-001.csv
 2019-02-20 GEOMS-TE-FTIR-TCCON-005.csv
 2016-07-21 GEOMS-TE-FTUV-003.csv
 2019-11-21 GEOMS-TE-LHR-FRM4GHG-001.csv
 2020-07-22 GEOMS-TE-LIDAR-AEROSOL-005.csv
 2017-10-28 GEOMS-TE-LIDAR-H2O-005.csv
 2017-10-28 GEOMS-TE-LIDAR-O3-005.csv
 2017-10-28 GEOMS-TE-LIDAR-TEMPERATURE-005.csv
 2014-02-18 GEOMS-TE-MWR-003.csv
 2018-02-02 GEOMS-TE-MWR-WIND-001.csv
 2021-10-21 GEOMS-TE-PANDORA-DIRECTSUN-GAS-003.csv
 2016-12-01 GEOMS-TE-RO-001.csv
 2020-02-28 GEOMS-TE-SODAR-001.csv
 2013-07-19 GEOMS-TE-SONDE-002.csv
 2022-02-14 GEOMS-TE-UVVIS-BREWER-TOTALCOL-001.csv
 2018-04-26 GEOMS-TE-UVVIS-DOAS-DIRECTSUN-GAS-007.csv
 2018-04-26 GEOMS-TE-UVVIS-DOAS-OFFAXIS-AEROSOL-007.csv
 2018-04-25 GEOMS-TE-UVVIS-DOAS-OFFAXIS-GAS-007.csv
 2018-04-25 GEOMS-TE-UVVIS-DOAS-ZENITH-GAS-007.csv

Data reporting templates are used as an additional guidance to file formatting for specific instruments, e.g. a LIDAR, within a monitoring network report the same mandatory data

To help you format your files, EVDC has set up an [Online GEOMS File Creation Tool](#). At the bottom of the tool, you can find example files for various instruments. These example files might be helpful for data submitters learning how to format the files in GEOMS.

You may read more about GEOMS templates at the [AVDC](#) site.

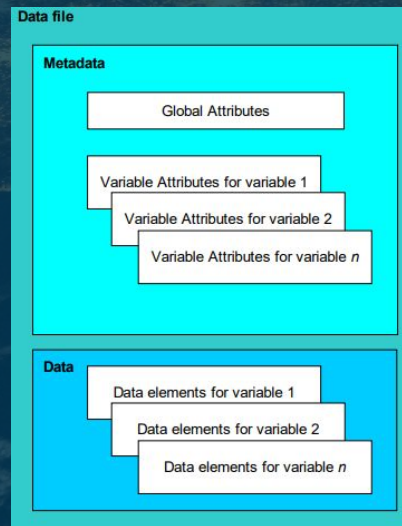
Available templates:

<https://evdc.esa.int/tools/data-formatting-templates/>

Two core structure elements of the metadata standard,

The global attributes (GA) and the variable attributes (VA),

followed by the data itself.



- 2011-10-03 GEOMS-TE-BOUY-001.csv
- 2020-06-15 GEOMS-TE-CLOUD-RADAR-001.csv
- 2018-05-28 GEOMS-TE-FTIR-002.csv
- 2021-06-03 GEOMS-TE-FTIR-003.csv
- 2020-09-01 GEOMS-TE-FTIR-COCCON-001.csv
- 2019-11-21 GEOMS-TE-FTIR-FRM4GHG-001.csv
- 2015-12-23 GEOMS-TE-FTIR-ISO-001.csv
- 2019-02-20 GEOMS-TE-FTIR-TCCON-005.csv
- 2016-07-21 GEOMS-TE-FTUV-003.csv
- 2019-11-21 GEOMS-TE-LHR-FRM4GHG-001.csv
- 2020-07-22 GEOMS-TE-LIDAR-AEROSOL-005.csv
- 2017-10-28 GEOMS-TE-LIDAR-H2O-005.csv
- 2017-10-28 GEOMS-TE-LIDAR-O3-005.csv
- 2017-10-28 GEOMS-TE-LIDAR-TEMPERATURE-005.csv
- 2014-02-18 GEOMS-TE-MWR-003.csv
- 2018-02-02 GEOMS-TE-MWR-WIND-001.csv
- 2021-10-21 GEOMS-TE-PANDORA-DIRECTSUN-GAS-003.csv
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- 2013-07-19 GEOMS-TE-SONDE-002.csv
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- 2018-04-25 GEOMS-TE-UVVIS-DOAS-ZENITH-GAS-007.csv



Available templates:

<https://evdc.esa.int/tools/data-formatting-templates/>

The *global attributes* entries describe the ownership of the data found in a given file (PI, DS, name, e-mail...), the type and identity of the instrument, information on the geolocation of the data, the field of research, and a list of the data variables included in the file.

The *variable attributes* are the specific metadata for a single variable (name, description... of the variable)

GEOMS Data Formatting Templates

Data reporting templates are used as an additional guidance to file formatting for specific instruments, similar instruments, e.g. a LIDAR, within a monitoring network report the same mandatory data.

To help you format your files, EVDC has set up an Online GEOMS File Creation Tool . At the bottom of the page, you will find example files for each instrument. These example files might be helpful for data submitters learning how to format the files in GEOMS.

You may read more about GEOMS templates at the AVDC site.

2011-10-03 GEOMS-TE-BOUY-001.csv
2020-06-15 GEOMS-TE-CLOUD-RADAR-001.csv
2018-05-28 GEOMS-TE-FTIR-002.csv
2021-06-03 GEOMS-TE-FTIR-003.csv
2020-09-01 GEOMS-TE-FTIR-COCCON-001.csv
2019-11-21 GEOMS-TE-FTIR-FRM4GHG-001.csv
2015-12-23 GEOMS-TE-FTIR-ISO-001.csv
2019-02-20 GEOMS-TE-FTIR-TCCON-005.csv
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2019-11-21 GEOMS-TE-LHR-FRM4GHG-001.csv
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2018-04-25 GEOMS-TE-UVVIS-DOAS-ZENITH-GAS-007.csv





When the Cal/Val teams connect with the data center, they should look for a suitable template for their data and let EVDC how much help they need with the data conversion.

If there is no existing template, EVDC and the Cal/Val team or DS will work together to create a new one.

Process;

Draft template approval by GEOMS consortium (repr. EVDC, AVDC, NDACC and major networks/experts) Final template

GEOMS Data Formatting Templates

Data reporting templates are used as an additional guidance to file formatting for specific instruments similar instruments, e.g. a LIDAR, within a monitoring network report the same mandatory data

To help you format your files, EVDC has set up an [Online GEOMS File Creation Tool](#). At the bottom of the tool, you can find example files. These example files might be helpful for data submitters learning how to format the files in GEOMS.

You may read more about GEOMS templates at the [AVDC](#) site.

2011-10-03 GEOMS-TE-BOUY-001.csv
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2019-11-21 GEOMS-TE-FTIR-FRM4GHG-001.csv
2015-12-23 GEOMS-TE-FTIR-ISO-001.csv
2019-02-20 GEOMS-TE-FTIR-TCCON-005.csv
2016-07-21 GEOMS-TE-FTUV-003.csv
2019-11-21 GEOMS-TE-LHR-FRM4GHG-001.csv
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2018-04-25 GEOMS-TE-UVVIS-DOAS-ZENITH-GAS-007.csv



Tools for creating GEOMS files, and for metadata registration:

Specially developed **GEOMS file formatting software tool** as IDL scripts, or online

<https://evdc.esa.int/tools/creating-hdf-files/>

using the **idlcr8hdf** program, an IDL software that is delivered both as a .pro-file for users with an IDL license, and as a .sav-file for those without a license. The program takes two ASCII files as input, one data file and one metadata file, and formats an GEOMS compatible file (HDF4/5 or NetCDF).

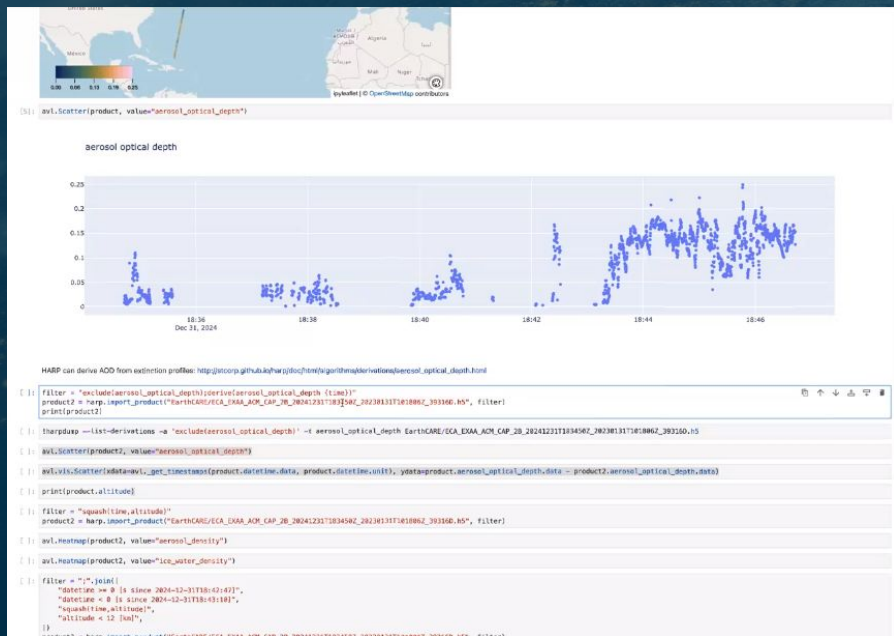
<https://geoms-tool.nilu.no/>

same as above, but online “click step-by-step” in browser.

Addressed in the Demo later today.

GEOMS files are HARP compatible

HARP demonstrated June 26th, by Sander Niemeijer, S&T



```

(3) | avl.Scatter(product, value="aerosol_optical_depth")

aerosol optical depth

(3) | avl.Scatter(product2, value="aerosol_optical_depth")

(4) | avl.viz.Scatter(datetimeavi_get_timestamp(product.datetime_utc), ydata=product.aerosol_optical_depth, data)


(5) | print(product.altitude)

(6) | filter = "==" | join |
    "datetime == 8 is since 2024-12-31T18:42:07",
    "datetime == 8 is since 2024-12-31T18:43:18",
    "squash(time,altitude)",
    "altitude == 12 [km]"
    |
(7) | avl.Heatmap(product2, value="aerosol_density")

(8) | avl.Heatmap(product2, value="ice_water_density")

(9) | filter = "==" | join |
    "datetime == 8 is since 2024-12-31T18:42:07",
    "datetime == 8 is since 2024-12-31T18:43:18",
    "squash(time,altitude)",
    "altitude == 12 [km]"
    |
  
```

HARP can derive AOD from extinction profiles: https://github.com/ESA-ES-Validation-Centre/harp/blob/main/derivations/aerosol_optical_depth.html



```

(14) | avl.Heatmap(product2, value="ice_water_density")

ice water density

(1) | filter = "==" | join |
    "datetime == 8 is since 2024-12-31T18:42:07",
    "datetime == 8 is since 2024-12-31T18:43:18",
    "squash(time,altitude)",
    "altitude == 12 [km]"
    |
(2) | product3 = harp.import_product("EarthCARE/ECA_EMAA_AOD_CAP_20_20241231T183458Z_20220131T010802_393306_H5", filter)
    | print(product3)
(3) | avl.Heatmap(product3, value="ice_water_density")
(4) | avl.Heatmap(product3, value="rain_rate")
(5) | avl.Scatter(product3, value="ice_water_column_density")

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Compare Sentinel-5P O3 profile against lidar

See also <https://pvc-vdaf-server.inpomi.eu/o3-profile/o3-profile-off-lidar/hohenpeissenberg>

```

(1) | import avl
import harp

(2) | !ls s5p

(3) | harp.import_product("SapS5P_RPRD_L2V003_FR_20220301T105407_20220301T123537_22701_03_020400_20230327T082400_hohenpeissenberg.nc")

(4) | !ls lidar

(5) | print(harp.import_product("lidar/groundbased_lidar_o3_dwb001_hohenpeissenberg_20220301T0711z_20220301T080742z_001.nc"))

(6) | !harp.collocate -d "datetime 24 [h]" --point-in-area-xy --a "valid(o3_column_number_density)validity 16.25%" --nx datetime --ny datetime --y datetime s5p lidar collocations.csv

(7) | !cat collocations.csv

(8) | operations = "==" | join |
    "collocate_left('collocations.csv')",
    "exclude(cloud_albedo, surface_albedo, wavelength)",
    "derive(datetime [time] days since 2000-01-01)",
    "derive(altitude [km])",
    "derive(pressure [hPa])",
    "derive(o3_column_number_density [DU])",
    "derive(o3_column_number_density_uncertainty [DU])",
    "derive(o3_number_density [molec/cm3])",
    "derive(o3_number_density_uncertainty [molec/cm3])",
    "derive(o3_number_density_2 [molec/cm3])",
    "derive(trappage_altitude [time] [km])",
    "derive(arec [time] [h2])",
  
```


DOI:

A Digital Object Identifier is a unique and permanent identifier for a digital object, such as a research paper, dataset, or software.

The purpose of a DOI is to provide a stable, long-lasting link to the digital object, allowing users to easily locate and access it.

DOIs are managed by trusted registration agencies, such as CrossRef, DataCite, or mEDRA, and they resolve to a landing page that provides metadata and access to the object being identified.

Having a DOI for your publication helps to ensure its long-term accessibility, visibility, and impact, making it easier for others to find, use, and build upon your work.

A field for DOI is included in the GEOMS metadata

Best practices for coining DOIs (Digital Object Identifiers) include:

1. Assign unique DOIs: Each DOI must be unique and permanent, and should not change over time.
2. Use a trusted DOI registration agency such as CrossRef, DataCite, or mEDRA.
3. Resolve to a landing page that provides metadata and access to the full-text or object being identified.
4. Provide complete and accurate metadata, e.g. title, authors, publication date, and persistent URL.
5. Use a consistent format: i.e. a consistent format for coining DOIs, such as the "10.xxxx/yyyyyyyy" format recommended by the International DOI Foundation.
6. Regularly update and maintain the DOI record to ensure that it continues to resolve to the correct landing page.

Examples of DOIs (Digital Object Identifiers):

- 10.1038/nature14539
- 10.1016/j.cell.2013.11.049
- 10.1371/journal.pone.0127752
- 10.1186/s13643-020-01356-9

DOIs typically consists of a **prefix** (e.g. "10.xxxx"), followed by a **unique identifier** assigned by the registration agency (e.g. "nature14539," "journal.pone.0127752").

The prefix and identifier together form the complete DOI, which resolves to a **landing page** that provides metadata and access to the digital object being identified.

NILU, on behalf of EVDC, may issue a DOI on datasets or other data products related to ESA Cal/Val.

EVDC offers user support related to the coining of DOIs. This involves giving the various frameworks access to an EVDC API for generating landing pages, issuing new repositories and giving access for self coining of DOIs.

In addition EVDC provides guidelines for the distribution of DOIs, recommendations on granularity and a list of recommended metadata to include when creating landing pages and coining DOIs.

When a DOI is issued, there are three things to consider:

- 1) Report metadata following a standard XML format (see what's required on next slide).
- 2) The xml will be used to generate the landing-page as well as coining of the DOI through the datacite API.
- 3) The link from the landing-page to the data download will need to be provided in the script.

The “data resource” will then be available through the presentation web page on a EVDC server,

hereunder a private URL to your landing page as a sub page of <https://evdc.esa.int>

Search GitLab

evdc-best-practice4dois

- Project information
- Repository
- Issues 0
- Merge requests 0
- CI/CD
- Security and Compliance
- Deployments
- Packages and registries
- Infrastructure
- Monitor
- Analytics
- Wiki
- Snippets
- Settings

EVDC > evdc-best-practice4dois

Modify README
Richard Olav Rud authored 2 months ago

main evdc-best-practice4dois / README.md Find file

README.md 6.20 KIB Edit

About

This repository includes instructions and scripts for coining DOI for EVDC

Introduction

The purpose of this document is to Provide clear guidelines to data owners, authors, publishers, and other stakeholders on how to coin and use

A DOI (Digital Object Identifier) is a unique and permanent identifier for a digital object, such as a research paper, dataset, or software. The purpose is to provide a long-lasting link to the digital object, allowing users to easily locate and access it. DOIs are managed by trusted registration agencies, such as CrossRef, which they resolve to a landing page that provides metadata and access to the object being identified.

Having a DOI (Digital Object Identifier) for your publication provides several benefits:

- Issues 0
- Merge requests 0
- CI/CD
- Security and Compliance
- Deployments
- Packages and registries
- Infrastructure
- Monitor
- Analytics
- Wiki
- Snippets
- Settings

Create DOI

```
In [2]:
import requests
import xmltodict
import os
```

Step 1: Fetch XML metadata

In order to create a DOI you will need to collect the necessary metadata to create a DOI (<https://schema.datacite.org/>).

```
In [3]:
# WARNING: Example XML, replace with your own metadata
xml = 'xml/example.xml'
```

```
with open(xml, 'r') as file:
    metadata = file.read()
```

```
In [4]:
# Create dictionary from xml metadata
_dict = xmltodict.parse(metadata)
```

```
print(_dict)
```

Create filename for html

XML metadata and landing pages:

- Name of the creator(s) of the dataset and affiliation
- Title
- Publication year
- Subject (e.g. “Atmospheric Science”)
- Contact person(s)
- Date of collection
- Date of creation
- Size (only if its a dataset, supply size of dataset in megabytes)
- Format (text/plain, netCDF, Ascii etc.)
- Language
- Rights (Any rights information for this resource, licensing, copyright etc.)
- Resource type (should be “Dataset” in most cases)
- Description(s) Description types: Abstract, Methods, SeriesInformation, TableOfContents, TechnicalInfo, Other)
- Funder name(s)
- GeoLocation of measuring station(s)

Supplying information for the landing page:

The landing page is not so strict in terms of content and shape, but should include a description of:

- Title
- Image (plot etc.) that describes the dataset, not mandatory but preferable.
- Data policy
- Description of data file(s), including contact person for the specific dataset/subset of the dataset
- Acknowledgments
- Citation (How to cite the dataset)
- Contact

Step-by-step:

Establish contact with the Data Centre by sending an e-mail to nadirteam@nilu.no

Import XML to scripts, and publish the landing-page via the API.

Utilize landing-page url together with XML metadata to coin the DOI through the DataCite API.

The DOI is ready and can be referenced. The DOI will point to the landing-page and the landing-page will contain the link to the dataset in EVDC.



EVDC 2.0
ESA Atmospheric Validation Data Centre
Maintenance and Evolution

[CCN#1 - D5]


DOIs for EO – Guidelines Document

GEOMS File (HDF, netCDF)

- metadata
- data

GEOMS Tool functionalities

- .data
- .data + .meta
- GEOMS file



GEOMS Tool

The GEOMS online tool is a set of functionalities to support data submitters with the data upload to [EVDC](#). The tool is easy to use and self-explanatory, but documentation and "how-to" documents are made available at <https://evdc.esa.int/documentation/geoms/>.

Metadata Creation Existing GEOMS templates

GEOMS File Creation Create GEOMS compliant files from a set of ascii metadata and data

GEOMS File Format Checker Check GEOMS file format (HDF4, HDF5 or netCDF)

<https://evdc.esa.int/tools/data-formatting-templates/>

EVDC
Database



login

GEOMS Tool

The GEOMS online tool is a set of functionalities to support data submitters with the data upload to EVDC. The tool also provides documentation and "how-to" documents are made available at <https://evdc.esa.int/documentation/geoms/>.

Metadata Creation

Existing GEOMS templates

➔

Create Metadata/header Request a new Metadata template Request a new EVDC template

GEOMS File Creation Create GEOMS compliant files from a set of ascii metadata and data

Create HDF4 Create HDF5 Create netCDF

GEOMS File Format Checker Check GEOMS file format (HDF4, HDF5 or netCDF)

QA checker

Example files for metadata (.meta) and data (.data) can be found at the bottom of the template page <https://evdc.esa.int/tools/data-formatting-templates/>.

GEOMS-TE-BOUY-001.csv

GEOMS-TE-CLOUD-RADAR-001.csv

GEOMS-TE-FTIR-003.csv

EVDC Vocabulary

Content language: English

Alphabetical Hierarchy

- data source
- platform type
 - aircraft
 - balloon
 - balloon in-situ
 - buoy
 - buoy in-situ
 - groundbased
 - groundbased
 - cloud radar
 - ftir
 - ftir cocoon
 - ftir frm4ghg
 - ftir iso
 - ftir tcon
 - ftuv
 - lhr frm4ghg
 - lidar aerosol
 - lidar h2o
 - lidar o3
 - lidar temper
 - mwr
 - mwr wind
 - pandora dir
 - radiosonde
 - ro
 - sodar
 - uvis brewer
 - uvis doas d
 - uvis doas d
 - uvis doas d
 - uvis doas d
 - uvis doas z

Vocabulary information

Content language: English

platform type > groundbased > groundbased remote sensing > lidar aerosol > aerosolExtinction.coefficient_derived

PREFERRED TERM aerosol.extinction.coefficient_derived

BROADER CONCEPT lidar aerosol

DESCRIPTION aerosol extinction coefficient e.g. derived from backscatter coefficient and lidar ratio or derived from Raman return signal

URI https://vocabulary.evdc.nll.no/evdc_vocab/aerosol.extinction.coefficient_derived

DOWNLOAD THIS CONCEPT: RDF/XML Turtle JSON-LD

RELATED MATCHING CONCEPTS

aerosol particle light extinction coefficient	ACTRIS vocabulary
http://vocab.nerc.ac.uk/collocation/vocab.nerc.ac.uk/P07/current/14MOPBUO	

GEOMS Tool



The GEOMS online tool is a set of functionalities to support data submitters with the data upload to [EVDC](#). The tool is easy to use and self-explanatory, but documentation and "how-to" documents are made available at <https://evdc.esa.int/documentation/geoms/>.

EarthCARE GEOMS Metadata Registration

Network Name or Campaign: *

Number of Measurement sites: *

Register Global Attributes

Metadata Creation

Existing GEOMS templates

[Create Metadata/header](#) [Request a new Metadata template](#) [Request a new EarthCARE Metadata](#)

Metadata Registrat Global Attributes

Home: GEOMS Tool

Part 1 - Data Template and Originator Attributes

Data Template:

SOLAR LUNAR

PI Name:

PI Affiliation:

PI Address:

PI E-mail:

DO Name:

DO Affiliation:

DO Address:

DO E-mail:

DS Name:

DS Affiliation:

DS Address:

DS E-mail:

Metadata Registration - Variable Attributes

View / Download

- [balloon_thr:eo2_ami000_rd_#bert_001.meta](#) (Note: Only Global Attributes part)

[Back to Global Attributes Part 1](#)

- Template: [GEOMS-TE-FTUV-003.csv](#)
- DATA_SOURCE: FTUVNO2_AWT000
- Number of Data Variables: 46

Variable Attributes

1. VAR_NAME = DATETIME
 Reporting: Mandatory Optional-Include Optional-Exclude
 VAR_DESCRIPTION = Effective meas. time
 VAR_NOTES = Additional pertinent information
 VAR_DEPEND = DATETIME
 VAR_DATA_TYPE = DOUBLE
 VAR_UNITS = MID2K
 VAR_VALID_MIN =
 VAR_VALID_MAX =

New Metadata Template Request

Home: GEOMS Tool

Submitter

Name:

Affiliation:

E-mail:

Measurement

Site name/Location:

Platform type:

Principle:

Campaign/Network

Campaign:

Network:

Mission:

Data

Data Description:

Data format:

Submitted to any other repositories:

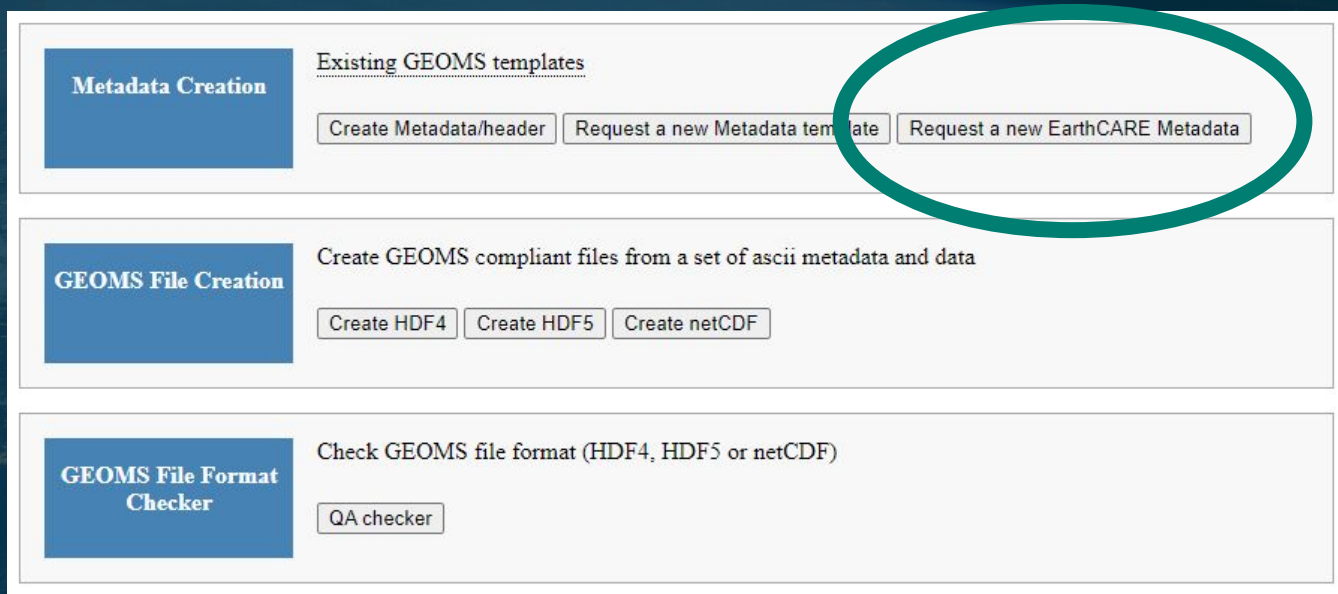
Send Request

Ref. point 3) on earlier slide;

Support for users that request central data conversion from EVDC [template]2GEOMS

(often preliminary) data unformatted, ascii, txt, csv

Cal/Val team and/or DS have to provide some essential information to EVDC. Custom built for the ECVT.



Metadata Creation Existing GEOMS templates

Create Metadata/header Request a new Metadata template Request a new EarthCARE Metadata

GEOMS File Creation Create GEOMS compliant files from a set of ascii metadata and data

Create HDF4 Create HDF5 Create netCDF

GEOMS File Format Checker Check GEOMS file format (HDF4, HDF5 or netCDF)

QA checker

EarthCARE GEOMS Metadata Registration - Global Attributes

Home: GEOMS Tool

Network/Campaign: **MPLNET (2 sites) - Site 1**

PI Name: *

PI Affiliation: *

PI Address: *

PI E-mail: *

DO Name: *

DO Affiliation: *

DO Address: *

DO E-mail: *

DS Name: *

DS Affiliation: *

DS Address: *

DS E-mail: *

Data Description:

Data Discipline:

Data Group:

Data Location: *

Data Source: *

EarthCARE GEOMS Metadata Registration - Global Attributes

Home: GEOMS Tool

Network/Campaign: **MPLNET (2 sites) - Site 2**

PI Name: *

PI Affiliation: *

PI Address: *

PI E-mail: *

DO Name: *

DO Affiliation: *

DO Address: *

DO E-mail: *

DS Name: *

DS Affiliation: *

DS Address: *

New Metadata Registration - EarthCARE

Home: GEOMS Tool

Download

- [MPLNET Translation_GA_Entries_20230625.csv](#)



Demo after the presentation

“Behind the scenes”

The backbone of EVDC is a unix disc system

All routines, programs and files are accessible and available via ssh and sftp.

Common system in use for the Cal/Val teams.

With the personal user account, an EVDC user has access to machines

login.nilu.no via ssh

upload.nilu.no and download.nilu.no via sftp

“Behind the scenes”

For EarthCARE and the ECV
 /viper/nadir/projects/earthcare
 Hereunder, in sub-directories
 both preliminary, unformatted

```

login.nilu.no - PuTTY
login as: annm
annm@login's password:

System information as of Tue Jun 27 14:38:17 CEST 2023

System load:  0.35          Processes:           274          3
Usage of /:   52.2% of 23.94GB  Users logged in:    2          268
Memory usage: 24%          IPv4 address for ens3: 128.39.104.118  3
Swap usage:   2%          3: 128.39.104.118

#####

This machine is for authorized users only.          ####

Usage of, and access to this machine is audited by means
of automatic and manual monitoring.

By accessing this machine, you accept to conform to
NILU IT policies and by the policies outlined in the
data access protocol for the project(s) you are given
access to.

#####

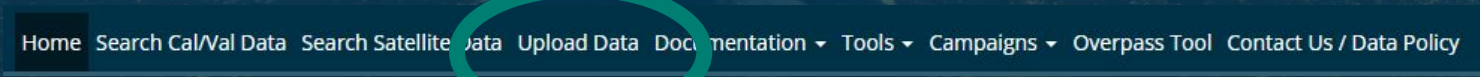
Last login: Fri Jun 16 08:16:48 2023 from 192.168.4.181
MANPATH: Undefined variable.          ####
% tcsh
MANPATH: Undefined variable.
prod-login04:~> cd /viper/nadir/projects/earthcare
/viper/nadir/projects/earthcare: Permission denied.
prod-login04:~> █
  
```


Data Upload:

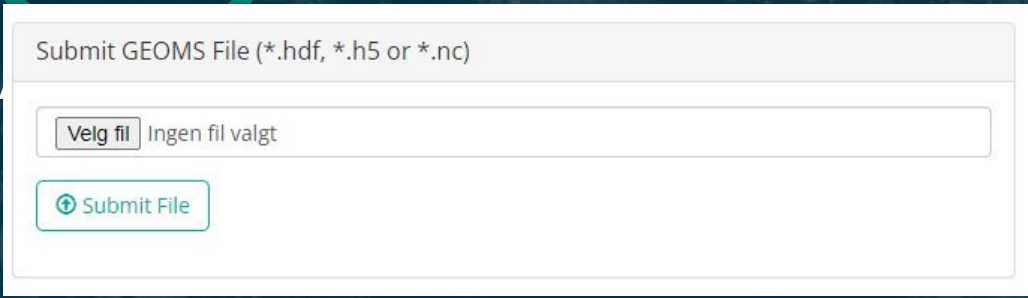
Establish contact with the Data Centre to retrieve personal user credentials. Only registered users are allowed to upload data.

Final data:

- 1) use web upload



Preliminary, unformatted EC



Data Upload:

Final data:

- 1) use web upload
- 2) use sftp upload: *sftp to upload.nilu.no folder /viper/nadir/evdc/incoming*

Preliminary, unformatted ECVT data (AOID data):

use sftp upload *sftp to upload.nilu.no folder /viper/nadir/projects/earthcare/**

** Information on the folder structure to be sent out by the nadirteam*

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