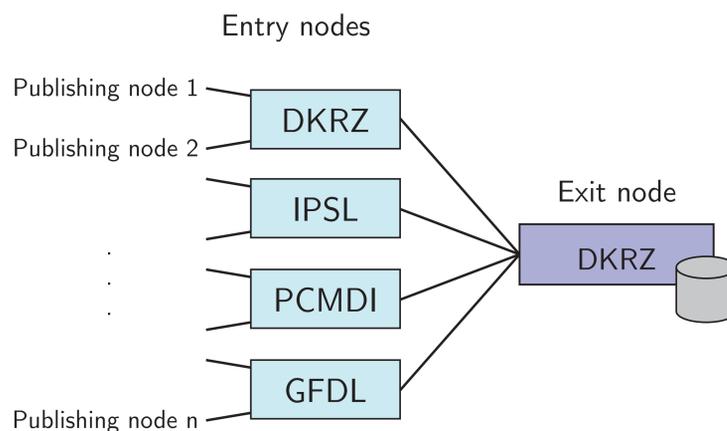


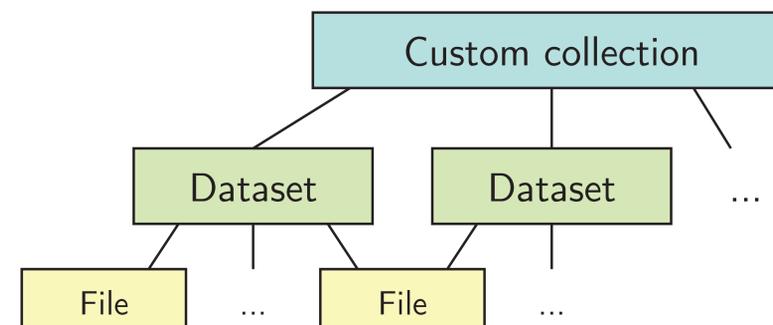
Every data provider for CMIP6 will issue Handle generation requests for CMIP6 files and datasets. These are submitted to a distributed queueing system with currently 3 entry nodes and 1 exit node that also hosts the Handle servers.

The success of this setup depends on adequate operational organization:

1. Proper use of the ESGF publisher to ensure correct versioning. No unmonitored exchange of files.
2. Load/availability monitoring of entry and exit nodes and adjustment as required over the course of CMIP6. SLAs are not required at this point due to redundancies already built in.
3. Operational oversight by CDNOT, distribution of access codes and enforcement of these policies.



ESGF CMIP6 PID services assign PIDs to files and datasets, carrying additional metadata. Users can create custom collections, based on data carts. Future implementation options include to assign more collection hierarchy levels, particularly to support replication.



My DataCart

Number of Items (4)

Collective Services for All Selected Datasets: [WGET Script] [LAS Visualization] [Globus Download] [Hide Collection PID]

When 'Show Files' is clicked, or when using WGET or Globus, you may use an optional string to sub-select the filenames: [Apply] [Reset]

Collection PID for the selected datasets:
hdl:21.14100/090d1cf-0ea8-3a11-8dde-eb94d01420e0

You can use this persistent identifier to refer back to your individual data cart. Note that this is no guarantee that the data in the cart will remain available or stable, but only that there will always be a reference back to them. For more information, see here.

Select All Datasets [Remove All]

obs4MIPs SSMI-MERIS Water Vapor Path L3 Monthly Data
Description: GlobVapour - Total Column Water Vapour monthly mean from SSMI+MERIS
Data Node: esgf1.dkrz.de
Version: 20140616
Total Number of Files (for all variables): 4
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [PID] [Show Citation] [Tech Note]

cmip6.CMIPCSIRO-BOM.NICAM.piControl.r11p1f1.Amon.rsut.gn
Data Node: esgf-dev.dkrz.de
Version: 20160714
Total Number of Files (for all variables): 1
[Show Metadata] [Hide Files] [THREDDS Catalog] [WGET Script] [LAS Visualization] [PID] [Show Citation]

rsut_Amon_piControl_NICAM_r11p1f1_gn_200001-200001.nc
Checksum: f7ee8bd4c1e23fec1c910b0376e9053650c73266180691f5fde22878469f5ca
Size: 16324
Tracking Id: hdl:21.14100/ad869e2a-85c1-4d6e-862e-917e7925478
[More File Metadata] HTTPServer

Obs4MIPs Information View

Dataset: obs4MIPs.FUB-DWD.SSMI-MERIS.prw.mon

General Information

Dataset Id	obs4MIPs.FUB-DWD.SSMI-MERIS.prw.mon
Persistent identifier	hdl:10876/ESGF/4ee9d37b-6454-44bf-b3ef-e738b2ecedb4
Version	20140616

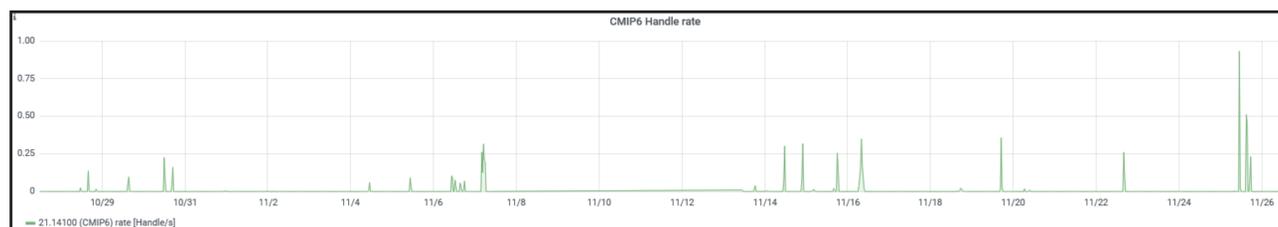
Data host(s)

esgf1.dkrz.de Original

Files belonging to this dataset

prwErr_SSMI-MERIS_L3_v1-00_200301-200812.nc	10876/ESGF/a9b1bffc-4b73-4295-8ed6-6b586bf1be02
prwFlag_SSMI-MERIS_L3_v1-00_200301-200812.nc	10876/ESGF/4c9bd2ab-08a8-4d21-be1e-bc93cac9756a
prwStddev_SSMI-MERIS_L3_v1-00_200301-200812.nc	10876/ESGF/21ca953d-7bf3-43fe-84c0-3f36c899bf2a
prw_SSMI-MERIS_L3_v1-00_200301-200812.nc	10876/ESGF/a4d6d485-feae-48d7-9925-1a4ac12fe816

This PID landing page service is provided by (German Climate Computing Centre).



Current maximum activity April 28: 150 H/s, none on hold

In 2018, monitoring was put in place for availability of queues and federation links, but also to measure the activity using Grafana. The Handle rate (H/s) is measured specifically. No bottlenecks have been encountered yet.

The total number of CMIP6 file and dataset Handles is at 100k now, increasing steadily. Very recently, GFDL joined the RabbitMQ federation, pending further testing. This enables better fallback options if an entry node is offline for any reason.

The setup of the PID services is designed to ensure no PIDs are lost, i.e., no files get published for CMIP6 whose PIDs remain unregistered. This has worked well so far, with less than 0.5% of PIDs missing (few hundred PIDs out of 100k).