Support to Climate Data Dissemination in a Worldwide Data Federation by IS-ENES2

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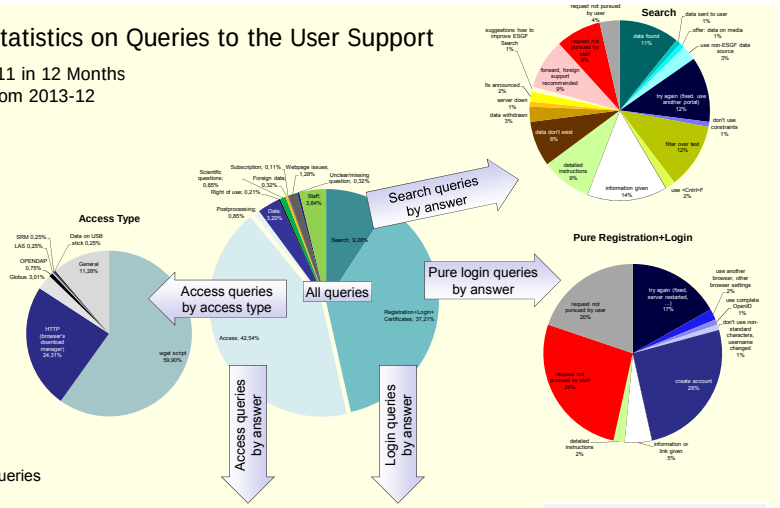
IS-ENES & Support for Climate Data

Thousands of users accessed climate data produced as part of the CMIP5 project, created by about 30 institutes and disseminated by a worldwide infrastructure, the Earth System Grid Federation (ESGF).
A part of the data belonged to the basis of the IPCC 5th Assessment Report (AR5) and was preserved at WDCC in a long term archive.

The support activity to the data dissemination was funded within the IS-ENES2 FP7 project by the EU.

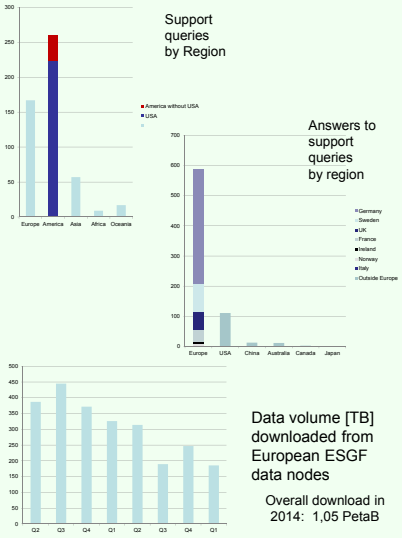
Statistics on Queries to the User Support

511 in 12 Months
from 2013-12



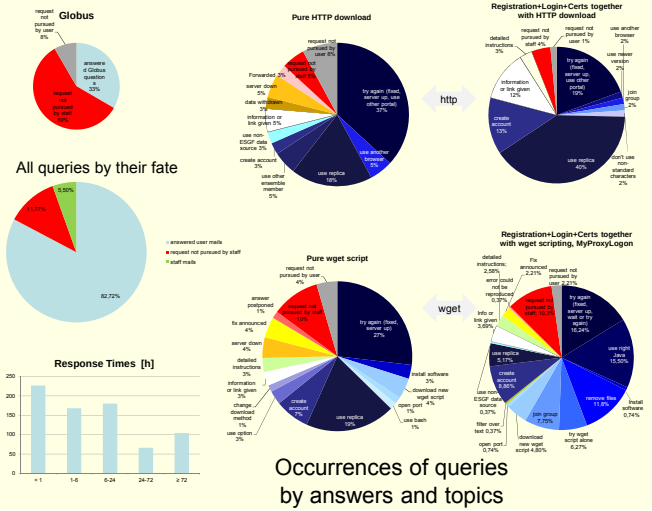
Statistics on Data Download & Regional Support Distribution

12 Months from 2013-12



Overall download in 2014: 1,05 PetaB

Statistics on queries related to the GLOBUS software



Occurrences of queries by answers and topics

What to learn from the statistics?

- About 2/3 of the queries belong to the login/access field.
- Search questions are 2nd.
- Some queries are not answered: answer unknown (specialised queries), mail impolite or other.
- By number of answers, the biggest share of support to the international ESGF is given by IS-ENES (this part located in Hamburg/DE).
- 3% spam got through
- Australia and United States should be better integrated to foster 24h support.
- Synchronise SW-updates between the data nodes.
- ... and this is a good overview for help pages and documentation!

IS-ENES Support

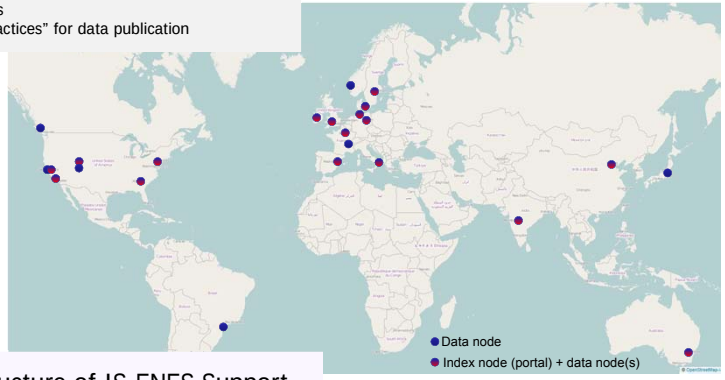
Support for data providers
- Data publication via ESGF data nodes
- Data quality assurance and control
  - Installation and application of QC software

Support for data users
- Personalized responses to support requests based on first/second level support structure

Support for data centres
- Identification and notification of data server problems
- "Best practices" for data publication

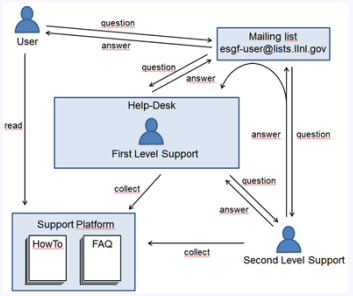
The Earth System Grid Federation (ESGF)

- A worldwide open source effort (http://esgf.llnl.gov)
- An operational worldwide data federation providing access to >2 PBytes of data
  - > 45 data nodes
  - > 8 synchronized portals
- IS-ENES supports the operation of the European ESGF data federation



Structure of IS-ENES Support

Starting two level support system



Support Challenges:

- Federated system based on a variety of national and institutional funding sources
  → Week operational federation wide service guarantees
- Users are not used to interact with a data federation
  - Bulk data requests interact with a distributed set of data nodes → partial transient failures
  - Authentication and Authorization problems
- While providing an operational platform, the ESGF software stack is under active development