GRUAN Data Portal

New possibility for data exchange within GRUAN

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Current status

➢ **GRUAN data flow between Sites, Processing Centres (PCs) and LC**

  ○ Usage of pure FTP server → without any modern security

  ○ In most cases → full read & write access

  ○ No possibility for fine control of rights

➢ **Use of passive FTP**

  ○ Requires a larger pool of open ports
    → collides with current safety standards

  ○ Use of pure FTP is forbidden in some institutions
    → cannot submit data

➢ **One account for all Sites**

  ○ Most involved parties have too many rights
    → collides with current safety standards
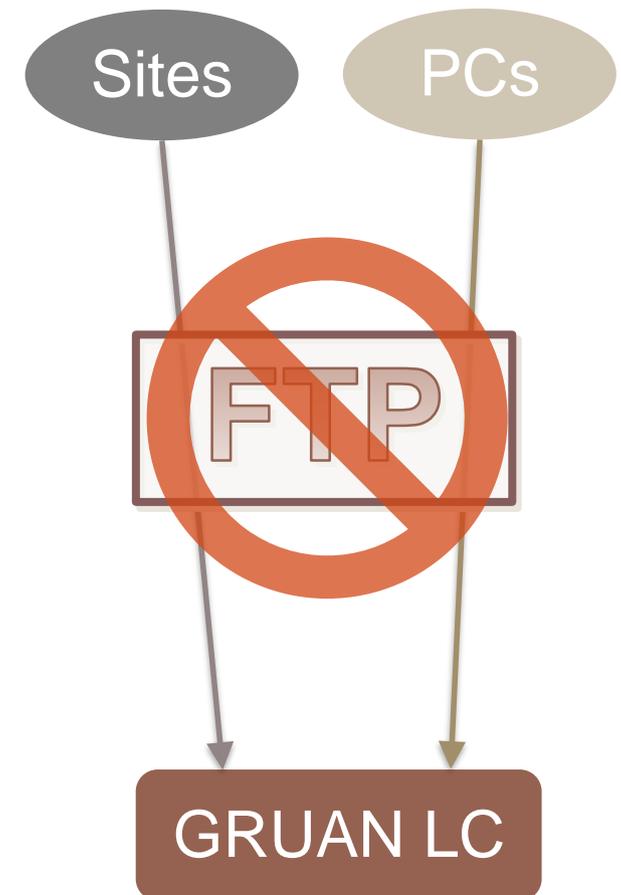
➢ Main focus of GRUAN Data Portal

- o Replacement of the old FTP server

- o User-based approach

- o Upload & download

- o Improved security – e.g.

  - ▪ A specific site has write-access only to own data paths

  - ▪ Changeable password, public keys, two-factor auth, …

- o Improved features

  - ▪ Web portal, SFTP, WebDav, FTPS, API, …
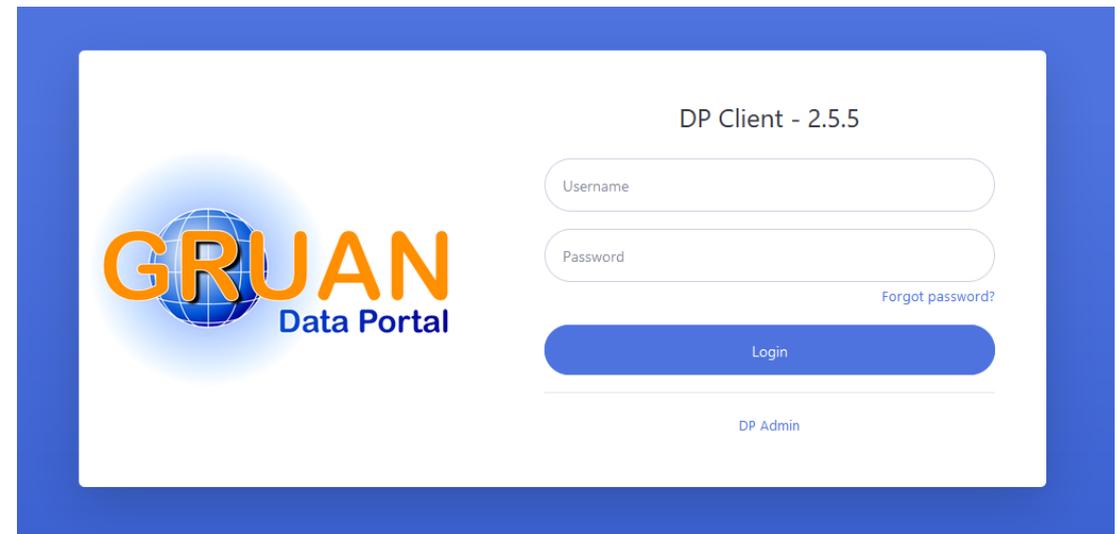
➢ BETA phase → ends now

- o Usage at Lindenberg (radiosonde) and Payerne, Ny-Alesund (lidar) as BETA users

- o Be aware that this portal will have some "teething troubles".

Web portal

➢ **Main directories**

- ○ upload/   – main upload directory (to use by sites and PCs)

- ○ upload-test/   – upload directory for tests and debugging

- ○ metadata/   – newest general meta-data (used e.g. by RsLaunchClient)

- ○ software/   – newest versions of GRUAN software (RLC, gtRsl, gt92, …)

- ○ storage/   – access to stored data (e.g. GDPs)

- ○ home/   – folder (with write access) to assist the exchange

➢ **Change of internal directory tree**

- ○ storage / Radiosonde / products / <product-version> / <system> / <year>

- ○ upload / raw / Radiosonde / <system>

- ○ <system> – unique code of GRUAN measurement systems (e.g. LIN-RS-01)

- ○ <product-version> – unique code of data product versions (e.g. RS41-GDP.1)

Updated GRUAN software

➢ Updated software

    o GRUAN RsLaunchClient (RLC v0.7.1)

    o GRUAN Tool RsLaunch (gtRsl v0.5.5)

➢ Added features

    o Additional protocols → sftp, ftps, webdav

    o Different handling of proxy server → part of specific configuration of connections

    o Enhanced configuration to handle

        ▪ Different (internal) directory structure at server (e.g. <system> instead of <site-name>)

        ▪ Upload measurement data as packages (one ZIP file instead of a couple of single files)

➢ Upgrades are required to use the new GRUAN data portal

Reordering of data flow

➤ Next steps

- o Switching the data flows of the individual sites

- o Switching the data flows of the processing centres (JMA, IPSL, GFZ)

➤ Procedure

- o LC contacts a site or PC → create one **specific account** per site or PC

- o Maybe necessary → **adjust configuration** of firewall or other security-related things

- o **Upgrade** of GRUAN software (e.g. RsLaunchClient, gtRsl)

➤ Goal

- o Finalise changeover latest by autumn 2024

- o Switch off the old FTP server this year

Ideas for further features

➢ Have easy access to all processed data related to own site

➢ Provide additional information, e.g.

  o Data flow statistics

  o Processing-related plots

➢ Provide improved QA/QC results

  o Related to the current discussions and future formalisations

  o Visual plots, report documents and automatically processable results

➢ Proposal for new task (TT-Sites)

  o Which feedback from LC and PCs are expected by sites?

    → What & when & how often

    → Detailed requests

Summary

➢ GRUAN has a new Data Portal for any **internal** data flow.

➢ The changeover will take place from next week.

➢ Proposal for new task of TT-Sites: Feedback from LC & PCs

Thank you for your attention.