

GWDG SERVICES

HackyHour

Christian Köhler

christian.koehler@gwdg.de

Georgios Kaklamanos

georgios.kaklamanos@gwdg.de

GWDG – Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen

Etherpad

ShareLaTeX

GitLab

ownCloud

Rocket.Chat

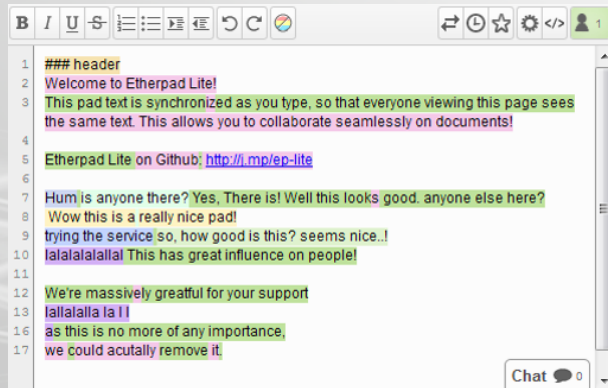
HPC

Compute Portal

<http://etherpad.gwdg.de>



- Highly customizable Open Source online editor providing collaborative editing in really real-time.

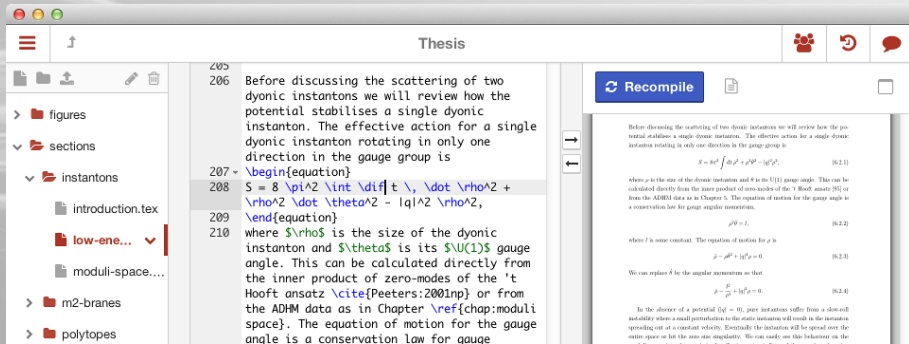


<https://sharelatex.gwdg.de>

■ Online collaborative LaTeX editor

■ Documentation

<https://www.sharelatex.com/learn>



The screenshot shows the ShareLaTeX web interface. On the left is a file explorer with a tree view containing folders like 'figures', 'sections', 'instantons', and 'm2-branes', and files like 'introduction.tex', 'low-ene...', and 'moduli-space...'. The main editor area displays a LaTeX document titled 'Thesis'. The document content includes a paragraph about dyonic instantons, a LaTeX equation block for $S = 8 \pi^2 \int dt \left(\frac{1}{2} \dot{\rho}^2 + \frac{1}{2} \dot{\theta}^2 - \rho^2 \right)$, and another paragraph about the size of the dyonic instanton and its gauge angle. The right sidebar contains a 'Recompile' button and a preview window showing the rendered LaTeX document, which includes the same text and equation as the source code.

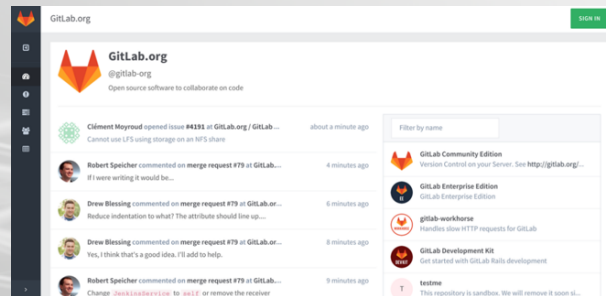
`https://gitlab.gwdg.de`
(login with short email address)



GitLab

■ Just like GitHub but:

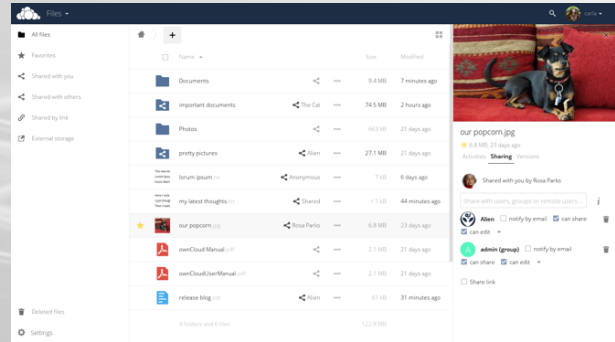
- Open Source
- Hosted at GWDG
- More private projects
- ... (other cool things)



<https://owncloud.gwdg.de>

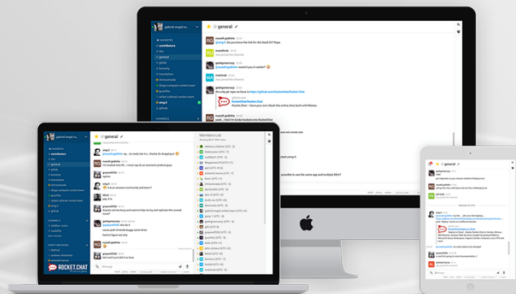
■ Just like Dropbox but:

- Open Source
- Hosted at GWDG
- 10 Gb space!
- Amazing network speed when accessing from the university network.
- ... (other cool things)

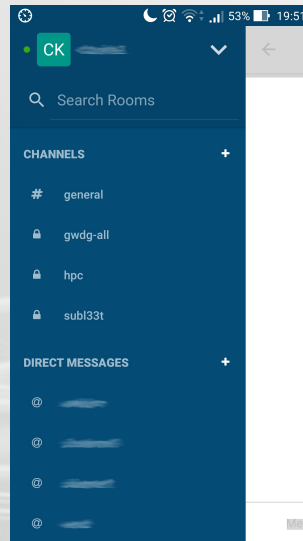
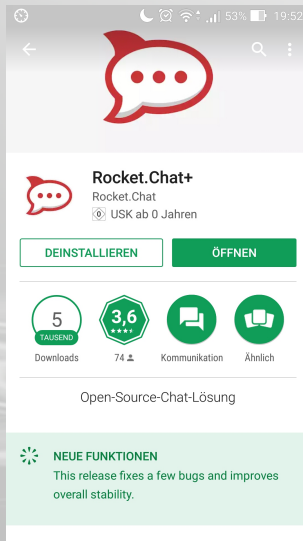


<https://chat.gwdg.de>

- Chat service
- Similar to Slack
- Access through web portal
- Clients for all Android and iOS also available



- recommended for Android:
Rocket.Chat+
- native client



- HPC demand from Life/Natural/Social sciences, Humanities
- Scientific Compute Cluster
- GöHPC: Operators and Users of HPC Clusters
- <http://hpc.gwdg.de>



Cluster specifications

Nodes 675

CPU (Peak) 368.818 TFLOP/s

Cores 17.048

Memory 85.056 GB

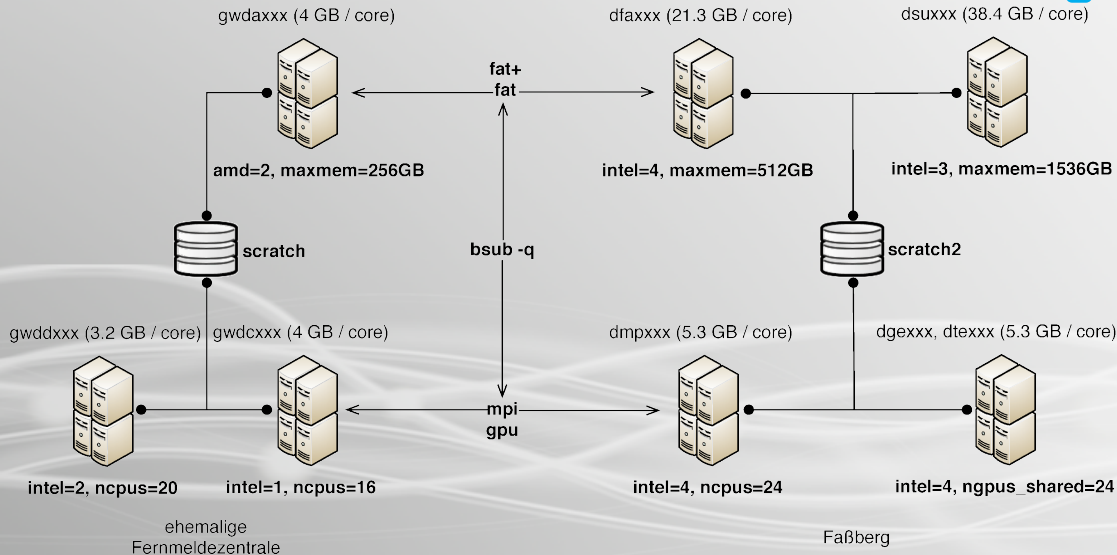
GPU/Coproc. 288,560 GFLOP/s

<http://hpc.gwdg.de/systems.html>

- Latest CPUs: Intel Broadwell (2016-08)

- GPUs: nVidia GTX 770/980, K40

HPC - CLUSTER OVERVIEW



IBM Platform LSF

Status monitor lsf.gwdg.de/lsfinfo/

- Using the GWDG Cluster
- Parallel Programming with MPI
- GPU Programming with CUDA
- Parallel Programming with OpenMP
- <https://info.gwdg.de>

<https://www.gwdg.de/server-services/gwdg-cloud-server>

- Based on OpenStack
- Images for most of the usual Linux distributions
- Easy to use
- Per researcher, we provide up to
 - 3 VMs
 - 12 CPUs
 - 24 GB of RAM
 - 3 Public Addresses



openstackTM
CLOUD SOFTWARE

CLOUD SERVER SELF SERVICE				
Resources	Server 0 / 3	Processor 0 / 12	Memory 0.0 / 24.0 GB	IP Address 0 / 3
Server	Manage Server Add Server ...			
Security	Security Group 1 default		SSH keys	Edit
Snapshots	Manage snapshots			

Advanced users can also access through horizon interface

<https://cloud.gwdg.de/horizon>



Copyright note: Some slides in this presentation include figures, trademarks, logos which are properties of third parties. Rights are reserved to the corresponding rights owners.