

Welcome!

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Biomedical Research Computing (BMRC)

- Established in WHG 2009, primarily funded from SRF income
- Currently supports ~180 PI groups, ~900 active researchers across ~25 departments
- Team of six with a variety science and non-science backgrounds



BMRC work is incredibly varied! For example, we:

- work with researchers to optimize code, *e.g.* UK Biobank 500,000 genotyping
 - [Nature 562 p. 203 \(2018\)](#)
- technically support GPU-intensive research, *e.g.* SARS-CoV-2 changes brain structure
 - [Nature 604 p. 697 \(2022\)](#)
- establish tightly controlled collaborative environments, *e.g.* blood atlas of Covid-19
 - [Cell 185 p. 16 \(2022\)](#)
- provide computation for Oxford's Covid-19 research, *e.g.* SARS-CoV-2 in-host diversity
 - [Science 372 p. 6539 \(2021\)](#)
- support electron-microscopy research, *e.g.* Covid-19 omicron structure
 - [Cell 185 p. 467 \(2022\)](#)
- support collaborations with industrial partners, *e.g.* the BDI-Novartis Partnership; GSK IMCM, Janssen, Novo Nordisk, Astra Zeneca

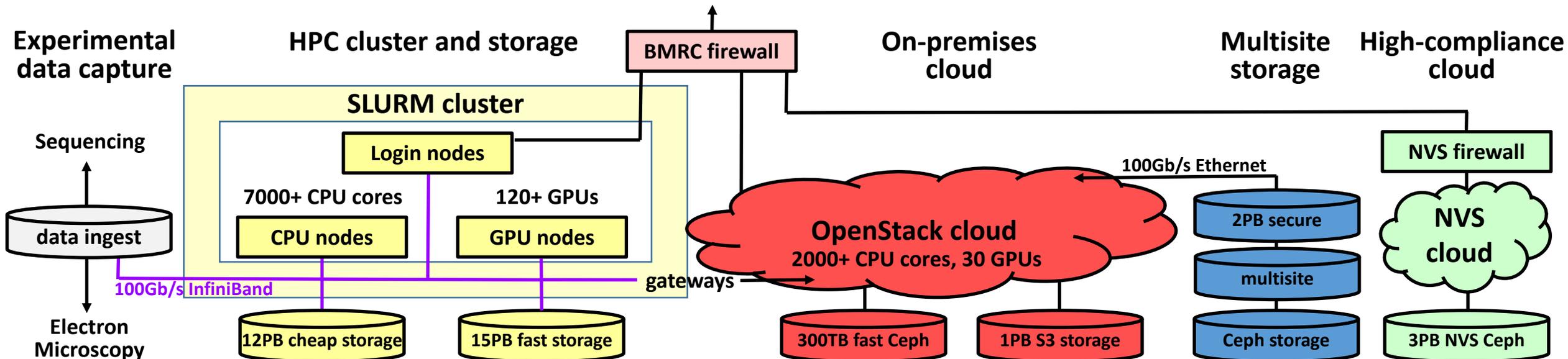
Biomedical Research Computing (BMRC)



BMRC occupies 29 racks split between WHG and BDI

The team members are embedded directly with the researchers to provide local support backed by a ticketing system

BMRC offers a range of computing platforms allowing high-throughput statistical computing and processing of significant quantities of experimental data (sequencing, electron microscopy, MRI, digital pathology, optical microscopy, proteomics)



Why is BMRC looking at Lustre – and why LUG UK?

Like most biomedical research computing, one of our biggest challenges is to increase the levels of data security and governance while maintaining the levels of performance on which our researchers have come to depend

Recent developments in Lustre – and the future roadmap – make it very attractive to us and we are actively exploring the security features in the latest releases of Lustre

Lustre would be much more attractive to us if there was an active UK community as a source for skills, help and inspiration (as well as being good for career development)

So, rather than wait, I'm honoured to take on the role of acting chairman and welcome you all to Lustre User Group UK 2022 in Manchester! Please complete the survey to have your say in the future direction of LUG-UK – even if it is only to depose me!

We've got some great talks lined up, you can meet key Lustre developers and you can socialize with your peers and vendors from across the UK

Acknowledgments:



wellcome
centre
human
genetics



- **The rest of the BMRC Team – Jon Diprose, Geoff Ferrari, Colin Freeman, Adam Huffman, Charles Roberts**
- **If you are interested in being part of the future of BMRC, please come and talk to me informally!**
- BMRC would not exist without the vision and long-term support of senior management within the Wellcome Centre for Human Genetics, the Big Data Institute, the Nuffield Department of Medicine and additional encouragement from many other University departments. BMRC is financially supported by many sources through a usage charge, but is also strategically supported by the Wellcome Trust Core Award 203141/Z/16/Z, the NIHR Oxford BRC and the University of Oxford

Acknowledgments:

- **Thank you for being part of LUG UK 2022!**
 - Thanks to our sponsors for enabling the meeting and to the developers for attending
- **On with the real talks...**
 - Jon Diprose (Oxford)
 - Alastair Basden (Durham)
 - James Beal / Richard Mansfield (Sanger Institute & DDN)
 - User Requirements Panel Discussion (Coffee Break)
 - Simon Trill (Nvidia)
 - Peter Jones (Whamcloud)
 - Andreas Dilger (Whamcloud)
 - Community Development Panel Discussion (Networking Reception)
- **Please remember to fill in the Lustre User Group UK survey before you leave!**