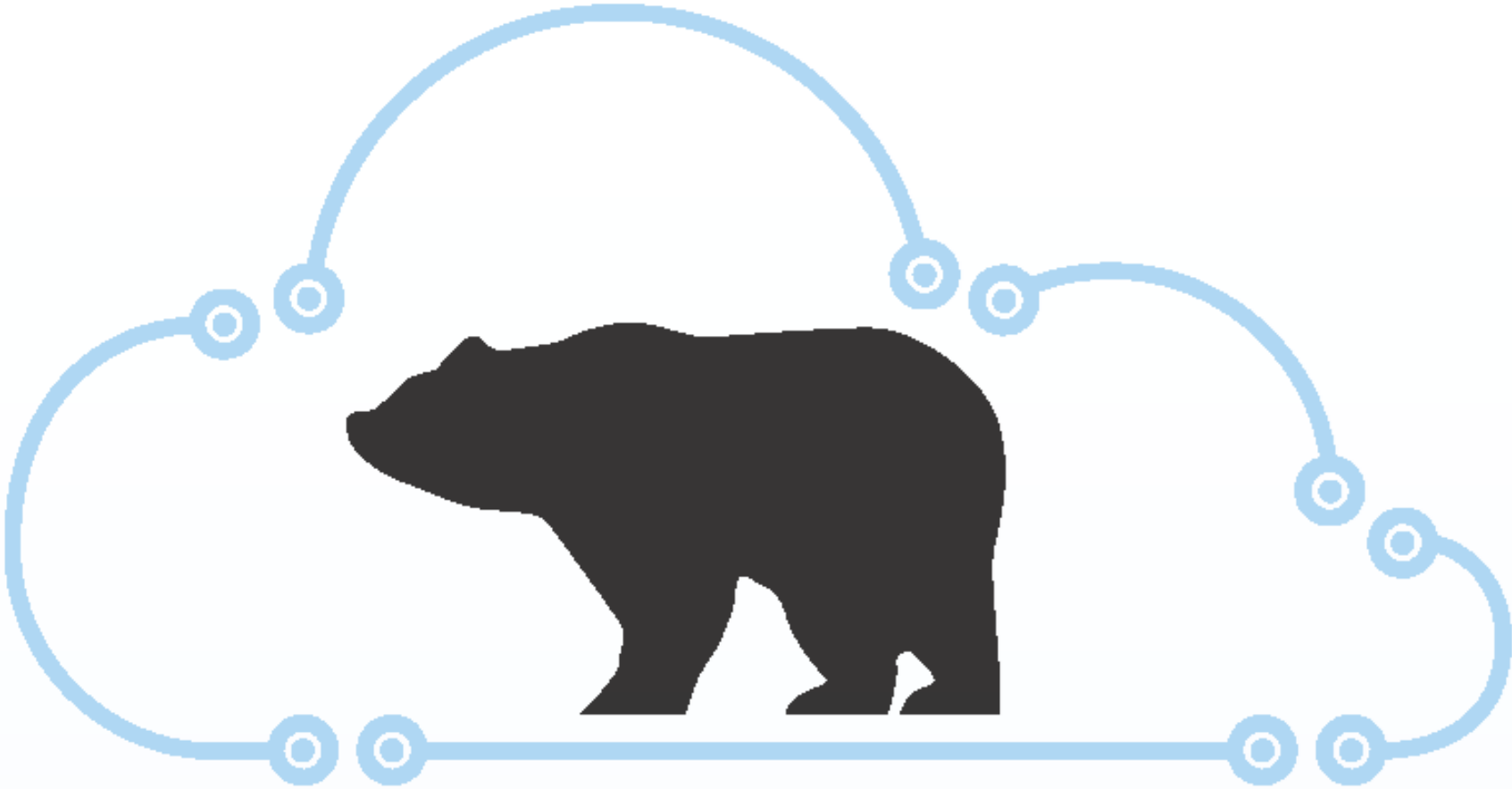
BEAR Cloud



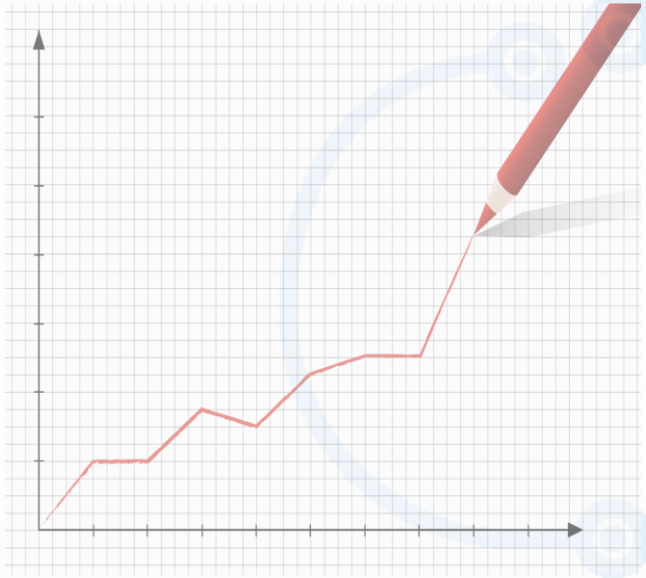
BEAR

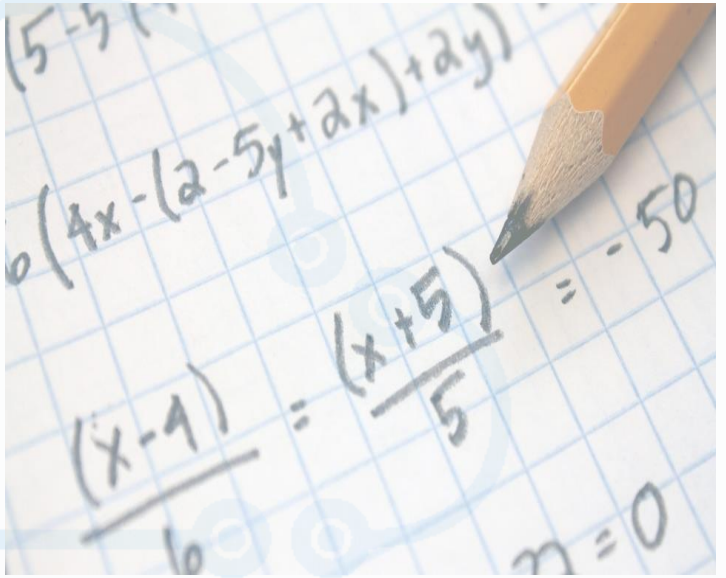
Birmingham Environment for Academic Research

Developed and supported by Birmingham's Research Computing Team

BEAR

Birmingham Environment for Academic Research





BEAR, BEAR Cloud and HPC

“High Performance Computing most generally refers to the practice of aggregating computing power in a way that delivers much higher performance than one could get out of a typical desktop computer or workstation in order to solve large problems in science, engineering, or business.”

BEAR Cloud

An infrastructure to support compute and/or memory intensive research.

- BEAR Cloud retains the power of traditional HPC which will be familiar to users of BlueBEAR
- It also introduces the ability to create virtual servers on demand. These servers can have:
  - large memory and many cores
  - different operating systems – different varieties of Linux or Windows – and can be tailored for applications that have been developed for particular environments

BEAR Cloud

An infrastructure to support compute and/or memory intensive research, in an energy efficient way.

- BEAR Cloud is built using Lenovo NeXtScale servers.
- These deploy warm water cooling direct to the chip – the first installation in the UK - providing some of the most advanced and efficient cooling technology, and minimising our carbon footprint.
- We have brought together the best and most advanced technology from our other partners too: Mellanox, DDN and IBM, all supported by OCF.
- This isn’t a turnkey solution – it has been developed through a strong partnership with all involved.

BEAR Cloud

- BEAR Cloud is also about a partnership with our researchers.
- It has been designed with them in mind, and very often through close collaboration.
- BEAR Cloud incorporates the University's major investment to support Life Sciences (CaStLeS)
- BEAR Cloud is about advanced computing **FOR ALL**.
- It's about breaking down the barriers to entry.
- It's targeted at **ALL** disciplines across campus:
  - from archaeology to cancer genomics;
  - from physics to theology

BEAR Cloud

It’s about results that change lives!