

Diamond Light Source Site Report

Frederik Ferner, James Thorne
Scientific Computing Team



Diamond Light Source



Storage

- Lustre03 500 TB
- GPFS01, 900 TB, 16 GB/sec
- GPFS02, 5 PB, 40GB/sec
- GPFS03, 10 PB, 60GB/s
- NetApps

NFS

- Problems with NFS access via CES nodes



Compute

- Univa Grid Engine
- 5,760 cores
- 254 nodes
- NVIDIA GPUs
 - 8 V100
 - 192 P100
 - 24 K80
 - 24 M2090

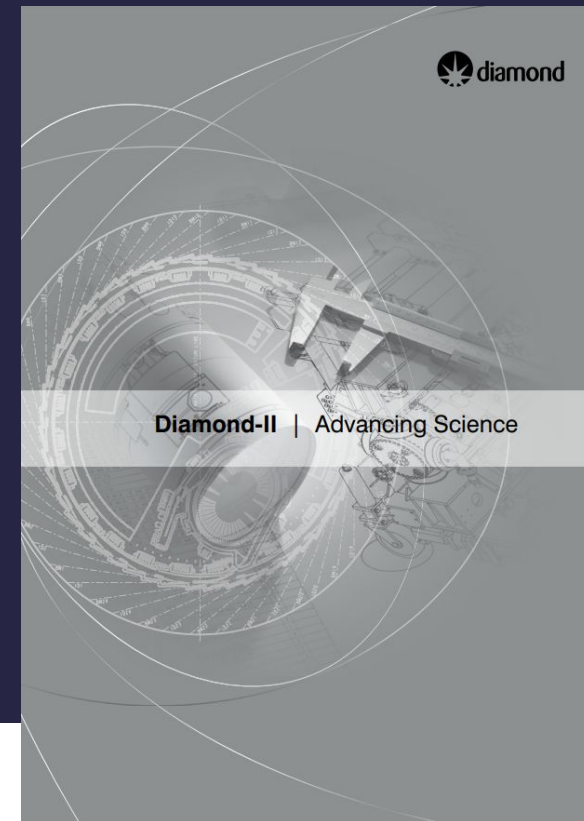
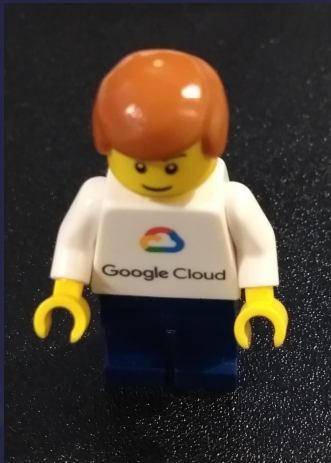


Student/Graduate projects

- EPICS IOCs in Docker/Kubernetes
- Apache Kafka for data acquisition and processing
- Ephemeral, in-memory Ceph storage spun up on per-job basis.
- Containerisation of software packages

The future

- Higher data rate detectors
- Diamond-II
- HTCondor and Kubernetes
- The future is (still) cloudy



Diamond-II Cell Layout

