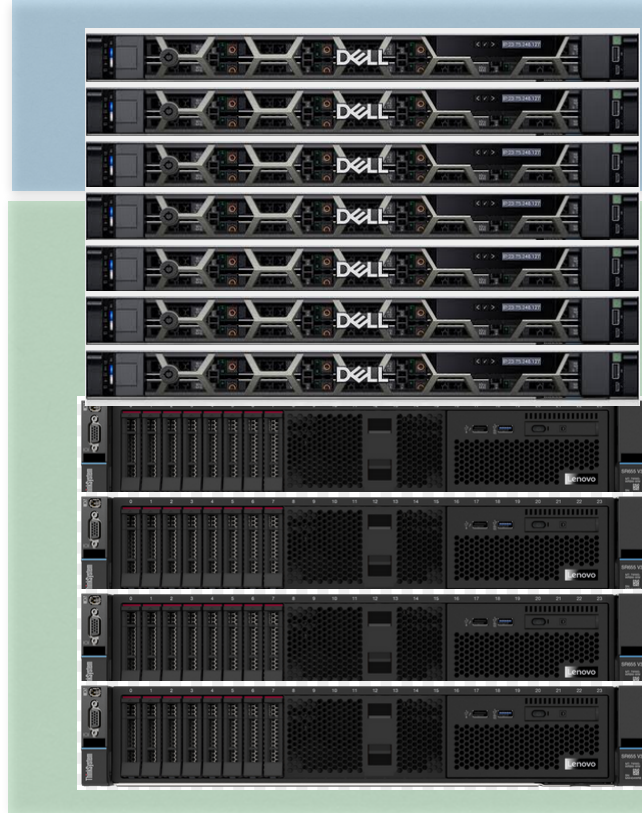# New Cluster Introduction

Replacing Jalapeno

Duncan Mortimer, 24/4/2024

New Hardware
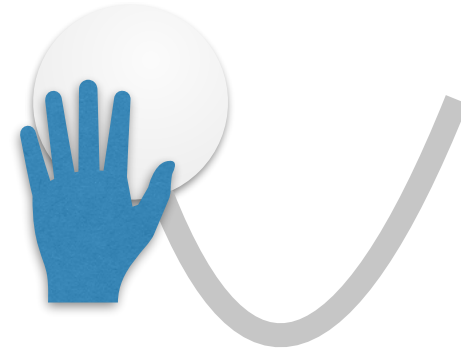

364 Cores
12 K class 12GB GPUs

3 Management Hosts
(Web and software hosting)

2 Remote Desktop Hosts
2 Compute + 4 GPU Hosts

288 Cores
12 A class 12GB GPUs
2 H class up-to 80GB GPUs

Accessing Ood

Connecting to and using

- **O**pen **O**n **D**emand - https://ood.fmrib.ox.ac.uk
    Web based VNC
- SSH - via clint.fmrib.ox.ac.uk
- SFTP/SCP/rsync - via sftp.fmrib.ox.ac.uk (or file transfer via Ood)
- No legacy X11/VNC

Changes

Software

- Rocky Linux 9 (Red Hat clone) (Jalapeno is 7.3) - very old software may no longer work
- All research software distributed by a much faster mechanism via different locations

    No /opt/fmrib - Check your .bashrc to see if you setup Conda from /opt/fmrib

    Ask computing-help@win.ox.ac.uk if you have Conda environments you use regularly on the cluster - central installation could speed up running

    MATLAB much faster to launch

- Software configured using 'module' command

    Only fsl_sub loaded by default (a few system configuration modules too)

- Some module names may have changed (use `module avail` to list)
- Older software versions may no longer be installed

Changes

Cluster

- SLURM (https://slurm.schedmd.com/)
- Queues mirror BMRC's cluster:

  veryshort.q + short.q > short (1 day 6 hours)

  long.q + verylong.q + bigmem.q > long (10 days)

  interactive.q > interactive (10 days) - only to be used via OOD

  gpu.q > gpu_short (4 hours)

  gpu_long (2.5 days)

- Recommend fsl_sub -T is used to specify number of minutes required
- Use fsl_sub -R <GB> to request more than default 16GB per slot
- /tmp is private to each job
- No K40 GPU class
- No 'infinite' queues

Changes

Remote desktop environment

- Runs as a cluster job

- Xfce (jalapeno is lxqt)

- Session is limited in CPU (core equivalents) and memory - programs requesting more than you have requested may be killed

- /tmp is private to the session (cannot access files from other sessions or users)

- GPUs available for CUDA tasks - please use sparingly

Documentation

Links

- Overview: https://www.win.ox.ac.uk/research/it/latest-win-it-news/ood_cluster
- OOD: https://www.win.ox.ac.uk/research/it/i-want-to/wfh/remote-desktops/fmrib-remote-desktops/fmrib-ondemand
- SSH connections: https://www.win.ox.ac.uk/research/it/i-want-to/wfh/ssh
- Cluster: https://www.win.ox.ac.uk/research/it/i-want-to/analyse-my-data/use-hpc-compute-resources/fmrib-compute-cluster
- Environment modules: https://www.win.ox.ac.uk/research/it/i-want-to/analyse-my-data/environment-modules
- BASH Customisation: https://www.win.ox.ac.uk/research/it/i-want-to/analyse-my-data/bashprofile
- Python/Conda: https://www.win.ox.ac.uk/research/it/i-want-to/analyse-my-data/python_conda