New GPU Cluster

Iain Rae

Computing Officer

School of Informatics

2016 5 nodes, 20 GPUs plus Google cloud

Oct 2017 over 300 students in MLP

- No Google Cloud

- Normal cluster procurement (6+ months)

– Requirements capture & Design

– Install racking/network/power

– Equipment tender/bid/selection process

– Build, install, acceptance test, tune scheduler and filesystem

– Beta test program

– commission

Oct 2017 over 300 students in MLP

- No Google Cloud

- Normal cluster procurement (6+ months)

– Requirements capture & Design

– Install racking/network/power

– Equipment tender/bid/selection process

– Build, install, acceptance test, tune schedule and filesystem
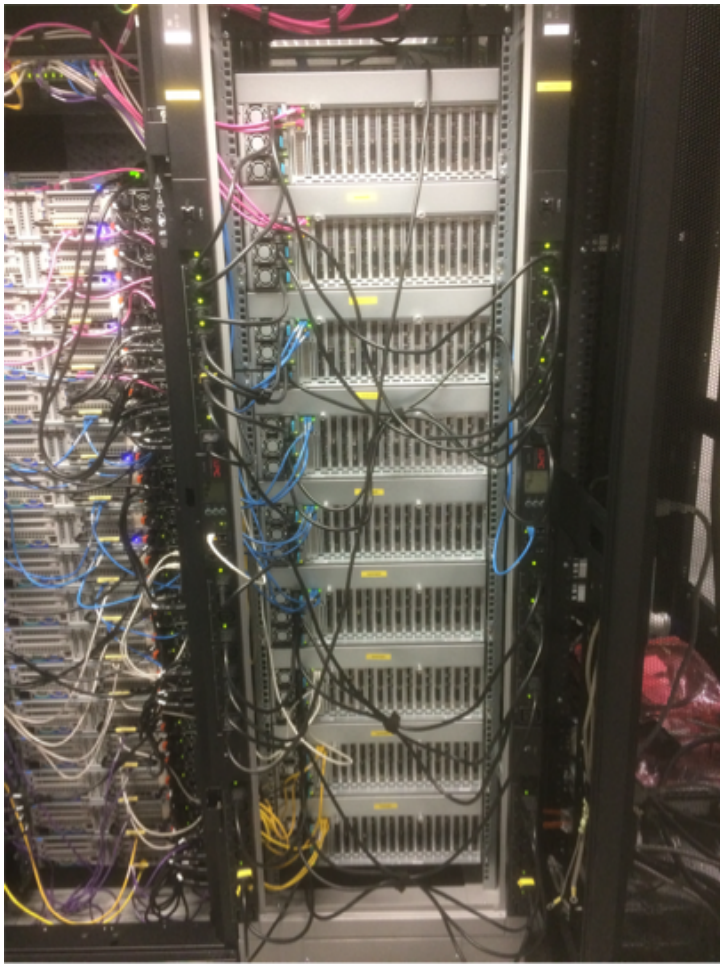
– Beta test program

– commission

Dec 2017 "It would be nice if all students had their own GPU"

- This Time it's a bit different

– Requirements capture (4 hours), use existing filesystem (gluster), lower power GPUS 8 to a box

– Fit cluster in existing spaces where we have power (3 racks on 3 sites)

– Reduce procurement process down to 2 weeks for nodes

– Place order 20/12/2017

– Nodes start to arrive 19/1/2018, first power on 20/1/2017
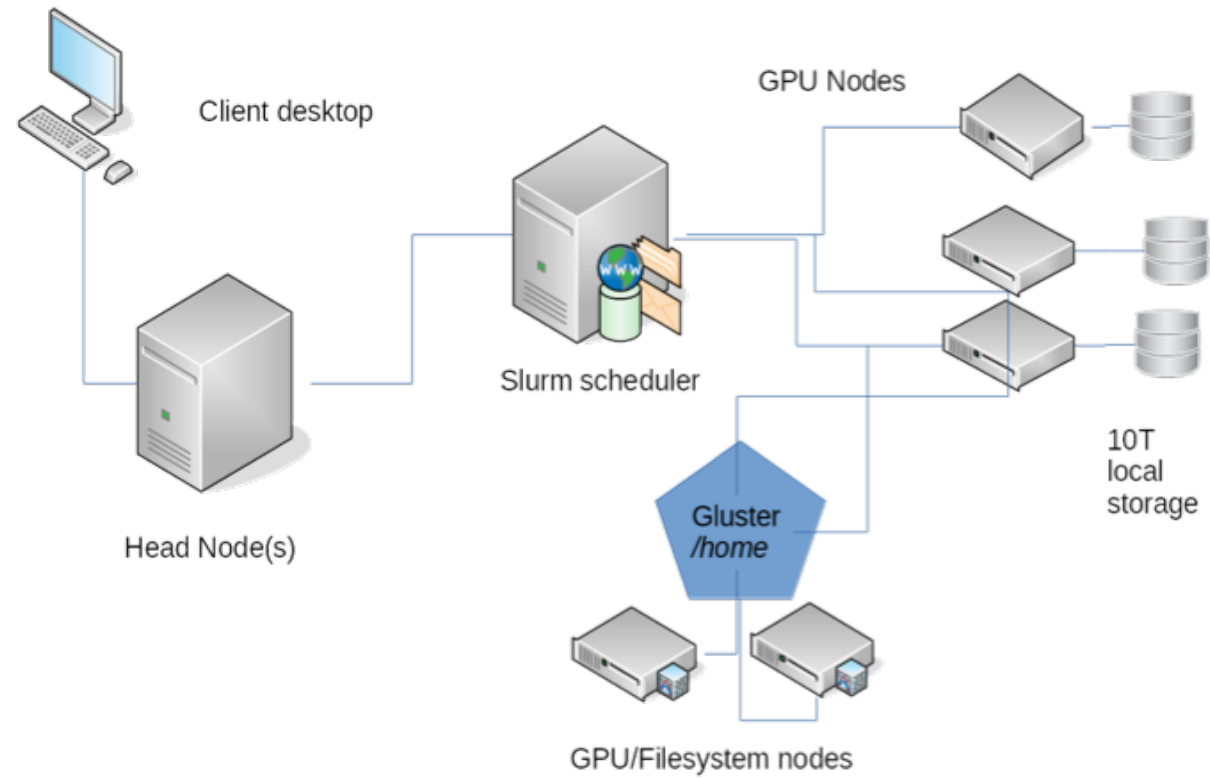
Rack #1 (nodes 1-9)

Node with 8 GPUs

Rack 2

Cluster Organisation

Oct 2017 "over 100 students"

- Normal cluster procurement (6+ months)

– Requirements capture & Design

– Install racking/network/power

– Equipment tender/bid/selection process

– Build, install, **acceptance test, tune scheduler and filesystem**

– **Beta test program**

– commission

Likely Problems

- Hardware is new and unknown

- Filesystem is reliable but not speedy (Transit van)

  - Slow on metadata queries

  - Think about using libgfapi

- Things will break at the joins

Problems/Issues

- Contact support

  – https://www.inf.ed.ac.uk/systems/support/form/

  – Have screen captures, logs, example code when reporting issues.

  – Feel free to cc me in the answer

  – iainr@inf.ed.ac.uk

- Help desk at AT 5.08 2pm