

Research IT Club

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Research Infrastructure Update

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RLP - Stream 1 Investment (Opt Z)

<http://staffnet.manchester.ac.uk/research-lifecycle-programme/>

- Phase 1 - Local HPC (reallocated RLP funds from N8-HPC)
 - Funding allocated to local compute resource to address *true* HPC needs
 - Hardware to be located in Computational Shared Facility (CSF)
- 4096 cores (Intel Skylake), IB-connected
 - Reserved for "HPC" jobs of 128/256 cores and up
 - Light-touch application process (cf. Polaris)
- **PO is out** - expected to commission ETA March 2019

RLP - Stream 1 Investment (Opts M&K)

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- Phase 1 - "Compute Capacity and Orchestration"
- Your input was requested
 - Two workshops held in October
- Outcome - Business case to CITP on 18th Dec
 - 16 x v100 GPUs + research-group contributed GPUs
 - High-mem nodes (3 nodes @ 1.5 TB RAM each)
 - Cloud cycles for interactive compute (Shiny + Jupyter)
 - HTC
- If successful - PO out Jan 2019, commission ETA April 2019

Condor and AWS

- RI Team working with AWS on Condor bursting in to Cloud
 - Condor + Cloud-bursting "natural" fit (eg data movement)
 - contrast HPC requires tightly-integrated cluster
- Make use of AWS Spot Market
 - Cost effective use of cloud resources
 - Any VM type possible in Spot (eg high-mem)
 - AWS VM hibernation to avoid wasted cycles
- Use cases
 - Low-priority work using Spot - costing model TBD
 - Urgent/on-demand work - likely to be charged back to users
- Early adopters wanted!

Computational Shared Facility Update

- Recap: CSF3 = DPSF + CSF2 + N8-HPC + research-group contribs
 - Hardware and users being moved in phases to minimise disruption
 - Summer round of research group funded hardware (inc GPUs) installed in CSF3
 - October round of research group funded GPUs ordered
- Phase 1 & 2 (end Oct): **Done**
 - All DPSF compute nodes and users moved to CSF3. DPSF login node withdrawn.
- Phases 3 (Nov / Dec): **In progress...**
 - CSF2 compute nodes moving in batches (~1800 cores moved, ~1000 more next week)
 - Specific user groups to be given CSF3 access this week
- Phase 4 (early in new year):
 - Final batches of nodes and users early in new year
- Aiming for 15,000 cores in CSF3 (inc N8-HPC investment) eventually