

Research IT Club, Feb 2020

Research Infrastructure Update

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CSF4 (aka ALAN)

- Will compliment CSF3 & The HPC Pool
- Funded through a business case to FSE to refresh existing CSF contributions
- 3880 CPU cores
- GPFS filesystem for scratch (CSF3 = Lustre)
- SLURM for batch jobs (CSF3 = SGE)
- Not everyone will use CSF4 - dependent on group affiliation & software
- Early User Access - mid April 2020 (tbc)

Condor Bursting to Cloud

- Uses the AWS 'spot' market
- A simple addition to user jobscript
- Good for peaks in demand, very urgent work, jobs with low memory, low disk space requirements
- Not suitable for restricted or highly restricted data
- Successful use cases
 - Proton Beam Therapy Simulation/Modelling
 - Single-molecule magnet development
- Free - funded by RLP while in dev - it WILL be charged for soon
- Interested? Email its-ri-team@manchester.ac.uk to discuss further

RLP Project O - IaaS

- Lots of researchers on campus making use of cloud computing
- Issues/Risks
 - Difficult to support; financial regulations; Security; GDPR; data breaches; data loss
- Solution - buy AWS resources through us!
 - We may be able to reduce your costs (Reserved Instances, Spot market)
 - Charge back through the University systems (not your personal credit card!)
 - A single institutional 'zone' through which to manage everything (coming soon)
 - Great for Jupyter notebooks, virtual labs, Teaching & Learning, etc
 - Containers & Images maintained by us (e.g Docker and Singularity)
- Storage - under investigation - a place for "cold data"? Inexpensive for some workloads?
- Other vendors - we are in talks with Azure, & Google
- Interested? Email its-ri-team@manchester.ac.uk to discuss further

RLP - Project S

- A new Data Safe Haven (DSH) service
- A platform for handling research data requiring the highest level of access control and security
 - Ensuring compliance with legal & policy requirements
 - Guarding against reputational damage due to data leaks/breach
 - Balancing of risks with opportunity, maintaining competitiveness
 - A management platform enabling easy management of access, audit, data classification, data re-reuse & discoverability
 - Variety of compute hardware and storage
- Requirements capture completed, business case submitted Dec 2019
- Meetings now taking place with potential suppliers
 - Cloud based? Many of the vendors have compliance certifications (e.g ISO27017, ISO27018, NCSC - CyberEssentials, HIPAA)
- Proof of Concept later this year

RLP Project N - Edge Compute & Satellite Storage; N1 Databases

- A service design project only
- Workshops held late last year to understand what 'local' needs researchers have that are not being met by central facilities
 - PCs/VM/Storage directly attached to instruments in your lab
 - Pre/Post processing workloads
 - High speed networking, large downloads
- Consultancy, fast & cost effective procurement, professional support of OS & hardware by Research IT (if desired)
- This will be a chargeable service - tiers of service, scaled pricing, fractions of FTEs
- Also - provision of databases & lab notebooks
 - appropriate security, software management, multiple database types, consistency of access

Costing Research Infrastructure on Grants

- Most of our services have to be paid for (limited 'free at the point of use' on some of them).
- Uncharged: Condor, RDS (up to 8TB), day to day applications support
- Charged: CSF (beyond 'free' allocation), Storage over 8TB, medium/large VMs, Edge Compute and Satellite Storage, significant cloud resources
- How much? It depends on your requirements.
- Please get in touch (its-ri-team@manchester.ac.uk) as early as you can in the grant writing or if you have the germ of an idea you may need our help with
- Research IT costing clinics (every 6 weeks) - next one 25th Feb 3pm
 - Please register <https://bit.ly/2vll4ue>

Links/Contacts/Outreach

- Research IT Website: <http://www.itservices.manchester.ac.uk/research/>
 - Sign up to the monthly newsletter ('Quick Links' on the right)
 - Follow us on twitter @UoM_eResearch
- Blog: <https://researchitnews.org/>
- Drop-in sessions
 - Every fortnight – next one 26th Feb 2-3pm Kilburn, Byte Cafe
- Courses: <https://bit.ly/37quyBW>
- Research Lifecycle Programme: <https://www.manchester.ac.uk/rlp>
- Research Infrastructure User Docs: <http://ri.itservices.manchester.ac.uk/>