

# LCFG in EPCC

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- Context – what EPCC does, why we're interested in LCFG?
- History – EPCC's previous LCFG configuration
- Current – Where we're at now with LCFG
- Evaluation – a (relatively) new adopter's results
- Future – where we see EPCC going with LCFG

- EPCC (within School of Physics) has ~75 staff
- Focus on High Performance Computing (HPC) & Grid
- SRIF Research SAN (155TB, 2004) – now IS service
- QCDOC (~14,000 CPU, 2005) – one of 3 in world
- IBM BlueGene/L (2048 CPU, 2006) – first outside USA
- ~4FTE to support HPC + ACF; ~2 for core services
- EPCC: need to adopt/adapt central services to target local effort at EPCC priorities – ***move from PA's “boring” layer!***
- School: need to provide coherent services to staff (currently 3 separate teams/service areas)

- LCFG ver 1 forked ~1994 (!)
- SunOS -> Solaris (current LCFG == 9)
- Locally maintained/developed
- LCFG embedded in EPCC Solaris cluster usage (nsu, jumpstarts, etc)
- Need to migrate to Linux, support OS X...
- Without breaking current usage
- Within local effort constraints
- Within strategy to adopt/adapt central services & provide coherent School services

- Initial evaluation project (3 months)
- ~0.5FTE to evaluate *feasibility, fitness for purpose, support*
  - Stephen Irvine (new to University, LCFG)
- Initial goal: prototype IPTables firewall profile
  - simple, well-defined, easily tested service
  - straight comparison with RHEL-based service adopted from IfP
- Final goal: central, coherent configuration & management of all major platforms (Windows, Linux, OS X)
- Milestones:
  - FC3 client (generic) - INSTALLED
  - FC5 client (generic) - INSTALLED
  - FC5 firewall (specific components) - STARTED

- Feasibility:
  - Initial learning curve moderately steep (docs, distributed development/service provision)
  - IS desktop setup works well (SelectPC, etc)
  - Need to understand overlap with Informatics
- Fitness for purpose:
  - Already installing client machines with only minor issues
  - Starting to understand how to specify & modify profile components
  - Need to gain experience of generating site-specific components (e.g., Globus-based modules) for managed deployment
- Support:
  - IS: excellent – most compelling reason for adoption
  - Informatics: extremely helpful - willing to explain, discuss

- Include other EPCC COs
- Pilot test IS FC5 on selected EPCC clients (Ph.Ds, software developers) to uncover local issues, constraints:
  - Understand full lifecycle (specification, deployment, managed service)
- Investigate overlap/differences between IS/Informatics:
  - Install Informatics test clients in EPCC (other platforms?)
- Identify areas for EPCC to contribute development/test effort:
  - laptops? OS X? Solaris
- Decide scope of deployment in EPCC:
  - Clients only? Servers?
- Roll out to EPCC staff, projects

- IS DST – Kenny, James for doing all the hard work
- Informatics – Paul, Alastair, Stephen, Chris for LCFG & helpful support
- SEE – Michael Gordon for helpful guidance at the start
- Stephen Irvine – for getting EPCC onto the learning curve