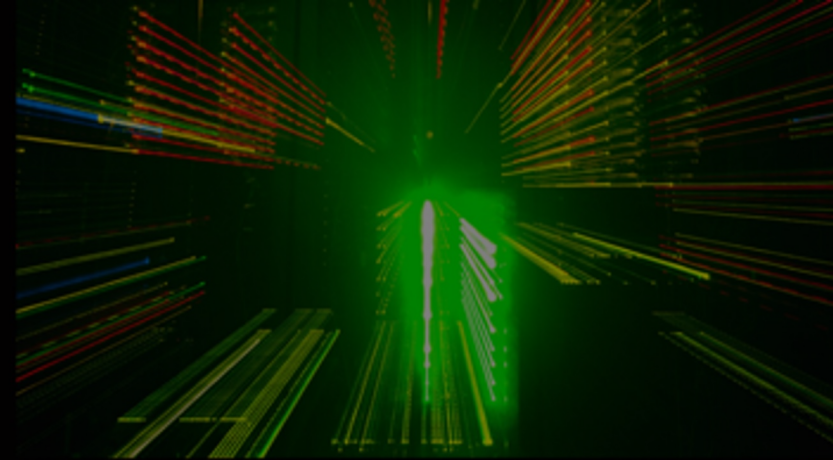


RALPP Site Report

PPD Status and Plans
Chris Brew



Status

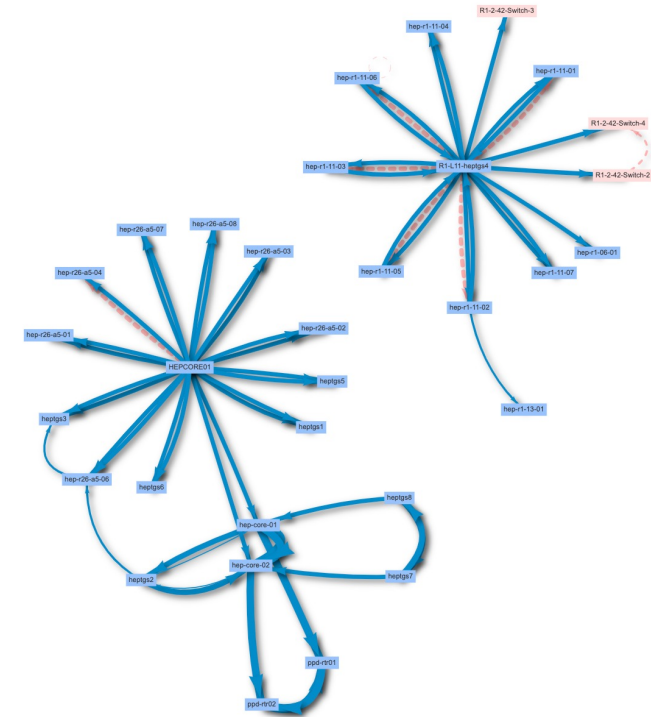
- Effort:
 - Linux
 - 1 and a bit FTE
 - Windows/Office
 - 2 FTE plus an apprentice
 - A bit of Physicist Programmer for hire
- Desktops/Laptops/Printers/Windows Backend Servers for a department of 70-100 people.
- Medium Large Tier 2/3
 - 9,000 Logical Cores, 110k HS06, 8PB Disk
 - 85% Grid : 15% “Local”

Accelerated Computing Facility

- Mercury Interactive Analysis Cluster
 - 11 Interactive Nodes, 312 Cores
 - 2 BeeGFS File Systems (Scratch!)
 - Data1 – 20TB Spinning Rust
 - Data2 – 40TB SSD
- Playground and Production Access to Accelerators:
 - “Free for all” Interactive:
 - 2 x Nvidia Titan X, 4 x Nvidia Titan V
 - 1 x Xilinx U250 FPGA
 - 1 Intel D5005 FPGA
 - “Production” Batch:
 - 6 Nvidia Titan RTX
 - 7 Nvidia A100
 - 2 AMD MI210
- Have remit (and money) to support “The Community”

New Network

- New Routers – Pair of Extreme
 - 2 x 100Gb/s to RAL Core
 - 2 x 100Gb/s to RAL Border Routers
 - 2 x 100Gb/s to PPD Main Core
 - 2 x 10Gb/s to PPD Resilience
- New Core – Pair of Dell S5248F
 - 2 x 100 Gb/s to Routers above
 - 2 x 25Gb/s to 2 x 10Gb/s to ToR (S4810s or S5248Fs)
- Will route to the Tier 1 via the Border Routers.
- IPv6 (Dual Stack) and Jumbo Frames almost everywhere



New Home File System

- Currently Pair Dell Equilogic iSCSI
 - Internally mirrors between two boxes in two rooms
 - VM mounts iSCSI and exports NFS
- New Pair Dell Unity iSCSI
 - No internal mirroring
 - Two VMs mount iSCSI, DRBD Mirror between them, Virtual IP address for NFS service
 - No HA STONITH for our VM -> Primary/Secondary with manual failover
 - Undergoing Testing

Repository of small, old websites

- As the central lab we end up running many “Project” webs for the community
- A variety of backends – HTML, Redmine, Trac, TWiki, DocDB, ...
- CentOS7 EoL will hopefully cull some of them
- Dreaming of one backend that I can persuade all new requests to use.

Wider RAL Support

- More cross STFC services:
 - SCCM – Windows desktop management
 - JAMF – MacOS/iOS management
 - PatchManager+ - Update management
 - PaperCut – Follow me printing
 - Zoom Phone
 - Office 365
- Constant talk of an IT Security Programme

Machine Room Move

- Currently:
 - 6 Racks in Basement (30s - Infrastructure, interactive, ...)
 - 18 Racks in Atlas Data Centre (5m – CPU Storage, ...)
- Estates wanted to uprate fire protection, but also decommission the room in “a few years”
- We elected to move now rather than run in a building site for a year and then move!

CentOS7 EoL

- Want to go directly to Rocky9
- But it looks like some services will “step” through Rocky 8
 - dCache needed new head nodes.
 - No common version of BeeGFS between EL7 and EL9.
 - Workers and Storage won't go until EL9 is ready.

Things I would like to do

- Kubernetes:
 - JupyterLab
 - Backfill container worker nodes
 - Containerize other services
- FreeIPA:
 - Kerberos -> Zero trust networking
 - OpenLDAP not supported in EL8