QMUL Site Report

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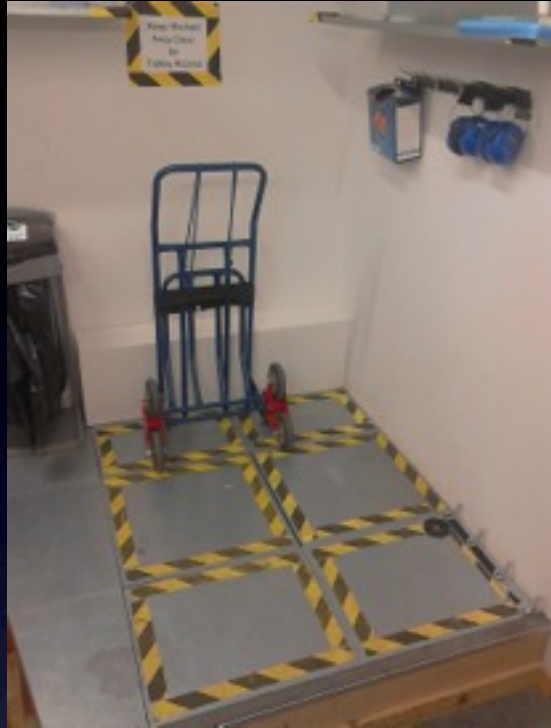
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The Team

- Alex Owen - Physicist/Programmer

- Cozmin Timis - Physicist/Programmer

- Dan Traynor - Grid Site Admin

- Terry Froy - Grid Site Admin

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Physics Server Room

- 7 racks (with space + power for 8th) 1xComms 1xAstro 3xPP 2xDept

- 32A per rack (2x16A) with 2xUPS per rack

- Max Input Power=32x8x220=56kVA

- 4x 14kW Aircon => Max Cooling 56kW

- 20Gb/s (2x10Gb/s) to server room with 2Gb/s (2x 1Gb/s) backup link

- APC Temp sensors on UPS cards

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PPRC Computing

- 8+1 Academics

- 16 "Postdocs"

- ~17 PhD Students

- Total 42 People

	Lin	Win	Mac	Tot
PC	39	15	0	54
Lap		11	14	25

Servers	6 : LTO5 backup
Batch	544 Job Slots
Disk	233 TB

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Astro Computing

- 18 Academics

- 5 "Postdocs"

- ~20 PhD Students

- Total 43 People

	Lin	Win	Mac	Tot
PC	40	4	6	50
Lap	13		14	27

Servers	5 : LTO5 backup
Batch	48 Job Slots
Disk	102 TB

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New Kit

- 6x HPE ProLiant DL60 G9

  - 128GB RAM

  - 2x Intel E5-2630v3 = 32 Job Slots

- Retired old unreliable supermicro nodes

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Additional Kit

- CUDA: K20m (Astro) K40c(PPRC)
  - Quadro 410 test setup SL7 (tensor flow)
  - More to come!
- DAQ Test Rig
  - Pair of Dell R520 (More disk)
  - Netgear XS708E (8 port 10GBaseT)
  - Raspberry Pi cluster! (NEW)

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OS Versions

- Debian Servers: mostly Debian 8

- Desktops: Debian 8 / SL6

- SL6 Batch Queues

- SL7 in dev

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Central ITS

- Change of management (again)!
  - Positive sounds... watch this space...
- Machine room Layer 2 remains with Physics
- DHCP remains with Physics (?)
- ITS finally sorting out broken DNS!

Laptop/PC from ITS

	Laptop	PC
Academic	PPRC	ITS
Postdoc	ITS	PPRC
Postgrad	-	PPRC

GridPP Computing

Nodes	214
Job Slots	4000
Storage	3.4 PB
LAN	10Gb/s
WAN	20Gb/s
GPU Slots	5

- Front facing IPv4/IPv6

- Proxmox/Ceph

  - Front facing VMs

- Dual stack/IPv6 only worker nodes... on the way!

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Let's Encrypt

- https://letsencrypt.org

- Bash script client

  - Formerly letsencrypt.sh > Now dehydrated

- Code:
  dehydrated.de
  https://github.com/lukas2511/dehydrated

- Docs:
  https://www.splitbrain.org/blog/2016-05/14-simple_letsencrypt_on_debian_apache

  https://www.aaflalo.me/2016/09/dehydrated-bash-client-lets-encrypt/

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Thanks for listening!

Questions?