

**Computing**  
**Particle Physics Annual Meeting**  
**April 2021**

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# Who We Are

- John
- Rob
- No more Steve
  - A well-earned retirement
  - Truly irreplaceable, i.e. we haven't replaced him
  - Grid work 'absorbed' by John and Rob

# Who We Were





# Who We Were





# Who We Are



# What We Do

- HEP and Grid Computing, in no particular order:

Helpdesk: Online, Drop-in. Accounts/Authentication. Storage: RAID, ZFS, Gluster. Backups. Networking: Hardware, Management, Monitoring, IPv6. Web Services: TWiki, Indico, Certs. Collaboration Services: Gitlab, Mattermost, WISP, Vision. Email: Webmail, Mailing Lists. Batch Systems. System Monitoring: Nagios, Zabbix, Cacti. Linux Desktops. Security. OS Support: Linux, Windows, Mac. Procurement. Stores. Hardware: Installs, Repairs, Machine Hosting. Data Centre Management. Software: Installs, Licensing, Debugging. Virtual Machine Hosting. Grid Computing: CPU, Storage, Clouds, Documentation. GPGPUs: CUDA, Tensorflow.

# How It's Going

- The usual:
  - An ever-increasing number of complex systems and services
  - Still doing more with less
  - University could be more helpful
- And then...

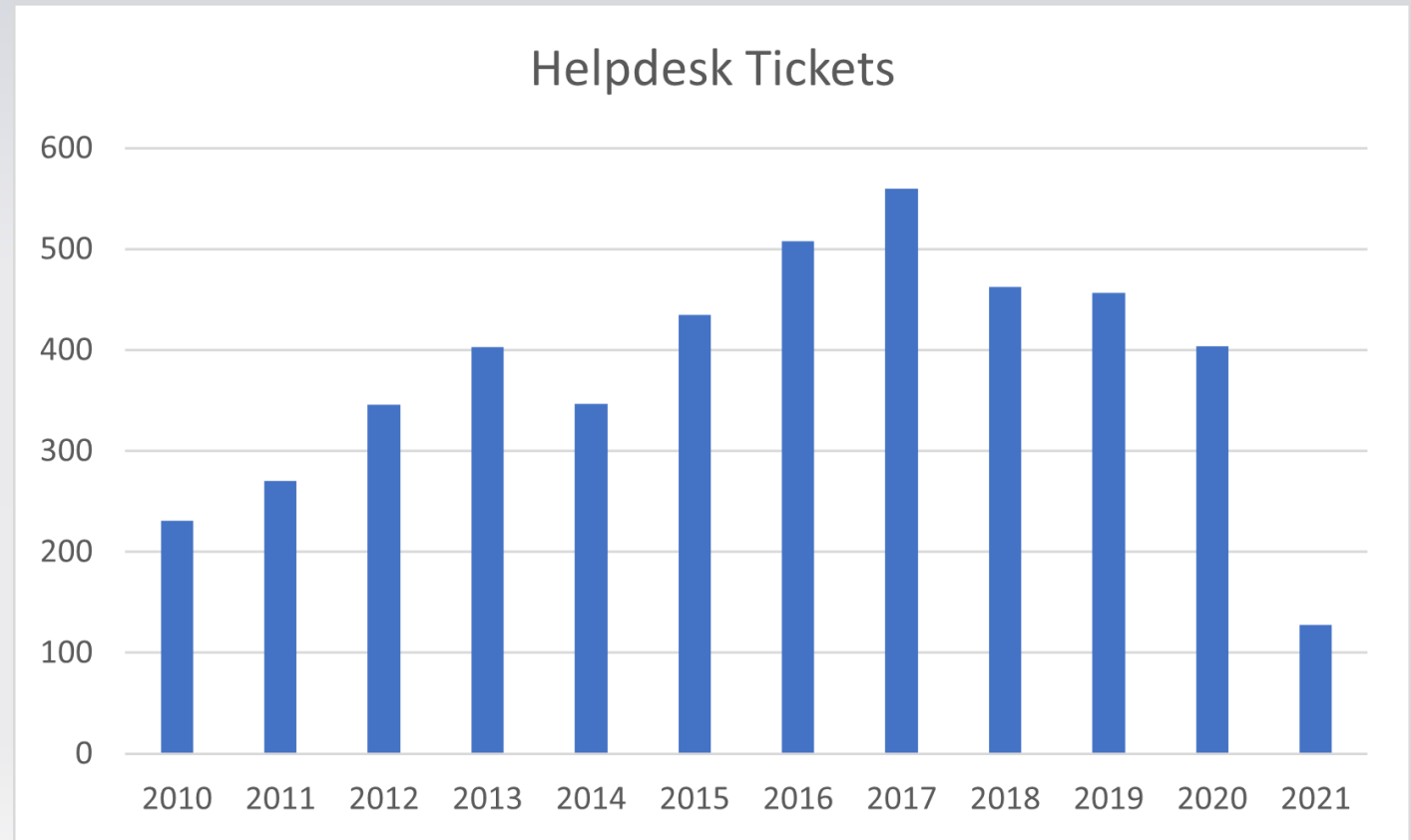
# How It's Going – Pandemic

- Remote working
  - We've always had some of it
  - But it's a bit different when it's everyone!
- Limited Physical Access to the Building and Cluster
  - But we've been systematically improving remote access over the years
  - Managing well with remote access and occasional visits
  - Still able to commission new systems, including ones for LIV.DAT, Watchman, ATLAS
- Overall, we've been able to keep things running pretty well



# How It's Going – Pandemic

- ~400 helpdesk tickets in 2020
- About the usual
- Average 2.5 emails per ticket



# How It's Going – Security

- Several other universities hacked
  - Typically 'ransomware' attacks; files are encrypted and held to ransom
- Liverpool auditing security; CSD rolling out new measures
- Duo two-factor authentication (2FA) introduced on HEP SSH
  - We're working to ensure necessary access is maintained
  - If Duo isn't working, tell CSD
  - If changes are otherwise causing you problems, tell us

# Key Reminders

- Helpdesk – [helpdesk@hep.ph.liv.ac.uk](mailto:helpdesk@hep.ph.liv.ac.uk)
  - Talk to us!
  - The earlier projects and problems are raised, the better
- Twiki - <https://hep.ph.liv.ac.uk/twiki>
  - Most computing things are documented here
- Bundle for bulk data storage
  - High-performance, scaled, clustered, expandable file system
  - Hepstore is an old single server, full, slow, and not long for this world

# Key Reminders

- Passwords
  - Still need to be sufficiently strong
  - That means not just common words
  - And not common words with numbers and/or an exclamation mark at the end
- Pooling resources
  - We can try to help procure systems with limited funds and short notice
  - But the more notice the better
  - And where those limited funds can be combined, we can get better systems!



# Thank you!

- We'd usually say 'Merry Christmas' here
- But it's the 28<sup>th</sup> of April
- So: Happy World Day for Health and Safety at Work!
- Questions?