

Research Computing

ARC Centre of Excellence for Particle Physics at the Terascale

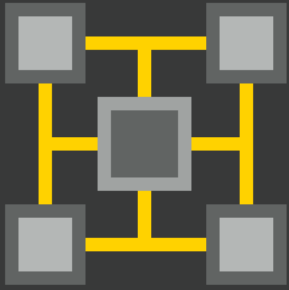
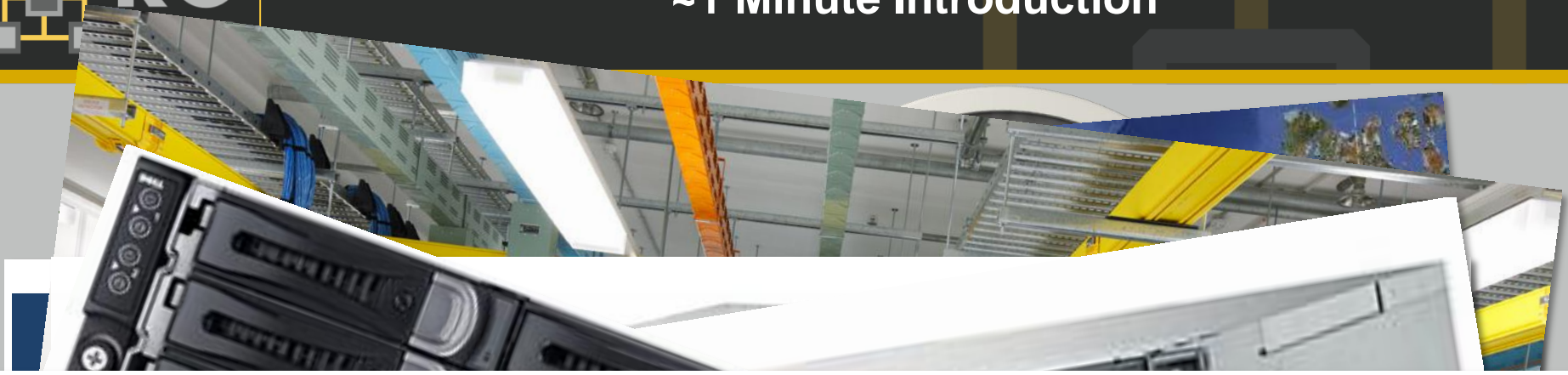
Lucien Boland and Sean Crosby

Research Computing



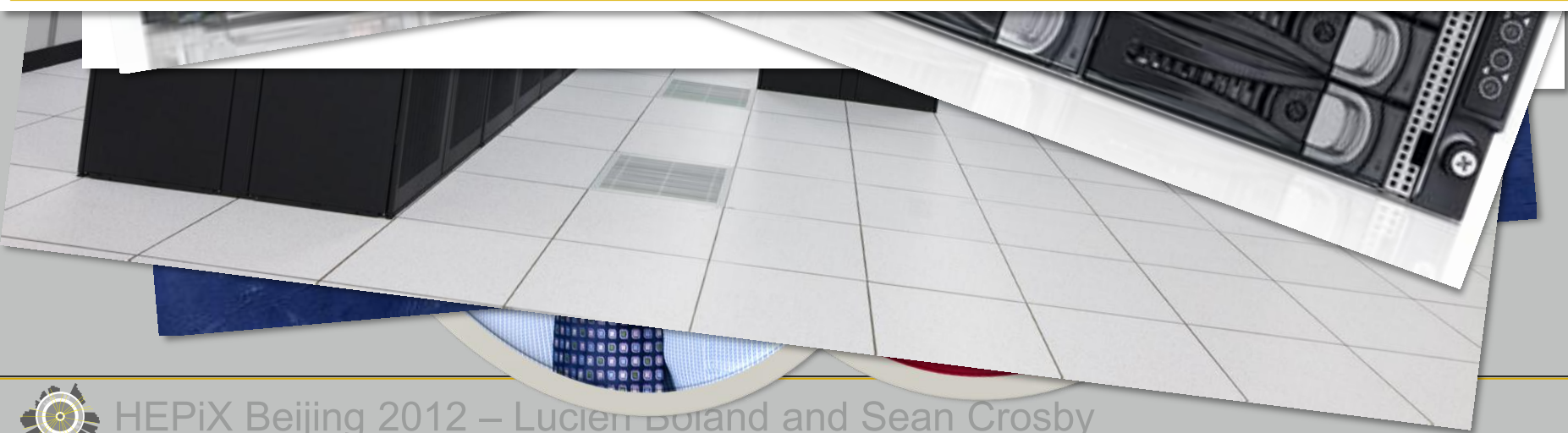


~1 Minute Introduction



Research Computing

ARC Centre of Excellence for Particle Physics at the Terascale



HEPiX Beijing 2012 – Lucien Boland and Sean Crosby

- old staff → new staff
- old data hall (4kw/r) → new data hall (16kw/r)
- local storage → SAN
- KVM → XenServer
- Debian/RHEL → SL6
- cfengine → puppet
- NFS → CVMFS
- gLite 3.2 → UMD

```
rm -rf /melb/home/tjdyce
```

```
rm -rf /melb/home/fifieltdt
```

```
mkdir /melb/home/lucien
```

```
mkdir /melb/home/scrosby
```

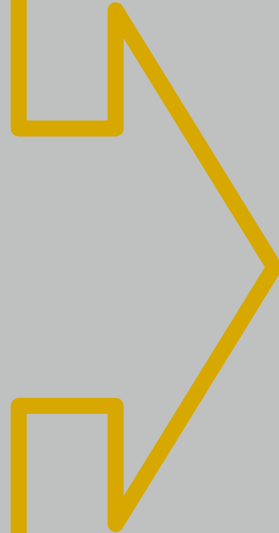
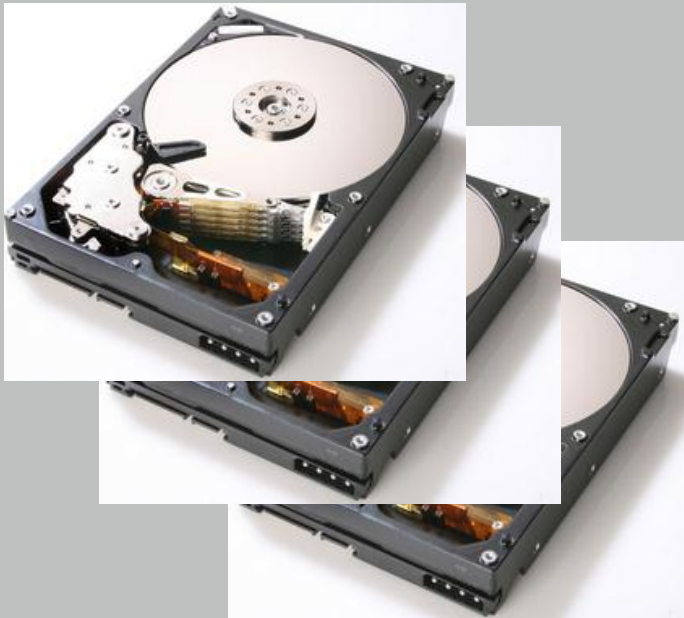
```
mkdir /syd/home/swasnik
```

New Data Hall



Data Hall 1 = 4kW / rack
Data Hall 2 = 16kW / rack

Local disk



Dell MD3600f
Shared Storage

8 TiB

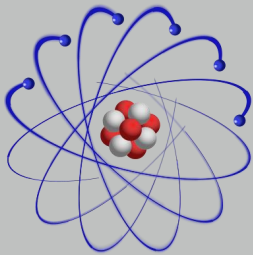




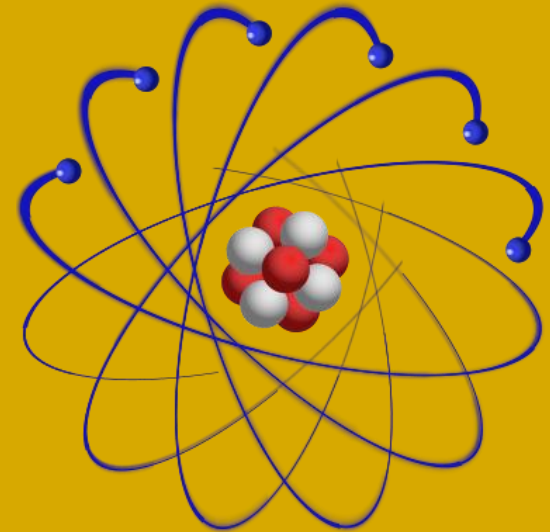
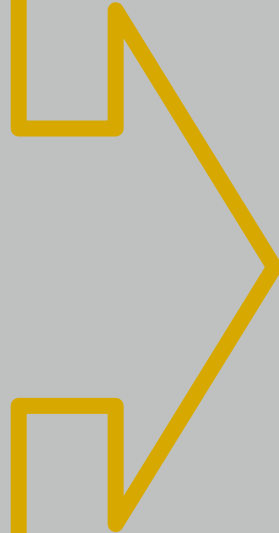
Debian



RHEL 6



SL 5



Scientific Linux 6
(and XenServer)

 CFEngine®

- gLite 3.2 to UMD-1
- NFS to CVMFS
- DPM NFS testing
- Joining federated xrootd cluster

- Fault Monitoring: Nagios (Puppet)
- Perf Monitoring: Ganglia
- Network Monitor: Perfsonar
- Authentication: Kerberos/OpenLDAP
- Logging: rsyslog
- Documentation: dokuwiki
- Tickets & projects: redmine
- Remote Mang: openVPN

- SVN to git
- Deprecated hardware for backups

- Virtualization farm
 - Dell MD3600f connected to 2 Dell R620s and 2 R710s
 - Citrix XenServer Advanced for HA/failover
- IPMI SOL – (IMM, DRAC, ILO)
- Build – DHCP, PXE, Kickstart, Puppet

- Nectar Cloud – Federally funded
- 1.5 year project to deploy software to run Tier 3 and Tier 2 grid infrastructure on the Australian National Research Cloud (NECTAR).
- 2 developers started recently
- 1 developer being sought (close 25 Oct)

- Disk growth from 700TB to 800TB
 - purchase 300TB (inc. replace old disk)
- CPU growth from 6000HEPSPEC to 7000 HEPSPEC

- Delivering disk and CPU
- Dell C6145 performance
- DPM disk
- Dealing with out of warranty equipment

Thanks for Listening



CoEPP
ARC Centre of Excellence for
Particle Physics at the Terascale

