The New Enterprise Lab

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Old lab

- Office based
- Grew organically over time (ad-hoc) until:
  - Not enough power
  - Not enough cooling
  - Not enough noise insulation for office environment
New lab

- Data center in London
- Redundant power/cooling
- Biometric access control, manned 24x7
- Regular infrastructure testing
- Remote hands support
- Infrastructure deployment automated with ansible
- Multiple VPNs (per sub-lab)
New Lab

Internet

VPN endpoint & Public range (cloud)

Router A
HA
Router B

VLAN 0-10
VLAN 11-20
VLAN 21-30
VLAN 31-40

TOR Switch
TOR provisioner
Ceph
Upstream
Lab (Bare-Metal)

TOR Switch
TOR provisioner
HPC-SIG Lab (Bare-Metal)

TOR Switch
TOR provisioner
LEG Machine Lab (Bare-Metal)

TOR Switch
TOR provisioner
UK Linaro Developer Cloud (VMs)
mr-provisioner services

User UI
- lab management
- manual testing

API
- automated testing

- Serve bootfile
- Serve images
- Serve preseed/ks
- DHCP

- Power control
- Netboot
- Console access

See: https://github.com/linaro/mr-provisioner
The Mlab in LEG is to the servers what a library is to books

- Servers can be loaned to engineers for periods of time
  - engineers control installation process/configuration
  - access to the server console
  - BMC power control
- Servers can be used for automated testing via API
  - ERP testing already using provisioner’s API
HPC-SIG Lab

- We built a lab where we can dispatch OpenHPC for CI, releases, testing in different clusters at the same time

- But we also need to protect the systems from the other labs and the Internet, so only authorised (HPC) engineers have access to our machines
HPC-SIG Lab

● Automated installation
  ○ Using Ansible and other upstream playbooks
  ○ Using the upstream recipes (Jenkins, MrP)
  ○ Easily deployable in any location
  ○ Separating infrastructure from test and benchmark machines

● Mr-Provisioner

● Jenkins

● Automated OpenHPC deployment

● Automated Benchmark dispatch
Thank You

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