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STFC & RAL Tier-1 LHCONE update

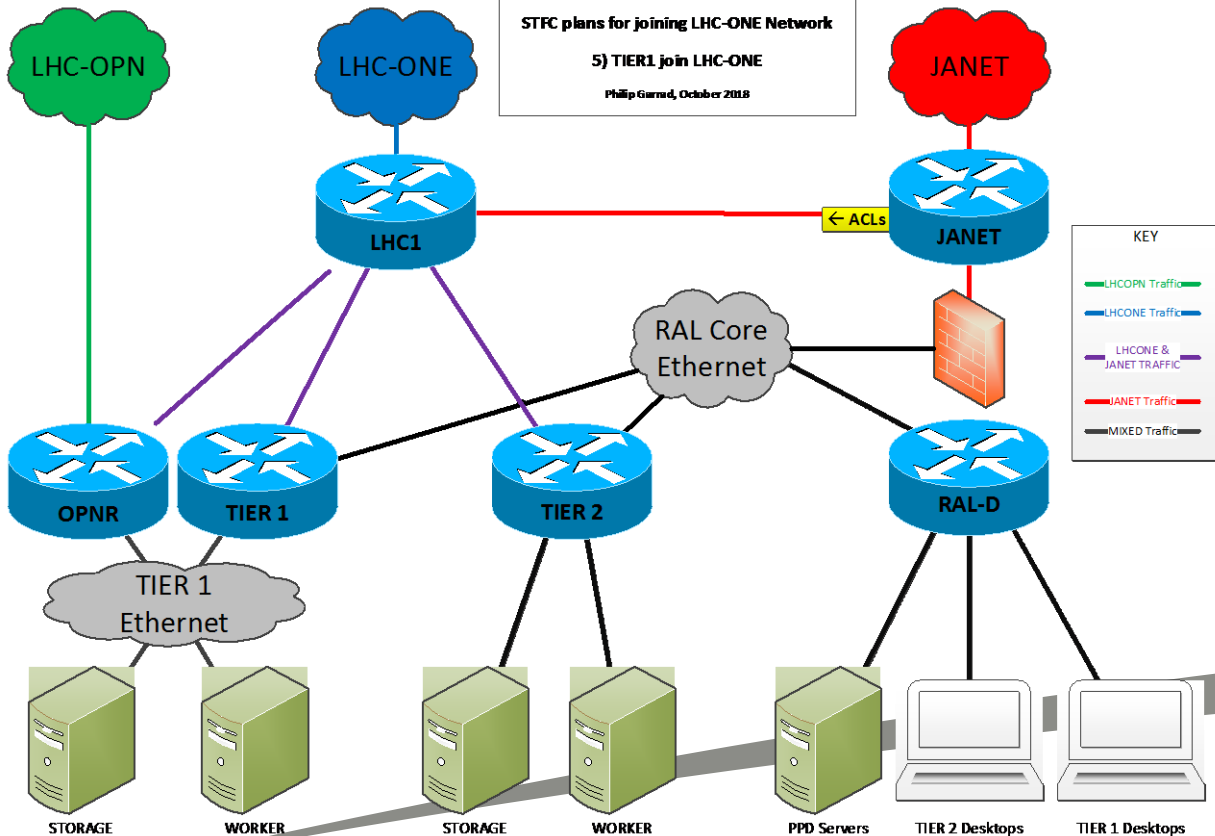
Ian Collier

&

Alastair Dewhurst

LHCOPN-LHCONE Meeting, Umeå, June 2019

STFC-RAL Joining LHCONE



LHCONE Status & Time Line

- Peering and IP address allocation expected from JISC in coming days
- PPD Tier-2 will join first.
 - Start with single perfSonar host.
 - Rest of T2 site joins by end June 2019.
- Tier-1
 - Reorganising & sanitising subnets. Completion by August 1st 2019.
 - Advertise new prefix to OPN at start of August.
 - Start Tier-1 joining LHCONE (perfSONAR) later in August.
 - Rest of T1 to follow after a week or so.

IPv6 Status

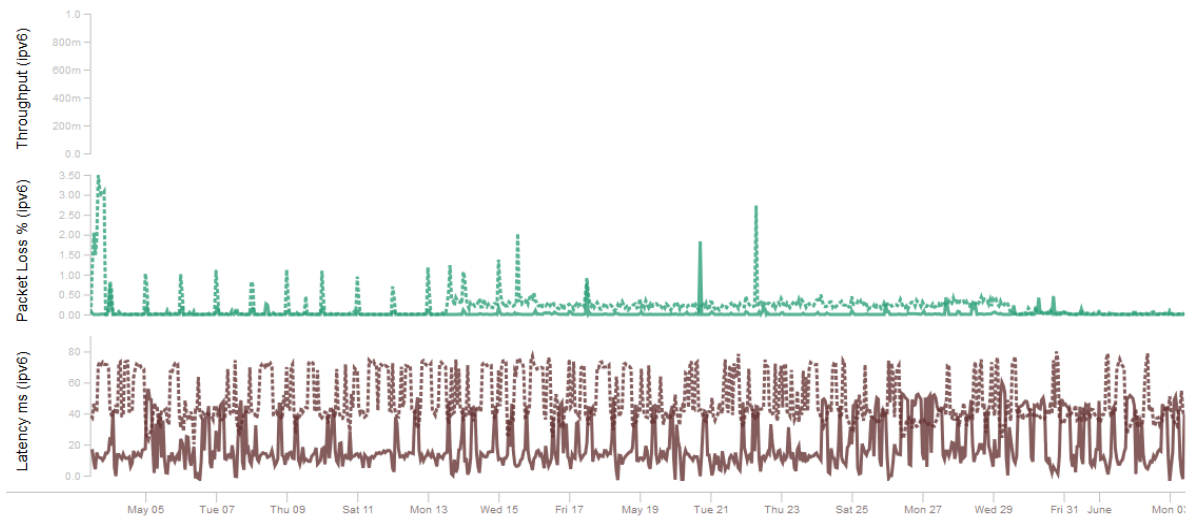
perfSONAR test results - documentation

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Source lcgps01.gridpp.rl.ac.uk 130.246.176.109,2001:630:58:1820:0:0:82f6:b06d Host info ▾	Destination lhcperfmn.bnl.gov 192.12.15.26,2620:0:210:1:0:0:0:26 Host info ▾	Report range ← 1 month → Fri 05/03/2019 10:27:35 (GMT+1) to Mon 06/03/2019 10:27:35 (GMT+1)
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Tput (TCP) Tput (UDP) Loss (UDP) Loss (one way) Loss (rtt) Retrans Latency (one way) Latency (rtt)

Forward — Reverse ... Failures ●



Tier-1 is still seeing unacceptably high outbound packet loss over IPV6

IPv6 Status

- Firmware update to border routers didn't solve the problem.
- Next step is to connect T1 OPN Router to pair of new border routers.
 - If problem remains at least easier to debug.
- Investigating upgrades to make better use of LHCONE connection
 - Tier-1 only has 40Gb/s links currently.
 - Equipment upgrades may improve matters

Upgrading LHCOPN link

- Currently 3 x 10Gb/s links from RAL to CERN.
 - 2 separate geographical paths.
 - All land on the same CERN router.
- Site has resilient 100Gb/s links to super JANET.
- For Run 3 planning move to a single 100Gb/s link.
 - Resilience from LHCONE.
 - Landing points TBD.
- Awaiting indications on costs



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Questions?

Ian Collier, LHCONE/LHCOPN,
Umeå, June 2019