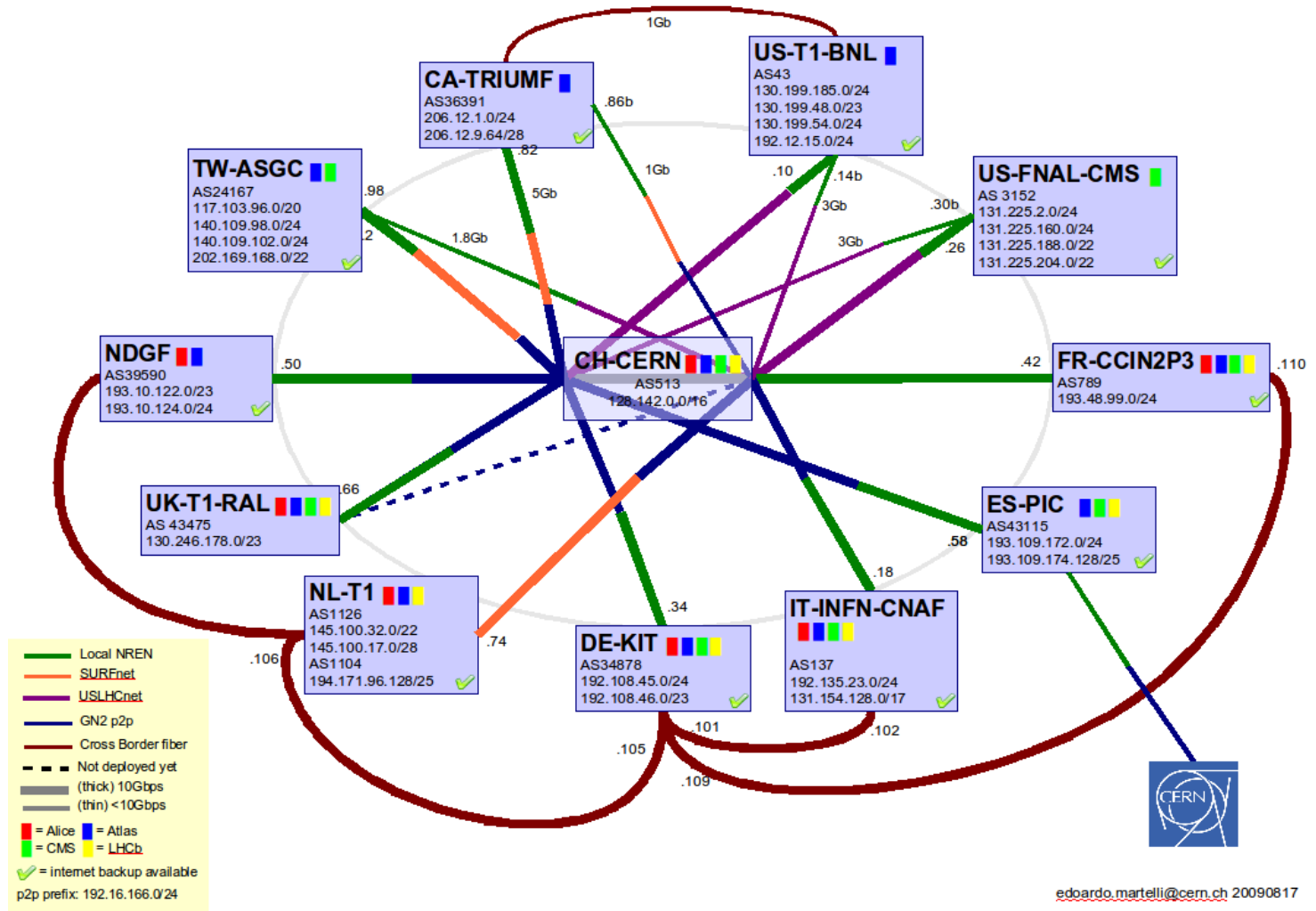


LHCOPN Update

Wayne Salter – 13th November 2009

LHCOPN – current status

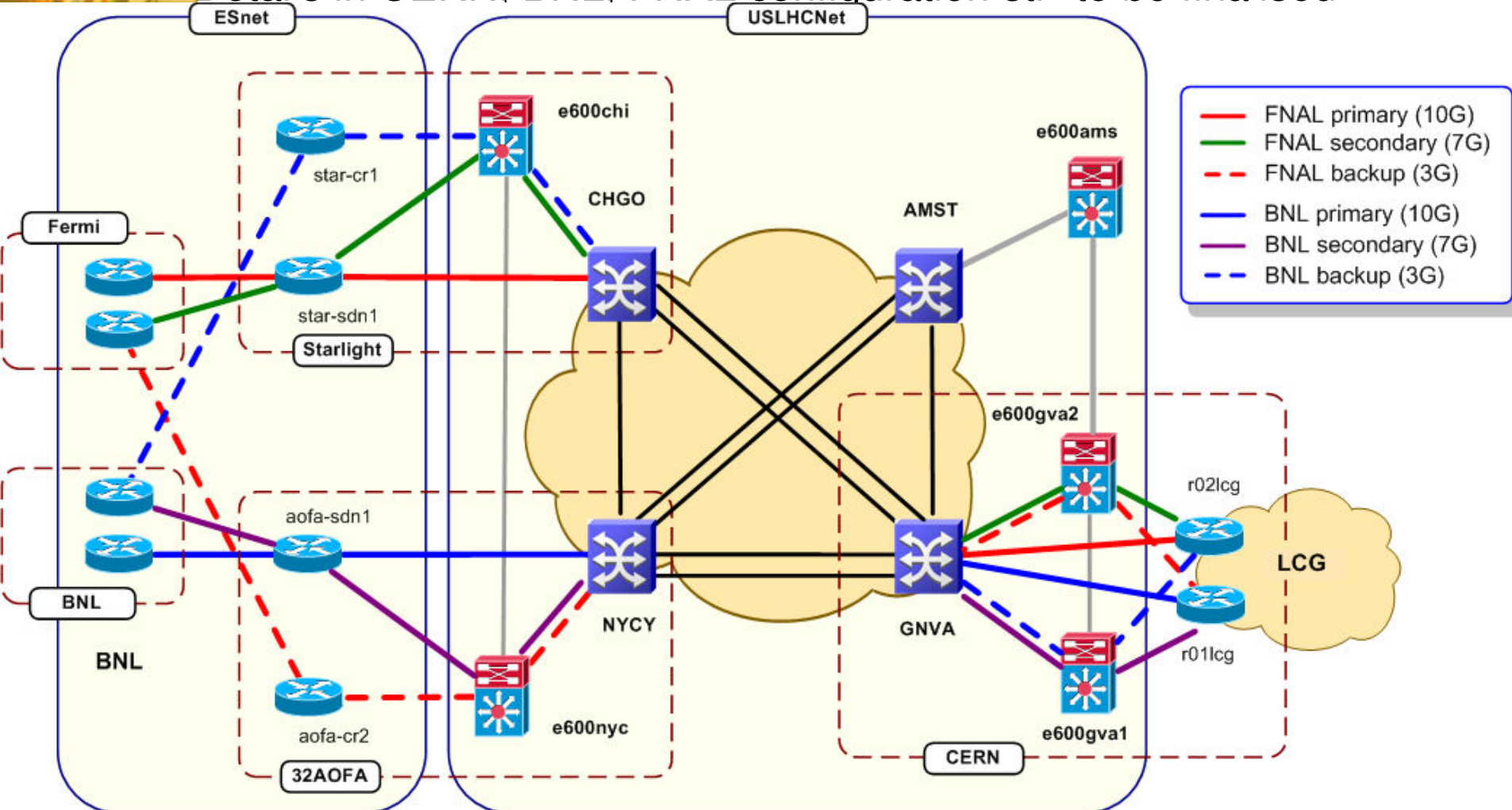


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- 10Gps primary links to all sites except TRIUMF (5Gbps) and BNL (10+7Gbps)
- Dedicated backup paths for all sites except RAL (being ordered)
- Internet access available for all sites except RAL
- Good resilience as shown during STEP09
 - Major fibre cut affecting links to 7 sites but all sites remained connected
- Some Tier1-Tier1 traffic via LHCOPN
- Additional Tier1-Tier1 links outside of LHCOPN

Details in CERN, BNL, FNAL configuration still to be finalised



Links using VCAT and LCAS

To be finalized on 1st October

Collaboration Board 13th November 2009 - 4



- LHCOPN Operations Model has been developed and agreed
- 3 Training sessions (2@CERN, 1@FNAL)
- Test phase Feb-Apr 2009
- In production since May 2009
- Sites gradually getting up to speed
- Responsibilities w.r.t. operational interaction with WLCG clarified further in Vancouver 31st/8 and 1st/9
- Operations teleconferences held regularly to monitor application of model

- Recent change
 - BNL have upgraded to 2*10 Gbps links
- In preparation
 - FNAL increase to 2*10Gbps links
 - RAL backup link
- In discussion
 - Additional link for CNAF for T1-T1 traffic

- Should Tier1-Tier1 links (not foreseen for Tier0-Tier1 traffic) be part of LHCOPN?
 - Consistent operational model
 - Fuller overview of Tier0/Tier1 networking for WLCG
 - Known Tier1-Tier1 links not in LHCOPN
 - NLT1-TRIUMF, NLT1-ASGC, FNAL-KIT, NLT1-FNAL
- Are there any new networking requirements, e.g. for improving Tier1-Tier2 connectivity?
 - If so, should LHCOPN community investigate this?
- Should we define SLA for links?

- LHCOPN fulfilling the ‘known’ needs of WLCG and includes a good level of resilience
 - RAL is the exception (but B/U is being ordered)
- Operational model now in production
- Is there a need for any changes?
 - Tier1-Tier1 links
 - Tier1-Tier2 links