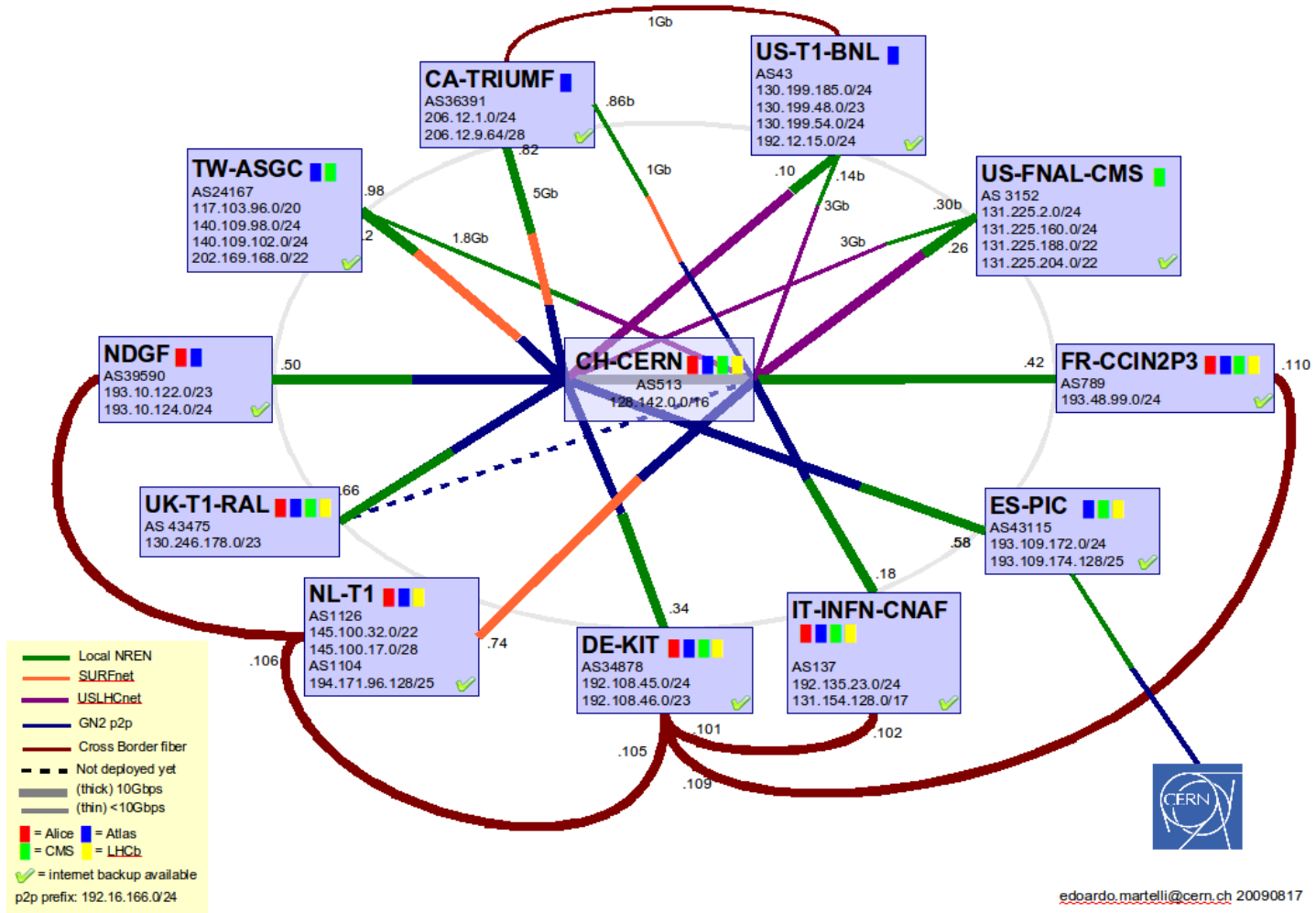


# LHCOPN Update

Wayne Salter – 9<sup>th</sup> September 2009

## LHCOPN – current status

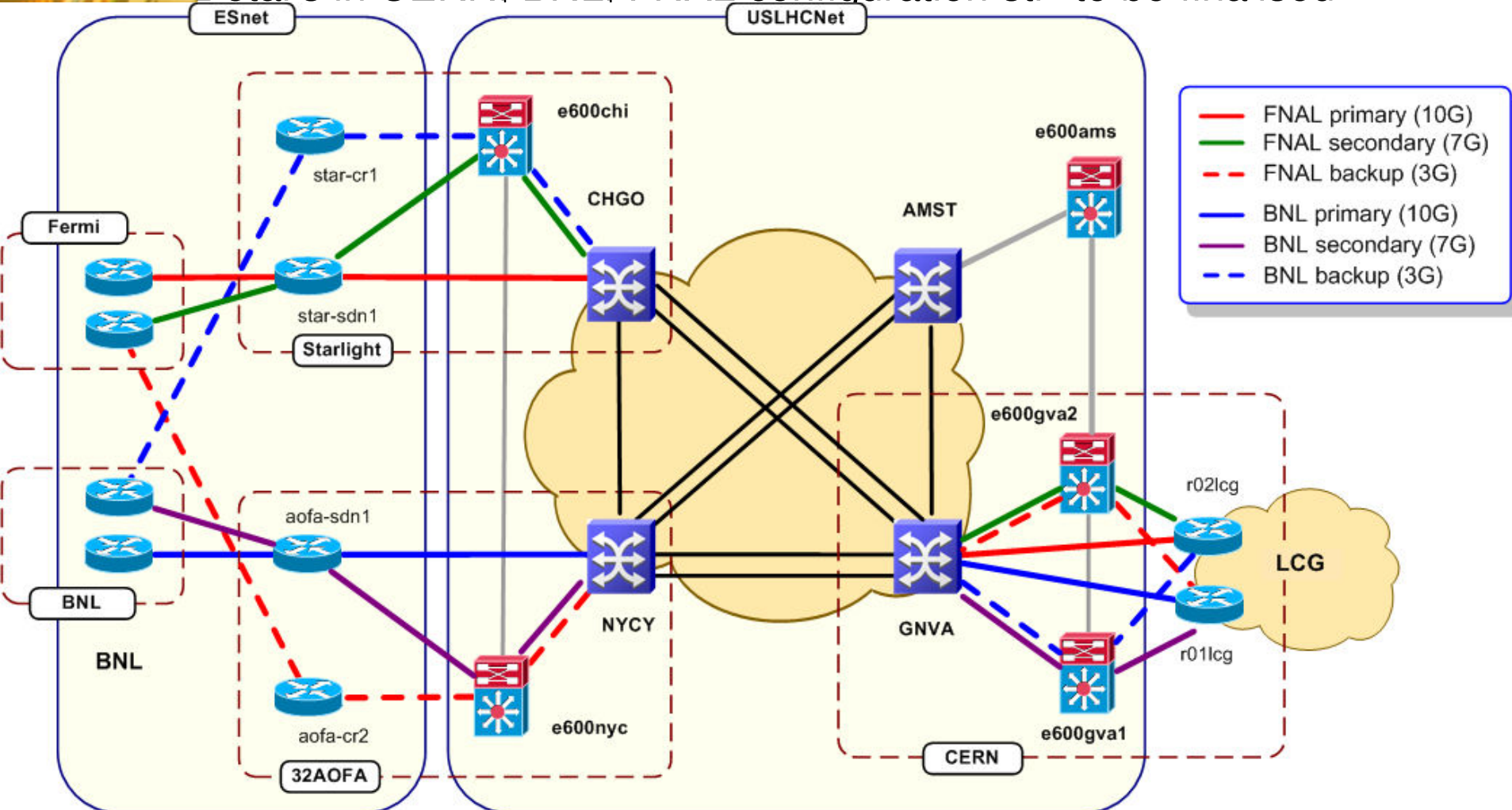


eduardo.martelli@cern.ch 20090817



- 10Gps primary links to all sites except TRIUMF (5Gbps)
- Dedicated backup paths for all sites except RAL (in planning)
- 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 1<sup>st</sup> October

GDB 9<sup>th</sup> September 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 31<sup>st</sup>/8 and 1<sup>st</sup>/9
- Operations teleconferences held regularly to monitor application of model



- In planning
  - RAL backup link
  - BNL and FNAL have requested USLHCNet => 20 Gbps
- 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
- Operational model now in production
- Is there a need for any changes?
  - Tier1-Tier1 links
  - Tier1-Tier2 links