



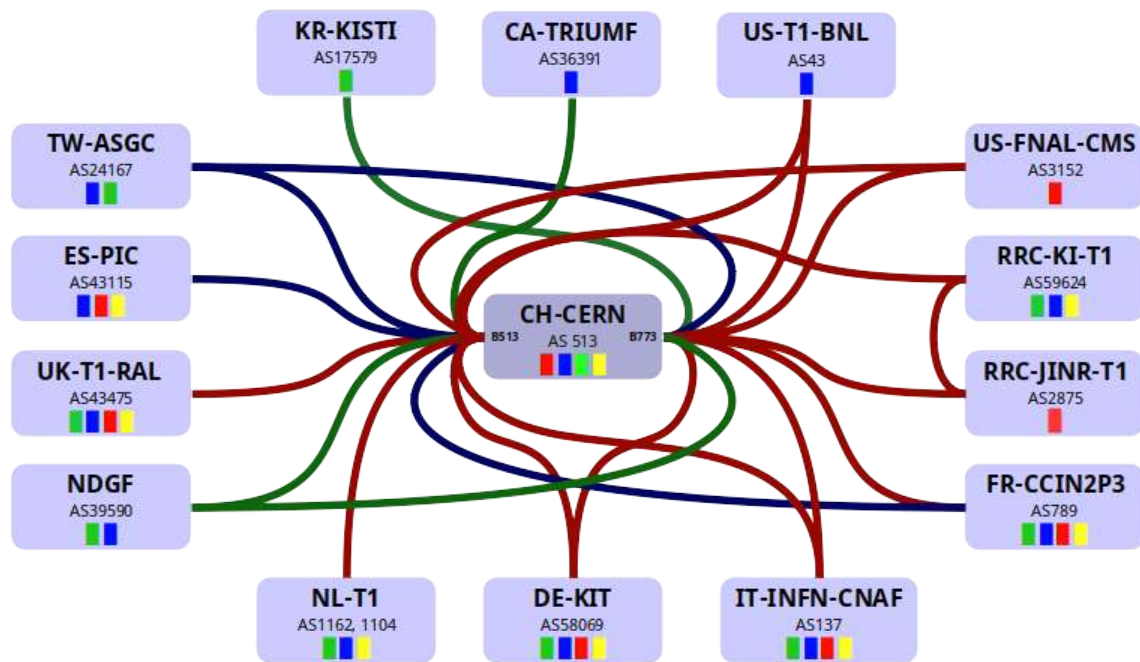
LHCOPN update

Edoardo Martelli

LHCOPN/ONE meeting #47

11th October 2021

LHCOPN



■ = Alice ■ = Atlas ■ = CMS ■ = LHCb

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10Gbps
20Gbps
40Gbps
100Gbps

Numbers

- 14 Tier1s + 1 Tier0

- 12 countries in 3 continents

- Dual stack IPv4-IPv6

- 1.3 Tbps to the Tier0

<https://twiki.cern.ch/twiki/bin/view/LHCOPN/OverallNetworkMaps>



Latest news

ES-PIC

- Waiting for GEANT to upgrade Madrid and Geneva POP to deploy new 100G link

CH-CERN:

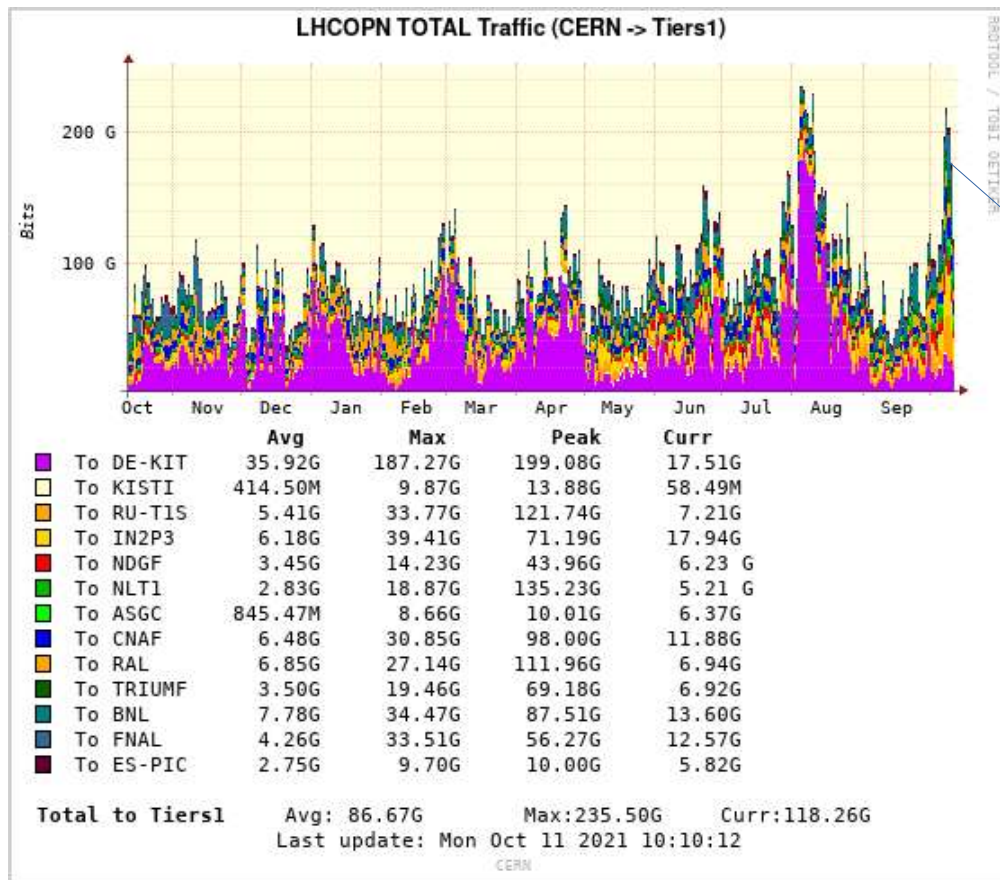
- The PCC (Prévessin Computing Centre) contract has been signed.
Construction will start soon, to be completed by mid-2023
- R&D link to Amsterdam will be upgraded to 400G with option to test 800G
- Ordered new Juniper router PTX10001 to support 400G links on LHCOPN

CERN PCC



Rendering image

LHCOPN Traffic – last 12 months



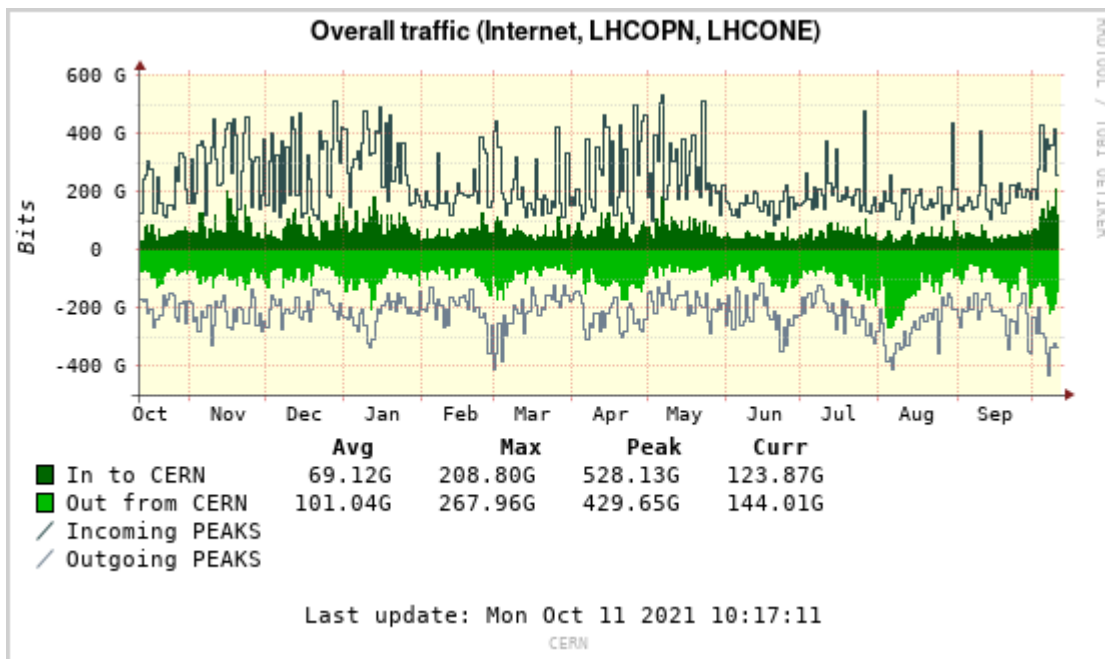
On going
WLCG data
challenge

Numbers:

Moved ~341 PB in
the last 12
months

+19% compared
to previous year
(286PB)

CERN total traffic



Numbers:

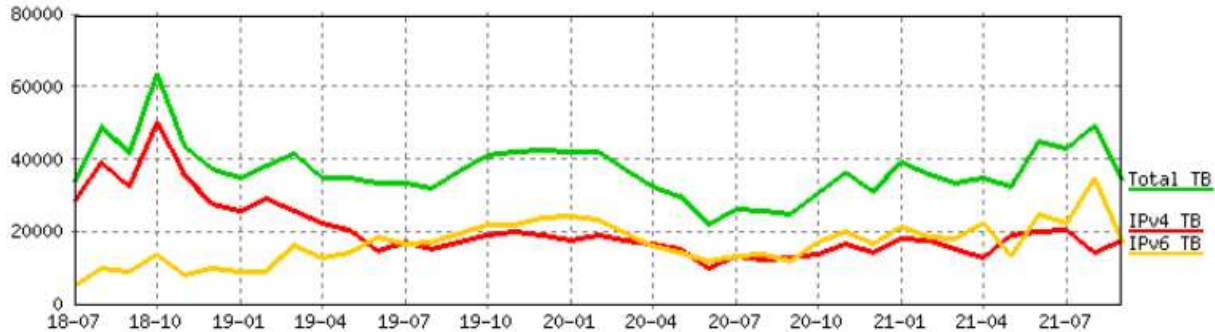
Sent out ~398 PB
in the last 12
months

+44% compared
to previous year
(275PB)

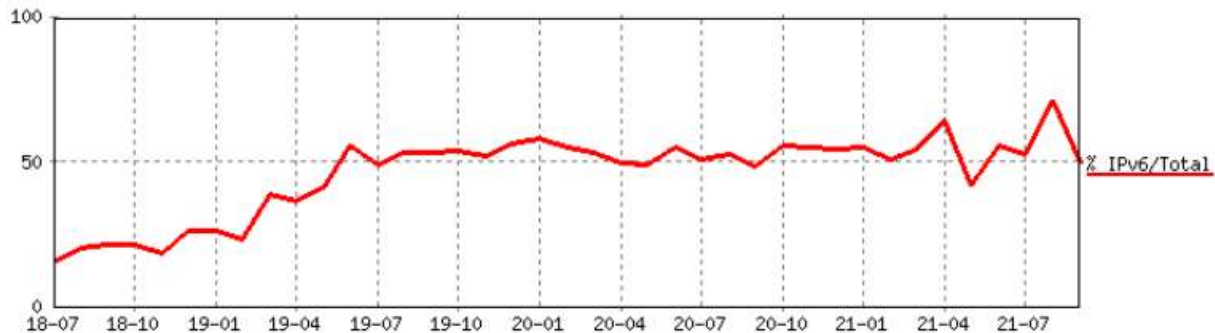
Ref: <https://netstat.cern.ch/monitoring/network-statistics/ext/?q=CERN&p=EXT&mn=01-Total-Internet-traffic&t=Yearly>

LHCOPN+LHCONE: IPv4 vs IPv6

IPv4 and IPv6 traffic volumes month by month



Percentage of IPv6 traffic over the total

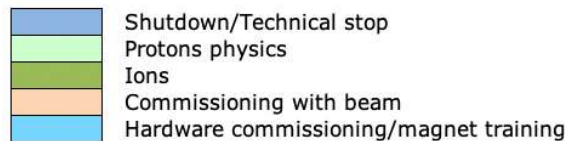
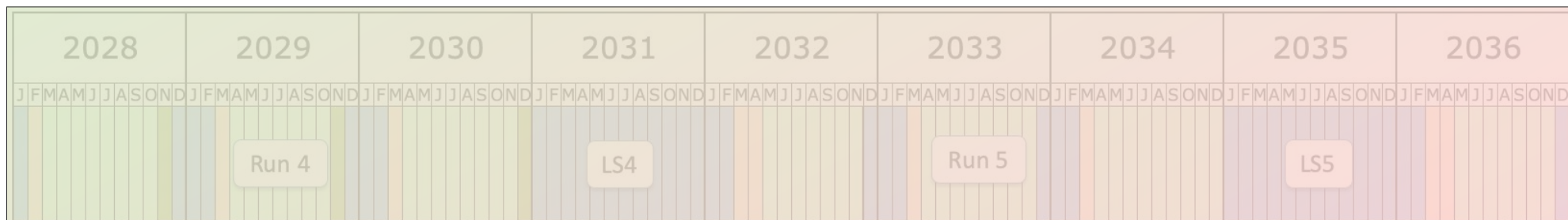


v4/v6 as seen on
the CERN
LHCOPNE border
routers

Ref: <https://twiki.cern.ch/twiki/bin/view/LHCOPN/LHCOPNEv4v6Traffic>



LHC schedule



Last updated: June 2021

Questions?

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