



# CCIN2P3 Network



FJPPL 2015  
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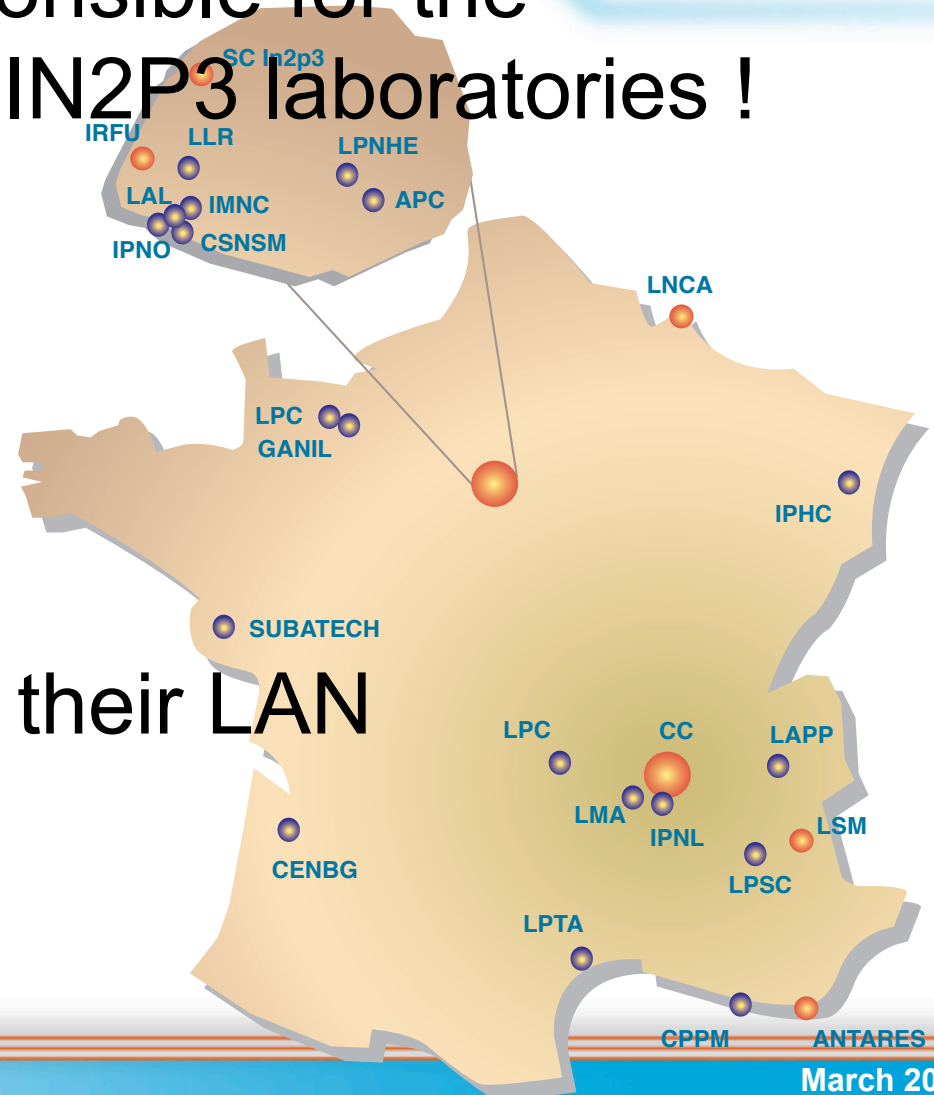


# IN2P3 network



- The CCIN2P3 is responsible for the connectivity of all the IN2P3 laboratories !

-> 23 sites



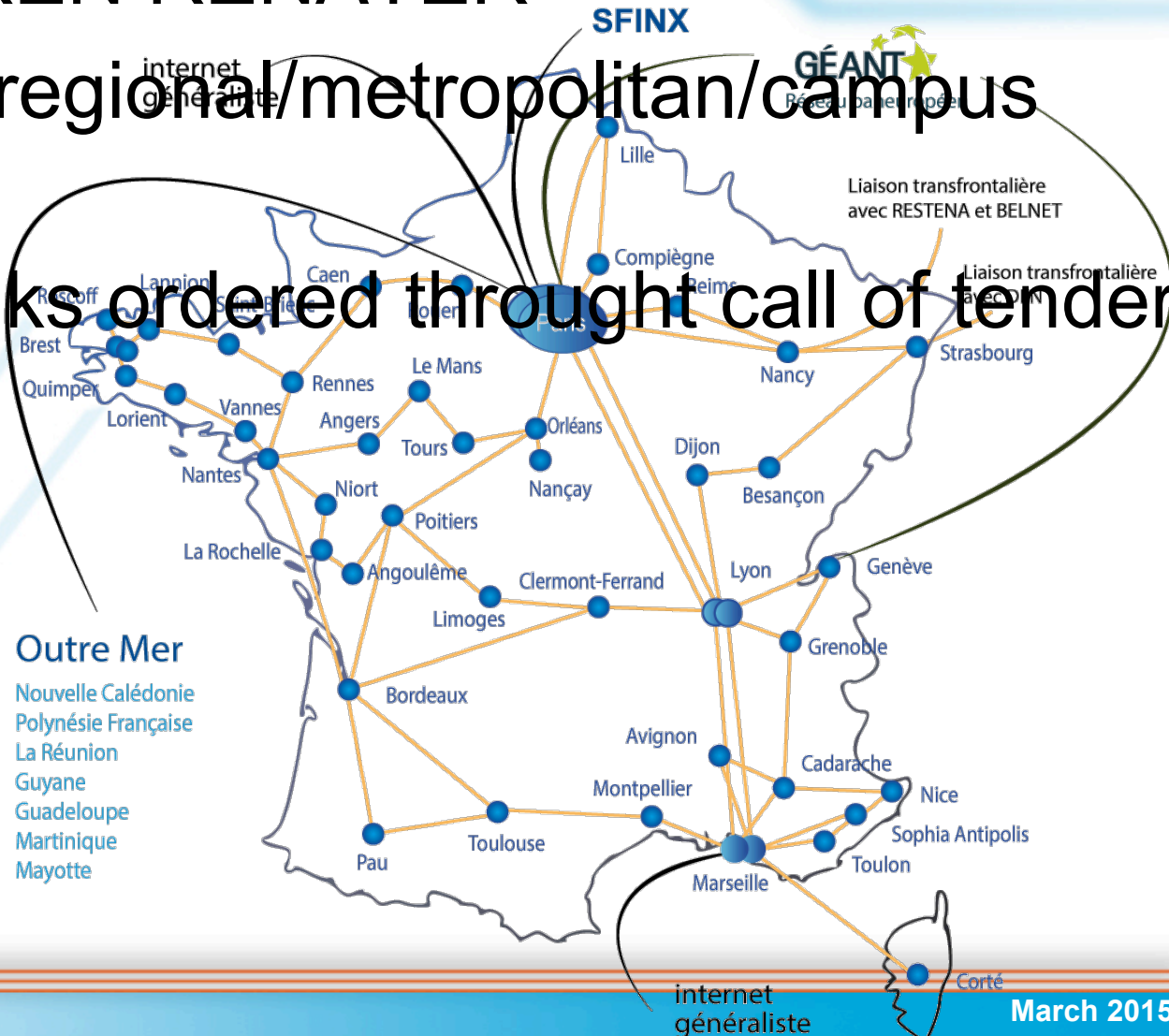
- Laboratories manage their LAN

-> + CCIN2P3 LAN !

# IN2P3 connectivity



- Based on NREN RENATER
- and multiple regional/metropolitan/campus networks
- plus some links ordered through call of tender





- CCIN2P3

  - 2x10Gb/s LHCOPN + 30Gb/s LHCONE + 10Gb/s

- LHC T2/3

  - at least 10Gb/s shared for LHCONE + generalist

- + some other sites

  - 1Gb/s or 100Mb/s

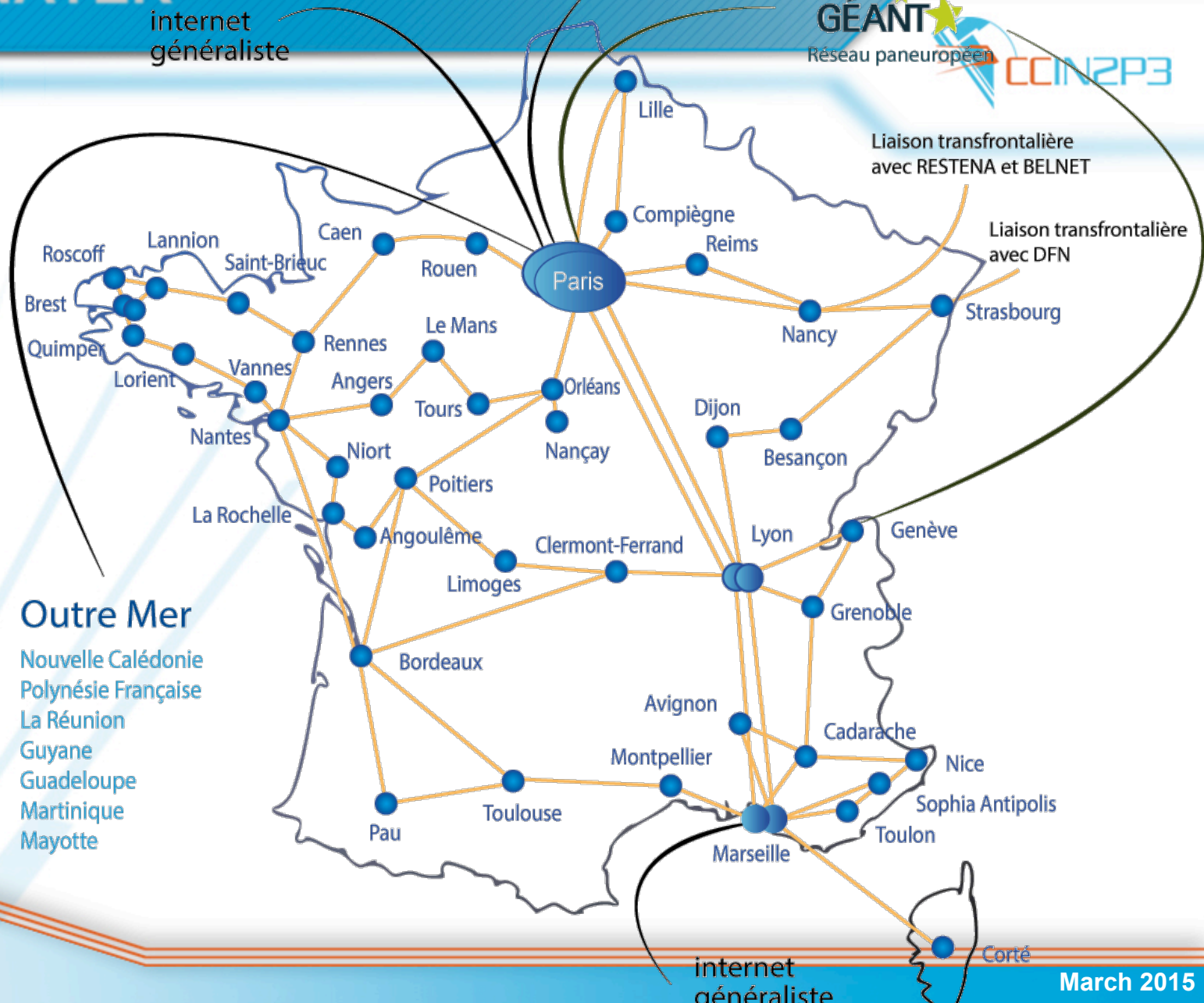




# RENATER

internet généraliste

SFINX



## Outre Mer

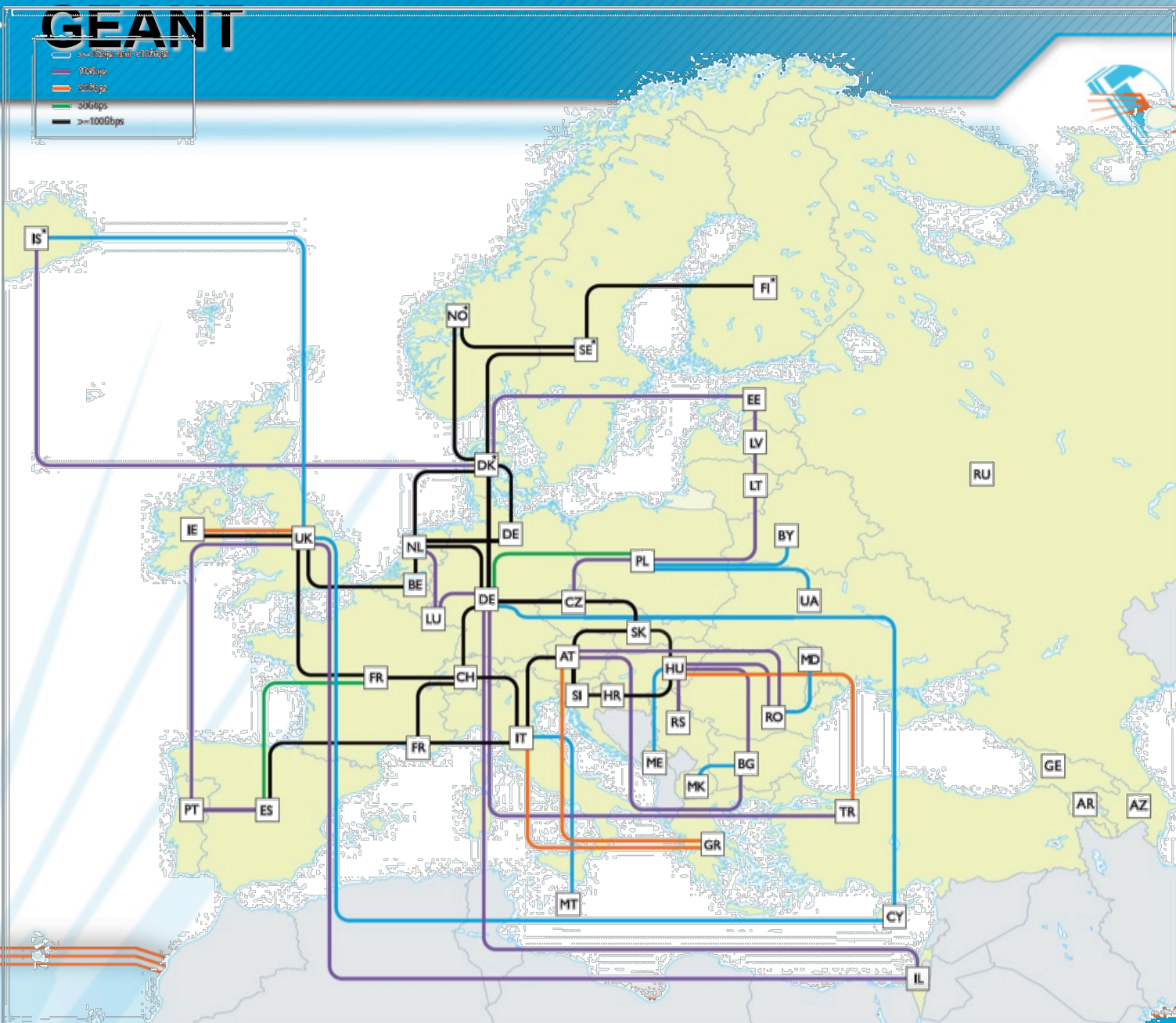
- Nouvelle Calédonie
- Polynésie Française
- La Réunion
- Guyane
- Guadeloupe
- Martinique
- Mayotte

internet généraliste

# GEANT

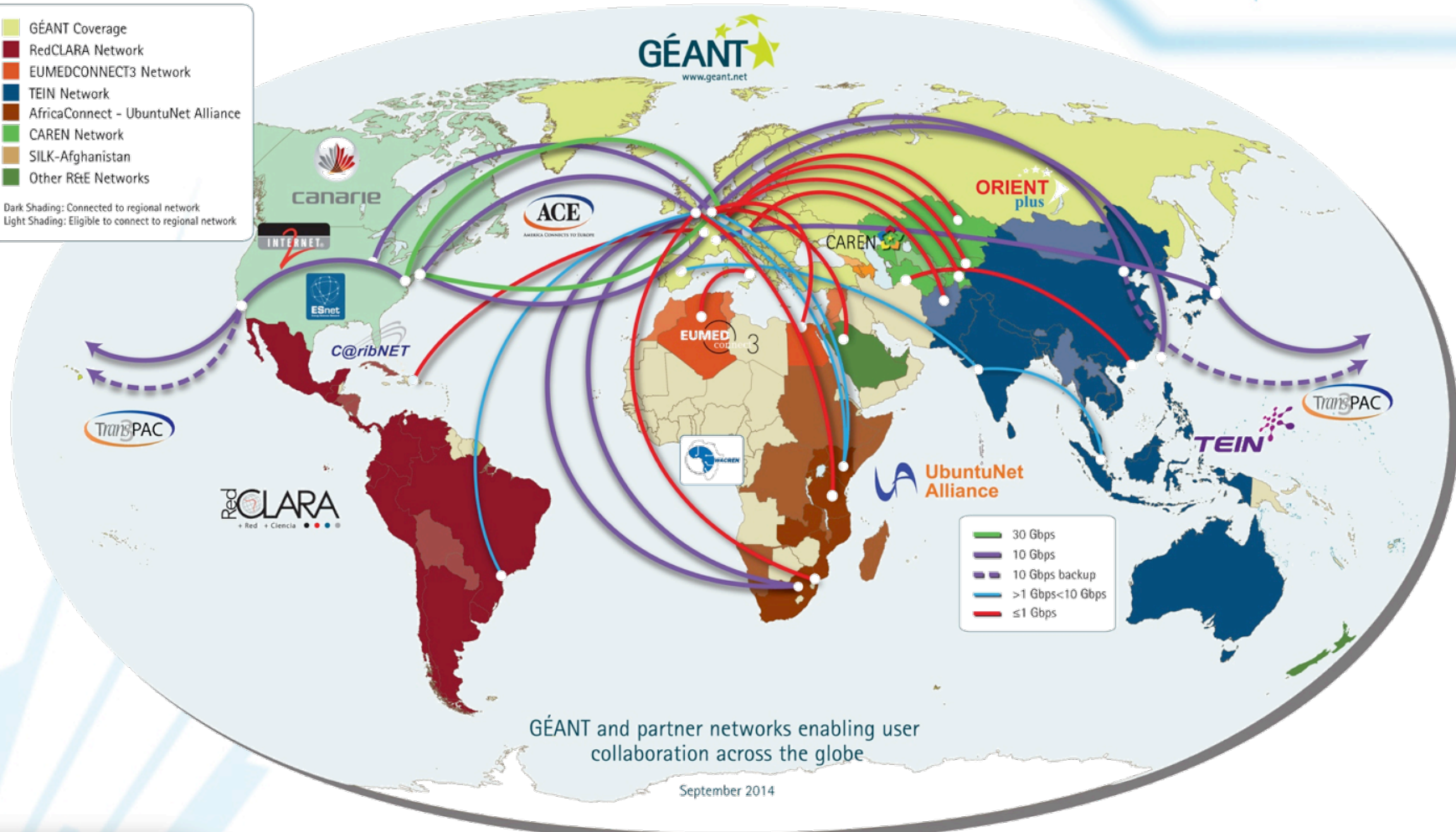


CIN2P3





- GÉANT Coverage
  - RedCLARA Network
  - EUMEDCONNECT3 Network
  - TEIN Network
  - AfricaConnect - UbuntuNet Alliance
  - CAREN Network
  - SILK-Afghanistan
  - Other R&E Networks
- Dark Shading: Connected to regional network  
Light Shading: Eligible to connect to regional network

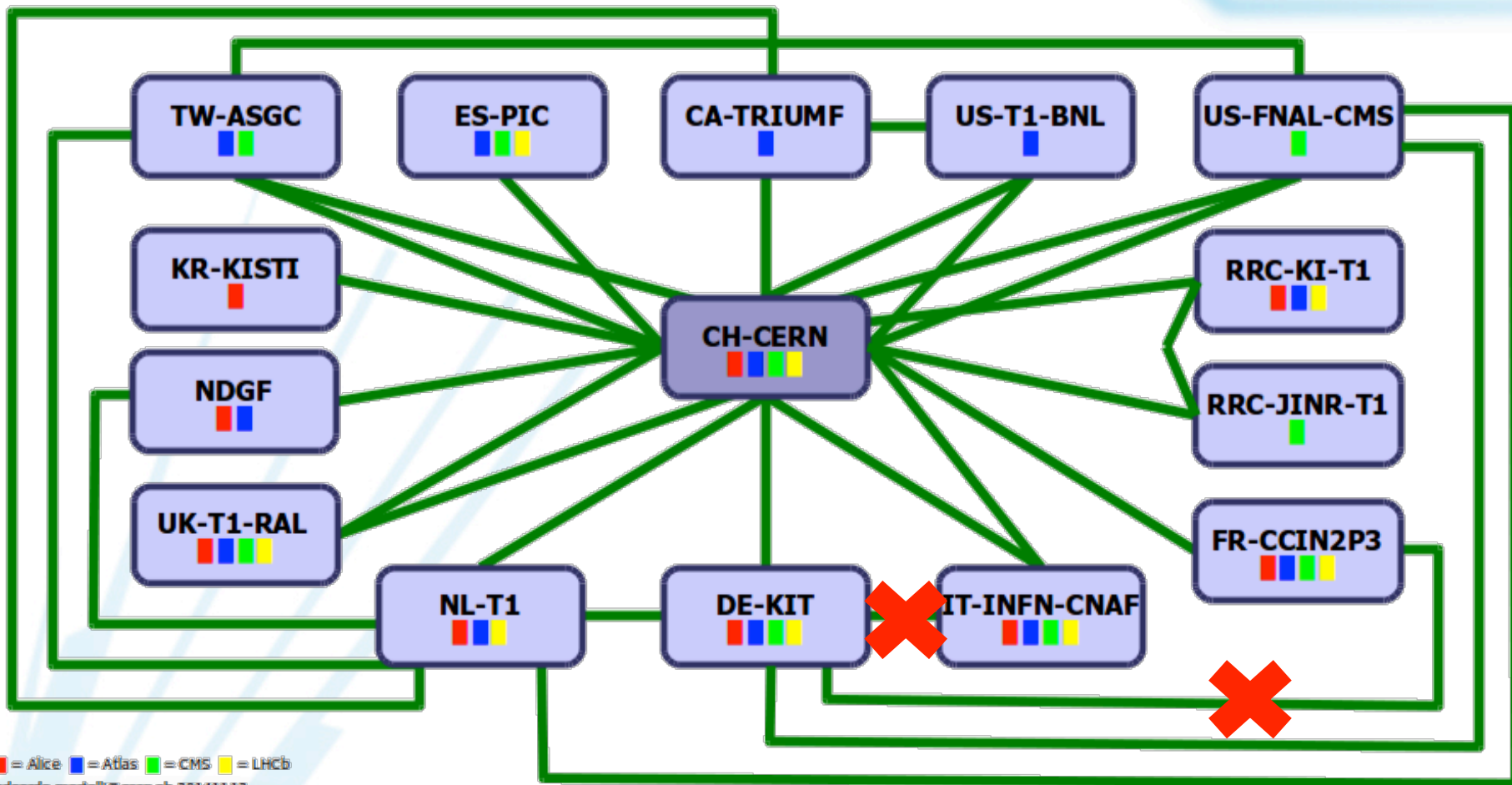


GEANT and partner networks enabling user collaboration across the globe

September 2014



# LHCOPN



# LHCONE France



**LHCONE**

10G λ dédiée

MPLS-TE 10G partagé

**LHCOPN**

10G λ dédiée

Backup optique



**GÉANT**



**LHCOPN**

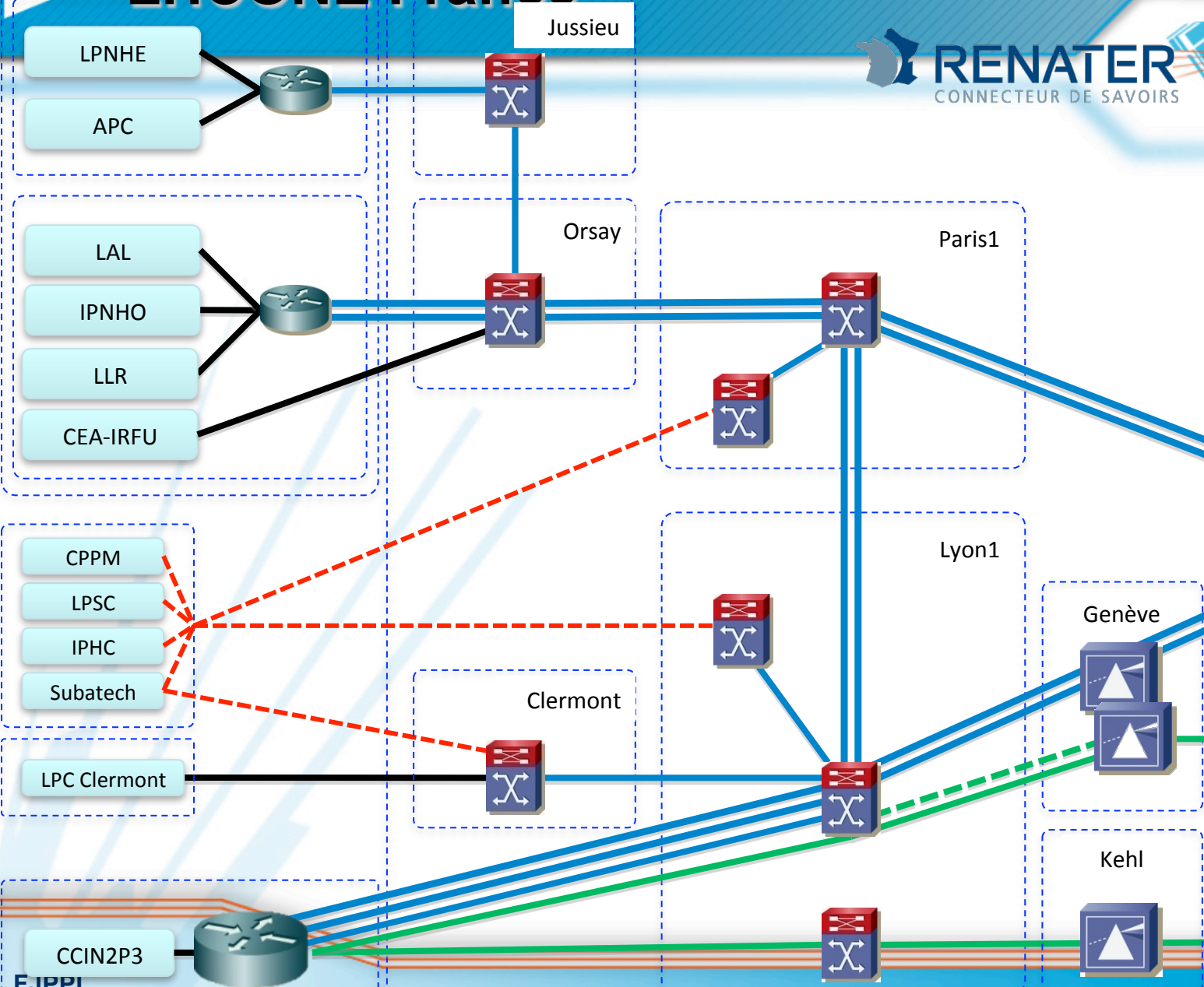


March 2015

GRIF - Distributed T2

Others T2

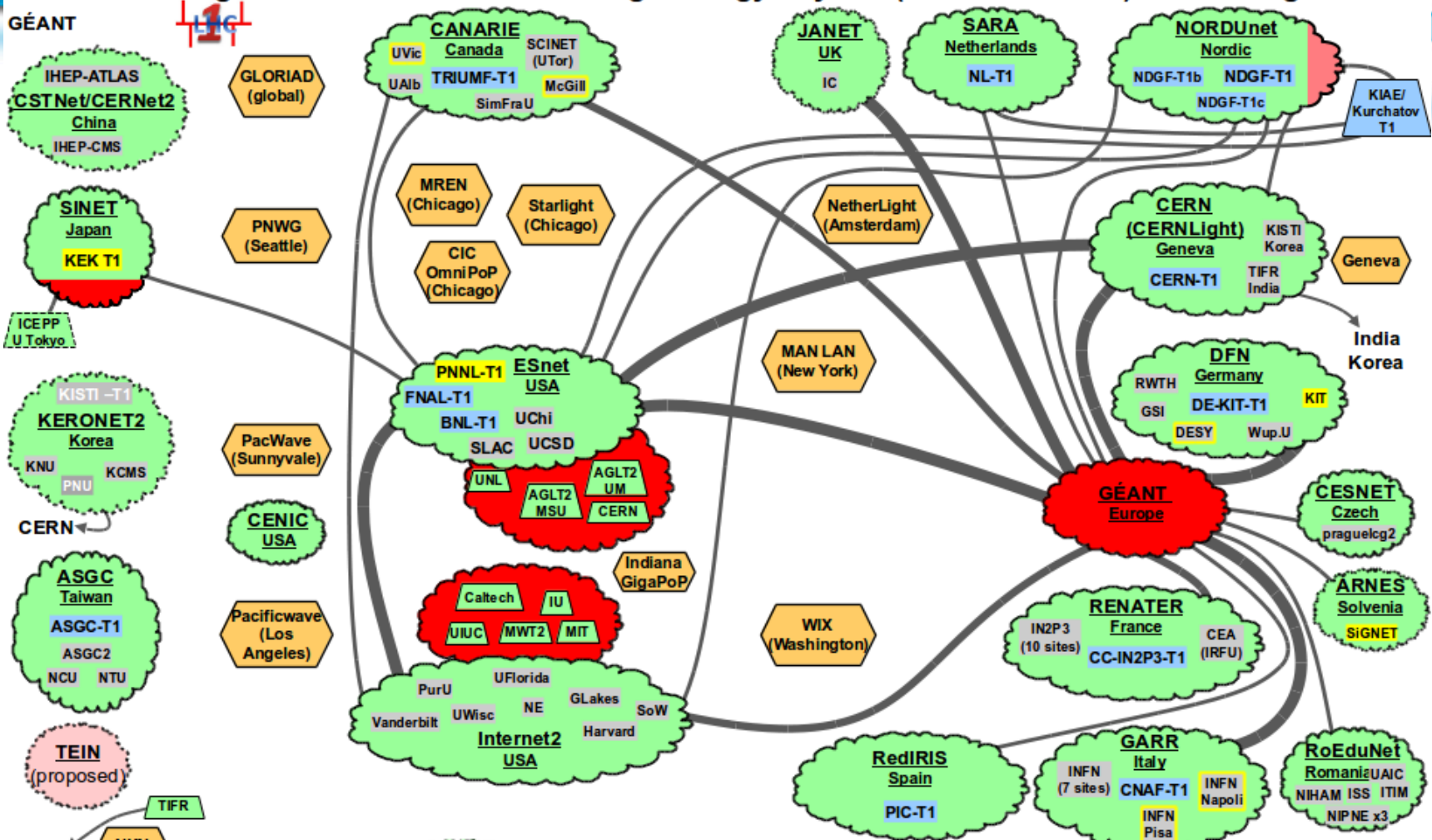
T1



# LHCONE

LHCONE: A global infrastructure for the High Energy Physics (LHC and Belle II) data management

N2P3



27 February 2015 – WEJohnston, wej@es.net

	LHCONE VRF domain		LHC Tier 1/2/3 ALTAS and CMS	} yellow outline indicates LHC+Belle II site
	LHCONE VRF aggregator network		Belle II Tier 1/2	
	Regional R&E communication nexus or link/VLAN provider		LHC ALICE	
			Sites that are standalone VRFs, Communication links: 1, 10, 20/30/40, and 100Gb/s	
			See <a href="http://lhcone.net">http://lhcone.net</a> for details.	

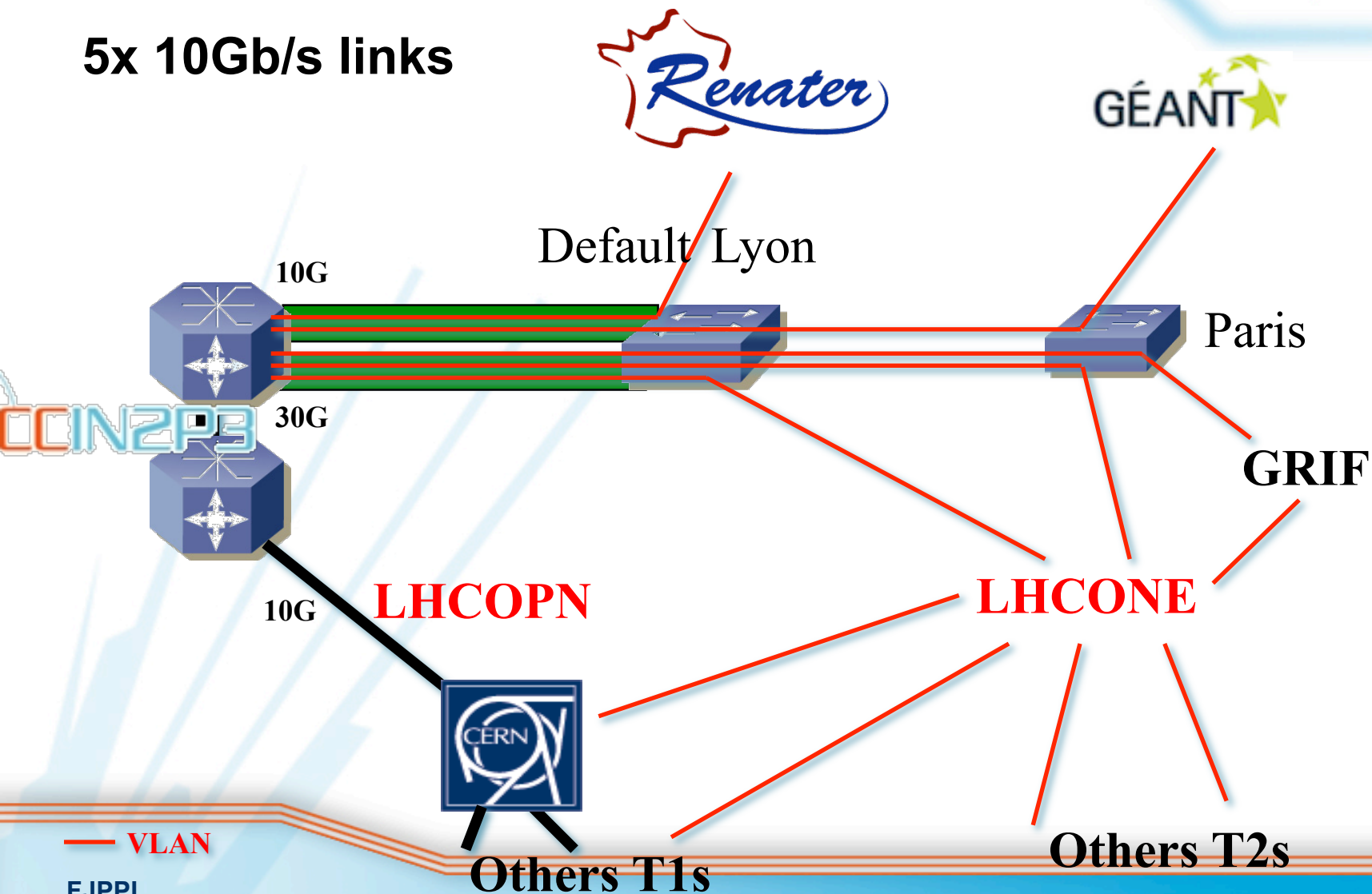




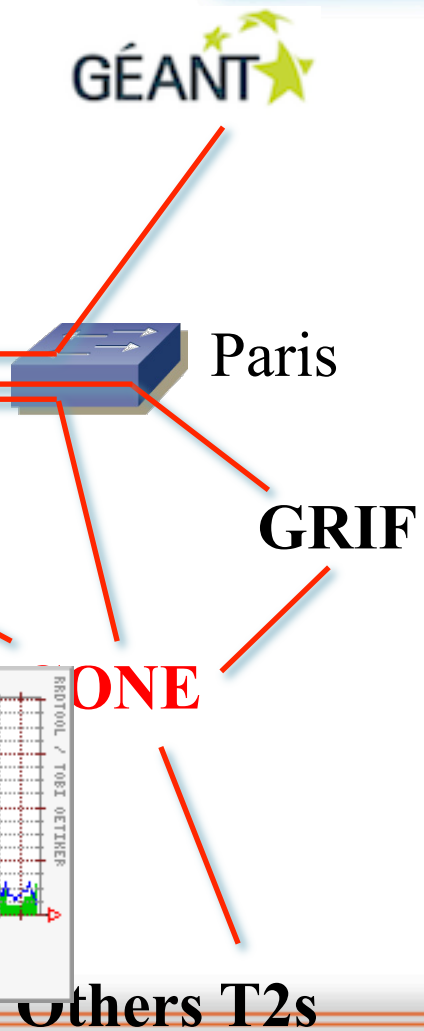
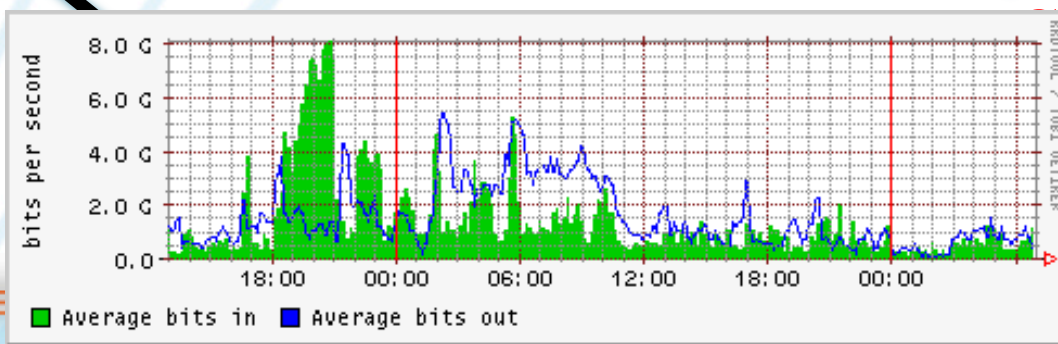
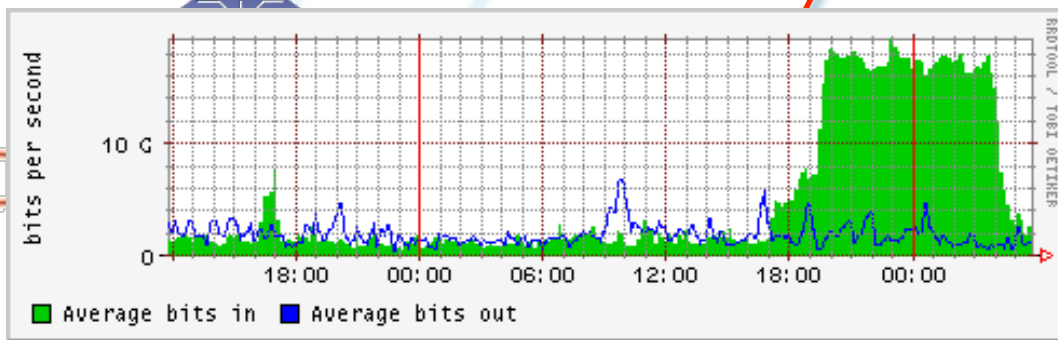
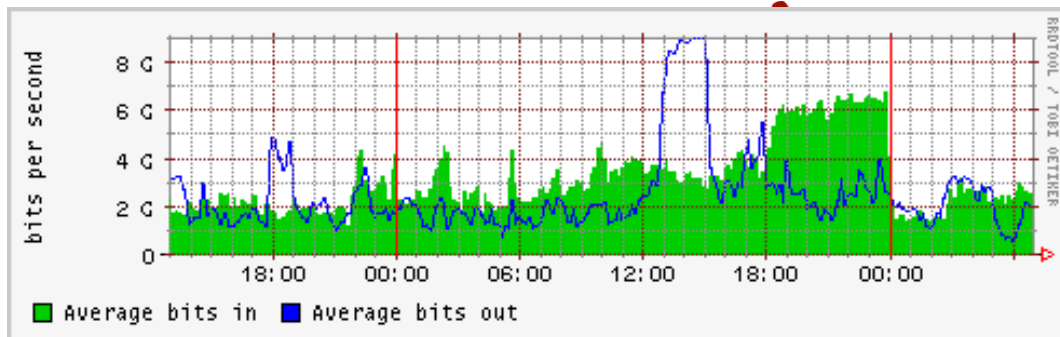
# CCIN2P3 connectivity



5x 10Gb/s links



# CCIN2P3 connectivity



— VLAN  
FJPPL

Others T1s

Others T2s





# CCIN2P3 LAN



> 1000 computing servers



> 500 data servers



> 15 PB RAID disk

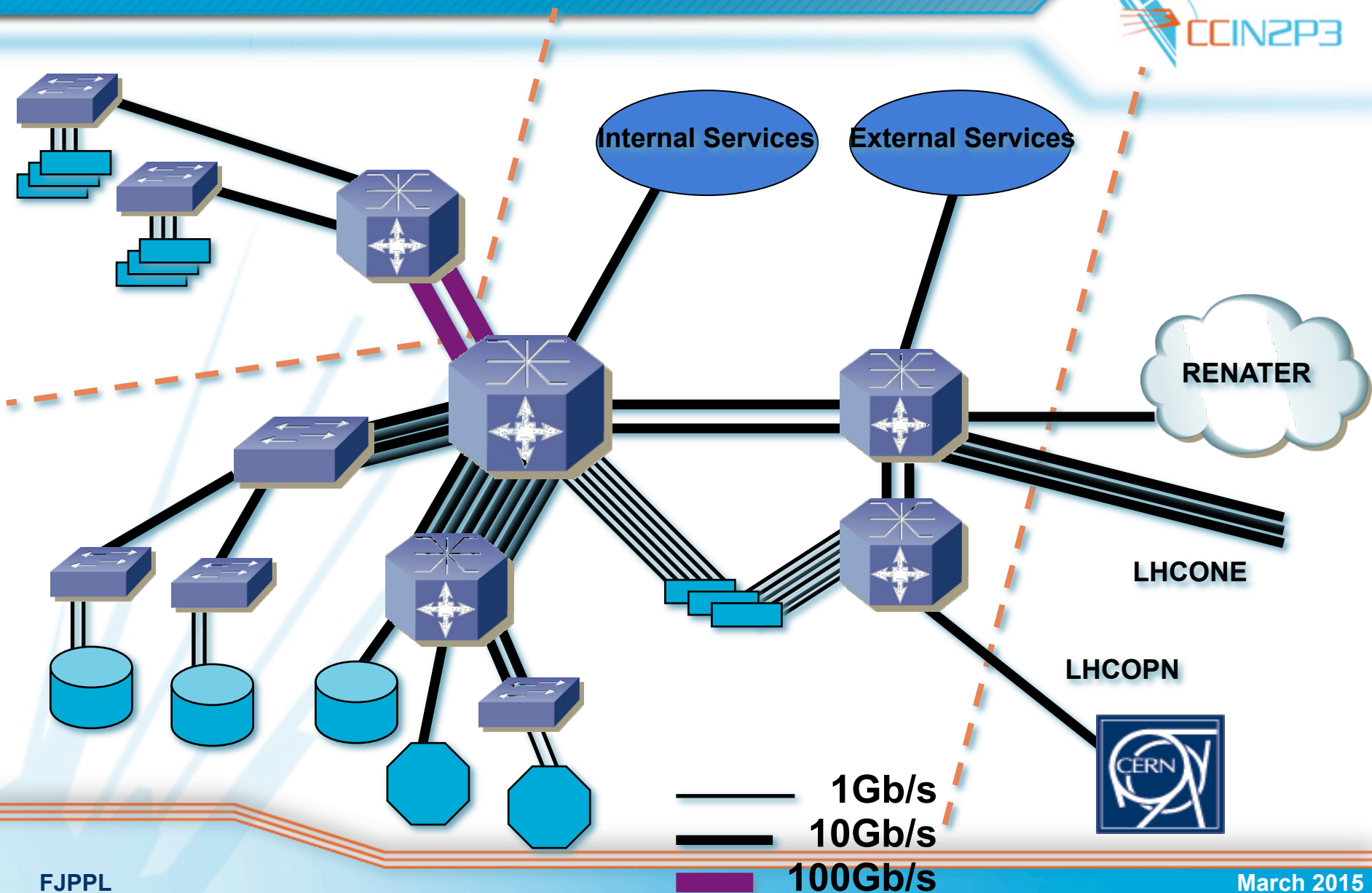


4 libraries of 10K tapes  
> 40 PB

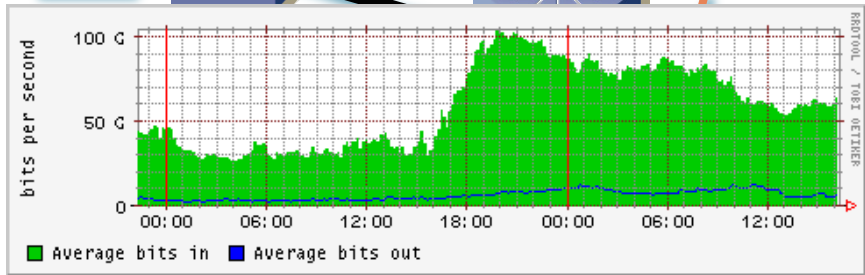
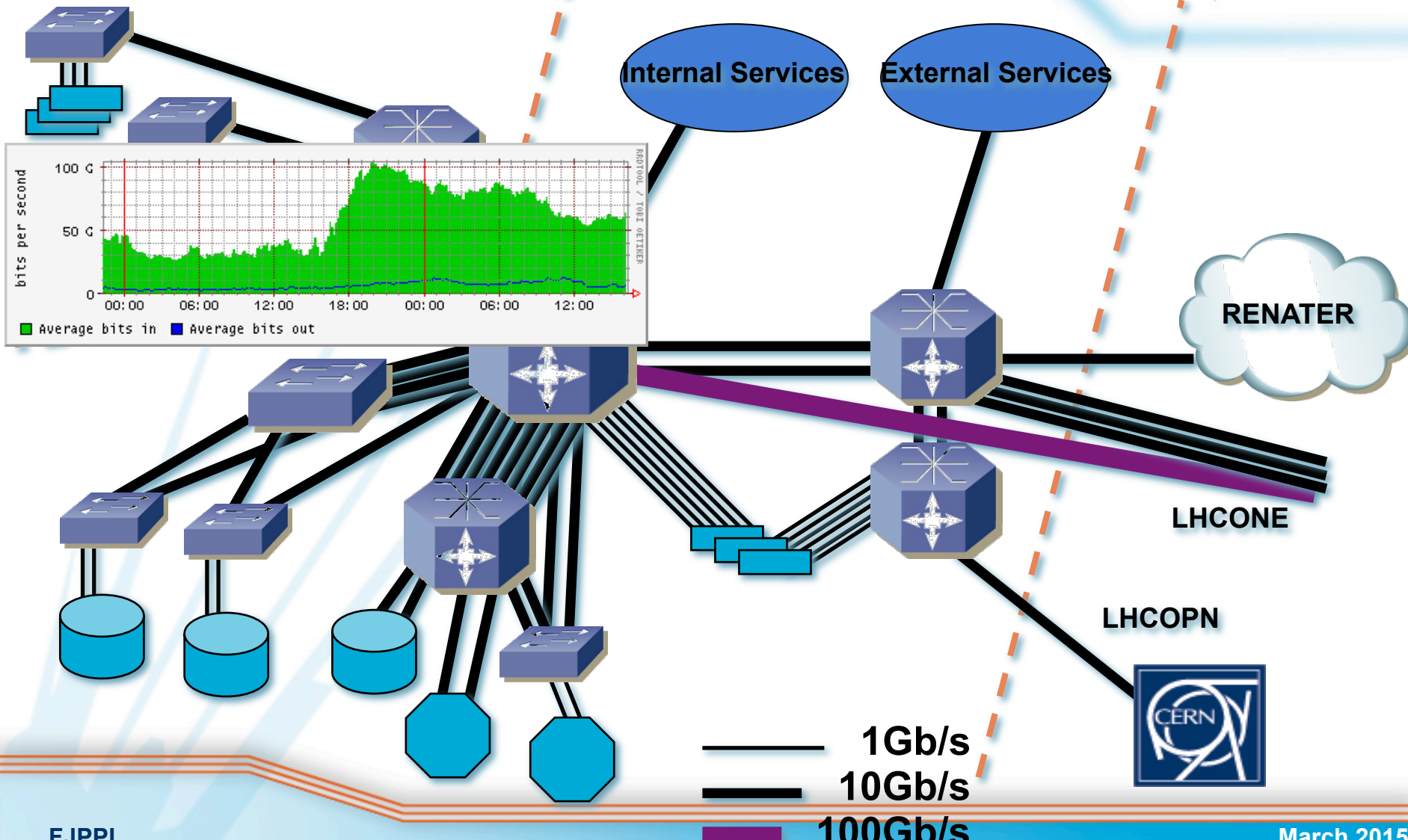




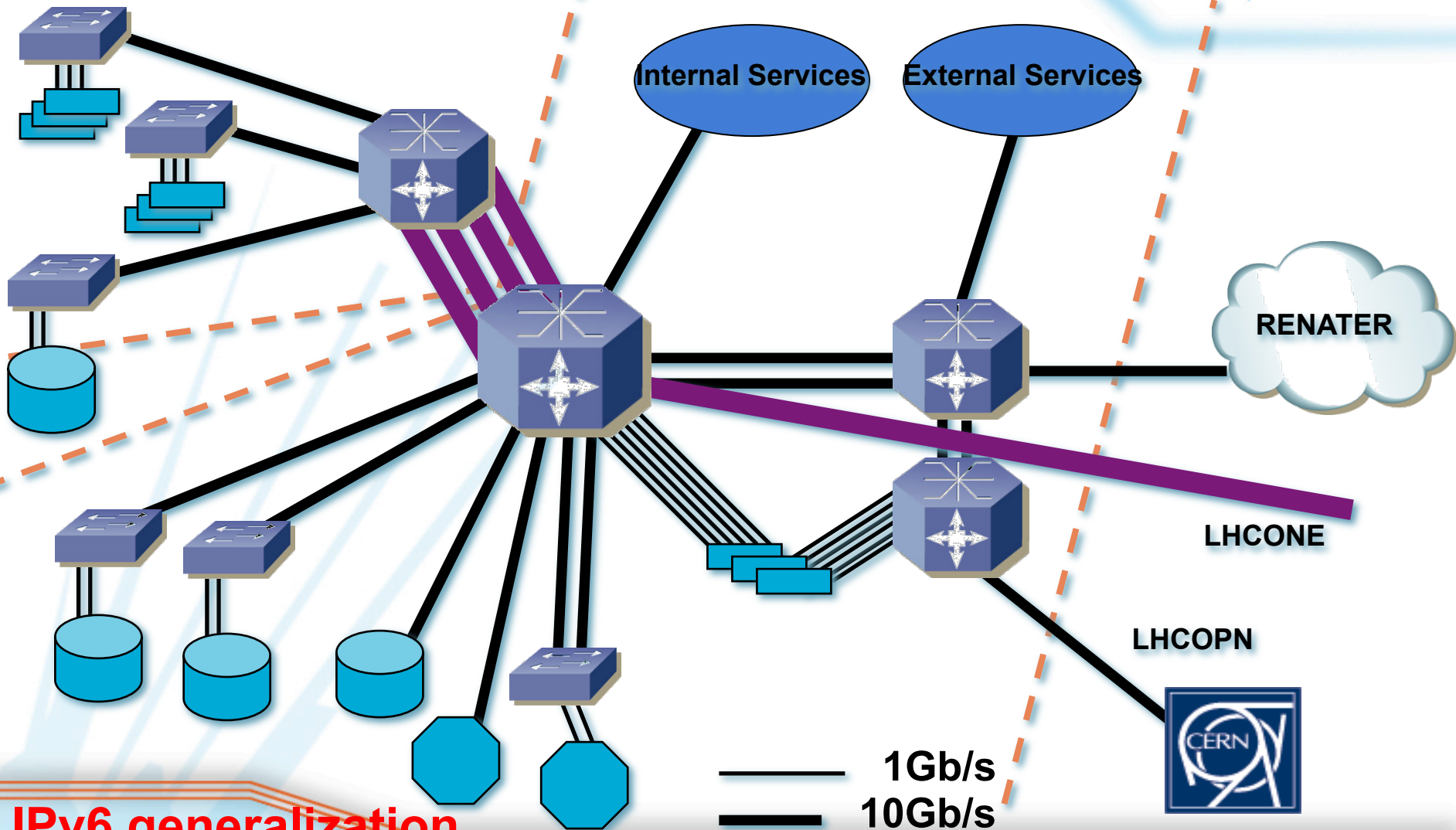
# LAN CCIN2P3



# LAN CCIN2P3 evolution



# LAN CCIN2P3 evolution ...



**IPv6 generalization**

FJPPL

- 1Gb/s
- 10Gb/s
- 100Gb/s



# IN2P3 Security



- ACLs
- Archiving and monitoring connections

by DESCOMBES Thierry and ZAKARI TOURE Ismael

Ip:  Server:  whois

Logs Alerts Global NON-CC cloud services workers interactives ring visiteurs eduroam IPv6 Details

telecom windows personar services1 services2 xfer

Presets : Last 24 Hours From : To : Apply

🕒 : 2015-03-09 09:00 → 2015-03-10 09:00

