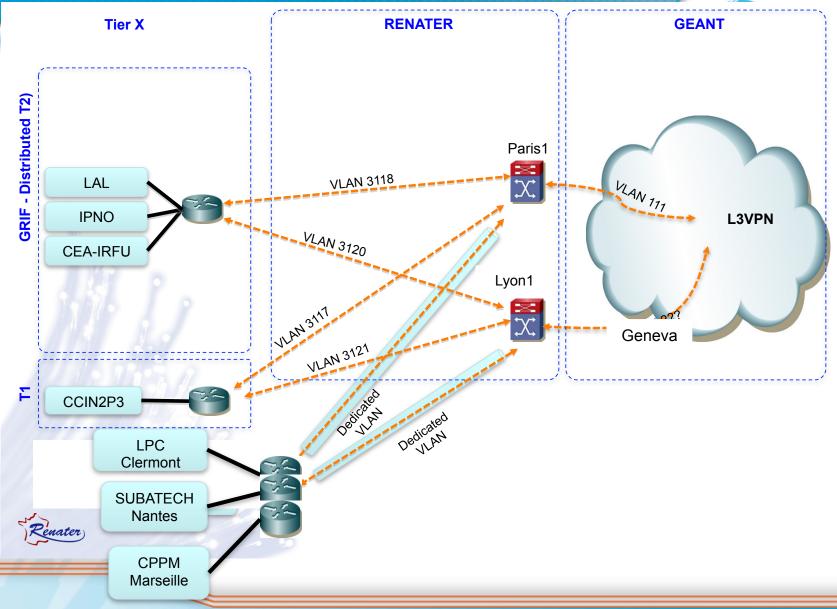# ATLAS FR Cloud

telecom@cc.in2p3.fr

June 2012

2012 French TierX connectivity changements

- LHCONE L3VPN

- T1 -> + a dedicated 10Gb/s link to LHCONE

- T2 SUBATECH Nantes 1G -> 10Gb/s generic IP + LHCONE

- T2 LPC Clermont 10Gb/s generic IP -> + LHCONE

- T2 CPPM Marseille 1G -> 10Gb/s generic IP + LHCONE

LHCONE L3VPN

- Mainly (6) routing problems

  that caused Assymetric traffic

  -> Not accepted by some sites:

  IRFU, CERN, KIT, BNL !

- Complex architecture with few remote tools to help and different administrative domains

GRIF

LLR

SAPHIR

GÉANT

Renater

P7

APC

CCIN2P3

SAPHIR

RAP

10Gb/s

10Gb/s

NR Orsay

NR Jussieu

LAL

IPNO

10Gb/s

10Gb/s

CEA

LHCONE

10Gb/s

IRFU

LPNHE

NR Lyon

10Gb/s

CCIN2P3

— **VLAN**

CCIN2P3 external connectivity

4x10Gb/s

Default RENATER Lyon

Paris

GRIF

LHCOPN

LHCONE

Others T1s

Some T2s

Others T2s

CCIN2P3 external connectivity

4x10Gb/s

Others T2s

GÉANT

Paris

GRIF

7 June 2012

LHCOPN

CERN

LHCONE

Some T2s
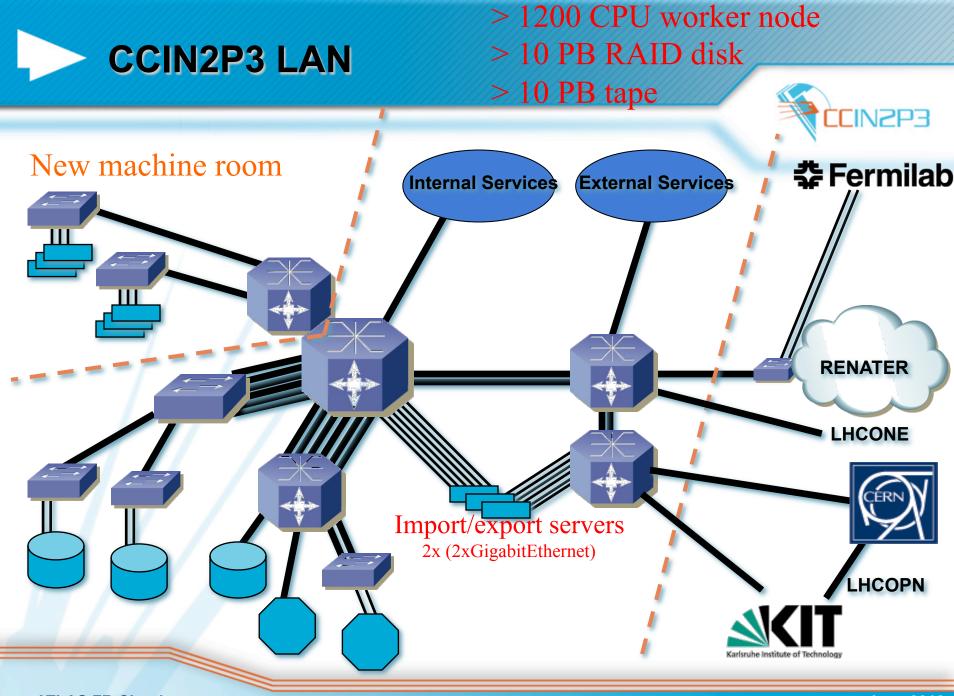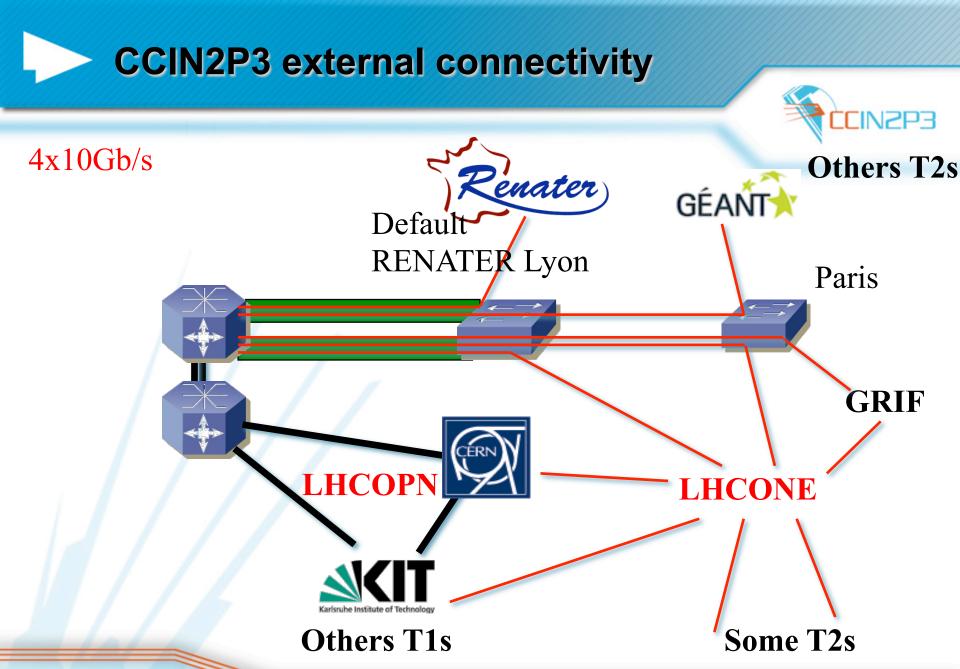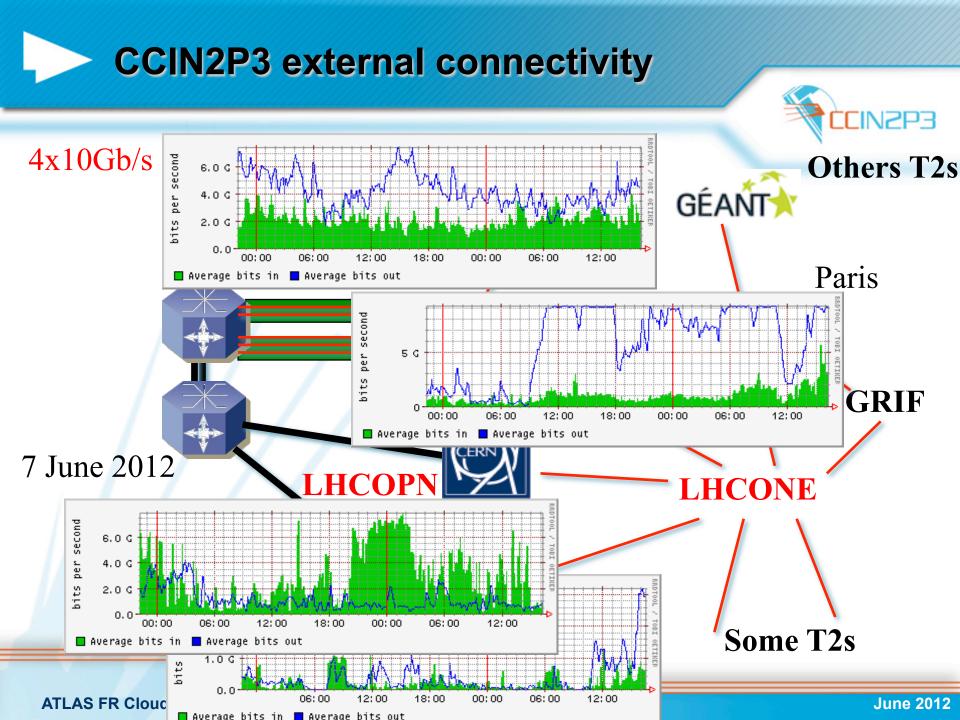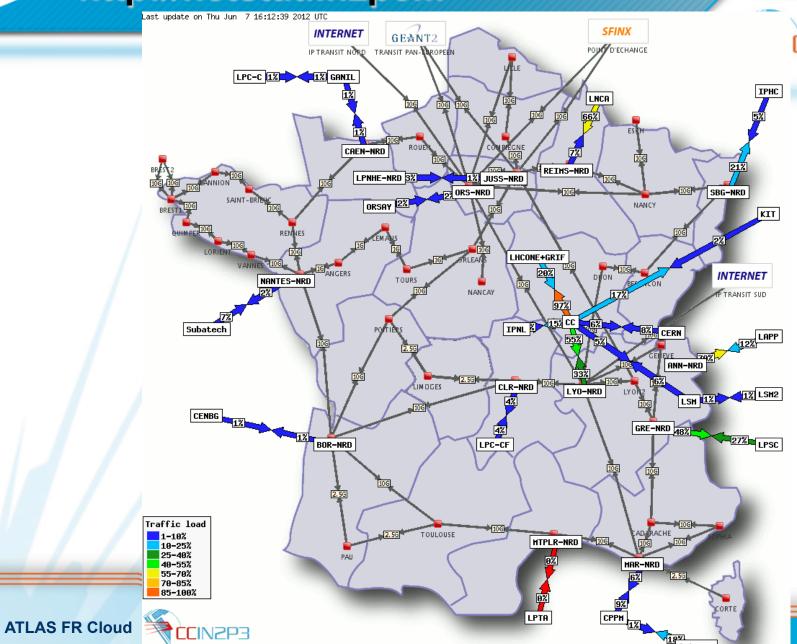
http://netstat.in2p3.fr

ATLAS FR Cloud

June 2012

- LINUX server have 2 GigaEthernet cards
- Old bonding algorithm

  mode=balance-rr
- New bonding algorithm

  mode=802.3ad xmit_hash_policy=layer2+3

Transfer performances

CCIN2P3 to distant sites

CCIN2P3 to	LAN	LAL Paris	GEANT London	IHEP China	ICEPP Japan
LINUX 2x 1 Gb/s Old algo	830 Mb/s	620 Mb/s	160 Mb/s	15 Mb/s	2 Mb/s
LINUX 2x 1 Gb/s New algo	860 Mb/s	600 Mb/s	400 Mb/s	220 Mb/s	12 Mb/s
SOLARIS 2x 1 Gb/s	940 Mb/s	940 Mb/s	400 Mb/s	200 Mb/s	400 Mb/s

iperf tests 1 stream -w16M

Transfer comments

- Iperf average

- Big differences when the machine is free unlike it is in production, even if the network card is few used,

  the throughput can then vary for exemple

  for IHEP site from 10 to 200 Mb/s !

- One week after we made the LINUX server optimisation we had performances problems with the SOLARIS servers !

- Problems due to the new JAVA patch installed for security reasons …