

DE-KIT (GridKa) update

Bruno Hoeft KIT/SCC

STEINBUCH CENTRE FOR COMPUTING - SCC



Layout – snapshot end 2016 (1)

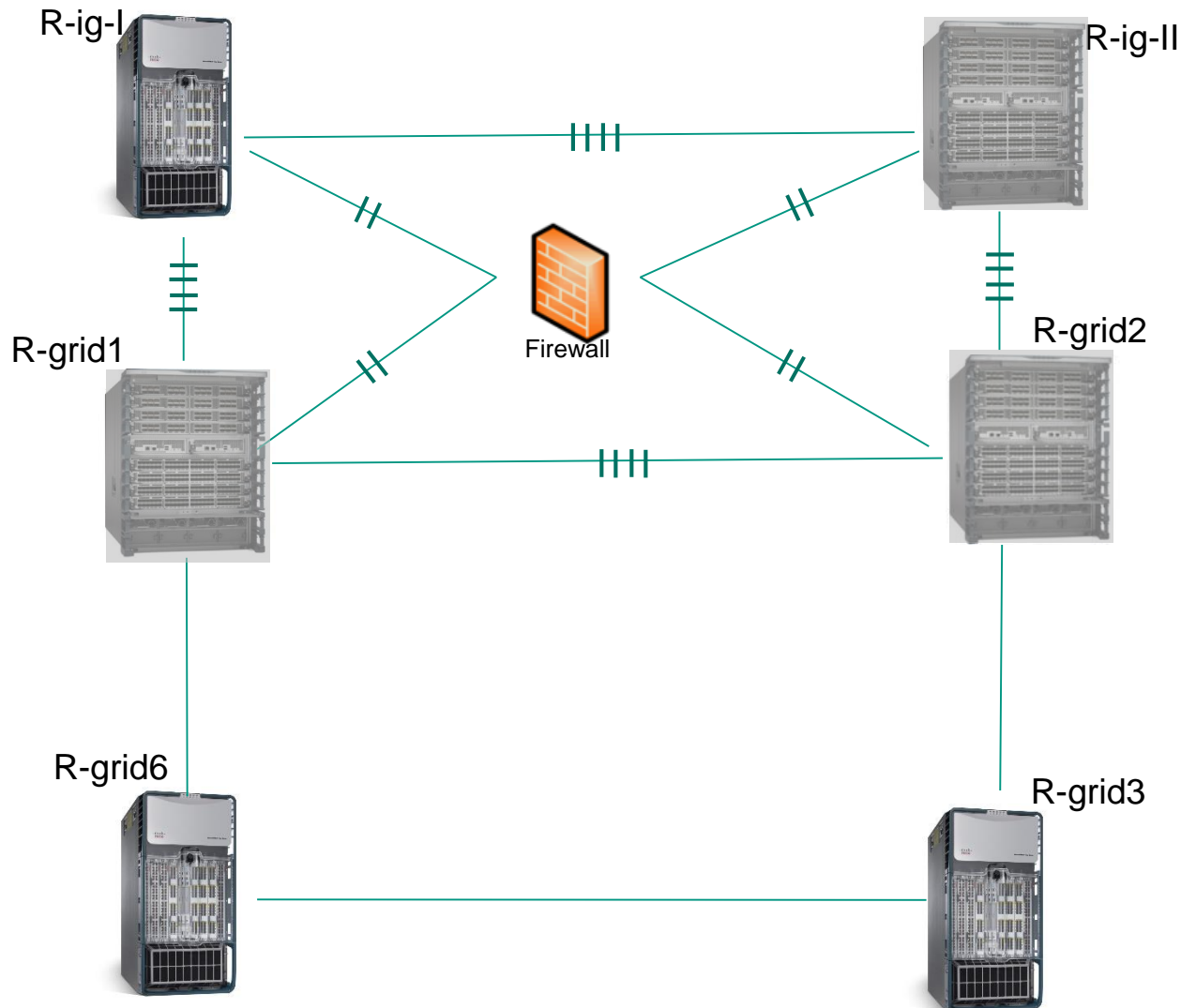
■ WAN:

- 2*10 GE LHCOPN
- 1*100 GE shared
 - LHCONE
 - GE General Purpose Internet (GPI)

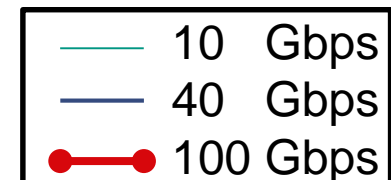
■ LAN:

- Storage: each Server 10 GE
 - Single attached to one router
- Worker Nodes: each host 1 GE
 - Switch aggregated

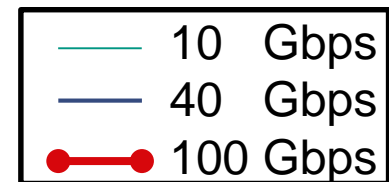
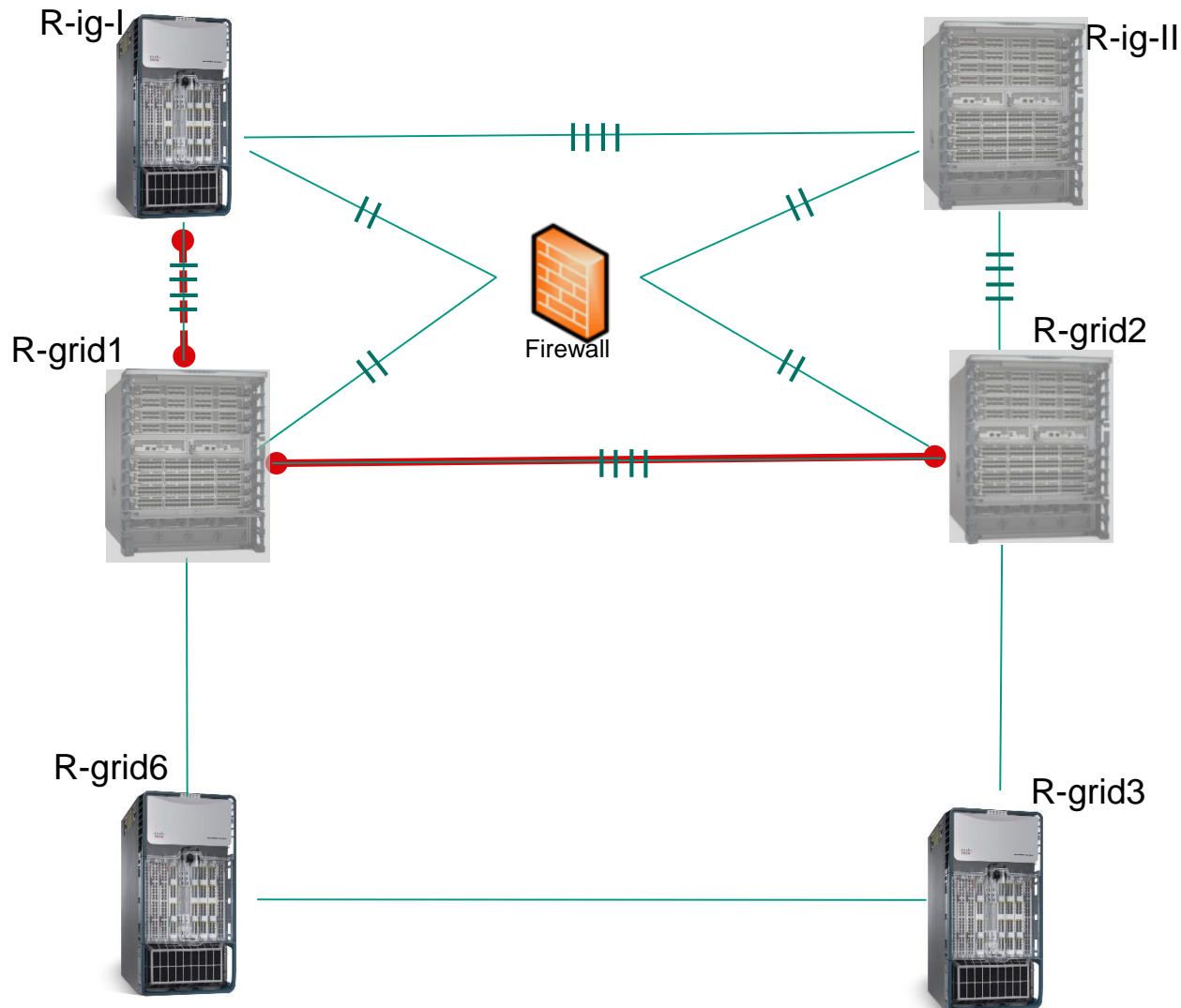
Layout – snapshot end 2016 (2)



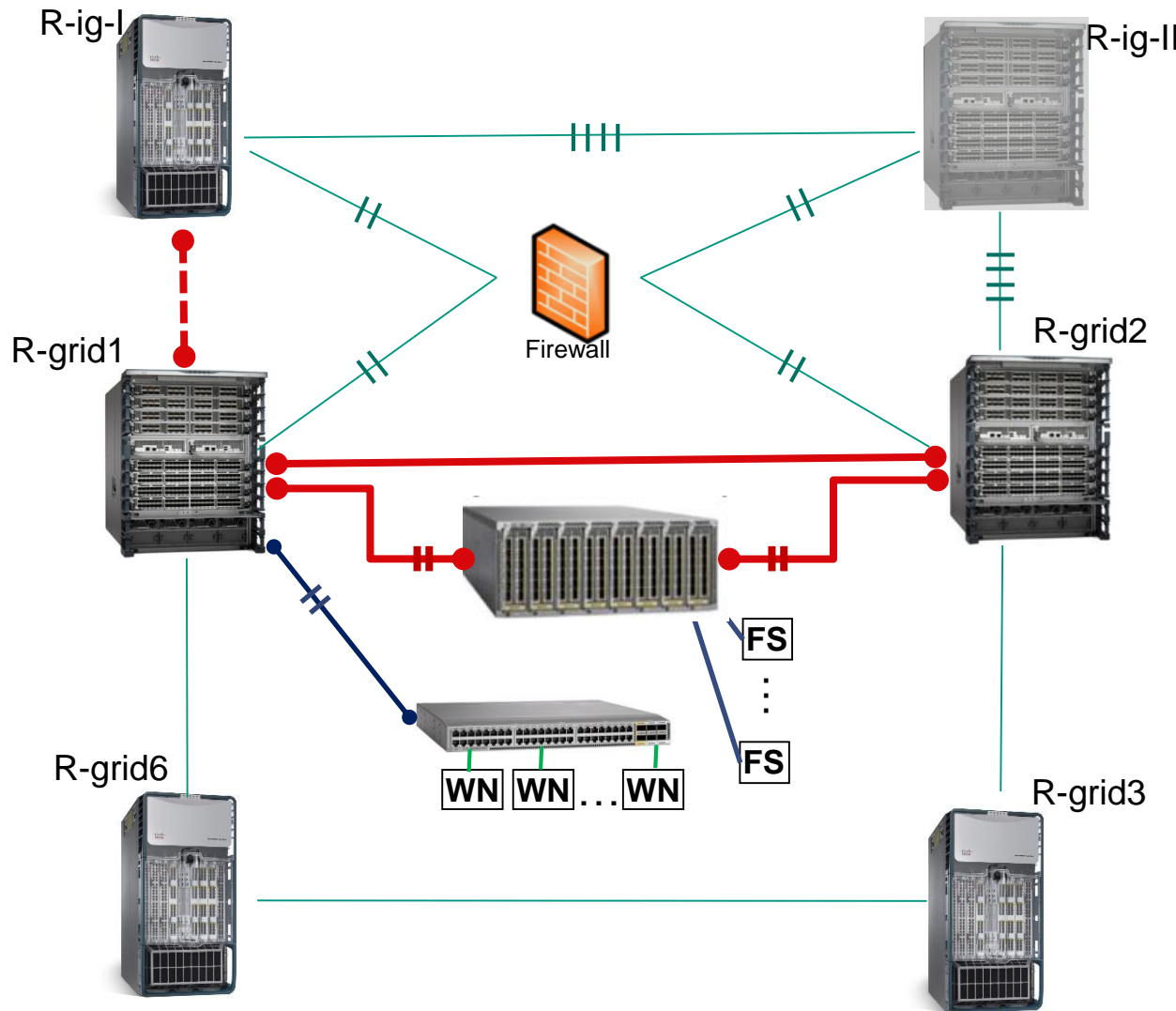
- Double Firewall capacity:
 - each interface 2 * 10 GE



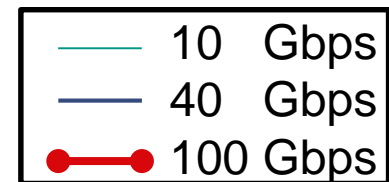
Lan upgrade (1)



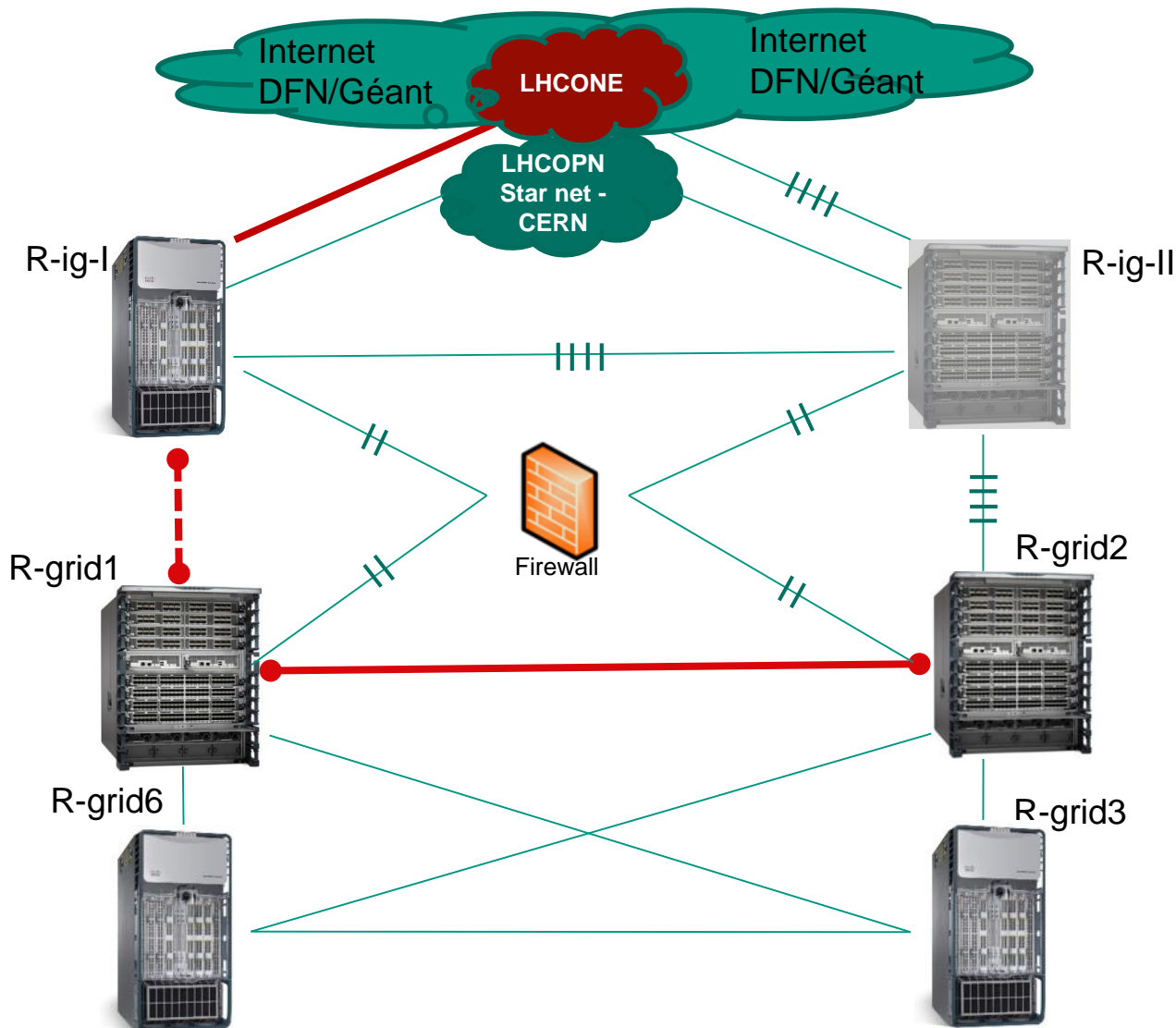
LAN Upgrade (2)



- Worker Nodes: each Host 10 GE
- Storage approx. 20PB: each Server 40 GE
 - Single attached
 - to a redundant connected switch



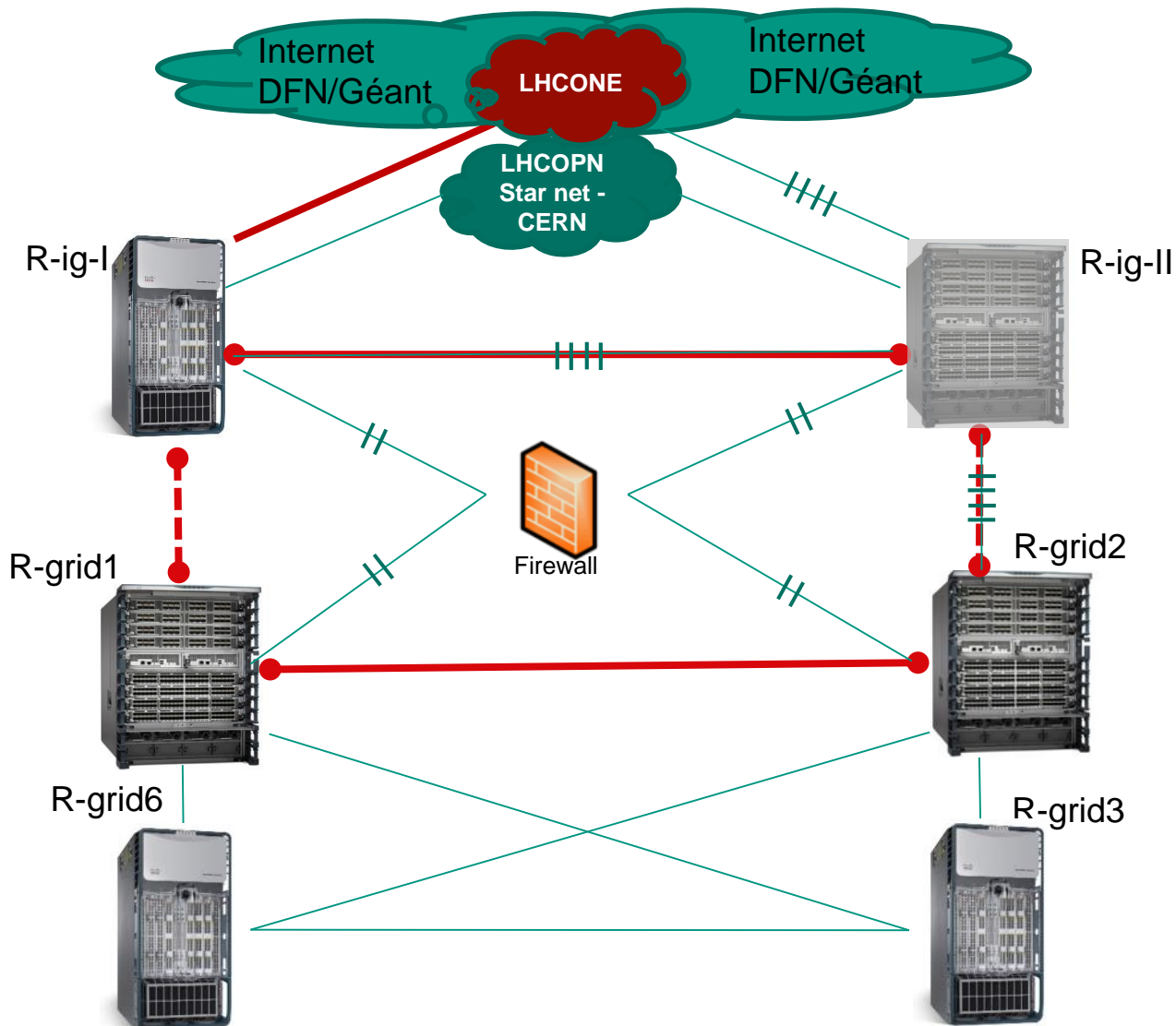
WAN status end 2016



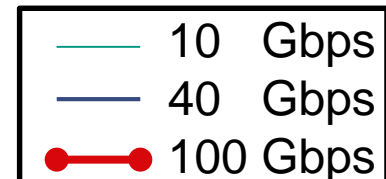
- 2 * 10 LHCOPN
- 1 * 100 + 4 * 10 LHCONE + GPI



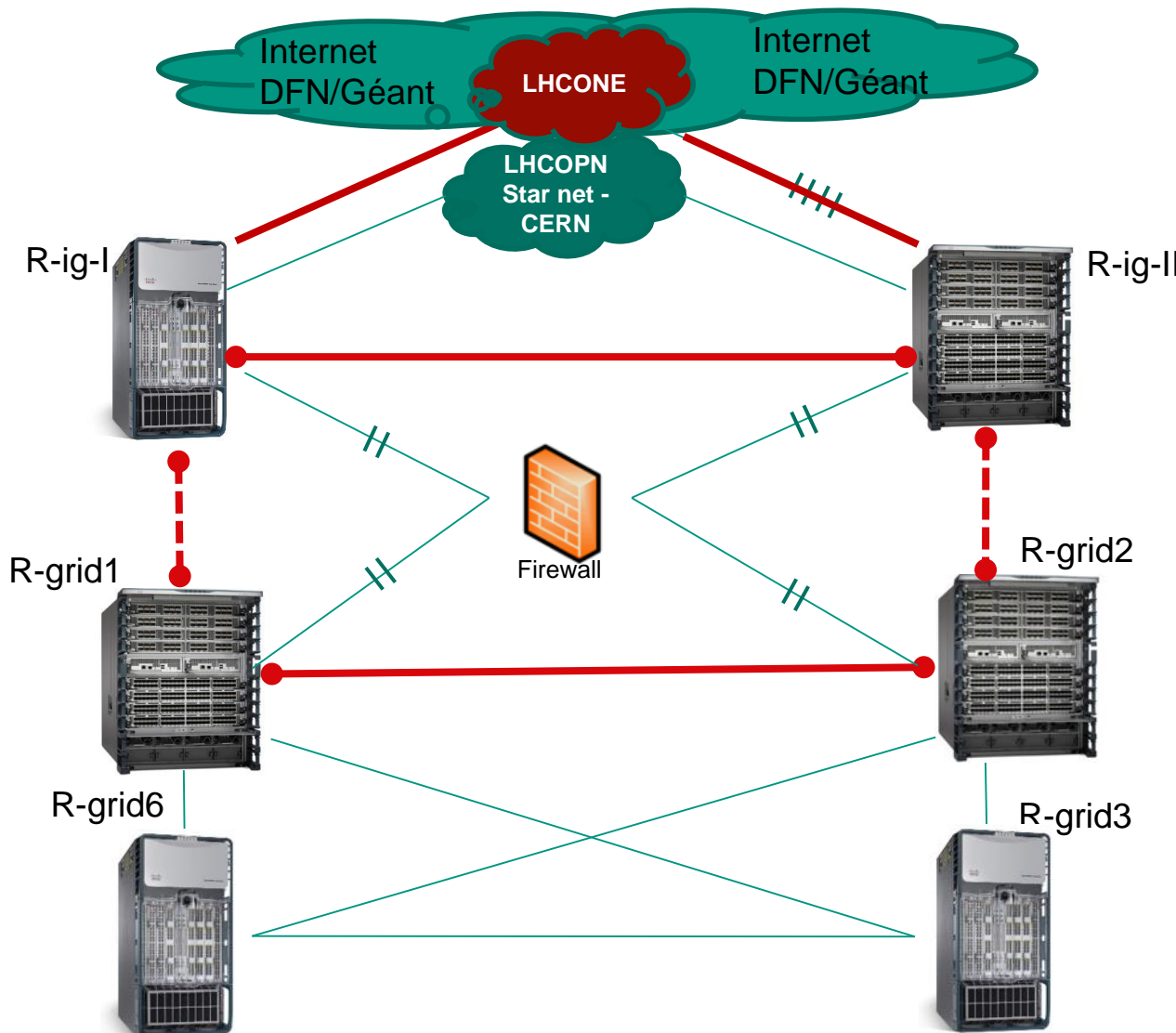
WAN upgrade



■ New second border router



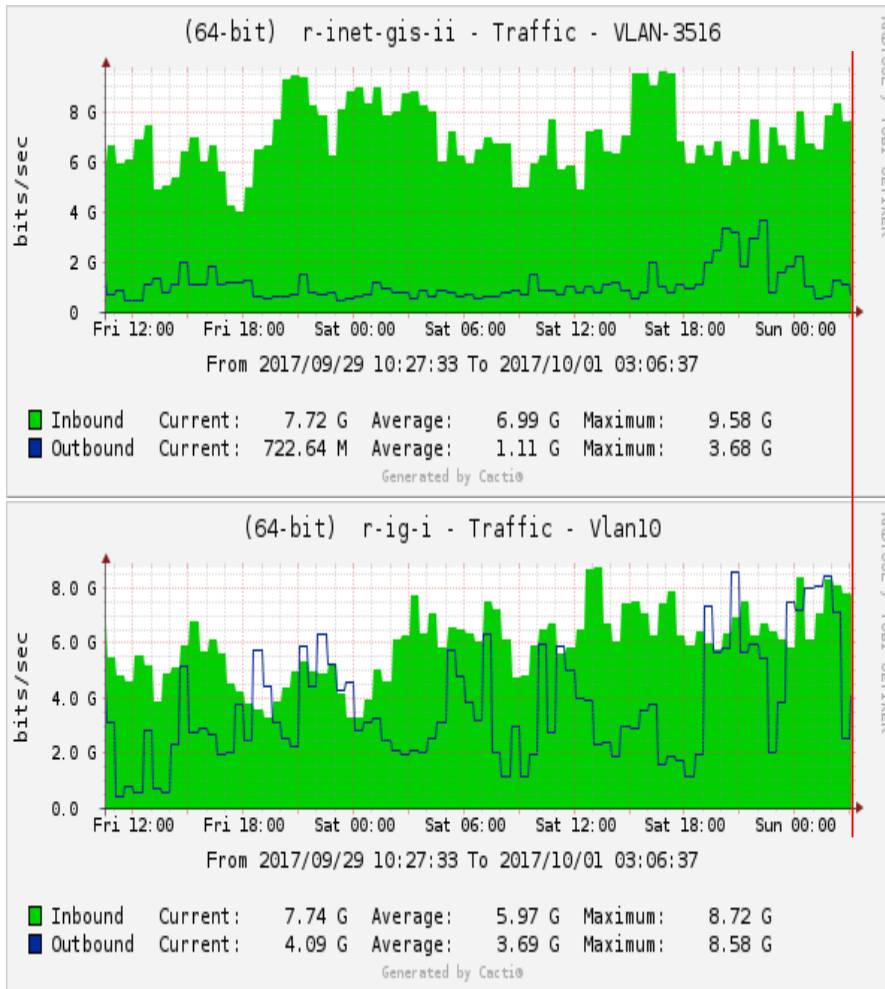
WAN upgrade



- 2 * 50 GE shared
- LHCONE
- General Purpose Internet

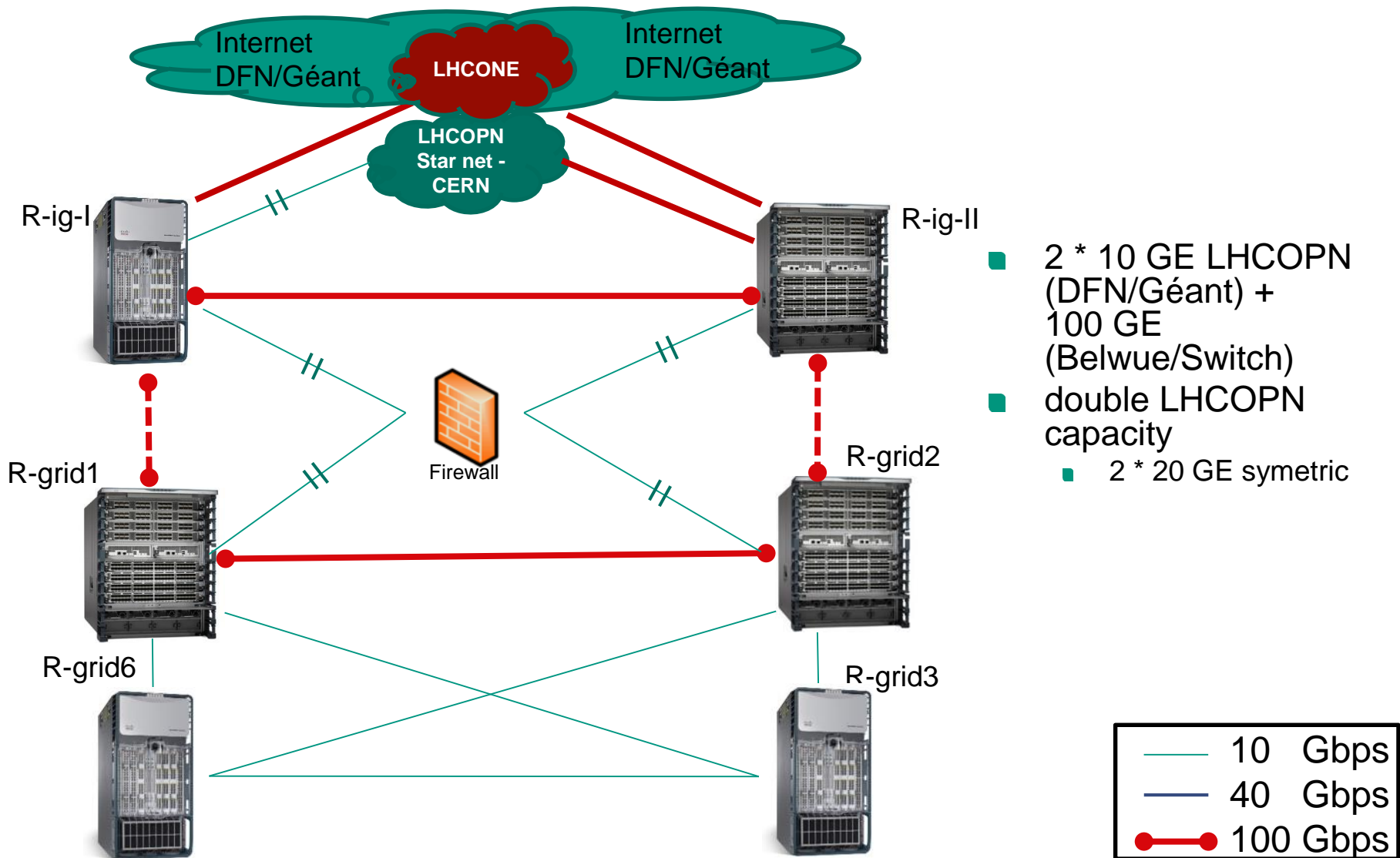


LHCOPN ?



- Discussion with CERN: → LHCOPN will be maintained, as a VPN for distributing raw data to Tier-1 for archiving and first processing
- 2 * 10 GE not completely saturated, but the necessity of upgrade is obvious
- Options:
 - Additional 2 * 10 GE
 - Additional 100 GE
- Talking to several provider
 - with DFN → the first option was favoured
 - with Belwue → eventually the second option was possible

WAN upgrade



Summary

- Reorganization of routing/switching
- Reducing number of backbone routers
- Increase the LAN/WAN capacity
- WN interface now 10 GE
- File server interface 40 GE
- File server and WN connected to aggregation switches
- Uplink of aggregation switches are redundant and scalable
- Upgrade second DE-KIT border router
- LHCONE and Internet shared → symmetric 2 * 100 GE
- LHCOPN upgrade to
 - 2 * 10 GE and
 - 1 * 100 GE (Belwue/Switch)

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thanks for your attention
?
Questions

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