

Running and Testing T2 Grid Services with Puppet at GRIF-IRFU

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Abstract

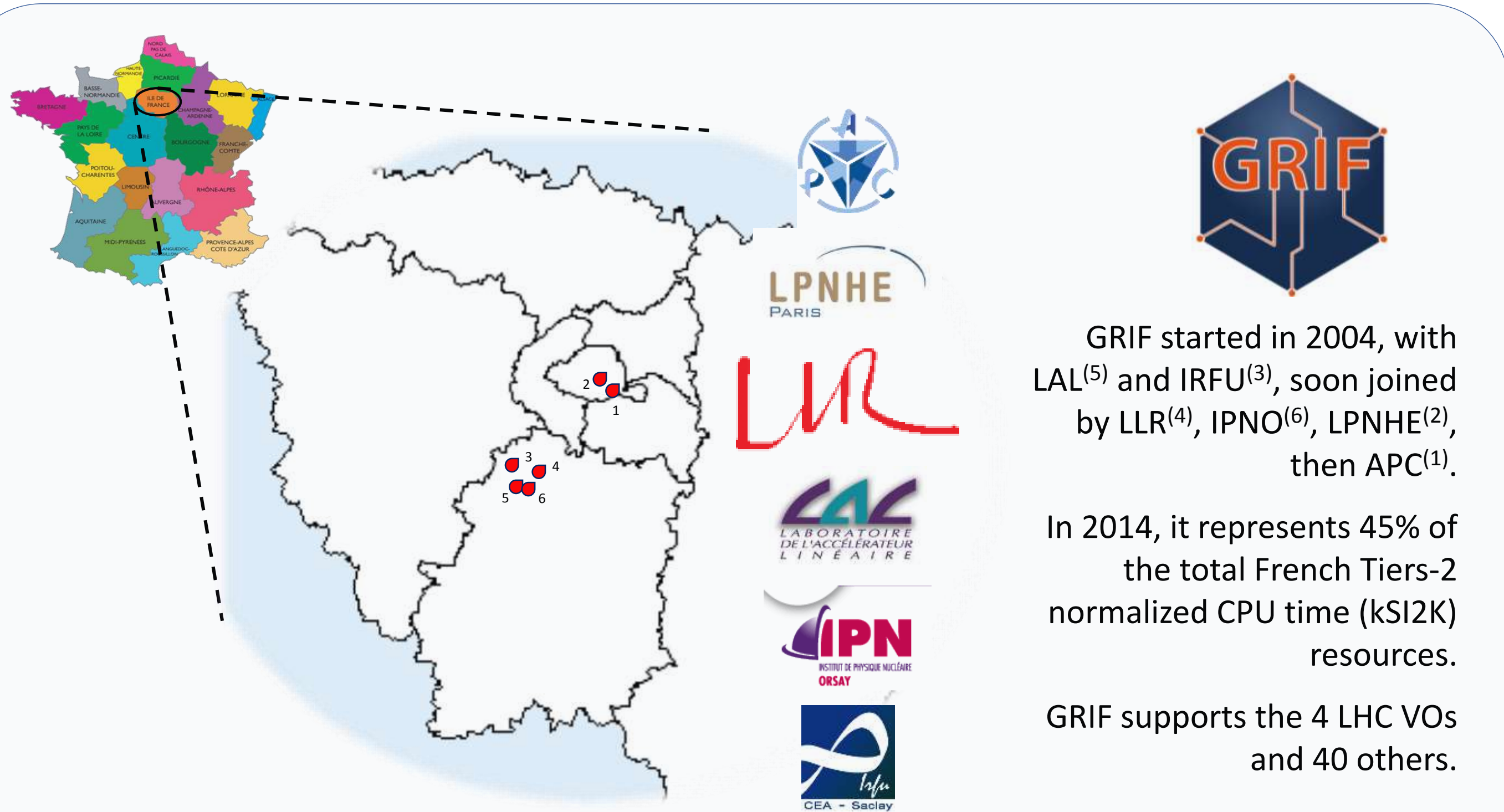
GRIF is a distributed Tiers-2 center, made of 6 different centers in the Paris region, and serving many VOs. The sub-sites are connected with 10gbits/s private network and share tools for central management.

One of the sub-sites, GRIF-IRFU held and maintained in the CEA-Saclay center, moved, a year ago, to a configuration management with Puppet. Thanks to the versatility of Puppet/Foreman automation, the GRIF-IRFU site maintains usual grid services, with, among them: a Cream-CE with a Torque with Maui (running a batch with more than 5000 jobs slots), a DPM storage of more than 2PB, a Nagios monitoring essentially based on check_mk, as well as centralized services for the French NGI, like the accounting, or the argus central banning system.

We report on the actual functionalities of Puppet and present the last tests and evolutions including a monitoring with Graphite, a HT-condor multi core batch accessed with an ARC-CE and a CEPH storage file system.

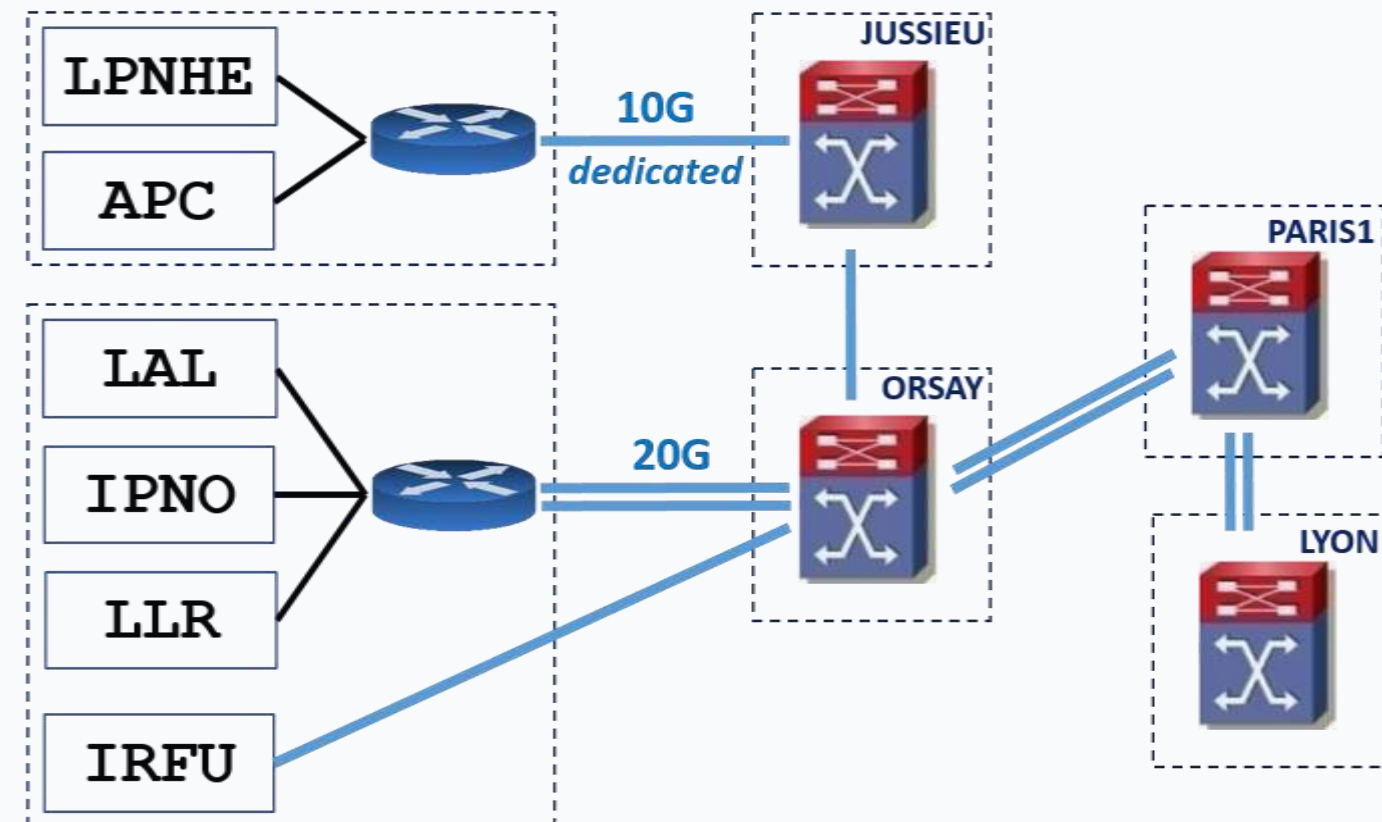


GRIF : A distributed Tier 2 in Île-de-France

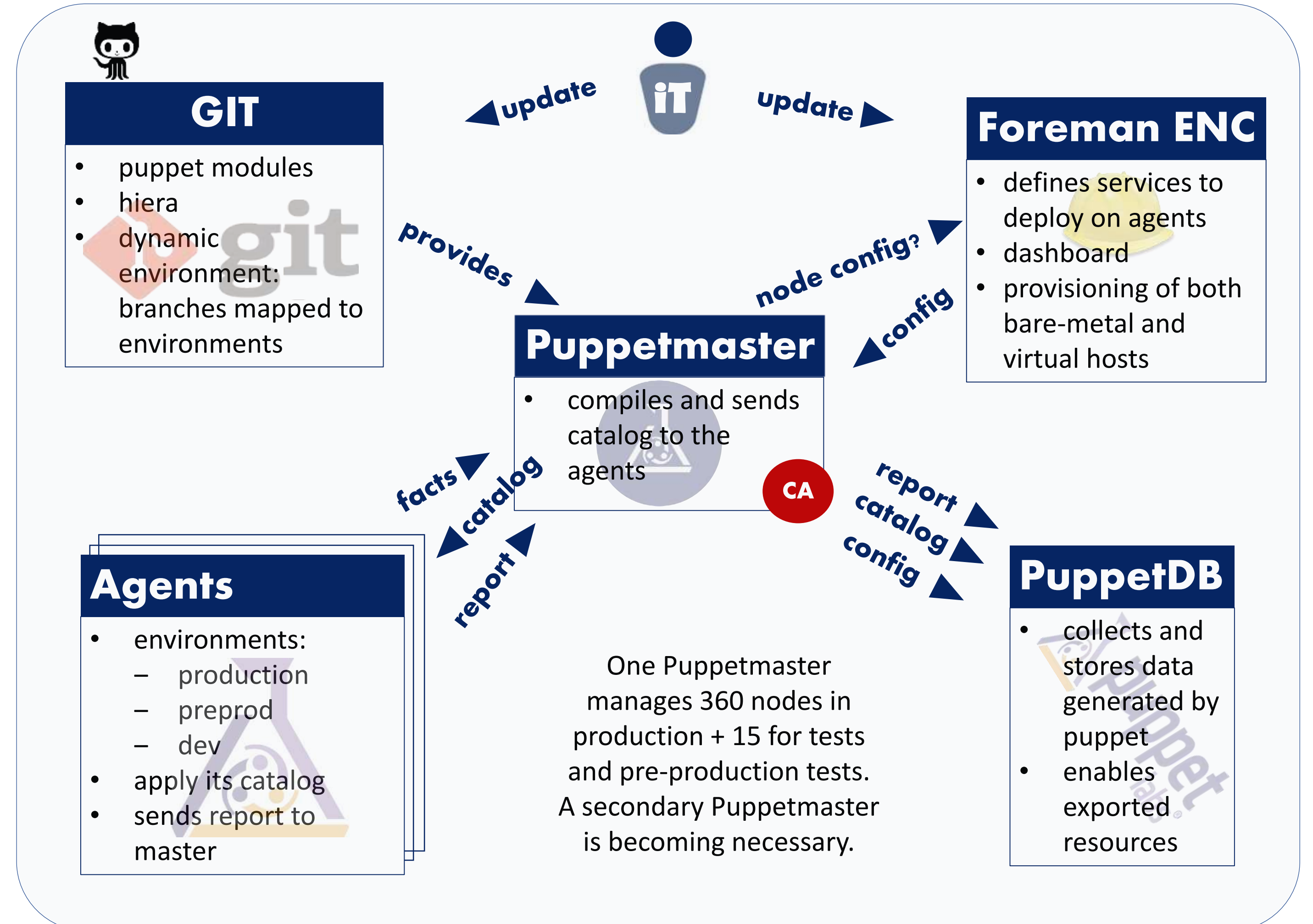


The LHCone Network

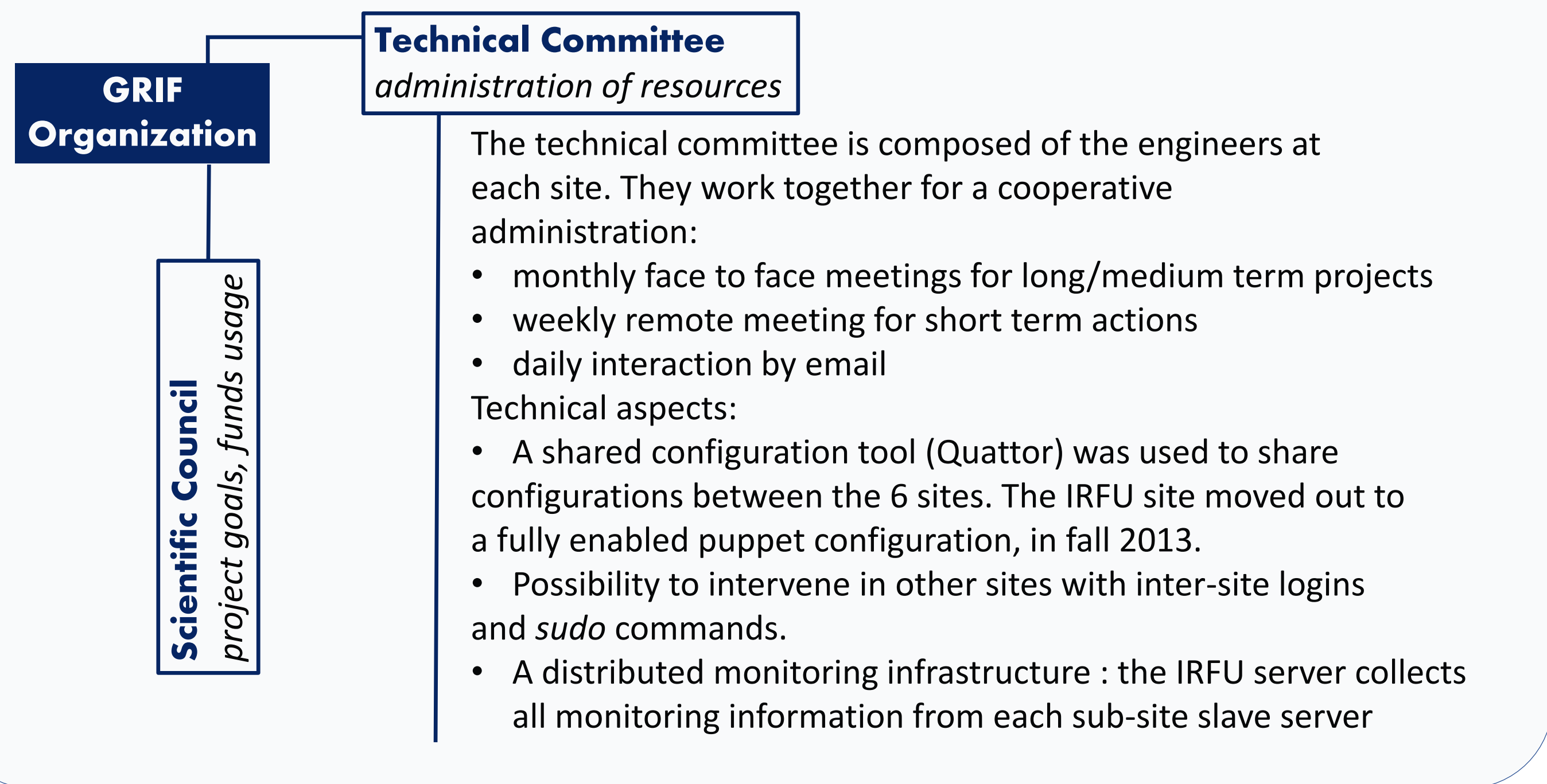
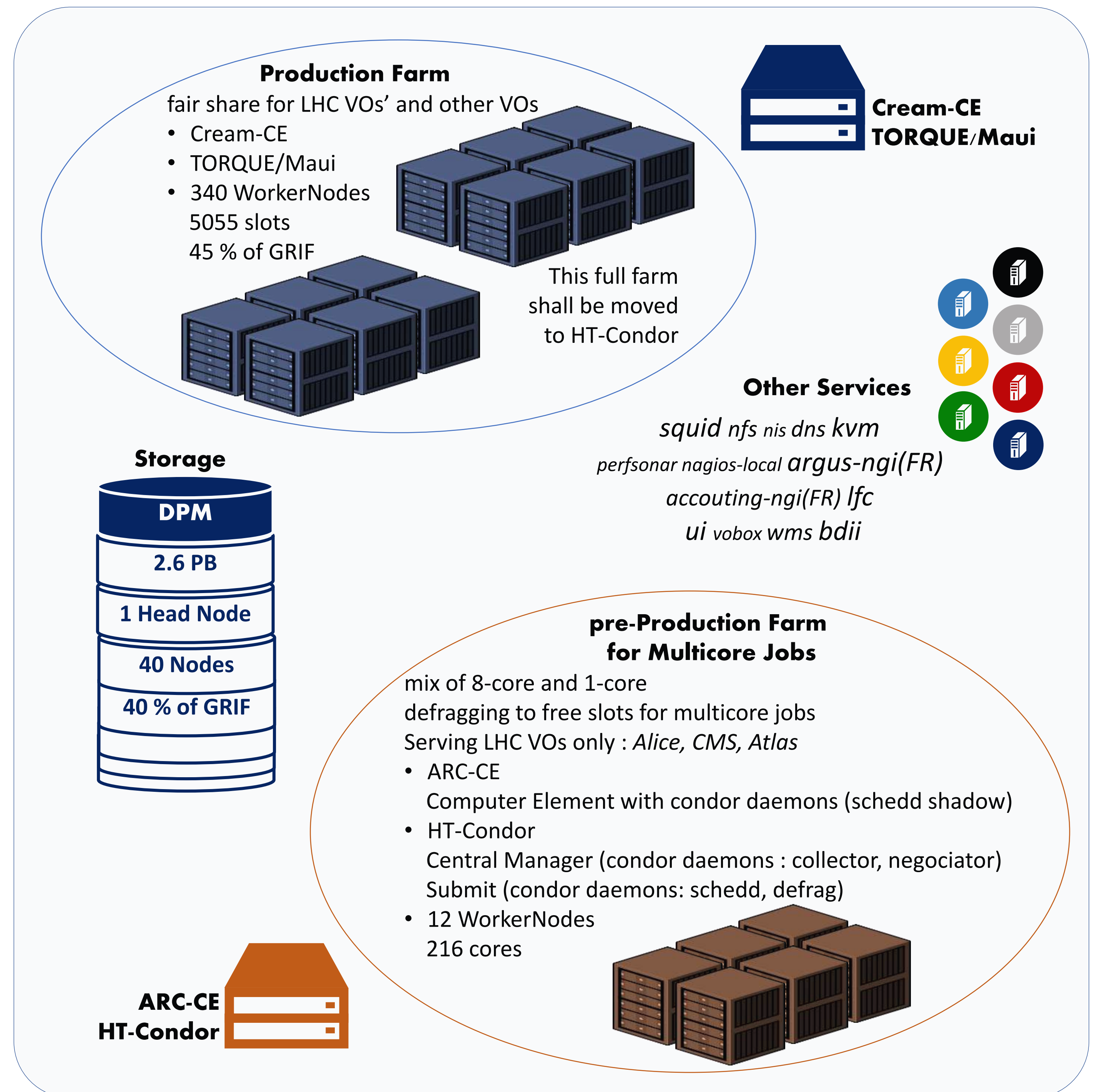
A dedicated 20Gb links GRIF to the French Tier-1 (Lyon) through Orsay PoP. Orsay is connected with one 10Gb link to the two inner Paris sites and with another 10Gb link to IRFU. The 3 sites LAL, IPNO, LLR share a 20Gb link.



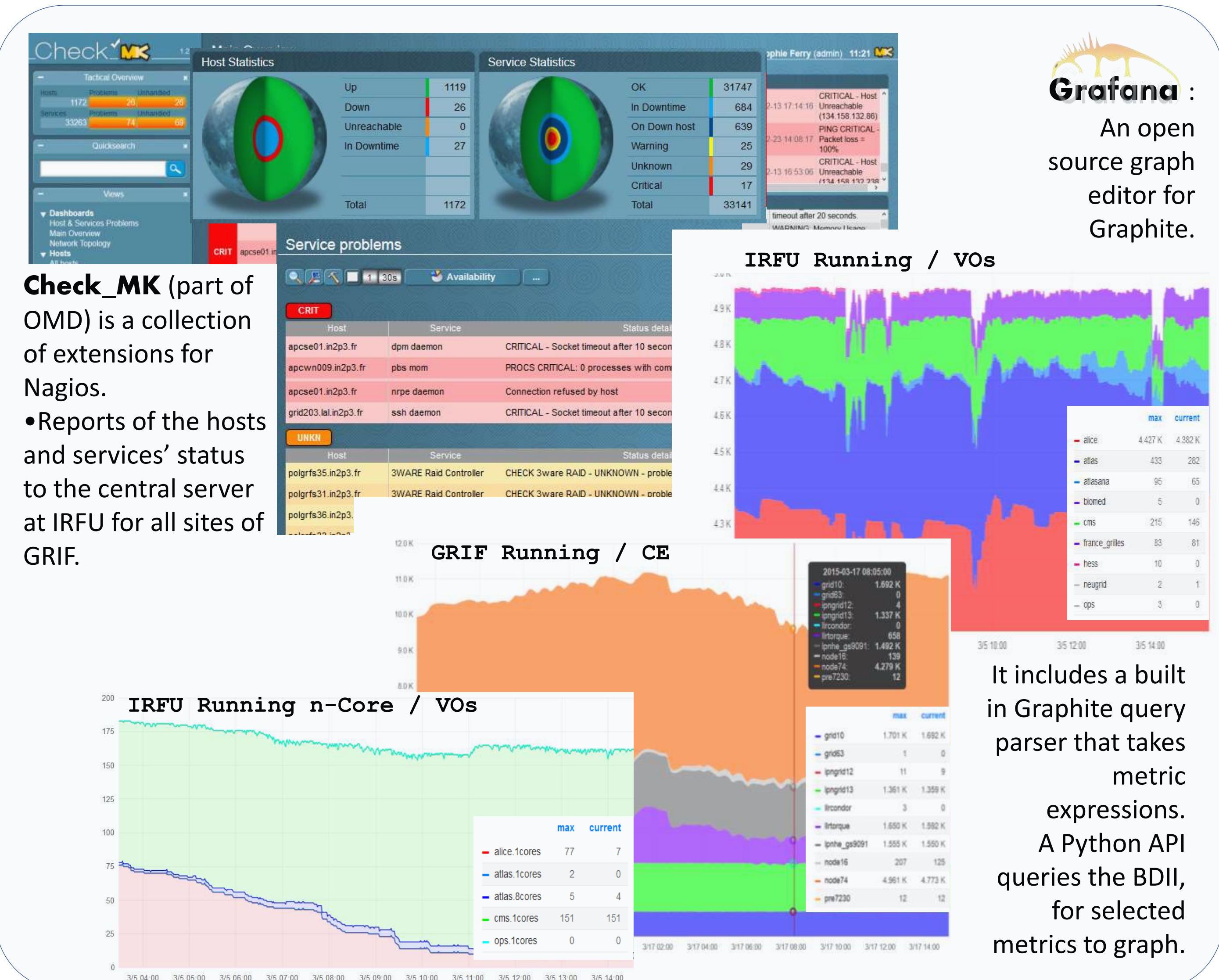
Puppet at IRFU



GRID Services at IRFU



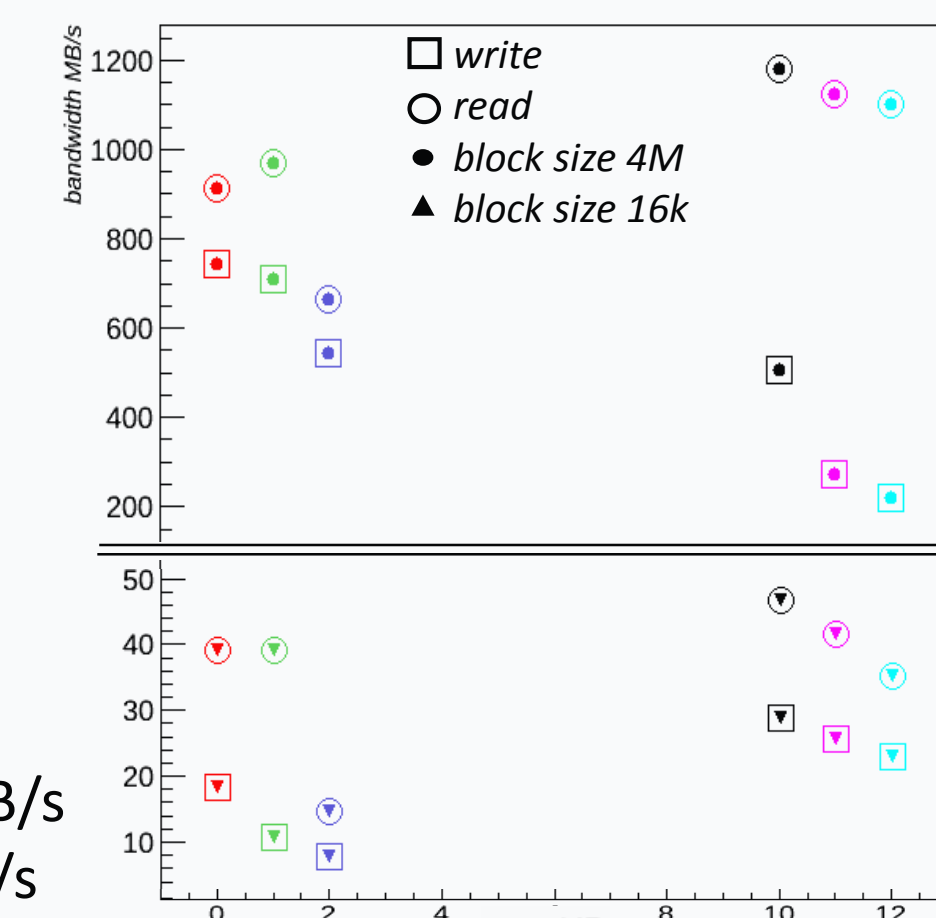
Monitoring



Testing CEPH

CentOS7 on decommissioned hardware: DELL R510 with external bay (MD1200)

- 11 HDD x 2To
- jbod access to disks
- 1 SSD per bay with journals partitions
- 5 servers: 3 (mds+mon+osd) + 2 osd



ERASURE CODE POOL

- 0 : k=4,m=1,host_pg_num=1024
- 1 : k=4,m=1,osd_pg_num=1024
- 2 : k=12,m=3,osd_pg_num=256

REPLICATED POOL

- 10 : repl=2,pg_num=2048
- 11 : repl=4,pg_num=1024
- 12 : repl=10,pg_num=512