

Belle II data challenge



When: Sep - Oct 2018

CNAF people involved: Daniele Cesini, Lucia Morganti Stefano Zani

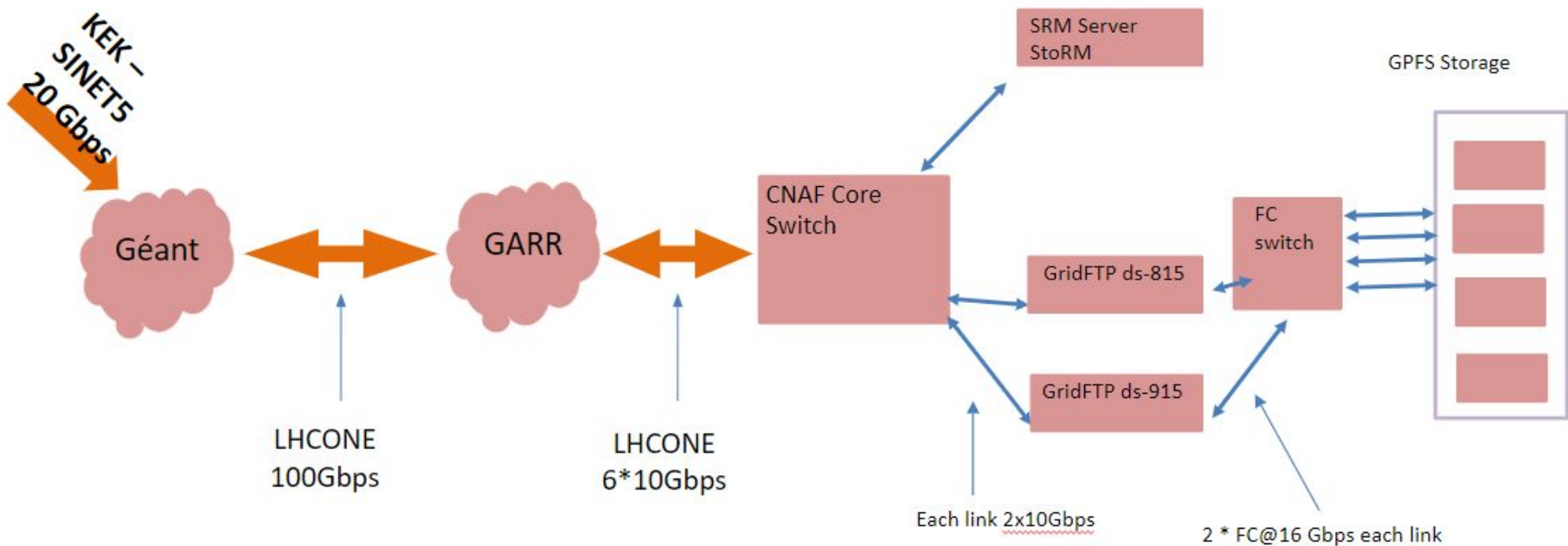
Aim: test the network among the raw data centers

	Storage host name	Storage Network per Disk Node	Number of Disk Node	Estimate/Know Storage performance	WAN Connection	Link vs KEK	Note (bottleneck etc..)	Local Monitoring of Storage/network Available? Specific procedure to access/collect data?
BNL	dcblsrm.sdcc.bnl.gov	2x10Gbps 2x25Gbps	4 (for 2x10) 1 (for 2x25)	~5 GB/s	2x2x10 Gbps to OPN/LHCONE	2x2x10 Gbps LHCOPN		grafana (public and internal) ganglia
CNAF	storm-fe-archive.cr.cna f.infn.it	2x10Gbps	2	>10 GB/s	100 Gbps to GARR POP	2x10Gbps vs SINET5 - LHCONE	all resources are shared with other VOs	grafana (internal)
DESY	dcache-se-desy.desy.de	1x1Gbps	32	>1Gbps max 32x1Gbps	2x15Gbps to DFN POP	2x10Gbps vs SINET5 - LHCONE		internal; plots can be provided periodically
IN2P3	TBD					2x10Gbps vs SINET5 - LHCONE		
KEK	kek2-se02.cc.kek.jp	4x10Gbps	2		40Gbps to SINET POP			
KIT	gridka-dcache.fzk.de	2x40Gbps	2	>20 Gbps	100Gbps to DFN POP 2x10Gbps CERN	2x10Gbps vs SINET5 - LHCONE 2x10Gbps vs BNL LHCOPN		Storage Mon public
UVIC	charon01.westgrid.ca	2x10Gbps	2	estimated 1...2GB/s	100Gbps to BCNet/ Canarie	100Gbps TransPAC/ Canarie	transfer performance depends a lot on the I/O pattern and file size; latency depends on parallel access from others	internal monitoring only; we can provide plots for specific periods (which statistics are interesting?)
SIGNET	dcache.ijs.si							Internal monitoring; we will provide monitoring plots periodically

Still ongoing

	KEK
BNL	1 October 15:00-18:00 CEST / Backup 2 October 15:00-18:00 CEST (please check)
CNAF	18 September 9:00-12:00 CEST (16:00-19:00 JPT) / Backup 19 September 9:00-12:00 CEST (16:00-19:00 JPT) COMPLETED
IN2P3	5 October 9:00-12:00 CEST / Backup 8 October 9:00-12:00 CEST (please check)
DESY	20 September 9:00-12:00 CEST (16:00-19:00 JPT) / Backup 21 September 9:00-12:00 CEST (16:00-19:00 JPT) COMPLETED
KIT	20 September 9:00-12:00 CEST (16:00-19:00 JPT) / Backup 21 September 9:00-12:00 CEST (16:00-19:00 JPT) COMPLETED
UVIC	RESCHEDULED 27 September 18:00-21:00 CEST (01:00-05:00 JPT) / Backup 28 September 18:00-21:00 CEST (01:00-05:00 JPT) [25 Sept - 00:00-05:00 CEST / Backup 26 Sep 00:00-05:00 CEST 18:00-21:00 CEST]
SIGNET	RESCHEDULED: 26 September 9:00-12:00 CEST (16:00-19:00 JPT) [27 September 9:00-12:00 CEST (16:00-19:00 JPT) / Backup 28 September 9:00-12:00 CEST (16:00-19:00 JPT)]

CNAF peering and storage



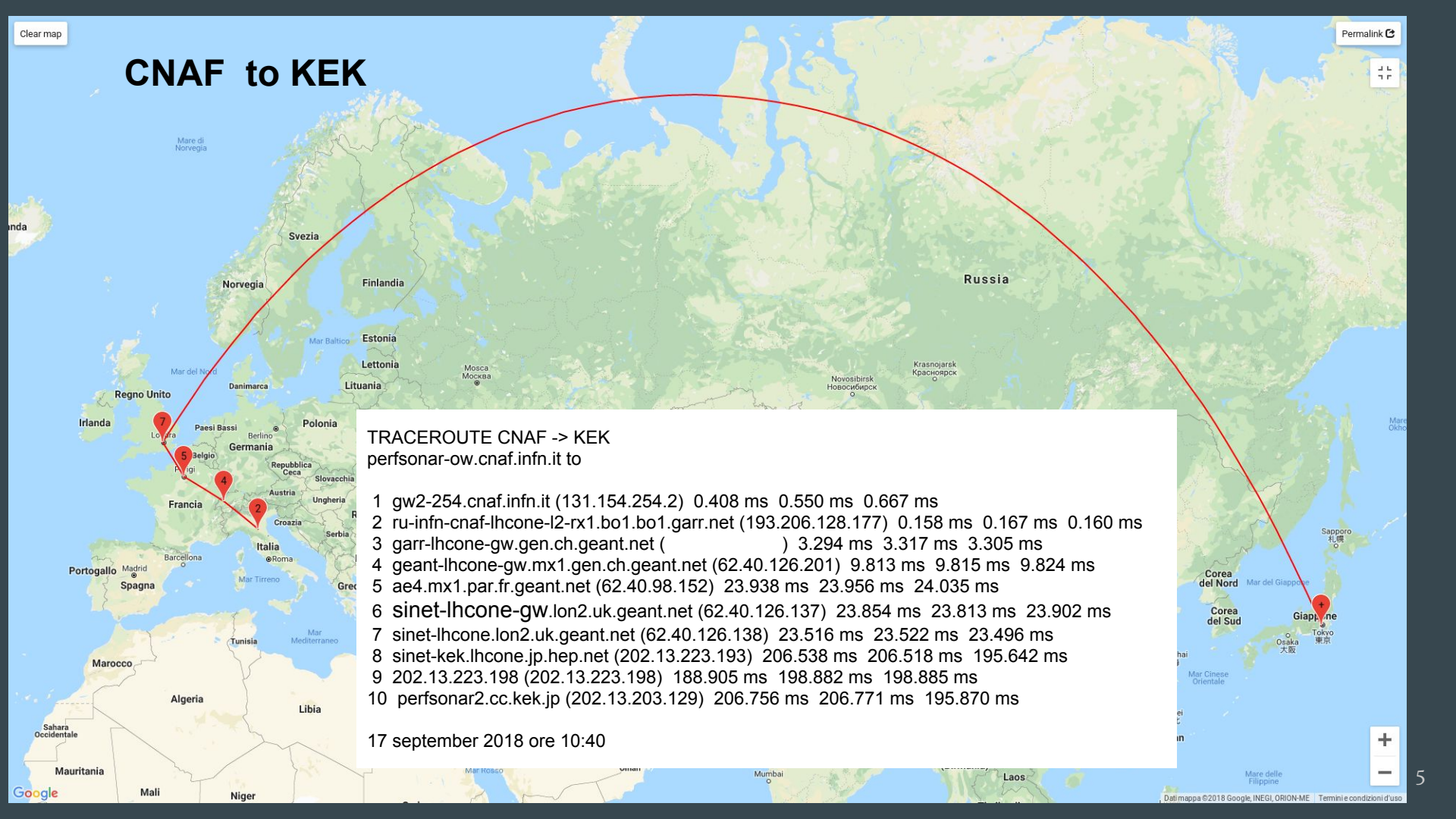
All resources are shared among non-LHC VOs

CNAF to KEK

TRACEROUTE CNAF -> KEK

- 1 gw2-254.cnaf.infn.it (131.154.254.2) 0.408 ms 0.550 ms 0.667 ms
- 2 ru-infn-cnaf-lhcone-l2-rx1.bo1.bo1.garr.net (193.206.128.177) 0.158 ms 0.167 ms 0.160 ms
- 3 garr-lhcone-gw.gen.ch.geant.net () 3.294 ms 3.317 ms 3.305 ms
- 4 geant-lhcone-gw.mx1.gen.ch.geant.net (62.40.126.201) 9.813 ms 9.815 ms 9.824 ms
- 5 ae4.mx1.par.fr.geant.net (62.40.98.152) 23.938 ms 23.956 ms 24.035 ms
- 6 sinet-lhcone-gw.lon2.uk.geant.net (62.40.126.137) 23.854 ms 23.813 ms 23.902 ms
- 7 sinet-lhcone.lon2.uk.geant.net (62.40.126.138) 23.516 ms 23.522 ms 23.496 ms
- 8 sinet-kek.lhcone.jp.hep.net (202.13.223.193) 206.538 ms 206.518 ms 195.642 ms
- 9 202.13.223.198 (202.13.223.198) 188.905 ms 198.882 ms 198.885 ms
- 10 perfonar2.cc.kek.jp (202.13.203.129) 206.756 ms 206.771 ms 195.870 ms

17 september 2018 ore 10:40



KEK to CNAF

traceroute to 131.154.254.11 (131.154.254.11), 30 hops max, 60 byte packets

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1 202.13.202.1 (202.13.202.1) 0.881 ms 0.923 ms 0.973 ms
2 sinet-kek.lhcone.jp.hep.net (202.13.223.193) 0.574 ms 0.588 ms 0.582 ms
3 sinet-lhcone.lon2.uk.geant.net (62.40.126.138) 167.424 ms 177.964 ms 167.426 ms
4 sinet-lhcone-gw.lon2.uk.geant.net (62.40.126.137) 167.345 ms 161.601 ms 167.325 ms
5 ae0.mx1.par.fr.geant.net (62.40.98.77) 176.626 ms 176.643 ms 176.713 ms
6 62.40.126.186 (62.40.126.186) 181.307 ms 181.301 ms 176.040 ms
7 garr-lhcone-gw.gen.ch.geant.net (62.40.126.202) 182.107 ms 182.056 ms 182.053 ms
8 ru-infn-cnaf-lhcone-l1-rx1.bo1.bo1.garr.net (193.206.128.173) 185.087 ms 185.071 ms 191.883 ms
9 rx1.bo1-ru-infn-cnaf-lhcone-l2.bo1.garr.net (193.206.128.178) 190.934 ms 191.008 ms
  rx1.bo1-ru-infn-cnaf-lhcone-l1.bo1.garr.net (193.206.128.174) 190.888 ms
10 perfonar-ps.cnaf.infn.it (131.154.254.11) 184.866 ms 184.871 ms 184.846 ms
17 settembre 2018 ore 10:38

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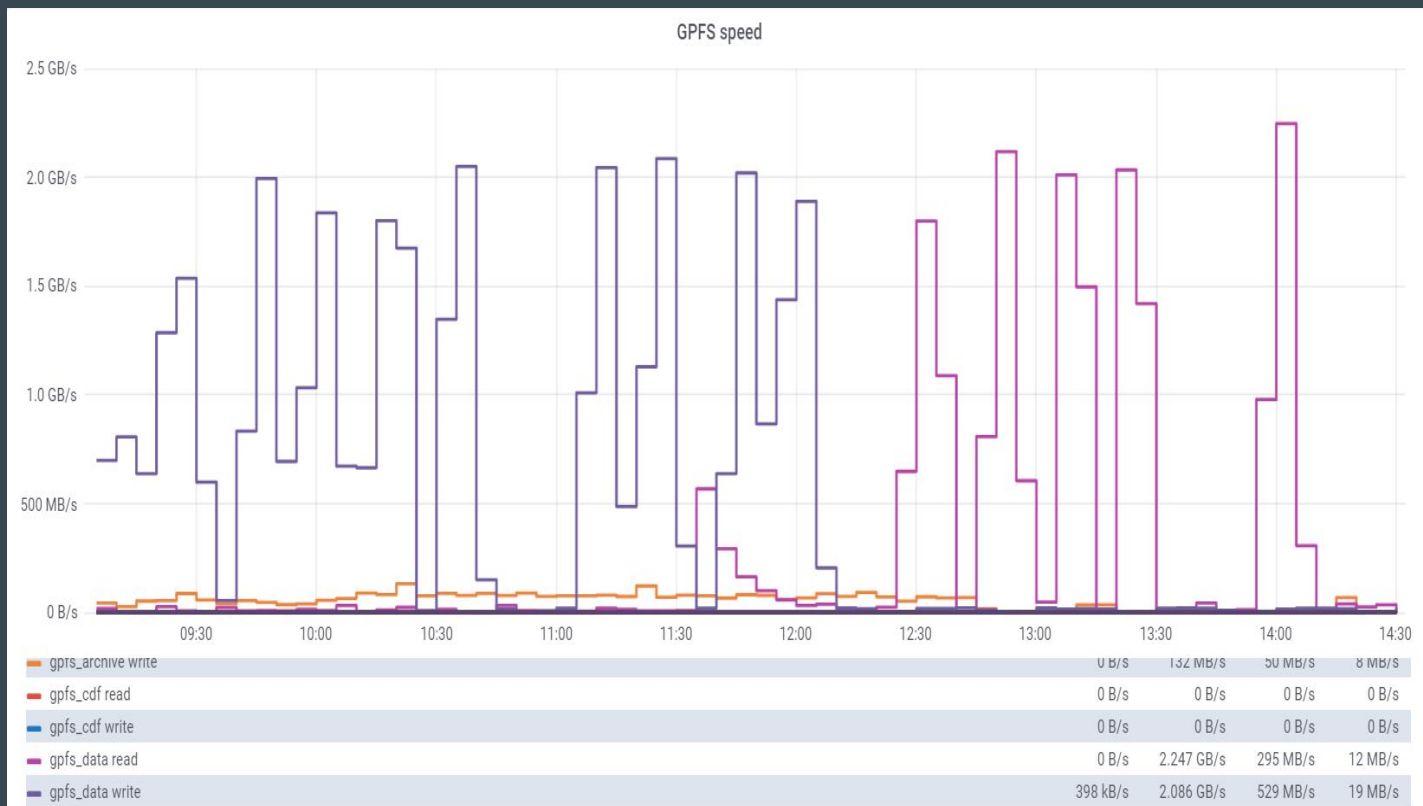
KEK to CNAF 18-21/09/2018

ID	Start	End	End-Start	End-Start (s)	#ActiveFile	Max Observer (MB/s)	Max Observer (Gbps)	Total Sent (GB)	Average Throughput (Gbps)	Note
8895cff0-bb1c-11e8-9e41-00163e10501e	10:26:44	10:35:53	00:09:09	549.00	25	1829	14.6	1048	15.3	ok
825465fa-bb23-11e8-b22f-00163e105038	11:17:24	11:26:32	00:09:08	548.00	50	2027	16.2	1048	15.3	ok
5737e70c-bb28-11e8-8833-5cf3fc0c7c5c	11:51:41	12:01:08	00:09:27	567.00	100	2399	19.2	1048	14.8	ok
c29d70c8-bd9b-11e8-ae9c-5cf3fc0c7c5c	14:42:12	15:02:54	00:20:42	1,242.00	200	2597	20.8	2090	13.5	performed 21 september 2018 - 1 file stalled

CNAF to KEK 18-21/09/2018

ID	Start	End	End-Start	End-Start (s)	#ActiveFile	Max Observer (MB/s)	Max Observer (Gbps)	Total Sent (GiB)	Average Throughput (Gbps)	Note
8895cff0-bb1c-11e8-9e41-00163e10501e	12:18:28	12:32:01	00:13:33	813.00	25	1551	12.4	1048	10.3	ok
825465fa-bb23-11e8-b22f-00163e105038	12:59:35	13:09:31	00:09:56	596.00	50	1715	13.7	1048	14.1	ok
5737e70c-bb28-11e8-8833-5cf3fc0c7c5c	13:52:22	14:01:31	00:09:09	549.00	100	1967	15.7	1048	15.3	ok
86cdf46-bda0-11e8-8cf5-5cf3fc0c7c5c	15:16:19	15:33:43	00:17:24	1,044.00	200	2264	18.1	2090	16.0	performed 21 september 2018 - 1 file stalled

From our monitoring: GPFS speed on gpfs_data (r&w)



From our monitoring: gridftp-storm-archive ds-815



From our monitoring: gridftp-storm-archive ds-915

