

Tier-1 situation + IPv6 Traffic

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STEINBUCH CENTRE FOR COMPUTING - SCC



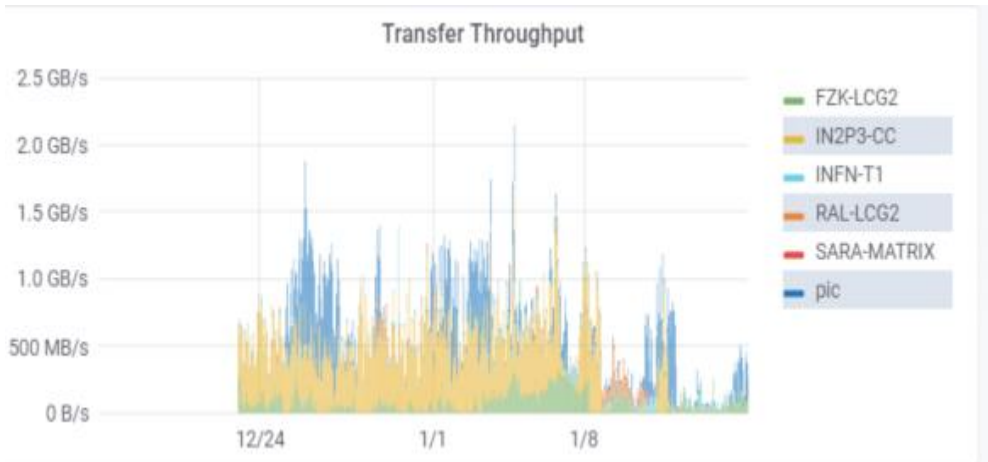
Tier-1 situation

Tier-1	LHCOPN	LHCONE	PERFSONAR IPv6
CA-TRIUMF	OK	OK	OK
CH-CERN (Tier-0)	OK	OK	OK
DE-KIT	OK	OK	OK
ES-PIC	OK	OK	OK
FR-CCIN2P3	OK	OK	OK
IT-INFN-CNAF	OK	OK	OK
KR-KISTI	OK	OK	??
NDGF	OK	OK	OK
NL-T1 – NIKHEF	OK	OK	??
NL-T1 – Sara-Matrix	OK	OK	??
RRC-KI-T1	OK	?	??
RRC-JINR-T1	OK	OK	OK
TW-ASGC	OK	OK	OK
UK-T1-RAL	OK	OK	OK
US-T1-BNL	OK	OK	OK
US-T1-FNAL	OK	OK	OK

Tier-1 Readyness

- FNAL :
 - IPv6 dual-stack deployment after „run-2“ finishes
 - Deployment will start „end of Jan 2019“ / „beginning of Feb. 2019
 - Expected deployment duration → 6 month
- BNL :
 - IPv6 dual-stack ready !!
 - Storaga Intern still IPv4 → proxy deployed with dual-stack
 - FTS server
 - Previous transfer issues with US IPv4 only sites
→ IPv6 deployed, but deprecated
 - New deployed FTS server with „IPv6 preferred over IPv4“
- RRC-KI-T1 KIAE → no response

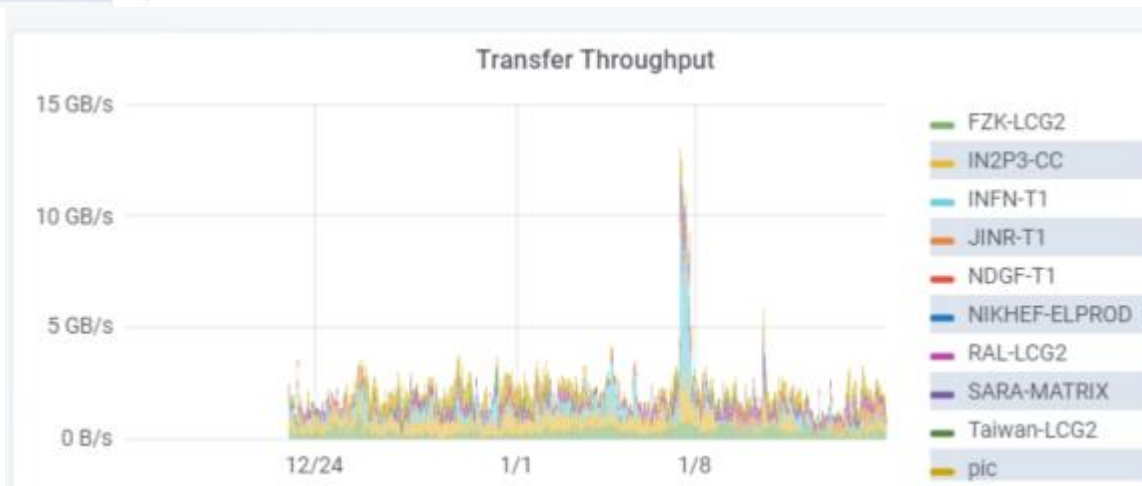
Transfer over IPv6



- Transfers to CERN only

Source Site

CERN-PROD + FZK-LCG2 + IN2P3-CC + INFN-T1 + JINR-LCG2 + JINR-T1 + KR-KISTI-GSDC-02 + NDGF-T1 + NIKHEF-ELPROD + RAL-LCG2 + SARA-MATRIX + TRIUMF-LCG2 + Taiwan-LCG2 + pic

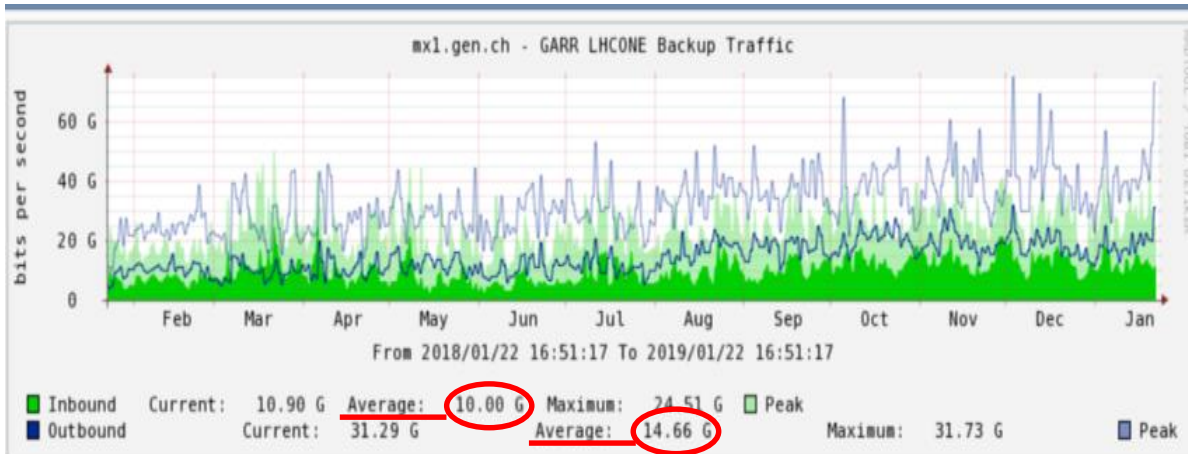


Monitoring at CERN → does it capture all transfers?

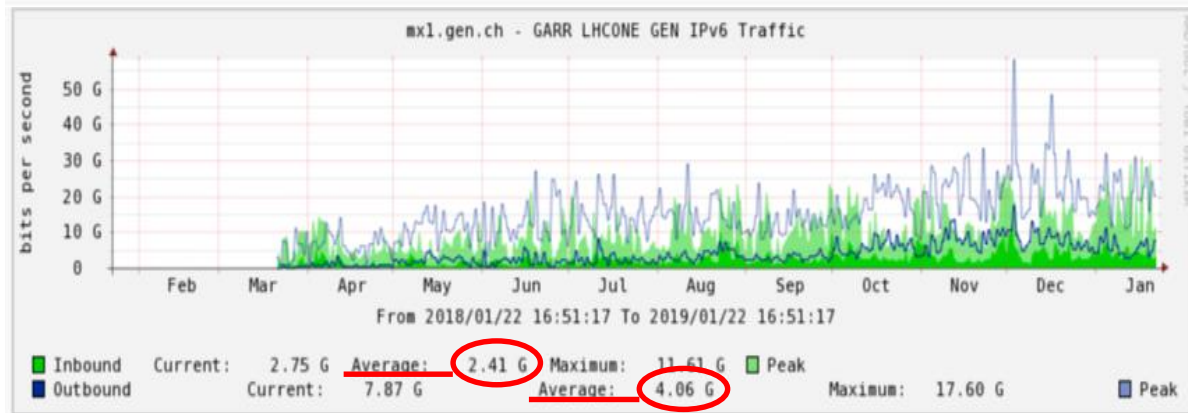
Missing sites:

- CA-Triumf :→ 😞
- KR-KISTI :- 9th Dec. to 14th Dec. facility migration to a new building → Alice only → no FTS
- RRC-KI-T1 KIAE :→ 😞
- US-FNAL-CMS
- US-T1-BNL :→ ??

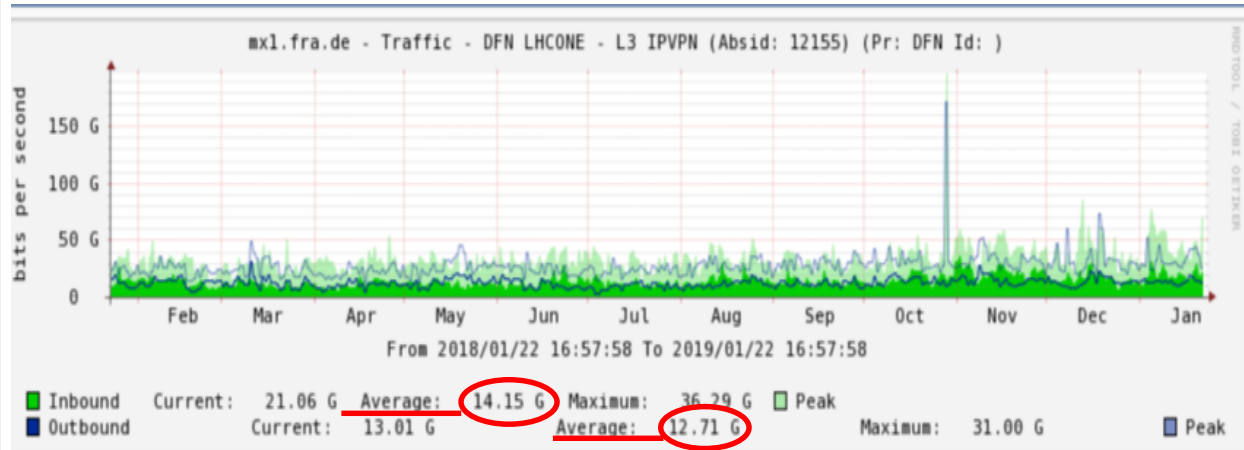
LHCONE – traffic -- GARR



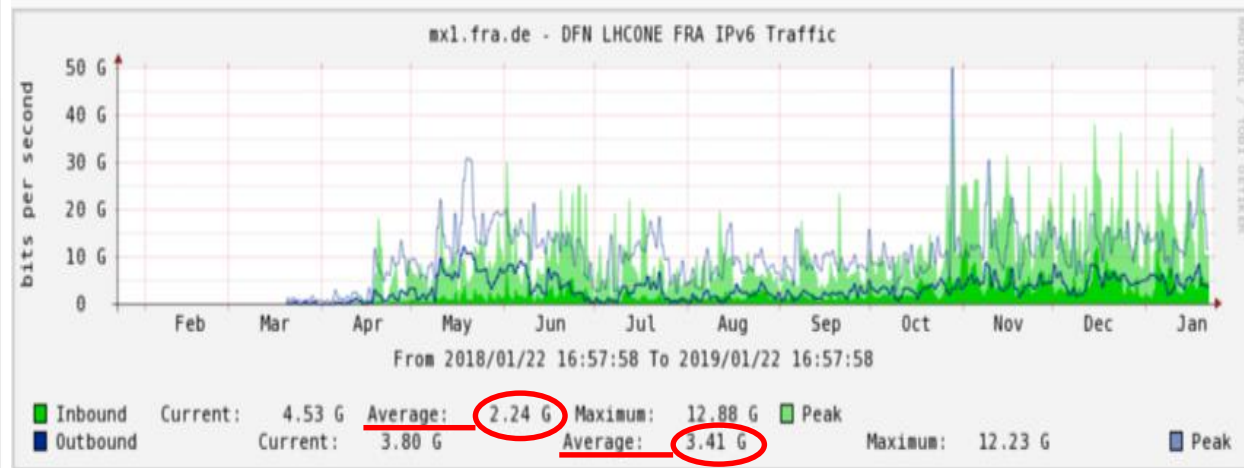
- Average of IPv6:IPv4
- Approx. 1:4



LHCONE – traffic -- DFN



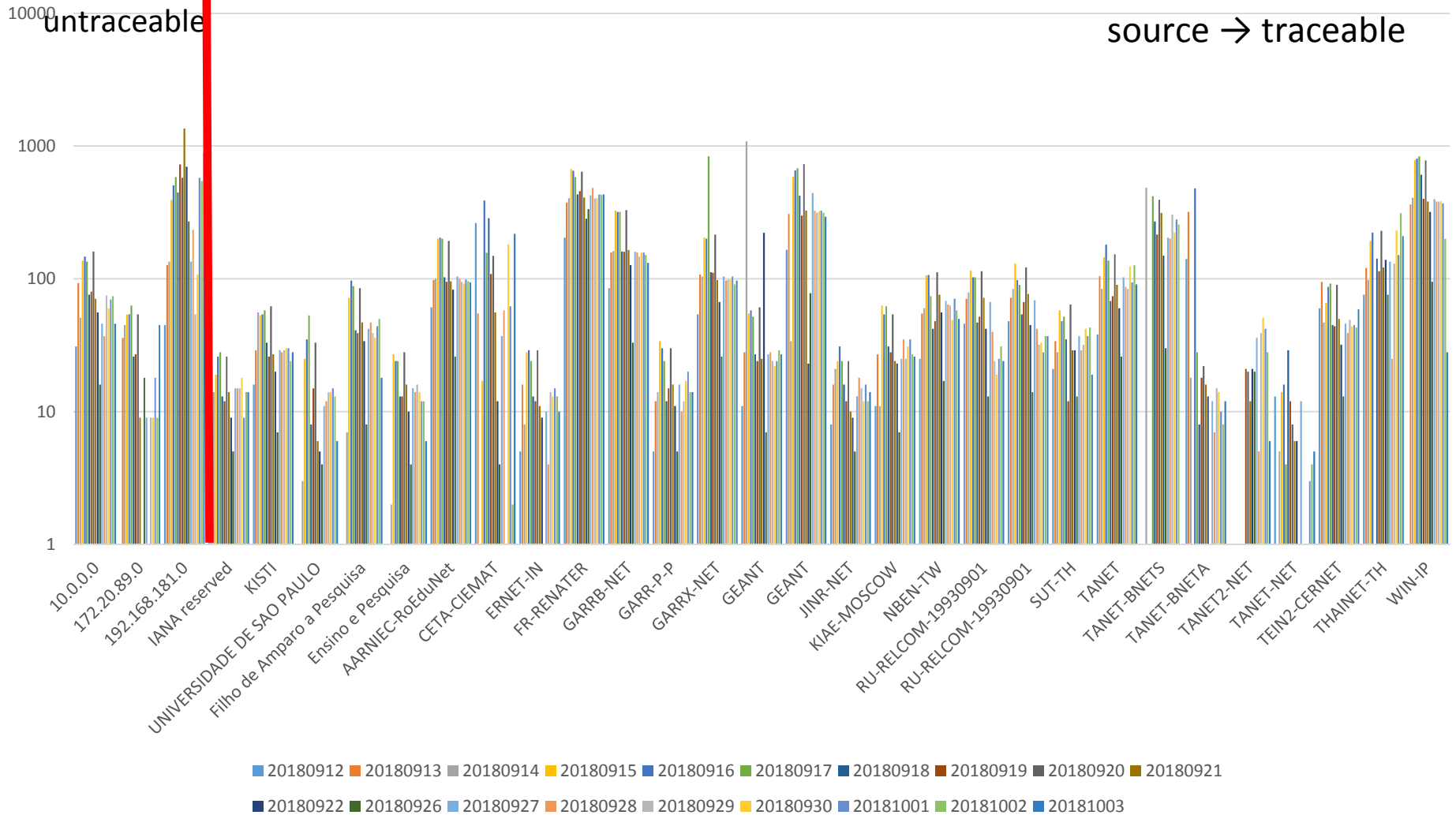
- Average of IPv6:IPv4
- Approx. 1:4



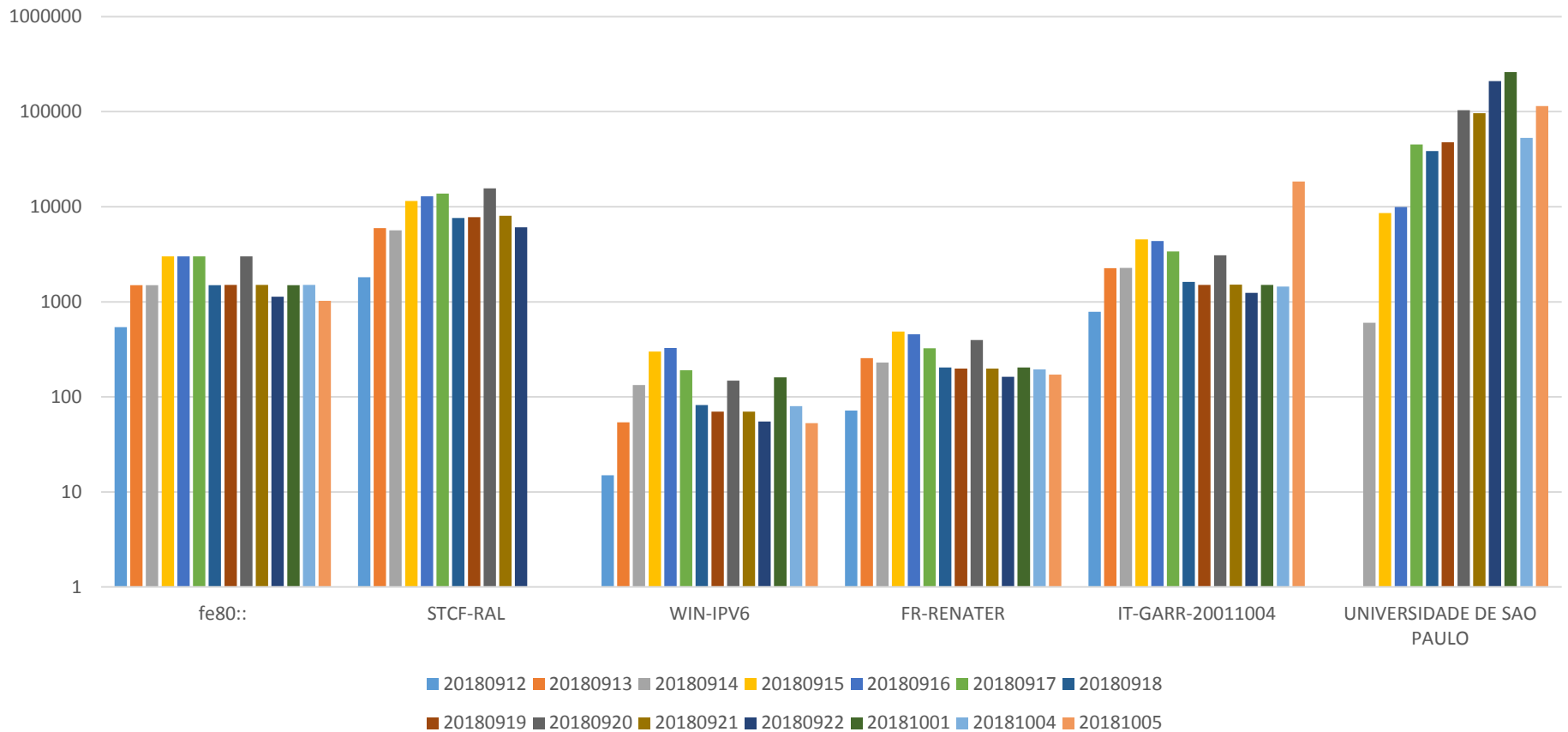
mis-routed IPv4 traffic

10365 150420
6,44% 93,56%

approx. 0,35% of total traffic



Mis-routed IPv6 Packets



[none-]ICMP traffic

