

RPKI Origin Validation in real life

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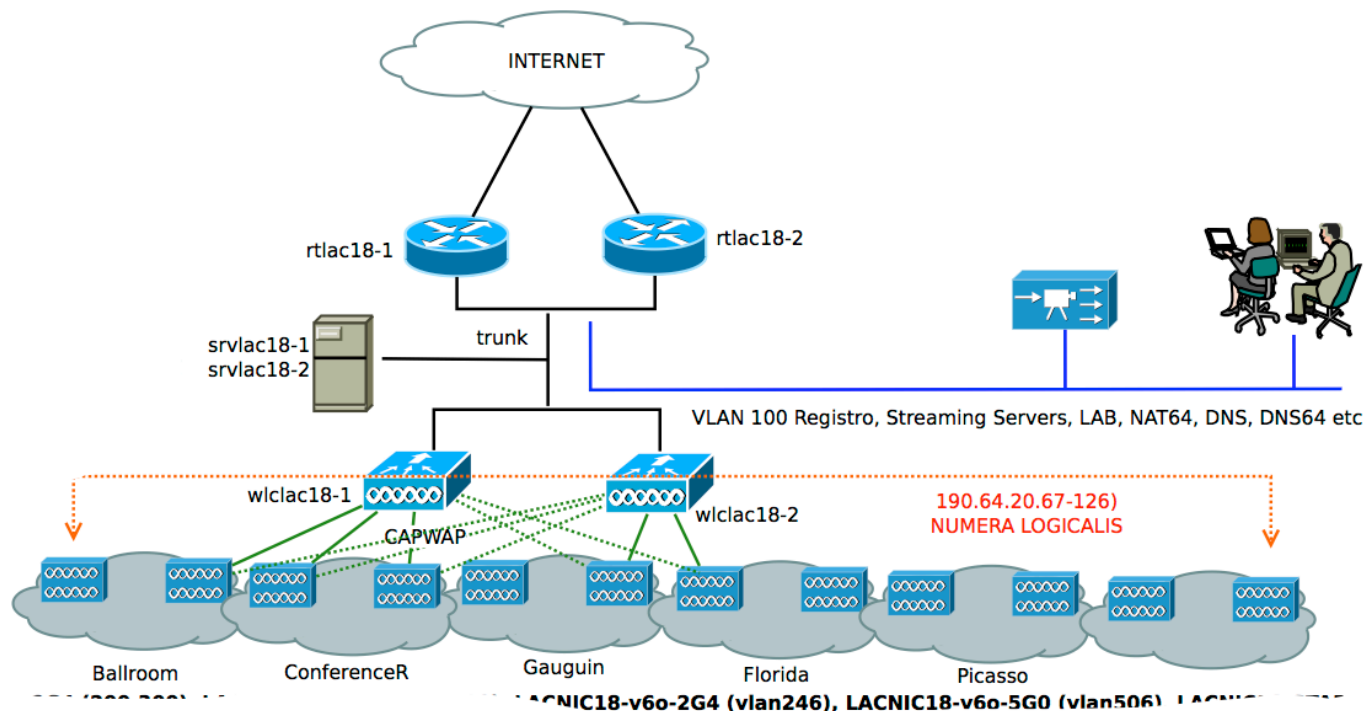
IEPG, IETF 85

Background

- We wanted to try RPKI origin validation since long ago
- In LACNOG 2011 we test it in a closed environment.
 - Router crashed once in a while
 - RTR sessions dropped frequently
- We have tried different validators and router combinations in test environments (JunOS, Quagga-SRX, rcynic, RIPE NCC validator) but never in real networks until now ...

LACNOG –LACNIC Network

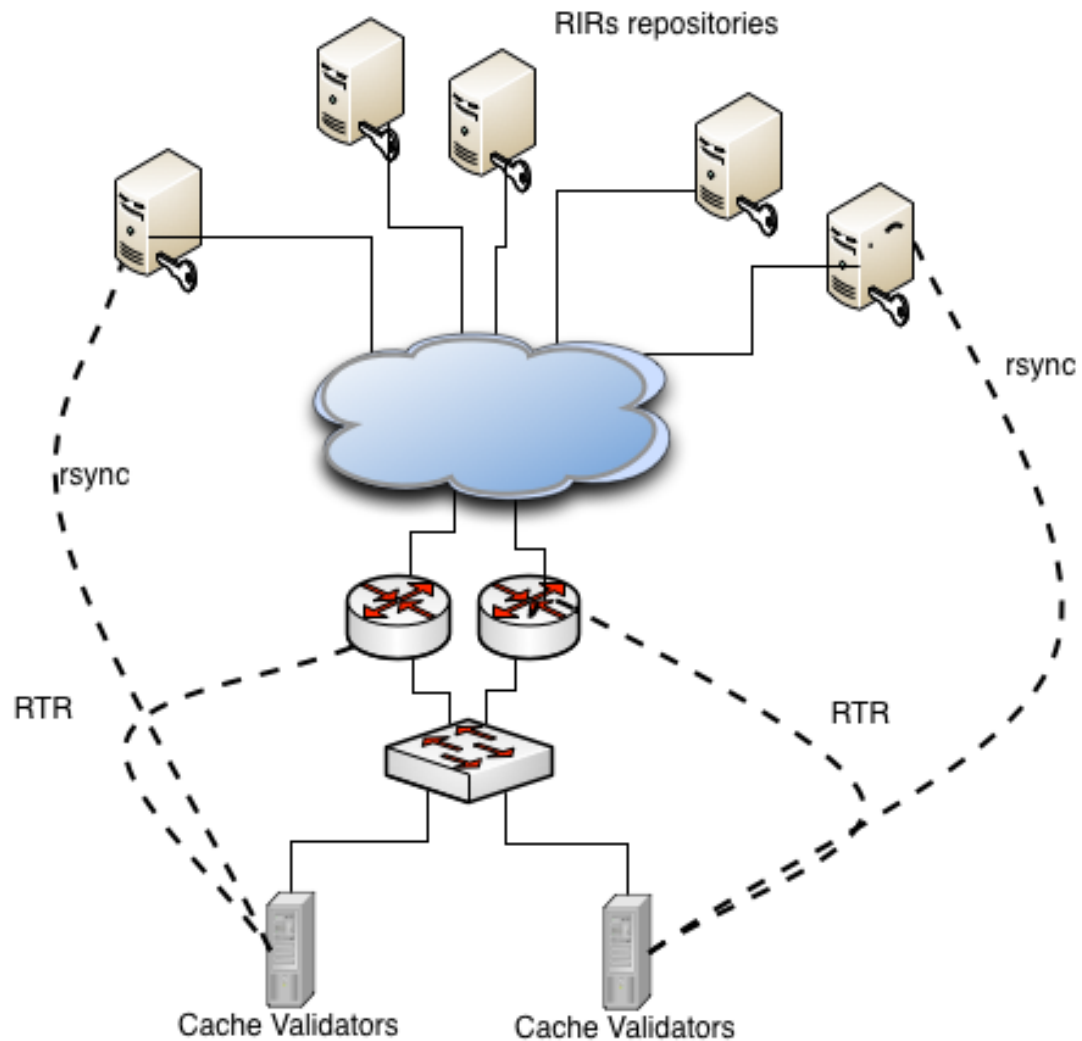
- Conventional network, mostly wireless.
450-500 attendees



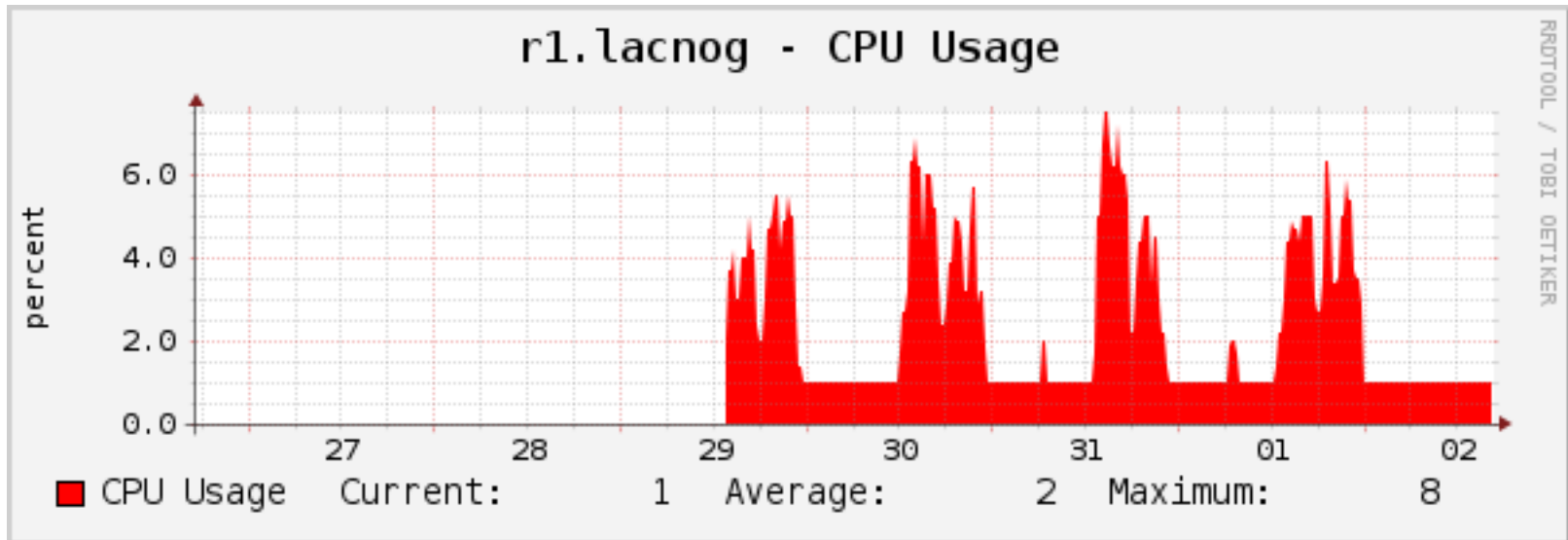
The RPKI Origin validation setup

- 2 Cisco routers 7201.
- ANTEL (service provider) downloaded IOS with no problem, no special code, no special version
- 2 instances of RIPE NCC validator
- TA from 5 RIRs repositories
- ~20k IPv4 routes, ~11k routes IPv6 (full table)
- Dropping invalids after day 2

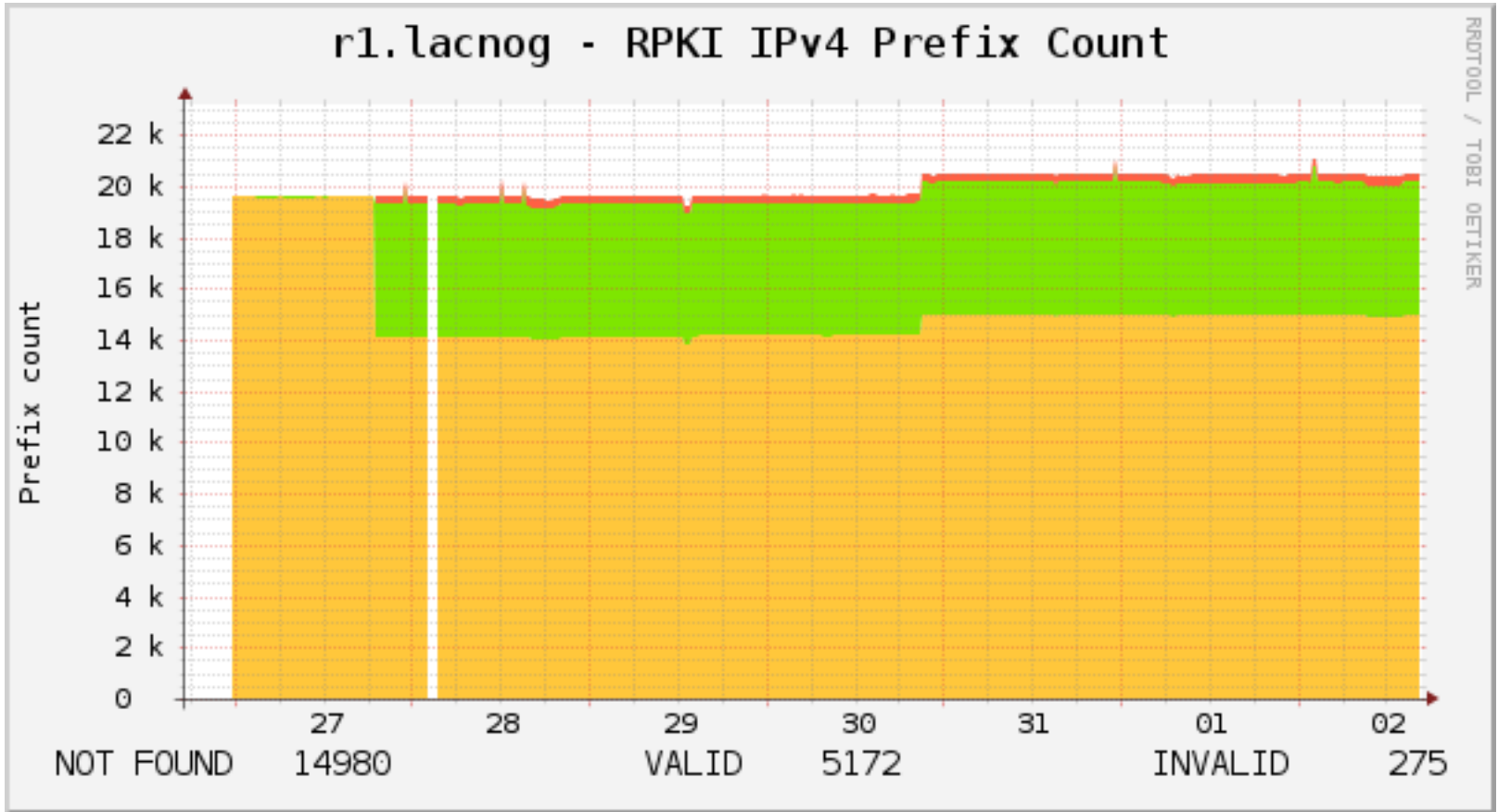
RPKI and Origin Validation Architecture



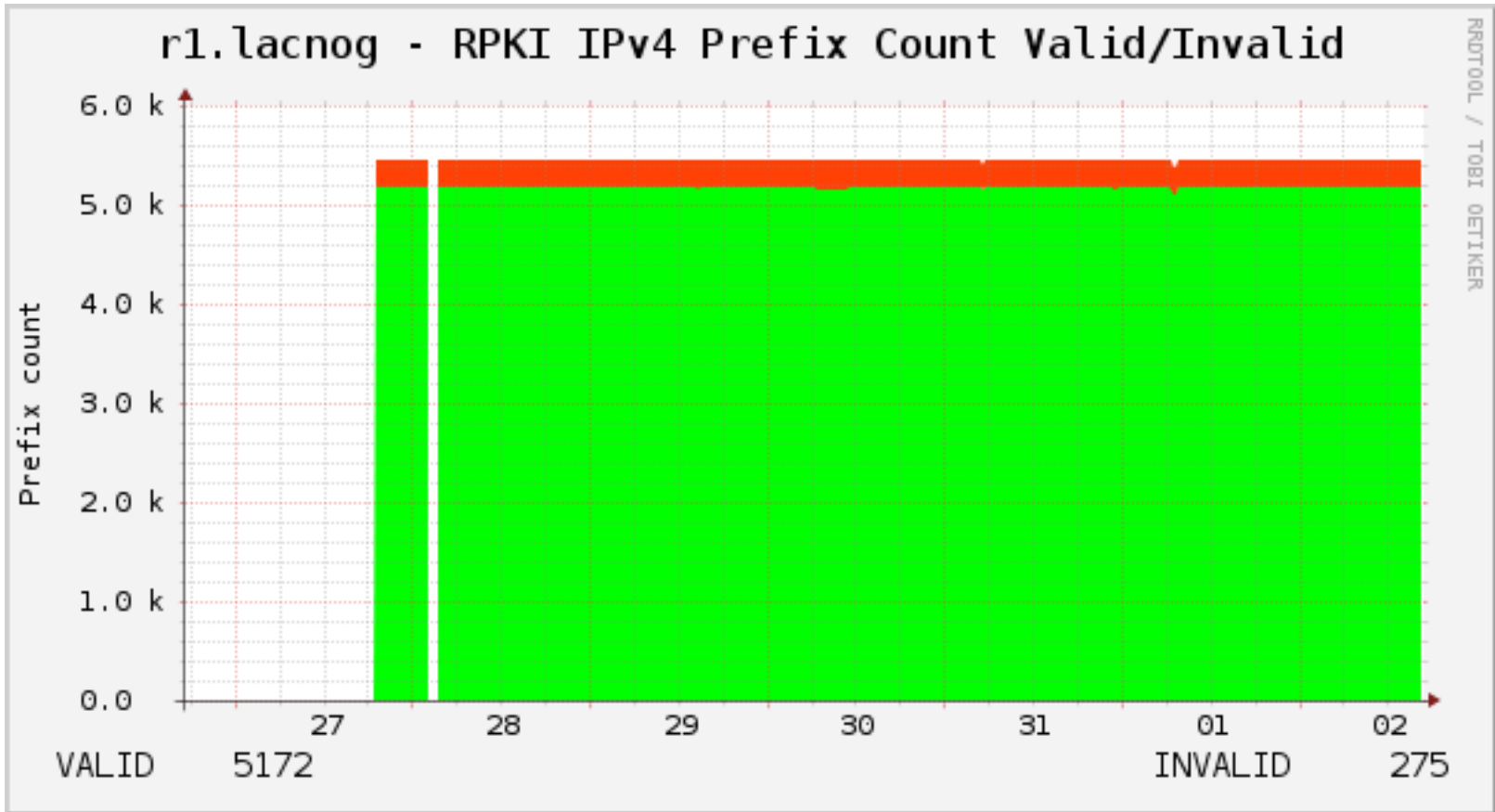
Routers CPU utilization



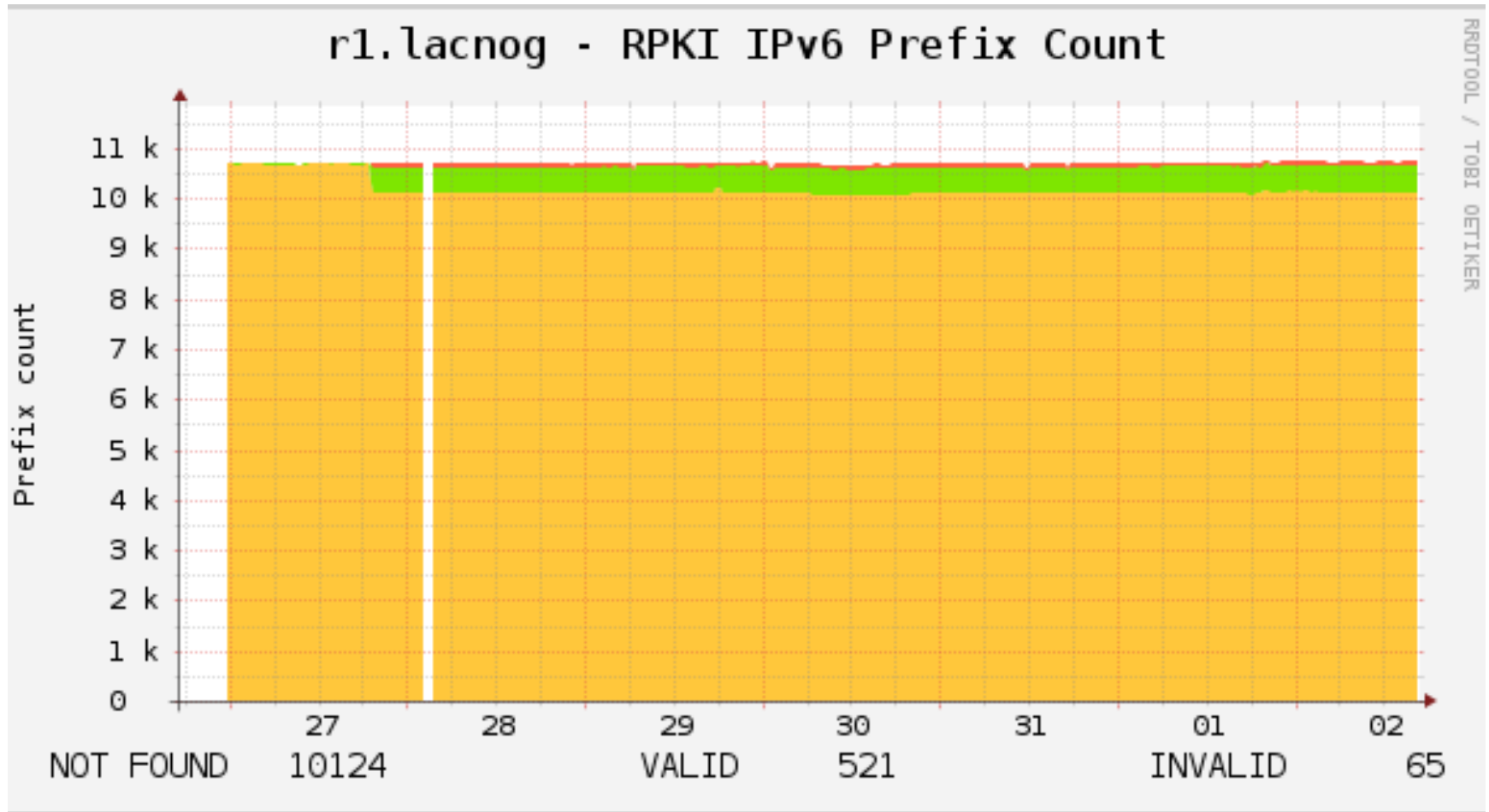
Validation IPv4



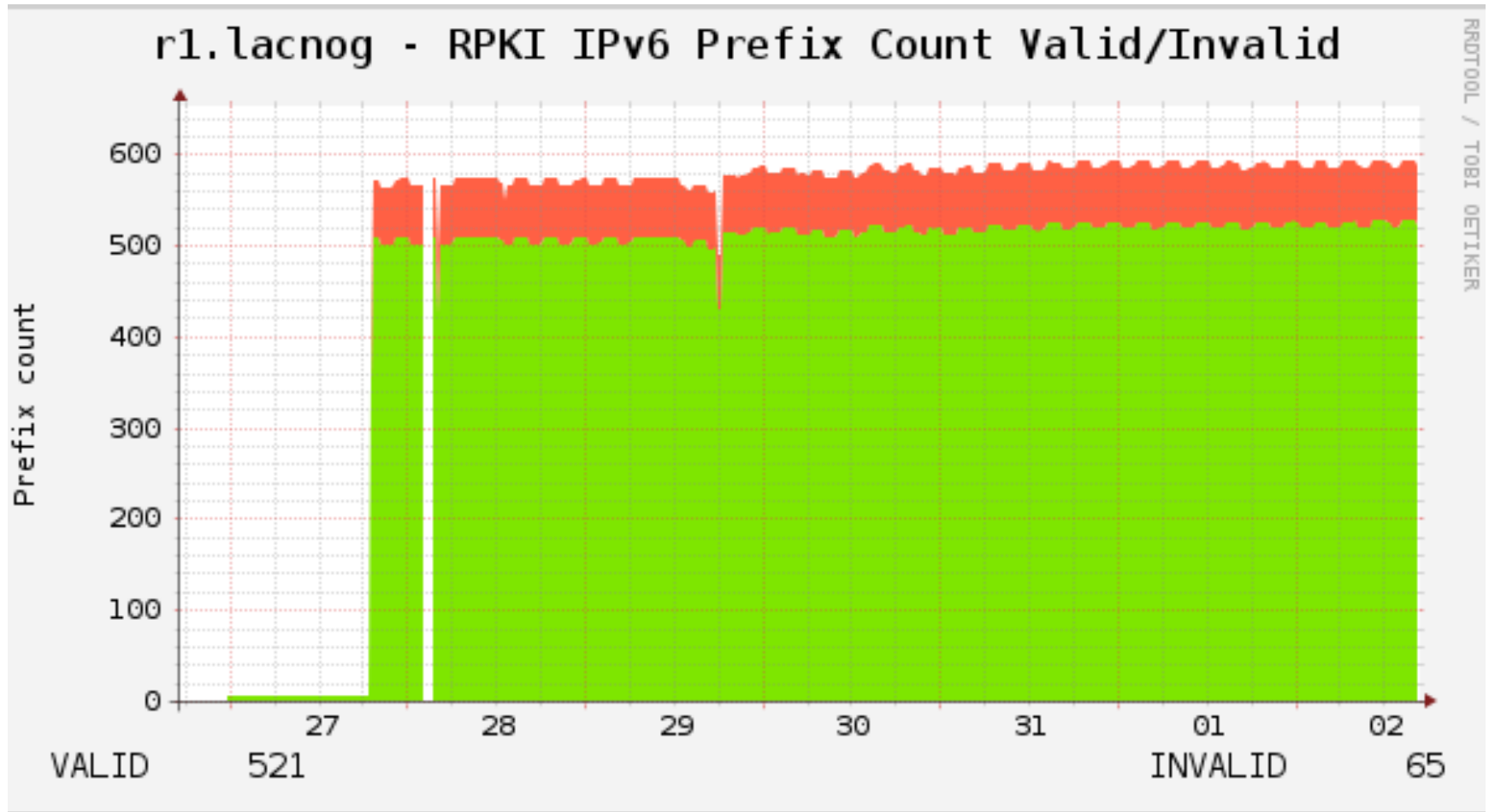
Validation IPv4



Validation IPv6



Validation IPv6



Our experience

- Contrary to last year experience software for routers and validator was very stable.
 - No RTR drops between validator and router
 - No router crashes
- Repositories OK, we validate with no problems
- We notice no CPU impact on routers or validators
- After dropping invalids, routing table was very clean (lots of more specifics)

Questions !!