

Quantifying Interference between Measurements on the RIPE Atlas platform

Thomas Holterbach
Laurent Vanbever

Cristel Pelsser
Randy Bush

ETH *Zürich*

IIJ

Internet Initiative Japan

Research and Applications of Internet Measurements
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The RIPE Atlas platform

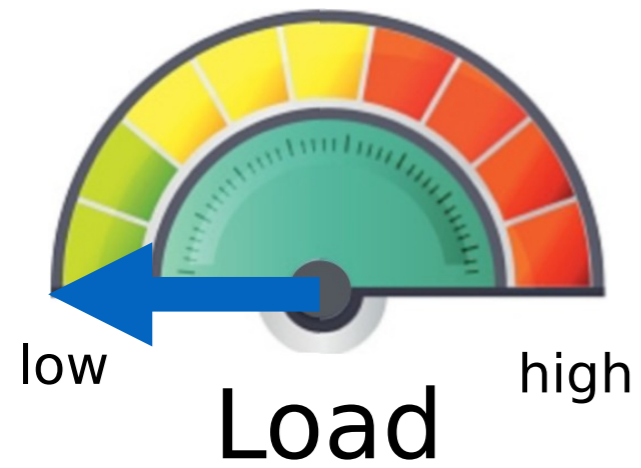


More than 8000 probes
around the globe

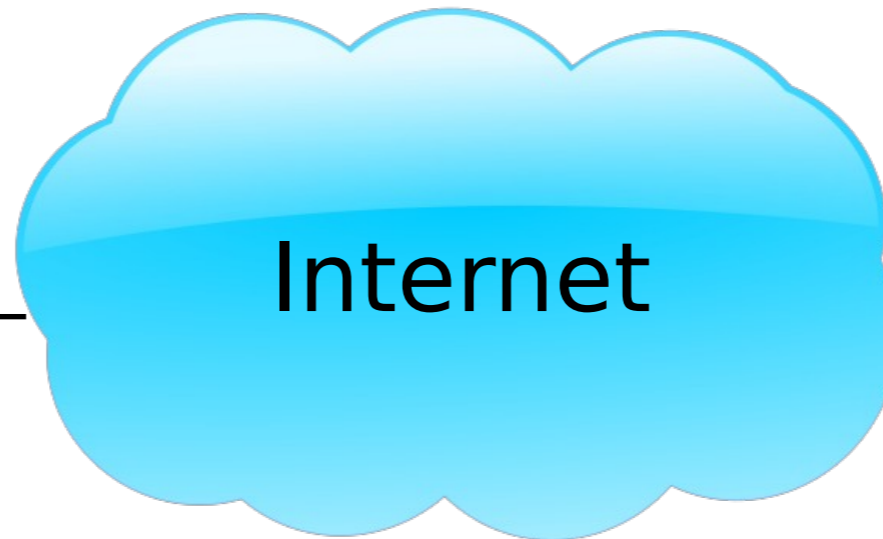
Can perform several
types of measurements

- Ping
- traceroute

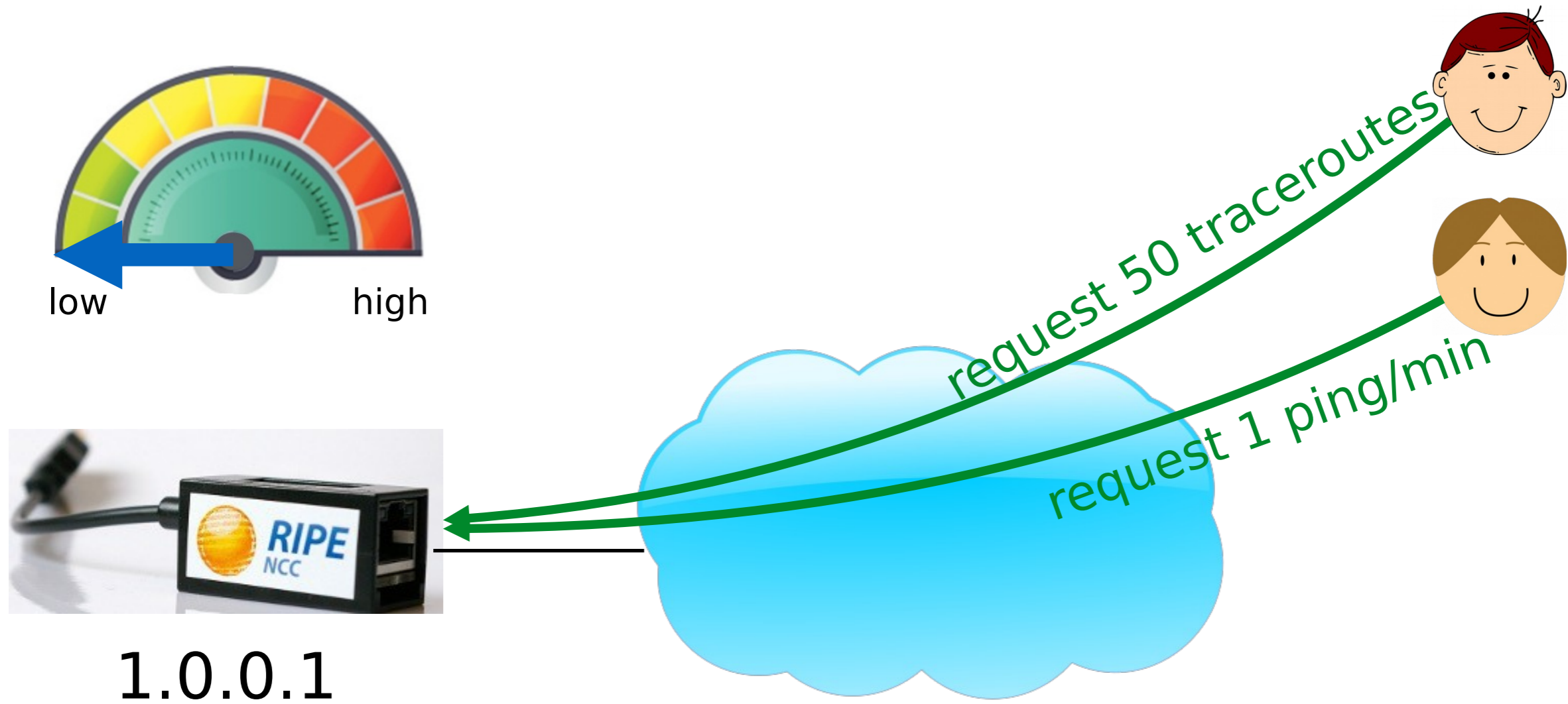
Interference between measurements



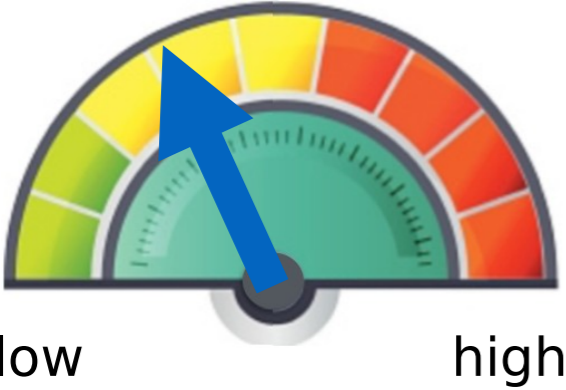
1.0.0.1



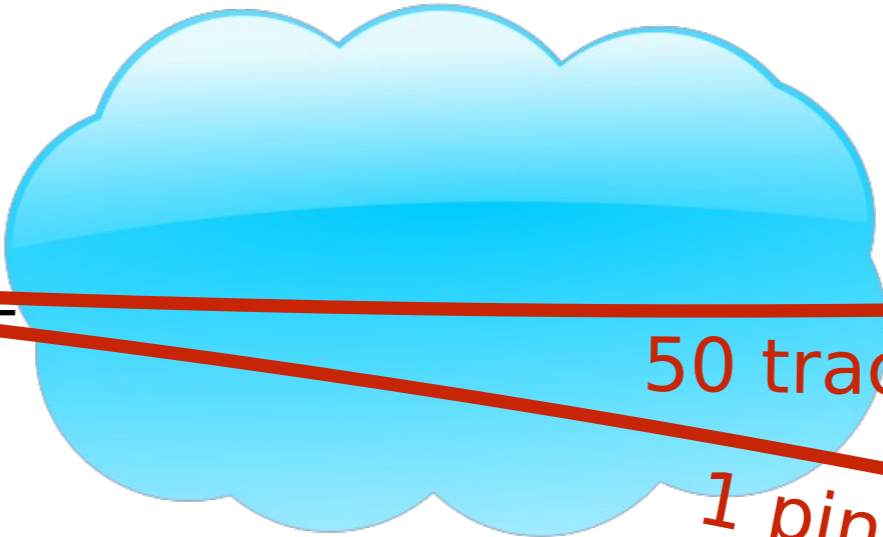
Interference between measurements



Interference between measurements

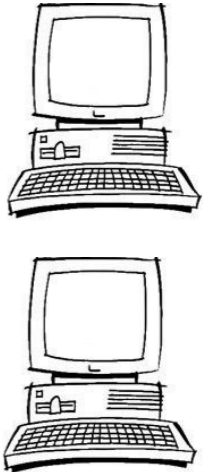


1.0.0.1

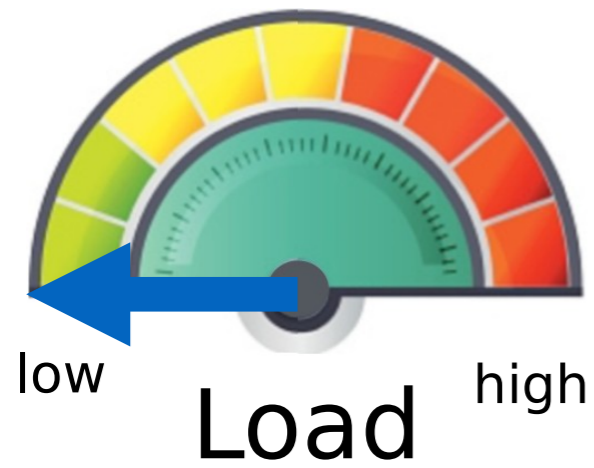


50 traceroutes

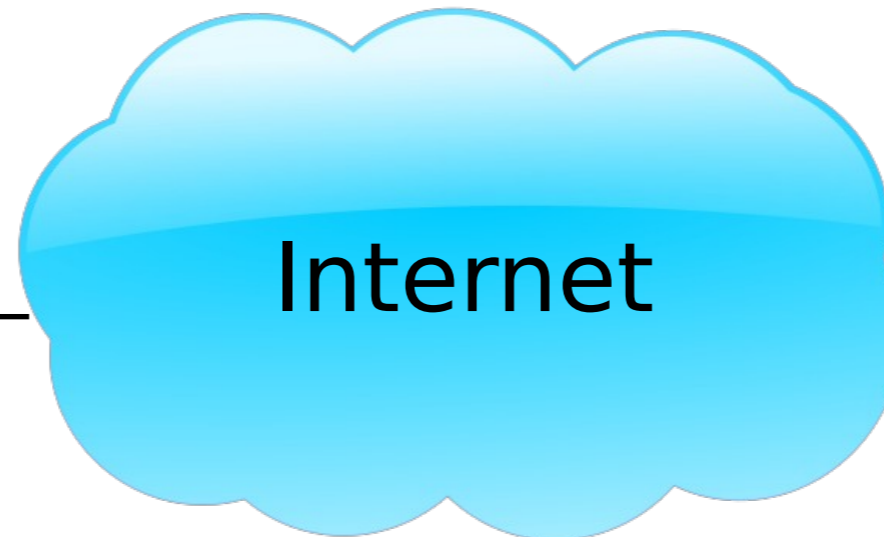
1 ping/min



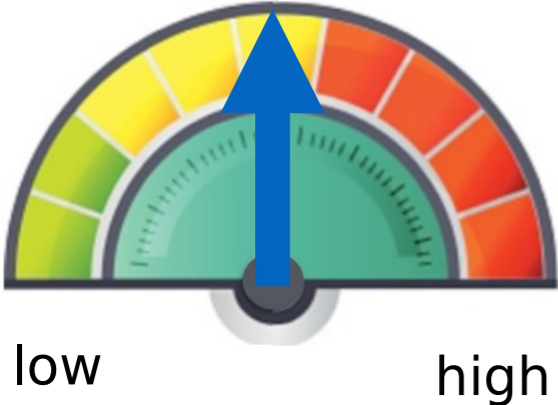
Interference between measurements



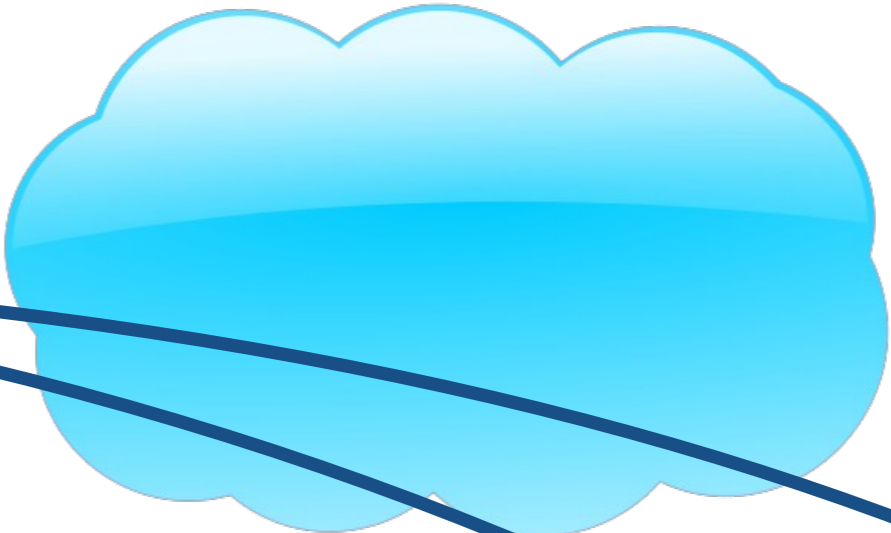
1.0.0.1



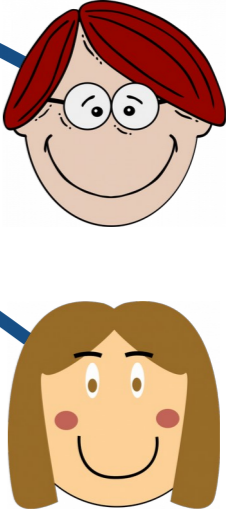
Interference between measurements



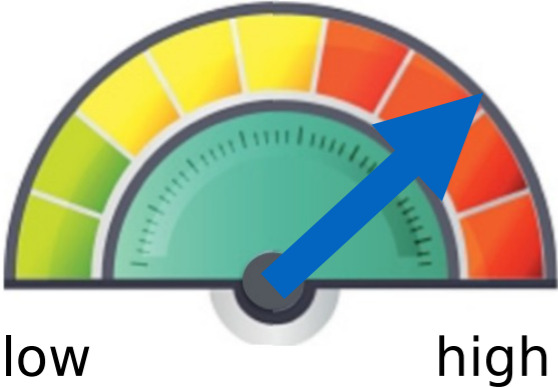
1.0.0.1



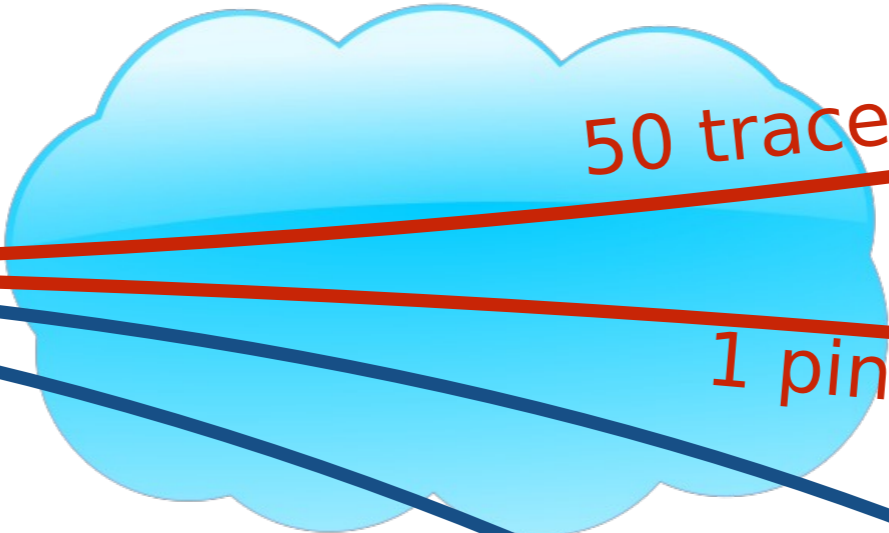
1 ping/s
1000 ping/s



Interference between measurements



1.0.0.1

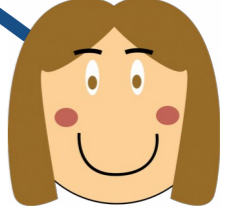
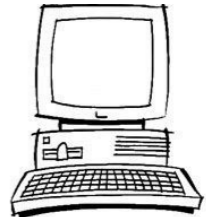


50 traceroutes

1 ping/min

1 ping/s

1000 ping/s



Interference between measurements

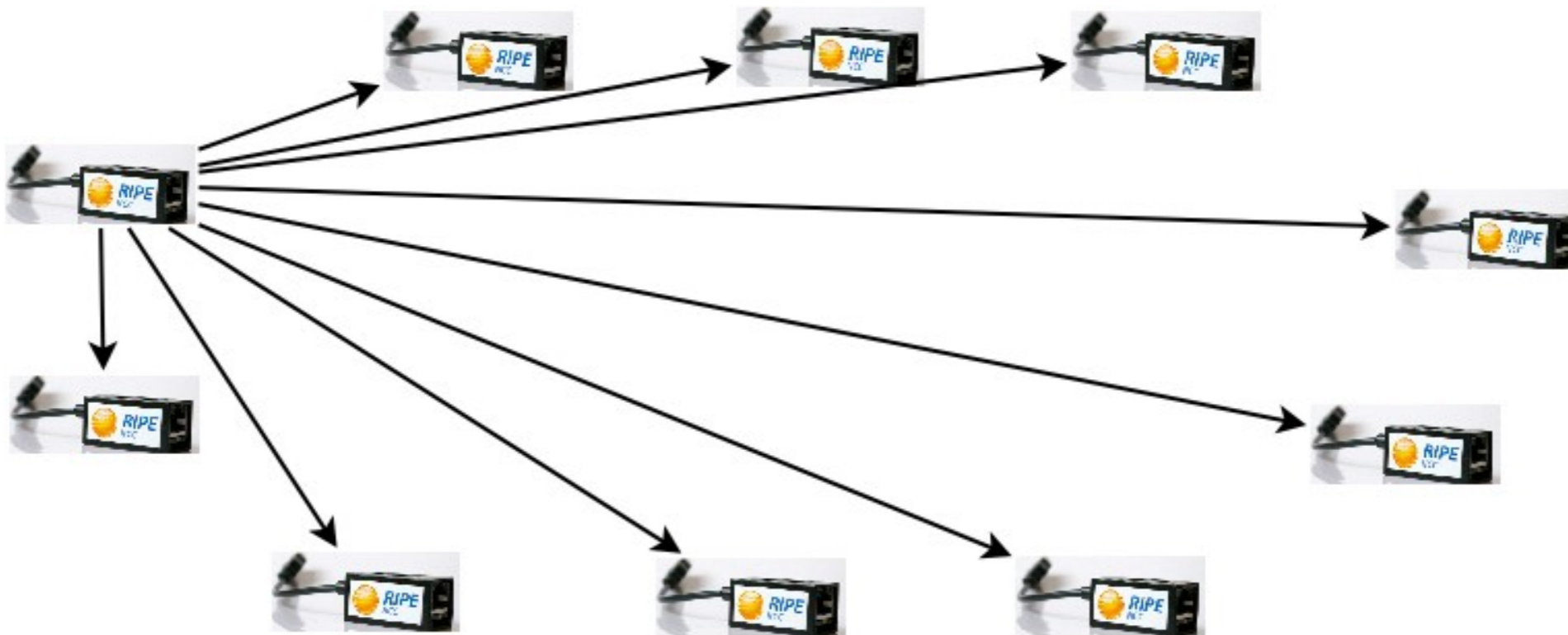
Impact:

- Reported delays measured by or towards the probe
 - Shifts in the RTT
 - Increased standard deviation, 95th percentile, ..
- Measurements' completion time
 - Increases when the probe is loaded
- V3 probes mitigate the impact

Did you experience such
measurement interferences?

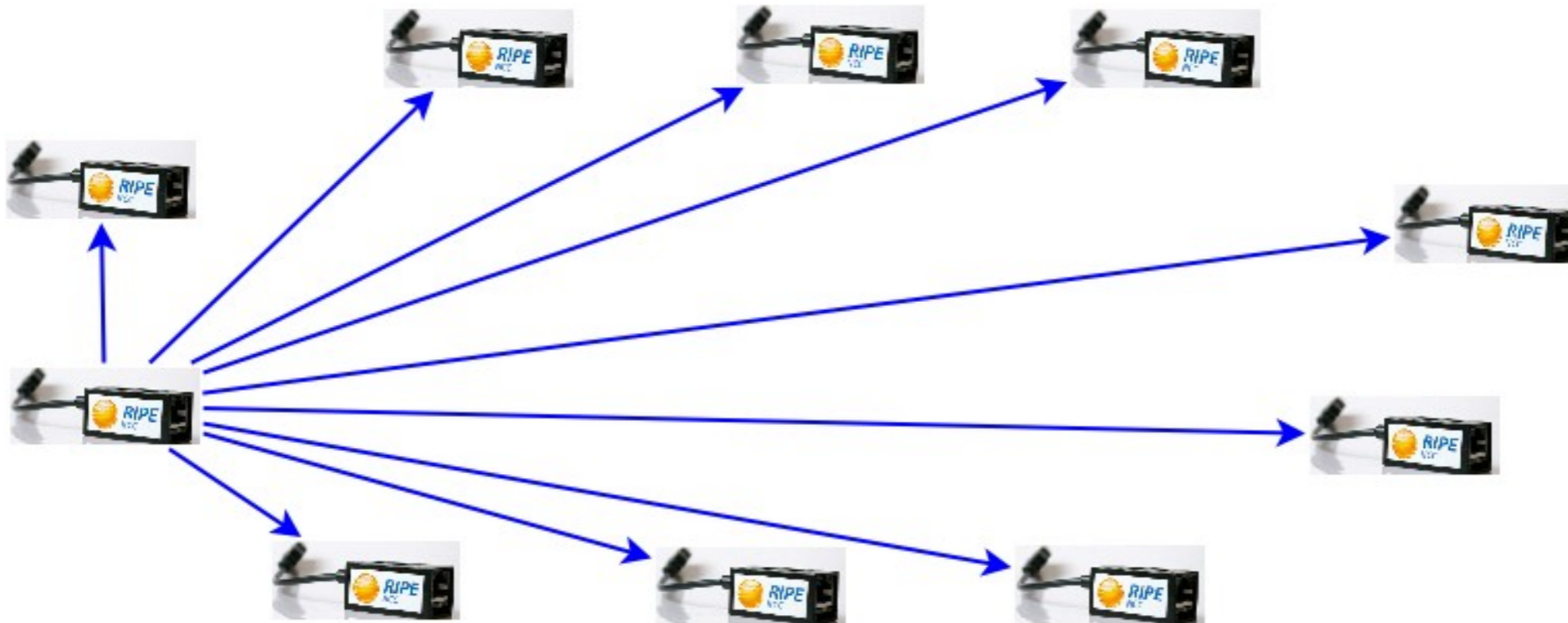
Did you run measurement campaigns that could have overloaded the platform?

e.g full-mesh experiment

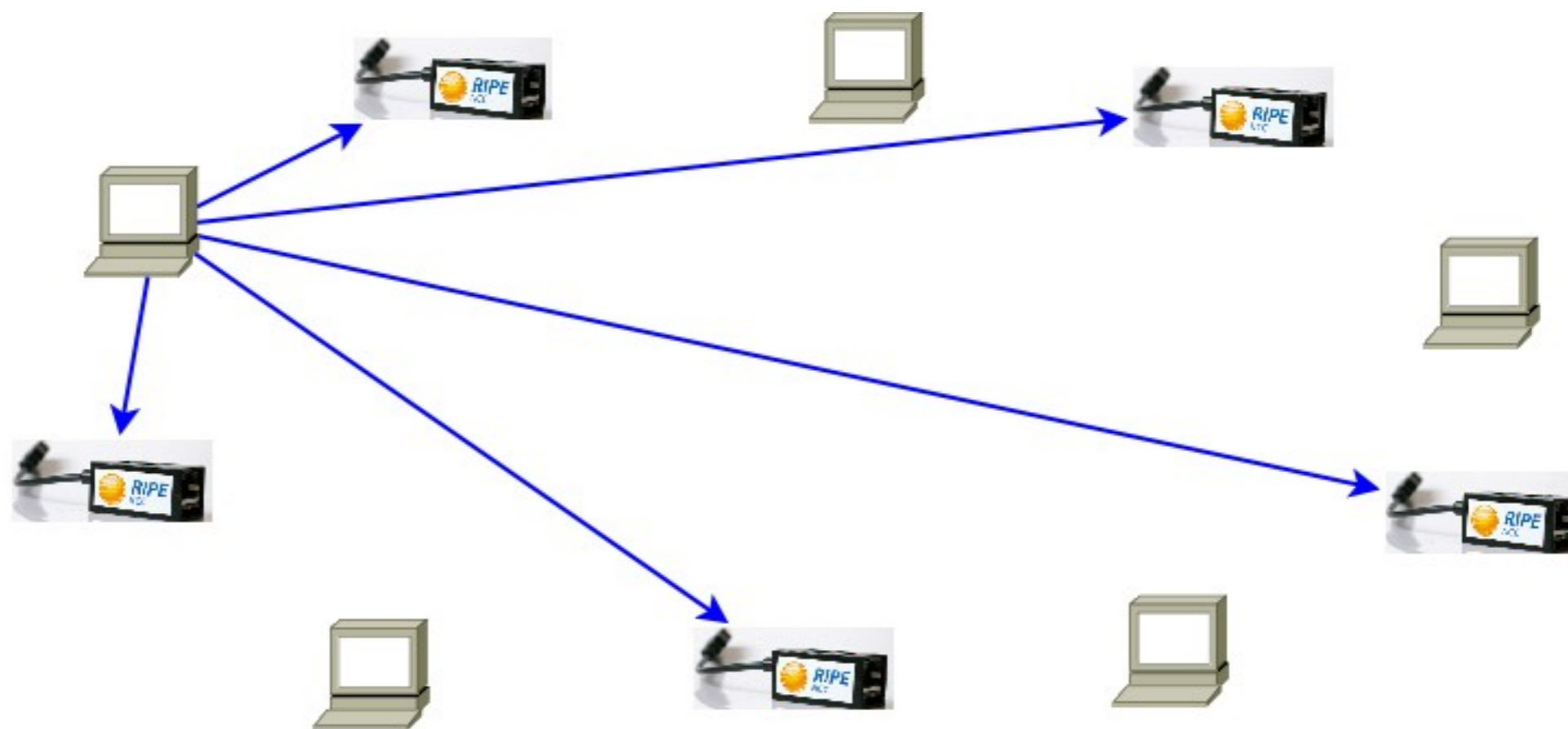


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e.g full-mesh experiment

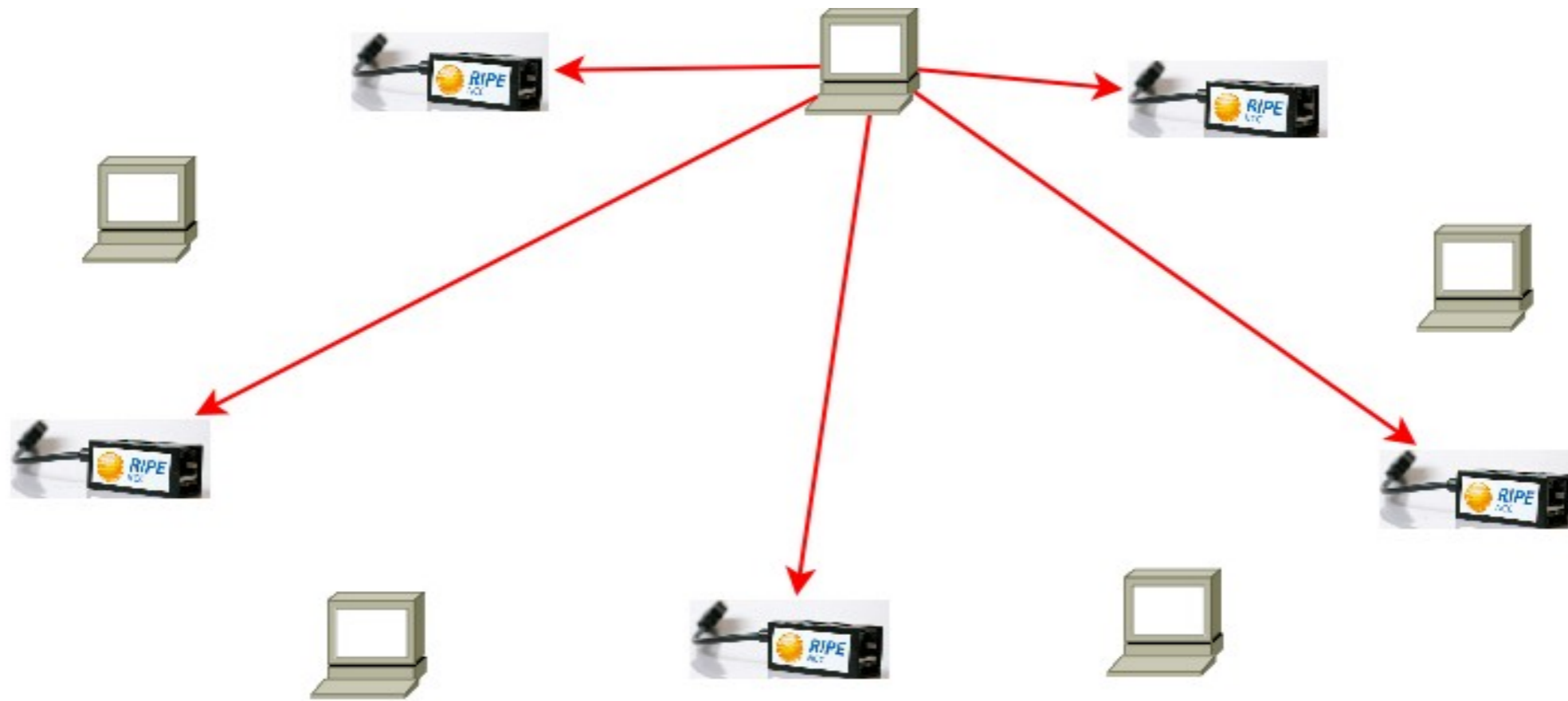


What about combining two measurement platforms with different capabilities?



 NL Ring node,
PlanetLab node, ...

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