



CONTROL-PLANE DATE-PLANE TESTING

To Convergence and Beyond

ABOUT ME/US



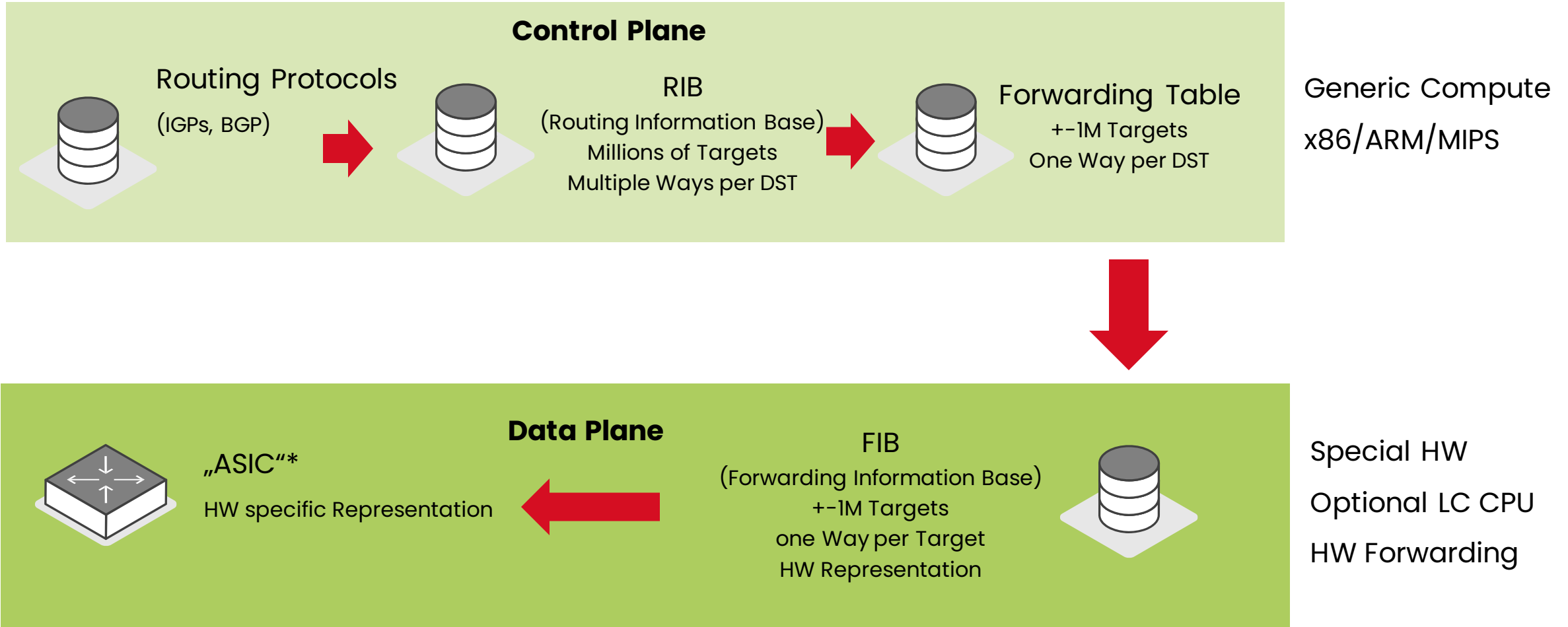
Tobias Heister

- Solution Architect by Day
- one of the Keepers of the XT3LAB
(see talk from DENO9 about the Lab
http://dump.hackathon.de/denog9/171124_0930_automation_for_network_lab_enviroments__tobias_heister.pptx)

Xantaro

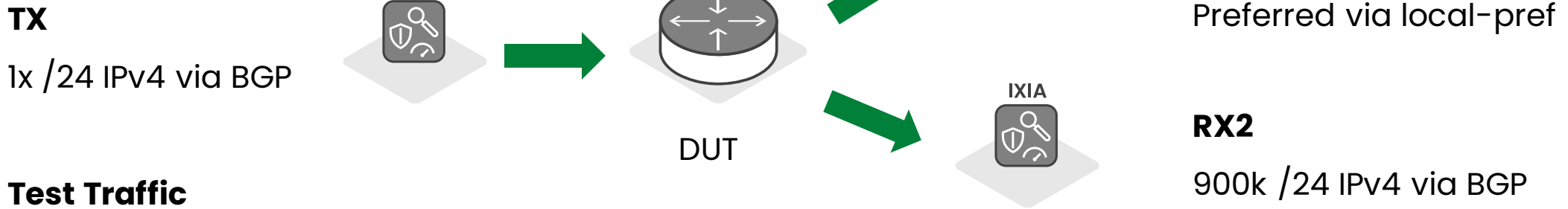
- Value Added Reseller + Trusted Advisor
- Biggest (outside of the vendor) Juniper (+ more technologies) Lab in Europe

CONTROL PLANE - DATA PLANE - WHAT IS WHAT?



*https://github.com/denog/media/blob/main/DENOG12/Day0_workshop_ASIC.pdf

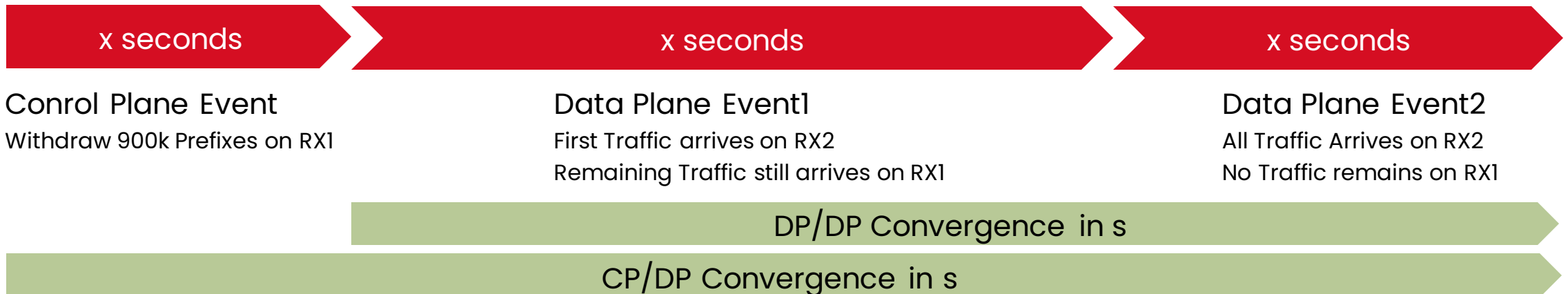
CP/DP TEST METHODOLOGY



Test Traffic

1 Flow per Prefix (900k Flows)

Relevant Rate (at least 1pps per flow for 1s resolution)



SOME RESULTS (BIGGEST JUNIPER LAB IN EUROPE)

Good

Juniper MX304	11s
Juniper MX204	21s
Juniper MX480 (MPC5)	22s
Juniper MX10008 (LC2101)	23s

OK

Juniper PTX10001	43s
Juniper PTX10003	45s
Juniper ACX7100	70s

BAD

Juniper SRX380	464s
Juniper SRX345	442s
Juniper MX80	318s
Juniper MX104	242s

Honorary Mention

Juniper SRX1500	117s
-----------------	-------------

Full Results see Blogpost: <https://www.xantaro.net/en/tech-blogs/juniper-cp-dp-convergence-testing/>

CALL TO ACTION – „WE“ SHOULD



DENOG Community

define standard BGP policies per use-case
(Peering, Transit, \$whatever)
e.g. via Routing-WG

DENOG Community

(optionally) create Test-Suite
based on „Open“ Tools (e.g. TREX, bng-blaster, Ostinato)

Define Test-Plan + Setup
based on BGP Policies from WG

Xantaro

offer to run IXIA based tests for free in XT3LAB*
Bring your Router, We test it with you
All results must be published



DENOG

Publish all results under the DENOG umbrella
e.g. on DENOG Wiki/Website/\$Wherever

*Terms and Conditions may apply. Contact us for Details. e.g. Limited to the Use Cases described in this presentation etc.

THANKS!

Tobias Heister

theister@xantaro.net

#denog:izemaen