RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE Atlas Future Plans

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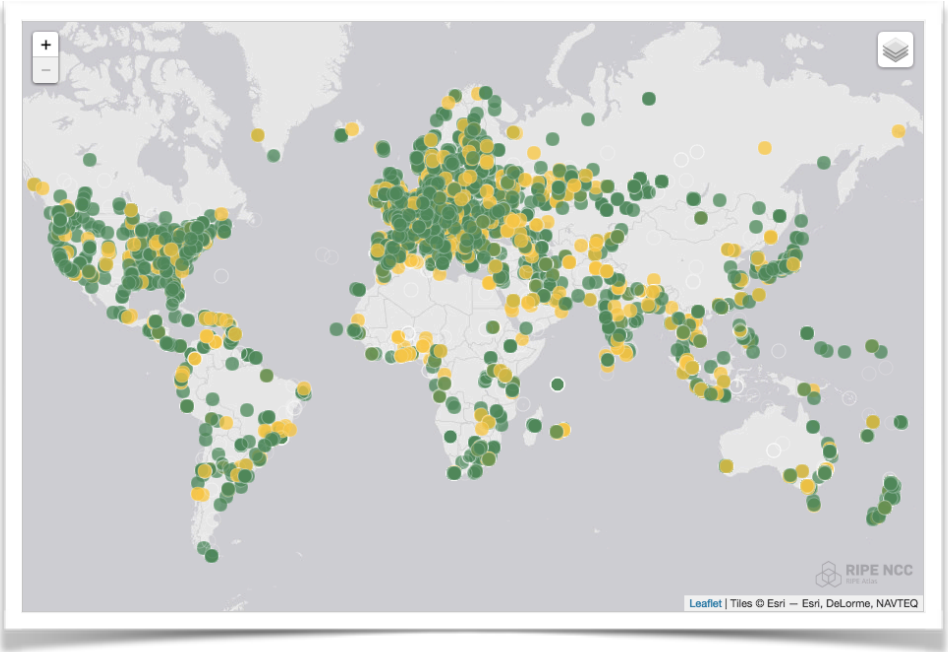
Quick Update on Current Status

- Number of connected probes: 10,000+
  - Of which almost 300 are anchors
- Covered ASes: ~3,600 (IPv4), ~1,350 (IPv6)
- Collecting 5,000+ results/sec (450M+/day)



RIPE Atlas Probe Generations

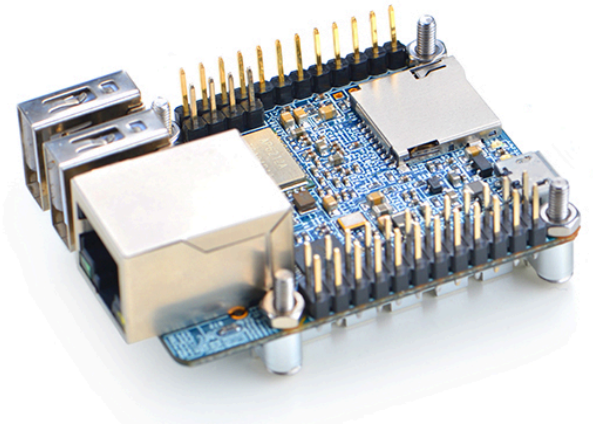
- v1 (v2)
  - Lantronix XPortPro
  - Very low power usage
  - 8 (16) MB RAM, 16MB flash
  - Runs uClinux
  - No FPU, no MMU
  - A reboot costs <15 seconds
  - An SSH connection costs ~30 seconds (!)
- Lived well beyond their anticipated life time
  - We still have ~600 + ~1,400 of these up and running
  - Version 1 probes approached their technical limits

RIPE Atlas Probe Generations

- v3 - TP-Link
  - TP-Link MR3020 + USB disk
  - 32 MB RAM, 4MB flash + 4GB USB disk
  - Can be powered over USB
  - Runs OpenWRT & Busybox
  - Off-the-shelf hardware => cheaper
  - USB disk caused more issues than anticipated

RIPE Atlas Probe Generations

- v4 - Evaluating NanoPi NEO Plus2
  - Raspberry PI “clone”
  - 1GB RAM, 8GB flash
  - Allwinner H5, Quad core Cortex A53
  - No external storage needed
  - Will run either Armbian or OpenWRT as base OS
  - Looks very capable, but logistics needs work



RIPE Atlas Anchors

- V1 (prototype phase)
  - Dell rack-mounted server
  - Virtually all have been decommissioned by now
- V2
  - Soekris net6501-70
  - Was deployed until September 2017, in use until EOL
- V3
  - PC Engines APU2C2/APU2C4
  - Current model, deployed since October 2017

RIPE Atlas VMs - Likely Coming

- Some users expressed they desire to deploy VMs instead of physical probes
- We're evaluating this, coming up with a plan
  - RIPE Atlas probe VM?
  - RIPE Atlas anchor VM?
  - Any of these "in the cloud"?

Upcoming Features

- OpenIPMap
  - Crowdsourced **infrastructure** geolocation service
  - Using multiple inputs to approximate physical location of infrastructure IPs
  - Combine user input, triangulation, reverse DNS parsing, …
  - Integrate with RIPE Atlas — use traceroute measurements as inputs and show “geoloc visualisation” for these

Upcoming Features

- Improve visualisations
  - Better “probe status page”, highlighting things that are work well as well as behaviour that seems to indicate issues
- Suggest alternative measurements
  - Facilitate reuse of existing measurements
- Improve APIs to interact with RIPE Atlas
- Better notifications
  - Including support for ambassadors
- Regular reporting on results

Questions

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