10 Years of RIPE Atlas

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RIPE NCC

The Vision

- A collaborative, active measurement network

- Should potentially be on "unprecedented" scale, perhaps with vantage points in *every network*

- Community involvement - the RIPE NCC shouldn't do this alone

- Focus on the "network level" measurements as much as possible

- Create and nurture an ecosystem of contributors and users

- Provide a long-term, sustainable platform

The First ~10 Years

2007-2008 — Inspirations, prior art and exploring the problem

- PlanetLab, iPlane, Hubble

Early 2008 — Feasibility studies, codename "DAR"

Late 2008 — Early planning (potential, challenges, …)

2008Q4-2009Q1 — An intern (Philo) explores hardware options

- Digi Connect ME9210

- Lantronix MatchPort/XPort AR

2009 — Architecture design, early stages

May 2009 — First public presentation at RIPE 58

The First ~10 Years

2010Q1 — Internal "go" decision, selection of v1 hardware, selection of hardware engineering partner. Launch target: RIPE 61 (November 2010, Rome)

2010Q1 — First external supporter found

Jun/Jul 2010 — Switching to high gear

Jul 2010 — Delivery schedule for the first 500 probes (things get exciting!):

- 3 September: 2 prototypes
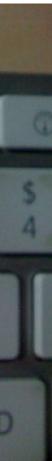
- 17 September: 100 pieces

- 18 October: 400 pieces

The First ~10 Years

Aug 2010 — Hiring the first two developers dedicated to DAR

- Viktor and Andreas

Sep 2010 — First UI mockups

7 Oct 2010 — RIPE NCC borrel, the name "atlas" comes up

8 Oct 2010 — "RIPE Atlas" is accepted as the official name

11 Oct 2010 — All code and UI pages are updated to use "RIPE Atlas"

Mid-Oct 2010 — Infrastructure components start functioning

The First ~10 Years

29 Oct 2010 ● First (VIP) probes go online

7 Nov 2010 ● First graphs for probes appear (ping results)

15 Nov 2010 ● Announcement at RIPE 61 (Rome)

- Official birthday of the service

Oct 2011 ● First "User Defined Measurements" started

15 Oct 2011 ● New probe version: v2

12 Dec 2011 ● Milestone: 1.000 connected probes

12 Dec 2012 ● RIPE Atlas anchors introduced

2 Feb 2013 ● New probe version: v3

The First ~10 Years

3 Mar 2014 — Milestone: 5.000 connected probes

23 May 2016 — API v2 introduced

21 Aug 2017 — Milestone: 10.000 connected probes

21 Dec 2017 — VM anchors announced

8 Mar 2018 — First VM anchor goes live

8 May 2018 — New probe version: v4

2 Oct 2019 — Software probes are introduced

Oct 2020 — RIPE 81

At 10 Years

- We're at ~11.400 connected probes

  - ~1.350 are v1/v2 (!)

  - ~6.000 are v3

  - ~2.600 are v4

  - ~750 are software

  - ~650 are anchors (about half of these are virtual)

- On average about 25.000 measurements are running

- We cover 177 countries, ~3.700 ASNs

- The "most alive" probe has been up and running for:

  - 9y 318d 16h 28m (and a bit more by now)

Celebrating 10 Years

- The RIPE Atlas UI will get a significant facelift

  - Expect changes soon after RIPE 81

- We're introducing "birthday presents" for probes

  - Recognising the long-term support from our probe hosts

- We'll be publishing some "tales from the past" and preparing a few other gimmicks

- Organising a RIPE NCC Open House event and a Deployathon

- Please join the RIPE81 Atlas community room

After 10 Years

- We plan to make the system more useful to more users

  - Better access to data (simpler, faster, …)

  - More out-of-the-box support for particular use cases

- Increase value for individual contributors such as probe hosts

- Improve on processes that "help our helpers"

  - E.g. ambassadors and sponsors

- Focus on increased network coverage, if possible

  - Various activities to get probes into more networks

Acknowledgements and Shout Outs

- To current members of the development and support teams

- Many other RIPE NCC staff helping every day one way or another
  - As running such a system needs far more than just developing it!

- To former staff and friends who contributed
  - Andreas, Antony, Bert, Colin, Dan, Devin, Erik, Franz, Iñigo, John, Mark, Massimo, Max, Nevil, Philo, Sergey, Tony, Valentino, Vasco (and probably more)

- Most importantly: to **you**, members of the community for hosting, measuring, contributing, using, promoting, sponsoring, supporting, questioning, debating, cooperating, believing, evangelising, mentoring, translating, … **THANK YOU!**

Questions

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