RIPE NCC Update

Changes, Challenges & Highlights

Suzanne Taylor | RIPE NCC Roundtable Meeting | 27 January 2020

A little background…

Who We Are

- We are one of five Regional Internet Registries (RIRs)

  - We distribute and maintain the registry of IP address space for Europe, the Middle East and parts of Central Asia

  - Our members are ISPs and other organisations running their own networks

  - RIPE community develops policy relating to Internet address space (open)

- We also provide a number of technical services and tools, including K-root

- We are a source of technical expertise for a range of stakeholders

Other Things We Do

- Support development of local technical communities

- Understand challenges faced by members across service region

- Understand public sector concerns and provide relevant information

- Represent interests and concerns of members and community in Internet governance and policy arenas

- Spread know-how, share best practices and develop tools

Our Place in the Wider Ecosystem

Members

Law Enforcement

Regulators

Banking & Finance

ITU

Technical Community

Governments

Other RIRs

Academia

Mobile Sector

Enterprise

OECD

Membership

Where Our Members Are Located

Membership Growth

IPv4 and IPv6

Available IPv4 Pool

Legend: Available IPv4 in Last /8 · Available IPv4 Outside Last /8 · Reserved IPv4

Y-axis: 0M, 4M, 8M, 12M, 16M

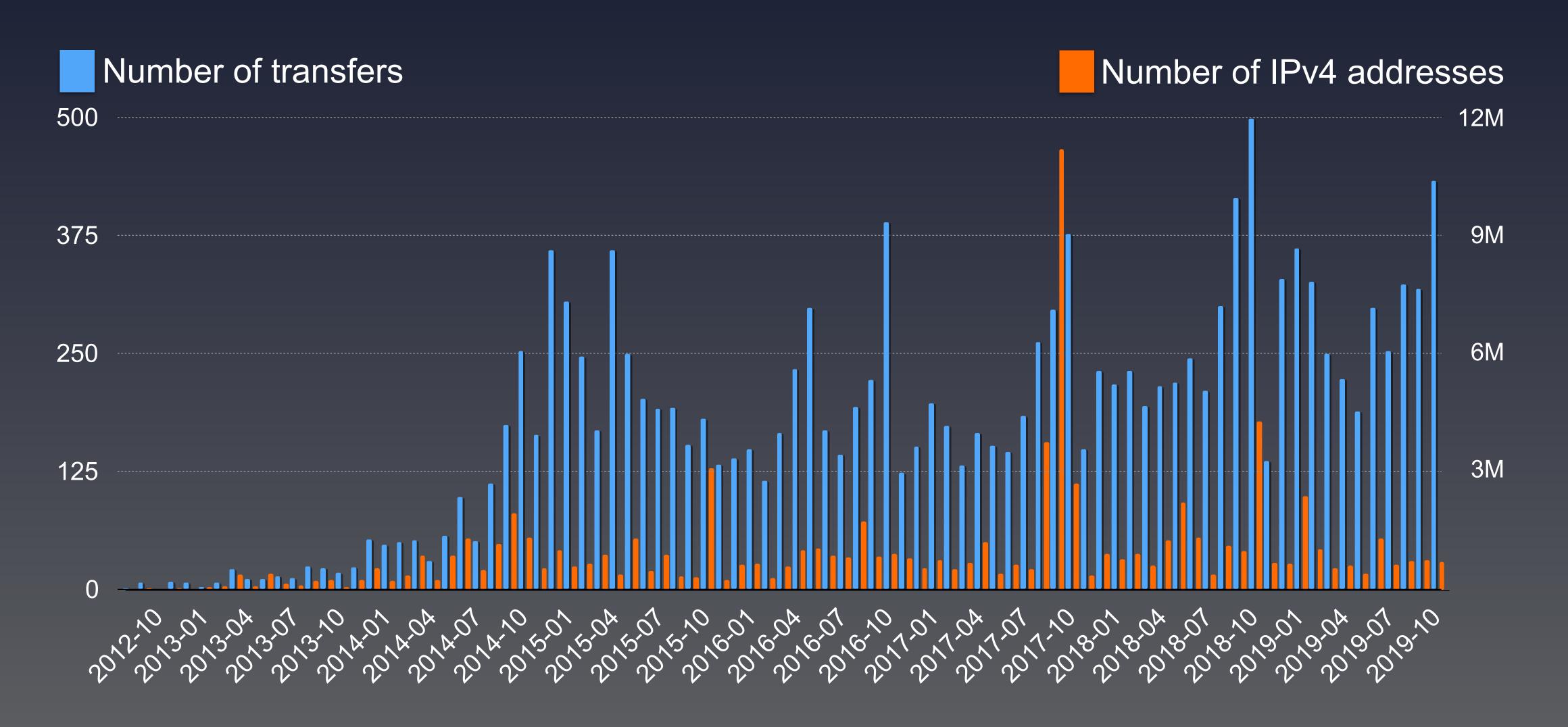X-axis: Oct 16, Jan 17, Apr 17, Jul 17, Oct 17, Jan 18, Apr 18, Jul 18, Oct 18, Jan 19, Apr 19, Jul 19, Oct 19
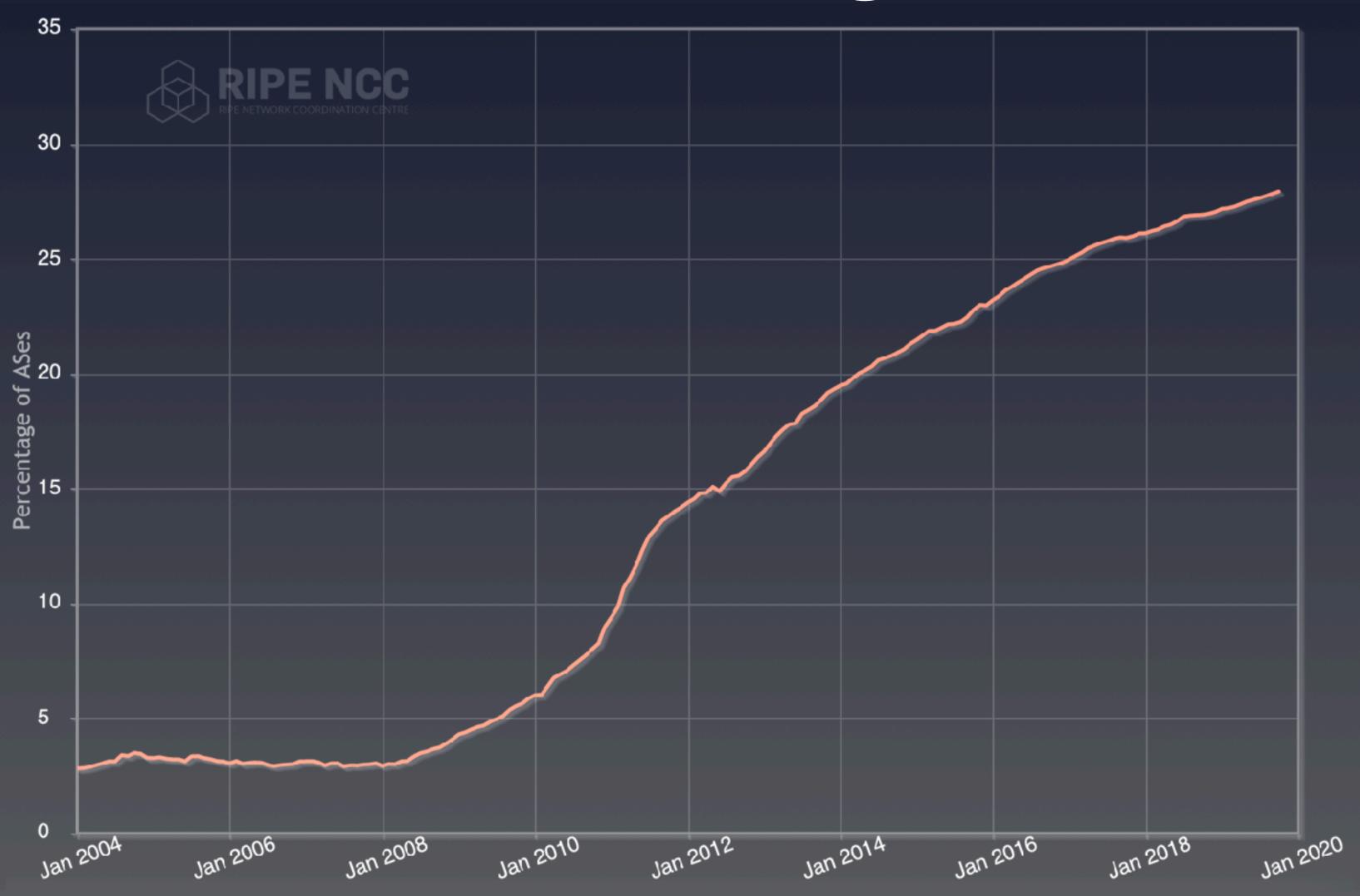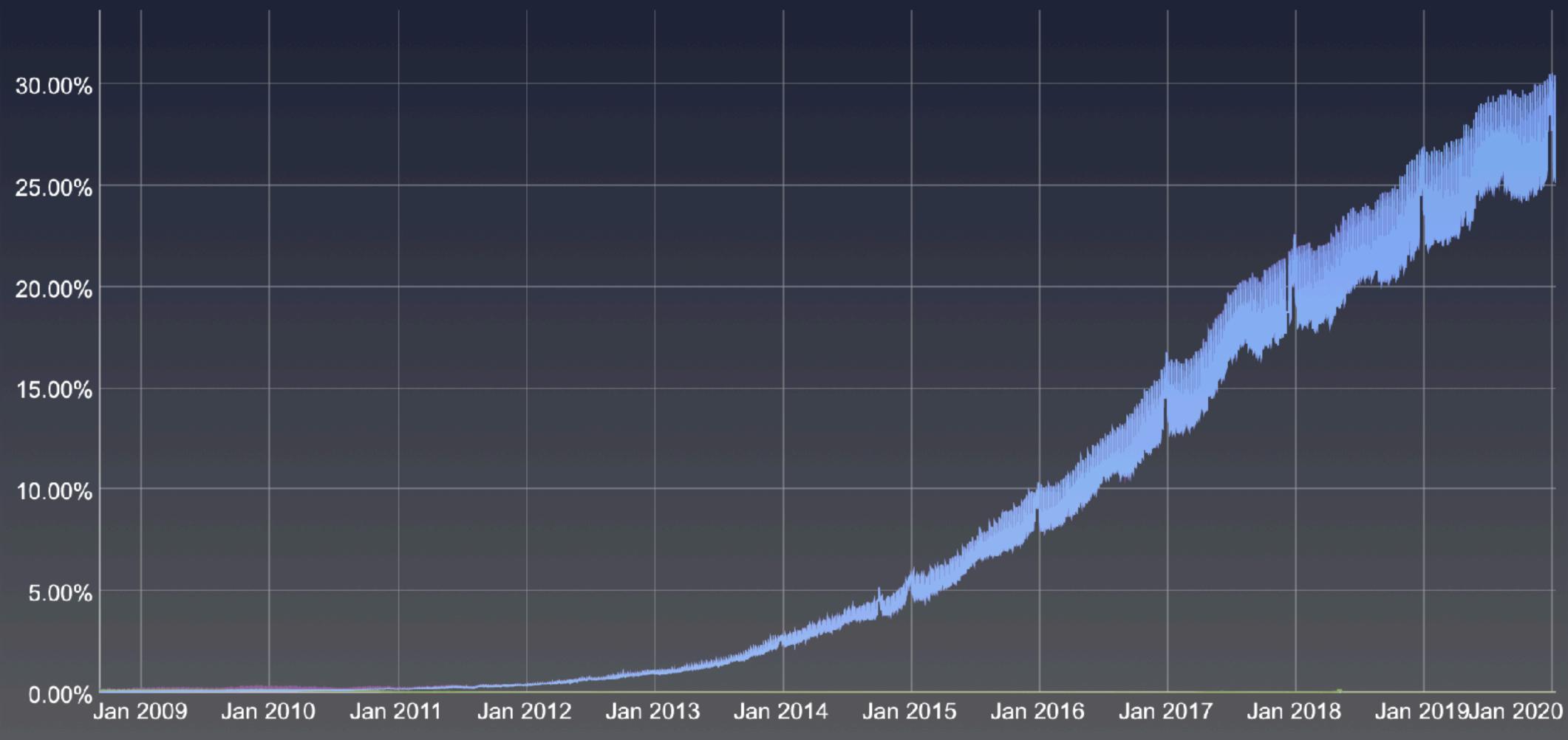
IPv4 Transfers

LIRs with IPv6

Networks Announcing IPv6

Users Accessing Google Over IPv6

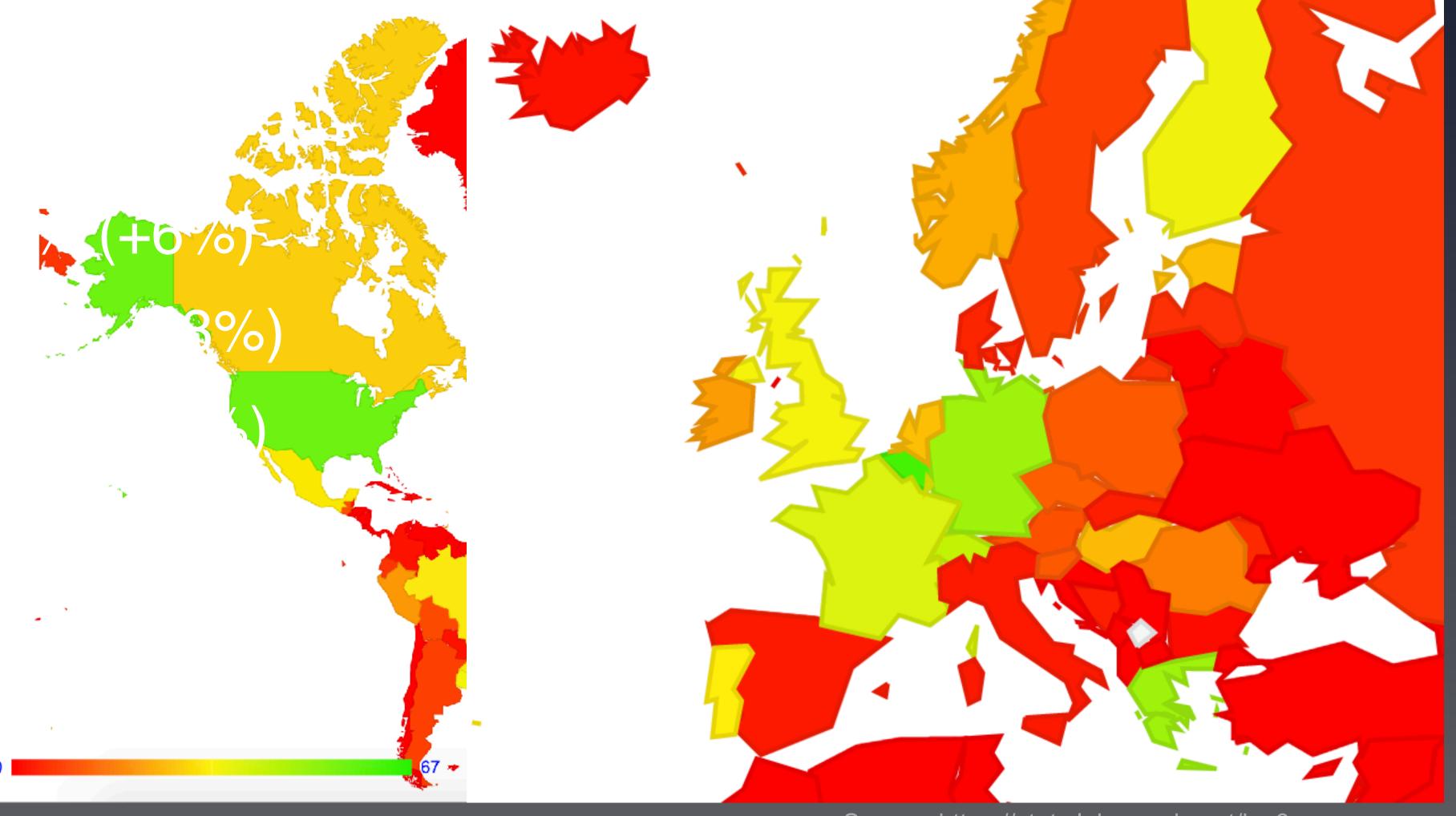Source: https://www.google.com/intl/en/ipv6/statistics.html

IPv6 Deployment

Belgium: 6 (+6 %)

Germany: 8%)

Greece: 48

Source: https://stats.labs.apnic.net/ipv6

Supporting IPv6

- Still haven't reached the IPv6 tipping point

- We do everything we can to support IPv6 deployment:

  - Work directly with governments on national strategies

  - Contribute technical expertise to consultations

  - In-person and online training courses

  - Detailed deployment guide and resources

2019 in Review

In 2019, we…

- Processed 6,090 new LIRs accounts

- Made 5,150 /22 IPv4 allocations and 2,116 IPv6 allocations

- Hosted ~2,000 attendees at events we organised

- Held 84 training courses for 1,715 participants in 39 locations

- Provided €237,500 in funding for community projects

RIPE NCC Survey 2019

- Largest survey to date: 4,161 responses

- Translated into eight languages for first time

  - 48% responded in language other than English

- 92% rated RIPE NCC services as good or excellent

- 87% positive ratings of registration services (up from 2016)

- Calls for more accurate data in RIPE Database

- Calls for more RIPE NCC training courses in local languages

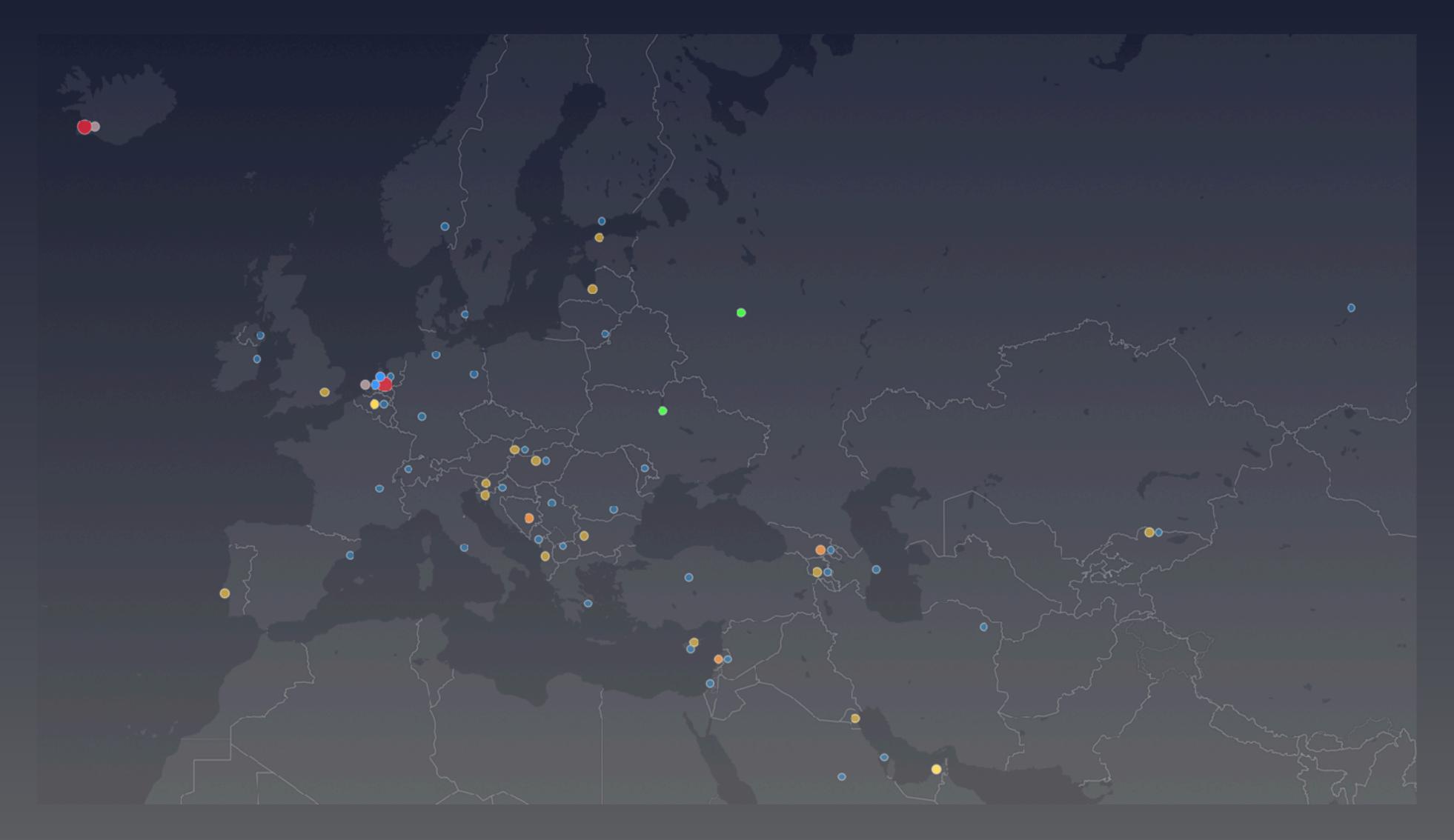- Calls for RIPE NCC to reclaim unused IPv4 address space

Survey: Industry Insights

- Network security biggest challenge for technical community

- 53% need more IPv4 in the next 2-3 years

  - 61% plan to buy on the secondary market

  - 41% plan to use NAT

- 22% have fully deployed IPv6 (21% in 2016)

  - 50% have started; 25% have no plans

- 27% believe regulatory changes will impact them or the RIPE NCC in coming years

  - Key concerns: censorship, national autonomy, high compliance costs

Our Events in 2019

Key Events in 2019

- Roundtable Meetings

  - Brussels - January

  - Kazakhstan - September

  - Dubai - September

- RIPE Meetings

  - Reykjavik - May (742 attendees)

  - Rotterdam - October (736 attendees)

  - Articles on RIPE Labs:

    https://labs.ripe.net/Members/hans_petter_holen/ripe-78-the-big-picture
    https://labs.ripe.net/Members/hans_petter_holen/reporting-back-from-ripe-79

Key Events in 2019

- EuroDIG

  - The Hague - June

- Europol-INTERPOL Cybercrime Conference

  - The Hague - October

- Internet Governance Forum

  - Berlin - November

Key Developments

- IPv4 run-out in November

  - Long-anticipated development

  - Increase in LIR applications

  - Waiting list now in effect for recovered /24 (256 addresses)

  - We will continue to redistribute these small amounts for the foreseeable future

What Run-out Means for the Community

- Extending lifespan of IPv4 - possibly slowing IPv6 adoption

- New actors in RIPE Policy Development Process, and RIPE community generally

- Greater attention and involvement from governments and regulators who view IPv4 as an economic issue

What Run-out Means for the RIPE NCC

- Secondary market reinforces the importance of the registry

- Impacts the dynamic between the RIPE NCC and our members

- Speculators, hoarders and hijackers with greater incentive to abuse the system

- Need to maintain balance between due diligence and not being overly bureaucratic

- Having fewer members could challenge our business model

Interesting IPv4 Facts

- Total IPv4 addresses distributed by the RIPE NCC: 649,925,248

- Total IPv4 blocks transferred: ~13,500

- Biggest IPv4 allocation ever: 90.0.0.0/9 to Orange S.A. in 2006

- The first transfer took place in October 2012

Key Developments

- Changes in RIPE NCC leadership

  - Departures of Axel Pawlik (Managing Director), Paul Rendek (External Relations), Serge Radovcic (Communications) and Dick Leaning (Competent Authorities)

  - Management team in place during transition

  - Expecting new Managing Director in coming months

  - Our commitments to our members and all our stakeholders, across our service region, remain the same

Key Developments

- Abuse-c validation process

  - Policy proposal accepted in June 2018 (co-authored by Europol and Orange)

  - RIPE NCC asked to check abuse contacts in RIPE Database

  - Automated verification tool followed by manual intervention where needed

Key Developments

- Our work with competent authorities

    - Signed MoU in March with UK's National Crime Agency

    - Met with DG Home and Europol in May to discuss RIPE Database and RIPE Policy Development Process

    - New Public Safety Coordination Group (PSCG) under the NRO to coordinate RIR outreach and cooperation with public safety community

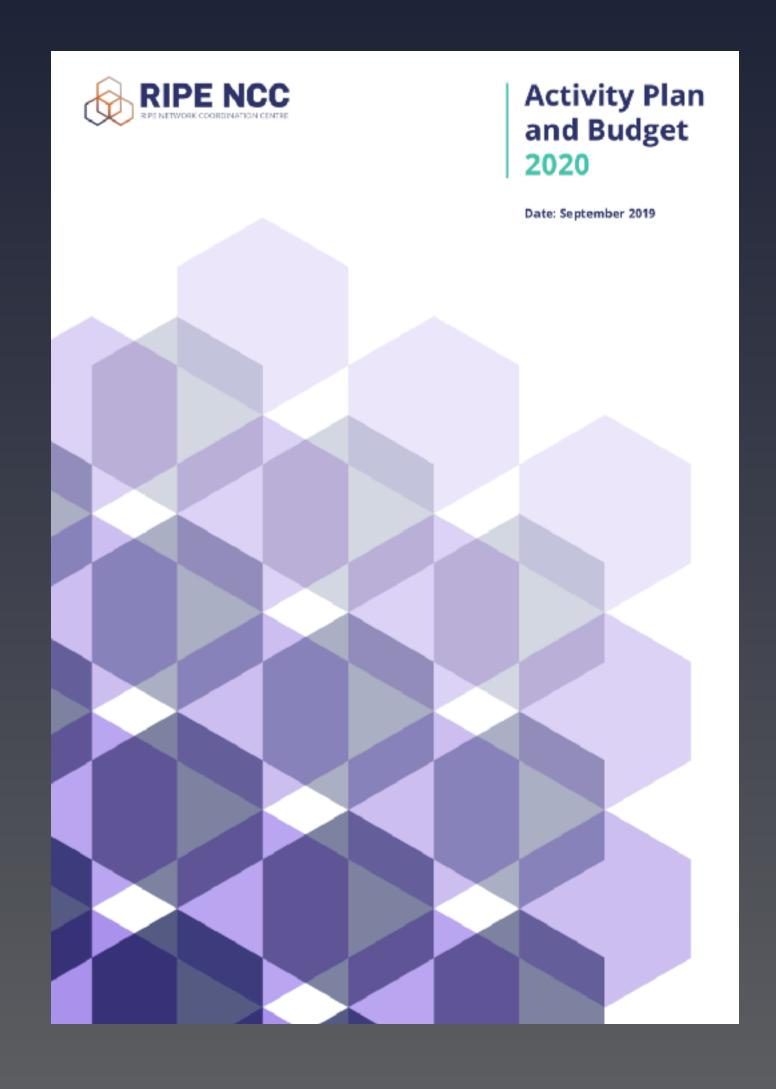   - Delivered a number of bespoke trainings as well as workshops at ICANN and other RIR meetings

Looking Ahead

The coming year

- Strategic focus: deliver world-class services and help to maintain the resiliency and stability of the Internet

  - Maintain and improve registry

  - Better understand the needs of our members

  - Effective member outreach and external engagement

  - Modernise our technical infrastructure

  - Increase agility to handle emerging challenges

  - Increase accountability and due diligence

  https://www.ripe.net/gm/oct-2019/supporting-documents

RIPE NCC
RIPE NETWORK COORDINATION CENTRE

Activity Plan and Budget 2020

Date: September 2019
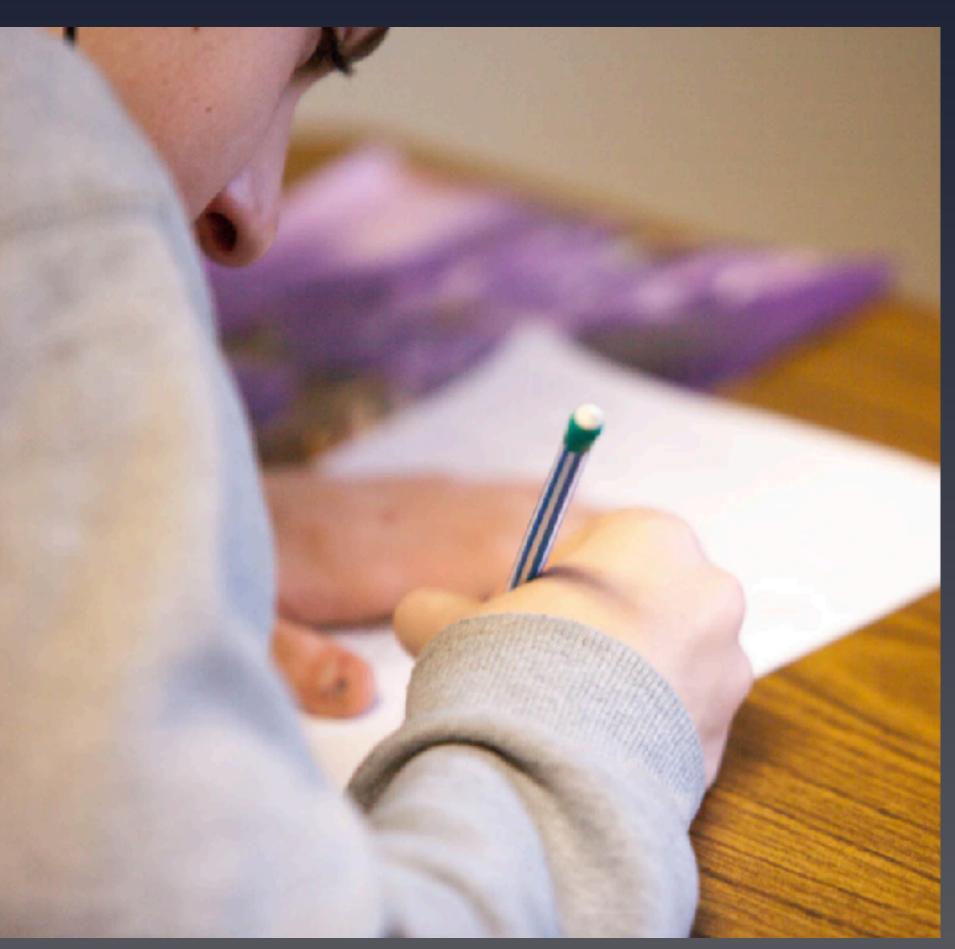
The coming year

Photo by Ben Mullins on Unsplash

- RIPE NCC Certified Professionals
  - Online learning platform
  - Members earn digital badges
  - Proctored exams
  - Extensive job task analysis and stakeholder consultations to align certifications with industry needs
- RPKI is a priority to improve routing security
- Projected 1,500 fewer member accounts

Major Events in 2020

- **EuroDIG**

  - Trieste, Italy - June

- **Internet Governance Forum**

  - Katowice, Poland - November

Major Events in 2020

- **ITU World Telecommunication Standardization Assembly (WTSA)**

  - Hyderabad, India - November

  - Sets the direction for the Standardization Sector (ITU-T) every four years

- **Planning for ITU World Telecommunication Policy Forum (WTPF) in 2021**

  - RIPE NCC participating on informal experts group

Questions ?

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