



ARIN 44

31 October - 1 November 2019 • Austin, Texas

History (and Future) of IPv6 Outreach at ARIN

Richard Jimmerson

Overview



- ARIN IPv6 advocacy by decade
 - 1990s
 - 2000s
 - 2010s
- Impacts
- What's coming for 2020s (next year)

ARIN IPv6 Outreach - 1990s



- **Mid-1990s** – IETF begins working on IPng
- **1999** – IETF creates IPv6 and delegates /3 to IANA for further issuance to the then 3 RIRs
- **1999** – ARIN receives first IPv6 block from IANA
- **1999** – ARIN makes first IPv6 allocation to ESnet using allocation framework recommended by IETF

ARIN IPv6 Outreach - 2000s



- **2000** – Beginning of IPv6 outreach at ARIN meetings
- **2001** – IAB/IESG publishes recommendation on IPv6 address allocations, after which ARIN community begins IPv6 policy work
- **2003** – ARIN Board implements first fee waiver for IPv6
- **Mid-2000s** – ARIN staff, Board, and AC begin conducting outreach, including trade-shows and industry conferences
- **2007** – ARIN Board passes resolution advising Internet community on migration to IPv6
- **2007** – Opens IPv6 wiki
- **2008** – ARIN begins using social media accounts
- **2009** – Certified postal letters from ARIN to every ARIN member executive with notice of IPv4 depletion and need to adopt IPv6

ARIN IPv6 Outreach - 2010s



- **2010** – Launches TeamARIN, including speakers' bureau, outreach calendar, and community-use slide decks
- **2011** – IANA exhausts global IPv4 pool, and hosts press conference
- **2011** – “Where in the world is IPv6?” sticker contest
- **2011/12** – Participates in World IPv6 Day and World IPv6 Launch
- **2014** – Kicks off Get6 campaign focused on IPv6-enabling web content
- **2015** – ARIN runs out of IPv4 highlighting the pressing need for IPv6
- **2016** – Builds list of Hosting & DNS providers that support IPv6 and IPv6 trainers and consultants
- **2017** – Begins publishing IPv6 case studies
- **2019** – Creates grant program including funding for informational outreach related to IPv6 deployment

Outreach examples throughout the years



- Social media engagement
 - Facebook, Twitter, LinkedIn
- Speaking sessions and panels at industry conferences
 - Interop, TechEx, NAv6TF, PTC, CANTO, etc.
- Tradeshow booths
 - CES, GSM, HostingCon, IT Roadmap, etc.
- Help desks
 - NANOG, CaribNOG, WISPA, Canadian ISP Summit, etc.
- Sessions at ARIN meetings and ARIN on the Road events
- Individualized Briefings
- Media interviews
 - WSJ, USA Today, Wired, etc.
- Bylines
 - Forbes, Information Week, CIO Applications, etc.
- Educational materials
 - Videos, blogs, webpages, infographics, guides, handouts, emails, swag, etc.
- Coordination with other Internet organizations
- Surveys
- Targeted outreach to organizations with IPv4 but no IPv6

Plus, we eat our own dogfood



- ARIN public-facing services are available via IPv6
 - Websites, DNS, Directory Services, FTP, Messaging
- New services must have IPv6
- ARIN vendors must have IPv6 plans
- All meetings require IPv6 connectivity

Impacts



- **59.5%** of ARIN members have IPv6, **26%** of end user customers
- **6,800+** total IPv6 blocks allocated/assigned
- **51,000+** /32 equivalents allocated
- **3,272,236** /48 equivalents assigned
- **172,000+** total IPv6 reassignments/reallocations (**61%** created since beginning of 2018)

IPv6 Traffic (snapshot 10/2019)



- Google: **36.21%** of Google traffic in the US
 - **28.58%** globally
 - <https://www.google.com/intl/en/ipv6/>
- Facebook: **56.5%** of Facebook traffic in the US
 - **25.48%** globally
 - <https://www.facebook.com/ipv6/>
- Akamai: **48.1%** IPv6 adoption in the US
 - **22.6%** globally
 - <https://www.akamai.com/us/en/resources/our-thinking/state-of-the-internet-report/state-of-the-internet-ipv6-adoption-visualization.jsp>

Thank you to
all community
members who
helped with
IPv6 outreach
over the years



ARIN IPv6 Outreach - 2020s



- Plan to sustain current level of outreach
- Addition of IPv6 training programs
- Is more needed?

Give Your Input



- Do you have any ideas about what you'd like to see ARIN doing to further promote IPv6 adoption/deployment?
- Email us at get6@arin.net

???

Thank you.

Any Questions?