



IPv4 Status

- IANA Free Pool (<http://www.iana.org/>)
 - 5 /8s remain as of February 2, 2011
 - IANA allocated 19 /8 blocks to the RIRs in 2010
 - IANA free pool depletes on February 3, 2011
Tune in at 9:30AM (nro.net)
- ARIN Free Pool
 - Depletion in days to months following IANA free pool depletion (expected before end of 2011)
 - New policies triggered by depletion of IANA and ARIN free pools

ARIN
American Registry for Internet Numbers

What about underutilized blocks?

- ARIN actively attempts reclamations
- We have reclaimed large underutilized blocks and will continue
- Our successes will not significantly extend the lifetime of the IPv4 free pool

ARIN
American Registry for Internet Numbers

What if?

- Current demand globally is ~24 Million IP addresses per month (December 2010)
- What if we have all IPv4 unicast to start over
 - Counting /32s it would take ~ 10-12 years to fully re-deplete the IPv4 resource
- What if we have all of IPv6 to start (we do)
 - Counting /64 subnets it would take ~ 768 Billion years to deplete the resource
 - Counting /48 subnets it would take ~ 11.7 Million years to deplete the resource



IPv4 Policy Changes at IANA Depletion

- IPv4 /10 dedicated for IPv6 deployment
- Reduction in amount of IPv4 address space ISPs can request from a twelve to three-month supply
- Waiting list for unmet resources



IPv4 Registration Transfers

- Long standing merger & acquisitions transfer policy remains
- New policy: Transfers to specified recipients (8.3 of NRPM)



8.3 Transfer Policy

In addition to transfers under section 8.2, IPv4 number resources within the ARIN region may be released to ARIN by the authorized resource holder, in whole or in part, for transfer to another specified organizational recipient. Such transferred number resources may only be received under RSA by organizations that are within the ARIN region and can demonstrate the need for such resources, as a single aggregate, in the exact amount which they can justify under current ARIN policies.



IPv6 Policies

- ISPs
 - Known, existing ISPs automatically qualify
 - /32 minimum
 - ~4.2 Billion /64 subnets
 - ~65 Thousand /48 assignments
- End-users
 - Typically qualify by showing you qualify for IPv4
 - /48 minimum
 - 65,536 subnets
 - Qualify for larger by showing proposed use
 - Guidelines: /48 for a large site, /56 for a small site

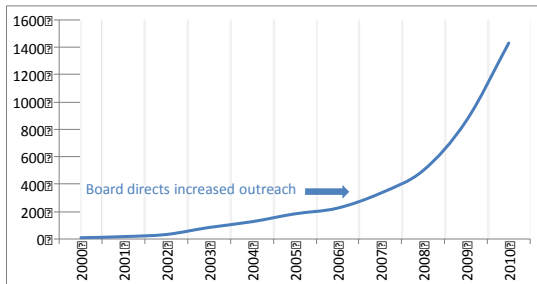


IPv6 Status

- Registration traffic continues to increase
- Community attitude shifting toward IPv6 acceptance
- Community continues to update IPv6 policies at ARIN
- Industry plans are going public
- Mainstream media is picking up the topic



IPv6 Allocations/Assignments by ARIN Over Time



IPv4 & IPv6 - The Bottom Line

- We're running out of IPv4 address space.
- New demand surge could quickly deplete remaining IPv4
- IPv6 must be adopted for continued Internet growth.
- We must maintain IPv4 and IPv6 simultaneously for many years.
- IPv6 deployment has begun.



Action Plans

What does this mean for:

- Broadband Access Providers?
- Internet Service Providers?
- Internet Content Providers?
- Enterprise Customers?
- Equipment Vendors?
- Government Organizations?



Call to Action



Your customers want access to the entire Internet, and this means IPv4 and IPv6 websites. Offering full access will require running IPv4/IPv6 transition services and is a significant engineering project.

Multiple transition technologies are available, and each provider needs to make its own architectural decisions.



Call to Action

Plan out how to connect businesses via IPv6-only and IPv4/IPv6 in addition to IPv4-only.



Businesses are beginning to ask for IPv6 over their existing Internet connections and for their co-located servers.

Communicate with your peers and vendors about IPv6, and confirm their timelines for production IPv6 services.



Call to Action

Content must be reachable to newer Internet customers.



Content served only via IPv4 will be accessed by IPv6 customers via transition solutions run by the access providers.

Plan on serving content via IPv6 in addition to IPv4 as soon as possible.



Call to Action

Mail, web, and application servers must be reachable via IPv6 in addition to IPv4.



Open a dialogue with your Internet Service Provider about providing IPv6 services.

Each organization must decide on timelines, and investment level will vary.



Call to Action

There was probably limited demand for IPv6 in the past.



Demand for IPv6 support will become mandatory very, very quickly.

Introduce IPv6 support into your product cycle as soon as possible.



Call to Action

Awareness

Coordinate with industry

Adopt incentives

- Regulatory
- Economic

Support and promote awareness and educational activities

Require IPv6-compatibility in procurement procedures

Officially adopt IPv6



Exhibit and Speaking Events

Recent Events

- Internet Governance Forum
- CompTel
- State CIOs & Technology Directors
- Caribbean Internet Governance Forum
- Caribbean ICT Road Shows
- DEF CON
- Catalyst Conference
- OPASTCO
- HostingCon
- CANTO
- InfoComm
- Rocky Mountain IPv6 Summit
- International Telecoms Week
- Cable Show
- Interop Las Vegas
- Game Developers Conference
- Texas IPv6 Task Force Summit
- Interop New York
- IT Roadmap – DC
- gogoNET Live!
- IT Roadmap – San Francisco
- LISA
- ICT Road Show Trinidad
- SC'10
- CES



Attitude Shift about IPv6 Adoption

- 2007: Laughter and Denial
- 2008: Skepticism
- 2009: Despair and Anger
- 2010: Moving toward Acceptance



Sample Media Coverage



23 July 2010



ARIN Resource Links



- TeamARIN Microsite <http://TeamARIN.net>
 - Event Calendar
 - Education
 - Blogs
 - Spread the word
 - Public use slide deck
 - Materials support request
- ARIN IPv6 wiki <http://getipv6.info>



Resources

- Community Use Slide Deck
- IPv6 Wiki
- Information Page at www.arin.net/knowledge/v4-v6.html
- Outreach Microsite: www.TeamARIN.net
- Social Media at ARIN www.arin.net/social.html
- ARIN Board Resolution
- Letter to CEOs



ARIN on Social Media



Facebook – www.facebook.com/TeamARIN



Twitter – www.twitter.com/TeamARIN



LinkedIn – www.linkedin.com



YouTube – www.youtube.com/TeamARIN



Learn More and Get Involved

Learn more about IPv6

- www.arin.net
- www.getipv6.info
- www.TeamARIN.net

Get Involved

- Public Policy Mailing List
- Attend a Meeting
- <http://www.arin.net/participate/>

