



RIPE Policy History

Focusing on IPv4

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Motivation

- Policies change as need occurs
 - Who changes them? How?
 - What were the needs and how did they effect the policies in the past?
 - Which policies changed in time?
 - When
 - Researchers keep asking
- What did not change?
 - Principles



Overview

- Policy Development Process
- Changes in IPv4 Policies in time
 - Allocation Policies
 - Minimum/Maximum sizes
 - Sub-allocations
 - Assignment Policies
 - Internetworking Experiments and Anycasting DNS
- Conclusion



Policy Development Process

- Need
 - Technology/Industry requirements changes
- Proposal and Discussion
 - Mailing lists and policy meetings
- Consensus
- Implementation
- Evaluation of the policy
 - Effect on Industry
 - Interaction with Technology



IPv4 - Allocation Policies

- In the beginning (1992-1993)
 - RIPE NCC allocating Class Bs and Class Cs
 - Procedures document: ripe-65
 - September 1993: CIDR is introduced in RFC 1519
 - December 1993: ripe-104 is published
 - Minimum allocation size: /16
- 1996
 - ripe-136 is published as a “policy” document
 - Maximum allocation size: /16
 - Minimum allocation size: /19 (slow start mechanism)
 - Not all network admins are familiar with CIDR yet
- 1997
 - IANA allocates a former Class A block
 - Temporary policy agreed in RIPE 26 to have relaxed policies April-December 1997
 - To ease the potential problems with this “first-time” address block type
 - ripe-155 is published in April outlining this temporary policy
 - Further allocation criteria is set to 90% (ripe-159, July)
 - To formalise when an LIR can receive further address space

IPv4 - Allocation Policies

- 1998-1999
 - Proposals in RIPE 30
 - LIRs find it hard to realise good internal aggregation
 - Change 90% criteria to 80% for further allocations
 - Active since October 1998
 - Remove maximum allocation size
 - Agreed in 1999
- 2000-2001
 - RIPE 36, minimum allocation size changed from /19 to /20
 - Stats showing that not all of the /19s are used efficiently within 2 years
 - RIPE 39, criteria to receive a 1st Allocation is agreed
 - Already utilise OR show immediate need for a /22



IPv4 - Allocation Policies

- 2003
 - January, RIPE 44: SUB-ALLOCATIONS are accepted.
 - December:
 - Minimum allocation size changed from a /20 to /21 (2048 IPs)
 - Utilisation criteria for 1st allocation is dropped
 - Task Force for Provider Independent Address Space (PI) advised
 - Make it easier to be members so people will not go for PI
- 2004-2005
 - Minimum allocation size for LIRs in Africa set to /22 (1024 IPs)
 - Needs of Africa are different
 - To ease the forthcoming transition to AfriNIC
 - AfriNIC received full recognition in April 2005
 - Special policies for Africa are removed



IPv4 - Allocation Policies

- 2006-2007
 - Proposal to set allocation period to 12 months
 - Accepted in March 2007



IPv4- Assignment Policies - (AW)

- 1993
 - April, RIPE 15:
 - Recommendation shorter than a /19 should go for 2nd opinion to RIPE NCC
- 1995
 - January, RIPE 20:
 - AW for new LIRs set to zero
 - Maximum AW is /19
 - LIRs need education on CIDR
 - Slow start mechanism in place
- 1999-2001
 - Maximum AW size dropped
 - October, RIPE 40:
 - INFRA-AW introduced
 - Usage of AW for the LIR is separated from the usage for End User
 - LIRs need to make assignments for their own infrastructure more often for the same re-occurring need
- 2006-2007:
 - Proposal to raise new LIR's AW to a /21 six months after they receive their 1st allocation



IPv4 - Some examples of Assignment Policies

- Internetworking Experiments
 - Researchers need temporary address space
 - 2002, Proposed in RIPE 43
 - 2003, Reached consensus for all resources
- Anycasting DNS
 - 2004, Proposed in RIPE 47
 - Revised in time
 - 2006 September, Reached consensus for a fixed /24 (256 IPs)
 - Documented in ripe-387
 - New proposal in 2007



What did not change?

- Principles for Internet registries
 - Aggregation
 - Conservation
 - Registration
 - These have been in the policy documents since the beginning
 - Always visited during new proposals
- Responsible usage of Internet resources
- Responsible stewardship of Internet resources



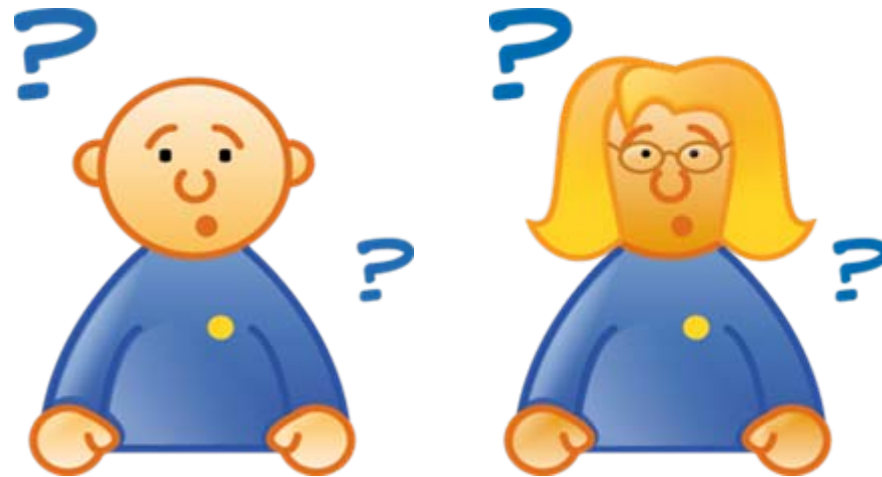
Conclusion

- Industry environment and business requirements change
- PDP is there to meet this demand for the changes
- So the policies do change
- But the principles remain the same
- Many policies stayed stable since the beginning



References

- Mailing list archives
 - <http://www.ripe.net/ripe/maillists/>
- Meeting Archives
 - <http://www.ripe.net/ripe/meetings/>
- Working groups
 - <http://www.ripe.net/ripe/wg/>
- Document Store
 - <http://www.ripe.net/ripe/docs/>
- RIPE PDP
 - <http://www.ripe.net/ripe/policies/>



Questions?