RIPE Policy Development & IPv4 / IPv6

RIPE NCC Regional Meeting / MENOG 4

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Overview

RIPE PDP (Policy Development Process)

IPv4 & IPv6 Address Allocations

    IPv6 Routing

Current Policy Issues

    IPv4 Depletion

    IPv6 and IPv4 Proposals

Policy Development Cycle

RIPE PDP Principles

Open
- Anyone can participate
- Policy meetings
- Mailing lists

Transparent
- Mailing lists archived
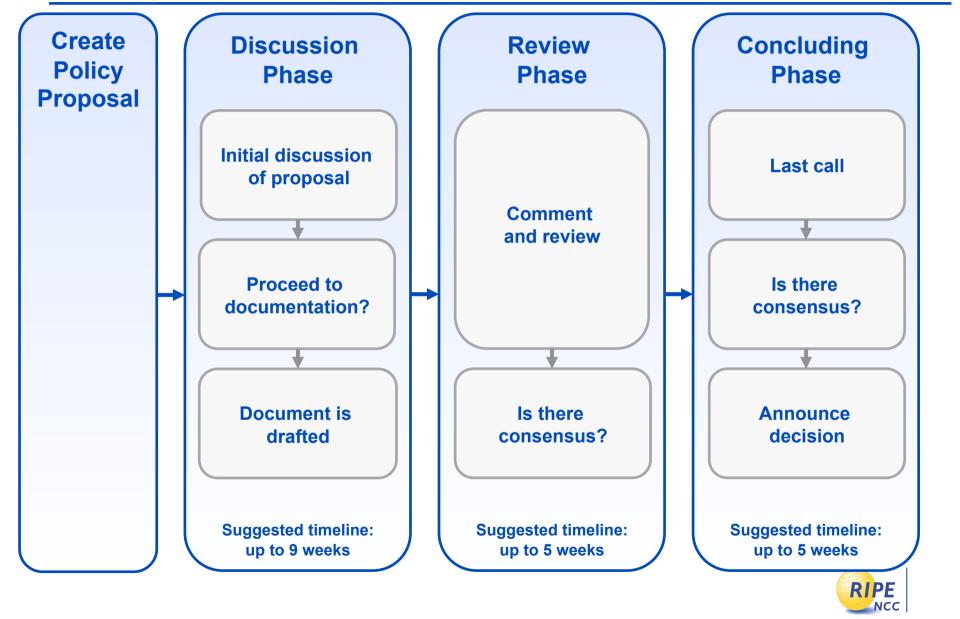- Meetings scribed

Developed Bottom-up
- By the Internet Community
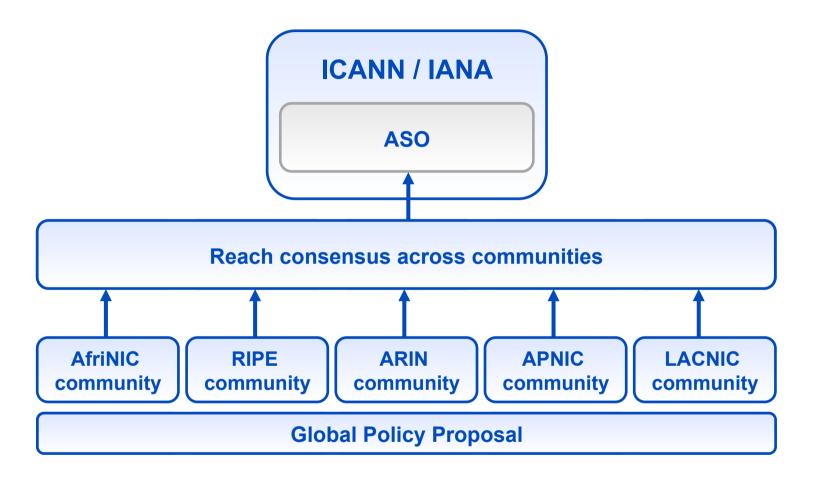
Documented
- Formal Policy Documents
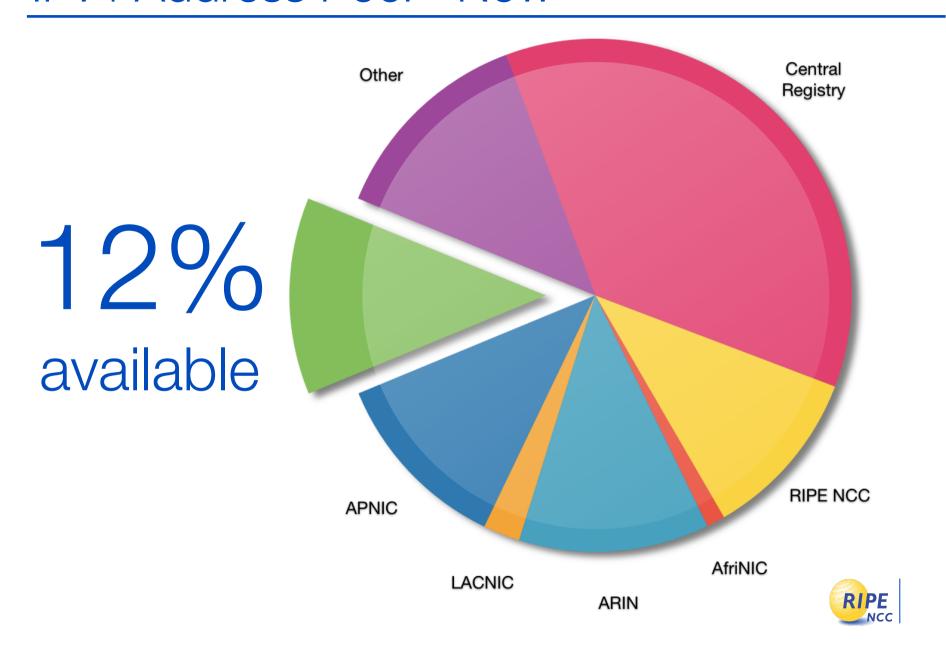- Implementation Procedures
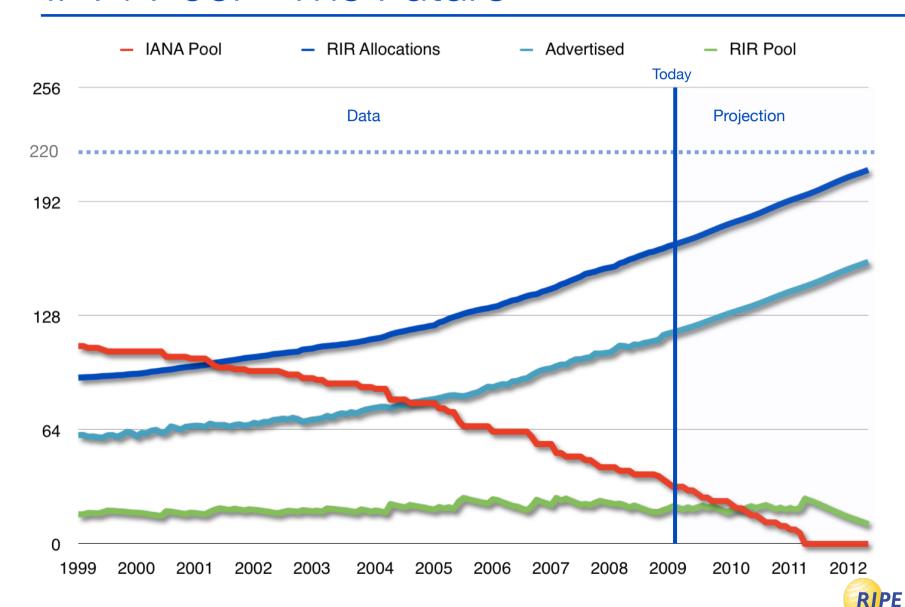
Policy Development Process

Create Policy Proposal

Discussion Phase

- Initial discussion of proposal
- Proceed to documentation?
- Document is drafted

Suggested timeline: up to 9 weeks

Review Phase

- Comment and review
- Is there consensus?

Suggested timeline: up to 5 weeks

Concluding Phase

- Last call
- Is there consensus?
- Announce decision

Suggested timeline: up to 5 weeks

RIPE NCC

Regional and Global Policy

IPv4 Address Pool - Now

12% available

Other
Central Registry
RIPE NCC
AfriNIC
ARIN
LACNIC
APNIC

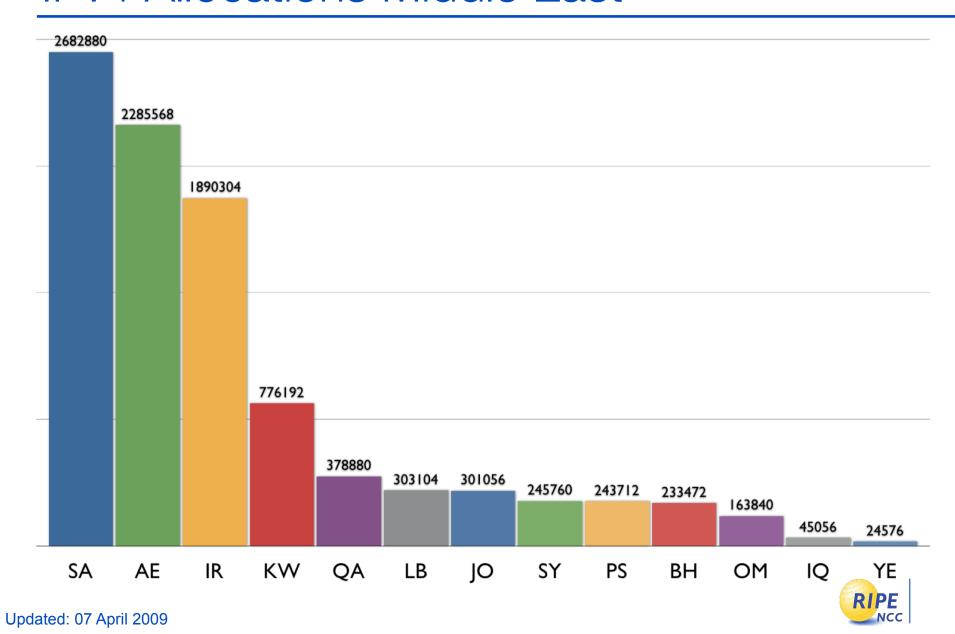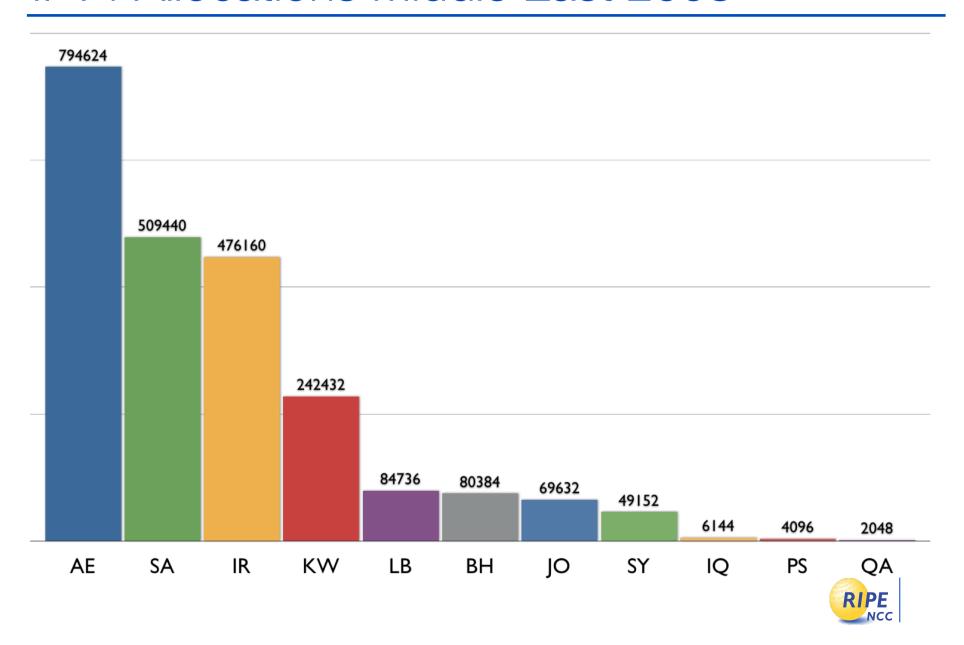RIPE NCC

IPv4 Pool - The Future

IPv4 Allocations Middle East

IPv4 Allocations Middle East 2008

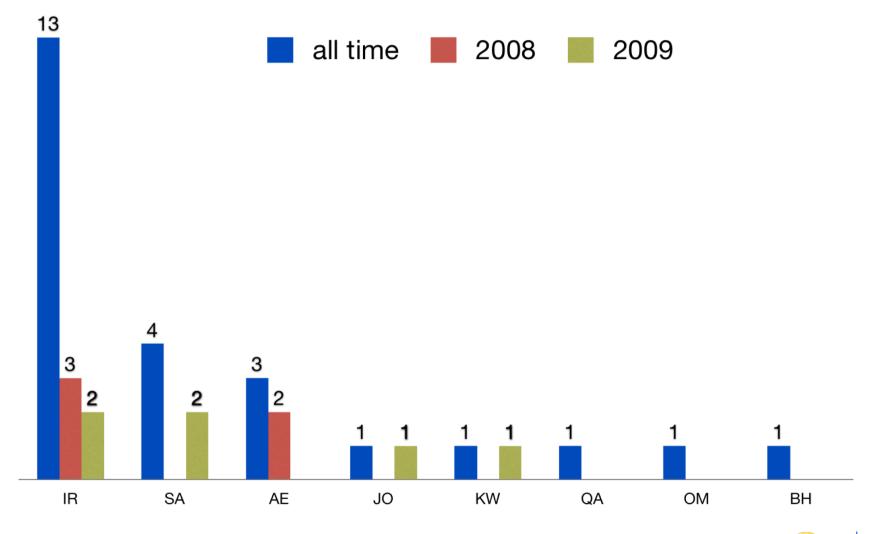# IPv6 Allocations per Country (top ten)

Legend: ■ all time ■ 2008 ■ 2009

Country	all time	2008	2009
DE	214	68	23
UK	152	38	19
NL	109	35	16
FR	71	18	6
CH	69	32	2
IT	65	21	5
RU	62	33	9
SE	51	15	8
CZ	50	18	10
AT	43	13	5

RIPE NCC

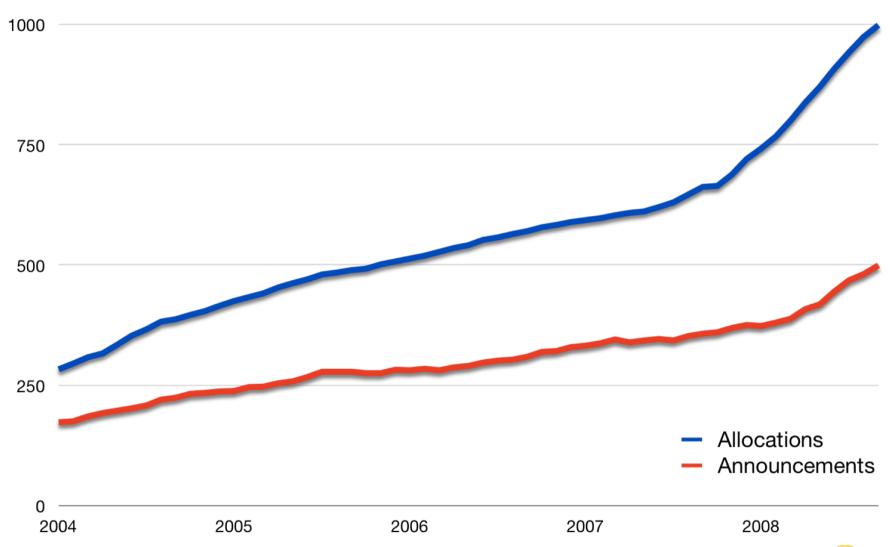# IPv6 Allocations Middle East
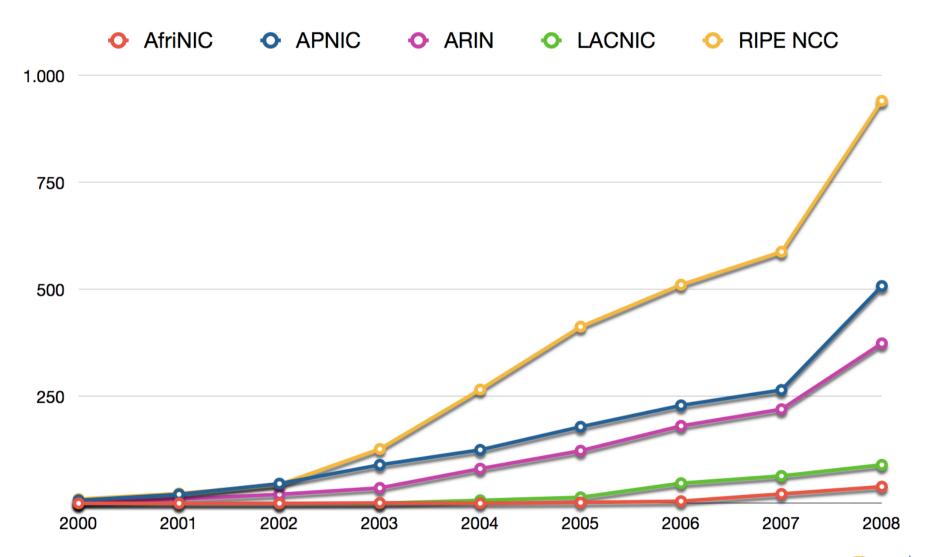
IPv6 Routing

IPv6 Allocations per RIR

RIPE PDP Current Issues

IPv4 depletion

Policy proposals

 Remove any remaining obstacles for IPv6 allocations

 Get ready for IPv4 endgame

 … and sustained IPv4 usage

Remove Obstacles to IPv6

Proposal 2006-02: IPv6 Allocation Policy

- IPv6 Allocation criteria altered
    - No more requirement for assignments to *others*
    - No more requirement for 200 customers
- New End Site definition
    - LIRs internal assignments count as End Site
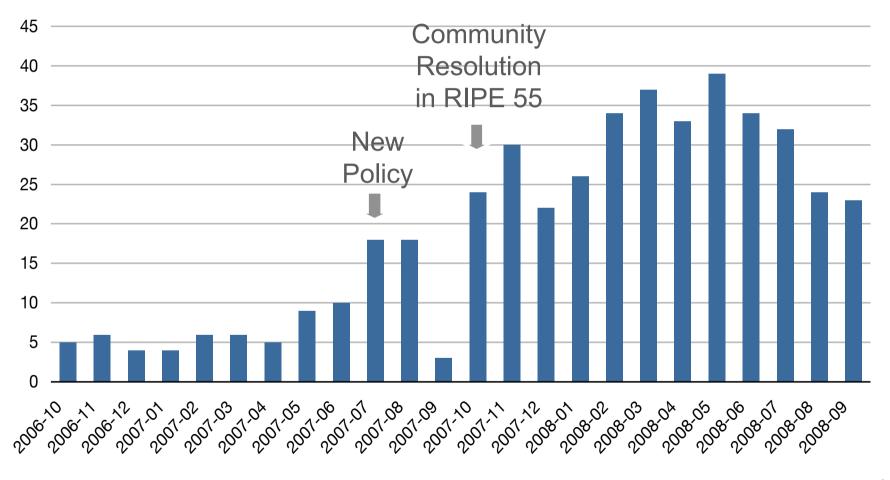- LIRs: Plan to make sub-allocations to others or assignments to End Sites

Proposal 2006-01: IPv6 for End Users

- Provider Independent Address Space
- Currently under discussion

IPv6 Allocations

Depletion of IPv4 Free Pool

Global Perspective

Global Policy for the Allocation of the Remaining IPv4 Address
Space (2008-03)

Accepted by all regions

Ratified by ICANN Board

Documented

http://www.ripe.net/ripe/docs/ripe-436.html

Distribute the last 5 /8s evenly among RIRs (N=1)

RIPE Region Specific

Direct Internet Resource Assignments to End Users from the RIPE NCC (2007-01)

- Contractual relationship for all independent number resources to an End User
- Have a contract with
  - a sponsoring LIR **or**
  - the RIPE NCC
- Applies to previously made assignments
- Legacy (pre-RIR) space is excluded
- Accepted in October 2008
- First phase implemented

Resource Transfers

Enabling Methods for Reallocation of IPv4 Resources (2007-08)

- IPv4 Exhaustion

- Applies only to IPv4 PA allocations

- Only within the RIPE region

- Accepted in December 2008

- Implemented in January 2009

- Similar concept under discussion also in ARIN and APNIC

RIPE
NCC

Prudence Proposals

Use of last /8 (2008-06)

   New LIRs and Existing LIRs

      Must qualify for an allocation

      Will receive only one block in min. size regardless of their real needs

   A /16 will be reserved for unforeseen circumstances

Addition of IPv6 deployment requirement suggested

Prudence Proposals

Ensuring efficient use of historical IPv4 resources (2008-07)

- Currently legacy allocations are exempt from 80% usage policy
- Proposal requires documentation of usage of legacy space

Comments from RIPE 57

- How long will this save us?
- May cause deletion of registration
- Accuracy of registration is important
- Do both (save and make sure it is accurate)
- New wording suggested

Prudence Proposals

A New Global Policy for the allocation of IPv4 blocks to RIRs

- RIRs receiving returned space returns that to IANA
- IANA allocates to RIRs from that pool of returns
- Minimum size /24
- Under discussion in all communities

Prudence – Other Regions

Dedicated IPv4 blocks to facilitate IPv6 Deployment

ARIN accepted
- Reserve a /10
- Assignments for key dual stack DNS servers, and NAT-PT or NAT464 translators

APNIC accepted
- Use of final /8
- Ensuring efficient use of historical IPv4 resources

LACNIC accepted
- Reserve a /12
- /22s for "new" ISPs and critical infrastructure

Fairness in the Endgame

Looking at what may happen in the future

Possibility of big allocations to few members sweeping the resources too quickly even before the last /8

Asking questions to the floor what can be done to avoid this - Should we avoid this?

Some ideas expressed

Volunteers recruited to work on a potential proposal

Just published as "Run Out Fairly" aka 2009-03

Conclusion

Increase IPv6 deployment

    Easier access to resources

    Raise awareness

Get ready for IPv4 endgame

    Minimise depletion impact

    Increased contact with space holders

    Increased efficiency in usage

    Enabling usage of allocated but unused space

    Pre-RIR blocks to be included in the system

    Focus on fairness and responsible stewardship

References

RIPE PDP

    http://www.ripe.net/ripe/docs/pdp.html

Document Store

    http://www.ripe.net/ripe/docs/

Current Proposals

    http://www.ripe.net/ripe/policies/proposals/

Archived Proposals

    http://www.ripe.net/ripe/policies/proposals/archive/

Address Policy WG Mailing list

    http://www.ripe.net/ripe/maillists/archives/address-policy-wg/

Policy Announce Mailing List

    http://www.ripe.net/ripe/maillists/archives/policy-announce/

IPv4 Address Report

    http://www.potaroo.net/tools/ipv4/

Thank you