APNIC
allocation and policy update

JPNIC OPM

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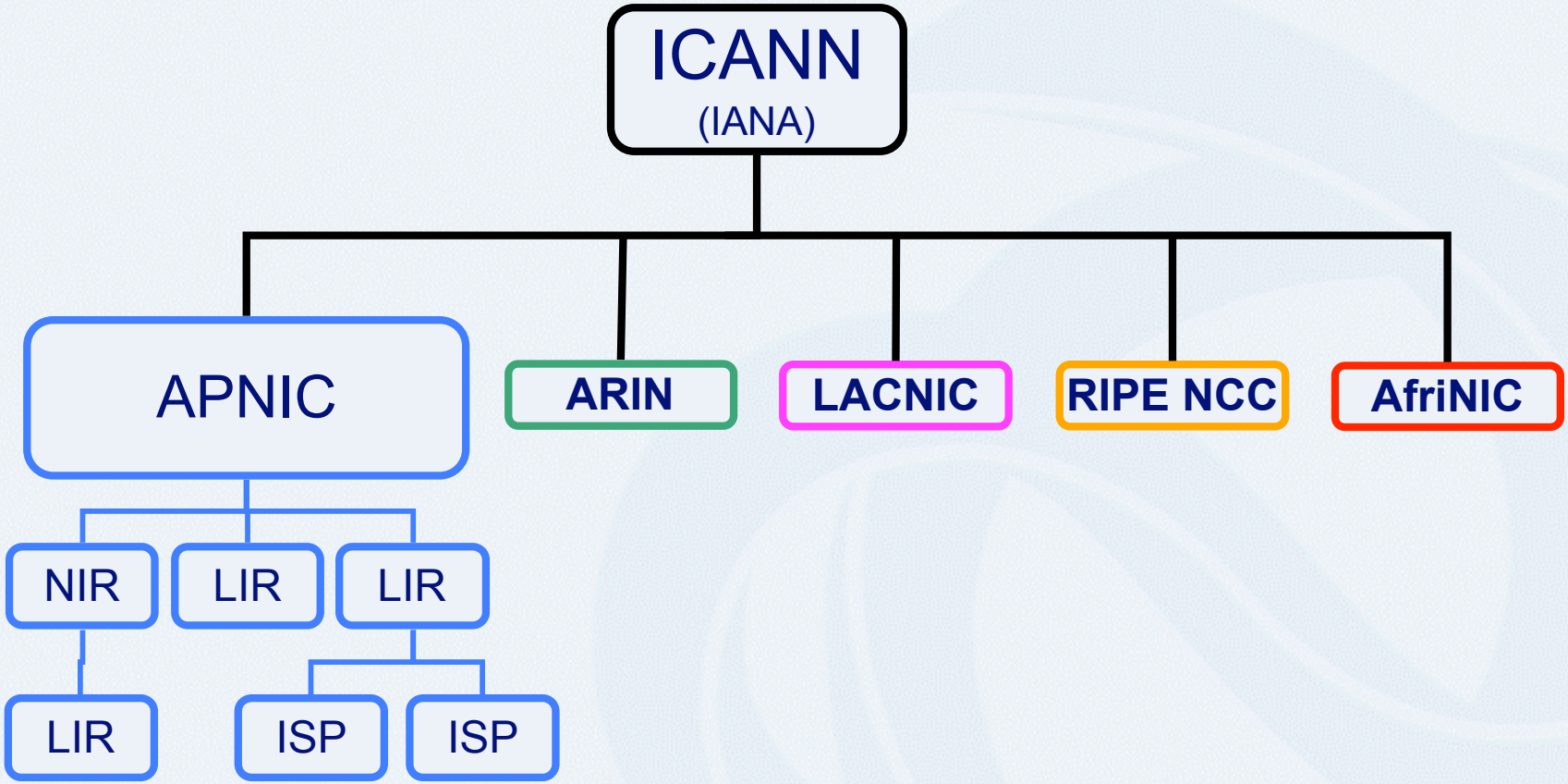
Overview

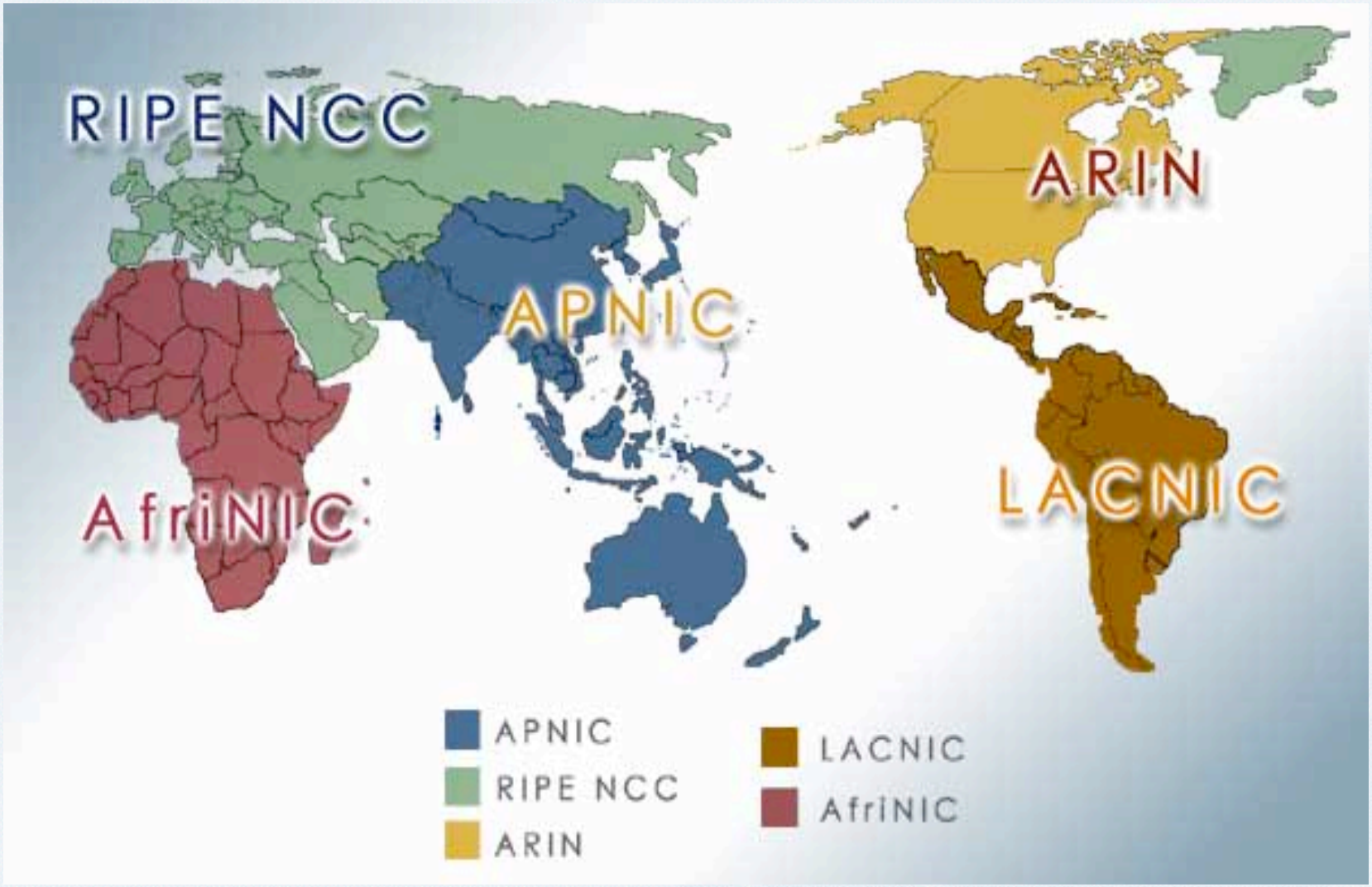
- Internet registry structure
- Number resource allocation statistics
- APNIC recent policy implementations
- Proposals discussed at APNIC 23
- Proposals to be discussed at APNIC 24
- New policies in other RIR regions

Internet registry structure

Internet registry structure

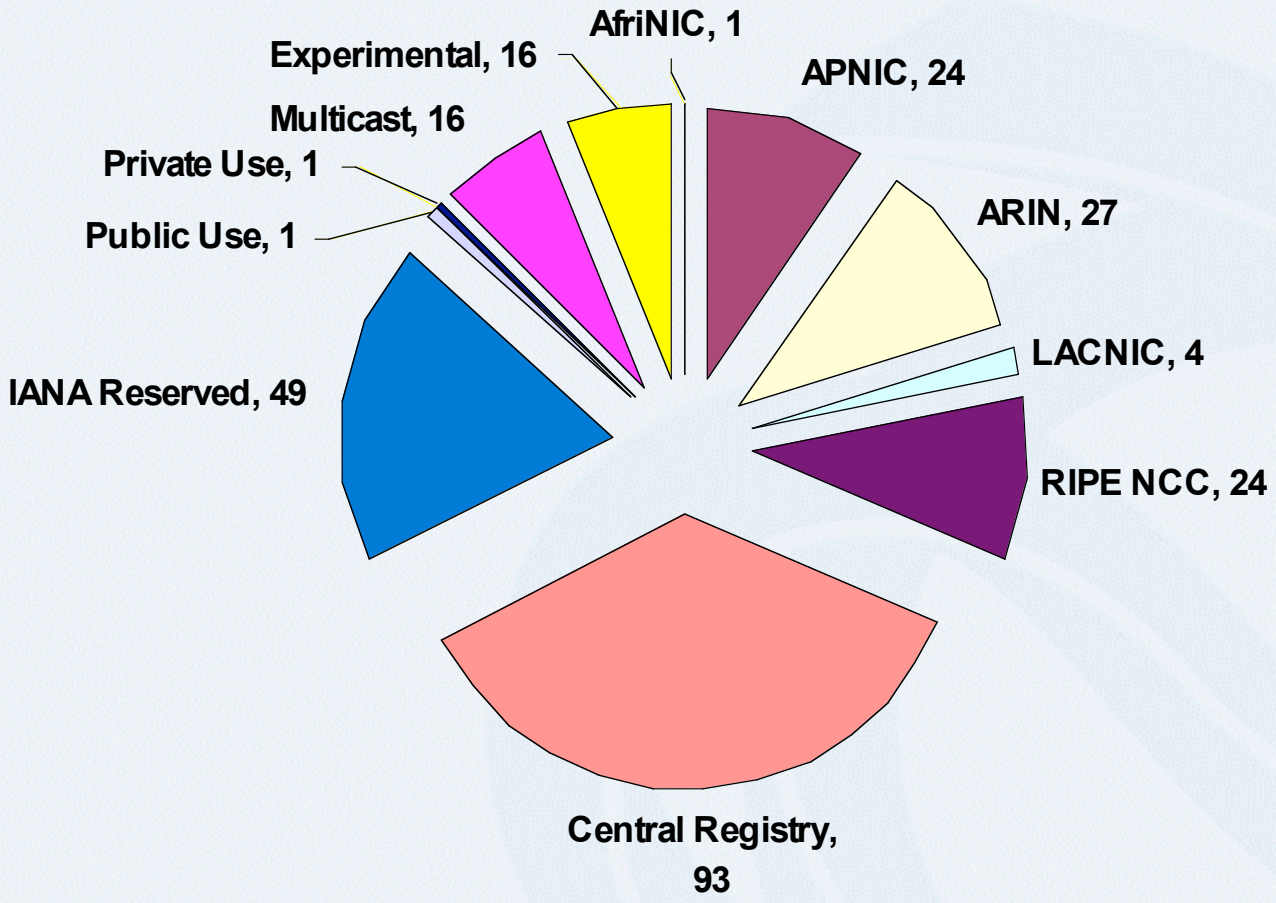


RIR service areas



Number resource allocation statistics

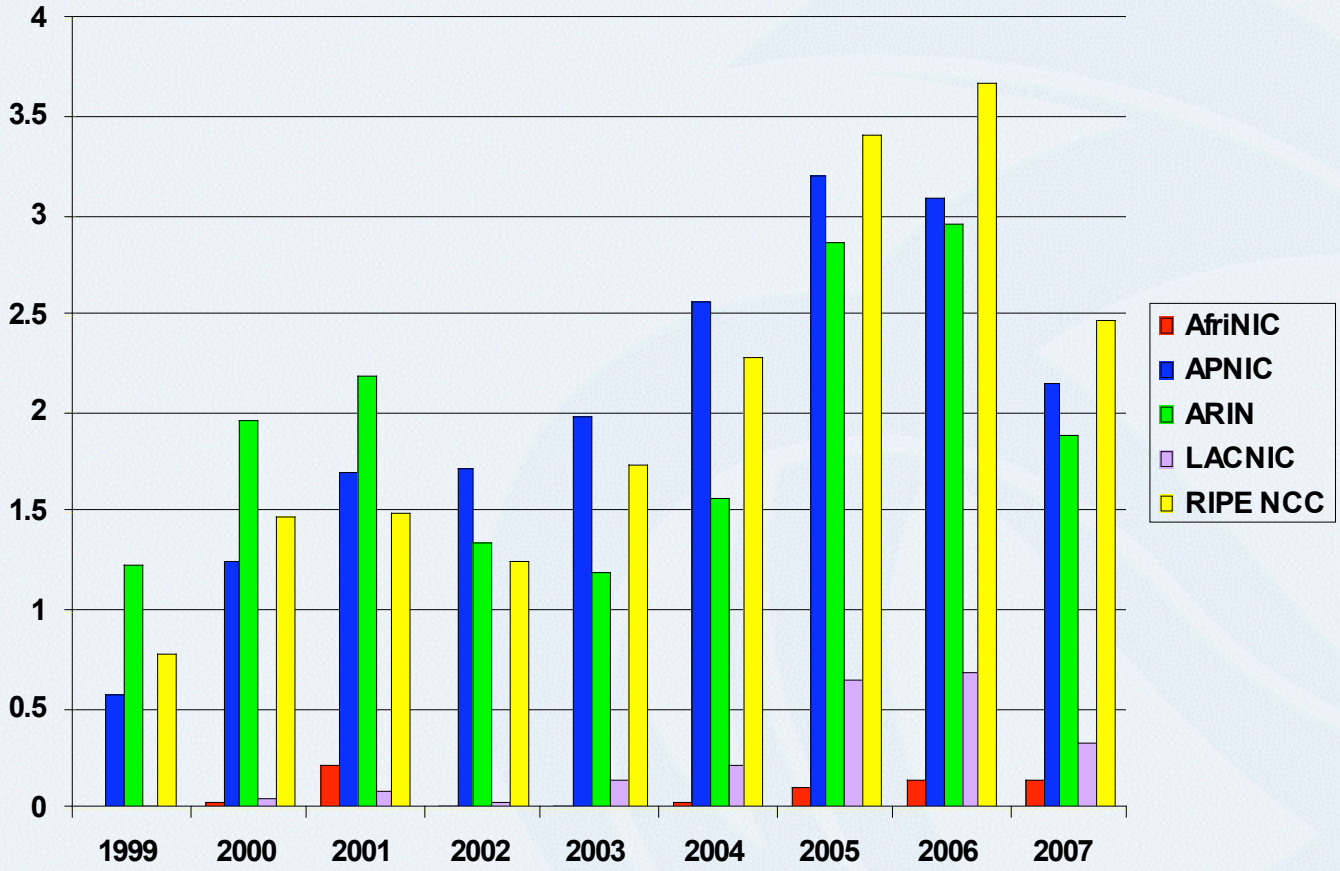
Distribution of IPv4 /8 blocks



Total /8 blocks: 256

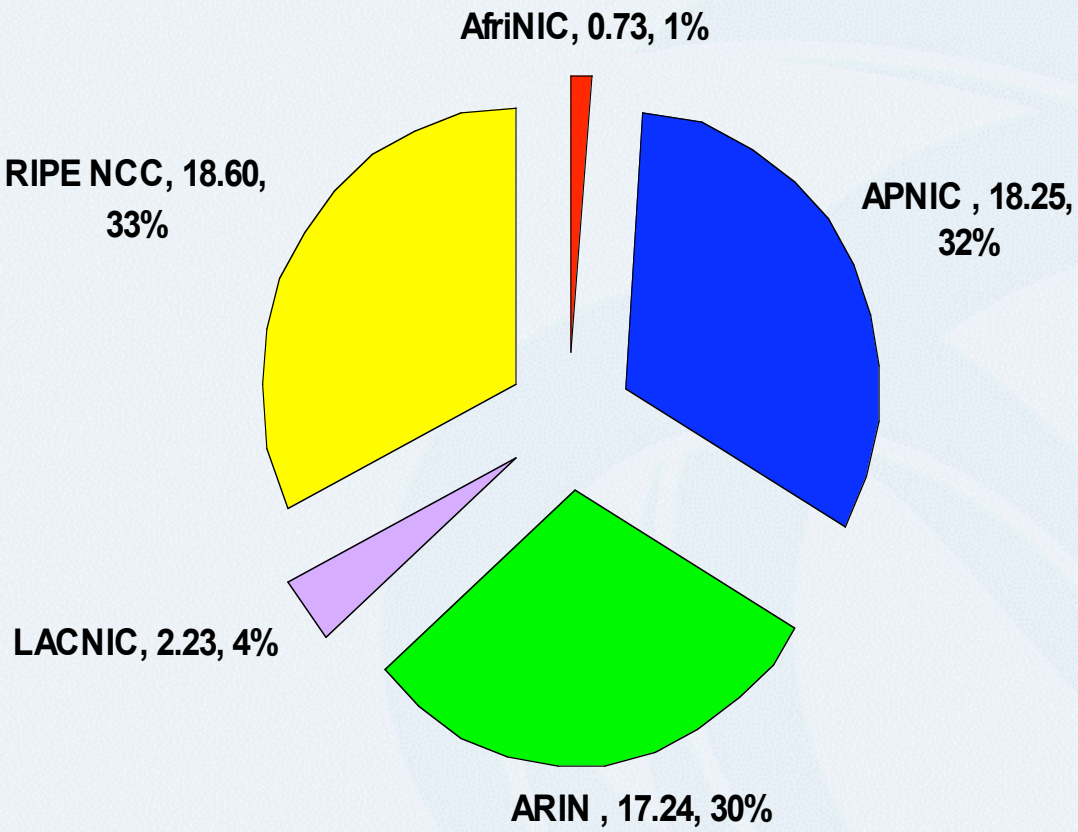
IPv4 allocations RIRs to LIRs/ISPs

Yearly comparison (/8s) - data up to Jun 2007



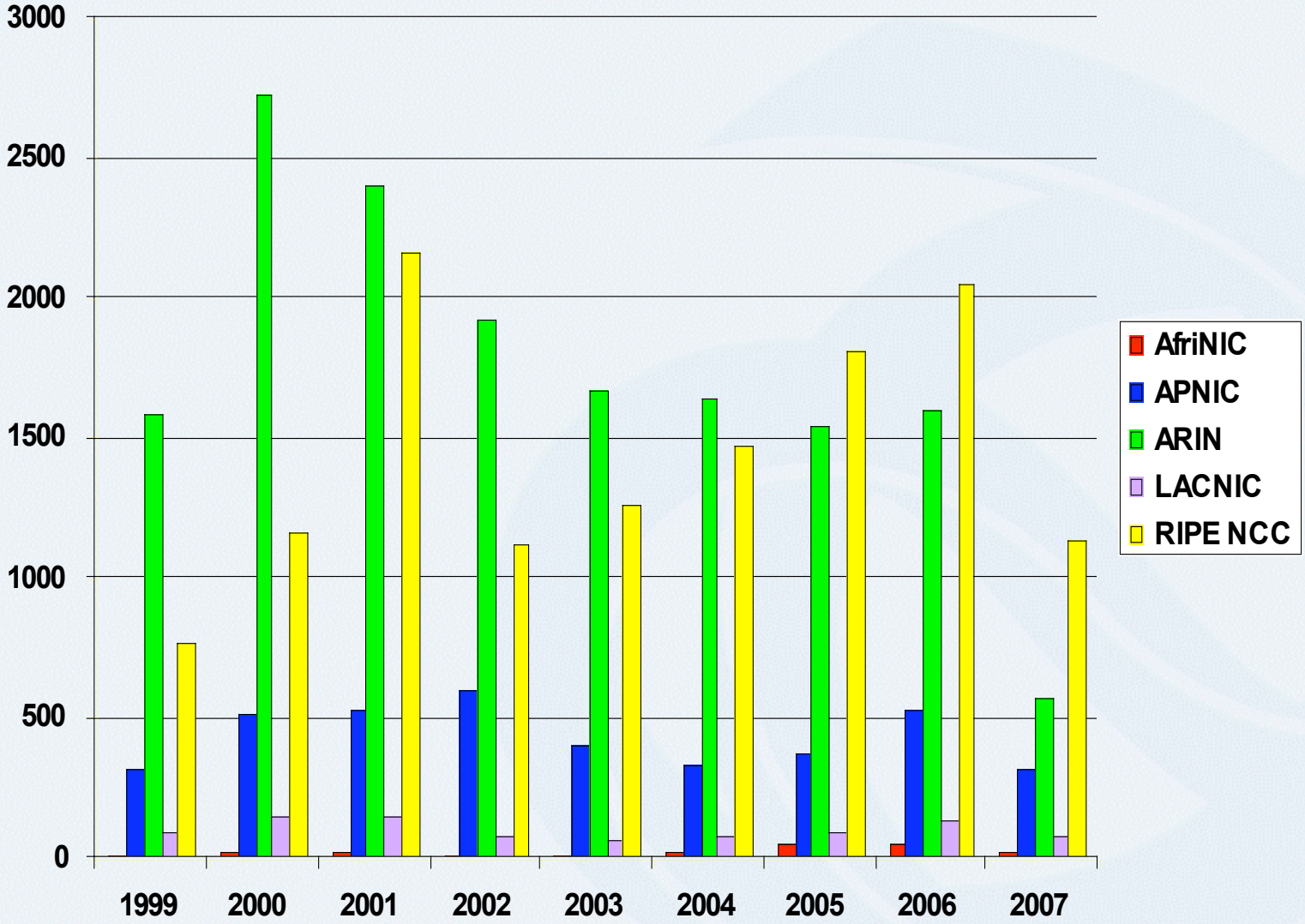
IPv4 allocations RIRs to LIRs/ISPs

Cumulative total (Jan 1999 – Jun 2007)



ASN assignments: RIRs to LIRs/ISPs

Yearly comparison - data up to Jun 2007



ASN assignments: RIRs to LIRs/ISPs

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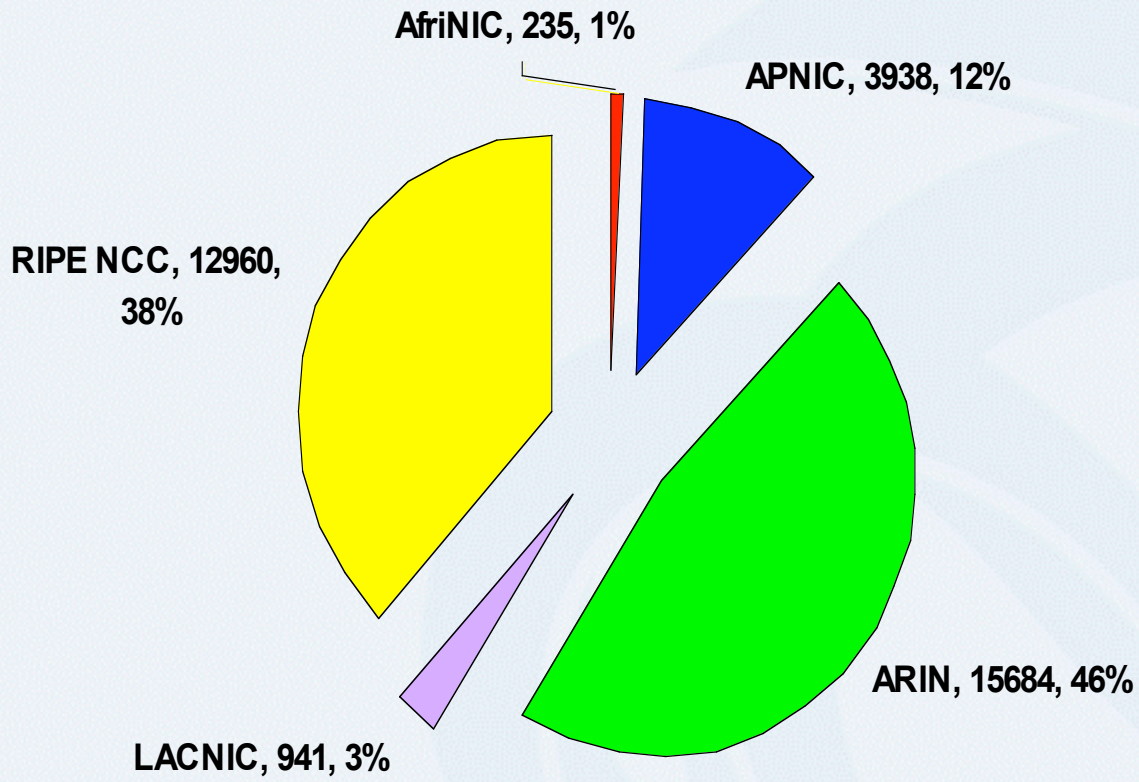
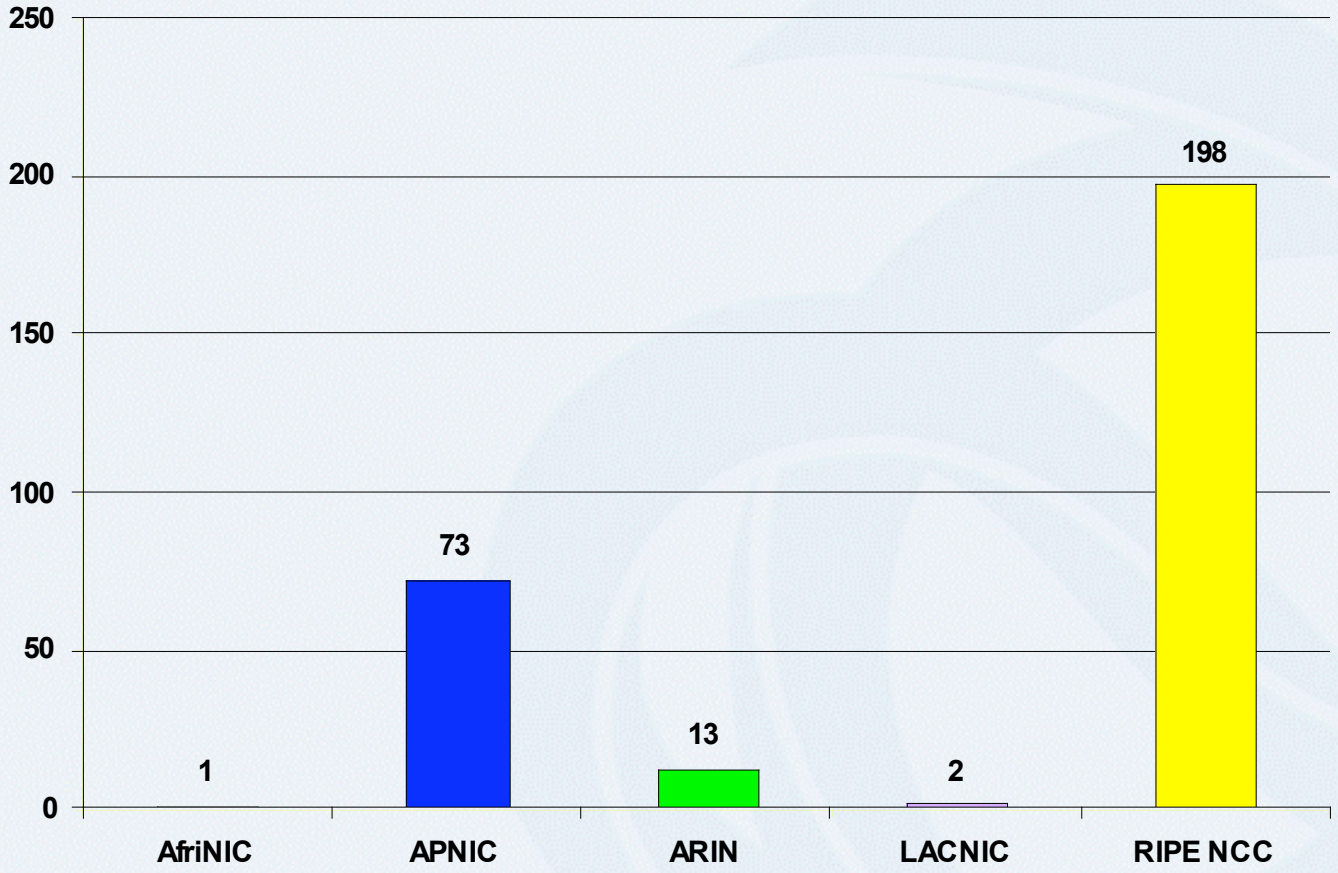


IANA IPv6 allocations to RIRs

issued as /23s prior to Oct 2006



IANA IPv6 allocations to RIRs

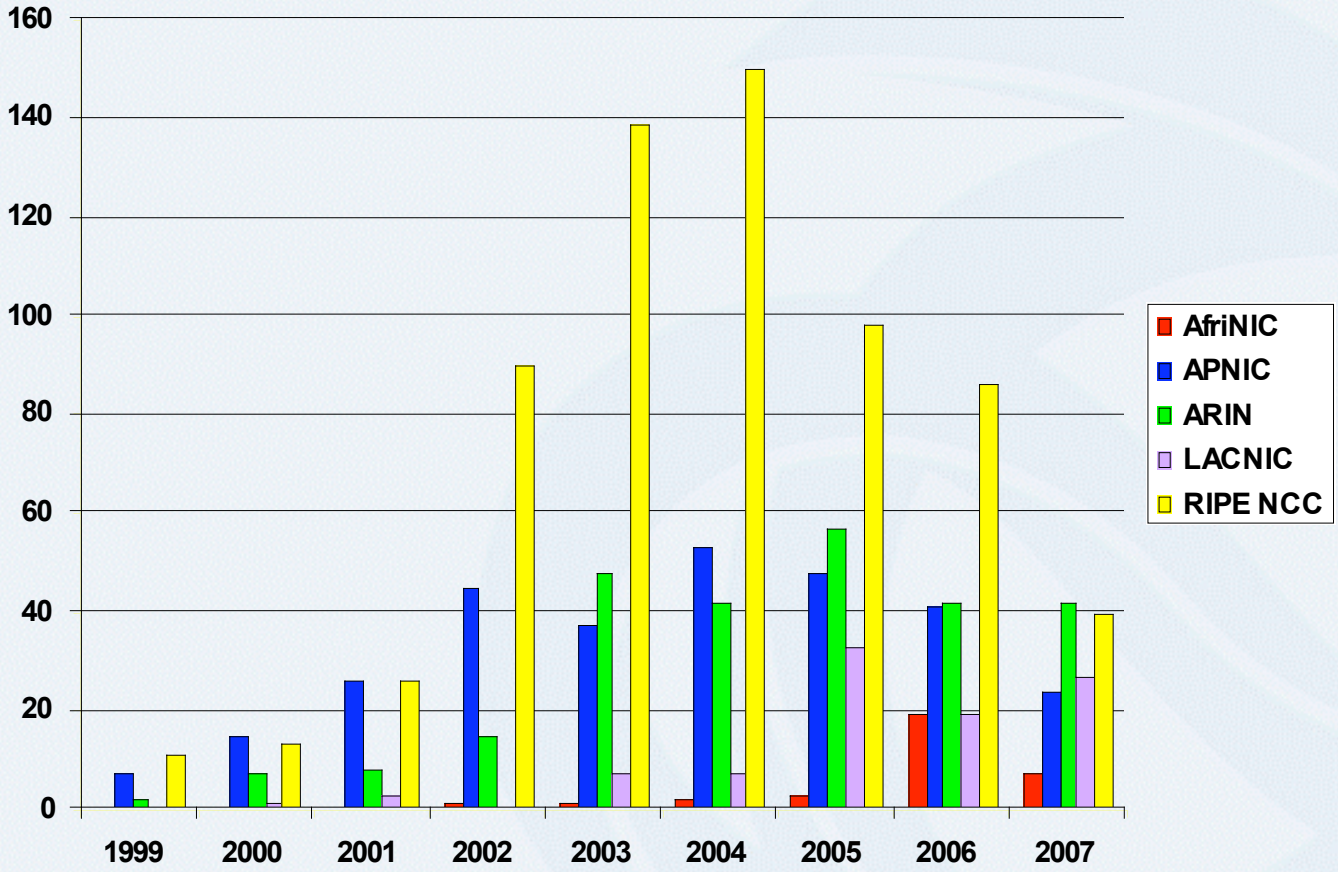
issued in Oct 2006

RIR	IPv6 Address
AfriNIC	2C00:0000::/12
APNIC	2400:0000::/12
ARIN	2600:0000::/12
LACNIC	2800:0000::/12
RIPE NCC	2A00:0000::/12

Some /23s from the previous slide are incorporated in these /12s

IPv6 Allocations: RIRs to LIRs/ISPs

Yearly comparison – data up to Jun 2007



IPv6 allocations RIRs to LIRs/ISPs

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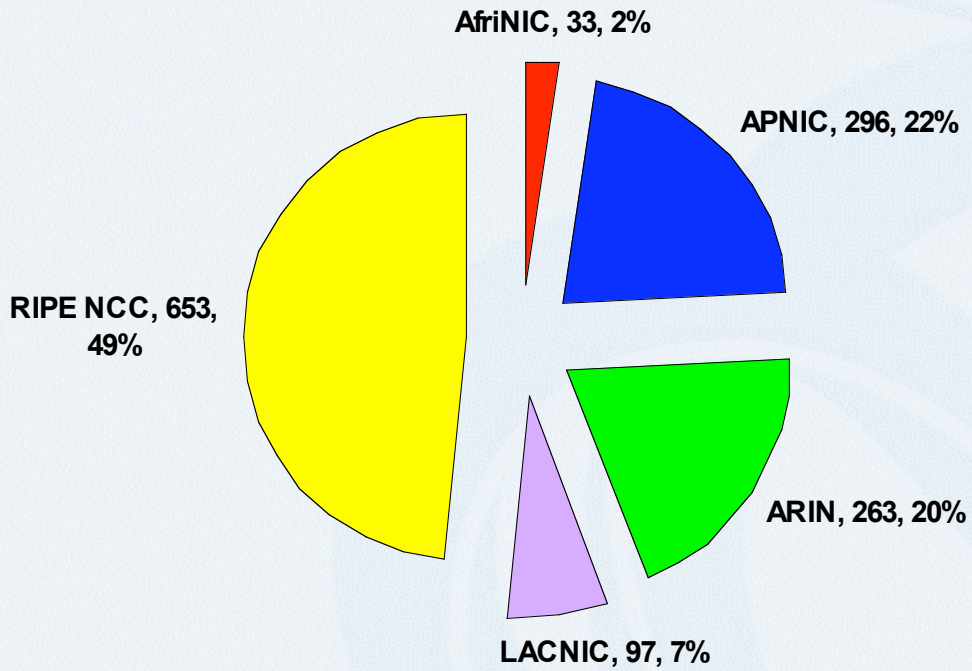

Links to RIR statistics

- RIR stats:
  www.nro.net/statistics

- Raw data/historical RIR allocations:
  www.aso.icann.org/stats
  www.iana.org/assignments/ipv4-address-space
  www.iana.org/assignments/as-numbers
  www.iana.org/assignments/ipv6-unicast-address-assignments

APNIC recent policy implementations

prop-041: IPv6 assignment size to critical infrastructure

- Changed from “minimum /32” to “maximum /32”.
- Implemented 18 Dec 2006.

- Note: Critical infrastructures include root DNS, gTLD, ccTLDs, IANA, RIRs and NIRs.

prop-032: Four-byte AS number policy proposal

- Adopted by all RIRs and IANA.
- APNIC received the first block of four-byte ASN from IANA on 29 Nov 2006. The range is:

  2.0 - 2.1023

- APNIC started assigning four-byte ASNs on 1 Jan 2007.

prop-038: Amending APNIC's lame DNS reverse delegation policy

- Implemented 1 Jan 2007.
- Modifies APNIC's existing method for identifying and removing lame DNS reverse delegations by adopting a definition of lameness that is consistent with generally-accepted best practice and other RIRs (where relevant).

prop-033: End site assignment policy for IPv6
prop-031: APNIC IPv6 utilisation requirement

- Implemented 9 Mar 2007.
- Now you can assign /64 to /48 to your customer network depends on their requirement.
- Measurement unit changed from /48 to /56.
- HD ratio changed from 0.8 to 0.94

prop-035: IPv6 portable assignment for multihoming

- Implemented 9 Mar 2007.
- An organisation is eligible to receive a portable assignment from APNIC if it:
  - is currently multihomed with provider-based addresses, or demonstrates a plan to multihome within three months and,
  - agrees to renumber out of previously assigned IPv6 address space.

Proposals discussed at APNIC 23

Proposals returned to mailing list

- prop-046: IPv4 countdown policy proposal
- prop-043: Proposal to remove reference to IPv6 policy document as an "interim" policy document
- prop-042: Proposal to change IPv6 initial allocation criteria
- prop-037: Deprecation of email updates for APNIC Registry and whois data

Proposals abandoned

- prop-045 Proposal to modify "end site" definition and allow end sites to receive IPv6 allocations
- prop-044 Proposal to remove requirement to document need for multiple /48s assigned to a single end site

Proposals to be discussed at APNIC 24

Proposals have been submitted

- [prop-048] IPv6 ULA-central
- [prop-047] eGLOP multicast address assignments

- More to come …

New policies in other RIR regions

AfriNIC: newly implemented

- Proposal to change the IPv4 allocation and assignment period to 12 months
- IPv6 Provider Independent (PI) Assignment for End-Sites
- Proposal to change the IPv6 HD ratio from 0.8 to 0.94

ARIN: Adopted recently

- 2007-11: Refinement of ISP Initial Allocation Policy
- 2007-9: Modernization of ISP Immediate Need Policy
- 2007-8: Transfer Policy Clarifications
- 2007-7: Creation of Policy for Subsequent End-User IP Requests/Assignments
- 2007-4: Changes to IPv6 policy - removal of "interim" consideration

LACNIC: Consensus, last call

- LAC-2007-07 Global Policy for the Allocation of the Remaining IPv4 Address Space
- LAC-2007-08 IANA Policy for Allocation of ASN-2-bytes Blocks to Regional Internet Registries
- LAC-2007-10 Second IPv6 Allocations
  - Allow ISPs who already received an IPv6 allocation to request a second one even if utilization had not reached HD ratio level – need to return the first block.

RIPE NCC: Accepted

- First Raise in IPv4 Assignment Window Size
  - Assignment Window (AW) available to new LIRs should automatically be raised from 0 to /21 six months after they receive their first allocation.
- IPv4 Maximum Allocation Period
  - Changed to 12 months

Hot topic – IPv4 exhaustion issue

- IPv4 countdown policy proposal
  - Set A-date and T-date to notify Internet community in advance
- IPv4 soft landing policy proposal
  - Step by step move to IPv6
- Global Policy for the Allocation of the Remaining IPv4 Address Space
  - Reserve 5 * /8 blocks for each RIR

RIR Policy references

- AfriNIC:

  http://www.afrinic.net/policy.htm

- ARIN:

  http://www.arin.net/policy/proposals/proposal_archive.html

- APNIC:

  http://www.apnic.net/policy/index.html

- LACNIC:

  http://lacnic.net/en/politicas/index.html

- RIPE NCC:

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

Thanks!