Latin American and Caribbean Internet Addresses Registry
Registro de Direcciones de Internet para América Latina y Caribe
Registro de Endereços da Internet para América Latina e Caribe

IPv4 Depletion
Transition to IPv6

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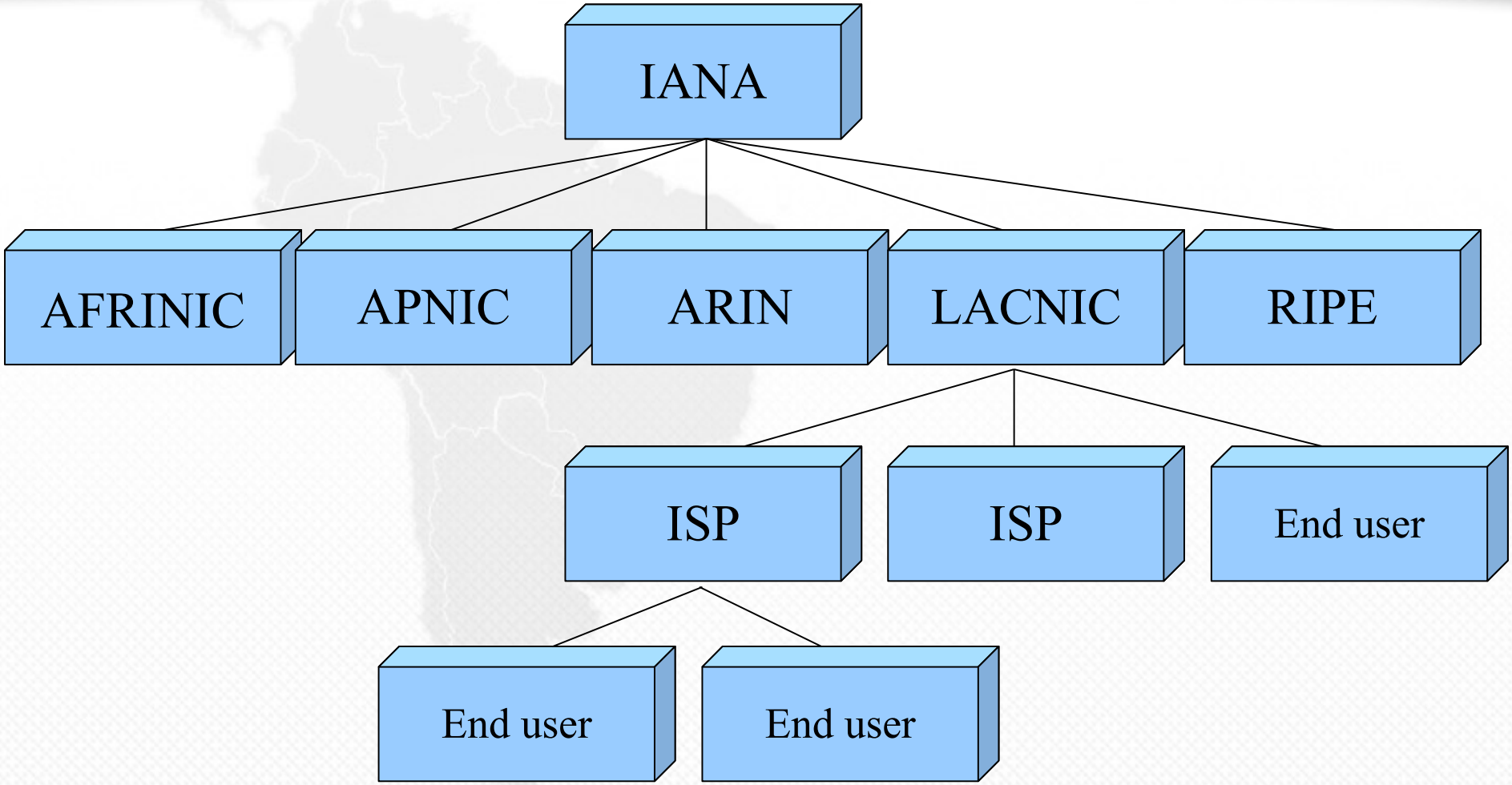
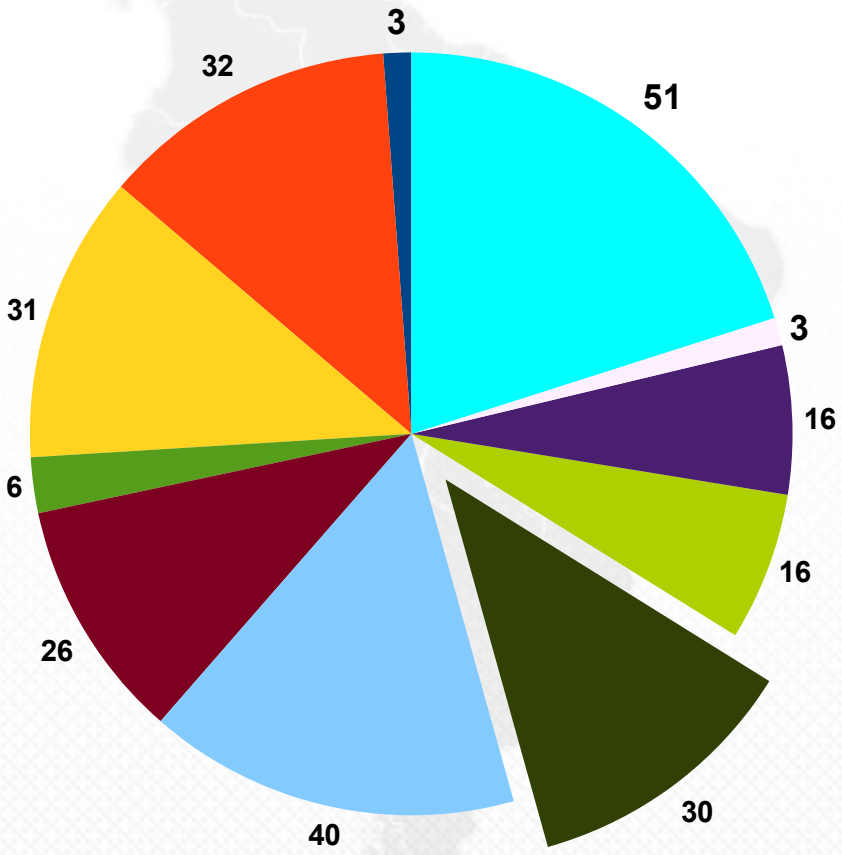
Internet Resource Distribution



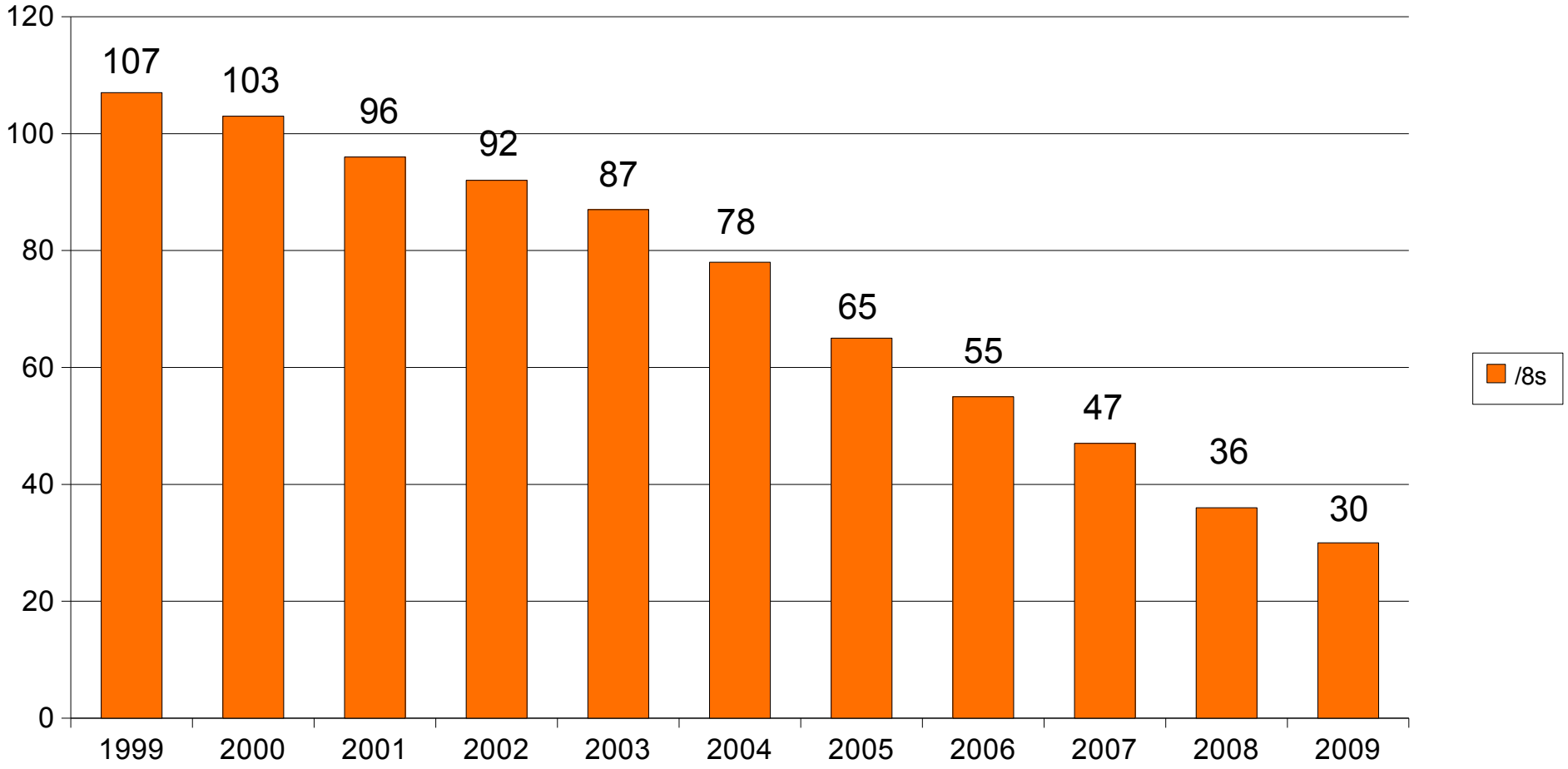
Current Global IPv4 distribution



- AfriNIC
- APNIC
- ARIN
- LACNIC
- RIPE NCC
- Central Registry
- Stock IANA
- Multicast
- Experimental
- Reserved
- Varios RIRs

Unity: /8
/8 = 1/256 of total IPv4 address space

IPv4 Central pool



Main points on Resources Distribution

- RFC 2050
  - Conservation
  - Aggregation
  - Registration
- RIRs have been assigning IP resources to any organization requesting and justifying it
- RIRs system has proved to be a very efficient and well recognized in various forums, including the WSIS.

IPv4 depletion

- Policy proposal recently approved by LACNIC community
  - **Last 5 final /8s will be distributed one to each RIRs (more certain about future)**
- LACNIC community approved on 2008 a policy to reserve some address space to new entrants. Similar discussions on other RIRs.
- New global policy proposal to create a secondary pool with recovered addresses. Currently in discussion.
  - **More clear view of future**
- Transfer policies in various RIRs.

What could happen ?

- Internet will not stop
- There will be IPv4 address for many years (different ways to access it)
- Difficulties to allocated large (or not so large) contiguous block
- Increase on NAT usage
- Secondary/gray markets
- In some moment in the future there might be “IPv6 only” users
- IPv6 will not be massively adopted until IPv4 address are finished or adequate incentives are implemented (economics, politics, regulatory)

Scenarios

- Different possible scenarios based on which measures and policies are applied
- It is not possible to guarantee that access to IPv4 address on secondary markets will be balanced
- There are many things to do. But, the most important is to work on iPv6 deployment.
- The best way to avoid bigger problems with IPv4 depletion is early IPv6 adoption.
- Every actor can contribute in its own role
- For our region (LAC), early IPv6 adoption might be more important than for other regions.

Adopt IPv6, what does it mean?

For an ISP

- IPv6 support in its backbone (core services)
- IPv6 support in the datacenter
- Transition mechanisms available
- IPv6 support in every new equipment purchase
- No need to substitute old computer immediately

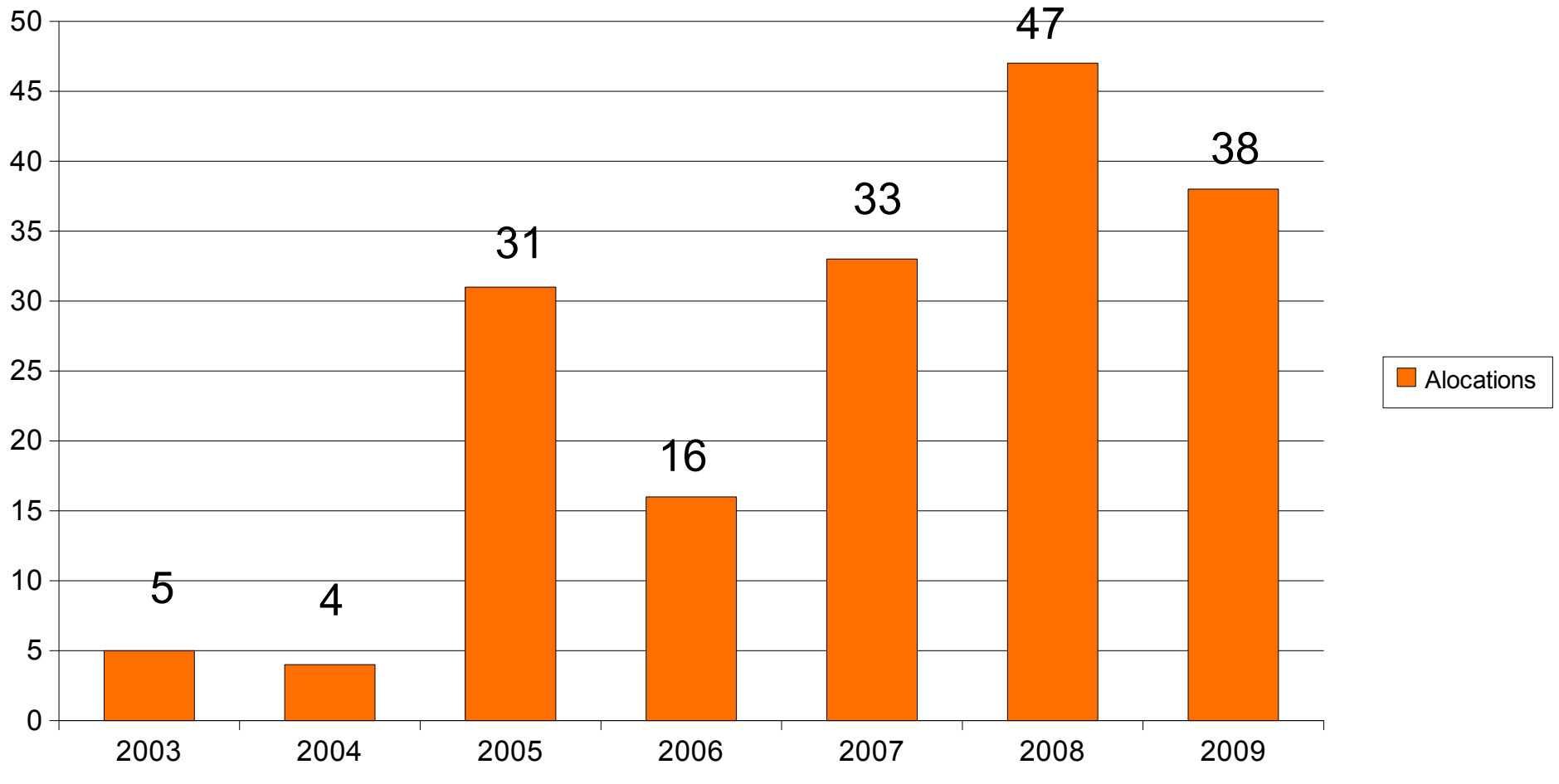
Adopt IPv6, what does it mean?

To an end user

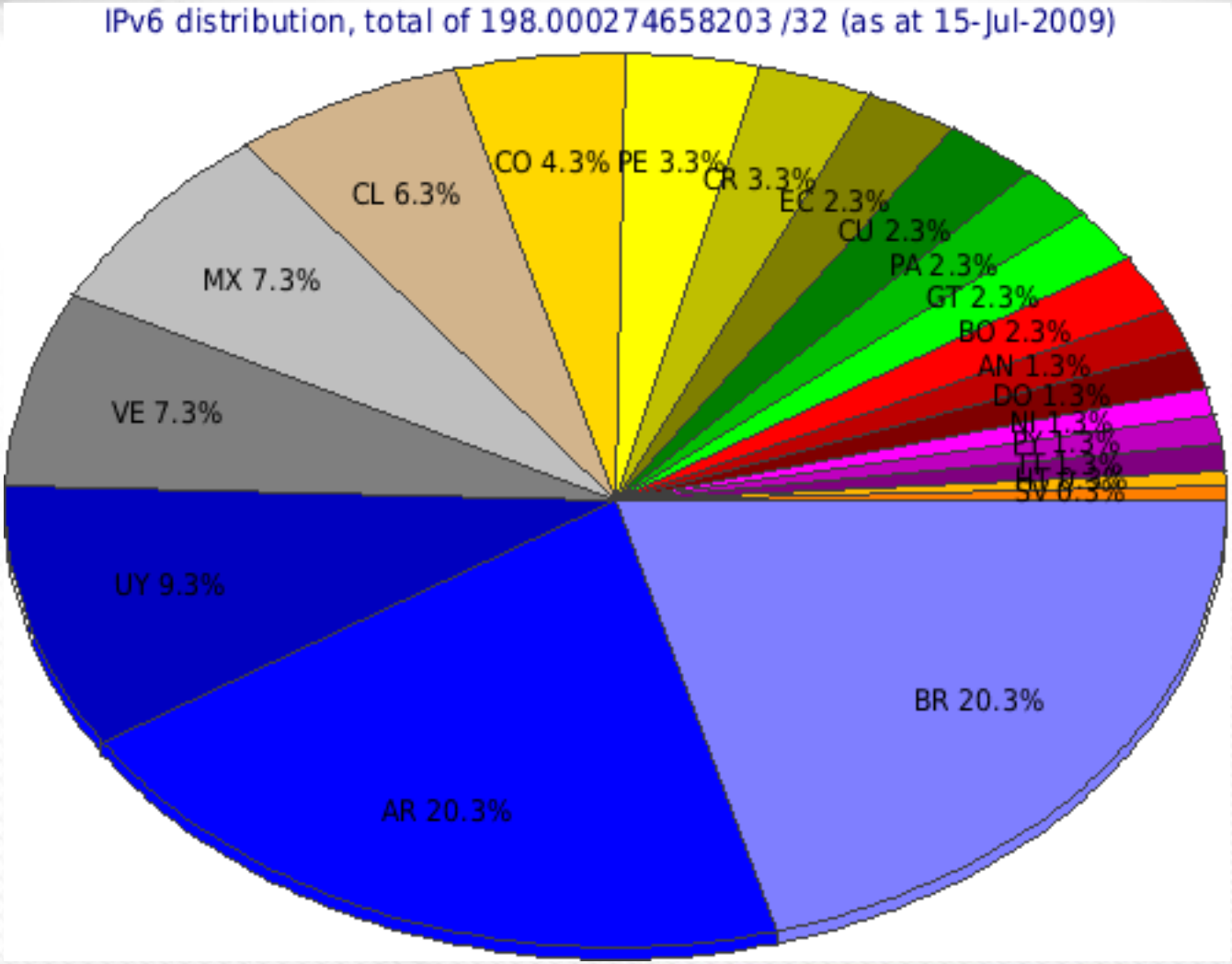
- Computers (operational systems)
- Network services
- Applications

- Adopt IPv6 does not mean substitute all the equipment It is a transition process, not a migration

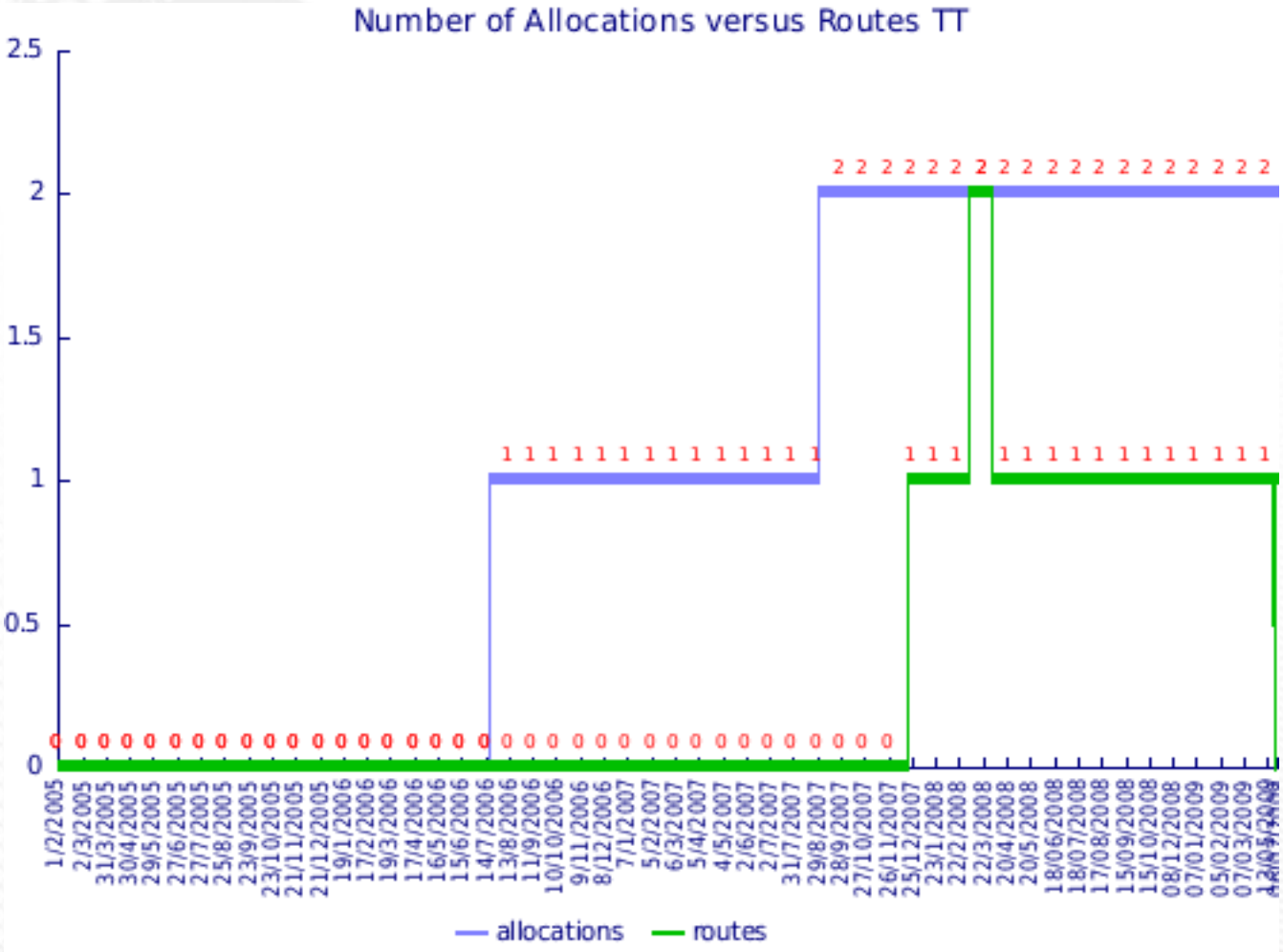
IPv6 allocations in LACNIC region



IPv6 allocations per country in LACNIC



Allocations in Trinidad and Tobago



Metrics

- Available at

  http://portalipv6.lacnic.net/en/ipv6/statistics/ipv6-0

- To measure IPv6 adoption
  - Number of allocation
  - Number of routes being announced

- Useful for LACNIC as a way to measure its campaigns impact.

Suggestions

- Share experiences and actions in different countries
  - Promoting
  - Governmental purchasing
  - Industry coordination
  - Research
- International forums
- Work towards eLAC 2010 Action Points
- Public private collaboration
  - Create national multistakeholder Task Forces
- LACNIC campaign region IPv6 ready by 1/1/11

Reflections

- IPv6 will not completely substitute IPv4 neither in short nor medium term. Both will coexist for many years.
- Neither policies and nor fees to receive IPv6 are obstacles for Ipv6 adoption.
- IPv6 is ready to be used. As any new technology, it is something being improved in many aspects. **But it is completely ready to be used**.
- It will be needed lot of efforts on promotion and training
- It is a great opportunity for innovation

National IPv6 Task Forces

- Currently, 8 Task Forces in the region:
  - Cuba - http://www.cu.ipv6tf.org/
  - Brazil - http://www.br.ipv6tf.org/
  - Mexico - http://www.mx.ipv6tf.org/
  - Peru - http://www.pe.ipv6tf.org/
  - Argentina - http://www.ar.ipv6tf.org/
  - Colombia - http://www.co.ipv6tf.org/
  - Panama - http://www.pa.ipv6tf.org/
  - Uruguay - http://www.uy6tf.org.uy/
- In formalisation process …
  - Dominican Republic
  - Ecuador
  - Venezuela

Useful links

- LACNIC IPv6Portal
  - http://portalipv6.lacnic.net/en
- The IPv6 portal
  - http://www.ipv6tf.org/
- Latin American and Caribbean IPv6 Task Force
  - http://www.lac.ipv6tf.org/

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Thank you