



LACNIC IPv6 Policies

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Agenda

- ◆ **Internet Resources Distribution**
- ◆ **LACNIC IPv6 Policies**
- ◆ **How to apply for IPv6 Addresses?**



Internet Resources Distribution

- ◆ **Internet Resources: finite set and globally available.**
 - ◆ **Its distribution should follow certain criteria such as : *justified need*.**
 - ◆ **According to RFC 2050, it should also guarantee:**
 - ◆ *Uniqueness, Conservation, Routability and Registration*



Internet Resources Distribution

- ◆ Conservation:
 - ◆ ***Fair distribution of globally unique Internet address space according to the operational needs...
Prevention of stockpiling in order to maximize the lifetime of the Internet address space.***



Internet Resources Distribution

- ◆ **Routability:**
 - ◆ ***Distribution of globally unique Internet in an hierarchical manner, permitting the routing scalability of the address ...***

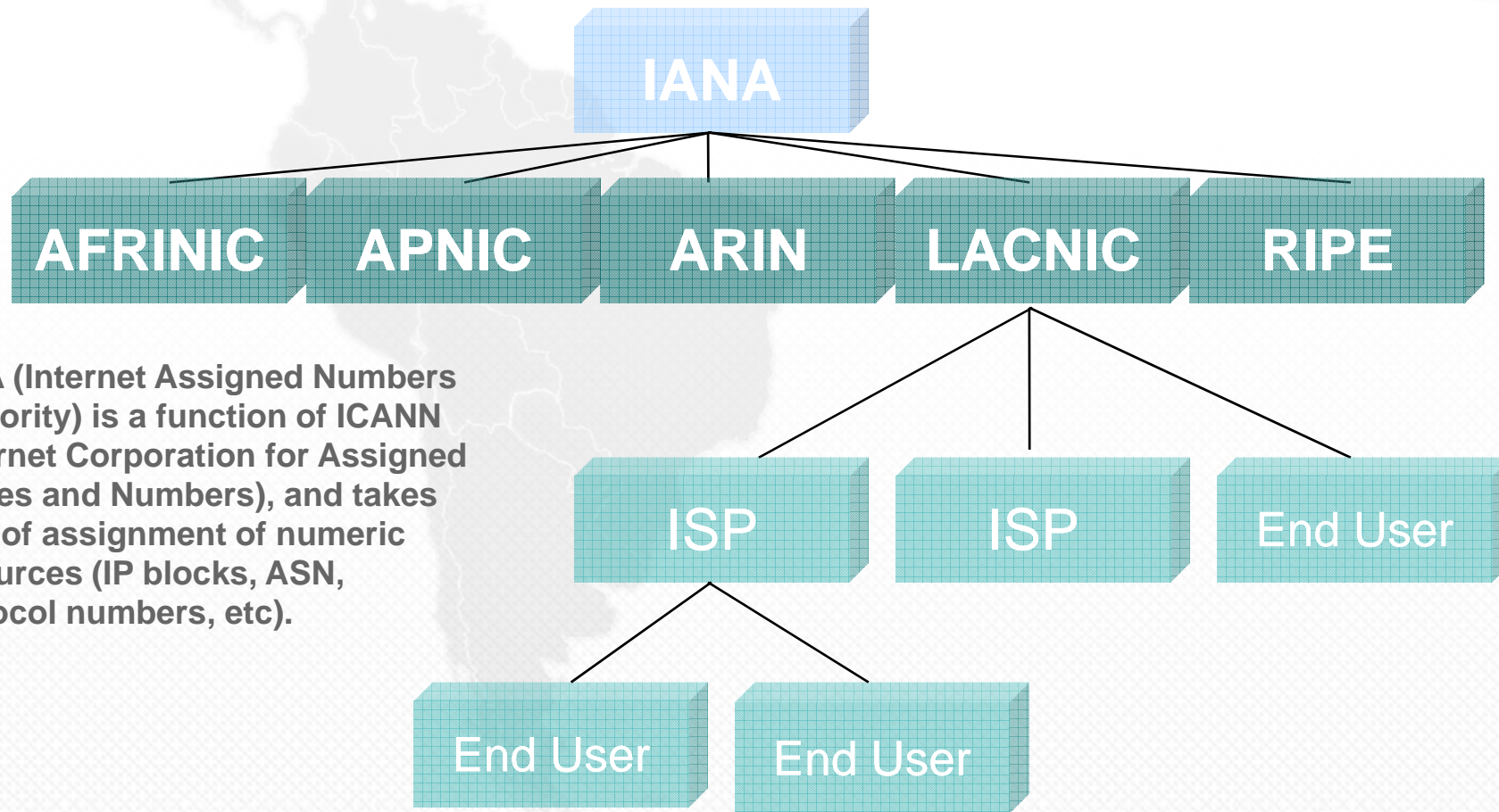


Internet Resources Distribution

- ◆ Registration:
 - ◆ ***Provisioning of a public registry documenting address space allocation and assignment. This is necessary to ensure uniqueness...***



Internet Resources Distribution



IANA (Internet Assigned Numbers Authority) is a function of ICANN (Internet Corporation for Assigned Names and Numbers), and takes care of assignment of numeric resources (IP blocks, ASN, protocol numbers, etc).



Internet Resources Distribution

- ◆ They all use a set of written criteria or *policies* for the distribution of Internet Resources.
 - ◆ **Policy creation follows bottom-up process: *addressing community needs and technology development***



Internet Resources Distribution

- ◆ **LACNIC policies for Internet Resources Distribution:**
 - ◆ **LACNIC Current Policies are kept in LACNIC Policy Manual.**
 - ◆ **LACNIC Policy Development Process (PDP) establishes how the Policy Manual can be modified.**
 - ◆ **Discussion happens at the Open Policy Mailing List:**

Please Join at:

<https://mail.lacnic.net/mailman/listinfo/politicas>

- ◆ **Also you can participate at LACNIC Annual Policy Forum.**
- ◆ **More Information at our Policy Web Page:**

<http://www.lacnic.net/en/politicas/>



LACNIC Policies - IPv6

- ◆ Initial/original policy:
 - ◆ **Globally coordinated**
 - ◆ **Allocations only to ISPs**
 - ◆ Due to routing constraints / large size of total address space.
- ◆ Globally coordinated policy has changed in all RIRs.
- ◆ Specific policies for Critical Infrastructure: IXP, ccTLD, etc.
- ◆ **NEW! Since Sept. 1st 2008 LACNIC assigns IPv6 Provider Independent addresses to End Users.**
- ◆ **At the present time and until a new resolution of LACNIC's Board Of Directors, the organizations that qualify for receiving IPv6 blocks will be exonerated of payment.**



LACNIC Policies - IPv6

- ◆ **Allocations to ISPs:**
 - ◆ **Minimal allocation size: /32 (a lot of IPs)**
 - ◆ **Justification:**
 - ◆ Be a LIR or ISP;
 - ◆ Plan for services and connectivity to be offered.
 - ◆ Announce a single block to the routing system in no longer than 12 months
 - ◆ Offer service via IPv6 to clients or related entities in no longer than 24 months.



LACNIC Policies - IPv6

- ◆ **Assignment to End Users:**
 - ◆ **Min a /48, max a /32.**
 - ◆ **Justification:**
 - ◆ **Automatic if requestor has IPv4 assignments.**
 - ◆ **In other cases:**
 - ◆ Not been an LIR
 - ◆ Announce a single block in the inter-domain routing table
 - ◆ Submit information showing address use plan for 3, 6 and 12 months
 - ◆ Submit network topology, routing and addressing plan.



LACNIC Policies - IPv6

- ◆ **Micro assignment for critical structure:**
 - ◆ **Similar to IPv4. Organizations with key roles in the internet: ccTLDs, RIRs, IXPs ...**
 - ◆ **Assignment Size: min /48 max /32.**
 - ◆ **Justification:**
 - ◆ **Demonstrate its role as one of mentioned organization.**



LACNIC Policies - IPv6

- ◆ **Returning First allocation for a bigger one:**
 - ◆ **Organization with only one IPv6 allocation can return it within 6 months in order to apply for a new and bigger one.**
 - ◆ **This can be done only once**
 - ◆ **Same criteria as initial/first application.**
 - ◆ **New and more elaborated utilization plan.**



LACNIC Policies - IPv6

- ◆ **Additional allocation / assignment**
 - ◆ **Utilization of previous address space should meet a threshold in terms /48 assignments.**
 - ◆ **HD-Ratio of 0.94**
$$\text{HD} = \frac{\text{Log}(\text{number of allocated objects})}{\text{Log}(\text{max number of allocatable objects})}$$
 - ◆ **Example: If you have a /32 you need to assign 33689 /48 networks before been able to request additional space.**



How to apply for Internet Resources?



How to apply?

- ◆ **Three Steps:**
 - 1. Create Point of Contacts (POC).**
 - 2. Fill the text form for your organization.**
 - 3. Send the form to hostmaster@lacnic.net and follow the process.**



How to apply? 1) Create POC.

- ◆ **Point of contacts should be created for each contact: admin, tech, abuse, billing & membership.**
 - ◆ **Web form: <https://lacnic.net/newid>**
 - ◆ **Personal information, language preference, personal password.**
 - ◆ **An UserID will be send by email (Example AIL).**



How to apply? 2) Fill Template.

- ◆ One template for each and every type of resources (IPv4, IPv6, ISP, End User, Critical Inf.).
- ◆ Initial part equal to any of them:
 - ◆ **Organization information:** name, postal address, phone number, Organization-id (in the case of additional request)
 - ◆ **Points of contact:** admin, tech, billing, membership.
- ◆ **IPv6 Information:**
 - ◆ **Upstream providers:** name, postal address, ASN, and its ability to route IPv6.
 - ◆ **Address distribution plan:** Planed prefixes length for each type of customer, for equipments, POPs, etc.
 - ◆ **Planned date for enabling IPv6 services.**



How to apply? 2) Fill Template.

◆ Initial part equal to any of them:

0a. Organization ID. (OwnerID): **Leave blank if new organization.**

0b. Name of the Organization:

0c. Postal address:

0d. City:

0e. State:

0f. Country:

0g. ZIP Code:

1a. ID. technical contact (UserID):

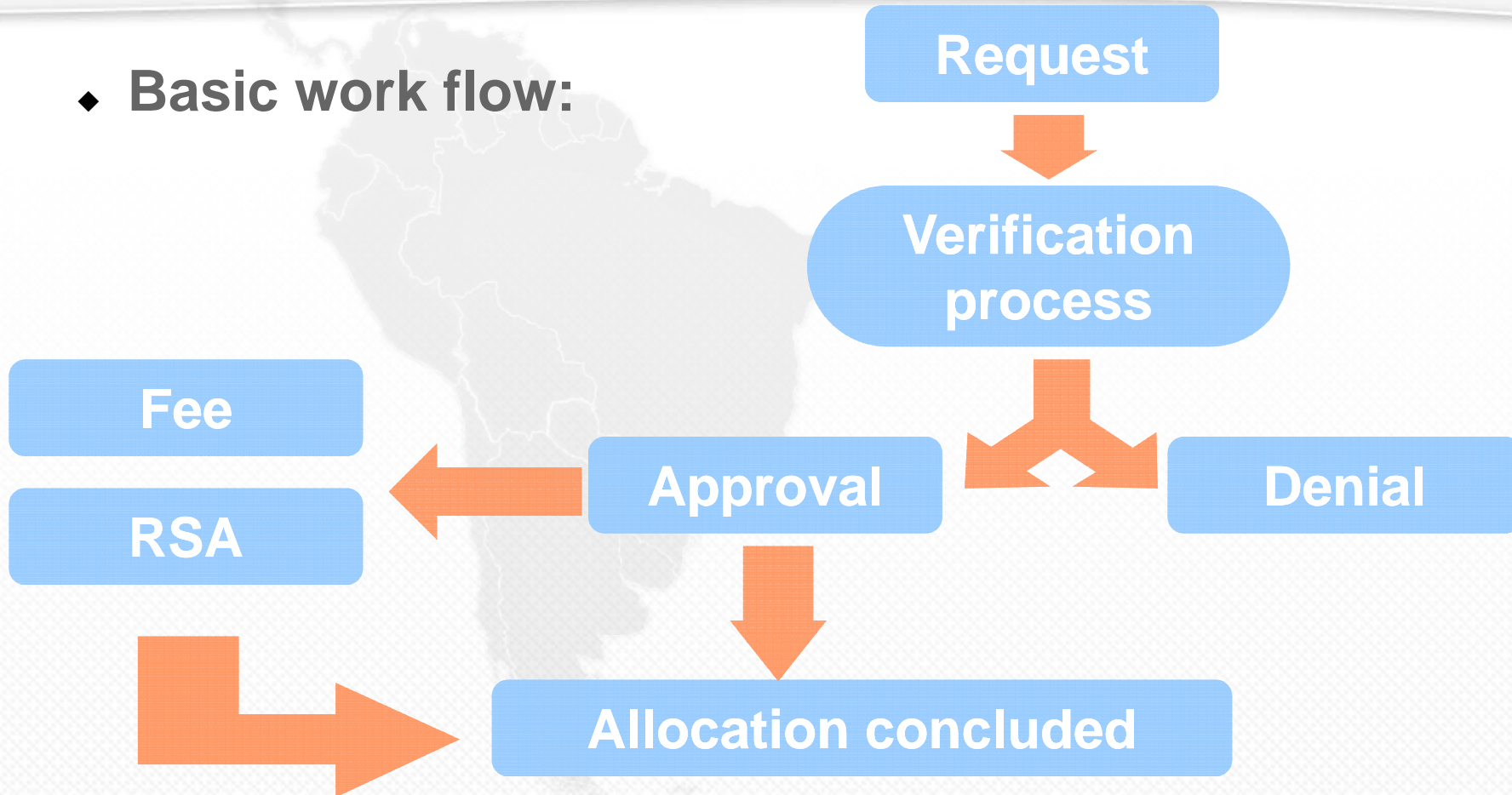
1b. ID. billing contact (UserID):

When done, send it to hostmaster@lacnic.net



How to apply? Allocation Process

- ◆ **Basic work flow:**





Thank you!

Any Question?

**Please email our
Hostmaster:
hostmaster@lacnic.net**