



# NRO NC Report: Activities of the ASO AC

Jason Schiller  
ASO Address Council  
ARIN 34  
Baltimore MD  
10 October 2014

Number Resource Organization



# Agenda

- About the NRO NC / ASO AC
- ASO AC activities
  - ICANN Participation
  - ICANN BoD seat 9



# What is the NRO?

**ICANN**

Internet Corporation for Assigned Names and Numbers  
Performs the IANA function

**IANA**

Internet Assigned Numbers Authority  
Responsible for global coordination of Root DNS, IP addresses, ASNs, protocol and port numbers

**ICANN SO**

ICANN Supporting Organization

**ASO**

Address Supporting Organization

**ASO AC**

ASO Address Council  
review and develop recommendations on IP address policy and recommendations to ICANN Board

**NRO**

Number Resource Organization  
Umbrella organization for the 5 RIRs to speak with one voice, protect RIR interests

**NRO EC**

NRO Executive Council  
Formed by RIR boards, speak on behalf of NRO

**NRO NC**

NRO NC  
Elected / appointed by the 5 RIR communities, perform the function of ASO AC



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Number Resource Organization



# What is the NRO

- Number Resource Organization
- Formed by the NRO MoU
  - 24 October 2003
  - <http://www.nro.net/documents/nro-memorandum-of-understanding>
- Purpose
  - Coordination roll for 5 RIRs to act collectively
  - Perform joint operational / external activities
  - Protect unallocated number resources
  - Promote and protect the bottom-up policy development process
  - Act as a focal point for the Internet community input into the RIR system
- Consists of
  - NRO EC
  - NRO NC
  - NRO Secretariat



# What is the NRO EC

- NRO Executive Council
  - One member appointed from each of the 5 RIR's boards
    - Typically the RIR CEO
  - Represents the NRO in external activity
  - Represents the RIRs on issues the RIR delegates
    - Speaks on behalf of the 5 RIRs with one voice
  - Commits RIR resources in support of NRO activities



# What is the ASO?

- ICANN Address Supporting Organization
  - NRO and ICANN signed the ASO MoU
    - 19 October 1999
    - Updated 30 October 2002 to add LACNIC
    - Updated 21 October 2004 to add AFRINIC
    - <http://www.nro.net/wp-content/uploads/2004/10/aso-mou-signed.pdf>
  - Established the NRO NC will perform the function of ASO AC
  - Defines the roles and process for global policy development
  - Defines how to provide recommendations to the ICANN board wrt recognition of new RIRs
  - Defines how to provide advice to the ICANN board regarding number policy



# What is the ASO AC?

- ICANN Address Supporting Organization
- ASO Address Council function performed by NRO Number Council
- Independent body separate from RIR management and board to:
  - Oversee global number resource policy work
  - Appoint 2 Directors to the ICANN Board
  - Serve on various ICANN bodies as needed
  - Advise ICANN Board on number resource matters



# Global Policy

- There are currently no Global Policy Proposals
- A Global Policy
  - “Global policies are defined within the scope of this agreement as Internet number resource policies that have the agreement of all RIRs [Regional Internet Registries] according to their policy development processes and ICANN, and require specific actions or outcomes on the part of IANA or any other external ICANN-related body in order to be implemented.”
  - Global policies determine number allocation policy for requests that involve IANA
  - Global policies may also specify regional number allocation policy





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# Global Policy Development

- The NRO NC must
  - Validate the proposal went through the policy development process of each region
  - Adequate consideration of viewpoints
  - The same text passed in all regions
  - Or any rewrite from the NRO EC is not a substantive change compared to what the individual region passed
- The NRO NC that recommends to the ICANN board to ratify
- ICANN Board can ratify, ask for clarification, or send it back for specific reconsideration of concerns



# ASO AC Activities: ICANN Participation

- **ASO AC face to face meeting at ICANN 50 in London June 22-26**
  - Discussed the revamp of the NRO web site
  - Discussed the need for a Global (coordinated) Policy on IPv4 address transfers
  - Updated our operating procedures
    - Process for appointments
  - Discussed a need to expedited ASO AC member selection
- **Met with ICANN Board**
- **ICANN Board Selection**



# ASO AC Activities: ICANN Participation

- **2 Hour ASO AC work shop**
  - **LACNIC IPv4 runnot announcemnt**
  - **APNIC, RIPE, LACNIC soft landing policies**
  - **Current transfer policy status**
  - **IPv6 adoption and World IPv6 Launch**
  - **IANA redistribution policy**



# Recent Appointments

- APNIC elected Dr Ajay Kumar to the ASO AC
- Appointed Hans Petter Holen to the ICANN 2015 NomCom
- Selected Hartmut Glasser to the IANA Oversight Transition Coordination Group

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# IANA Advice

- On April 15<sup>th</sup> IANA asked ASO AC for advice regarding the ASN allocation issue because of limited number (less than 500) of 2-byte ASN in the available pool.
- **Policy: Internet Assigned Numbers Authority (IANA) Policy for Allocation of ASN Blocks to Regional Internet Registries.**

# ASN Allocation Policy

- IANA allocates ASNs to RIRs in blocks of 1024 ASNs.
- After 31<sup>st</sup> December 2010 there was no distinction between 16-bit and 32-bit only ASN and allocation started from 32-bit allocation pool.
  - “16-bit” ASNs are the AS Numbers in the range: 0 - 65535
  - “32-bit only” ASNs are the AS Numbers in the range: 65536 - 4294967295
  - “32-bit” ASNs are the AS Numbers in the range: 0 - 4294967295



# ASN Allocation Policy

- Additional Allocation - An RIR is eligible to receive (an) additional ASN block(s) from the IANA if one of the following conditions is met:
  1. The RIR has assigned/allocated 80% of the previously received ASN block, or
  2. The number of free ASNs currently held by the RIR is less than two months need. This projection is based on the monthly average number of ASNs assigned/allocated by the RIR over the previous six months.
- An RIR will be allocated as many ASN blocks as are needed to support their registration needs for the next 12 months, based on their average assignment/ allocation rate over the previous six months, **unless the RIR specifically requests fewer blocks than it qualifies for.**



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## Question Raised by RIRs

- The RIRs raised a question about allocations of AS Numbers to the RIRs and whether their holdings of 16-bit AS Numbers can be set to one side when evaluating a request for additional AS Numbers from the IANA AS Numbers registry.



# NRO **Formal Response to IANA**

- When judging if an RIR is eligible to receive (an) additional ASN block(s) from the IANA per section 3, the IANA must consider utilization of the total undifferentiated pool of ASNs that contains both 16-bit ASNs and 32-bit only ASNs.
- How RIRs manage their undifferentiated pool is within each RIR's consideration per their operating procedures and policies.
- There is no requirement in the policy to form the block of 1024 AS Numbers from a contiguous set of numbers, thus allocating from 2 or more different value-ranges is acceptable
- Per this advice, the past practice that an RIR has the option of requesting a block of 1024 AS Numbers that consists of a non-contiguous block of a specific amount of 16-bit ASNs and 32-bit only ASNs may continue.



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# Formal Response to NRO-EC

- In the AC's August teleconference, the ASO AC noted that past precedence for ASN requests to the IANA would allow for each RIR to take only 99 16-bit ASNs on their next ASN request from the IANA. If such an agreement is to be reached, the AC advises that it should be done so transparently, and openly, and the RIR communities should be informed of such an arrangement so that the outcome is anticipated.



# New 16-bit ASN Allocations

- APNIC
  - 64000-64098 – (99 ASN)
  - 2<sup>nd</sup> September 2014
- LACNIC
  - 64099-64197 – (99 ASN)
  - 5<sup>th</sup> September 2014

## Current Status:

- Remaining IANA Pool
  - 64198-64495 - (298 ASN)
- Remaining APNIC Pool
  - 270 ASN



# ASO AC Activities: ICANN Board Selection

- Seat 9 selection schedule
  - Nomination Phase: 24 Oct - 31 Dec 2014
  - Comment Phase: 1 Jan – 31 March 2015
  - Interview Phase: 1 Feb – 31 March 2015
  - Selection Phase: 1 April – 17 April 2015
  - Due Diligence Review 18 April – 31 May 2015



# Thank You

## Questions?

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