

# ETNO: IPv4 Exhaustion

Amsterdam, 22 October 2007

# Focus: IPv4 and Network Operators

- | The IPv4 Exhaustion issue is well understood
- | Why use this opportunity to cover it
  - | Very important to ETNO members
  - | Consensus amongst European Telecom Operators
- | Goals
  - | Not to rehash the IPv4 Exhaustion model

# No Global Consensus

- | While many proposals for managing IPv4 exhaustion have emerged
  - | There is no global consensus on a single proposal
  - | Or, on a combination of approaches
- | Obviously, a topic for the this RIPE meeting
  - | And upcoming RIR meetings in other regions
- | However . . .
  - | The free pool continues to be used up while we talk

# ETNO Discussions

- | Discussions led by Group of Experts (Numbering, Addressing and Naming Issues Working Group)
- | Responded to initial policy proposals to help derive a European position
- | IPv4 ETNO Common Position agreed using established procedures – requires 100% agreement by all ETNO members

# Do Not Abandon RIR Process

- | ETNO thinks a key principle in the remaining time for the IPv4 free pool will be . . .
  - | Using the existing Internet community organizations that have bottom-up and inclusive stakeholder based processes
- | ETNO does not support the intervention of organizations outside the traditional IP addressing community
- | ETNO does not want to see government intervention in the allocation of IP address space
- | ETNO supports the process and principles that underlie the five RIRs

# Existing RIR Processes Work

- | Many IPv4 Exhaustion proposals suggest countdowns or set asides
  - | These are not needed and are artificial
- | RIPE should simply use the allocation processes it always has for the remaining IPv4 pool
  - | No need to change
- | Set asides only serve to bring the date of free pool exhaustion forward
  - | For no good technical reason
- | The existing RIR policies for IPv4 allocation are proven, time-tested and appropriate for future allocation

# No IP Marketplace

- | ETNO believes that a marketplace in IP addressing is contrary to the principles of fair play and conservation through which IP addresses have been allocated in the past
- | Development of a market for IP addresses should be strongly discouraged
  - | Legal, informal and illegal trading of IP addresses should be strongly discouraged
- | RIPE – as well as its membership – should identify strategic actions that would help meet this goal

# Needs Based Allocations

- | The remaining free pool for IPv4 should be allocated based on needs
  - | As we have always done
- | Geographic/regional set asides must be discouraged
- | A global, needs-based approach prevents global organizations from IP address “shopping”
- | The availability of allocations from one region – while RIR pools were depleted in other regions – would not be an acceptable situation
  - | This invites government intervention
  - | Competition issues arise here as well

# Address Policy

- | If new IPv4 policy emerges
  - | The existing RIPE policy development process should be used
  - | No need/desire for a new policy making structure within RIPE
- | The ISP and carrier community needs predictability and continuity on this
  - | Evolution in IPv4 allocation policy should go through the same, thoughtful process as any other policy change in RIPE

# Global Information Sharing

- | Accurately informed IP addressing stakeholders are critical
  - | The visibility of exhaustion is increasing
    - | More extensive of reporting of assignments and allocation is needed
    - | Not just to the addressing community, but to media and governments and other parties who will become interested in the next few years
- | There is a need for a globally acceptable independent modeling tool
  - | Such a tool should be independent of individuals who potentially have agendas to pursue or conflicts of interest
  - | This could be a jointly commissioned activity of the RIRs

# Legacy Blocks

- | ETNO would like to see IANA and ARIN continue to work with legacy owners of /8s
  - | Continuing effort to recycle unused addresses
  - | Recent success at IANA with net 12
  - | Potential to add other /8s to the global pool
- | RIPE NCC, perhaps through the NRO, should continue to emphasize that the “recycling” activity should continue
  - | While it may not make an enormous difference in the amount of time we have before exhaustion
  - | . . . It does make sense in terms of stewardship of the IPv4 space
  - | . . . It does make sense to re-allocate what isn't really being used

# ETNO Commitment

- | ETNO members believes that these principles should be the basis for any agreement on appropriate measures and actions
- | ETNO – as an organization – will work within RIPE to help encourage the adoption of these principles
- | ETNO will work as a contributing and positive membership organization to the debate in ETNO noting that it
  - | Represents 43 members across 34 countries representing a telecoms market of many billions of euros
  - | Uses internal agreement mechanisms to agree the view that is represented at external forums, such as RIPE, for those members who are interested but unable to attend RIPE meetings

# Conclusion

- | ETNO believes that any solution to IPv4 pool exhaustion should be based on these five key principles regarding
  - | Use the existing IP addressing community
  - | Allocations, now and always, should be needs-based
  - | No IP addressing marketplace should be allowed to emerge
  - | Policy should be done through existing, predictable process
  - | Legacy blocks should be treated separately