ETNO Common Position on IPv4 Exhaustion

Executive Summary

Exhaustion of IPv4 public address space is anticipated to happen in 2010. This requires urgent action by all stakeholders in order to manage the exhaust process and facilitate transition to an alternative solution. ETNO proposes a series of principles to assist in understanding selecting the most appropriate managed solutions.

Introduction

The theoretical date for exhaustion of the IANA pool of public IPv4 address space, which is the only significant pool of IPV4 available addresses remaining and which is managed by ICANN (IANA Function), has altered significantly. The allocation from IANA to RIRs of IPv4 address resource is being done at increasing rate. As a consequence public IPv4 addresses available could only continue to meet global requirements until **2010.**

The potential exhaustion of IPv4 address space in 2010 will require urgent **action to be taken by all stakeholders**. Furthermore, an alternative solution to the public IPv4 address resource must be developed. This timely transition to an alternative solution can be assisted by the use of efficient management techniques of existing allocated IPv4 resources. It can be further assisted by the provision of consistent and timely information as to the status of the remaining public IPv4 address space.

Initial Discussions and Options

There have been preliminary discussions at ICANN and RIRs level on the issue of IPv4 exhaust, and though there have been different approaches identified no consensus has emerged from these discussions. ETNO proposes the following principles to assist stakeholders in reaching a consensus.

Basic Principles

Principle 1 IPv4 Exhaustion issue should be addressed by the existing Internet community bodies using the existing bottom up and inclusive stakeholder driven processes.

Principle 2 Development of a market for IP addresses (legal or illegal) should be discouraged.

NB: This is intended to avoid any disruptive impact on Public address allocation processes that are well understood and accepted, and embodies fairness. It also maintains the public nature of this address resource.

Principle 3 Global synchronization

IPv4 address exhaustion should be treated in such a way that all Registries (LIR) worldwide have their request treated according to their need rather than on geographic availability. A situation where LIRs could access to new IPv4 allocations in one region while the RIR pool would be depleted in another region would not be an acceptable situation. A global approach and synchronization are needed, as a minimum between ARIN-RIPE-NCC-APNIC.

A failure to have a consistent approach would lead not only to competition issues, but also "shopping" in one region where addresses remain available and IPv6 deployment with different timescales.

Principle 4 Predictability

Significant evolution in IP policies should be announced well in advance in order to give sufficient time for operators and LIRs to be prepared and assist in their development. Part of this principle is to provide visibility on consumption rate and predictions for exhaustion of IPv4 pools of addresses.

Principle 5 Legacy blocks are to be treated separately

There will be activities undertaken in order to recycle unused addresses coming from Legacy blocks. In such circumstances those addresses that are recovered should be used as a common global pool after the date of exhaustion of the IANA pool.

Conclusion

ETNO believes that the above principles should be met and implemented by appropriate measures and actions. ETNO is confident that the Internet Community, using the current bodies and processes, will reach a final conclusion on this issue.