Four Byte AS Number Experiment

MAEMURA Akinori

maem@maem.org

JPNIC / France Telecom

Summary

- Not proposal but Informational
- Raising an idea for 4-byte ASN experiment for discussion
  - Idea itself
  - Procedures from now on
  - Etc…

Background

- draft-ietf-idr- as4bytes-12.txt *"BGP Support for Four-octet AS Number Space"*
  - Defines protocol extension with which BGP can handle four-octet ASN

- prop-032-v002: 4-byte AS number policy proposal
  - On-demand assignment of 32bit only ASN from Jan 2007
  - Default assignment of 32 bit only ASN from Jan 2009
  - Consensus reached, EC Endorsed
  - One can obtain a four-byte ASN in January 2007

Problem?

- The existing Autonomous System operators with a 16-bit ASN cannot use their own ASN to try that protocol extension
  - A new ASN holder only can try before the cut-off of their service provision

- Tests in isolated test beds will not be enough to check the normal operation of 4 byte ASNs
  - The whole live Internet need test before an Autonomous System with 32-bit ASN will have live traffic

This is a similar situation with…

- RFC1797 – *"Class A Subnet Experiment"*
  - Allowed any AS operators to have a /24 class A subnet advertised and used in the live Internet
  - Operators verified if their hosts (especially old implementations) can handle a Class A subnet

Basic idea

- ## Defining experimental 32-bit ASNs
  - To allow operators to try 32-bit ASN on in the live Internet

- ## Defining experimental IPv4 address block
  - To allow operators to install test hosts in that experimental AS to communicate with other Internet hosts

- ## Effective in a limited time duration

A possible proposal

- Defining experimental 32-bit ASN
  - Let's say 39.[existing ASN] for 16-bit ASN holders
  - Let's say 39.[49152—65535] for non ASN holders
    - 49152 == 1100 0000 , 65535 == 1111 1111
- Defining experimental IPv4 /24 blocks
  - Let's reuse net 39 as RFC1979
    - 39.[upper byte of existing ASN].[lower byte].0 / 24
    - 39.192.0.0/24 – 39.255.255.0/24 for non ASN holders
- Defining the duration of experiment
  - Let's say till December 2009
    - Consistent with prop-032-v002 – RIRs will stop distinguishing 16-bit and 32-bit ASNs

Your thought?

- For the idea of experiment itself

- Also talking among idr@ietf.org
- Could be compiled as an Internet-Draft

Thank You !

Four Byte AS Number Experiment

MAEMURA Akinori

maem@maem.org

Japan Network Information Center

France Telecom Research & Development Tokyo