prop-065-v001

Format for delegation and recording of 4-byte AS numb

APNIC26 - Christchurch NZ

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- This proposal recommends that APNIC changes its procedures standardise on delegating 4-byte AS numbers in the ASPLAIN fo rather than the current ASDOT format.

- This proposal extends to the data recorded in APNIC Whois Database records, with the proposal recommending that whois returns the same record for queries made in either format.

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- **ASPLAIN**

- Defines the 4-byte AS Number as a basic 32 bit integer, it is the cur

- format used to represent 2 Byte AS Numbers e.g.

  - Original 2 Byte AS pool: 0 - 65535

  - New 4-byte AS pool: 0 - 4294967295

- **ASDOT**

- Defines the 4-byte AS Number as;

  - <higher16bits> <lower16bits>

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- Current Problem

- APNIC assigns and records 4 Byte AS numbers in the ASDOT for

  - Members have never been consulted

  - There is no RFC for ASDOT

  - RIRs and IANA have adopted ASDOT with consultation (AR

    - We now know a bit more ...

  - Almost all operators would prefer to use ASPLAIN

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- Problems with ASDOT ...

  - ASDOT is wildly regarded as having compatibility problems.

  - AS-PATH regex is broken by the "."

    - ^2.37$ (matches 2137, 2237, 2337 etc)

  - Internal Management systems (scripts, db etc)

  - IRR/RPSL

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- ASDOT has ...

  - Lack of support for ASDOT in the 'operator' community

  - Issues with SNMP, REGEX, IRR/RPSL etc

  - 'Canonical Textual Representation of Four-octet AS Numbers' -

    - draft-michaelson-4byte-as-representation-05.txt

  - Placing more problems in the path of 4byte adoption (bad)

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- Router Vendors are supporting ASPLAIN

  - Cisco will use ASPLAIN by default on all new code release / platf

  - Juniper support ASPLAIN (9.2 will include ASDOT)

  - Force10 (current ASPLAIN)

  - Redback use ":" but moving to support ASPLAIN

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- What we have today

  - Two formats (no question here)

  - Operators using/preferring ASPLAIN

  - LIRs/Customers being allocated ASDOT

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- Customers will know their AS as something different

  - AS2.37 from the customer perspective

  - AS 131109 from the provider perspective

- What to use for your CRM ?

- What to use for the IRR/RPSL configuration

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- Timing is critical

  - 1/1/09 (~4 months) will 4byte ASN are in the wild

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- Support

  - 1/1/09 (~4 months) will 4byte ASN are in the wild

  - If we as members want to use ASPLAIN now is the time

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- IETF

- draft-huston-as-representation-00.txt

- Strong support on the IDR mailing list

  - 12/14 responses supporting adoption of the draft

  - 13th has recently changed his opinion ?

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- "Having read this draft and having also previously commented on the problems the asdot/asdot+ create within SNMP/SMIv2 presentation, I support the adoption of this draft. "

- "The asdot/asdot+ formats will become a burden from the point of view of a network operator (manipulation as subsets of strings). "

- "Having read the document, I support the asplain representation."

- "I would welcome adoption of this draft. "

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- IDR Updated: Enke Chen has called for the use of ":::"

- So now we have

  - .

  - :

  - ::

  - **Integer**