http://www.apnic.net/policy/proposals/prop-115

Discussion Paper for : Registration of detailed assignment information in whois DB or other sources

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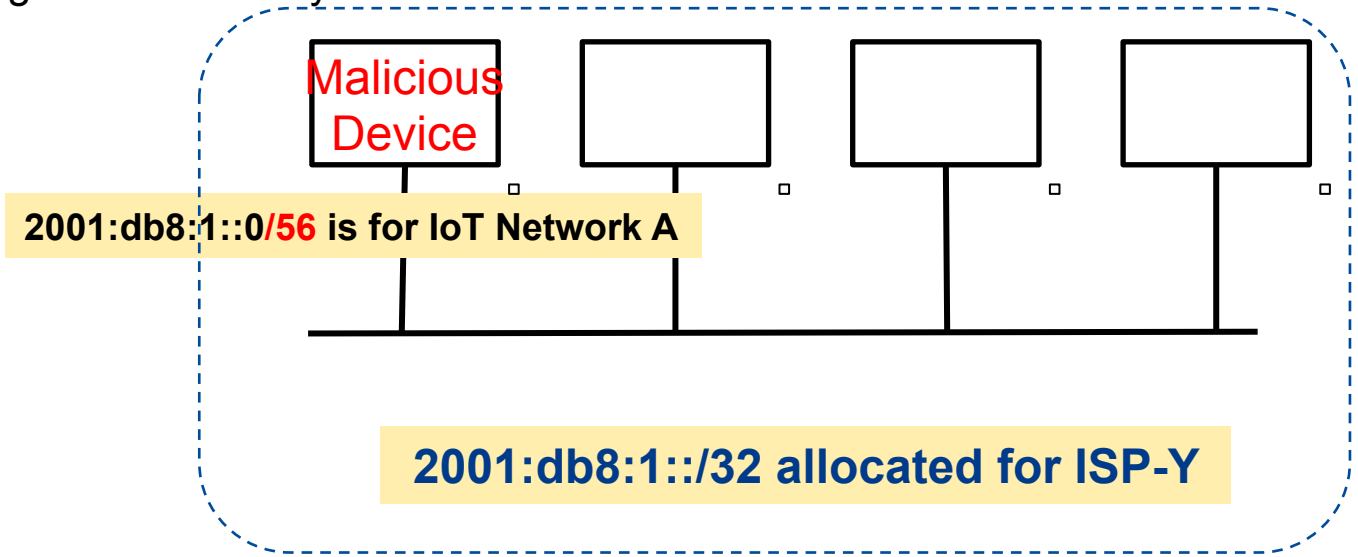
Problem statement from prop-115

- there are some cases need to get IP address assignment information in more detail to specify the IP address.
- Without detailed information, operators cannot filter out specific address range, and it might lead to 'OVER-FILTER' (i.e. filtering whole ISP's address range).

Case 1) address assignment size information in IPv6

Exact assignment size is not shown for IoT Network and
The IPv6 address assignment size may be different from ISP



(non-)Problem statement

- Registries provide their allocation and assignment information for the statistics.
- Now it is IoT period, lots of people want to know the coverage of

Traditional internet users vs. IoT devices.

- In this case, detailed information must be usable.

Registration Information will be needed for various purpose

Statistics, estimate expansion of the Internet, future service deployment, etc.

Question 1

Do you agree with us to provide detailed information?

If YES, we want to go to the next topic,

How we provide detailed information?

Here 5 possible solution for this.

1. Whois DataBase
2. DNS(Domain Name System)
3. IRR(Internet Routing Registry) Server
4. Other DataBase
5. Routing Information

1. Using WHOIS DB

- Policy originally said, the Allocation and Assignment Information should be registered in the WHOIS
- To provide 'assignment prefix size' information for specific IPv6 Addresses using WHOIS DB is the best solution

Using "remarks" field
Or
Add NEW field

```
inet6num:  2001:db8::/32
name:      DOCNET-BLK-JP
cr:        Somewhere Inc.
ntry:      JP
in-c:      99999999JP
-c:        99999999JP
arks:      This information has been partially mirrored by APNIC from
arks:      JPNIC. To obtain more specific information, please use the
arks:      JPNIC WHOIS Gateway at
remarks:   http://www.nic.ad.jp/en/db/whois/en-gateway.html or
arks:      whois.nic.ad.jp for WHOIS client.
remarks:   Assignment Size = /56
Assignment-size:  /56
changed:   apnic-ftp@nic.ad.jp 20130517
source:    JPNIC
```

2. Using DNS

- Domain Name System is also useful if we decide

Using “TXT” Resource Record Or Add NEW RR

```
; <<>> DiG 9.10.2-P3 <<>> TXT somewhere.com.
;; Global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 58716
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 4, ADDITIONAL: 5

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;somewhere.com.                 IN      TXT

;; ANSWER SECTION:
somewhere.com.          3600    IN      TXT     “2001:db8::/32
AssignmrntSize is /56"

;; AUTHORITY SECTION:
somewhere.com.          73986   IN      NS      ns3.somewhere.com.
somewhere.com.          73986   IN      NS      ns2.somewhere.com.
```

3. Using IRR server

- IRR is able to provide assignment size information, too.

Using “remarks” Object
Or
“descr” Object
Or
Add NEW Object

```
route6:     2001:db8::/32
descr:      SOMEWHERE IPV6 NETWORK
origin:     AS566530
remarks:    assignment size = /56
descr: assignment size = /56
Size:   /56
mnt-by:     MAINT-SOMEW
changed:    some@somewhere.com 20161231
source:     RADB
```

4,5. other solutions

Here are possibilities for these, too.

4. Develop other DataBase
5. Routing Information System

Must develop a Brand-New information system/service but it will create from a clean slate.

Question 2

Which is the best technique to provide assignment size information?

Summary

- Our proposal is
  - Detailed assignment information can be seen in whois DB for operators
  - Operators can set filter with this detailed information and not goes to be ‘over-filter’ with whole allocation information
  - Detailed information about Assignment will be useful for various purpose.

Thank you,