MAP Deployment

draft-mdt-softwire-map-deployment-02

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Purpose

- Informational on
  - how operator can organize the MAP domain?
    - rule setting and distribution
    - options
    - address planning
    - migrate
- Relation with spec
  - deployment draft is not spec but about to share requirements, understandings and recommendations
    - currently in MAP terminology and MAP-specific
    - easy to be extended/revised/replaced to cover deployment issues of 4rd, the unified solution, within the WG consensus framework
    - details need to develop along with the base spec

Where

- Typical use cases
  - Fixed networks
    - MAP CE as CPE deployed at
      - home network
      - enterprise network
    - BR at one of core routers as the interface towards IPv4 world
  - Mobile networks (3GPP)
    - MAP CE at UE
    - MAP BR at EPC
  - … (to be added)

How Deploy

- Domain Building
  - Planning
    - Topology
    - Forwarding mode
    - Addressing and Rules
    - Port-set
  - Provisioning
    - Number of Domains : Number of DHCPv6 server
    - FMR distribution (mesh, hub&spoke, etc…)

Address Planning

- Identify the requirements
  - How many users?
  - How long prefix for each user?
  - Maximum concurrent port numbers?
- Step-by-step planning
  - Independent IPv6 planning
    - Planning prefix delegation
  - Allocating residual IPv4 addresses
    - Deciding PSID length according to sharing ratio
    - Applying available IPv4 address blocks and PSID
    - Mapping IPv6 prefix to address and PSID
  - Formulating the MAP rules
  - If rules are too many to suffer, try to relax the length of delegation (if possible) and do the above again
- Dispatching BMRs to CPEs

Further Remarks

- Number of rules
  - the fewer the better
    - significance of stateless deployment
  - … but constrained in practice by
    - the aggregation property of IPv4 residual blocks
    - the possible aggregator of IPv6 planned for this purpose

Moving Forward

- Comments?
- WG adoption call ended
  - no objections remained
  - ready for adoption?