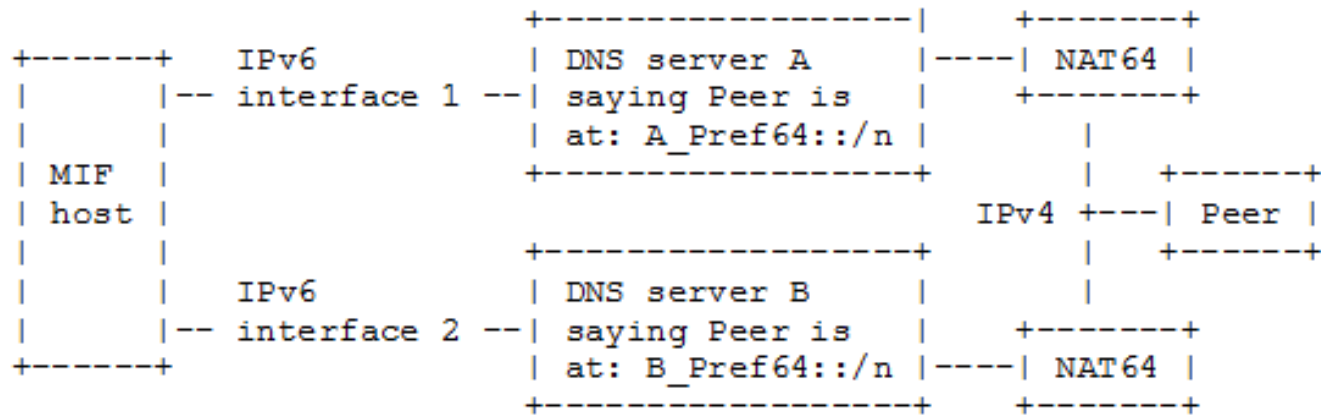# DNS Server Selection
on Multi-Homed Hosts

draft-savolainen-mif-dns-server-selection-02

Teemu Savolainen
(teemu.savolainen@nokia.com)
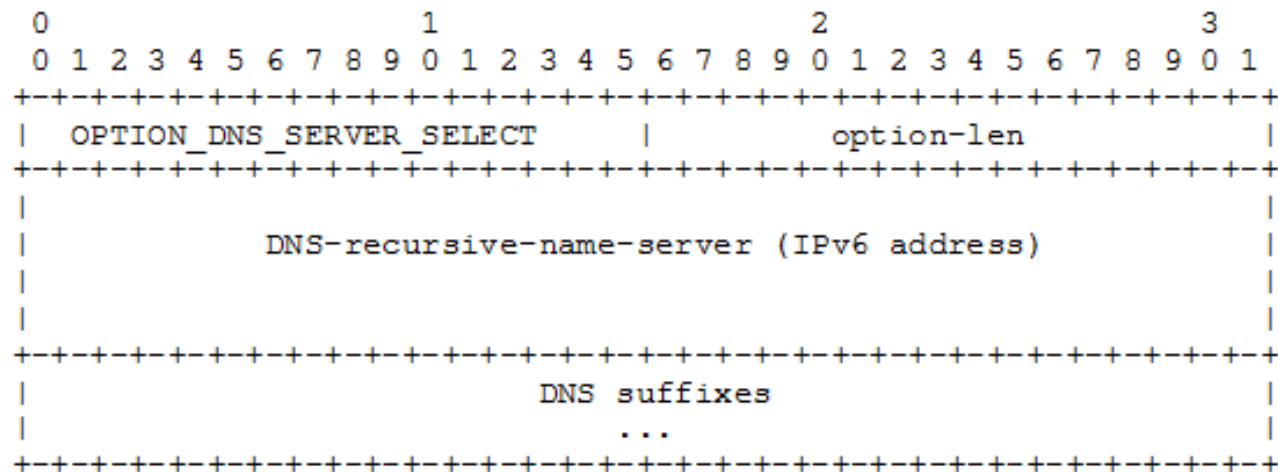
MIF IETF #77

22-03-2010

NOKIA

Changes between -00 and -01

- Added issues caused by synthesized AAAA records (DNS64/BIS): those addresses are valid only on the interface learned on

```
                              +----------------|    +-------+
  +-------+    IPv6           | DNS server A   |----| NAT64 |
  |       |-- interface 1 --| saying Peer is   |    +-------+
  |       |                 | at: A_Pref64::/n |        |
  | MIF   |                 +------------------+        |    +------+
  | host  |                                   IPv4 +---| Peer |
  |       |                 +------------------+        |    +------+
  |       |    IPv6         | DNS server B     |        |
  |       |-- interface 2 --| saying Peer is   |    +-------+
  +-------+                 | at: B_Pref64::/n |----| NAT64 |
                            +------------------+    +-------+
```

- Added that an FQDN may identify a service that provides different services on its different interfaces (e.g. Internet and Intranet facing)

- Added DNSSEC reference

- Minor nits

Changes between -01 and -02

- After suggestion from Arifumi Matsumoto, added a DHCPv6 option to configure explicitly which suffixes are particularly served by a DNS server – and prefer that server with matching FQDNs. DHCPv4 option not yet included, could be similar.

```
 0                   1                   2                   3
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|    OPTION_DNS_SERVER_SELECT      |            option-len        |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                                                               |
|              DNS-recursive-name-server (IPv6 address)         |
|                                                               |
|                                                               |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                         DNS suffixes                          |
|                           ...                                 |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

  - DNS suffixes: The list of DNS suffixes MUST be encoded as specified in section "Representation and use of domain names" of RFC3315

- Added reference to draft-wing-behave-dns64-config
- Minor nits

Call for feedback

- Please comment on the draft and proposal directly or on the MIF mailing list

- Improvement ideas welcome, also as direct text input